

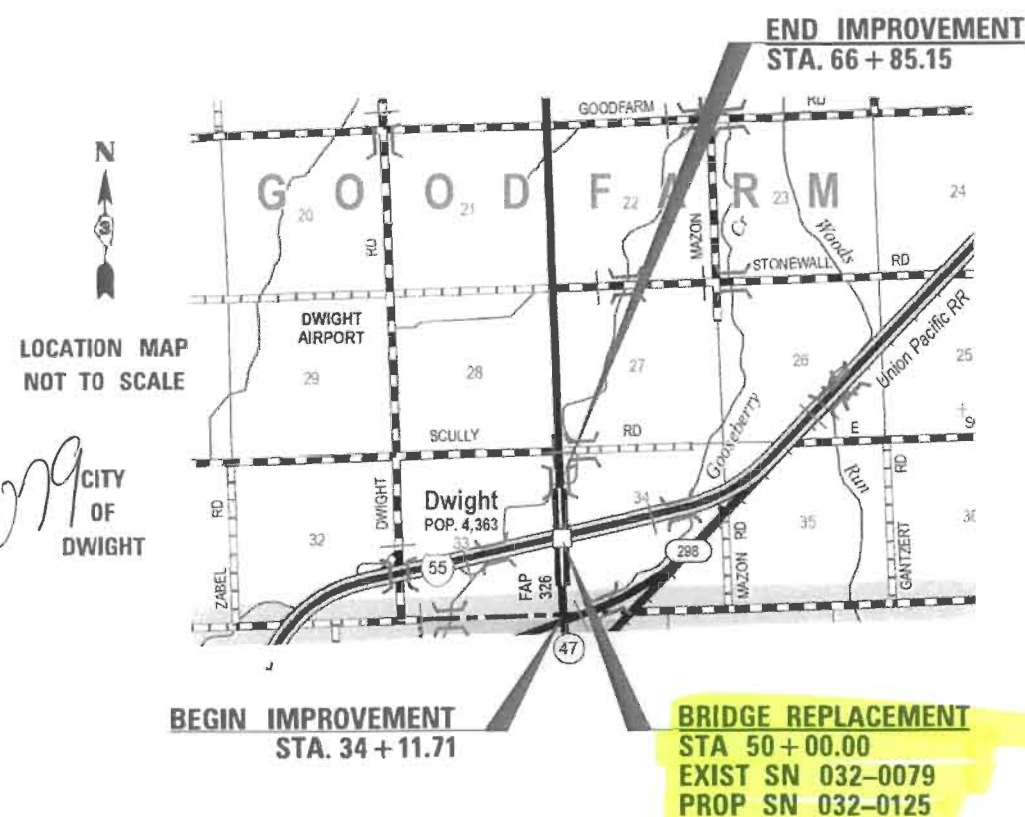
DISTRICT 3 NO. (815) 434-6131
PROJECT ENGINEER: JOE KANNEL, P.E.
UNIT CHIEF: MICHELE LINDEMANN, P.E.
CONTRACT NO. 66H15

GRUNDY
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED HIGHWAY PLANS

**FAI 55 (I-55)
SECTION [((32-3)HB-1)]HBK
PROJECT NHPP-HIBR-7C00(501)
REPLACEMENT OF STRUCTURE
CARRYING IL 47 OVER I-55
GRUNDY COUNTY**

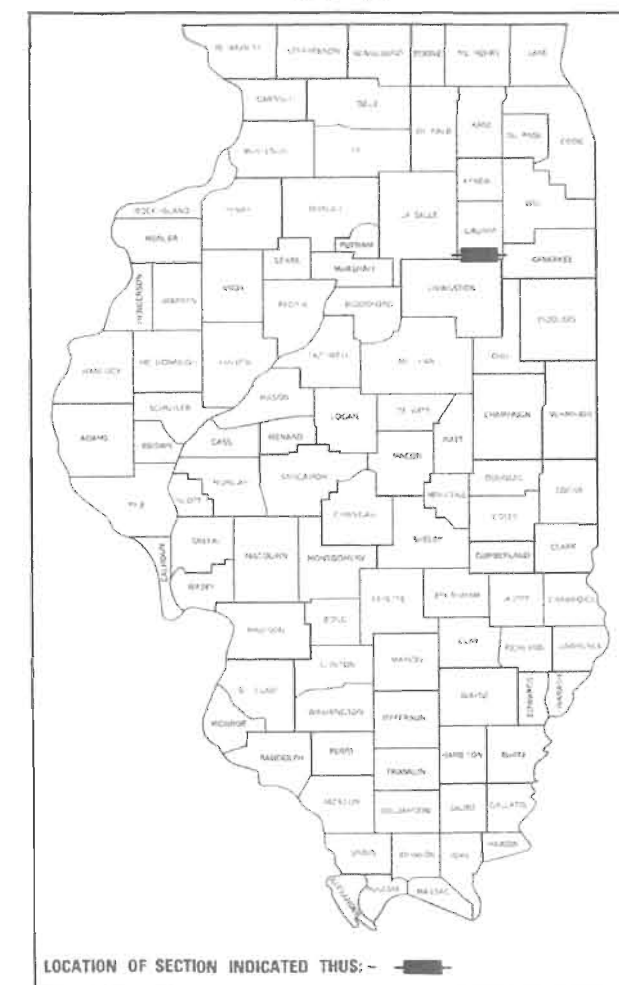
C-93-047-20



GROSS LENGTH = 3,273.44 FT. = 0.62 MILE
NET LENGTH = 3,273.44 FT. = 0.62 MILE

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	[(32-31H8-1)]HBK	GRUNDY	123*	1
		ILLINOIS	CONTRACT NO. 66H15	

* 173 + 2 = 175 TOTAL SHEETS
P-93-027-17
D-93-018-20



FUNCTIONAL CLASSIFICATION (FAI 55)

2019 ADT = 20,500
P.V.=65.8% S.U.=6.7% M.U.=27.5%

FUNCTIONAL CLASSIFICATION (FAP 326 /IL 47)
OTHER PRINCIPAL ARTERIAL

P.V. = 65.4% S.U. = 8.5% M.U. = 26.1%

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED December 17, 2020
[Signature]
 REGIONAL ENGINEER
January 29, 2021
[Signature]
 ENGINEER OF DESIGN AND ENVIRONMENT
January 29, 2021
[Signature]
 DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

HIGHWAY STANDARDS

000001-07	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420001-09	PAVEMENT JOINTS
420101-06	24' (7.2 M) JOINTED PCC PAVEMENT
420106-06	36' (10.8 M) JOINTED PCC PAVEMENT
420401-13	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB
420111-04	PCC PAVEMENT ROUNDOUTS
483001-05	PCC SHOULDER
515001-04	NAME PLATE FOR BRIDGES
542001-06	CONCRETE END SECTIONS FOR PIPE CULVERTS 15"(375 MM) THRU 84" (2100 MM) DIAMETER
542401-03	METAL FLARED END SECTION FOR PIPE CULVERTS
601001-05	PIPE UNDERDRAINS
601101-02	CONCRETE HEADWALL FOR PIPE UNDERDRAIN
606001-07	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
606006-04	OUTLET FOR CONCRETE CURB AND GUTTER, TYPE B-6.24 (B-15.60)
606301-04	PC CONCRETE ISLANDS AND MEDIANS
606306-04	CORRUGATED PC CONCRETE MEDIANS
610001-08	SHOULDER INLET WITH CURB
630001-12	STEEL PLATE BEAM GUARDRAIL
630201-07	PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-09	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-16	TRAFFIC BARRIER TERMINAL, TYPE 6
642001-02	SHOULDER RUMBLE STRIPS, 16 IN.
643001-02	SAND MODULE IMPACT ATTENUATORS
701001-02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5 M) AWAY
701006-05	OFF-ROAD OPERATIONS, 2L, 2W, 15' (4.5 M) TO 24"(600 MM) FROM PAVEMENT EDGE
701011-04	OFF-ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701201-05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701326-04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
701400-10	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-12	LANE CLOSURE, FREEWAY/EXPRESSWAY
701421-08	LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY, FOR SPEEDS ≥ 45 MPH TO 55 MPH
701422-10	LANE CLOSURE, MULTILANE, FOR SPEEDS ≥ 45 MPH TO 55 MPH
701431-13	LANE CLOSURE, MULTILANE, UNDIV. WITH CROSSOVER, FOR SPEEDS ≥ 45 MPH TO 55 MPH
701456-05	PARTIAL EXIT RAMP CLOSURE FREEWAY/EXPRESSWAY
701901-08	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
720001-01	SIGN PANEL MOUNTING DETAILS
720006-04	SIGN PANEL ERECTION DETAILS
780001-05	TYPICAL PAVEMENT MARKINGS
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
821101-02	LUMINAIRE WIRING IN POLE
825011-04	LIGHTING CONTROLLER PEDESTAL MOUNTED, 240V
835001-01	LIGHT TOWER
837001-05	LIGHT TOWER FOUNDATION
886001-01	DETECTOR LOOP INSTALLATIONS
886006-01	TYPICAL LAYOUTS FOR DETECTION LOOPS

GENERAL NOTES

1.

EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.
2.

BEFORE ORDERING PIPE CULVERTS OR PIPE DRAINS, THE CONTRACTOR SHALL CONSULT THE ENGINEER FOR EXACT LENGTHS.
3.

THE ENGINEER WILL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS HMA LIFTS.
4.

SHORT TERM PAVEMENT MARKING SHALL BE USED TO OUTLINE EXIT AND ENTRANCE RAMPs FOR THE PRIME COAT APPLICATION AND EACH RESURFACING LIFT.
5.

ALL ELEVATIONS REFERRING TO U.S.G.S. MEAN SEA LEVEL DATUM.
6.

THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

GRANULAR MATERIALS

2.05 TONS / CU YD

HMA RESURFACING

112 LBS / SQ YD / IN

SHORT TERM PAVEMENT MARKING

10 FT / 100 FT OF APPLICATION

MIX FOR CRACKS, JTS & FLGWYS

0.0003 TONS / SQ YD

SUPPLEMENTAL WATERING

3 GAL / SQ YD / APPLICATION

CALCIUM CHLORIDE

2 LB / SQ YD / APPLICATION

AGGREGATE DITCH CHECKS

5 TONS AGGREGATE
7.

THE WORK REQUIRED TO CONNECT ANY SEWER TO AN EXISTING DRAINAGE STRUCTURE OR PIPE WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE CONSIDERED AS INCLUDED IN THE CONTRACT UNIT PRICE BID FOR THE SEWER ITEMS.
8.

MEMBERS OF JULIE KNOWN TO BE WITHIN THE LIMITS OF THE IMPROVEMENT ARE:

AT&T

CENTURYLINK

COMED

NICOR GAS

VILLAGE OF DWIGHT
9.

NON-MEMBERS OF JULIE KNOWN TO BE WITHIN THE LIMITS OF THE IMPROVEMENT ARE:

NONE

COMMITMENTS

NONE

HMA MIXTURE REQUIREMENT TABLE			
LOCATIONS	TEMP PVMT / SHOULDER RESURFACING.	TEMP PVMT	ENTIRE PROJECT
MIXTURE USES	HMA SURFACE (2")	HMA BINDER (7")	HMA STABILIZED SUBBASE (4")
BINDER GRADE (PG)	PG64-22	PG64-22	PG64-22
DESIGN AIR VOIDS	4.0% @ N70	4.0% @ N70	4.0% @ N50
MIXTURE COMPOSITION (MIXTURE GRADATION)	IL 9.5	IL 19.0	IL 19.0
FRICTION AGGREGATE	MIXTURE C		
MIXTURE WEIGHT	112 LB/SY/IN	112 LB/SY/IN	112 LB/SY/IN
QUALITY MANAGEMENT PROGRAM	QC/QA	QC/QA	QC/QA
SUBLOT SIZE	N/A	N/A	N/A
DENSITY TEST METHOD	CORES	CORES	CORES/NUCLEAR

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

REVIEWED BY:

DISTRICT STUDIES & PLANS ENGINEER

DATE:

EXAMINED BY:

DISTRICT CONSTRUCTION ENGINEER

DISTRICT MATERIALS ENGINEER

DISTRICT OPERATIONS ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HIGHWAY STANDARDS,
GENERAL NOTES AND COMMITMENTS

SCALE: N/A SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	((32-3)HB-1)HBK	GRUNDY	173	2
CONTRACT NO. 66H15				
ILLINOIS FED. AID PROJECT				

MODEL: Default
FILE NAME: Z:\B93-1450B IL 47 over 15516 Drawings\CADD Sheets\0366H15-shr-dennote.dgn



USER NAME	u: lborges	DESIGNED -	TSB	REVISED -	
		DRAWN -	TSB	REVISED -	
PLOT SCALE	= 2.0000 " / IN	CHECKED -	LSA	REVISED -	
PLOT DATE	= 11/12/2020	DATE -	11/3/20	REVISED -	

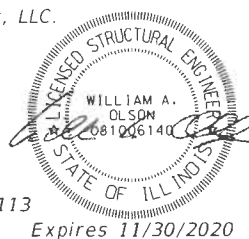
Benchmark: Cut "□" in top south edge of concrete light pole foundation at I-55 NB exit ramp to IL-47, 69.39' LT.
Sta. 42+39.13 - Elevation = 635.468

Existing Structure: S.N. 032-0079 was originally built in 1973 as Ill.-47 Section 32-3HB. The existing structure is a 2 span, concrete deck on continuous steel beam superstructure with concrete piers and vaulted abutments. The structure underwent repairs in 2006 including deck slab repair, substructure repair, joint replacement, and expansion bearing replacement. 203'-10½" Bk. to bk. abutments, 92'-0" out to out deck, 11° 9' 13" right ahead skew. Traffic to be maintained utilizing staged construction.

No salvage.

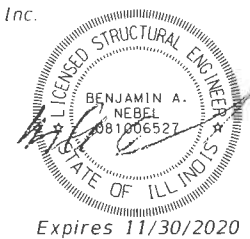
Firm: Bloom Companies, LLC.
Name: William A. Olson
License Number:
081006140
Date: 10/07/2020

Signature And Seal
Apply To Drawings:
86 to 88, 90 to 104 & 113



Firm: Hutchison Engineering, Inc.
Name: Benjamin A. Nebel
License Number:
081006527
Date: 10/07/2020

Signature And Seal
Apply To Drawings:
89, 105 to 112 & 114 to 116



LOADING HL-93

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

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design
Specifications, 8th Edition

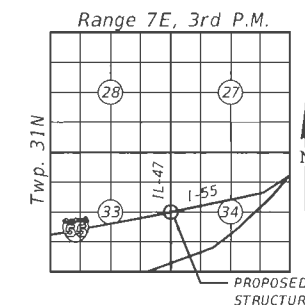
DESIGN STRESSES

FIELD UNITS

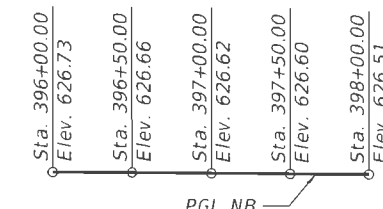
f'_c = 4,000 psi (superstructure)
 f'_c = 3,500 psi (substructure)
 f_y = 60,000 psi (reinforcement)
 f_y = 50,000 psi (M270 Grade 50) (girders)
 f_y = 36,000 psi (M270 Grade 36) (cross frames)
 f_y = 36,000 psi (M270 Grade 36) (bearings)

SEISMIC DATA

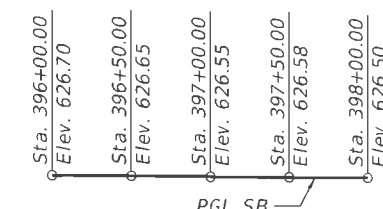
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.074g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.129g
Soil Site Class = C



LOCATION SKETCH

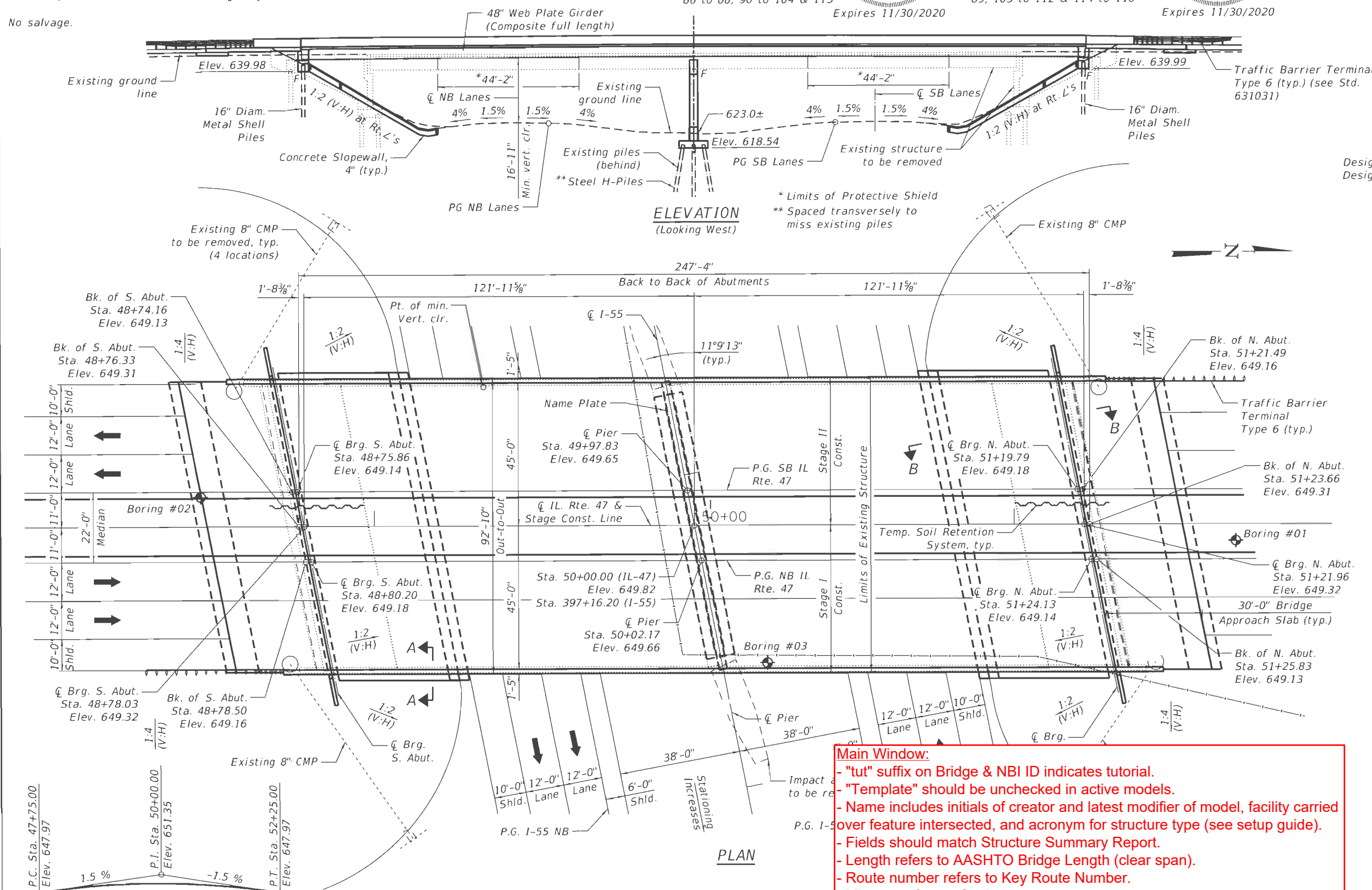


I-55 NB PROFILE GRADE



I-55 SB PROFILE GRADE

GENERAL PLAN & ELEVATION
ILLINOIS ROUTE 47 OVER I-55
F.A.I.-55 SEC [(32-3)HB-1]HBK
GRUNDY COUNTY
STA. 50+00.00
STRUCTURE NO. 032-0125



Main Window:

- "tut" suffix on Bridge & NBI ID indicates tutorial.
- "Template" should be unchecked in active models.
- Name includes initials of creator and latest modifier of model, facility carried over feature intersected, and acronym for structure type (see setup guide).
- Fields should match Structure Summary Report.
- Length refers to AASHTO Bridge Length (clear span).
- Route number refers to Key Route Number.
- Mi. post refers to Station.
- Fill in remaining tabs if info is available.

HRG PROJECT NO.: 032025-66H5.00.goe.dgn
HRG PROJ. CONTACT: JANDREWS
FILE NAME: 032025-66H5.00.goe.dgn
PLOT DRIVER: JANDREWS
PEN TABLE: JANDREWS



USER NAME = jandrews
PLOT SCALE =
PLOT DATE = 11/11/2020

DESIGNED - JA
CHECKED - BT & WAO
DRAWN - JA
CHECKED - 11/3/20

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

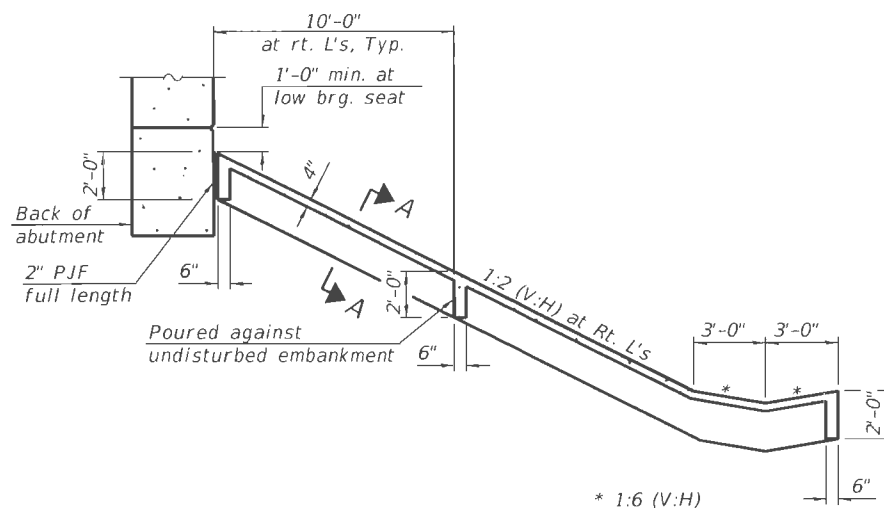
GENERAL PLAN AND ELEVATION
STRUCTURE NO. 032-0125

SHEET NO. 1 OF 31 SHEETS

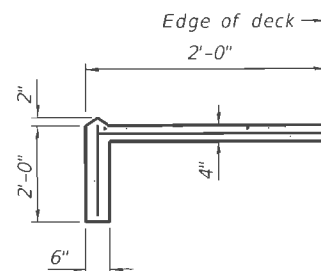
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	[(32-3) HB-1] HBK	GRUNDY	173	86
CONTRACT NO. 66H15				
ILLINOIS FED. AID PROJECT				

1. General Plan and Elevation
2. General Notes, Index of Sheets & Total Bill of Material
3. Stage Construction Details
4. Footing Layout and Temporary Soil Retention System
5. Temporary Concrete Barrier for Stage Construction
6. Top of Deck Elevations - I
7. Top of Deck Elevations - II
8. Top of Deck Elevations - III
9. Top of Deck Elevations - IV
10. Top of Approach Slab Elevations
11. Superstructure - I
12. Superstructure - II
13. Superstructure Details
14. Diaphragm Details
15. Approach Slab Details - I
16. Approach Slab Details - II
17. Framing Plan and Steel Girder Elevation
18. Structural Steel Details
19. Bearings Details
20. South Abutment
21. South Abutment Details
22. North Abutment
23. North Abutment Details
24. Pier
25. Pier
26. Metal Shell Pile Details
27. HP Pile Details
28. Bar Splicer Assembly and Mechanical Splicer Details
29. Soil Boring Logs
30. Soil Boring Logs
31. Soil Boring Logs

Abut.	Abutment	E.F.	Each Face	SE	Southeast
@	At	Elev.	Elevation	Shldr.	Shoulder
B.F.	Back Face	Exist.	Existing	Spa.	Spaces
Bk.	Back	Exp.	Expansion	Std.	Standard
Brg.	Bearing	F.F.	Front Face	Sta.	Station
Btw.	Between	Max.	Maximum	SW	Southwest
CL	Centerline	Min.	Minimum	Typ.	Typical
Clr.	Clearance	N.	North	U.N.O.	Unless Noted Otherwise
Cts.	Centers	NE	Northeast	Vert.	Vertical
Const.	Construction	No.	Number	W.	West
Ø	Diameter	Pt.	Point		
E.	East	S.	South		



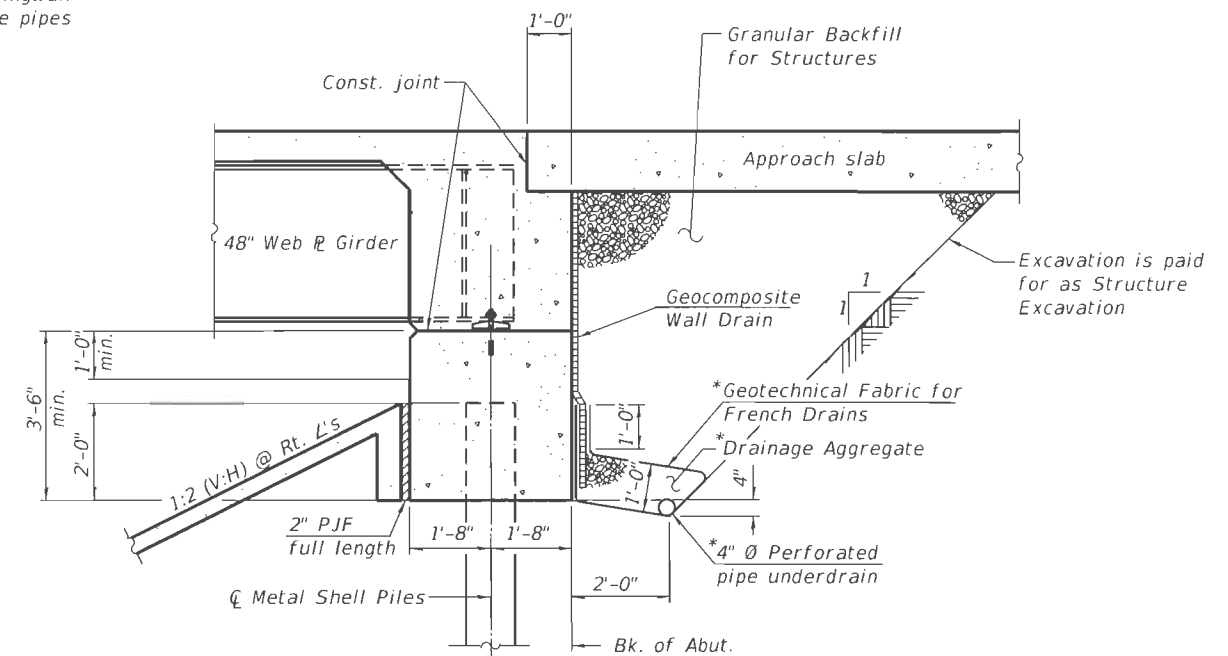
1. Fasteners shall be ASTM F1325 Grade A325 Type 1, mechanically galvanized bolts. Bolts $\frac{1}{8}$ in., holes $\frac{1}{16}$ in., unless otherwise noted.
2. Calculated weight of structural steel = 30,520 lb (ASTM M270 Gr. 36)
= 792,950 lb (AASHTO M270 Gr. 50)
3. No field welding is permitted except as specified in the contract documents.
4. Reinforcement bars designated (E) shall be epoxy coated.
5. If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(B) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.
6. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ in. (0.01 ft). Adjustment shall be made either by grinding the surface or by shimming the bearings.
7. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
8. The Organic Zinc Rich Primer/Epoxy/Urethane Paint System shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that the exterior surfaces and the bottom of the bottom flange of fascia beams, masked off connections surfaces, field installed fasteners, and damaged areas shall be touched up and finished coated in the field. The color of the final finished coat for all the interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finished coat for the exterior and bottom flange of the fascia beams shall be Interstate Green, Munsell No. 7.5G 4/8.



STATION 50+00.00
BUILT 202_ BY
STATE OF ILLINOIS
FAI-55
SEC. [(32-3)HB-1]HBK
LOADING HL-93
STRUCTURE NO. 032-0125

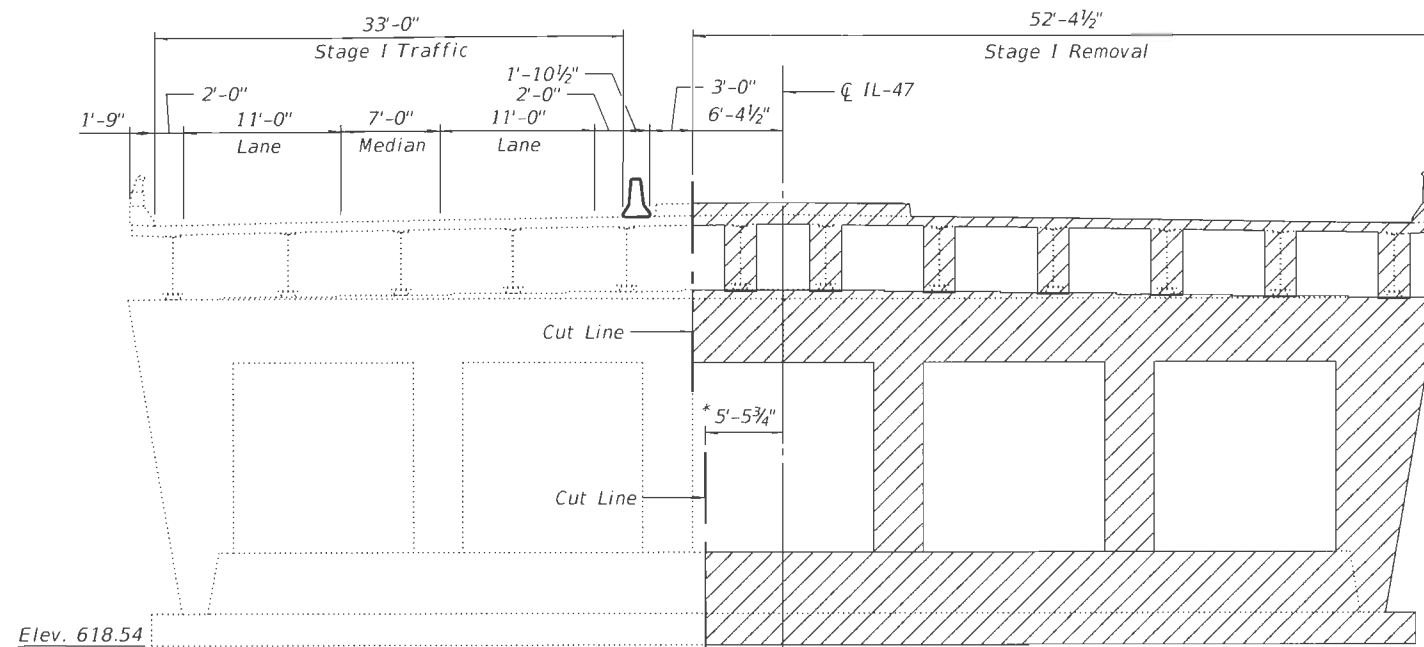
See Std. 515001-04

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures	Each	1		1
Slope Wall Removal	Sq Yd		583	583
Protective Shield	Sq Yd		844	844
Structure Excavation	Cu Yd		805	805
Concrete Structures	Cu Yd	57.3	330.2	387.5
Concrete Superstructure	Cu Yd	870.7		870.7
Bridge Deck Grooving	Sq Yd	2,261		2,261
Protective Coat	Sq Yd	3,338		3,338
Concrete Superstructure (Approach Slab)	Cu Yd	255.9		255.9
Furnishing and Erecting Structural Steel	L Sum	1		1
Stud Shear Connectors	Each	7,164		7,164
Reinforcement Bars, Epoxy Coated	Pound	309,180	58,490	367,670
Bar Splicers	Each	1,184		1,184
Slope Wall 4 Inch	Sq Yd		970	970
Furnishing Metal Shell Piles 16" x 0.375"	Foot		1,199	1,199
Furnishing Steel Piles HP12x53	Foot		2,450	2,450
Driving Piles	Foot		3,649	3,649
Test Pile Metal Shells	Each		2	2
Test Pile Steel HP12x53	Each		1	1
Pile Shoes	Each		24	24
Name Plates	Each		1	1
Anchor Bolts, 1"	Each		48	48
Anchor Bolts, 1½"	Each		24	24
Temporary Soil Retention System	Sq Ft		628	628
Granular Backfill For Structures	Cu Yd		490	490
Geocomposite Wall Drain	Sq Yd		171	171
Pipe Underdrains For Structures 4"	Foot		206	206



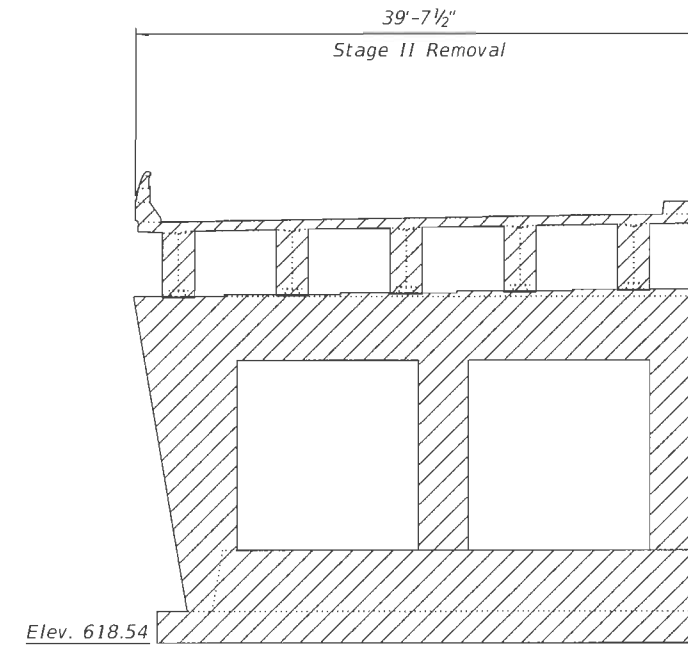
(Horiz. dim. @ Rt. L 's)

* Included in the cost of Pipe Underdrains for Structures (See Special Provisions)

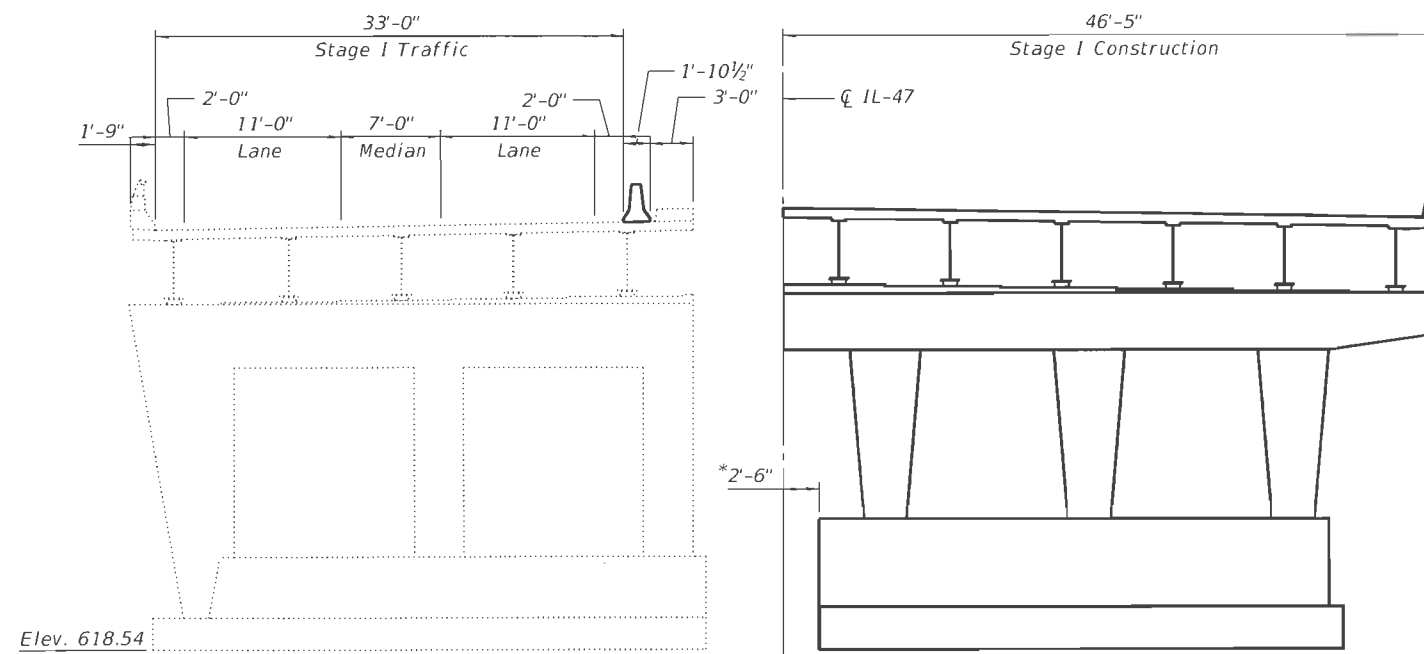


STAGE I REMOVAL

* Parallel to CL Pier

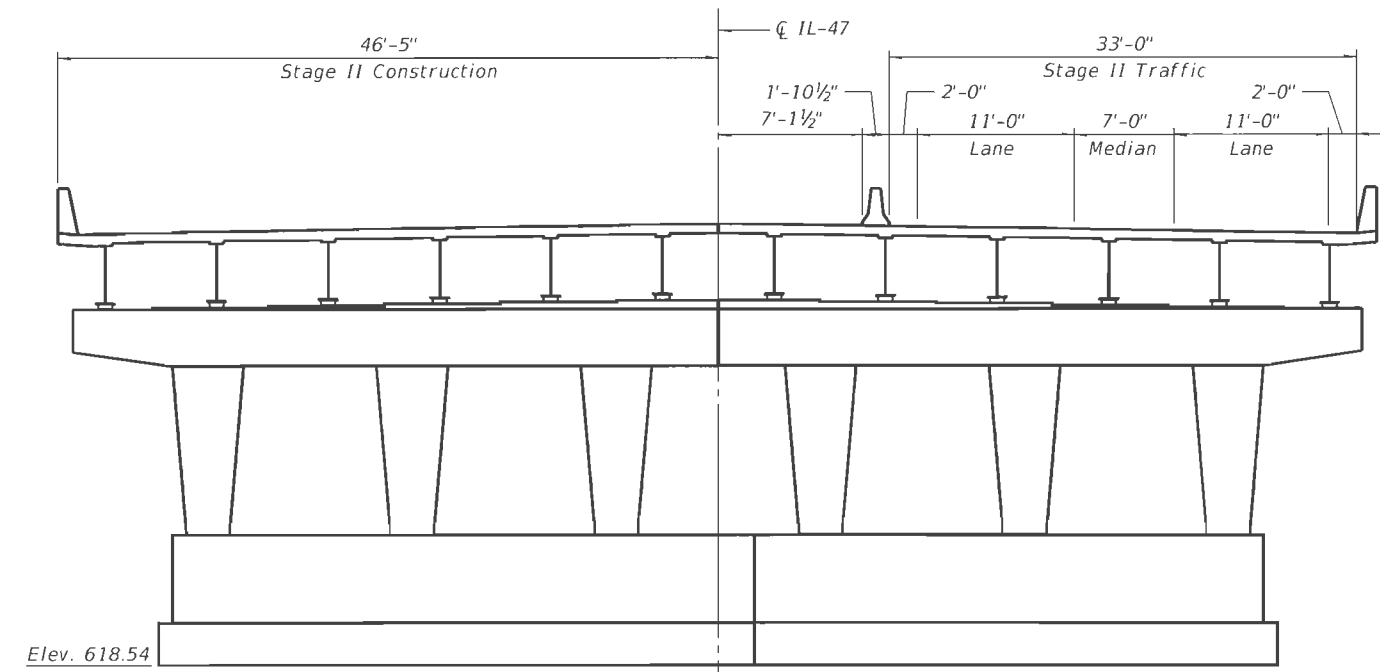


STAGE II REMOVAL



STAGE I CONSTRUCTION

* Parallel to CL Pier



STAGE II CONSTRUCTION

Notes:
All cross sections shown looking North along IL. Rte. 47.
All dimensions shown perpendicular to centerline of roadway, U.N.O.

HRG PROJECT NO.: 032025-66H15
HRG PROJ. CONTACT: J. J. J. J.
FILE NAME: 032025-66H15_001.srfconst.dgn
PLOT DRIVER: PLOT.DRV
PEN TABLE: PEN.TAB



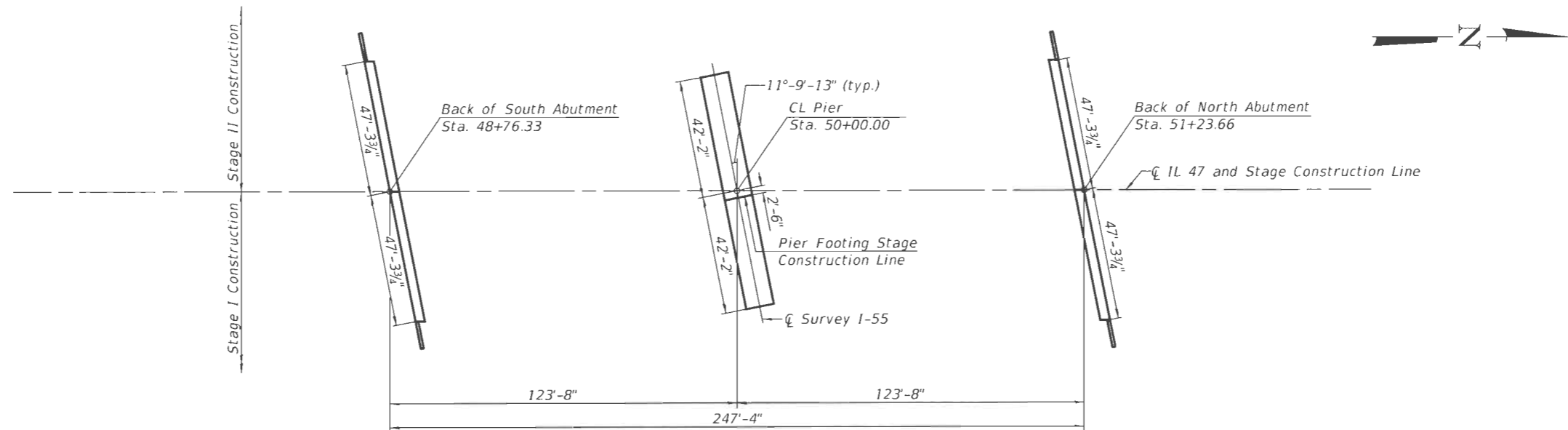
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	CHECKED - BT & WAO	REVISED -
PLOT SCALE =	DRAWN - JA	REVISED -
PLOT DATE = 11/12/2020	CHECKED - 11/3/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

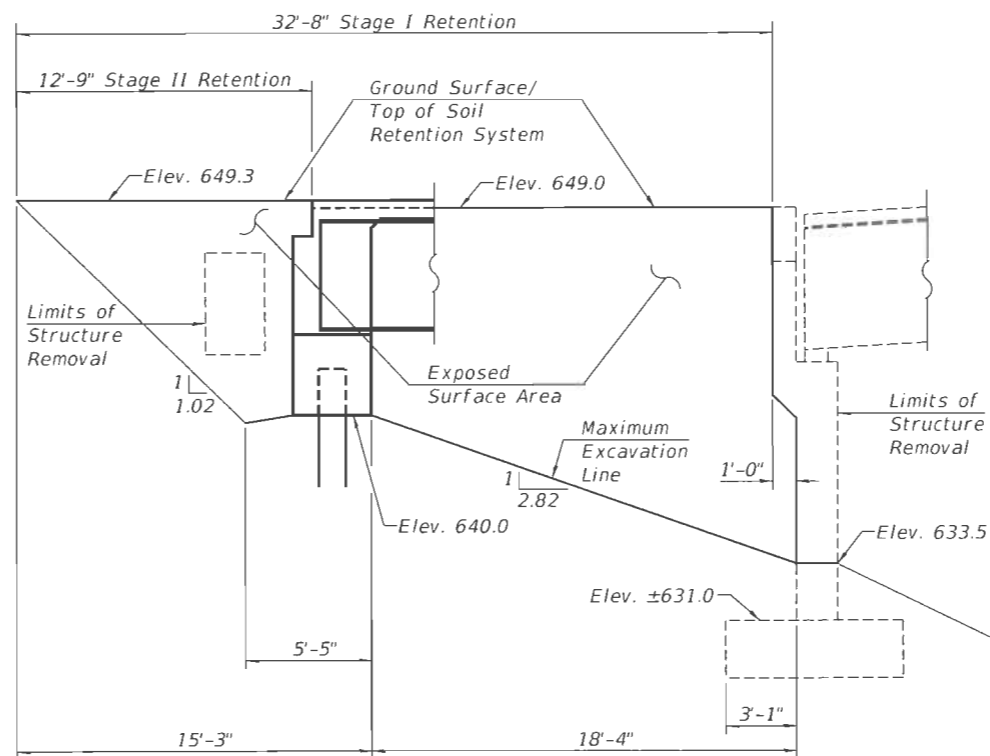
STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 032-0125

SHEET NO. 3 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	[(32-3) HB-1] HBK	GRUNDY	173	88
CONTRACT NO. 66H15				
ILLINOIS FED. AID PROJECT				



FOOTING LAYOUT



TEMPORARY SOIL RETENTION SYSTEM

South Abutment Shown - North Abutment Similar

A cantilevered sheet piling design does not appear feasible. An additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

All horizontal dimensions are given along stage removal line.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Temporary Soil Retention System	SQ FT	628

MODEL: \$MODELNAME\$
FILE NAME: 014363 - 153 and IL 47 Interchange (Bloom-DOE) 03/11/2020 15:46:11 304-Footing Layout & Temp Retention.dgn

Hutchison Engineering, Inc.
Jacksonville-Moline-Peoria-Shorewood
Since 1945

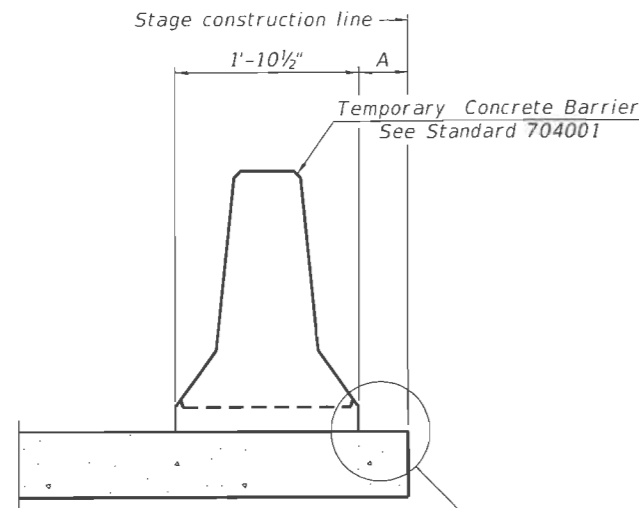
USER NAME = BNebel	DESIGNED - BAN	REVISED -
	CHECKED - ZL	REVISED -
PLOT SCALE =	DRAWN - JCW	REVISED -
PLOT DATE = 11/11/2020	CHECKED - BAN/ZL	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOOTING LAYOUT & TEMPORARY SOIL RETENTION SYSTEM
STRUCTURE NO. 032-0125

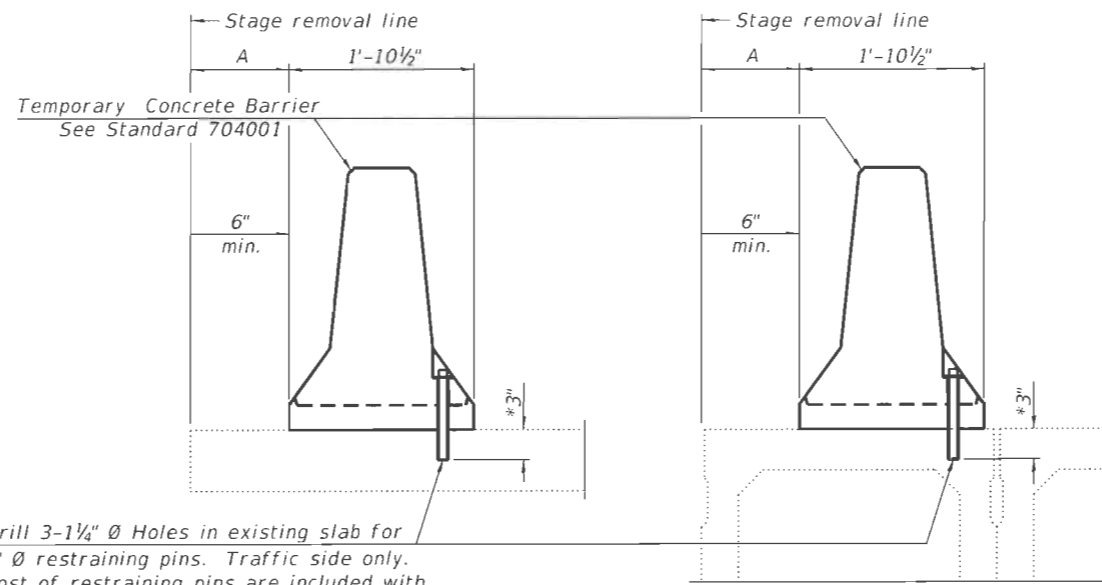
SHEET 4 OF 31 SHEETS

FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	[(32-3)HB-1]HBK	GRUNDY	173	89
CONTRACT NO. 66H15				
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

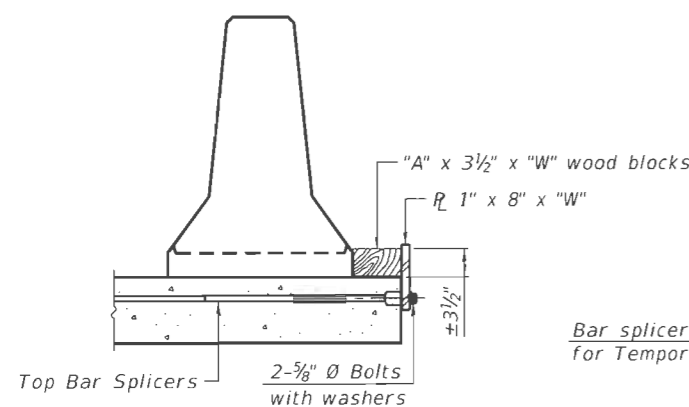


Drill 3-1 1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

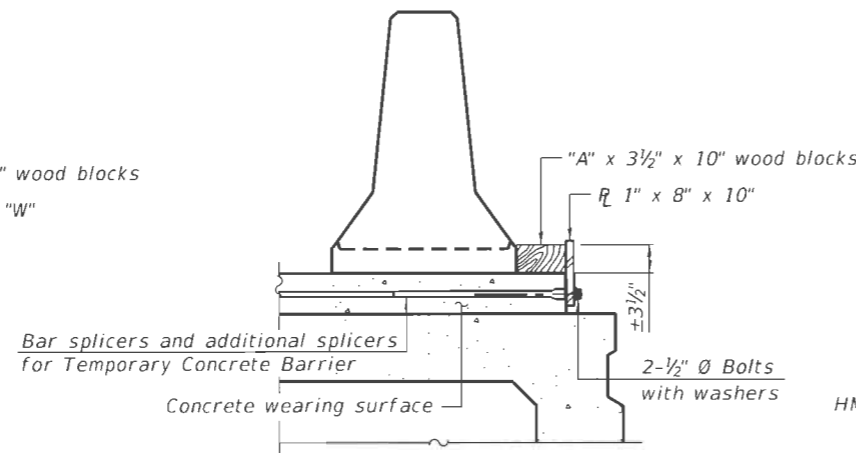
EXISTING SLAB

EXISTING DECK BEAM

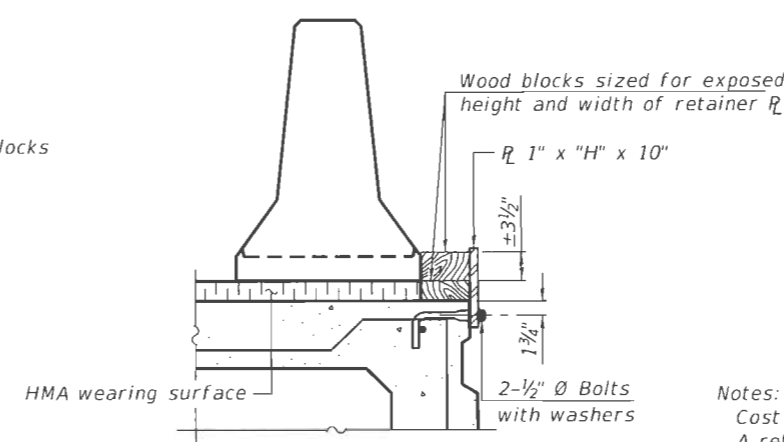
SECTIONS THRU SLAB OR DECK BEAM



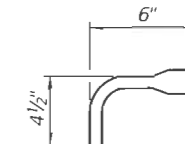
DETAIL I



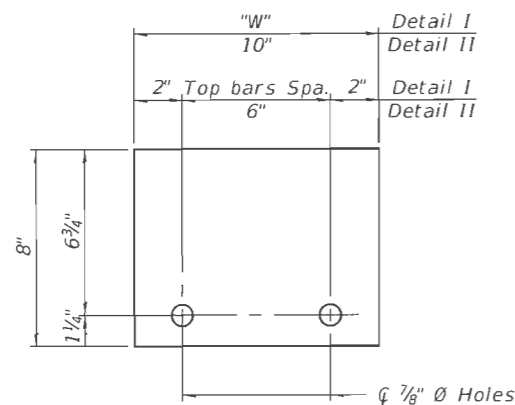
DETAIL II



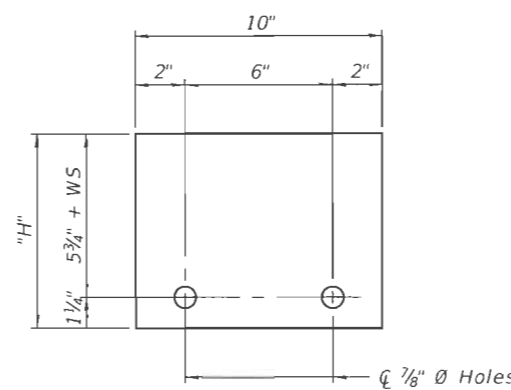
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER R 1" x 8" x "W"
(Detail I and II)



STEEL RETAINER R 1" x "H" x 10"
(Detail III)

Notes:
Cost of retainer assembly is included with Temporary Concrete Barrier.
A retainer assembly shall be located at the approximate $\frac{1}{2}$ 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 1 1/2", 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.

HRG PROJECT NO.: 032025-66H15.005-bar-dgn
HRG PROJ. CONTACT: BLOOM COMPANIES, LLC
FILE NAME: 032025-66H15.005-bar-dgn
PLOT DRIVER: BLOOM COMPANIES, LLC
PEN TABLE: BLOOM COMPANIES, LLC

R-27

2-17-2017



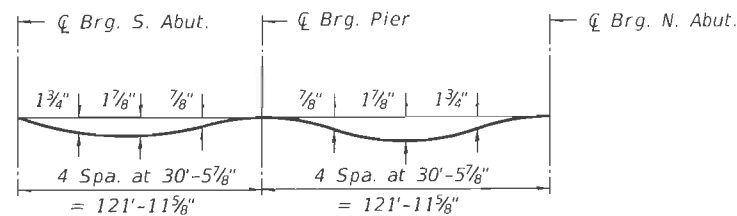
USER NAME = jandrews	DESIGNED - JA	REVISED -
CHECKED - BT & WAO	CHECKED - BT & WAO	REVISED -
PLOT SCALE =	DRAWN - JA	REVISED -
PLOT DATE = 11/11/2020	CHECKED - 11/3/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 032-0125

SHEET NO. 5 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	[(132-3) HB-13 H&K	GRUNDY	173	90
CONTRACT NO. 66H15				
ILLINOIS FED. AID PROJECT				

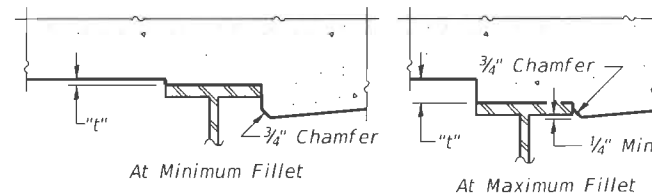


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

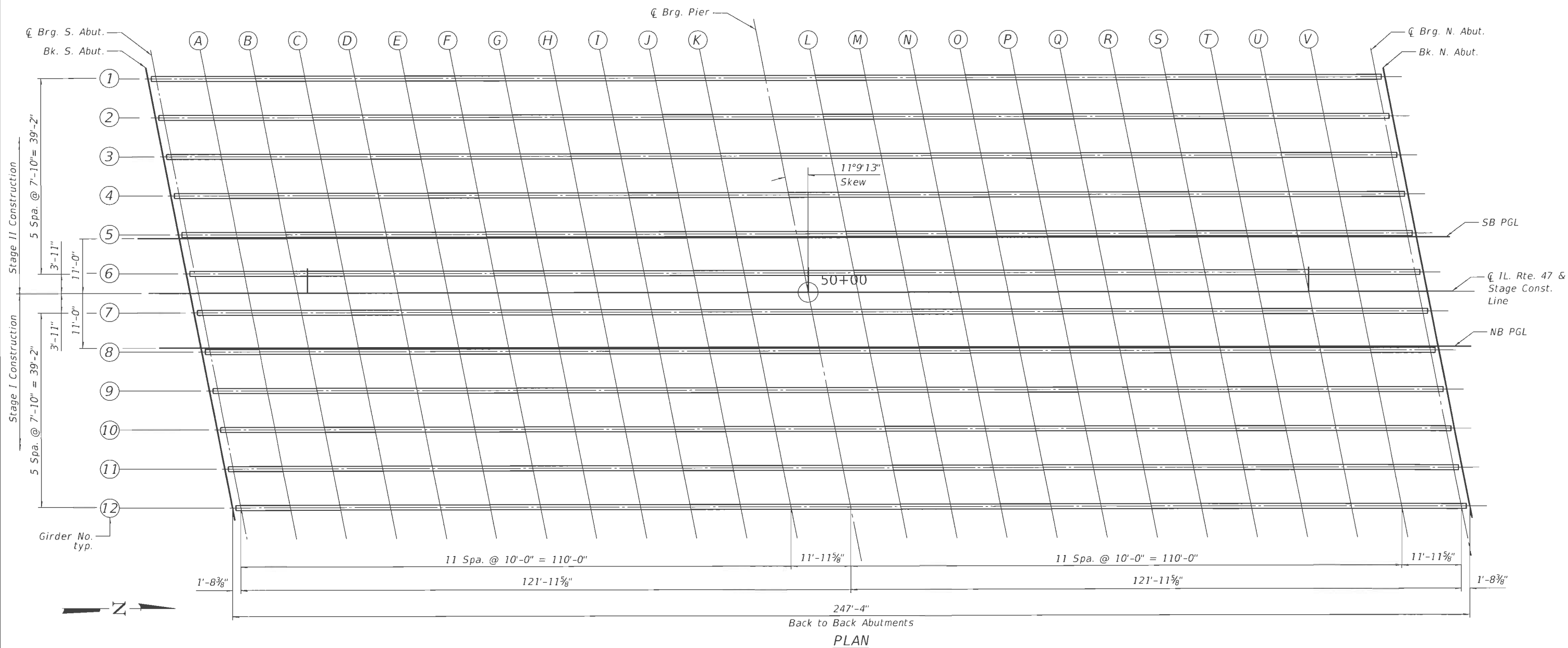
Note:

The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on Sheets 7 to 9.



To determine "l": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on Sheets 7 to 9, minus slab thickness, equals the fillet heights "l" above top flange of beams.

FILLET HEIGHTS



HRG PROJECT NO.: 032023-66H5.005.elevation.dgn
HRG PROJ. CONTACT: JANDREWS
FILE NAME: 032023-66H5.005.elevation.dgn
PLOT DRIVER: JANDREWS
PEN TABLE: JANDREWS



USER NAME : jandrews	DESIGNED - JA	REVISED -
CHECKED - BT & WAO	REVISOR -	
PLOT SCALE :	DRAWN - JA	REVISED -
PLOT DATE : 11/19/2020	CHECKED - 11/3/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF DECK ELEVATIONS - I
STRUCTURE NO. 032-0125

SHEET NO. 6 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	[(32-3) HB-1] HBK	GRUNDY	173	91
CONTRACT NO. 66H15				
ILLINOIS FED. AID PROJECT				

GIRDER 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	48+67.84	32.083	648.55	648.55
☒ Brg. S. Abut.	48+69.54	32.083	648.57	648.57
A	48+79.54	32.083	648.65	648.71
B	48+89.54	32.083	648.73	648.85
C	48+99.54	32.083	648.80	648.96
D	49+09.54	32.083	648.86	649.05
E	49+19.54	32.083	648.92	649.11
F	49+29.54	32.083	648.97	649.15
G	49+39.54	32.083	649.01	649.17
H	49+49.54	32.083	649.05	649.17
I	49+59.54	32.083	649.08	649.16
J	49+69.54	32.083	649.10	649.15
K	49+79.54	32.083	649.12	649.14
☒ Brg. Pier	49+91.51	32.083	649.13	649.13
L	50+01.51	32.083	649.14	649.15
M	50+11.51	32.083	649.13	649.17
N	50+21.51	32.083	649.12	649.20
O	50+31.51	32.083	649.10	649.22
P	50+41.51	32.083	649.08	649.23
Q	50+51.51	32.083	649.05	649.23
R	50+61.51	32.083	649.01	649.20
S	50+71.51	32.083	648.97	649.15
T	50+81.51	32.083	648.91	649.08
U	50+91.51	32.083	648.86	648.98
V	51+01.51	32.083	648.79	648.87
☒ Brg. N. Abut.	51+13.47	32.083	648.71	648.71
Bk. N. Abut.	51+15.17	32.083	648.69	648.69

GIRDER 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	48+69.38	24.250	648.72	648.72
☒ Brg. S. Abut.	48+71.08	24.250	648.74	648.74
A	48+81.08	24.250	648.82	648.89
B	48+91.08	24.250	648.90	649.02
C	49+01.08	24.250	648.97	649.13
D	49+11.08	24.250	649.03	649.22
E	49+21.08	24.250	649.08	649.29
F	49+31.08	24.250	649.13	649.33
G	49+41.08	24.250	649.18	649.34
H	49+51.08	24.250	649.21	649.34
I	49+61.08	24.250	649.24	649.33
J	49+71.08	24.250	649.26	649.31
K	49+81.08	24.250	649.28	649.30
☒ Brg. Pier	49+93.05	24.250	649.29	649.29
L	50+03.05	24.250	649.29	649.30
M	50+13.05	24.250	649.29	649.33
N	50+23.05	24.250	649.28	649.35
O	50+33.05	24.250	649.26	649.38
P	50+43.05	24.250	649.23	649.39
Q	50+53.05	24.250	649.20	649.39
R	50+63.05	24.250	649.16	649.36
S	50+73.05	24.250	649.12	649.31
T	50+83.05	24.250	649.06	649.24
U	50+93.05	24.250	649.00	649.14
V	51+03.05	24.250	648.94	649.02
☒ Brg. N. Abut.	51+15.02	24.250	648.85	648.85
Bk. N. Abut.	51+16.72	24.250	648.84	648.84

GIRDER 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	48+70.93	16.417	648.86	648.86
☒ Brg. S. Abut.	48+72.63	16.417	648.87	648.87
A	48+82.63	16.417	648.95	649.02
B	48+92.63	16.417	649.03	649.15
C	49+02.63	16.417	649.09	649.26
D	49+12.63	16.417	649.16	649.35
E	49+22.63	16.417	649.21	649.42
F	49+32.63	16.417	649.26	649.46
G	49+42.63	16.417	649.30	649.47
H	49+52.63	16.417	649.34	649.47
I	49+62.63	16.417	649.36	649.45
J	49+72.63	16.417	649.39	649.43
K	49+82.63	16.417	649.40	649.42
☒ Brg. Pier	49+94.59	16.417	649.41	649.41
L	50+04.59	16.417	649.41	649.42
M	50+14.59	16.417	649.40	649.45
N	50+24.59	16.417	649.39	649.47
O	50+34.59	16.417	649.37	649.49
P	50+44.59	16.417	649.35	649.51
Q	50+54.59	16.417	649.31	649.50
R	50+64.59	16.417	649.27	649.48
S	50+74.59	16.417	649.23	649.42
T	50+84.59	16.417	649.17	649.35
U	50+94.59	16.417	649.11	649.25
V	51+04.59	16.417	649.05	649.13
☒ Brg. N. Abut.	51+16.56	16.417	648.96	648.96
Bk. N. Abut.	51+18.26	16.417	648.95	648.95

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	48+72.47	8.583	648.99	648.99
☒ Brg. S. Abut.	48+74.17	8.583	649.00	649.00
A	48+84.17	8.583	649.08	649.15
B	48+94.17	8.583	649.15	649.28
C	49+04.17	8.583	649.22	649.39
D	49+14.17	8.583	649.28	649.48
E	49+24.17	8.583	649.34	649.54
F	49+34.17	8.583	649.38	649.58
G	49+44.17	8.583	649.42	649.59
H	49+54.17	8.583	649.46	649.59
I	49+64.17	8.583	649.49	649.57
J	49+74.17	8.583	649.51	649.55
K	49+84.17	8.583	649.52	649.54
☒ Brg. Pier	49+96.14	8.583	649.53	649.53
L	50+06.14	8.583	649.53	649.54
M	50+16.14	8.583	649.52	649.56
N	50+26.14	8.583	649.51	649.59
O	50+36.14	8.583	649.49	649.61
P	50+46.14	8.583	649.46	649.62
Q	50+56.14	8.583	649.42	649.61
R	50+66.14	8.583	649.38	649.59
S	50+76.14	8.583	649.34	649.53
T	50+86.14	8.583	649.28	649.46
U	50+96.14	8.583	649.22	649.36
V	51+06.14	8.583	649.15	649.23
☒ Brg. N. Abut.	51+18.11	8.583	649.06	649.06
Bk. N. Abut.	51+19.81	8.583	649.05	649.05

GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	48+74.02	0.75	649.12	649.12
☒ Brg. S. Abut.	48+75.71	0.75	649.13	649.13
A	48+85.71	0.75	649.21	649.28
B	48+95.71	0.75	649.28	649.41
C	49+05.71	0.75	649.35	649.52
D	49+15.71	0.75	649.41	649.61
E	49+25.71	0.75	649.46	649.67
F	49+35.71	0.75	649.51	649.70
G	49+45.71	0.75	649.55	649.72
H	49+55.71	0.75	649.58	649.71
I	49+65.71	0.75	649.61	649.69
J	49+75.71	0.75	649.63	649.67
K	49+85.71	0.75	649.64	649.66
☒ Brg. Pier	49+97.68	0.75	649.65	649.65
L	50+07.68	0.75	649.64	649.66
M	50+17.68	0.75	649.64	649.68
N	50+27.68	0.75	649.62	649.70
O	50+37.68	0.75	649.60	649.72
P	50+47.68	0.75	649.57	649.73
Q	50+57.68	0.75	649.54	649.73
R	50+67.68	0.75	649.49	649.70
S	50+77.68	0.75	649.45	649.64
T	50+87.68	0.75	649.39	649.57
U	50+97.68	0.75	649.33	649.46
V	51+07.68	0.75	649.26	649.34
☒ Brg. N. Abut.	51+19.65	0.75	649.17	649.17
Bk. N. Abut.	51+21.35	0.75	649.16	649.16

SB PGL

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	48+74.16	0.00	649.13	649.13
☒ Brg. S. Abut.	48+75.86	0.00	649.14	649.14
A	48+85.86	0.00	649.22	649.29
B	48+95.86	0.00	649.30	649.42
C	49+05.86	0.00	649.36	649.53
D	49+15.86	0.00	649.42	649.62
E	49+25.86	0.00	649.47	649.68
F	49+35.86	0.00	649.52	649.72
G	49+45.86	0.00	649.56	649.73
H	49+55.86	0.00	649.59	649.72
I	49+65.86	0.00	649.62	649.71
J	49+75.86	0.00	649.64	649.69
K	49+85.86	0.00	649.65	649.67
☒ Brg. Pier	49+97.83	0.00	649.66	649.66
L	50+07.83	0.00	649.66	649.67
M	50+17.83	0.00	649.65	649.69
N	50+27.83	0.00	649.63	649.71
O	50+37.83	0.00	649.61	649.73
P	50+47.83	0.00	649.58	649.74
Q	50+57.83	0.00	649.55	649.74
R	50+67.83	0.00	649.50	649.71
S	50+77.83	0.00	649.46	649.65
T	50+87.83	0.00	649.40	649.58
U	50+97.83	0.00	649.34	649.47
V	51+07.83	0.00	649.27	649.35
☒ Brg. N. Abut.	51+19.80	0.00	649.18	649.18
Bk. N. Abut.	51+21.50	0.00	649.17	649.17

PROJECT NO.: 032025-66H15
FILE NAME: 032025-66H15_007.dwg
PLOT DRIVER: PLOT.DRV
PEN TABLE: PEN.TAB



USER NAME = jendrews	DESIGNED - JA	REVISED -
	CHECKED - BT & WAO	REVISED -
PLOT SCALE =	DRAWN - JA	REVISED -
PLOT DATE = 11/11/2020	CHECKED - 11/3/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF DECK ELEVATIONS - II
STRUCTURE NO. 032-0125

SHEET NO. 7 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	[(32-3) HB-1] HBK	GRUNDY	173	92
CONTRACT NO. 66H15				
ILLINOIS FED. AID PROJECT				

GIRDER 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	48+75.56	-7.083	649.25	649.25
☒ Brg. S. Abut.	48+77.26	-7.083	649.26	649.26
A	48+87.26	-7.083	649.34	649.41
B	48+97.26	-7.083	649.41	649.54
C	49+07.26	-7.083	649.48	649.65
D	49+17.26	-7.083	649.54	649.73
E	49+27.26	-7.083	649.59	649.79
F	49+37.26	-7.083	649.63	649.83
G	49+47.26	-7.083	649.67	649.84
H	49+57.26	-7.083	649.70	649.83
I	49+67.26	-7.083	649.73	649.82
J	49+77.26	-7.083	649.75	649.79
K	49+87.26	-7.083	649.76	649.77
☒ Brg. Pier	49+99.23	-7.083	649.76	649.76
L	50+09.23	-7.083	649.76	649.77
M	50+19.23	-7.083	649.75	649.79
N	50+29.23	-7.083	649.74	649.81
O	50+39.23	-7.083	649.71	649.83
P	50+49.23	-7.083	649.68	649.84
Q	50+59.23	-7.083	649.65	649.84
R	50+69.23	-7.083	649.60	649.81
S	50+79.23	-7.083	649.55	649.75
T	50+89.23	-7.083	649.50	649.67
U	50+99.23	-7.083	649.44	649.57
V	51+09.23	-7.083	649.37	649.45
☒ Brg. N. Abut.	51+21.20	-7.083	649.27	649.27
Bk. N. Abut.	51+22.90	-7.083	649.26	649.26

STAGE CONSTRUCTION LINE/☒ IL-47

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	48+76.33	±11.00	649.31	649.31
☒ Brg. S. Abut.	48+78.03	±11.00	649.33	649.33
A	48+88.03	±11.00	649.40	649.47
B	48+98.03	±11.00	649.48	649.60
C	49+08.03	±11.00	649.54	649.71
D	49+18.03	±11.00	649.60	649.79
E	49+28.03	±11.00	649.65	649.86
F	49+38.03	±11.00	649.69	649.89
G	49+48.03	±11.00	649.73	649.90
H	49+58.03	±11.00	649.76	649.89
I	49+68.03	±11.00	649.79	649.88
J	49+78.03	±11.00	649.81	649.85
K	49+88.03	±11.00	649.82	649.83
☒ Brg. Pier	50+00.00	±11.00	649.82	649.82
L	50+10.00	±11.00	649.82	649.83
M	50+20.00	±11.00	649.81	649.85
N	50+30.00	±11.00	649.79	649.87
O	50+40.00	±11.00	649.77	649.89
P	50+50.00	±11.00	649.74	649.90
Q	50+60.00	±11.00	649.70	649.89
R	50+70.00	±11.00	649.66	649.86
S	50+80.00	±11.00	649.61	649.81
T	50+90.00	±11.00	649.55	649.73
U	51+00.00	±11.00	649.49	649.63
V	51+10.00	±11.00	649.42	649.50
☒ Brg. N. Abut.	51+21.97	±11.00	649.33	649.33
Bk. N. Abut.	51+23.67	±11.00	649.31	649.31

GIRDER 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	48+77.10	-7.083	649.26	649.26
☒ Brg. S. Abut.	48+78.80	-7.083	649.27	649.27
A	48+88.80	-7.083	649.35	649.42
B	48+98.80	-7.083	649.42	649.55
C	49+08.80	-7.083	649.49	649.66
D	49+18.80	-7.083	649.54	649.74
E	49+28.80	-7.083	649.59	649.80
F	49+38.80	-7.083	649.64	649.83
G	49+48.80	-7.083	649.68	649.84
H	49+58.80	-7.083	649.71	649.84
I	49+68.80	-7.083	649.73	649.82
J	49+78.80	-7.083	649.75	649.80
K	49+88.80	-7.083	649.76	649.78
☒ Brg. Pier	50+00.77	-7.083	649.76	649.76
L	50+10.77	-7.083	649.76	649.77
M	50+20.77	-7.083	649.75	649.79
N	50+30.77	-7.083	649.73	649.81
O	50+40.77	-7.083	649.71	649.83
P	50+50.77	-7.083	649.68	649.84
Q	50+60.77	-7.083	649.64	649.83
R	50+70.77	-7.083	649.60	649.80
S	50+80.77	-7.083	649.55	649.75
T	50+90.77	-7.083	649.49	649.67
U	51+00.77	-7.083	649.43	649.56
V	51+10.77	-7.083	649.36	649.43
☒ Brg. N. Abut.	51+22.74	-7.083	649.26	649.26
Bk. N. Abut.	51+24.44	-7.083	649.25	649.25

NB PGL

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	48+78.50	0.00	649.17	649.17
☒ Brg. S. Abut.	48+80.20	0.00	649.18	649.18
A	48+90.20	0.00	649.25	649.32
B	49+00.20	0.00	649.32	649.45
C	49+10.20	0.00	649.39	649.56
D	49+20.20	0.00	649.44	649.64
E	49+30.20	0.00	649.49	649.70
F	49+40.20	0.00	649.54	649.73
G	49+50.20	0.00	649.57	649.74
H	49+60.20	0.00	649.60	649.73
I	49+70.20	0.00	649.63	649.72
J	49+80.20	0.00	649.64	649.69
K	49+90.20	0.00	649.65	649.67
☒ Brg. Pier	50+02.17	0.00	649.66	649.66
L	50+12.17	0.00	649.65	649.67
M	50+22.17	0.00	649.64	649.68
N	50+32.17	0.00	649.62	649.70
O	50+42.17	0.00	649.60	649.72
P	50+52.17	0.00	649.57	649.73
Q	50+62.17	0.00	649.53	649.72
R	50+72.17	0.00	649.48	649.69
S	50+82.17	0.00	649.43	649.63
T	50+92.17	0.00	649.37	649.55
U	51+02.17	0.00	649.31	649.45
V	51+12.17	0.00	649.24	649.32
☒ Brg. N. Abut.	51+24.14	0.00	649.14	649.14
Bk. N. Abut.	51+25.84	0.00	649.13	649.13

GIRDER 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	48+78.65	0.75	649.15	649.15
☒ Brg. S. Abut.	48+80.35	0.75	649.17	649.17
A	48+90.35	0.75	649.25	649.31
B	49+00.35	0.75	649.31	649.44
C	49+10.35	0.75	649.38	649.55
D	49+20.35	0.75	649.43	649.63
E	49+30.35	0.75	649.48	649.69
F	49+40.35	0.75	649.53	649.72
G	49+50.35	0.75	649.56	649.73
H	49+60.35	0.75	649.59	649.72
I	49+70.35	0.75	649.62	649.70
J	49+80.35	0.75	649.63	649.68
K	49+90.35	0.75	649.64	649.66
☒ Brg. Pier	50+02.32	0.75	649.65	649.65
L	50+12.32	0.75	649.64	649.65
M	50+22.32	0.75	649.63	649.67
N	50+32.32	0.75	649.61	649.69
O	50+42.32	0.75	649.59	649.71
P	50+52.32	0.75	649.56	649.72
Q	50+62.32	0.75	649.52	649.71
R	50+72.32	0.75	649.47	649.68
S	50+82.32	0.75	649.42	649.62
T	50+92.32	0.75	649.36	649.54
U	51+02.32	0.75	649.30	649.43
V	51+12.32	0.75	649.23	649.31
☒ Brg. N. Abut.	51+24.29	0.75	649.13	649.13
Bk. N. Abut.	51+25.98	0.75	649.12	649.12

GIRDER 9

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	48+80.19	8.583	649.05	649.05
☒ Brg. S. Abut.	48+81.89	8.583	649.06	649.06
A	48+91.89	8.583	649.14	649.21
B	49+01.89	8.583	649.21	649.33
C	49+11.89	8.583	649.27	649.44
D	49+21.89	8.583	649.32	649.52
E	49+31.89	8.583	649.37	649.58
F	49+41.89	8.583	649.42	649.61
G	49+51.89	8.583	649.45	649.62
H	49+61.89	8.583	649.48	649.61
I	49+71.89	8.583	649.50	649.59
J	49+81.89	8.583	649.52	649.57
K	49+91.89	8.583	649.53	649.54
☒ Brg. Pier	50+03.86	8.583	649.53	649.53
L	50+13.86	8.583	649.52	649.53
M	50+23.86	8.583	649.51	649.55
N	50+33.86	8.583	649.49	649.57
O	50+43.86	8.583	649.46	649.59
P	50+53.86	8.583	649.43	649.59
Q	50+63.86	8.583	649.39	649.58
R	50+73.86	8.583	649.35	649.55
S	50+83.86	8.583	649.29	649.49
T	50+93.86	8.583	649.24	649.41
U	51+03.86	8.583	649.17	649.30
V	51+13.86	8.583	649.10	649.18
☒ Brg. N. Abut.	51+25.83	8.583	649.00	649.00
Bk. N. Abut.	51+27.53	8.583	648.99	648.99

HRG PROJECT NO.: 032023-06H15
HRG PROJ. CONTACT: 032023-06H15.008.dwg
FILE NAME: 032023-06H15.008.dwg
PLOT DRIVER: PLOT1.DWG
PEN TABLE: PEN1.TAB



USER NAME = jandrews
PLOT SCALE =
PLOT DATE = 11/11/2020

DESIGNED - JA
CHECKED - BT & WAO
DRAWN - JA
CHECKED - 11/3/20

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF DECK ELEVATIONS - III
STRUCTURE NO. 032-0125

SHEET NO. 8 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	[(32-3) HB-1] HBK	GRUNDY	173	93
CONTRACT NO. 66H15				
[ILLINOIS] FED. AID PROJECT				

GIRDER 10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	48+81.74	16.417	648.94	648.94
☒ Brg. S. Abut.	48+83.44	16.417	648.96	648.96
A	48+93.44	16.417	649.03	649.10
B	49+03.44	16.417	649.10	649.23
C	49+13.44	16.417	649.16	649.33
D	49+23.44	16.417	649.22	649.41
E	49+33.44	16.417	649.26	649.47
F	49+43.44	16.417	649.30	649.50
G	49+53.44	16.417	649.34	649.51
H	49+63.44	16.417	649.37	649.50
I	49+73.44	16.417	649.39	649.48
J	49+83.44	16.417	649.40	649.45
K	49+93.44	16.417	649.41	649.43
☒ Brg. Pier	50+05.41	16.417	649.41	649.41
L	50+15.41	16.417	649.40	649.42
M	50+25.41	16.417	649.39	649.43
N	50+35.41	16.417	649.37	649.45
O	50+45.41	16.417	649.34	649.46
P	50+55.41	16.417	649.31	649.47
Q	50+65.41	16.417	649.27	649.46
R	50+75.41	16.417	649.22	649.43
S	50+85.41	16.417	649.17	649.37
T	50+95.41	16.417	649.11	649.28
U	51+05.41	16.417	649.04	649.18
V	51+15.41	16.417	648.97	649.05
☒ Brg. N. Abut.	51+27.37	16.417	648.87	648.87
Bk. N. Abut.	51+29.07	16.417	648.86	648.86

GIRDER 11

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	48+83.28	24.25	648.84	648.84
☒ Brg. S. Abut.	48+84.98	24.25	648.85	648.85
A	48+94.98	24.25	648.92	648.99
B	49+04.98	24.25	648.99	649.12
C	49+14.98	24.25	649.05	649.22
D	49+24.98	24.25	649.10	649.30
E	49+34.98	24.25	649.15	649.36
F	49+44.98	24.25	649.19	649.39
G	49+54.98	24.25	649.22	649.39
H	49+64.98	24.25	649.25	649.38
I	49+74.98	24.25	649.27	649.36
J	49+84.98	24.25	649.28	649.33
K	49+94.98	24.25	649.29	649.31
☒ Brg. Pier	50+06.95	24.25	649.29	649.29
L	50+16.95	24.25	649.28	649.30
M	50+26.95	24.25	649.27	649.31
N	50+36.95	24.25	649.25	649.33
O	50+46.95	24.25	649.22	649.34
P	50+56.95	24.25	649.18	649.35
Q	50+66.95	24.25	649.14	649.33
R	50+76.95	24.25	649.10	649.30
S	50+86.95	24.25	649.04	649.24
T	50+96.95	24.25	648.98	649.16
U	51+06.95	24.25	648.91	649.05
V	51+16.95	24.25	648.84	648.92
☒ Brg. N. Abut.	51+28.92	24.25	648.74	648.74
Bk. N. Abut.	51+30.62	24.25	648.72	648.72

GIRDER 12

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	48+84.83	32.083	648.69	648.69
☒ Brg. S. Abut.	48+86.53	32.083	648.71	648.71
A	48+96.53	32.083	648.78	648.84
B	49+06.53	32.083	648.84	648.96
C	49+16.53	32.083	648.90	649.06
D	49+26.53	32.083	648.96	649.14
E	49+36.53	32.083	649.00	649.20
F	49+46.53	32.083	649.04	649.22
G	49+56.53	32.083	649.07	649.23
H	49+66.53	32.083	649.10	649.22
I	49+76.53	32.083	649.12	649.20
J	49+86.53	32.083	649.13	649.18
K	49+96.53	32.083	649.14	649.15
☒ Brg. Pier	50+08.49	32.083	649.13	649.13
L	50+18.49	32.083	649.12	649.14
M	50+28.49	32.083	649.11	649.15
N	50+38.49	32.083	649.09	649.16
O	50+48.49	32.083	649.06	649.17
P	50+58.49	32.083	649.02	649.17
Q	50+68.49	32.083	648.98	649.16
R	50+78.49	32.083	648.93	649.12
S	50+88.49	32.083	648.88	649.06
T	50+98.49	32.083	648.81	648.98
U	51+08.49	32.083	648.74	648.87
V	51+18.49	32.083	648.67	648.74
☒ Brg. N. Abut.	51+30.46	32.083	648.57	648.57
Bk. N. Abut.	51+32.16	32.083	648.55	648.55

HRG PROJECT NO.: 032025-66H15
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FILE NAME: PLOT.DWG
PLOT DRIVER: PLOT.DWG
PEN TABLE: PEN.TAB



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	CHECKED - BT & WAO	REVISED -
PLOT SCALE =	DRAWN - JA	REVISED -
PLOT DATE = 11/11/2020	CHECKED - 11/3/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF DECK ELEVATIONS - IV
STRUCTURE NO. 032-0125

SHEET NO. 9 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	[(32-3) HB-1] HBK	GRUNDY	173	94
CONTRACT NO. 66H15				
ILLINOIS FED. AID PROJECT				

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
S. End of S. Approach	48+38.48	34.00	648.23
A1	48+48.48	34.00	648.33
A2	48+58.48	34.00	648.43
N. End of S. Approach	48+68.48	34.00	648.52
S. End of N. Approach	51+13.78	34.00	648.67
A3	51+23.78	34.00	648.59
A4	51+33.78	34.00	648.50
N. End of N. Approach	51+43.78	34.00	648.41

WEST EDGE OF PAVEMENT

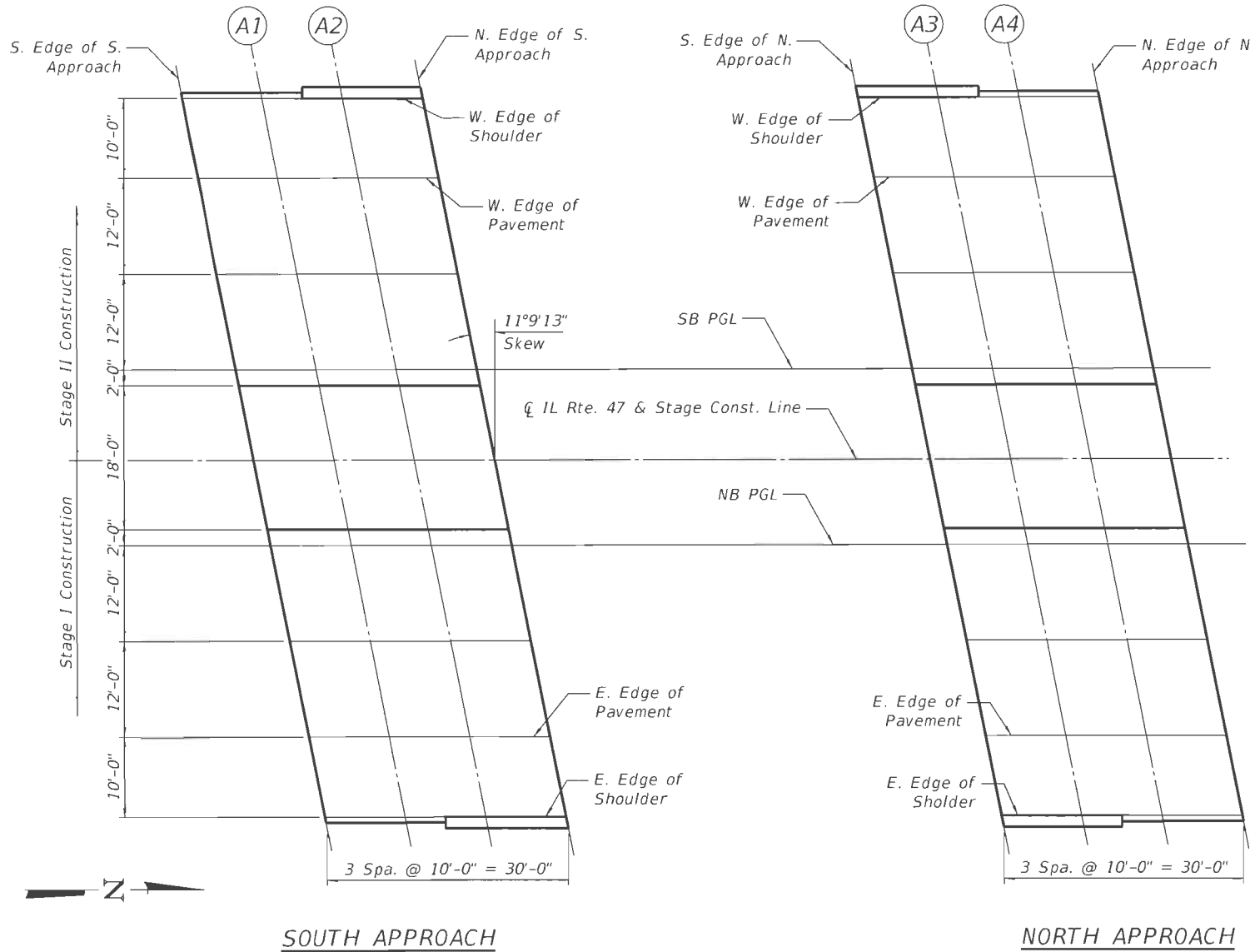
Location	Station	Offset	Theoretical Grade Elevations
S. End of S. Approach	48+40.45	24.00	648.45
A1	48+50.45	24.00	648.55
A2	48+60.45	24.00	648.65
N. End of S. Approach	48+70.45	24.00	648.74
S. End of N. Approach	51+15.75	24.00	648.85
A3	51+25.75	24.00	648.77
A4	51+35.75	24.00	648.68
N. End of N. Approach	51+45.75	24.00	648.59

SB PGL

Location	Station	Offset	Theoretical Grade Elevations
S. End of S. Approach	48+45.18	0.00	648.86
A1	48+55.18	0.00	648.96
A2	48+65.18	0.00	649.05
N. End of S. Approach	48+75.18	0.00	649.14
S. End of N. Approach	51+20.48	0.00	649.17
A3	51+30.48	0.00	649.09
A4	51+40.48	0.00	649.00
N. End of N. Approach	51+50.48	0.00	648.90

STAGE CONSTRUCTION LINE/± IL-47

Location	Station	Offset	Theoretical Grade Elevations
S. End of S. Approach	48+47.35	+/- 11.00	649.05
A1	48+57.35	+/- 11.00	649.14
A2	48+67.35	+/- 11.00	649.24
N. End of S. Approach	48+77.35	+/- 11.00	649.32
S. End of N. Approach	51+22.65	+/- 11.00	649.32
A3	51+32.65	+/- 11.00	649.24
A4	51+42.65	+/- 11.00	649.14
N. End of N. Approach	51+52.65	+/- 11.00	649.05



NB PGL

Location	Station	Offset	Theoretical Grade Elevations
S. End of S. Approach	48+49.52	0.00	648.90
A1	48+59.52	0.00	649.00
A2	48+69.52	0.00	649.09
N. End of S. Approach	48+79.52	0.00	649.17
S. End of N. Approach	51+24.82	0.00	649.14
A3	51+34.82	0.00	649.05
A4	51+44.82	0.00	648.96
N. End of N. Approach	51+54.82	0.00	648.86

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. End of S. Approach	48+54.25	24.00	648.59
A1	48+64.25	24.00	648.68
A2	48+74.25	24.00	648.77
N. End of S. Approach	48+84.25	24.00	648.85
S. End of N. Approach	51+29.55	24.00	648.74
A3	51+39.55	24.00	648.65
A4	51+49.55	24.00	648.55
N. End of N. Approach	51+59.55	24.00	648.45

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
S. End of S. Approach	48+56.37	34.00	648.41
A1	48+66.37	34.00	648.50
A2	48+76.37	34.00	648.59
N. End of S. Approach	48+86.37	34.00	648.67
S. End of N. Approach	51+31.67	34.00	648.52
A3	51+41.67	34.00	648.43
A4	51+51.67	34.00	648.33
N. End of N. Approach	51+61.67	34.00	648.23

HRG PROJECT NO.: 032025-66H5.00, app-relev.dgn
HRG PROJ. CONTACT: BIRGMA
FILE NAME: 032025-66H5.00, app-relev.dgn
PLOT DRIVER: PLOT.DRV
PEN TABLE: PEN.TAB



USER NAME = jendrews	DESIGNED - JA	REVISED -
	CHECKED - BT & WAO	REVISED -
PLOT SCALE =	DRAWN - JA	REVISED -
PLOT DATE = 11/11/2020	CHECKED - 11/3/20	REVISED -

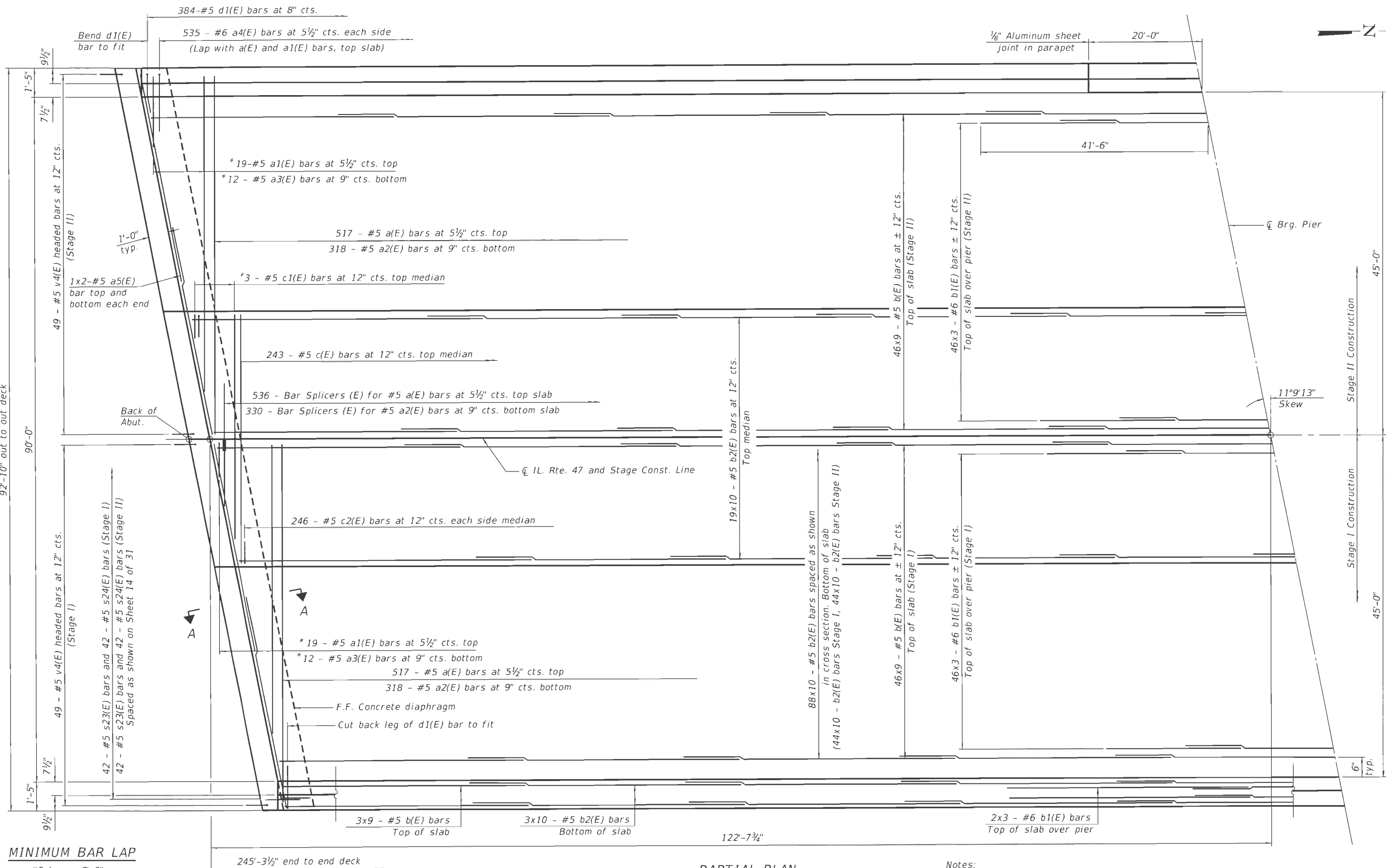
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF APPROACH SLAB ELEVATIONS
STRUCTURE NO. 032-0125

SHEET NO. 10 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	[(32-3) HB-1] HBK	GRUNDY	173	95
CONTRACT NO. 66H15				
ILLINOIS FED. AID PROJECT				

HRC PROJECT NO.: 032025-0125
 HRC PROJ. CONTACT: J. J. J. J.
 FILE NAME: 032025-0125_0125.dgn
 PLOT DRIVER: PLOT.DRV
 PEN TABLE: PEN.TBL



MINIMUM BAR LAP

#5 bar = 3'-6"
 #6 bar = 4'-4"

* See Field Cutting Diagram on sheet 13 of 31.

PARTIAL PLAN

Notes:
 See Sheets 13 & 14 of 31 for superstructure details, Section A-A and Bill of Material.
 See Sheet 12 of 31 for cross section.
 Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.



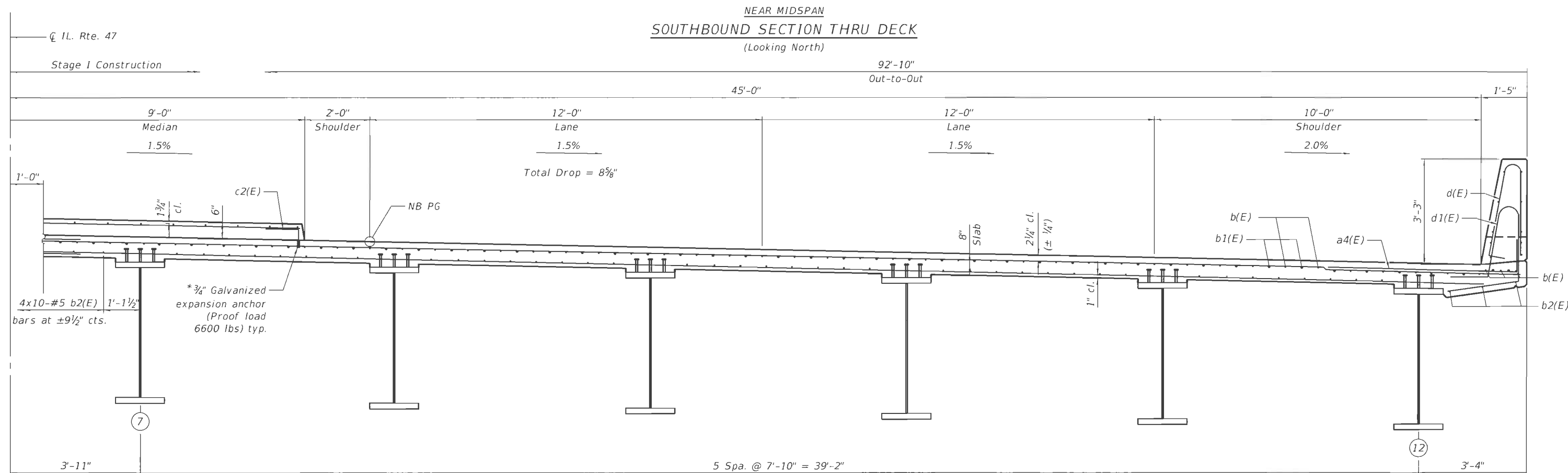
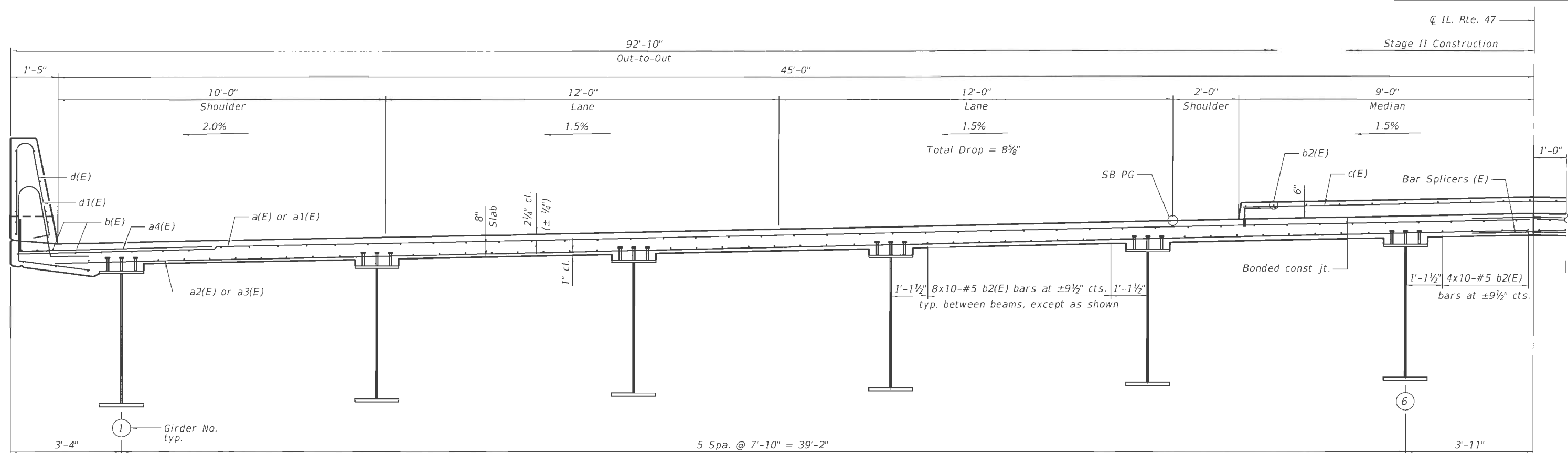
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	CHECKED - BT & WAO	REVISED -
PLOT SCALE :	DRAWN - JA	REVISED -
PLOT DATE : 11/11/2020	CHECKED - 11/3/20	REVISED -

STATE OF ILLINOIS
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SUPERSTRUCTURE - I
 STRUCTURE NO. 032-0125

SHEET NO. 11 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(132-3) HB-11 HBK	GRUNDY	173	96
CONTRACT NO. 66H15				
ILLINOIS FED. AID PROJECT				



* Cost of expansion anchor/inserts is included in the cost of Reinforcement Bars, Epoxy Coated

URG PROJECT NO.: 032-0125
 URG PROJ. CONTACT: 032025-66H15_02_decksec.dgn
 FILE NAME: 032025-66H15_02_decksec.dgn
 PLOT DRIVER: 032025-66H15_02_decksec.dgn
 PEN TABLE: 032025-66H15_02_decksec.dgn



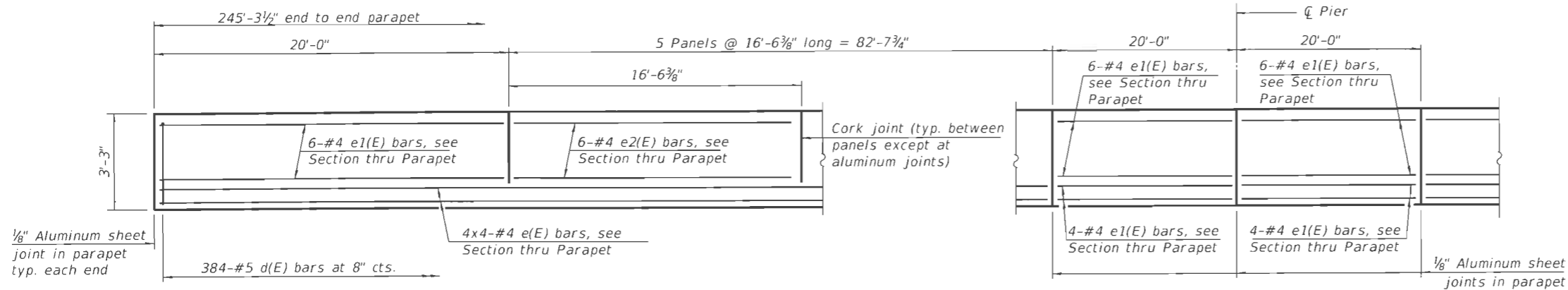
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	CHECKED - BT & WAO	REVISED -
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PLOT DATE = 11/11/2020	CHECKED - 11/3/20	REVISED -

STATE OF ILLINOIS
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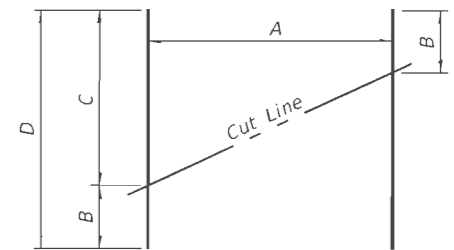
SUPERSTRUCTURE - II
STRUCTURE NO. 032-0125

SHEET NO. 12 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	[(132-3) HB-1] HBK	GRUNDY	173	97
CONTRACT NO. 66H15				
ILLINOIS FED. AID PROJECT				



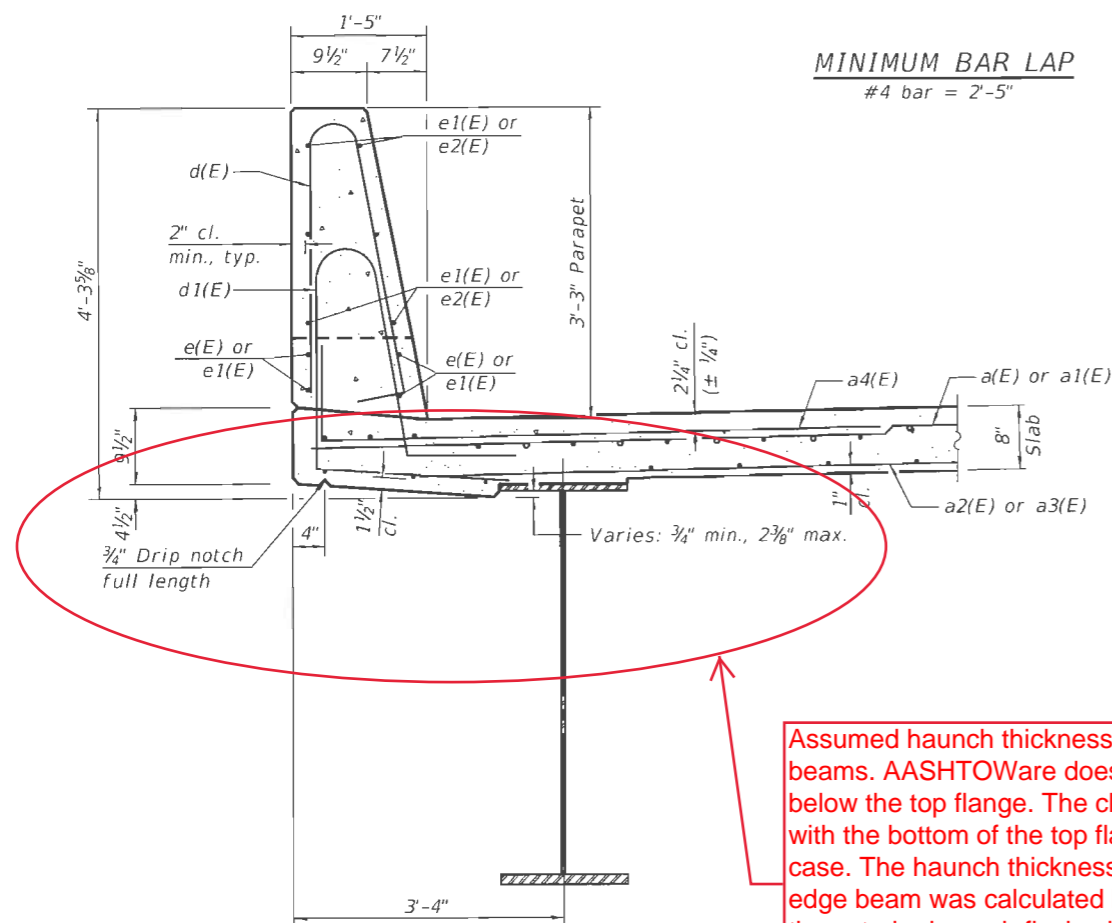
INSIDE ELEVATION OF PARAPET



Location	A	B	C	D
Top of Slab	2 Series of 19 - #5 a1(E) bars	3'-0"	44'-5"	47'-5"
Bottom of Slab	2 Series of 12 - #5 a3(E) bars	3'-0"	44'-5"	47'-5"
Top of Median	1 Series of 3 - #5 c1(E) bars	3'-0"	14'-7"	17'-7"

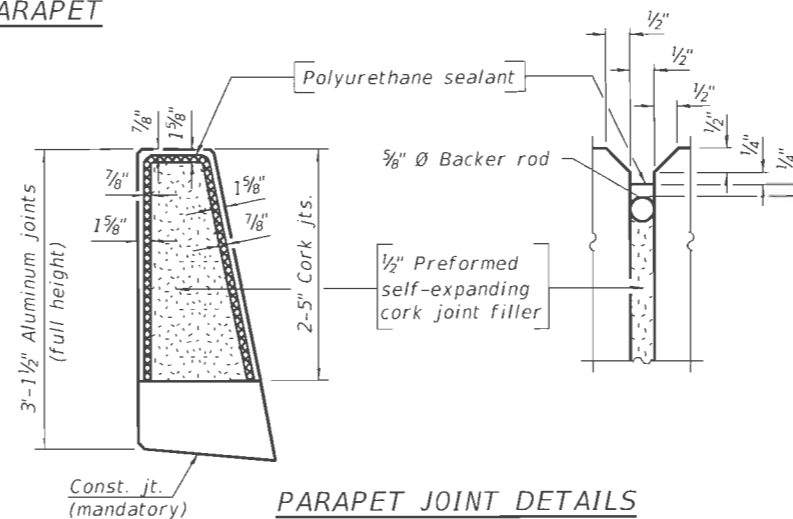
FIELD CUTTING DIAGRAM

Order a1(E), a3(E) and c1(E) bars full length. Cut as shown and use remainder of bars in opposite end of deck.



SECTION THRU PARAPET

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

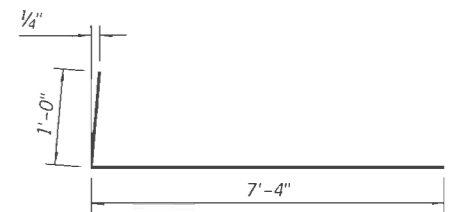
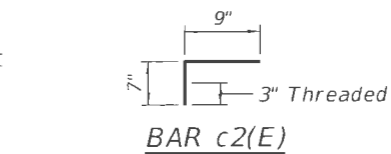


PARAPET JOINT DETAILS

Notes:

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.
The polyurethane sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

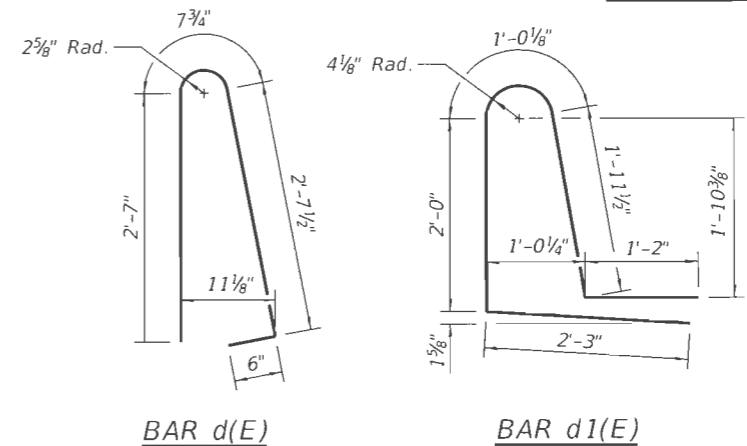
Assumed haunch thickness of 1" used for all interior beams. AASHTOWare does not allow for a haunch to go below the top flange. The closest configuration to flush with the bottom of the top flange is the minimum 3/4" case. The haunch thickness on the interior side of the edge beam was calculated based on the configuration of the exterior haunch flush with the bottom of the top flange, plus the 3/4" minimum overhang. Note: In cases where the haunch is very thick, more refined techniques should be used.



SUPERSTRUCTURE
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	1034	#5	46'-2"	—
a1(E)	38	#5	47'-5"	—
a2(E)	636	#5	45'-2"	—
a3(E)	24	#5	47'-5"	—
a4(E)	1070	#6	8'-4"	—
a5(E)	16	#5	25'-5"	—
b(E)	882	#5	30'-4"	—
b1(E)	288	#6	30'-0"	—
b2(E)	1130	#5	27'-8"	—
c(E)	243	#5	17'-7"	—
c1(E)	3	#5	17'-7"	—
c2(E)	492	#5	1'-4"	—
d(E)	768	#5	6'-4"	—
d1(E)	768	#5	8'-5"	—
e(E)	64	#4	28'-3"	—
e1(E)	64	#4	19'-9"	—
e2(E)	120	#4	16'-3"	—
m(E)	48	#6	26'-1"	—
m1(E)	120	#6	6'-4"	—
m2(E)	24	#6	2'-5"	—
m3(E)	24	#6	3'-0"	—
s23(E)	168	#5	8'-6"	—
s24(E)	168	#5	12'-9"	—
v4(E)	196	#5	3'-1"	—
Reinforcement Bars, Epoxy Coated		Lbs.	198,060	
Concrete Superstructure		Cu. Yds.	842.8	

Bars indicated thus 1 x 2-#8 etc. indicates 1 line of bars with 2 lengths per line.



BAR d(E)

BAR d1(E)

HRG PROJECT NO.: 032025-66H15-01
HRG PROJ. CONTACT: BHRG/MS
FILE NAME: 032025-66H15-01_deckdet.dgn
PLOT DRIVER: SPLT.DRV
PEN TABLE: PEN.TAB



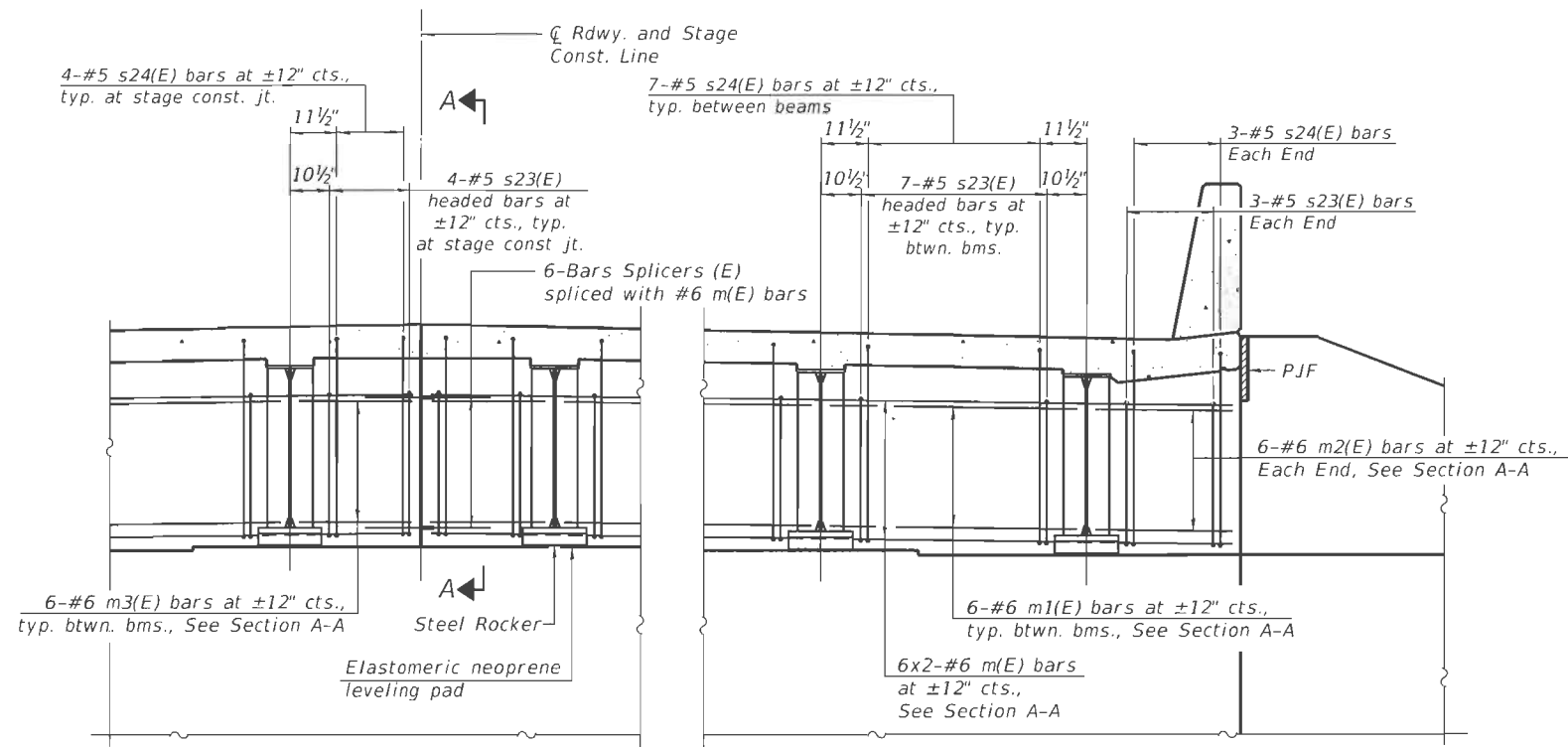
USER NAME: jondreva	DESIGNED: JA	REVISED: -
	CHECKED: BT & WAO	REVISED: -
PLOT SCALE: -	DRAWN: JA	REVISED: -
PLOT DATE: 2/1/2021	CHECKED: 2/1/21	REVISED: -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

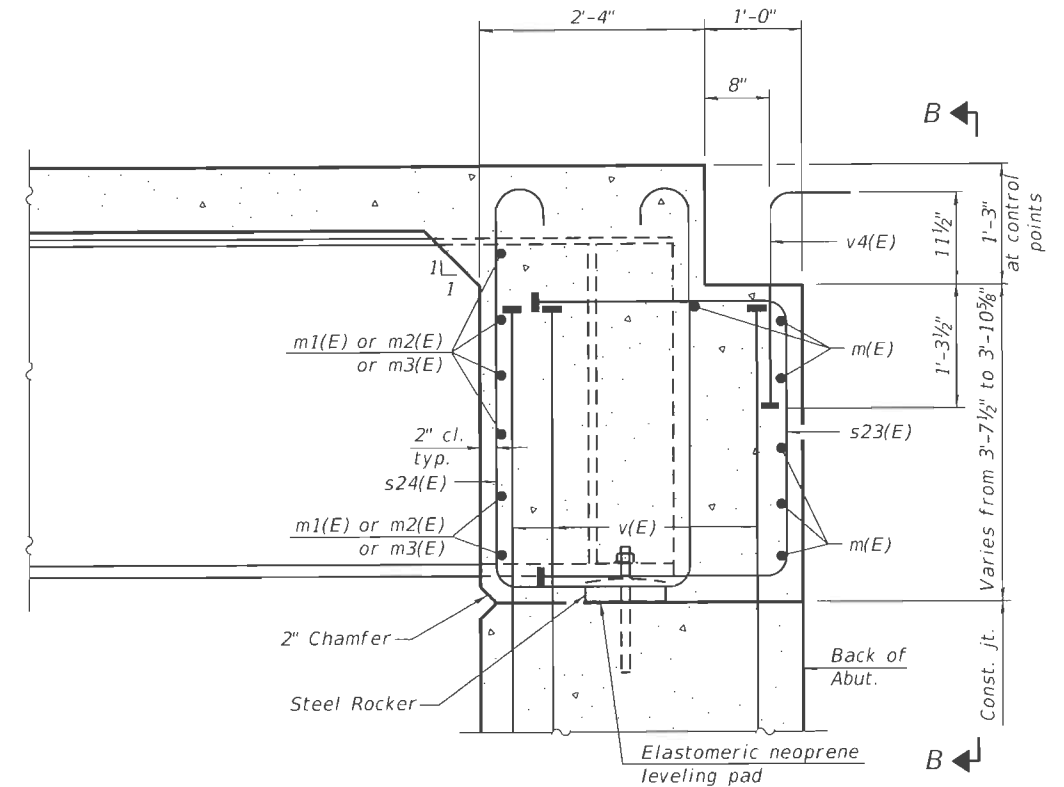
SUPERSTRUCTURE DETAILS
STRUCTURE NO. 032-0125

SHEET NO. 13 OF 31 SHEETS

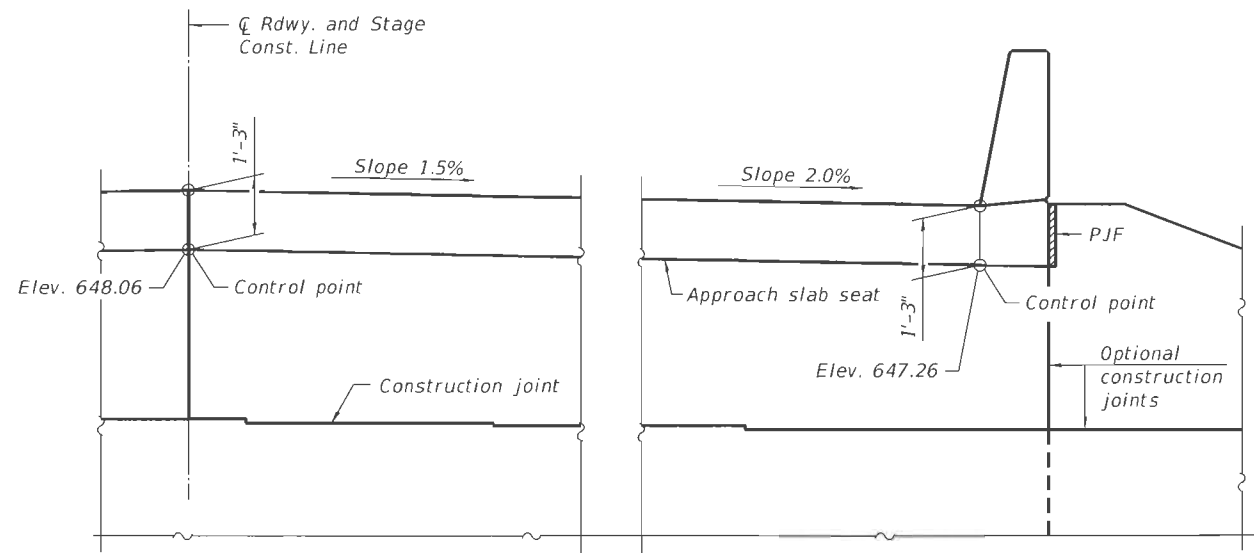
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	[(132-3) HB-1] HBK	GRUNDY	173	98
CONTRACT NO. 66H15				
ILLINOIS FED. AID PROJECT				



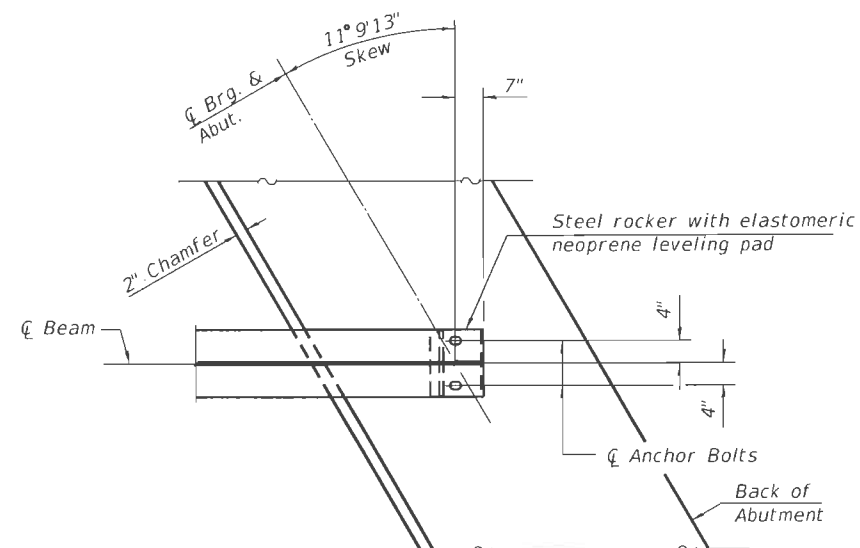
DIAPHRAGM AT ABUTMENT
(Median bars not shown for clarity)



SECTION A-A
(at Rt. L's)



VIEW B-B
(Median bars not shown for clarity)



PLAN AT ABUTMENT
(Showing bottom flange of beam)

Notes:
See sheet 13 of 31 for superstructure details and Bill of Material.
See sheet 15 of 31 for P.J.F. details.
The s23(E) and s24(E) bars shall be placed parallel to the beams.
Spacing for these bars shall be at right angles to the beams.
The approach slab seat shall have a constant slope determined from the control points shown.

HRG PROJECT NO.: 032025-66HIS.04, diaphragm.dgn
FILE NAME: 032025-66HIS.04, diaphragm.dgn
PLOT DRIVER: PEN, TABLE
PEN, TABLE



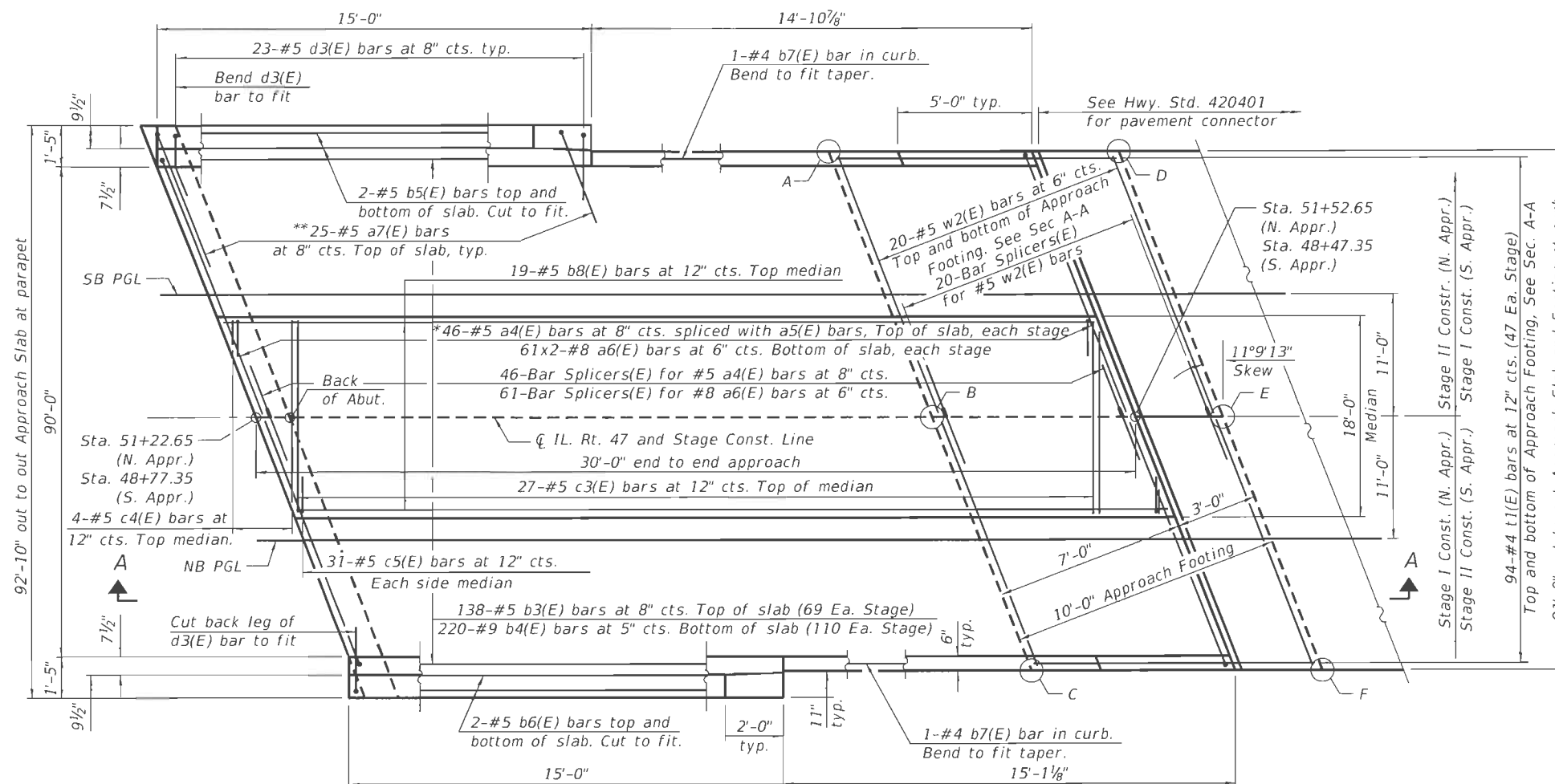
USER NAME : jendraws	DESIGNED - JA	REVISED -
CHECKED - BT & WAO	REVISOR -	
PLOT SCALE :	DRAWN - JA	REVISED -
PLOT DATE : 11/11/2020	CHECKED - 11/3/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIAPHRAGM DETAILS
STRUCTURE NO. 032-0125

SHEET NO. 14 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	[(32-3) HB-1] HBK	GRUNDY	173	99
CONTRACT NO. 66H15				
ILLINOIS FED. AID PROJECT				

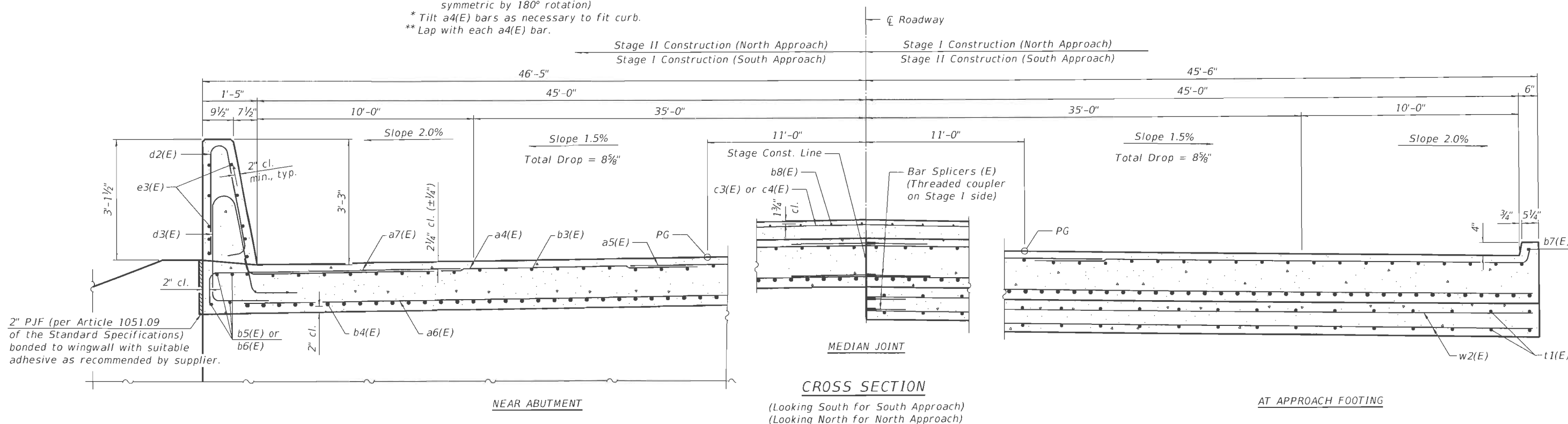


PLAN

(North Approach shown. South Approach symmetric by 180° rotation)
 * Tilt a4(E) bars as necessary to fit curb.
 ** Lap with each a4(E) bar.

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

Point	North Approach		South Approach	
	Top	Bottom	Top	Bottom
A	647.22	646.38	647.22	646.38
B	647.87	647.03	647.87	647.03
C	647.04	646.21	647.04	646.21
D	647.12	646.29	647.12	646.29
E	647.76	646.93	647.76	646.93
F	646.93	646.10	646.93	646.10



CROSS SECTION

(Looking South for South Approach)
 (Looking North for North Approach)

(Sheet 1 of 2)



USER NAME : jandrews
 PLOT SCALE :
 PLOT DATE : 11/12/2020

DESIGNED - JA
 CHECKED - BT & WAO
 DRAWN - JA
 CHECKED - 11/3/20

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

APPROACH SLAB DETAILS - I
 STRUCTURE NO. 032-0125

SHEET NO. 15 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(132-3) HB-1) HBK	GRUNDY	173	100
CONTRACT NO. 66H15				
ILLINOIS FED. AID PROJECT				



* Cost included with Concrete Superstructure (Approach Slab).



(@ Rt. L's)



Order c4(E) bars full length. Cut as shown and use remainder of bars in opposite end of median.



Bar	No.	Size	Length	Shape
a4(E)	184	#5	25'-4"	—
a5(E)	184	#5	24'-10"	—
a6(E)	488	#8	24'-10"	—
a7(E)	100	#5	7'-4"	—
b3(E)	276	#5	29'-8"	—
b4(E)	440	#9	29'-8"	—
b5(E)	8	#5	14'-6"	—
b6(E)	8	#5	15'-0"	—
b7(E)	4	#4	15'-0"	—
b8(E)	38	#5	29'-9"	—
c3(E)	54	#5	17'-7"	—
c4(E)	8	#5	19'-4"	—
c5(E)	124	#5	1'-4"	—
d2(E)	94	#5	6'-5"	—
d3(E)	94	#5	8'-6"	—
e3(E)	40	#4	14'-9"	—
t1(E)	376	#4	10'-0"	—
w2(E)	320	#5	24'-10"	—
Concrete Superstructure			Cu. Yd.	27.9
Concrete Superstructure (Approach Slab)			Cu. Yd.	255.
Concrete Structures			Cu. Yd.	57.3
Reinforcement Bars, Epoxy Coated			Pound	111,1

Notes:

Notes:
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.

Parapet concrete shall be paid for as Concrete Superstructure.

Approach slab shall be paid for as Concrete Superstructure (Approach Slab).

Approach footing concrete shall be paid for as Concrete Structures.

The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.

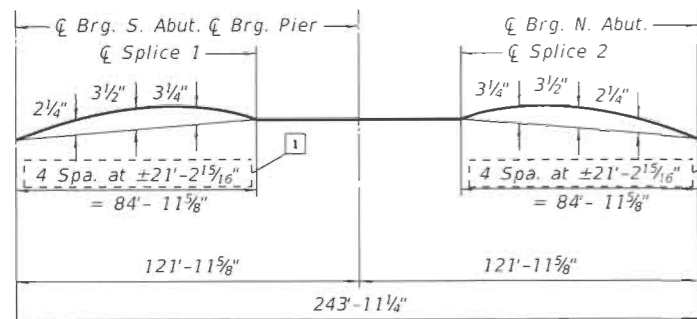
Cost of excavation for approach footing included with Concrete Structures.

For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 31.

(Sheet 2 of 2)

INTERIOR GIRDER MOMENT TABLE			
	0.4 Sp. 1 or 0.6 Sp. 2	Pier	
I_s	(in ⁴)	25305	53265
$I_c(n)$	(in ⁴)	65361	-
$I_c(3n)$	(in ⁴)	48165	-
$I_c(cr)$	(in ⁴)	-	60079
S_s	(in ³)	1111	2039
$S_c(n)$	(in ³)	1521	-
$S_c(3n)$	(in ³)	1401	-
$S_c(cr)$	(in ³)	-	2123
DC1	(k/')	1.05	1.22
MDC1	(k)	969	2649
DC2	(k/')	0.2	0.2
MDC2	(k)	188.3	434.7
DW	(k/')	0.3	0.3
MDW	(k)	280	645.6
LLDF		0.599	0.599
$M_L + IM$	(k)	1811.1	2271.4
M_u (Strength I)	(k)	5036.1	8798
$\phi_f M_n$	(k)	-	9761
f_s DC1	(ksi)	10.5	15.6
f_s DC2	(ksi)	1.6	2.5
f_s DW	(ksi)	2.4	3.6
f_s (L+IM)	(ksi)	14.3	12.8
f_s (Service II)	(ksi)	33.1	38.4
0.95Rh Fyf	(ksi)	47.5	47.5
f_s (Total)(Strength I)	(ksi)	43.8	50.4
$\phi_f F_n$	(ksi)	-	-
Vf	(k)	29.3	39.6

INTERIOR GIRDER REACTION TABLE				
	Abut.		Pier	
	Interior	Exterior	Interior	Exterior
LLDF	0.83	0.83	0.83	0.83
OCF	-	-	-	-
RDC1 (k)	52.8	52.8	176.0	176.0
RDC2 (k)	9.2	9.2	31.9	31.9
RDW (k)	17.2	17.2	57.2	57.2
$R_L + IM$ (k)	89.9	89.9	181.7	181.7
RTotal (k)	169.1	169.1	446.8	446.8



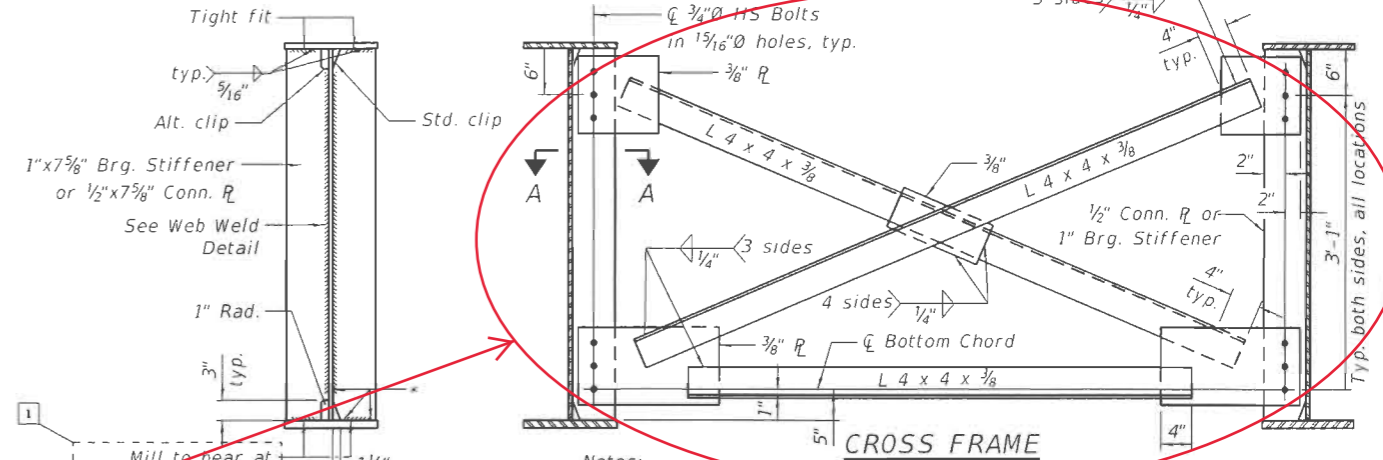
CAMBER DIAGRAM

TOP OF WEB ELEVATIONS
(For fabrication only)

Location	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5	Girder 6	Girder 7	Girder 8	Girder 9	Girder 10	Girder 11	Girder 12
Q Brg. S. Abut.	647.77	647.94	648.07	648.20	648.33	648.46	648.47	648.37	648.26	648.16	648.05	647.90
Q Splice 1	648.07	648.23	648.35	648.47	648.59	648.72	648.72	648.61	648.49	648.38	648.26	648.11
Q Pier	648.09	648.25	648.36	648.48	648.60	648.72	648.72	648.60	648.48	648.36	648.25	648.09
Q Splice 2	648.11	648.26	648.38	648.49	648.61	648.72	648.72	648.59	648.47	648.35	648.23	648.07
Q Brg. N. Abut.	647.91	648.05	648.16	648.26	648.37	648.47	648.46	648.33	648.20	648.07	647.94	647.77

- I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) 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-Strength I, and Service II) in uncracked sections 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-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in.⁴ and in.³).
- $I_c(cr), S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in.⁴ and in.³).
- DC1: Un-factored non-composite dead load (kips/ft.).
- MDC1: Un-factored composite dead load (kips/ft.).
- DC2: Un-factored composite dead load (kips/ft.).
- MDC2: Un-factored composite dead load (kips/ft.).
- DW: Un-factored dead load (kips/ft.).
- MDW: Un-factored dead load (kips/ft.).
- $M_L + IM$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
- M_u (Strength I): Factored design moment (kip-ft.).
- 1.25 (MDC1 + MDC2) + 1.5 MDW + 1.75 $M_L + IM$
- $\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft.).
- f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
- MDC1/ S_{nc}
- f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
- MDC2/ $S_c(3n)$ or MDC2/ $S_c(cr)$ as applicable.
- f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
- MDW/ $S_c(3n)$ or MDW/ $S_c(cr)$ as applicable.
- f_s (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
- $M_L + IM$ / $S_c(n)$ or $M_L + IM$ / $S_c(cr)$ as applicable.
- f_s (Service II): Sum of stresses as computed below (ksi).
- f_s DC1 + f_s DC2 + f_s DW + 1.3 f_s (L+IM)
- 0.95RhFyf: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).
- f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
- 1.25 (f_s DC1 + f_s DC2) + 1.5 f_s DW + 1.75 f_s (L+IM)
- $\phi_f F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).
- Vf: Maximum factored shear range in span computed according to Article 6.10.10.

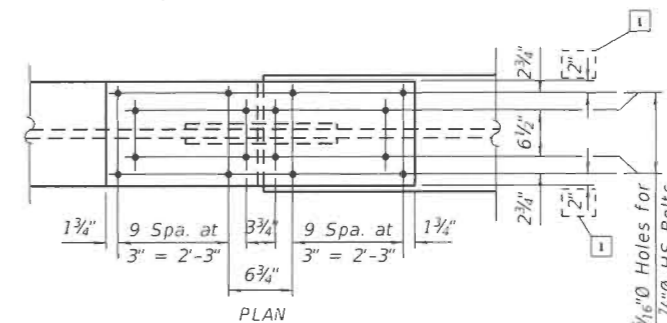
Cross-frame locations with weights should be defined in the framing plan. However, cross-frame definitions are not necessary for non-curved bridges since they are a secondary member that is not included in the rating.



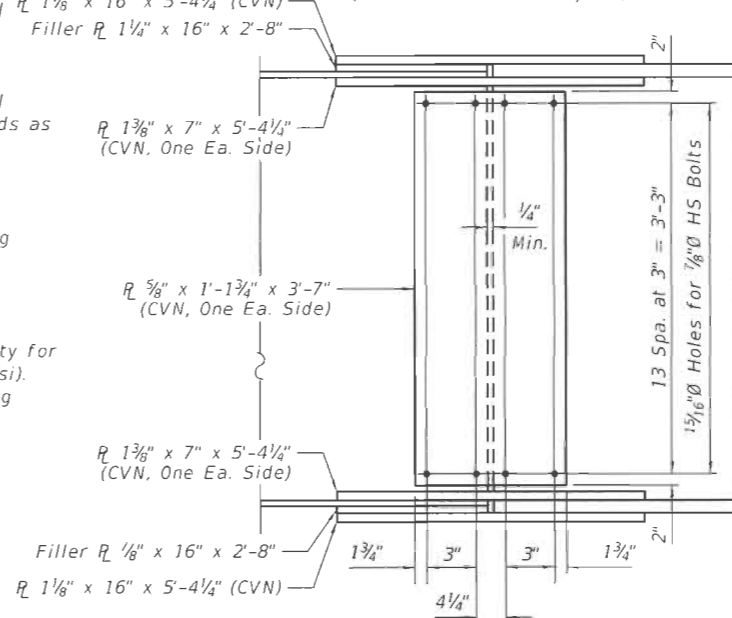
Notes:
Two hardened washers required for each set of oversized holes.
Cross Frame Connection "A" shown. Cross frames under stage construction line similar except as noted in Cross Frame Connection "B" Detail.

WELD AND CLIP DETAILS

* Stop welds 1/4" ($\pm 1/8$ ") from edges as shown, typ.



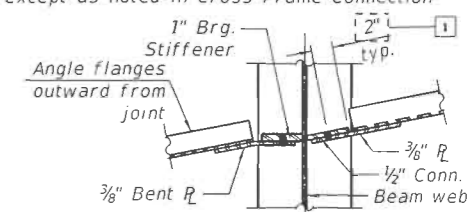
PLAN
(Top and bottom flange plates)
(40 bolts ea. side of splice)



ELEVATION
(28 bolts ea. side of splice)

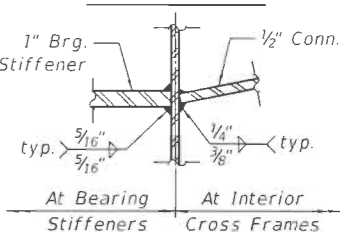
FIELD SPLICE DETAIL
(24 Required)

Notes:
All splice plates, except fill plates, shall be M270 Gr.50.



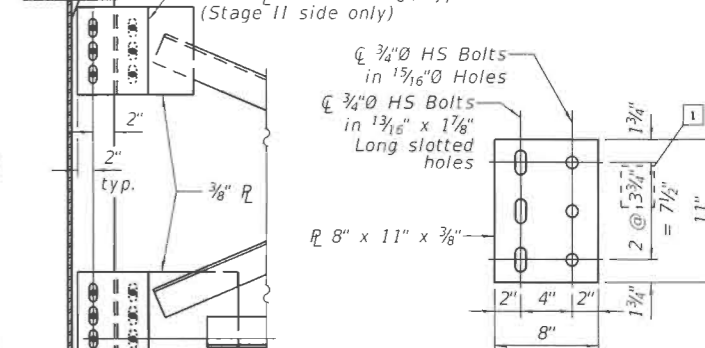
At Pier At Interior
Cross Frames Cross Frames

SECTION A-A



At Bearing At Interior
Stiffeners Cross Frames

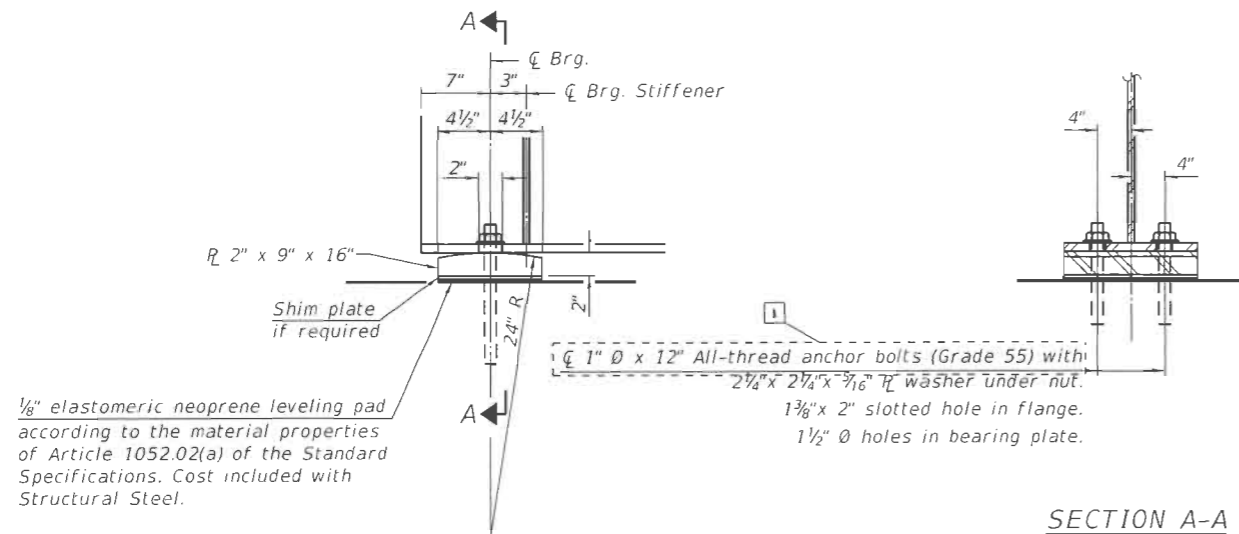
WEB WELD



SLIDE PLATE
(16 Required)

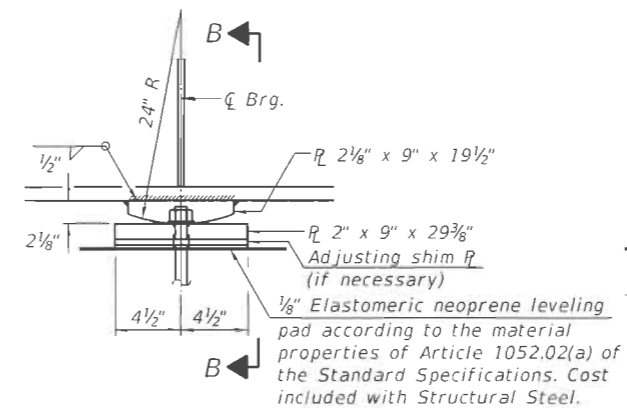
CROSS FRAME CONNECTION "B"

Notes:
Two hardened washers required for each set of oversized and long slotted holes.
See Sheet 17 of 31 for locations of Cross Frame Connection "B".
Bolts in the long slotted holes shall be finger tight until the Stage II deck pour is completed. The slotted holes in the gusset plate shall be positioned to allow the bolts to move from one end of the slotted hole to the opposite end under deck load. The holes shall be positioned allowing maximum bolt displacement without laterally stressing the beams.

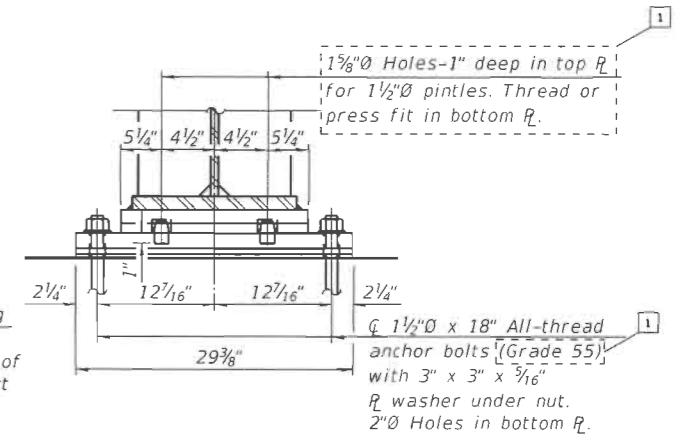


ELEVATION AT ABUTMENT

SECTION A-A



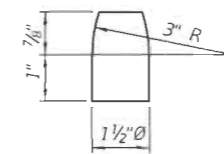
ELEVATION AT PIER



SECTION B-B

FIXED BEARING

- Notes:
- Anchor bolts shall be according to Article 521.06 of the Standard Specifications.
 - Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
 - Anchor bolts at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.
 - The structural steel bearing plates shall conform to the requirements of AASHTO M270 Grade 36.
 - 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 bearing details.



PINTLE
(M270 Gr. 36)

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1"	Each	48
Anchor Bolts, 1 1/2"	Each	24

HMC PROJECT NO. 1
PROJECT NO. 032-0125
FILE NAME: 032025-66H15_09.dwg
PLOT DRIVER: PLOT.DRV
PEN TABLE: PEN.TBL



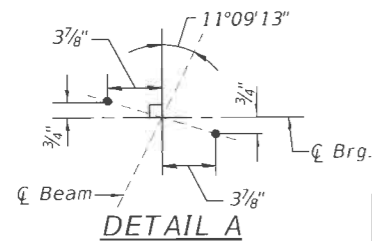
USER NAME = jendrews	DESIGNED - JA	REVISED - 1 5/24/2021 JA
	CHECKED - BT & WAO	REVISED -
PLOT SCALE =	DRAWN - JA	REVISED -
PLOT DATE = 5/24/2021	CHECKED - 5/24/21	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING DETAILS
STRUCTURE NO. 032-0125

SHEET NO. 19 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	[(32-3) HB-13 HBK	GRUNDY	173	104
CONTRACT NO. 66H15				
ILLINOIS FED. AID PROJECT				



Notes:
 Pour steps monolithically with cap.
 Space reinforcement to miss anchor bolts.
 For section through abut., bar details and
 Bill of Material see sheet 21 of 31.
 For details of piles see sheet 26 of 31.
 Headed bars shall conform to ASTM A790 with
 threaded attachment; Class HA; and reinforcement
 bars conforming to ASTM A706. Cost included with
 Reinforcement Bars, Epoxy Coated.

PLAN

MODEL: SMOELNAMES
FILE NAME: V:\4363 - I55 and IL 47 Interchange [Bloom-IdOT D3]CAD\CAOD Sheets\0320125-66H15-021-S Abut Details.dgn

Hutchison Engineering, Inc.
Jacksonville-Moline-Peoria-Shorewood
Since 1945

USER NAME = BNeibml
PLOT SCALE =
PLOT DATE = 10/5/2020

DESIGNED - ZL
CHECKED - BAN
DRAWN - JCW
CHECKED - ZL/BAN

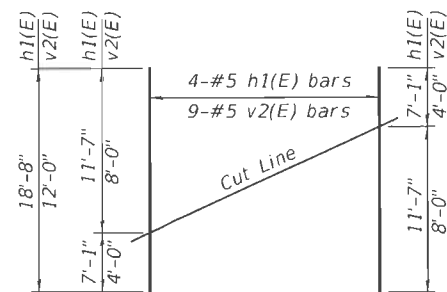
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT DETAILS
STRUCTURE NO. 032-0125

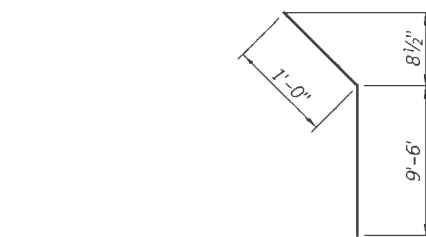
SHEET 21 OF 31 SHEETS

FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	[(32-3)HB-1]HBK	GRUNDY	173	106
CONTRACT NO. 66H15				
ILLINOIS FED. AID PROJECT				

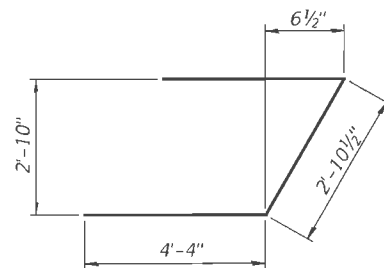


FIELD CUTTING DIAGRAM

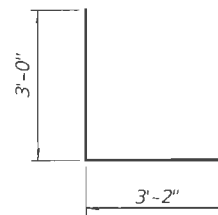
Order h1(E) and v2 (E) full length. Cut as shown and use remainder of bars in opposite face.



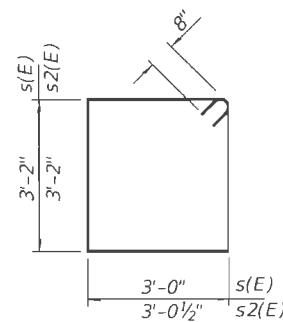
BAR h2(E)



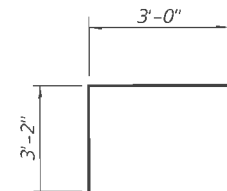
BAR u(E)



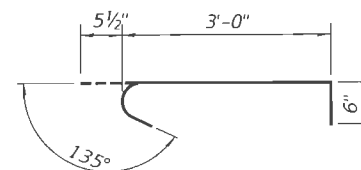
BAR s3(E)



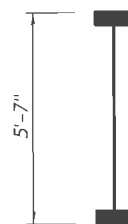
BAR s(E) & s2(E)



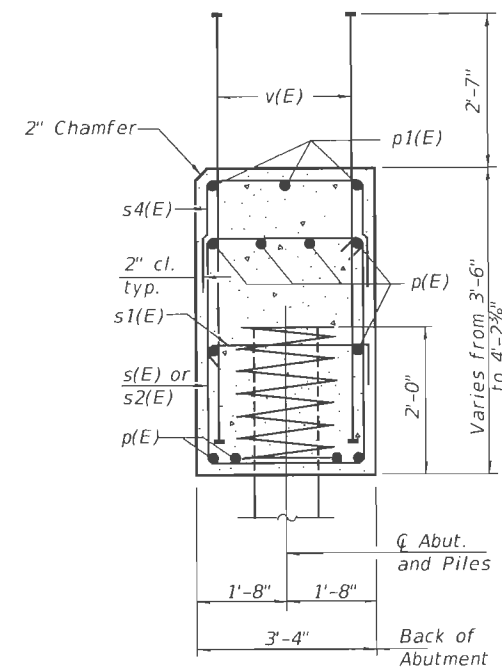
BAR s4(E)



BAR s1(E)



BAR v(E)
(Headed)



SEC. THRU ABUT.

(Dimensions at right angles to abutment.)

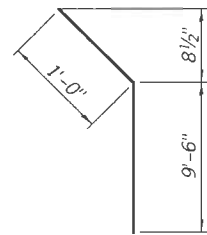
Notes:

Headed bars shall conform to ASTM A790 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

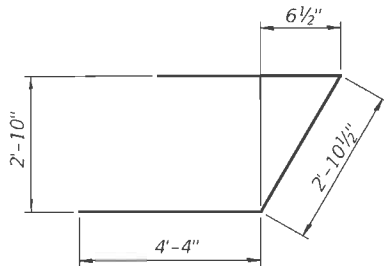
SOUTH ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	32	#5	12'-5"	
h1(E)	8	#5	18'-8"	
h2(E)	4	#5	10'-6"	
p(E)	20	#7	46'-11"	
p1(E)	8	#7	23'-11"	
s(E)	83	#6	13'-8"	
s1(E)	24	#5	4'-0"	
s2(E)	3	#6	13'-9"	
s3(E)	2	#6	9'-2"	
s4(E)	50	#5	9'-4"	
sp(E)	12	#4	2'-0"	
u(E)	8	#6	11'-7"	
v(E)	226	#8	5'-7"	
v1(E)	8	#5	8'-2"	
v2(E)	18	#5	12'-0"	
Structure Excavation			Cu. Yd.	370
Concrete Structures			Cu. Yd.	48.6
Reinforcement Bars, Epoxy Coated			Pound	9,660
Furnishing Metal Shell Piles, 16"x0.375"			Foot	572
Driving Piles			Foot	572
Test Pile Metal Shells			Each	1
Pile Shoes			Each	12

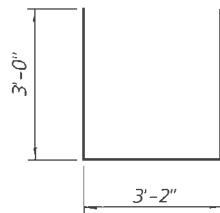
* Length is height of spiral.



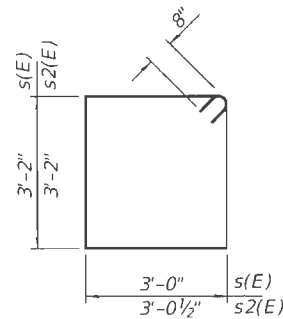
BAR h2(E)



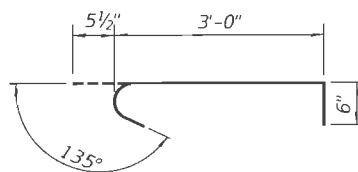
BAR u(E)



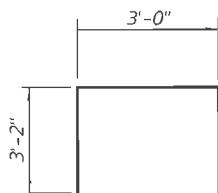
BAR s3(E)



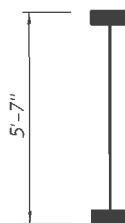
BAR s(E) & s2(E)



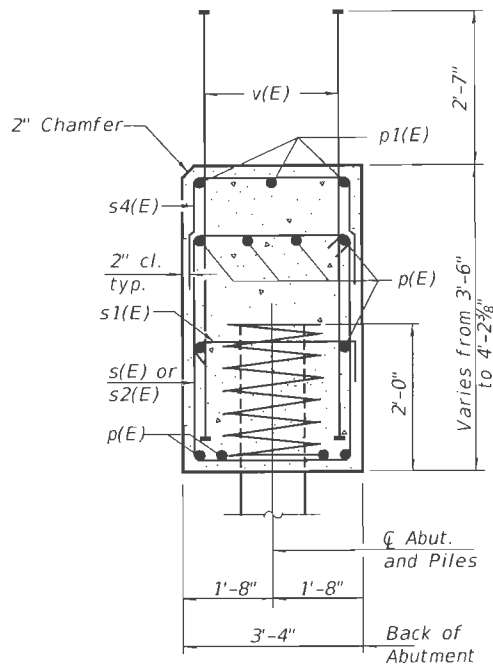
BAR s1(E)



BAR s4(E)



BAR v(E)
(Headed)



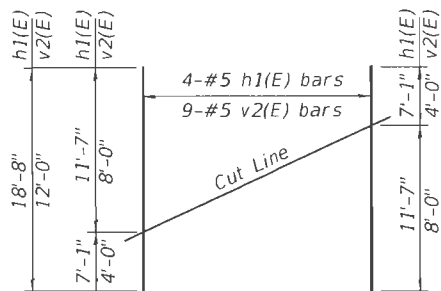
SEC. THRU ABUT.

(Dimensions at right angles to abutment.)

NORTH ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	32	#5	12'-5"	
h1(E)	8	#5	18'-8"	
h2(E)	4	#5	10'-6"	
p(E)	20	#7	46'-11"	
p1(E)	8	#7	23'-11"	
s(E)	83	#6	13'-8"	
s1(E)	24	#5	4'-0"	
s2(E)	3	#6	13'-9"	
s3(E)	2	#6	9'-2"	
s4(E)	50	#5	9'-4"	
sp(E)	12	#4	2'-0"	
u(E)	8	#6	11'-7"	
v(E)	226	#8	5'-7"	
v1(E)	8	#5	8'-2"	
v2(E)	18	#5	12'-0"	
Structure Excavation			Cu. Yd.	370
Concrete Structures			Cu. Yd.	48.6
Reinforcement Bars, Epoxy Coated			Pound	9,660
Furnishing Metal Shell Piles, 16"x0.375"			Foot	627
Driving Piles			Foot	627
Test Pile Metal Shells			Each	1
Pile Shoes			Each	12

* Length is height of spiral.



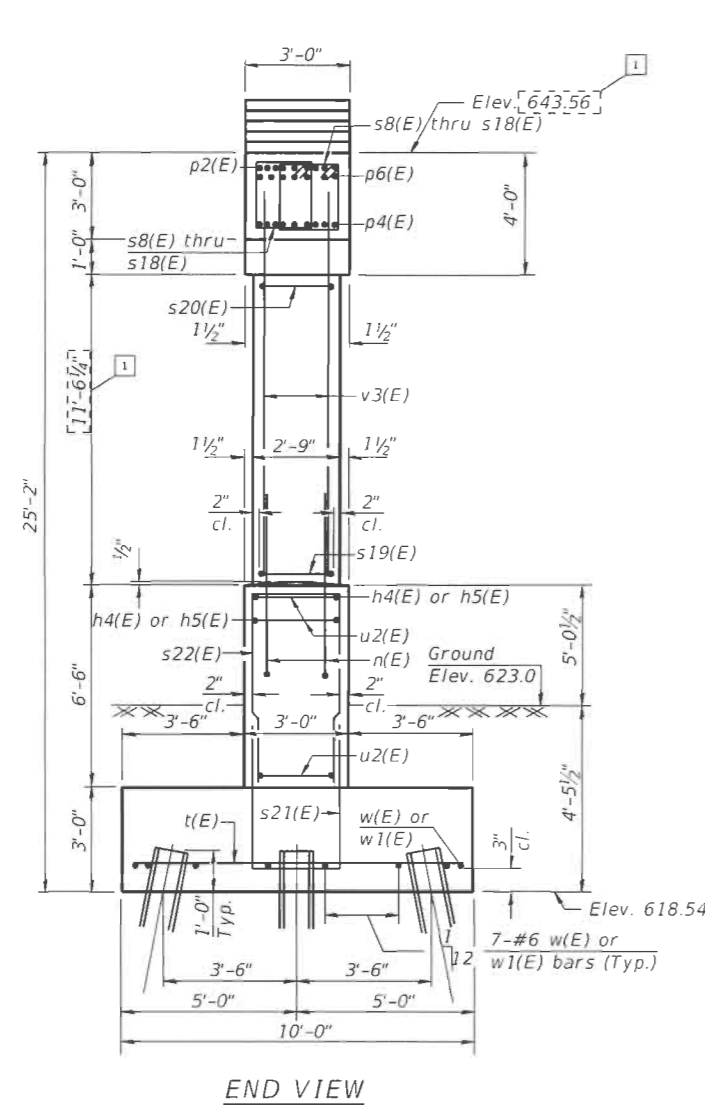
FIELD CUTTING DIAGRAM

Order h1(E) and v2 (E) full length. Cut as shown and use remainder of bars in opposite face.

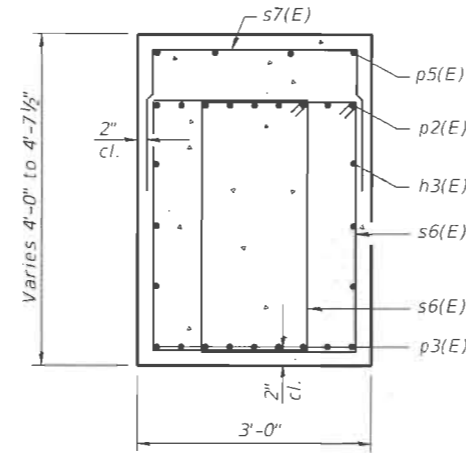
Notes:

Headed bars shall conform to ASTM A790 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

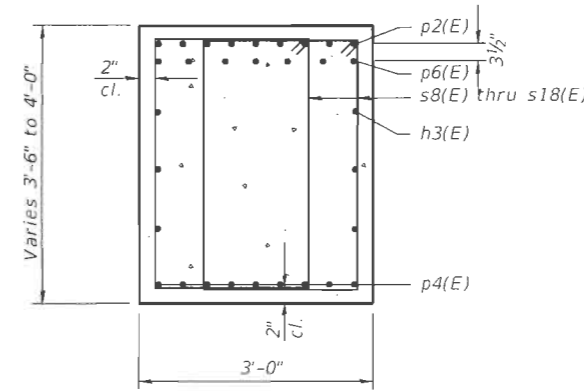
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 27 of 31.
Cut existing piles off at Elev. 616.54.



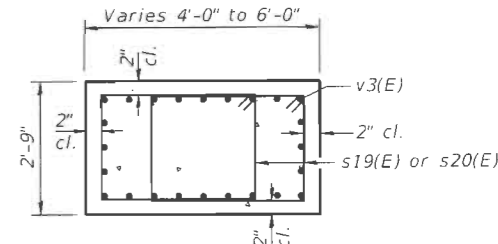
END VIEW



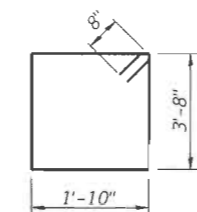
SECTION A-A



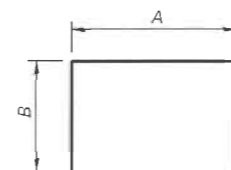
SECTION B-B



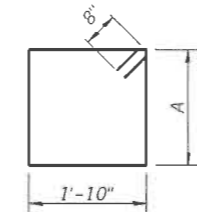
SECTION C-C



BAR s6(E)



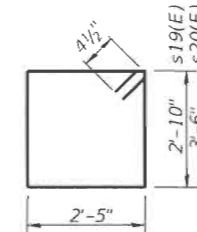
s7(E), s21(E) & s22(E) BARS



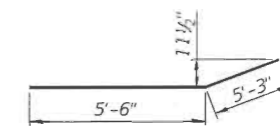
BARS s8(E) THRU s18(E)

A DIMENSIONS

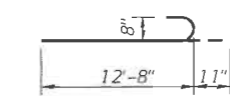
Bar	A
s8(E)	2'-8"
s9(E)	2'-9"
s10(E)	2'-10 1/2"
s11(E)	2'-11 1/2"
s12(E)	3'-0 1/2"
s13(E)	3'-1 1/2"
s14(E)	3'-3"
s15(E)	3'-4"
s16(E)	3'-5"
s17(E)	3'-6"
s18(E)	3'-7 1/2"



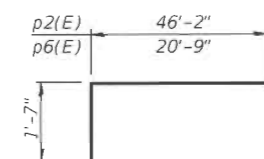
BAR s19(E) & s20(E)



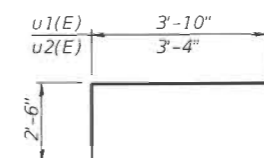
BAR p4(E)



BAR n(E)



BARS p2(E) & p6(E)



BARS u1(E) & u2(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h3(E)	12	#5	46'-2"	
h4(E)	17	#6	38'-4"	
h5(E)	17	#6	43'-4"	
n(E)	144	#8	13'-7"	
p2(E)	18	#9	47'-9"	
p3(E)	18	#9	41'-0"	
p4(E)	18	#8	10'-9"	
p5(E)	8	#6	23'-7"	
p6(E)	14	#9	22'-4"	
s6(E)	332	#6	12'-4"	
s7(E)	50	#6	9'-8"	
s8(E)	4	#6	10'-4"	
s9(E)	4	#6	10'-6"	
s10(E)	4	#6	10'-9"	
s11(E)	4	#6	10'-11"	
s12(E)	4	#6	11'-1"	
s13(E)	4	#6	11'-3"	
s14(E)	4	#6	11'-6"	
s15(E)	4	#6	11'-8"	
s16(E)	4	#6	11'-10"	
s17(E)	4	#6	12'-0"	
s18(E)	4	#6	12'-3"	
s19(E)	84	#4	11'-3"	
s20(E)	96	#4	12'-7"	
s21(E)	84	#5	14'-10"	
s22(E)	84	#5	15'-0"	
t(E)	120	#9	9'-8"	
u1(E)	10	#6	10'-2"	
u2(E)	14	#6	9'-2"	
v3(E)	144	#8	15'-0"	
w(E)	18	#6	39'-4"	
w1(E)	18	#6	44'-4"	
Structure Excavation	Cu. Yd.	65		
Concrete Structures	Cu. Yd.	233.0		
Reinforcement Bars, Epoxy Coated	Pound	39,170		
Furnishing Steel	Foot	2,450		
HP 12x53 Piles	Foot	2,450		
Driving Piles	Foot	2,450		
Test Pile Steel	Each	1		
HP 12x53				

MODEL: Default
FILE NAME: X:\BM3\14508_IL 47 over 15508 Drawings\CADD_Sheets\Hutchison\0320125-46119-025-Pier Details_construction.dgn

Hutchison Engineering, Inc.
Jacksonville-Moline-Peoria-Shorewood
Since 1945

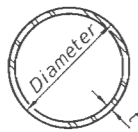
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CHECKED - BAN	REVISED -	
PLOT SCALE =	DRAWN - JCW	REVISED -
PLOT DATE = 5/24/2021	CHECKED - ZL/BAN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER
STRUCTURE NO. 032-0125

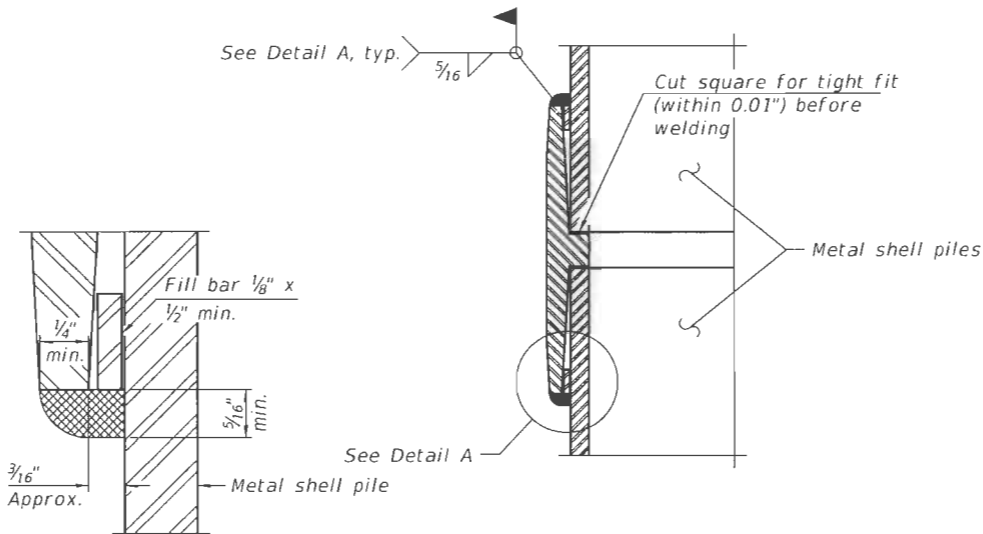
SHEET 25 OF 31 SHEETS

FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	[(32-3)HB-1]HBK	GRUNDY	173	110
				CONTRACT NO. 66H15
ILLINOIS FED. AID PROJECT				

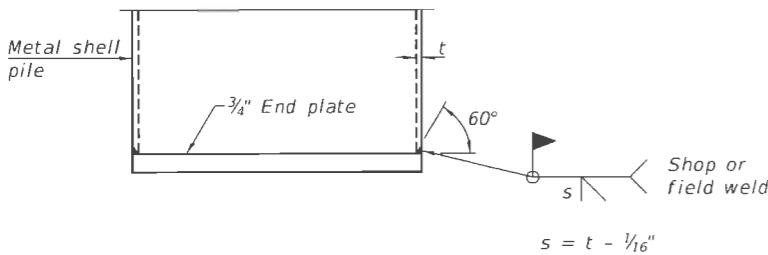


METAL SHELL PILE TABLE

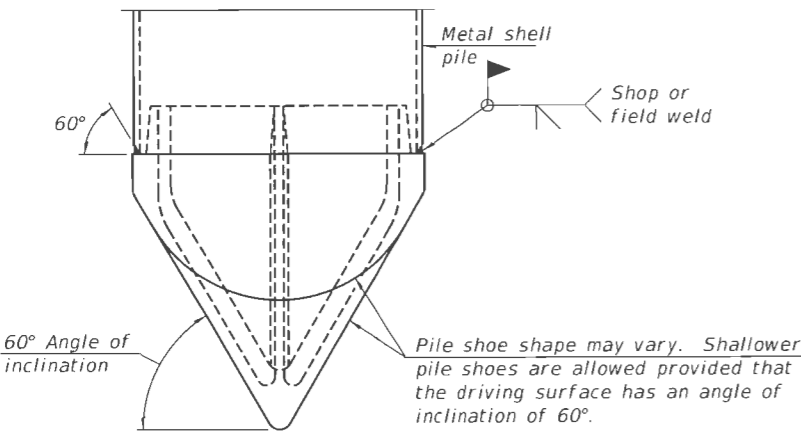
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361
PP16	0.312"	52.32	0.0478
PP16	0.375"	62.64	0.0470



DETAIL A



END PLATE ATTACHMENT

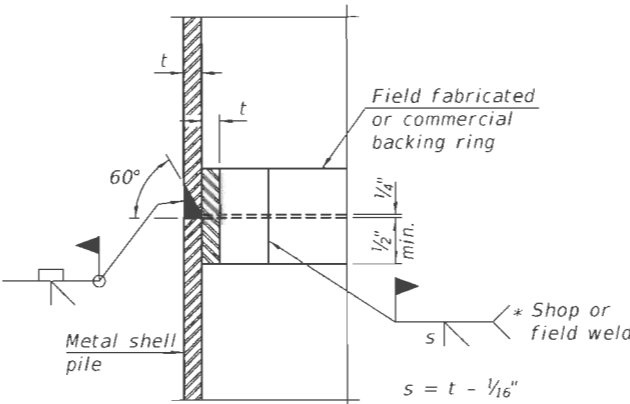


PILE SHOE ATTACHMENT

(When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 80-50 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld).

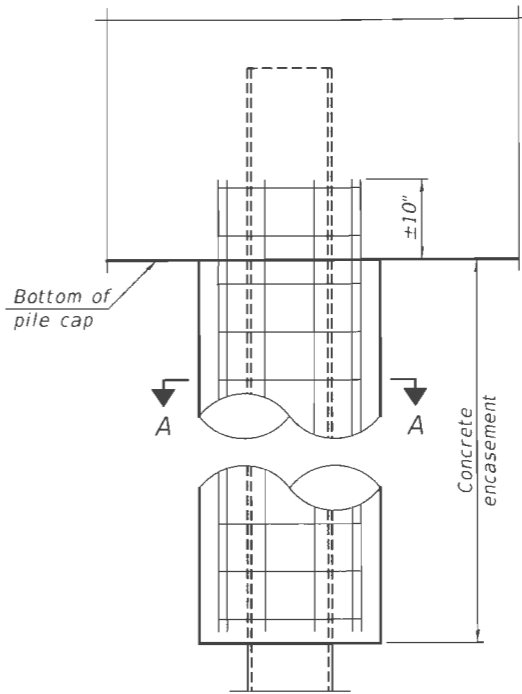
WELDED COMMERCIAL SPLICE

Notes:
The 1/8\"/>

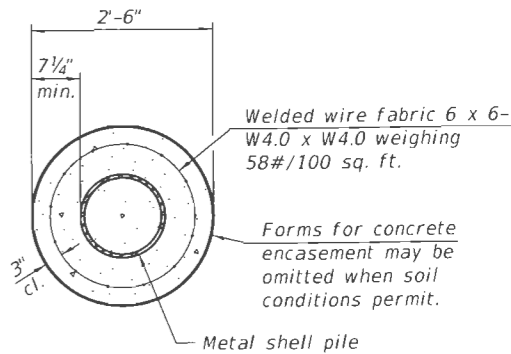


COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.

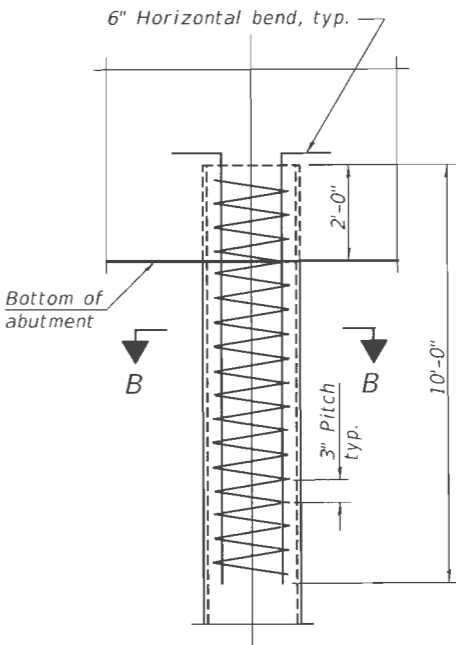


ELEVATION

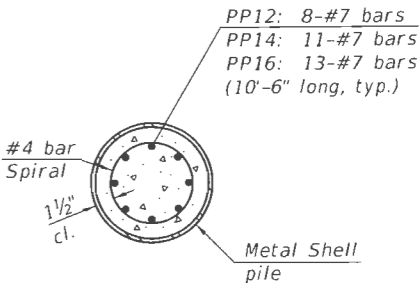


SECTION A-A

INDIVIDUAL PILE
CONCRETE ENCASEMENT
(When specified)



ELEVATION



SECTION B-B

REINFORCEMENT AT ABUTMENTS
(Omit when concrete encasement is specified)

Note:
The metal shell piles shall be according to Article 1006.05 of the Standard Specifications.

F-MS

1-1-2020

Hutchison Engineering, Inc.
Jacksonville-Moline-Peoria-Shorewood
Since 1945

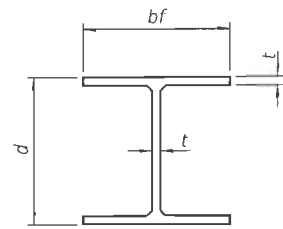
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	CHECKED - ZL	REVISED -
PLOT SCALE =	DRAWN - JCW	REVISED -
PLOT DATE = 10/5/2020	CHECKED - BAN/ZL	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

METAL SHELL PILE DETAILS
STRUCTURE NO. 032-0125

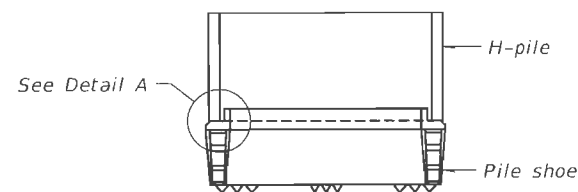
SHEET 26 OF 31 SHEETS

FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SS	[(32-3)HB-1]HBK	GRUNDY	173	111
				CONTRACT NO. 66H15
ILLINOIS FED. AID PROJECT				

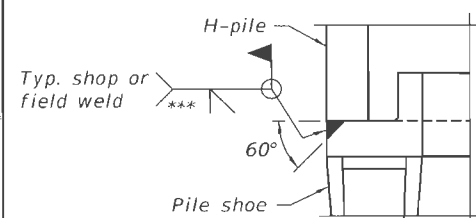


STEEL PILE TABLE

Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



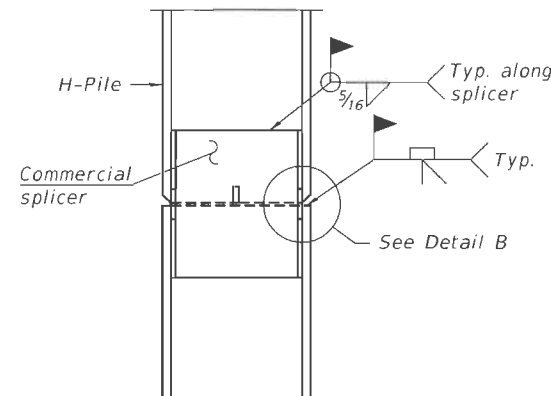
ELEVATION



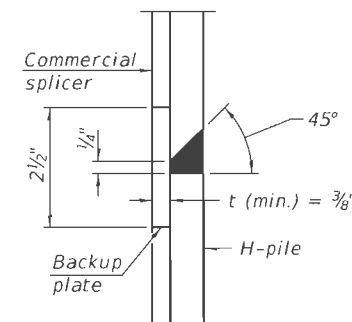
DETAIL A

SHOE ATTACHMENT

Note:
The steel H-piles shall be according to
AASHTO M270 Grade 50.

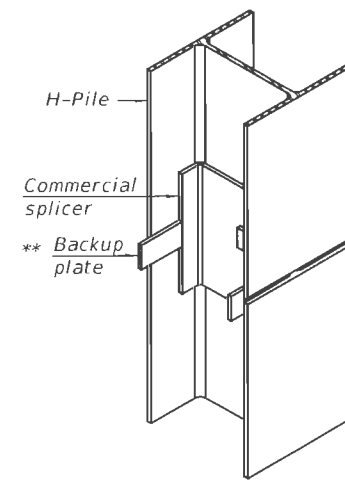


ELEVATION

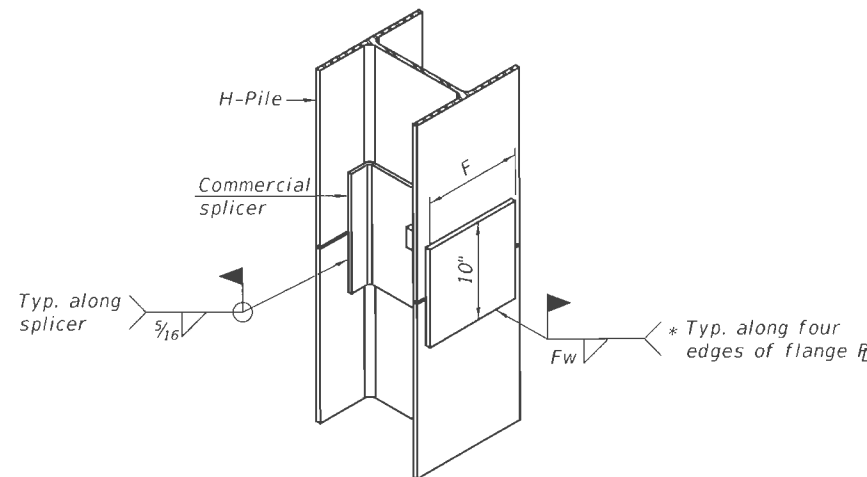


DETAIL "B"

WELDED COMMERCIAL SPLICE



ISOMETRIC VIEW



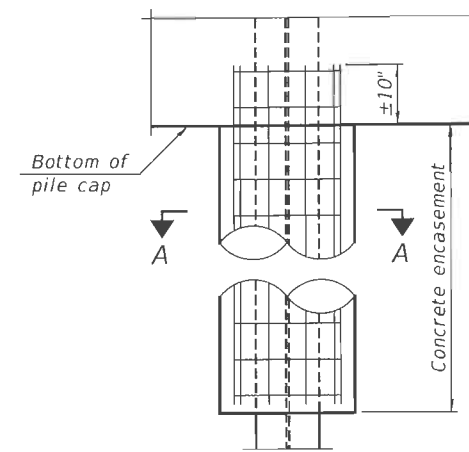
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

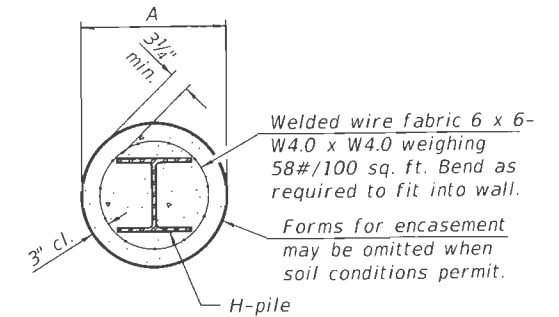
* Interrupt welds 1/4" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer (5/16" min.).

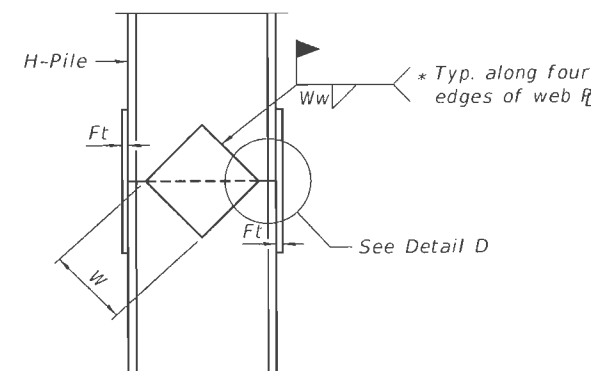


ELEVATION

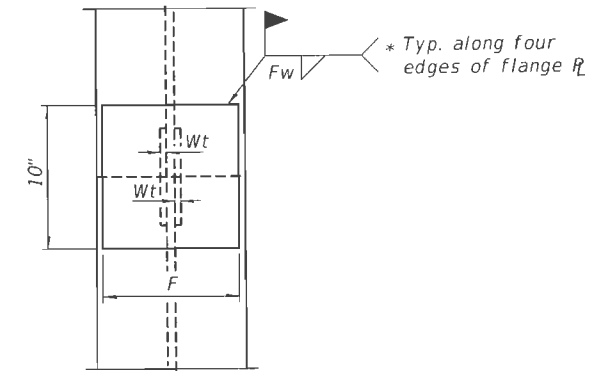


SECTION A-A

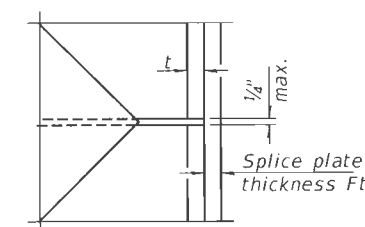
INDIVIDUAL PILE
CONCRETE ENCASUREMENT
(when specified)



ELEVATION



END VIEW



DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1 1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

F-HP

1-1-2020

Hutchison Engineering, Inc.
Jacksonville-Moline-Peoria-Shorewood
Since 1945

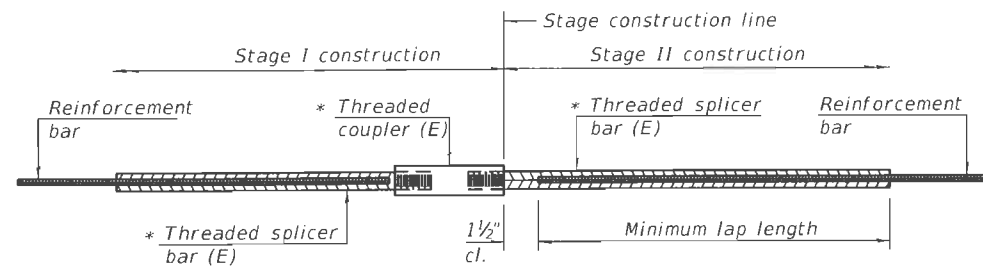
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PLOT SCALE =	CHECKED - ZL	REVISED -
PLOT DATE = 10/5/2020	DRAWN - JCW	REVISED -
	CHECKED - BAN/ZL	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 032-0125

SHEET 27 OF 31 SHEETS

FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	[(32-3)HB-1]HBK	GRUNDY	173	112
CONTRACT NO. 66H15				
ILLINOIS FED. AID PROJECT				

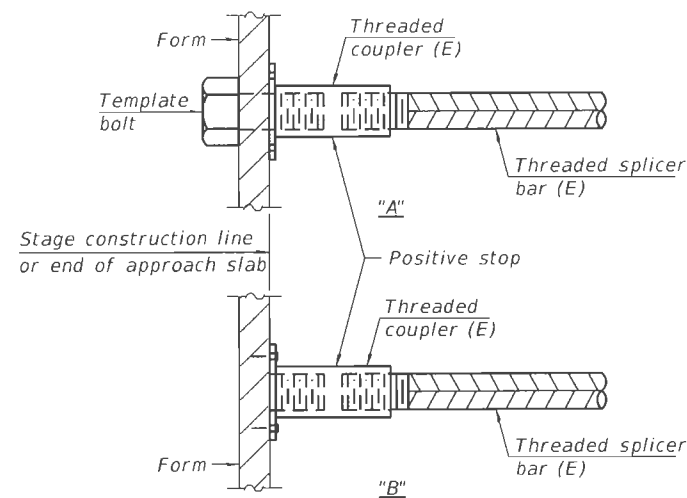


STANDARD BAR SPLICER ASSEMBLY

Threaded splicer bar length = min. lap length + 1 1/2" + 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
Superstructure	#5	866	3'-6"
Superstructure	#6	24	4'-4"
Approach Slabs	#5	172	3'-6"
Approach Slabs	#8	122	5'-11"

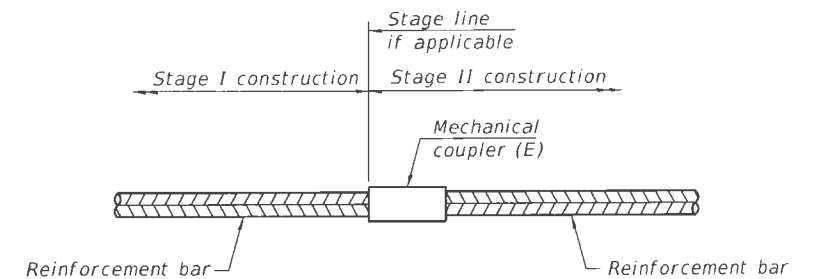


INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

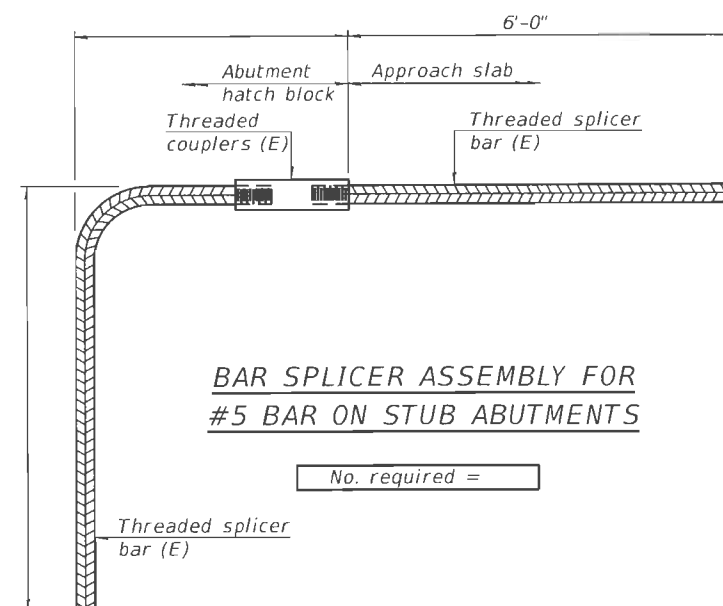
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. 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

2-17-2017



USER NAME = jandrews	DESIGNED - JA	REVISED -
	CHECKED - BT & WAO	REVISED -
PLOT SCALE =	DRAWN - JA	REVISED -
PLOT DATE = 11/11/2020	CHECKED - 11/3/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 032-0125

SHEET NO. 28 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	[(32-3) HB-1] HBK	GRUNDY	173	113
CONTRACT NO. 66H15				
ILLINOIS FED. AID PROJECT				

HRG PROJECT NO.: 032025-66H15_028_bar_splice.dgn
HRG PROJ. CONTACT: BHGPMS
FILE NAME: SPLT.DRV
PLOT DRIVER: SPLT.DRV
PEN TABLE: PEN.TAB



Illinois Department
of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 2

Date 10/26/17

ROUTE IL 47 DESCRIPTION IL 47 over I-55 Interchange at Dwight LOGGED BY Larry Myers

SECTION [(32-3)HB-1]ES LOCATION SE 1/4, SEC. 33, TWP. 31N, RNG. 7E, 3rd PM,
Latitude 41.116896, Longitude -88.414099

COUNTY Grundy DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 032-0079
Station 50+00.00

BORING NO. 02 (S.W. Quad.)
Station 48+45
Offset 9.4 ft Lt.
Ground Surface Elev. 641.72 ft

D E P T H H	B L O W S Qu	U C S Qu	M O I S T	Surface Water Elev. _____ ft	D E P T H H	B L O W S Qu	U C S Qu	M O I S T
				Stream Bed Elev. _____ ft				
				Groundwater Elev.: _____ ft				
				First Encounter _____ Dry ft				
				Upon Completion _____ Dry ft				
				After _____ Hrs. _____ ft				
					(ft)	(/6")	(tsf)	(%)
				Augered Bituminous Shoulder, Gray & Brown Silty Clay Loam Till Fill				
				639.22				
				Hard Gray & Brown Silty Clay Loam Till Fill				
				6				
				6				
				9				
				4.0				
				P				
				15				
				-5				
				5				
				6				
				8				
				4.0				
				P				
				16				
				616.72				
				Hard Black Silty Clay Loam with Organics				
				5				
				8				
				11				
				4.5				
				P				
				22				
				614.72				
				Very Stiff Gray & Brown Silty Clay Loess				
				3				
				4				
				5				
				7				
				4.0				
				P				
				18				
				612.22				
				Hard Brown & Gray Silty Clay Loam Till				
				4				
				6				
				7				
				4.1				
				B				
				20				
				4				
				6				
				9				
				4.4				
				S				
				17				
				-15				
				6				
				8				
				12				
				4.7				
				S				
				17				
				604.72				
				Very Stiff Gray Silty Clay Till				
				3				
				5				
				8				
				6.2				
				S				
				18				
				-20				
				40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)



Illinois Department
of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 2 of 2

Date 10/26/17

ROUTE IL 47 DESCRIPTION IL 47 over I-55 Interchange at Dwight LOGGED BY Larry Myers

SECTION [(32-3)HB-1]ES LOCATION SE 1/4, SEC. 33, TWP. 31N, RNG. 7E, 3rd PM,
Latitude 41.116896, Longitude -88.414099

COUNTY Grundy DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 032-0079
Station 50+00.00

BORING NO. 02 (S.W. Quad.)
Station 48+45
Offset 9.4 ft Lt.
Ground Surface Elev. 641.72 ft

D E P T H H	B L O W S Qu	U C S Qu	M O I S T	Surface Water Elev. _____ ft	D E P T H H	B L O W S Qu	U C S Qu	M O I S T
				Stream Bed Elev. _____ ft				
				Groundwater Elev.: _____ ft				
				First Encounter _____ Dry ft				
				Upon Completion _____ Dry ft				
				After _____ Hrs. _____ ft				
					(ft)	(/6")	(tsf)	(%)
				Very Stiff Gray Silty Clay Till (continued)				
				2				
				4				
				3.0				
				B				
				15				
				599.72				
				Hard Gray Silty Clay Loam Till				
				5				
				7				
				7.2				
				S				
				13				
				9				
				7				
				9				
				7.2				
				S				
				13				
				-45				
				6				
				9				
				7.8				
				S				
				13				
				11				
				7				
				8				
				7.6				
				S				
				13				
				11				
				7				
				8				
				7.4				
				S				
				14				
				11				
				7				
				9				
				7.4				
				S				
				14				
				11				
				7				
				8				
				7.6				
				S				
				13				
				10				
				12				
				7.6				
				S				
				13				
				-55				
				7				
				12				
				7.8				
				S				
				13				
				12				
				14				
				7.8				
				S				
				13				
				585.22				
				End of Boring				
				-60				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

MODEL: \$MODELNAME\$
FILE NAME: VM4363 - I55 and IL 47 Interchange (Bloom-IdOT D3)(CADD/CAAD Streets)(0320125-66H15-030-Borings 2.dgn

Hutchison Engineering, Inc.
Jacksonville-Moline-Peoria-Shorewood
Since 1945

USER NAME	IBNedel
DESIGNED	BAN
CHECKED	ZL
PLOT SCALE	
PLOT DATE	10/5/2020

REVISD	
REVISD	
REVISD	
REVISD	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 032-0125

SHEET 30 OF 31 SHEETS

FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	[(32-3)HB-1]HBK	GRUNDY	173	115
				CONTRACT NO. 66H15
				ILLINOIS FED. AID PROJECT



Illinois Department
of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 2

Date 10/30/17

ROUTE IL 47 DESCRIPTION IL 47 over I-55 Interchange at Dwight LOGGED BY Larry Myers

SECTION [(32-3)HB-1]ES LOCATION SE 1/4, SEC. 33, TWP. 31N, RNG. 7E, 3rd PM,
Latitude 41.117318, Longitude -88.413775

COUNTY Grundy DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 032-0079
Station 50+00.00

BORING NO. 03 (Center Pier)
Station 50+23
Offset 43.2 ft Rt.
Ground Surface Elev. 617.41 ft

DEPT H
BLOW S
UCS Qu
M O I S T

Surface Water Elev. ft
Stream Bed Elev. ft
Groundwater Elev.:
First Encounter 599.9 ft
Upon Completion 601.4 ft
After Hrs. ft

DEPT H
BLOW S
UCS Qu
M O I S T

Augered Black Silty Clay Loam
Fill, Asphalt Millings Fill

614.91

Very Stiff Gray Silty Clay Loam Till
(continued)

4
5
7

Stiff Brown & Gray Silty Clay
Loess

3
4
4

3
4
7

3
4
7

Hard Brown & Gray Silty Clay
Loam Till

-5
3
4
4

Hard Gray Silty Clay Loam Till -
Very Monolithic

-25
3
5
7

Very Stiff Gray Silty Clay Loam Till

4
4
5

4
7
9

5
7
9

Thin Sand Seams @ 17.5 Ft. with
Free Water

1
4
5

1
6
8

5
6
8

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)



Illinois Department
of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 2 of 2

Date 10/30/17

ROUTE IL 47 DESCRIPTION IL 47 over I-55 Interchange at Dwight LOGGED BY Larry Myers

SECTION [(32-3)HB-1]ES LOCATION SE 1/4, SEC. 33, TWP. 31N, RNG. 7E, 3rd PM,
Latitude 41.117318, Longitude -88.413775

COUNTY Grundy DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 032-0079
Station 50+00.00

BORING NO. 03 (Center Pier)
Station 50+23
Offset 43.2 ft Rt.
Ground Surface Elev. 617.41 ft

DEPT H
BLOW S
UCS Qu
M O I S T

Surface Water Elev. ft
Stream Bed Elev. ft
Groundwater Elev.:
First Encounter 599.9 ft
Upon Completion 601.4 ft
After Hrs. ft

DEPT H
BLOW S
UCS Qu
M O I S T

Hard Gray Silty Clay Loam Till -
Very Monolithic (continued)

6
8
10

6
9
10

6
9
10

End of Boring

555.91

End of Boring

End of Boring

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

MODEL: 48001 NAME: Hutchison Engineering, Inc. JACKSONVILLE-MOLINE-PEORIA-SHOREWOOD Since 1945
FILE NAME: V:\4363 - I-55 and IL 47 Interchange (Bloomington) Sheets\0320125-46H15-03-1-Boring 3.dgn

Hutchison Engineering, Inc.
Jacksonville-Moline-Peoria-Shorewood
Since 1945

USER NAME: RNeel
DESIGNED: BAN
CHECKED: ZL
DRAWN: JCW
PLOT DATE: 11/11/2020

REVISED: -
REVISED: -
REVISED: -
REVISED: -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 032-0125

SHEET 31 OF 31 SHEETS

FAI RTE. 55
SECTION [(32-3)HB-1]HBK
COUNTY GRUNDY
TOTAL SHEETS 173
SHEET NO. 116
CONTRACT NO. 66H15
ILLINOIS FED. AID PROJECT