

BRIDGE DECK OVERLAY
LETTING DATE
2-16-2021
IMN-080-6(395)206--0E-48

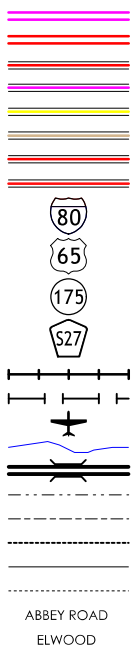
IOWA COUNTY - DESIGN 121/221

IOWA COUNTY

LEGEND

INTERSTATE HIGHWAY
PRIMARY HIGHWAY-DIVIDED
PRIMARY HIGHWAY
PORTLAND CEMENT CONCRETE ROAD
ASPHALT ROAD
BITUMINOUS ROAD
GRAVEL ROAD
EARTHEN ROAD

INTERSTATE HIGHWAY
UNITED STATES HIGHWAY
STATE HIGHWAY
COUNTY HIGHWAY
RAILROAD
PIPELINE
AIRPORT
HYDROLOGY
BRIDGE
STATE BOUNDARY
COUNTY BOUNDARY
CORPORATE BOUNDARY
TOWNSHIP LINE
SECTION LINE
ROAD NAMES
UNINCORPORATED PLACE



PLANS OF PROPOSED IMPROVEMENTS ON THE

INTERSTATE ROAD SYSTEM

IOWA COUNTY

BRIDGE DECK OVERLAY

I-80 OVER SR V38

AT JUNCTION SR V38

THE IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, SERIES 2015, PLUS APPLICABLE GENERAL SUPPLEMENTAL SPECIFICATIONS, DEVELOPMENTAL SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS SHALL APPLY TO CONSTRUCTION WORK ON THIS PROJECT.

TOTAL SHEETS
53

PROJECT NUMBER

IMN-080-6(395)206-0E-48

R.O.W. PROJECT NUMBER

PROJECT IDENTIFICATION NUMBER

I6-48-080-030

INDEX OF SHEETS

NO.	DESCRIPTION
1	TITLE SHEET
2	ESTIMATE SHEET - DESIGN 121
3-15	DESIGN 121 - BRIDGE PLANS
16	ESTIMATE SHEET - DESIGN 221
17-29	DESIGN 221 - BRIDGE PLANS
C.1	ESTIMATE SHEET FOR ROADWAY
A.1 - U.2	ROADWAY SHEETS

REVISIONS



STANDARD ROAD PLANS

STANDARD ROAD PLANS ARE LISTED
ON SHEET NUMBER C.2

DESIGN DATA RURAL

REFER TO INDIVIDUAL
SITUATION PLANS FOR
TRAFFIC DATA INFORMATION

INDEX OF SEALS

SHEET NO.	NAME	TYPE
1	DEAN G. BIERWAGEN	STRUCTURAL DESIGN
A.1	TAYLOR R. THEULEN	ROADWAY DESIGN

STRUCTURAL DESIGN



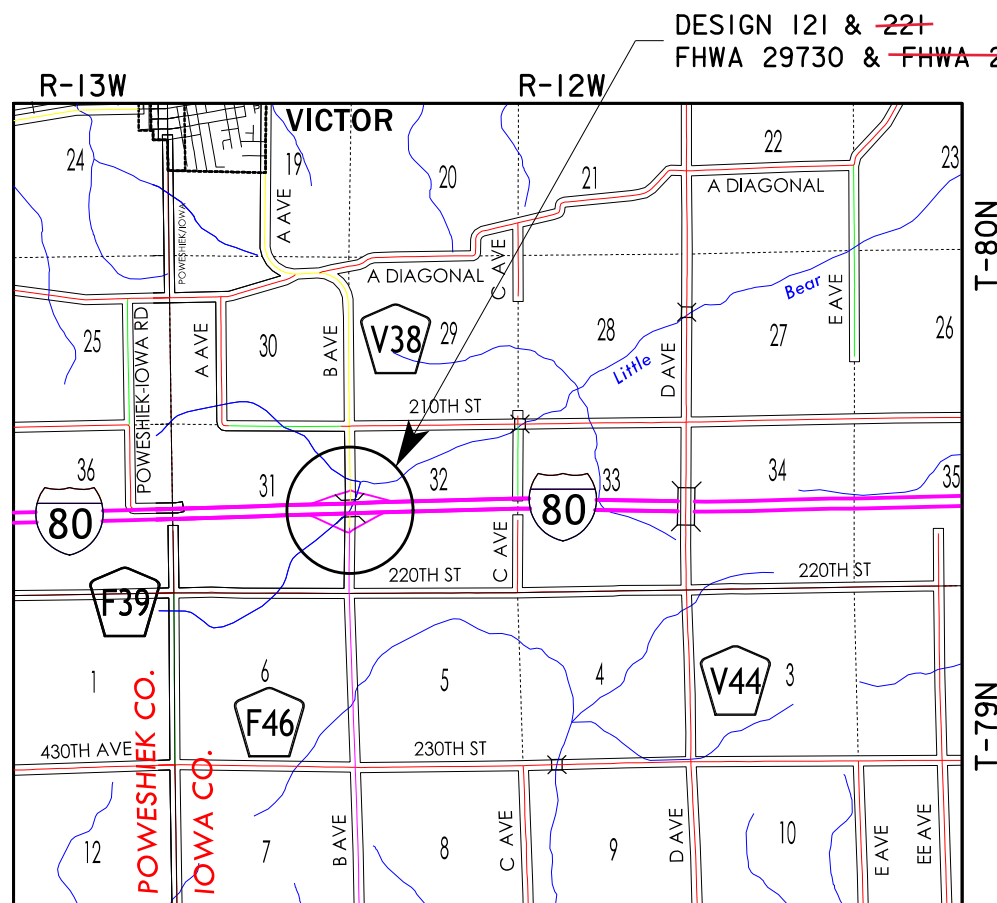
I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Signature Dean G. Bierwagen Date 9/14/2020
Printed or Typed Name

My license renewal date is December 31, 2020

Pages or sheets covered by this seal: SHEETS 1 THRU 29 OF 53

LOCATION MAP



PROJECT DIRECTORY NAME: 4808003016

DESIGN TEAM Stanley Consultants Inc.

ENGLISH

IOWA DOT * BRIDGES AND STRUCTURES BUREAU

FILE NO. 31539

IOWA COUNTY

PROJECT NUMBER IMN-080-6(395)206--0E-48

SHEET NUMBER 1

ESTIMATED BRIDGE QUANTITIES - DESIGN 121					
ITEM NO.	ITEM CODE	ITEM	UNIT	TOTAL	AS BUILT QUANTITY
1.	2401-6750001	REMOVALS, AS PER PLAN	LS	1.00	
2.	2402-2720000	EXCAVATION, CLASS 20	CY	24.0	
3.	2403-0100000	STRUCTURAL CONCRETE (MISC.)	CY	30.5	
4.	2404-7775005	REINFORCING STEEL, EPOXY COATED	LB	5497	
5.	2413-0698074	DECK REPAIR, CLASS A	SY	165.1	
6.	2510-6745640	REMOVAL OF EXISTING P.C. OVERLAY	SY	550.4	
7.	2533-4980005	MOBILIZATION	LS	1.00	
		ALTERNATE AA OPTION 1			
8A.	2413-0698066	DECK OVERLAY (CLASS 0 PCC)	SY	550.4	
		ALTERNATE AA OPTION 2			
8B.	2413-0698067	DECK OVERLAY (CLASS HPC-0 PCC)	SY	550.4	

ESTIMATE REFERENCE INFORMATION

ITEM NO.	DESCRIPTION
1.	INCLUDES ITEMS AS DESCRIBED IN THE "GENERAL NOTES" ON DESIGN SHEET 2 AND "REMOVAL NOTES" ON DESIGN SHEET 6. DOES NOT INCLUDE REMOVAL OF APPROACH PAVEMENT AND GUARDRAIL. REMOVAL OF SCHEDULED ITEMS SHALL BE IN ACCORDANCE WITH SECTION 2401, OF THE STANDARD SPECIFICATIONS. ANY DAMAGE TO MATERIAL NOT TO BE REMOVED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND REPAIRED AT NO EXTRA COST TO THE STATE.
2.	INCLUDES EXCAVATION AT EXISTING ABUTMENTS. INCLUDES COST OF TEMPORARY SHORING DURING STAGED CONSTRUCTION.
3.	INCLUDES ALL INSTALLATION COST FOR DOWELS. INCLUDES FURNISHING AND PLACING ALL RESILIENT JOINT FILLER REQUIRED. INCLUDES FURNISHING AND INSTALLING 1 INCH DIAMETER PLASTIC CONDUIT IN BARRIER ENDS.
4.	INCLUDES MECHANICAL SPLICES IN THE ABUTMENT BACKWALL AND SLAB.
8A/8B.	INCLUDES CLEANING EXISTING CONCRETE AT CURBS AND BARRIERS. INCLUDES FURNISHING AND PLACING CONCRETE SEALER AT CURBS AND BARRIERS.

ROADWAY QUANTITIES
SHOWN ON SHEET C.1

DESIGN FOR REPAIRS TO 2°40' SKEW (L.A.)

125'-10 x 40'-0 PRETENSIONED
PRESTRESSED CONCRETE BEAM W.B. BRIDGE

38'-11½ END SPANS47'-11 INTERIOR SPAN

ESTIMATED BRIDGE QUANTITIES

STA. 58+60.62, 37.0' LT. (℄ 1-80)DECEMBER 2020

IOWA COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 14FILE NO. 31539DESIGN NO. 121

GENERAL NOTES:

THIS DESIGN IS FOR THE REPAIRS TO THE EXISTING 125'-10 x 40'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE, ON WESTBOUND I-80 OVER S.R. V38. ELECTRONIC COPIES OF ORIGINAL DESIGN PLANS ARE AVAILABLE TO THE CONTRACTOR AS PART OF THE E-FILES SUPPLIED WITH THE CONTRACT DOCUMENTS. DIMENSIONS SHOWN ON THESE PLANS ARE BASED ON DESIGN PLANS (DESIGN NO. 162, 178, 382 AND 210). REPAIR SHALL CONSIST OF:

1. REMOVE EXISTING OVERLAY, SCARIFY DECK, COMPLETE CLASS A REPAIRS, AND OVERLAY THE BRIDGE WITH PCC.
2. REMOVE BACKWALL AND CONCRETE DIAPHRAGM. INSTALL NEW SEMI-INTEGRAL ABUTMENT.
3. REMOVE BARRIER END SECTIONS AND PARTIALLY REMOVE BARRIERS TO ACCOMMODATE ABUTMENT RECONSTRUCTION.
4. SEAL TOP AND INSIDE FACE OF EXISTING BARRIER RAILS.
5. REMOVE AND REINSTALL EXISTING GUARDRAIL ON EAST BRIDGE APPROACH.
6. REMOVE GUARDRAIL FROM NORTHWEST CORNER OF BRIDGE.
7. REMOVE AND REPLACE BRIDGE APPROACH WITH NEW 70'-0 APPROACHES MEETING CURRENT STANDARDS INCLUDING NEW "EF" JOINTS.

FAINT LINES ON PLANS INDICATE THE EXISTING STRUCTURE.

UTILITY COMPANIES WHOSE FACILITIES ARE SHOWN ON THE PLANS OR KNOWN TO BE WITHIN THE CONSTRUCTION LIMITS SHALL BE NOTIFIED BY THE BRIDGE CONTRACTOR OF THE STARTING DATE.

WESTBOUND I-80 WILL BE OPEN TO TRAFFIC DURING CONSTRUCTION. SEE TRAFFIC CONTROL PLAN NOTE.

THE LUMP SUM BID FOR "REMOVALS AS PER PLAN" INCLUDE ALL COSTS ASSOCIATED WITH REMOVING THE ABUTMENT BACKWALLS AND DIAPHRAGMS, PORTIONS OF THE BARRIERS, AND PORTIONS OF THE DECK AND CURBS AT THE ABUTMENTS. REMOVALS SHALL BE IN ACCORDANCE WITH SECTION 2401 OF THE STANDARD SPECIFICATIONS. ANY DAMAGE TO OTHER PORTIONS OF THE EXISTING STRUCTURE NOT NOTED FOR REMOVAL SHALL BE THE RESPONSIBILITY OF THE BRIDGE CONTRACTOR AND SHALL BE REPAIRED AT NO EXTRA COST TO THE STATE.

IT SHALL BE THE BRIDGE CONTRACTOR'S RESPONSIBILITY TO PROVIDE SITES FOR EXCESS EXCAVATED MATERIAL. NO PAYMENT FOR OVERHAUL WILL BE ALLOWED FOR MATERIAL HAULED TO THESE SITES.

NO PRELIMINARY DECK SURVEY IS SHOWN. THE PLAN QUANTITY FOR "DECK REPAIR, CLASS A" IS ESTIMATED AS 30% OF THE TOTAL DECK AREA. THE ACTUAL QUANTITY IS DETERMINED BY THE ENGINEER AFTER THE P.C.C. OVERLAY HAS BEEN REMOVED. ACTUAL SPALLED AND HOLLOW AREAS AS DETERMINED BY THE ENGINEER SHALL BE REPAIRED.

PRESENT DECK THICKNESS IS ABOUT 7½ INCHES, INCLUDING EXISTING OVERLAY. THE CONTRACTOR SHALL EXERCISE CARE IN REMOVING CONCRETE IN ORDER TO PREVENT UNNECESSARY UNBONDING OF REINFORCING STEEL.

CONSTRUCTION SHALL BE DONE IN STAGES WITH AT LEAST TWO LANES TRAFFIC MAINTAINED DURING REQUIRED HOURS, IN ACCORDANCE WITH "TRAFFIC CONTROL PLAN" NOTE.

CONSTRUCTION STAGES 1, 2, & 3 AS DETAILED ON THESE PLANS MAY BE REVISED AT THE CONTRACTOR'S OPTION SUBJECT TO THE ENGINEER'S APPROVAL.

ALL DIMENSIONS AND DETAILS SHOWN ON THESE PLANS PERTINENT TO NEW CONSTRUCTION SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR BEFORE STARTING CONSTRUCTION.

MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR IS TO BE 2" UNLESS OTHERWISE NOTED OR SHOWN.

KEYWAY DIMENSIONS SHOWN ON THE PLANS ARE BASED ON NOMINAL DIMENSIONS UNLESS STATED OTHERWISE. IN ADDITION, THE BEVEL USED ON THE KEYWAY SHALL BE LIMITED TO A MAXIMUM OF 10 DEGREES FROM VERTICAL.

READY MIX TRUCKS ARE NOT ALLOWED ON THE PREPARED PORTION OF THE BRIDGE DECK.

THE TOP AND INTERIOR FACES OF THE EXISTING CONCRETE BARRIERS ARE TO BE CLEANED AND SEALED IN ACCORDANCE WITH ARTICLE 2403.03, P, OF THE STANDARD SPECIFICATIONS. IF NEW SECTIONS OF BARRIERS ARE CONSTRUCTED, THE NEW SECTIONS SHALL NOT BE SEALED. ALL COSTS ASSOCIATED WITH CLEANING AND SEALING OF THE CONCRETE BARRIERS SHALL BE INCLUDE IN THE UNIT PRICE BID ITEM "DECK OVERLAY".

THESE BRIDGE PLANS LABEL ALL REINFORCING STEEL WITH ENGLISH NOTATION (5d1 IS ½ INCH DIAMETER BAR). ENGLISH REINFORCING STEEL RECEIVED IN THE FIELD MAY DISPLAY THE FOLLOWING "BAR DESIGNATION". THE "BAR DESIGNATION" IS THE STAMPED IMPRESSION ON THE REINFORCING BARS, AND IS EQUIVALENT TO THE BAR DIAMETER IN MILLIMETERS.

ENGLISH SIZE	3	4	5	6	7	8	9	10	11
BAR DESIGNATION	10	13	16	19	22	25	29	32	36

ALL REINFORCING BARS AND BARS NOTED AS DOWELS SUPPLIED FOR THIS STRUCTURE SHALL BE DEFORMED REINFORCEMENT UNLESS OTHERWISE NOTED OR SHOWN.

CONSTRUCTION STAGES FOR WESTBOUND I-80 (STAGES 1, 2, & 3) AS DETAILED IN DESIGN NO. 121 MAY BE REVERSED WITH EASTBOUND I-80 (STAGES 4, 5, & 6) AS DETAILED IN DESIGN NO. 221 AT THE CONTRACTOR'S OPTION SUBJECT TO THE ENGINEER'S APPROVAL.

THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING (SHEET PILE OR OTHER) TO PREVENT THE EARTH UNDER THE TRAFFIC LANE, FROM SLOUGHING IN DURING CONSTRUCTION. ALL COST OF SHORING, WILL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND NO DIRECT PAYMENT WILL BE MADE. ALL MATERIAL USED FOR SHORING SHALL REMAIN THE PROPERTY OF THE CONTRACTOR, SHORING IS TO BE REMOVED ONLY AFTER BACKFILLING HAS BEEN COMPLETED. THE CONTRACTOR SHALL SUBMIT SHORING PLANS FOR REVIEW. IN ADDITION TO THE REQUIREMENTS NOTED ABOVE, ARTICLE 1107.07 OF THE STANDARD SPECIFICATIONS, STILL APPLIES.

THE BRIDGE DECK IS COVERED WITH A 1¾ INCH THICK PORTLAND CEMENT CONCRETE OVERLAY. THE CONTRACTOR SHALL NOTE THE REDEFINING OF THE CLASSIFICATION LINE (BOUNDARY BETWEEN REPAIR AND OVERLAY) FOR THIS PROJECT DUE TO THE EXISTING 1¾ INCH OVERLAY. THE CLASSIFICATION LINE WILL BE DEFINED AS 2 INCHES BELOW THE TOP OF EXISTING OVERLAY. THIS WILL NECESSITATE THE REMOVAL OF THE EXISTING BRIDGE DECK OVERLAY BEFORE PLACING THE PROPOSED NEW BRIDGE DECK OVERLAY.

ALL COSTS ASSOCIATED WITH THE REMOVAL OF THE EXISTING OVERLAY SHALL BE INCLUDED IN THE BID ITEM "REMOVAL OF EXISTING P.C.C. OVERLAY". REMOVAL OF EXISTING OVERLAY SHALL BE COMPUTED IN SQUARE YARDS FROM THE MEASUREMENT OF AREAS REMOVED. THE CONTRACTOR WILL BE PAID THE CONTRACT PRICE PER SQUARE YARD FOR FURNISHING ALL EQUIPMENT AND LABOR NECESSARY TO REMOVE THE CONCRETE TO WITHIN ¼ INCH ABOVE THE CLASSIFICATION LINE. ALL COSTS, INCLUDING FURNISHING EQUIPMENT AND LABOR, ASSOCIATED WITH REMOVAL OF THE NEXT ¼ INCH OF CONCRETE (TO THE CLASSIFICATION LINE) SHALL BE INCLUDED IN THE BID ITEM "DECK OVERLAY".

UPON COMPLETION OF THE REMOVAL OF CONCRETE DOWN TO THE CLASSIFICATION LINE, THE ENGINEER SHALL DETERMINE THE AREAS OF BRIDGE DECK TO BE REPAIRED AS "DECK REPAIR, CLASS A". ACTUAL HOLLOW AREAS, AS DETERMINED BY THE ENGINEER, SHALL BE REPAIRED.

BEFORE PROCEEDING WITH BRIDGE DECK OVERLAY AND BRIDGE DECK REPAIR THE CONTRACTOR MAY COMPLETE ALL STAGES OF OTHER CONSTRUCTION. ANY CONSTRUCTION SHALL HAVE STAGE LIMITS, TEMPORARY BARRIER RAIL AND TRAFFIC CONTROL AS DETAILED ON THESE PLANS. TEMPORARY BARRIER RAIL AND TRAFFIC CONTROL MAY BE ADJUSTED TO FIT THE ACTUAL WORK AND STORAGE AREA. WHEN BACKWALLS AND/OR APPROACH SECTIONS ARE TO BE REBUILT TO A RAISED SURFACE, AND WHEN DECK OVERLAY IS NOT A PART OF THE SAME STAGE, THE CONTRACTOR SHALL PROVIDE FOR PROFILE TRANSITION WITH H.M.A. SURFACING. PROFILE TRANSITION SHALL BE TAPERED AT A RATE OF 25'-0 FOR 1½ INCHES OF RAISE. THE H.M.A. TRANSITION MATERIAL SHALL BE A COMMERCIAL GRADE HOT SURFACING MIX OR A MIX APPROVED BY THE ENGINEER H.M.A. MAY BE PLACED BY HAND METHODS AND MAY BE COMPACTED BY ANY APPROVED METHOD. ALL COSTS FOR ADDITIONAL TRAFFIC CONTROL, REPOSITIONING OF BARRIER AND H.M.A. SURFACING SHALL BE BORNE BY THE CONTRACTOR.

SURFACE PREPARATION SHALL BE ACCORDING TO ARTICLE 2413.03, B AND C OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL ENSURE THE VERTICAL EDGE OF THE STAGE 1 AND 2 OVERLAY IS PREPARED FOR PLACEMENT OF THE NEW CONCRETE FOR STAGE 2 AND 3 BY SANDBLASTING OR SHOT BLASTING, FOLLOWED BY AN AIR BLAST. ENSURE THIS CLEANING REMOVES ALL DIRT, OIL, AND OTHER FOREIGN MATERIAL. ENSURE IT REMOVES ALL UNSOUND CONCRETE, LAITANCE, OR LOOSE MATERIAL FROM THE SURFACE AND EDGES AGAINST WHICH THE SURFACE MIXTURE IS TO BE PLACED. THE CLEANING SHOULD ROUGHEN THE SURFACE IN ORDER TO PROVIDE SATISFACTORY BOND WITH THE SURFACING MIXTURE.

SCREED EXTENSION OR OVERLAY BEYOND THE LONGITUDINAL CONSTRUCTION JOINT MAY BE LESS THAN THE 6 INCHES REQUIRED BY ARTICLE 2413.03, A, 4, OF THE STANDARD SPECIFICATIONS. THE ENGINEER MAY REQUIRE ADDITIONAL VIBRATION OR SPECIAL FINISHING PROCEDURES ADJACENT TO THE LONGITUDINAL CONSTRUCTION JOINT.

THE TOPS OF THE ABUTMENT BACKWALLS AS SHOWN SHALL BE CONSTRUCTED USING STRUCTURAL CONCRETE CLASS C. PROMPTLY AFTER THE CONCRETE HAS BEEN PLACED AND VIBRATED AS PROVIDED IN ARTICLES 2403.03, C, AND 2403.03, D, OF THE STANDARD SPECIFICATIONS, IT SHALL BE HAND FINISHED TO PROVIDE A SMOOTH SURFACE WITH THE PROPER CROWN. THE CONTRACTOR MAY ELECT TO USE FORMWORK WHICH IS MARKED OR TRIMMED TO THE CORRECT ELEVATION AND CROWN TO PROVIDE THE LIMITS FOR THE HAND FINISHING.

SPECIFICATIONS:

DESIGN: AASHTO SERIES OF 2002.
CONSTRUCTION: IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, SERIES 2015, PLUS APPLICABLE GENERAL SUPPLEMENTAL SPECIFICATIONS, DEVELOPMENTAL SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS SHALL APPLY TO CONSTRUCTION WORK ON THIS PROJECT.

DESIGN STRESSES:

DESIGN STRESSES FOR THE FOLLOWING MATERIALS ARE IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SERIES OF 2002. REINFORCING STEEL IN ACCORDANCE WITH SECTION 8, GRADE 60. CONCRETE IN ACCORDANCE WITH SECTION 8, f'c = 4.0 KSI.

DOWEL SETTING NOTES:

THE 5d10 BARRIER BARS SHALL BE SET AS DOWELS IN DRILLED HOLES. HOLES ARE TO BE 10" DEEP. THE DOWELS SHALL BE INSTALLED IN ACCORDANCE WITH THE GROUT MANUFACTURER'S RECOMMENDATIONS. EITHER OF THE FOLLOWING SYSTEMS MAY BE USED AS A BONDING AGENT FOR VERTICAL DOWELS, BUT ONLY SYSTEM "A" MAY BE USED FOR HORIZONTAL DOWELS:

- A. POLYMER GROUT SYSTEM IN ACCORDANCE WITH ARTICLE 2301.03, E, OF THE STANDARD SPECIFICATIONS.
- B. HYDRAULIC CEMENT GROUT SYSTEMS. DRILLED HOLES ARE TO BE 2½ TIMES THE DOWEL DIAMETER AND ARE TO BE BLOWN CLEAN WITH COMPRESSED AIR IMMEDIATELY PRIOR TO PLACING GROUT. THE HYDRAULIC CEMENT GROUT SHALL BE ONE OF THOSE APPROVED IN MATERIALS 1.M. 491.13 AND SHALL BE USED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

THE PRICE BID FOR "STRUCTURAL CONCRETE (MISC.)" SHALL INCLUDE THE COSTS OF SETTING BARS AS DOWELS.

SHOP DRAWING SUBMITTALS

SHOP DRAWINGS SHALL BE SUBMITTED FOR THE FOLLOWING ITEMS SHOWN IN THE TABLE BELOW. (NOTE ADDITIONAL SHOP DRAWINGS MAY BE REQUIRED IN ACCORDANCE WITH ARTICLE 1105.03 OF THE STANDARD SPECIFICATIONS.)

SUBMITTAL REQUIREMENTS FOR SHOP DRAWINGS SHOULD BE IN ACCORDANCE WITH ARTICLE 1105.03, OF THE STANDARD SPECIFICATIONS, FOR HIGHWAY AND BRIDGE CONSTRUCTION OF THE IOWA DEPARTMENT OF TRANSPORTATION.

SHOP DRAWINGS SHALL BE SUBMITTED WITH THE FOLLOWING NAMING CONVENTION:
(Paren)_County_DesignNumber_SubmittalDescription.pdf
Example: (090)_BlackHawk_Design915_DeckDrains.pdf

I	TEMPORARY SHORING

DESIGN HISTORY AT THIS SITE (INCLUDES THIS DESIGN)	
DES. NO.	TYPE OF WORK
162	ORIGINAL DESIGN
178	RETROFIT RAIL
382	BRIDGE DECK OVERLAY
210	BARRIER END SECTIONS
121	BRIDGE DECK OVERLAY

TRAFFIC CONTROL PLAN
NOTE: W.B. I-80 WILL BE OPEN TO THRU TRAFFIC. REFER TO THE TRAFFIC CONTROL PLAN SHOWN ON SHEET J.1.

DESIGN FOR REPAIRS TO 2°40' SKEW (L.A.)

125'-10 x 40'-0 PRETENSIONED
PRESTRESSED CONCRETE BEAM W.B. BRIDGE

38'-11½ END SPANS47'-11 INTERIOR SPAN

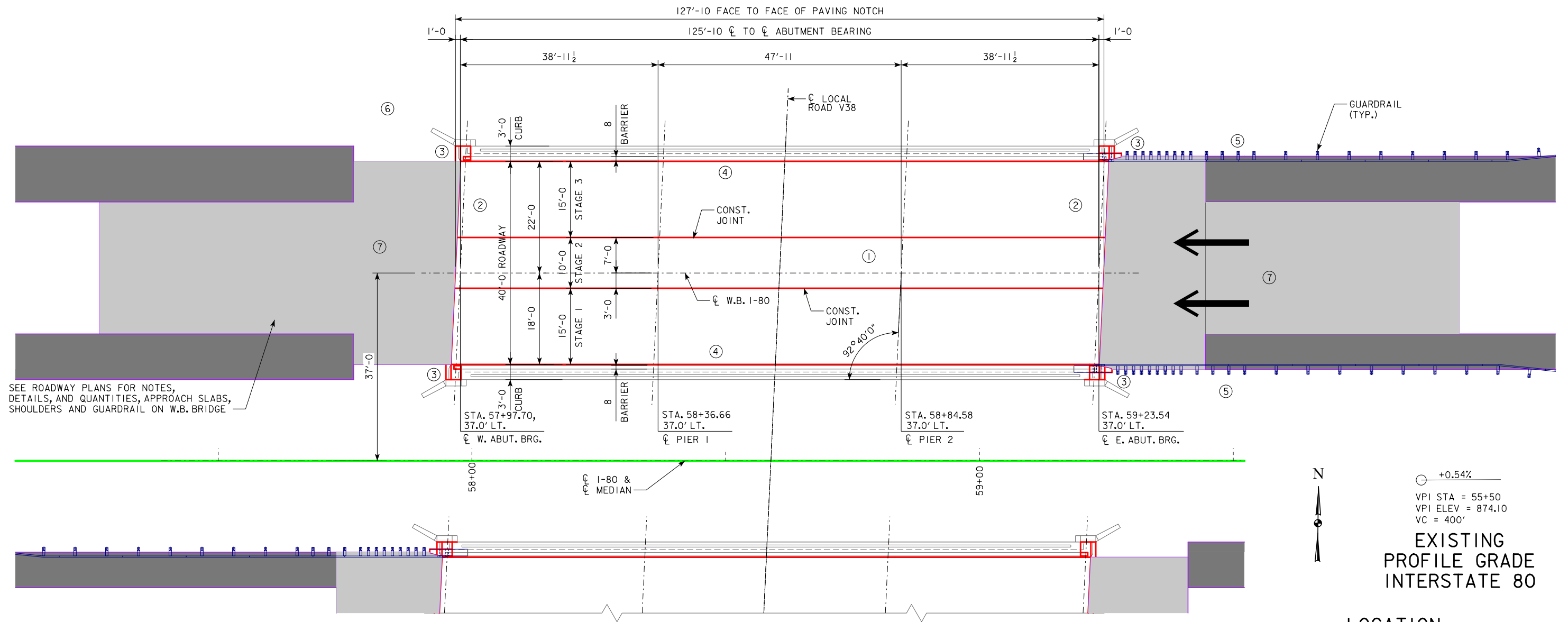
GENERAL NOTES

STA. 58+60.62, 37.0' LT. (☒ I-80)DECEMBER 2020

IOWA COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 2 OF 14FILE NO. 31539DESIGN NO. 121



SITUATION PLAN

REPAIR SHALL CONSIST OF:

- ① REMOVE EXISTING OVERLAY, SCARIFY DECK, COMPLETE CLASS A REPAIRS, AND OVERLAY THE BRIDGE WITH PCC.
- ② REMOVE BACKWALL AND CONCRETE DIAPHRAGM. INSTALL NEW SEMI-INTEGRAL ABUTMENT.
- ③ REMOVE BARRIER END SECTIONS AND PARTIALLY REMOVE BARRIERS TO ACCOMMODATE ABUTMENT RECONSTRUCTION.
- ④ SEAL TOP AND INSIDE FACE OF EXISTING BARRIER RAILS.
- ⑤ REMOVE AND REINSTALL EXISTING GUARDRAIL ON EAST BRIDGE APPROACH.
- ⑥ REMOVE GUARDRAIL FROM NORTHWEST CORNER OF BRIDGE.
- ⑦ REMOVE AND REPLACE BRIDGE APPROACH WITH NEW 70'-0" APPROACHES MEETING CURRENT STANDARDS INCLUDING NEW "EF" JOINTS.



+0.54%
VPI STA = 55+50
VPI ELEV = 874.10
VC = 400'

EXISTING PROFILE GRADE INTERSTATE 80

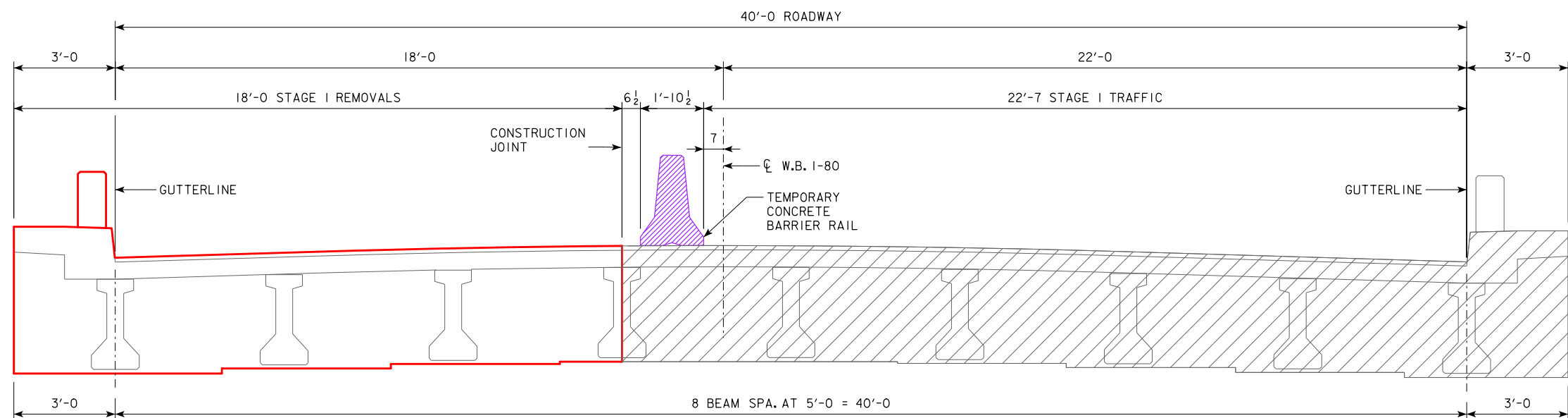
LOCATION

W.B. I-80 OVER SECONDARY ROAD V38
T-80N R-12W
SECTION 32
HARTFORD TOWNSHIP
IOWA COUNTY
FHWA NO. 29730
MAINT. NO. 4805.8L080
LATITUDE: 41.696158°
LONGITUDE: -92.279364°

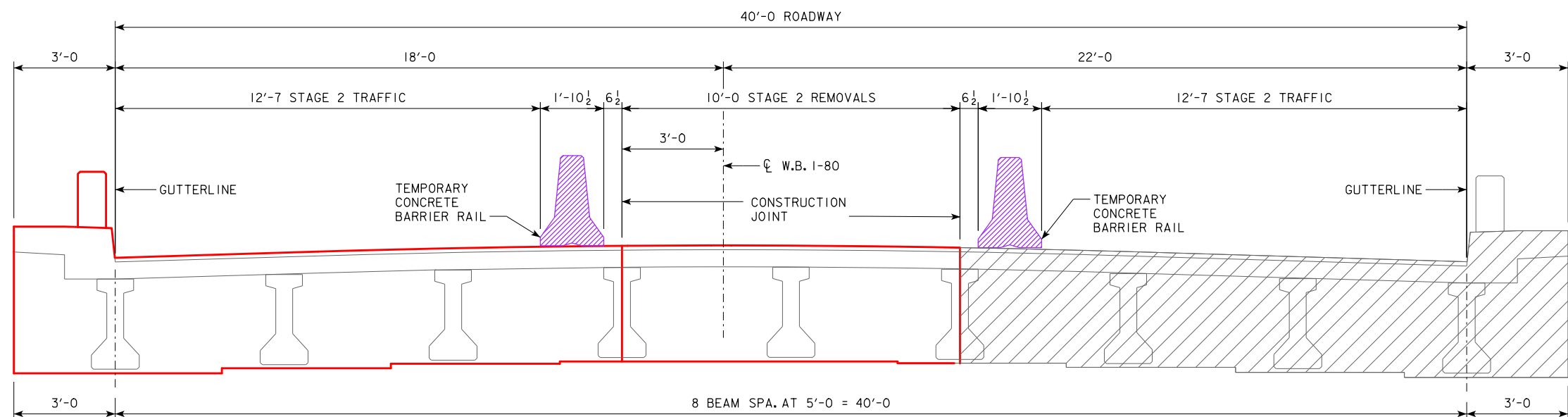
TRAFFIC ESTIMATE

2018 AADT 28,900 V.P.D.
TRUCKS 28 %
TOTAL 20 YEAR
DESIGN ESALs 24,000,000
INCLUDES EB AND WB LANES

DESIGN FOR REPAIRS TO 2°40' SKEW (L.A.)
**125'-10" x 40'-0" PRETENSIONED
PRESTRESSED CONCRETE BEAM W.B. BRIDGE**
38'-11 1/2" END SPANS 47'-11" INTERIOR SPAN
SITUATION PLAN
STA. 58+60.62, 37.0' LT. (CL I-80) DECEMBER 2020
IOWA COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 3 OF 14 FILE NO. 31539 DESIGN NO. 121

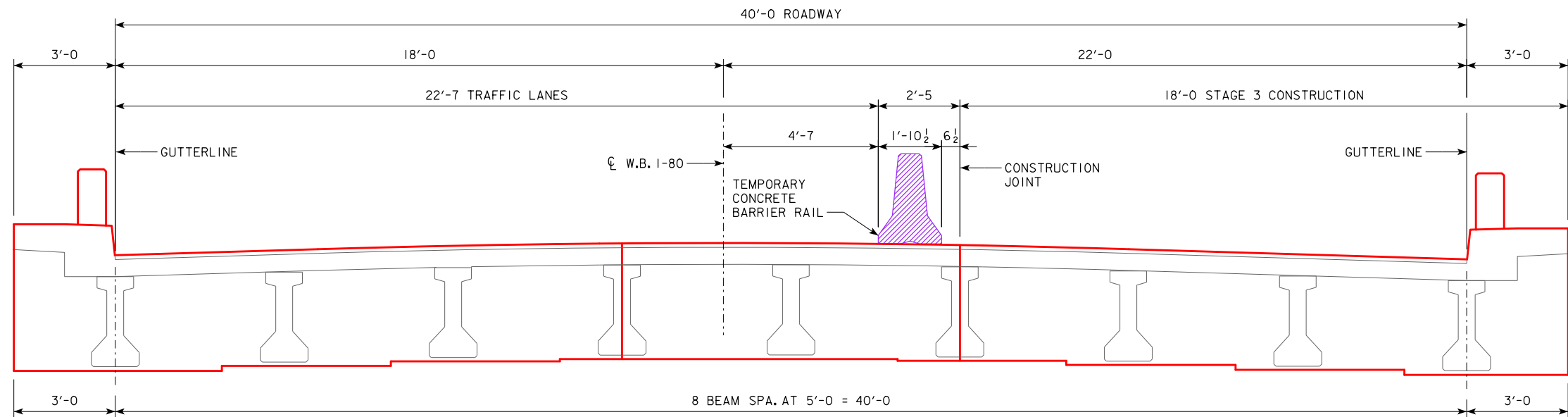


TYPICAL SECTION STAGE I CONSTRUCTION AT ABUTMENT
(LOOKING WEST)



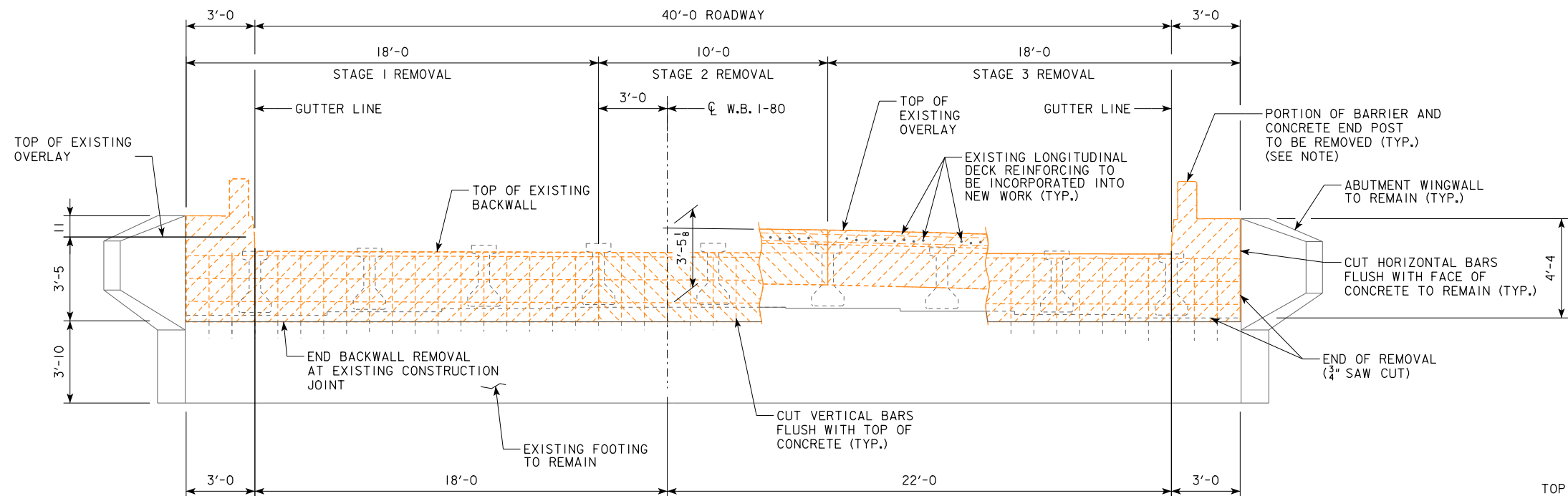
TYPICAL SECTION STAGE 2 CONSTRUCTION AT ABUTMENT
(LOOKING WEST)

DESIGN FOR REPAIRS TO 2°40' SKEW (L.A.)
**125'-10" x 40'-0" PRETENSIONED
 PRESTRESSED CONCRETE BEAM W.B. BRIDGE**
 38'-11 1/2" END SPANS 47'-11" INTERIOR SPAN
STAGING DETAILS
 STA. 58+60.62, 37.0' LT. (CL 1-80) DECEMBER 2020
IOWA COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 4 OF 14 FILE NO. 31539 DESIGN NO. 121

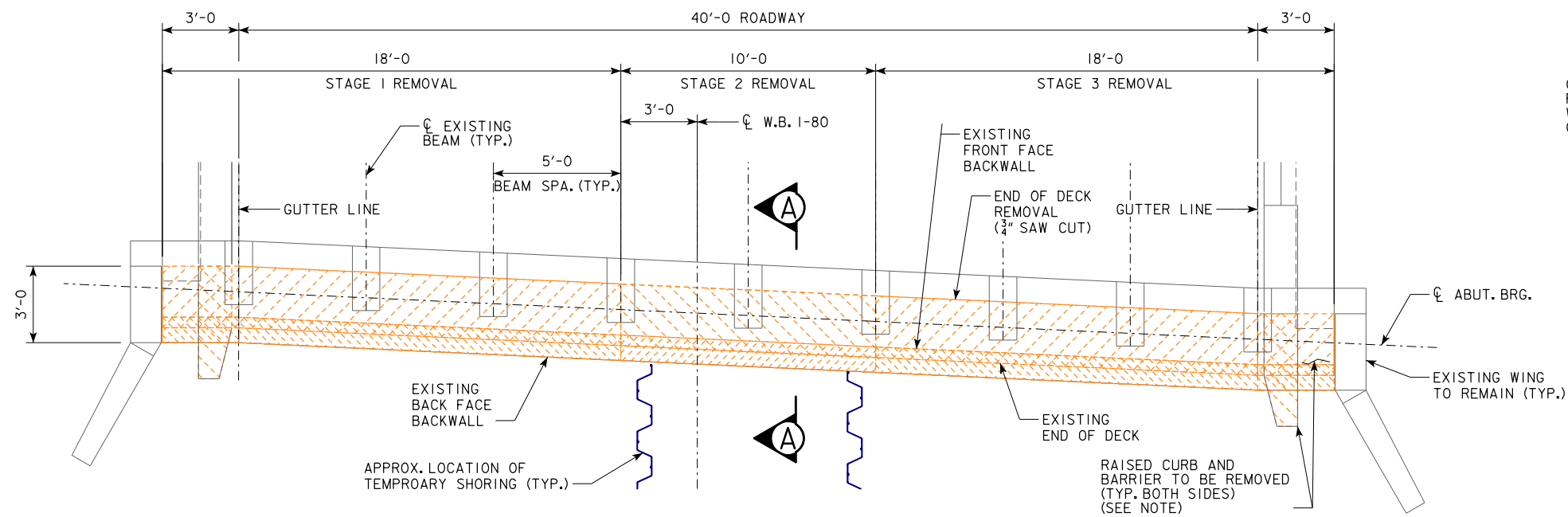


TYPICAL SECTION STAGE 3 CONSTRUCTION AT ABUTMENT
(LOOKING WEST)

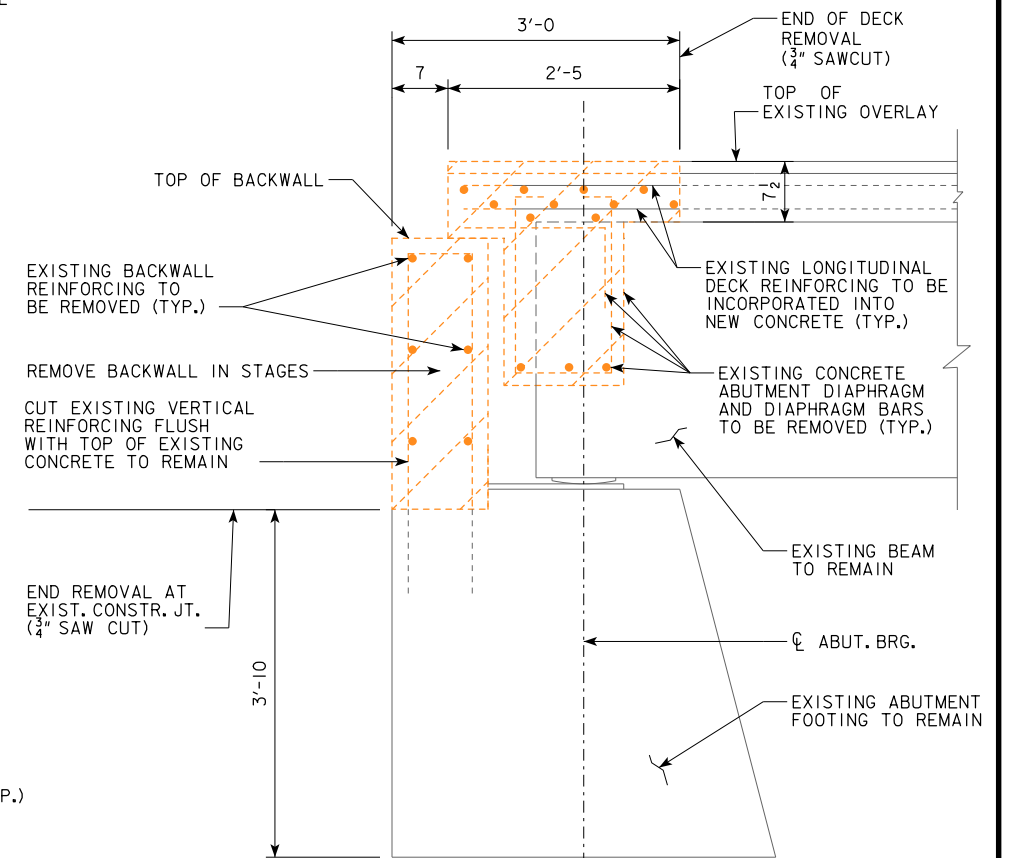
DESIGN FOR REPAIRS TO 2°40' SKEW (L.A.)
125'-10 x 40'-0 PRETENSIONED
PRESTRESSED CONCRETE BEAM W.B. BRIDGE
 38'-11 1/2" END SPANS 47'-11" INTERIOR SPAN
STAGING DETAILS
 STA. 58+60.62, 37.0' LT. (CL I-80) DECEMBER 2020
IOWA COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 5 OF 14 FILE NO. 31539 DESIGN NO. 121



ABUTMENT REAR BACKWALL ELEVATION
(EAST ABUTMENT SHOWN, WEST ABUTMENT SIMILAR)



REMOVAL - PLAN VIEW
(EAST ABUTMENT SHOWN, WEST ABUTMENT SIMILAR)



SECTION A-A

REMOVAL NOTES:

HATCHED AREAS INDICATE CONCRETE REMOVALS.

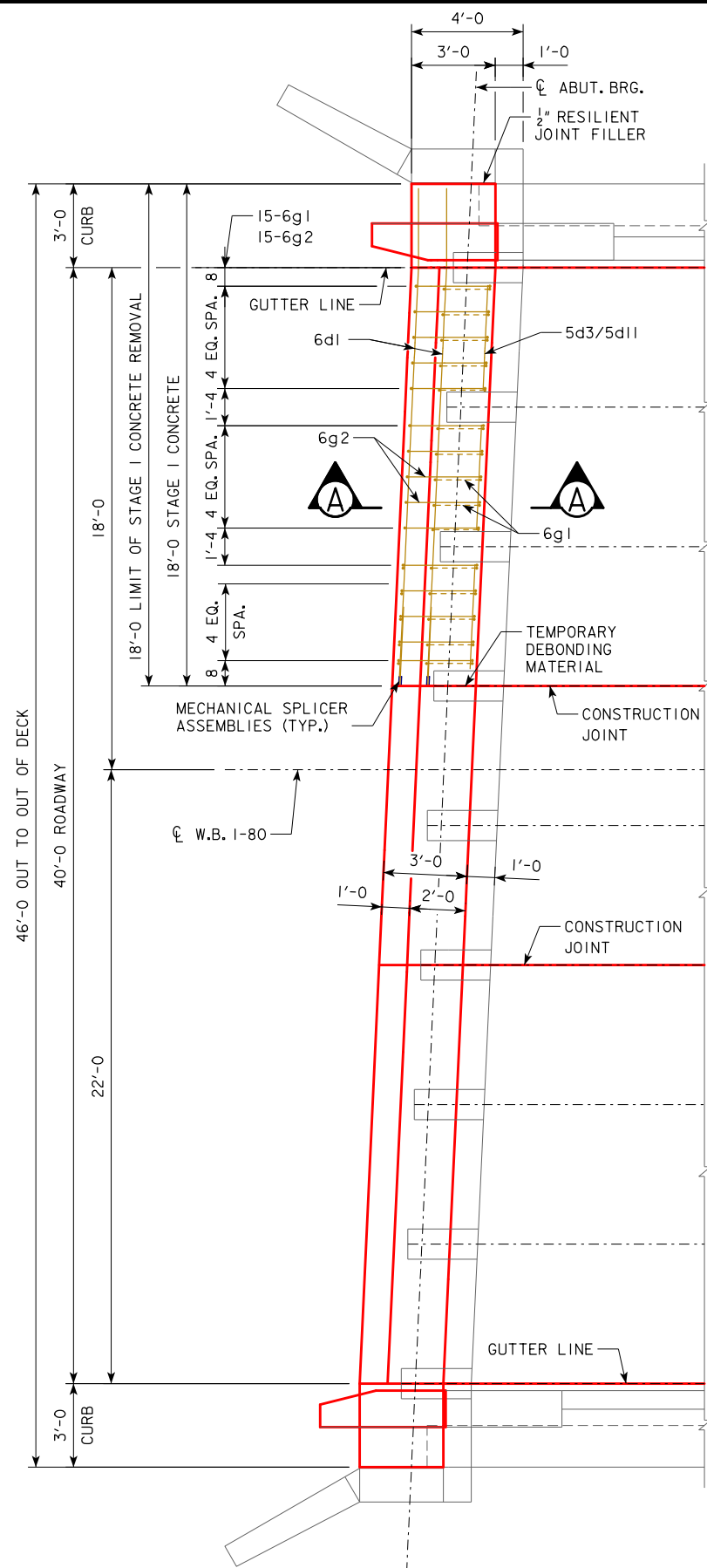
THIS SHEET SHOWS DETAILS OF THE PARTIAL SUPERSTRUCTURE REMOVAL ON THE EXISTING BRIDGE. ALL PARTIAL REMOVALS SHALL BE IN ACCORDANCE WITH SECTION 2401 OF THE STANDARD SPECIFICATIONS. ALL SUCH REMOVALS SHALL BE TO NEAT SAW CUTS TO PROVIDE CLEAN STRAIGHT SURFACES AT INTERFACES BETWEEN NEW CONCRETE AND REMAINING CONCRETE. THE REMOVAL SHALL BE DONE IN A MANNER WHICH WILL PREVENT ANY DAMAGE TO THE EXISTING STRUCTURE TO REMAIN. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY DAMAGE CAUSED, AND SHALL REPAIR ANY DAMAGED AREA TO ITS ORIGINAL CONDITION, AS DIRECTED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE. ANY EXISTING REINFORCING STEEL WHICH IS TO BE "SAVED" THAT IS EXPOSED DURING REMOVAL OPERATIONS IS TO BE CAREFULLY PROTECTED, CLEANED AND INCORPORATED INTO NEW CONSTRUCTION UNLESS NOTED OTHERWISE.

START ALL REMOVALS WITH $\frac{3}{4}$ " SAWCUT.

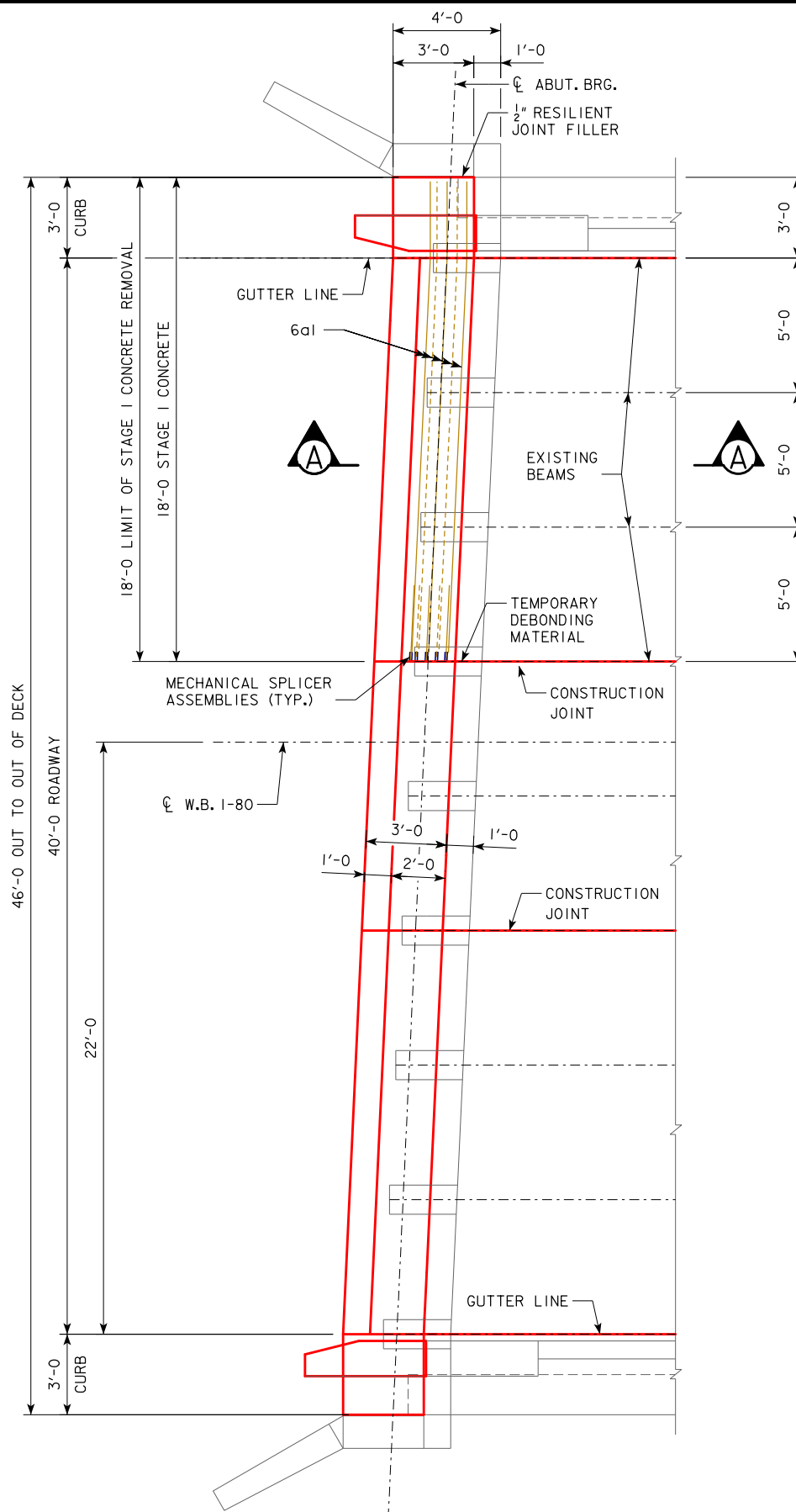
NOTE:

- FOR BARRIER AND CURB REMOVAL DETAILS, SEE DESIGN SHEET 11 FOR EAST ABUTMENT AND DESIGN SHEET 12 FOR WEST ABUTMENT.

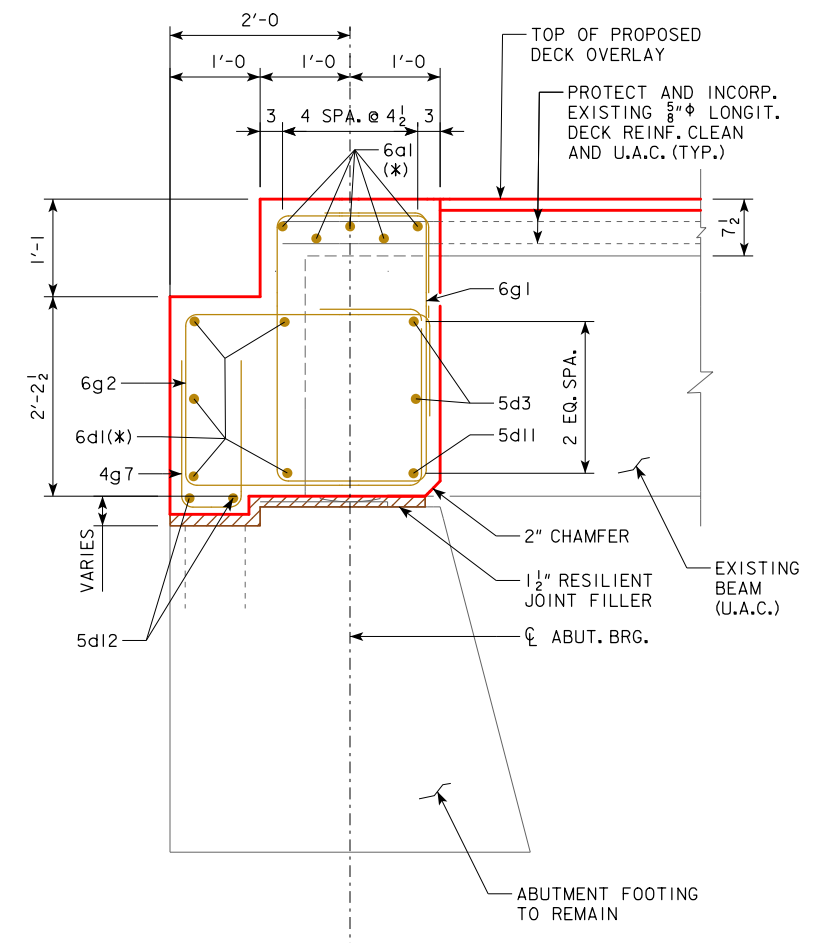
DESIGN FOR REPAIRS TO 2°40' SKEW (L.A.)
**125'-10" x 40'-0" PRETENSIONED
 PRESTRESSED CONCRETE BEAM W.B. BRIDGE**
 38'-11½" END SPANS 47'-11" INTERIOR SPAN
REMOVAL DETAILS
 STA. 58+60.62, 37.0' LT. (CL I-80) DECEMBER 2020
IOWA COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 6 OF 14 FILE NO. 31539 DESIGN NO. 121



ABUTMENT BACKWALL PLAN VIEW - STAGE I
(SLAB REINFORCING NOT SHOWN FOR CLARITY)
(EAST ABUTMENT SHOWN, WEST ABUTMENT SIMILAR)



SLAB PLAN VIEW - STAGE I
(ABUT. BACKWALL REINF. NOT SHOWN FOR CLARITY)
(EAST ABUTMENT SHOWN, WEST ABUTMENT SIMILAR)

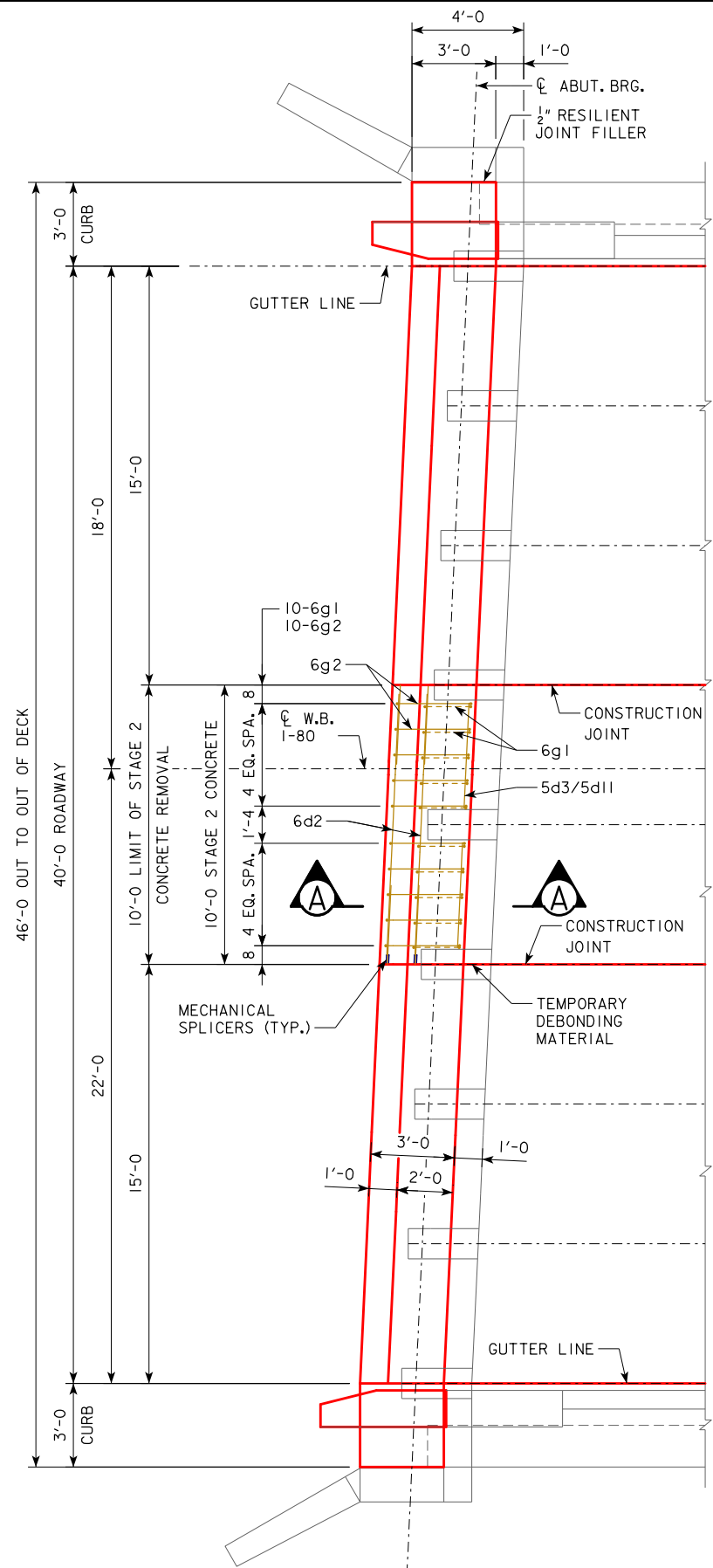


SECTION A-A

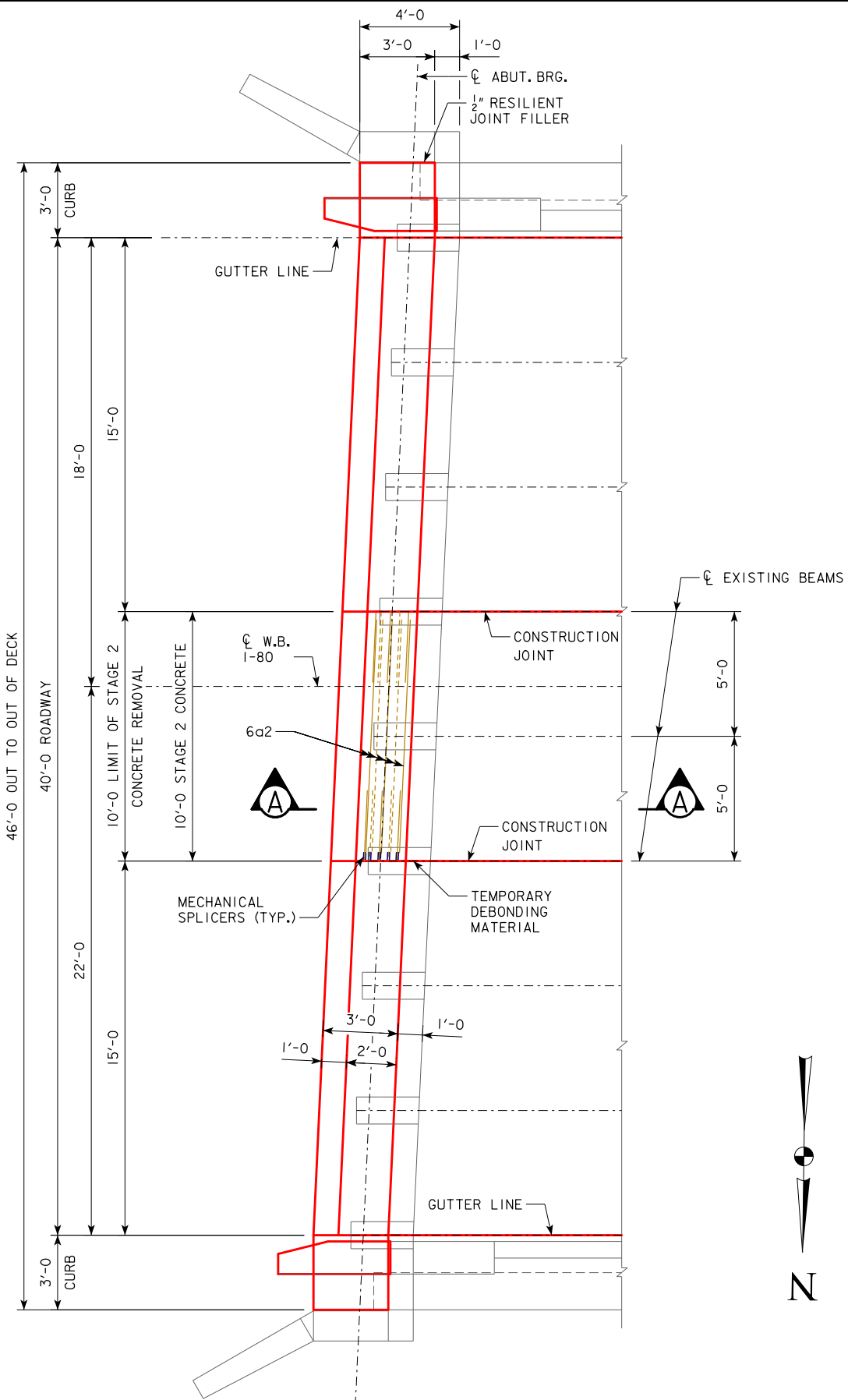
(*) MECHANICAL SPLICE ASSEMBLIES
USED AT CONSTRUCTION JOINT. SEE
DESIGN SHEET 13 FOR DETAILS.

- NOTES:
- SEE DESIGN SHEET 13 FOR MECHANICAL SPLICE DETAILS.
 - FOR BARRIER AND CURB DETAILS, SEE DESIGN SHEET 11 FOR EAST ABUTMENT AND DESIGN SHEET 12 FOR WEST ABUTMENT.
 - DECK AND TOP OF BACKWALL TO MATCH EXISTING GRADE.
 - NO DIAPHRAGM CONCRETE SHALL BE PLACED UNDER BEAMS. BEARINGS SHALL BE FREE TO SLIDE.
 - SEE DESIGN SHEET 13 FOR ABUTMENT NOTES, BENT BAR DETAILS AND BAR LIST.

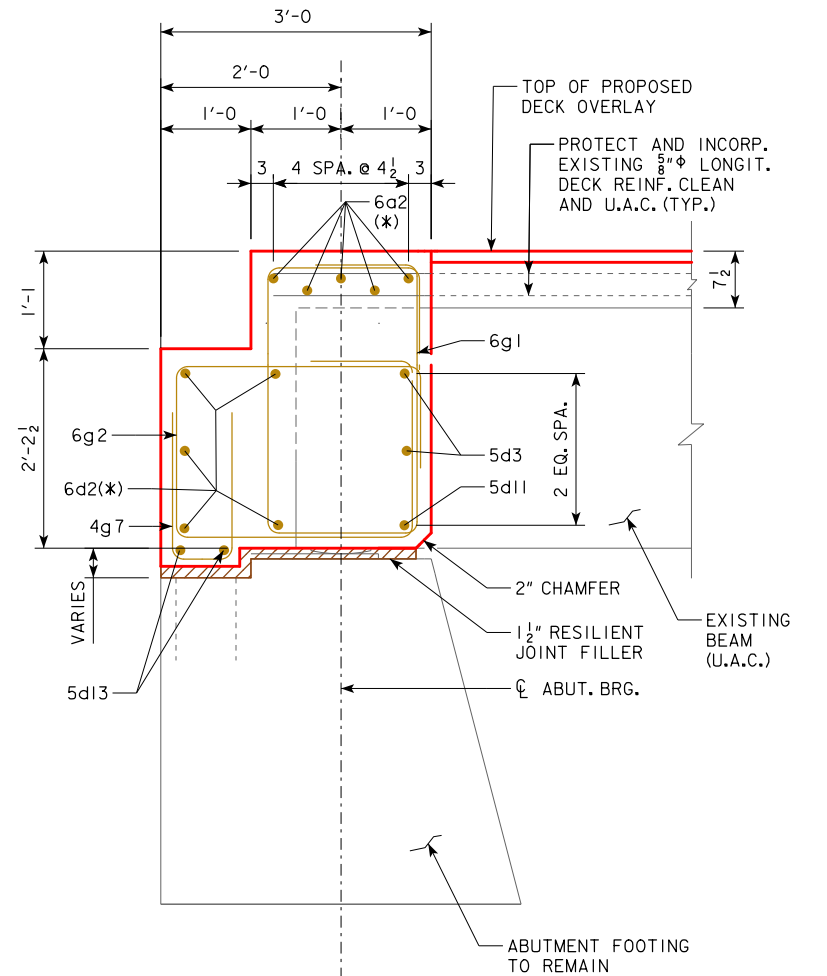
DESIGN FOR REPAIRS TO 2°40' SKEW (L.A.)
**125'-10 x 40'-0 PRETENSIONED
PRESTRESSED CONCRETE BEAM W.B. BRIDGE**
38'-11½ END SPANS 47'-11 INTERIOR SPAN
ABUTMENT REPAIR DETAILS
STA. 58+60.62, 37.0' LT. (CL 1-80) DECEMBER 2020
IOWA COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 7 OF 14 FILE NO. 31539 DESIGN NO. 121



ABUTMENT BACKWALL PLAN VIEW - STAGE 2
(SLAB REINF. NOT SHOWN FOR CLARITY)
(EAST ABUTMENT SHOWN, WEST ABUTMENT SIMILAR)



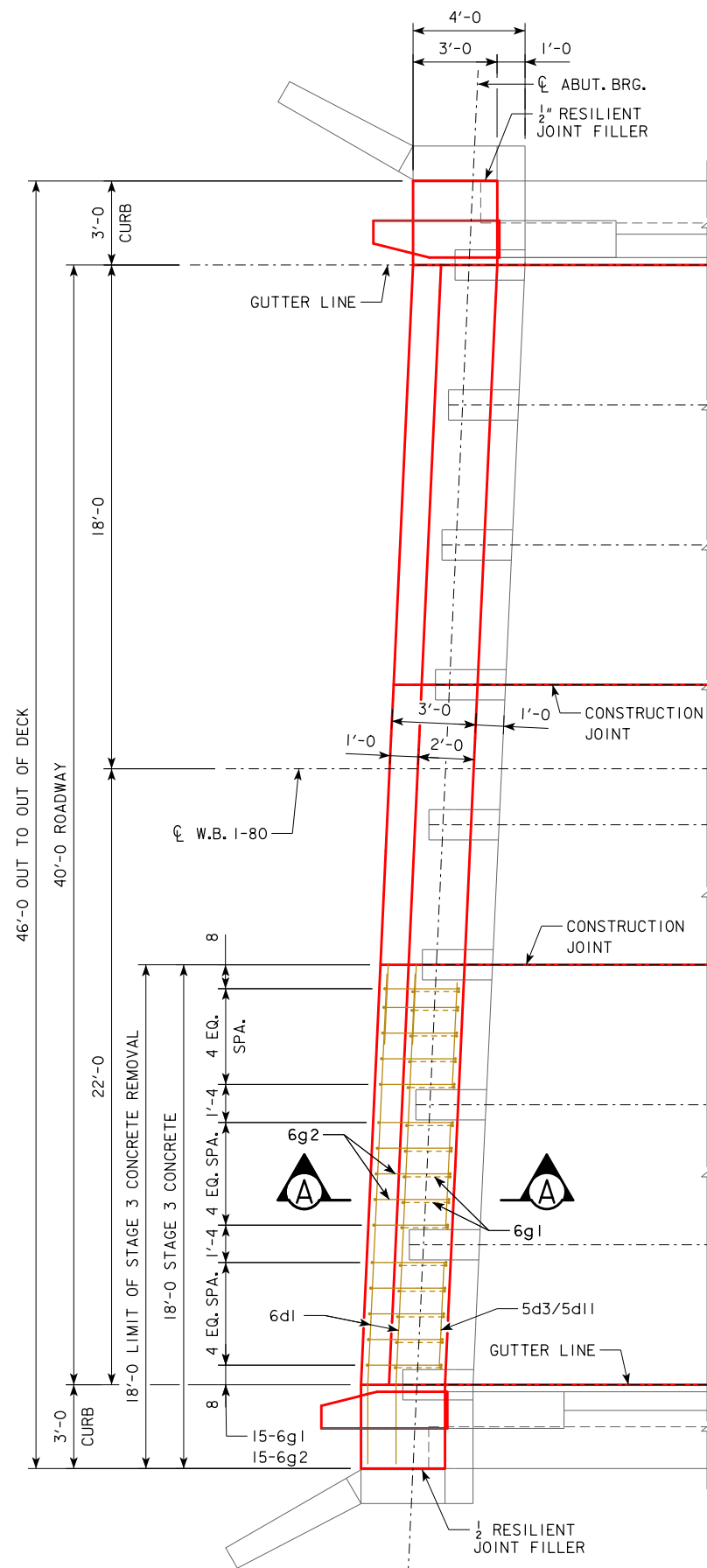
SLAB PLAN VIEW - STAGE 2
(ABUT. BACKWALL REINF. NOT SHOWN FOR CLARITY)
(EAST ABUTMENT SHOWN, WEST ABUTMENT SIMILAR)



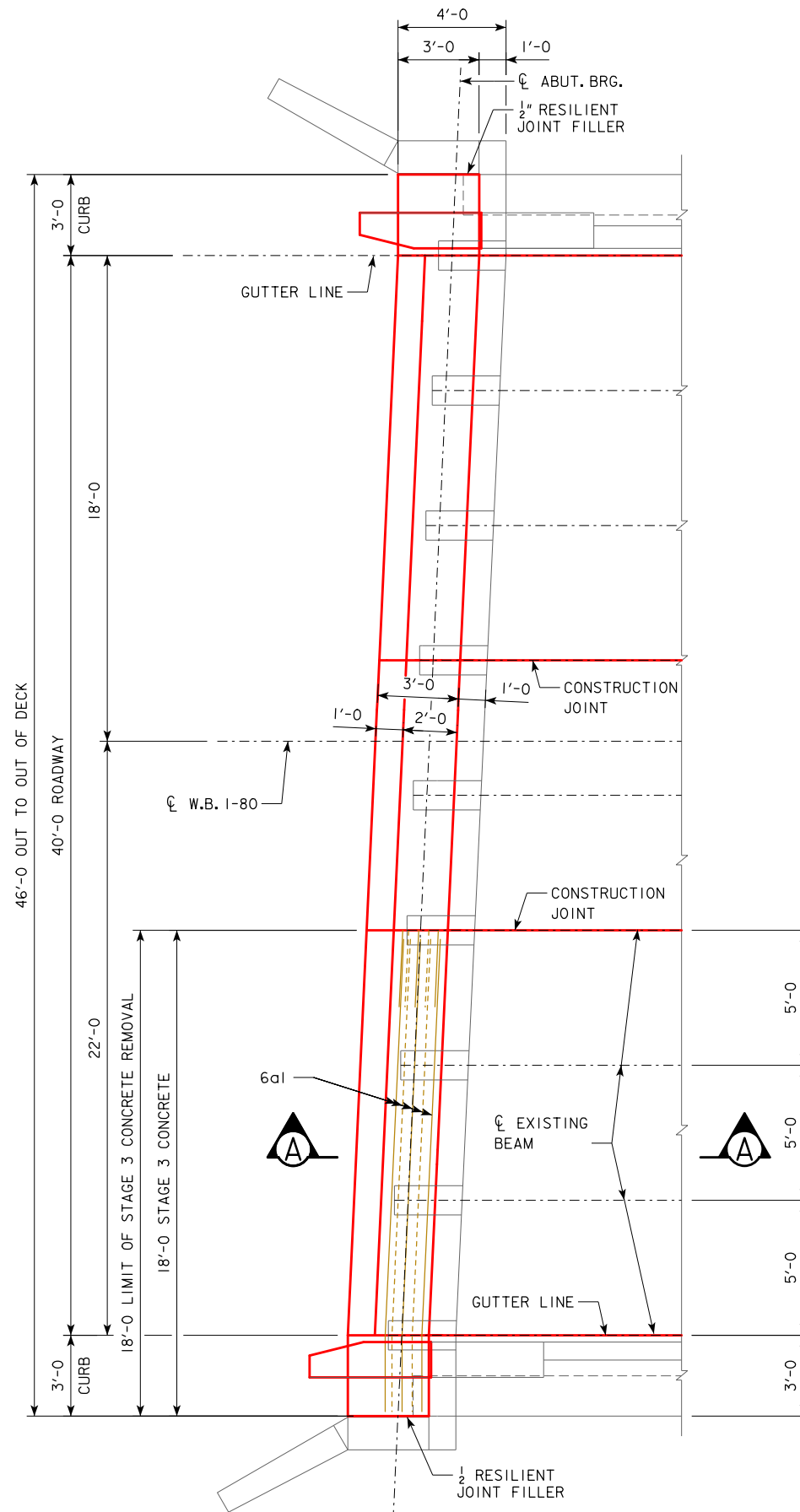
SECTION A-A
(*) MECHANICAL SPLICE ASSEMBLIES
USED AT CONSTRUCTION JOINT. SEE
DESIGN SHEET 13 FOR DETAILS.

- NOTES:
1. SEE DESIGN SHEET 13 FOR MECHANICAL SPLICE DETAILS.
 2. FOR BARRIER AND CURB DETAILS, SEE DESIGN SHEET 11 FOR EAST ABUTMENT AND DESIGN SHEET 12 FOR WEST ABUTMENT.
 3. DECK AND TOP OF BACKWALL TO MATCH EXISTING GRADE.
 4. NO DIAPHRAGM CONCRETE SHALL BE PLACED UNDER BEAMS. BEARINGS SHALL BE FREE TO SLIDE.
 5. SEE DESIGN SHEET 13 FOR ABUTMENT NOTES, BENT BAR DETAILS AND BAR LIST.

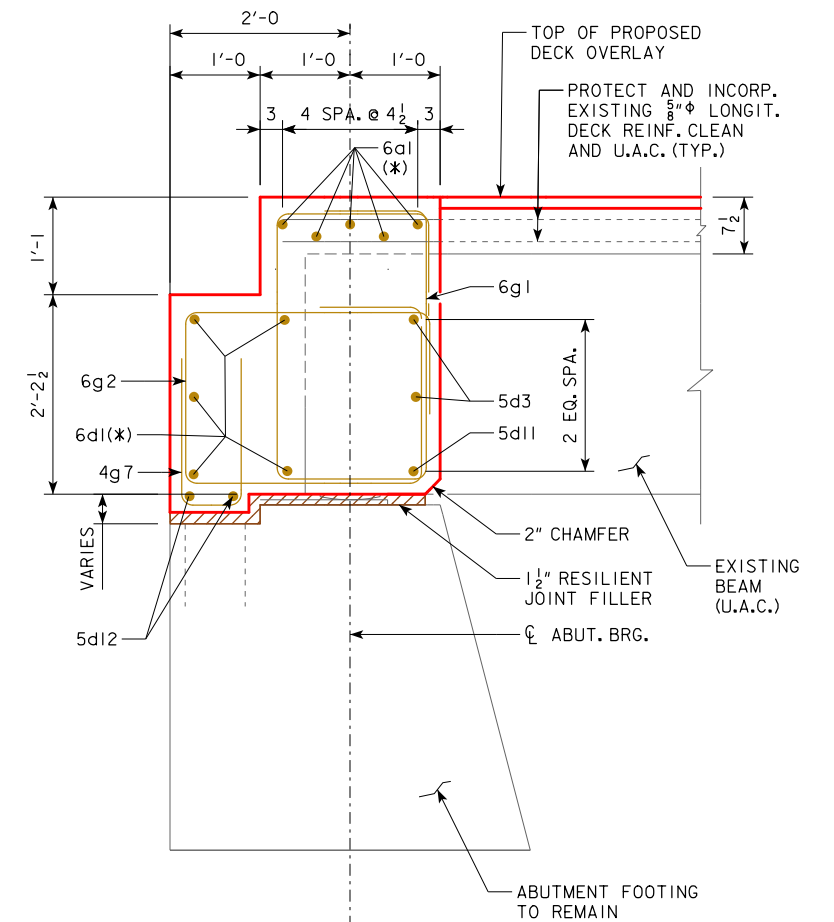
DESIGN FOR REPAIRS TO 2°40' SKEW (L.A.)
**125'-10 x 40'-0 PRETENSIONED
PRESTRESSED CONCRETE BEAM W.B. BRIDGE**
38'-11 1/2' END SPANS 47'-11' INTERIOR SPAN
ABUTMENT REPAIR DETAILS
STA. 58+60.62, 37.0' LT. (CL 1-80) DECEMBER 2020
IOWA COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 8 OF 14 FILE NO. 31539 DESIGN NO. 121



ABUTMENT BACKWALL PLAN VIEW - STAGE 3
(SLAB REINF. NOT SHOWN FOR CLARITY)
(EAST ABUTMENT SHOWN, WEST ABUTMENT SIMILAR)



SLAB PLAN VIEW - STAGE 3
(ABUT. BACKWALL REINF. NOT SHOWN FOR CLARITY)
(EAST ABUTMENT SHOWN, WEST ABUTMENT SIMILAR)

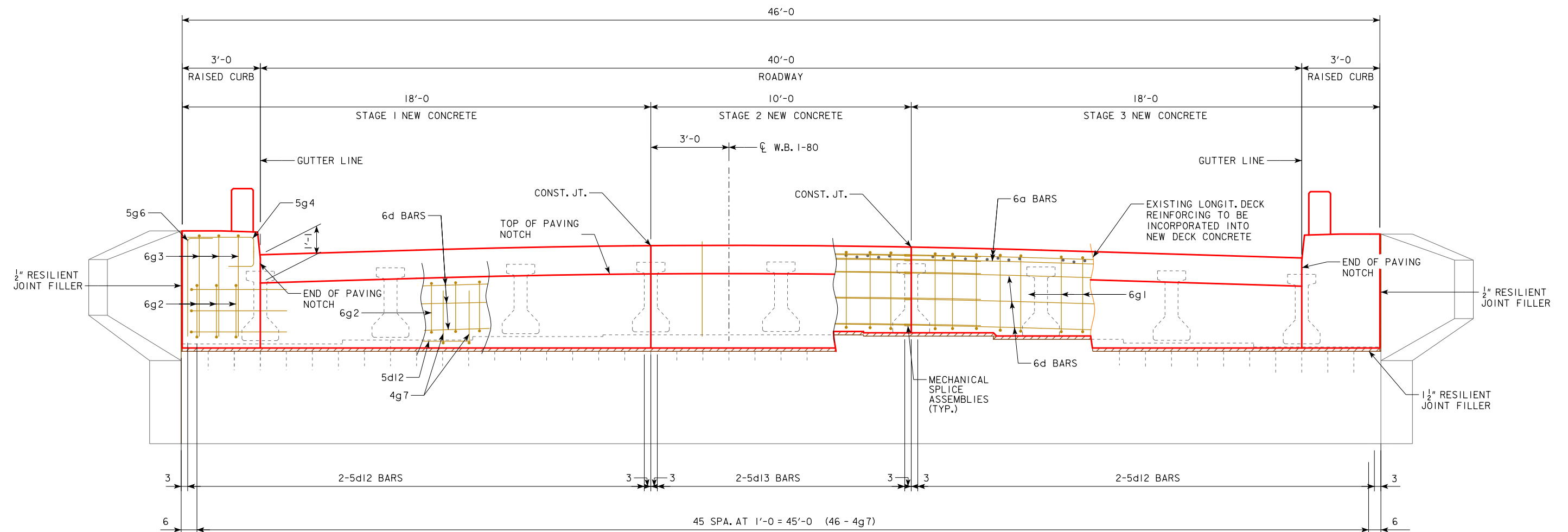


SECTION A-A

(*) MECHANICAL SPLICE ASSEMBLIES
USED AT CONSTRUCTION JOINT. SEE
DESIGN SHEET 13 FOR DETAILS.

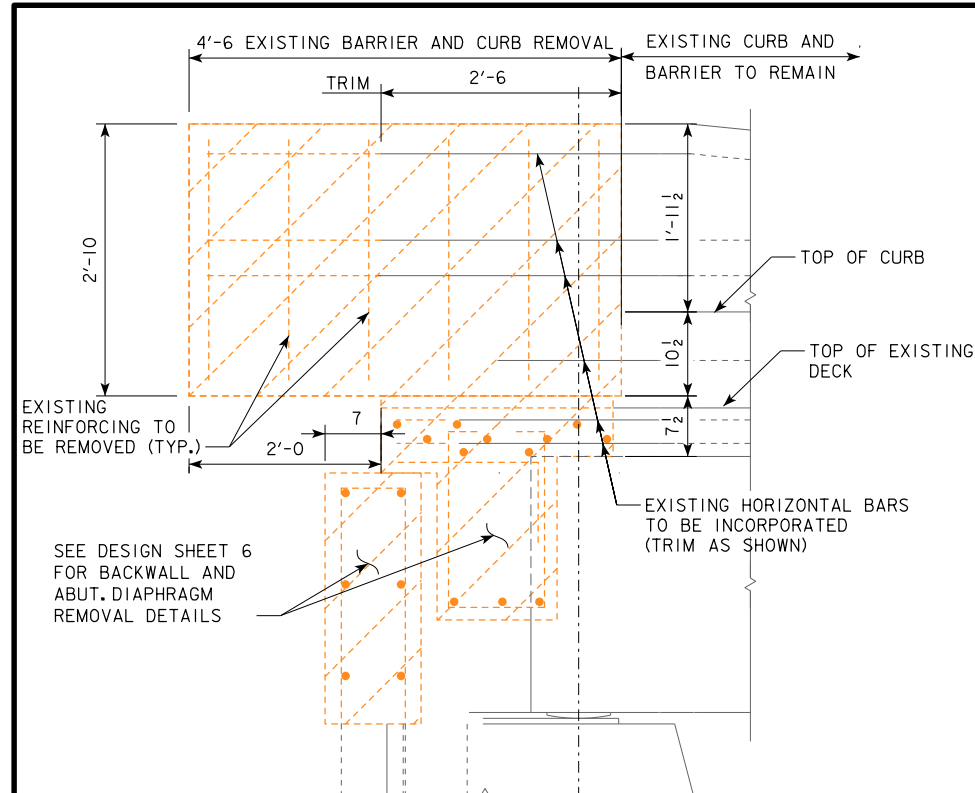
- NOTES:
1. SEE DESIGN SHEET 13 FOR MECHANICAL SPLICE DETAILS.
 2. FOR BARRIER AND CURB DETAILS, SEE DESIGN SHEET 11 FOR EAST ABUTMENT AND DESIGN SHEET 12 FOR WEST ABUTMENT.
 3. DECK AND TOP OF BACKWALL TO MATCH EXISTING GRADE.
 4. NO DIAPHRAGM CONCRETE SHALL BE PLACED UNDER BEAMS. BEARINGS SHALL BE FREE TO SLIDE.
 5. SEE DESIGN SHEET 13 FOR ABUTMENT NOTES, BENT BAR DETAILS AND BAR LIST.

DESIGN FOR REPAIRS TO 2°40' SKEW (L.A.)
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PRESTRESSED CONCRETE BEAM W.B. BRIDGE**
38'-11½ END SPANS 47'-11 INTERIOR SPAN
ABUTMENT REPAIR DETAILS
STA. 58+60.62, 37.0' LT. (CL 1-80) DECEMBER 2020
IOWA COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 9 OF 14 FILE NO. 31539 DESIGN NO. 121

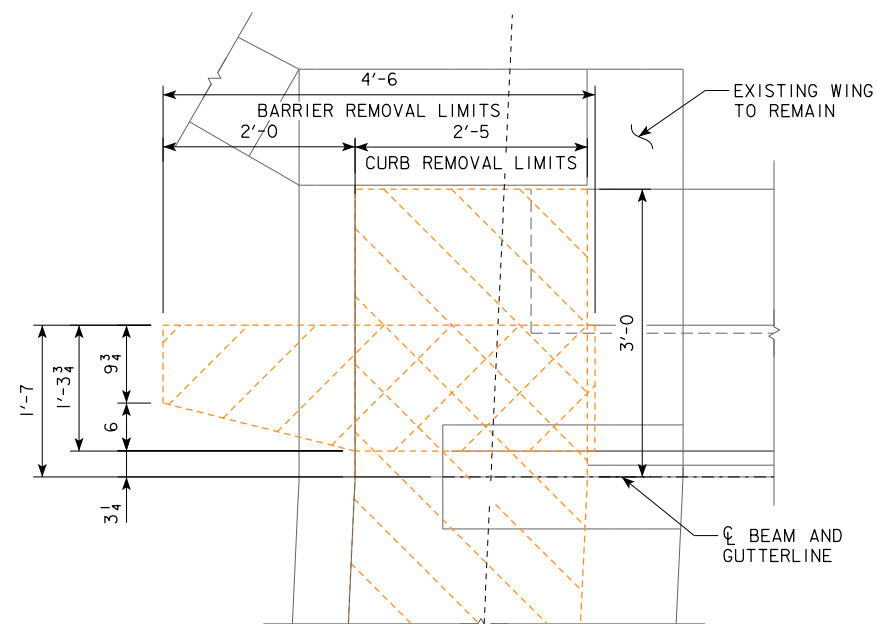


PROPOSED ABUTMENT BACKWALL ELEVATION
(EAST ABUTMENT LOOKING WEST SHOWN, WEST ABUTMENT SIMILAR)

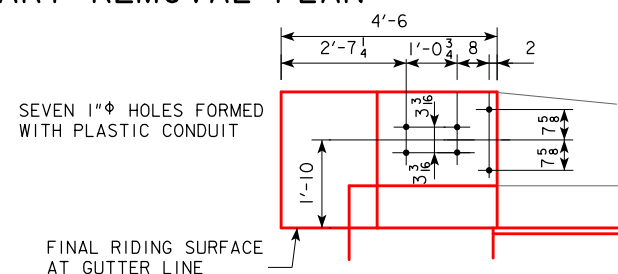
DESIGN FOR REPAIRS TO 2°40' SKEW (L.A.)
125'-10 x 40'-0 PRETENSIONED
PRESTRESSED CONCRETE BEAM W.B. BRIDGE
 38'-11½ END SPANS 47'-11 INTERIOR SPAN
ABUTMENT DETAILS
 STA. 58+60.62, 37.0' LT. (CL 1-80) DECEMBER 2020
IOWA COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 10 OF 14 FILE NO. 31539 DESIGN NO. 121



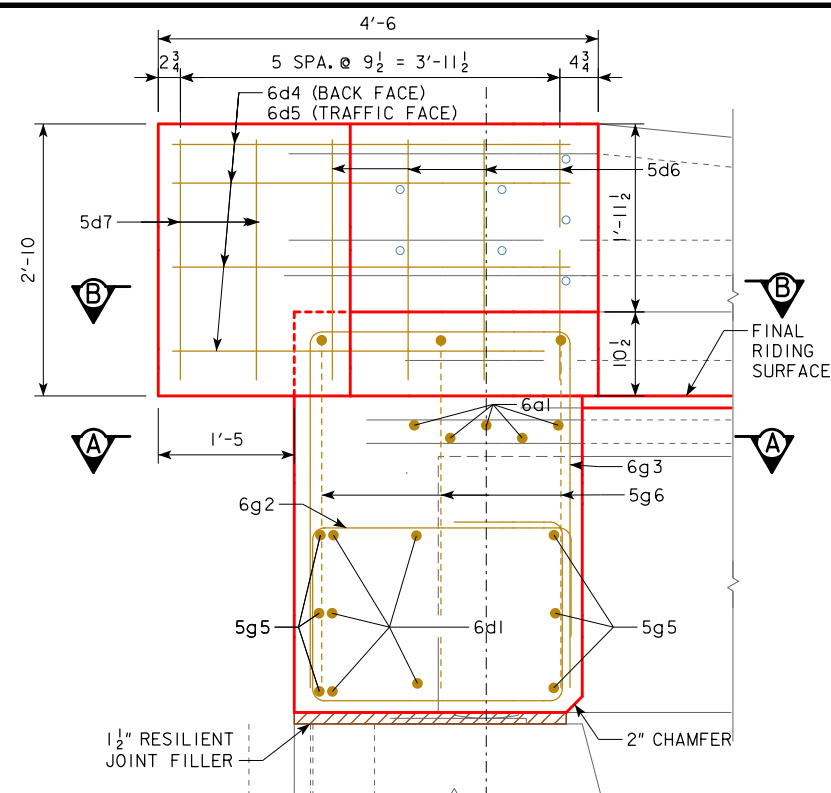
END SECTION PART REMOVAL ELEVATION
AT GUTTERLINE



END SECTION PART REMOVAL PLAN

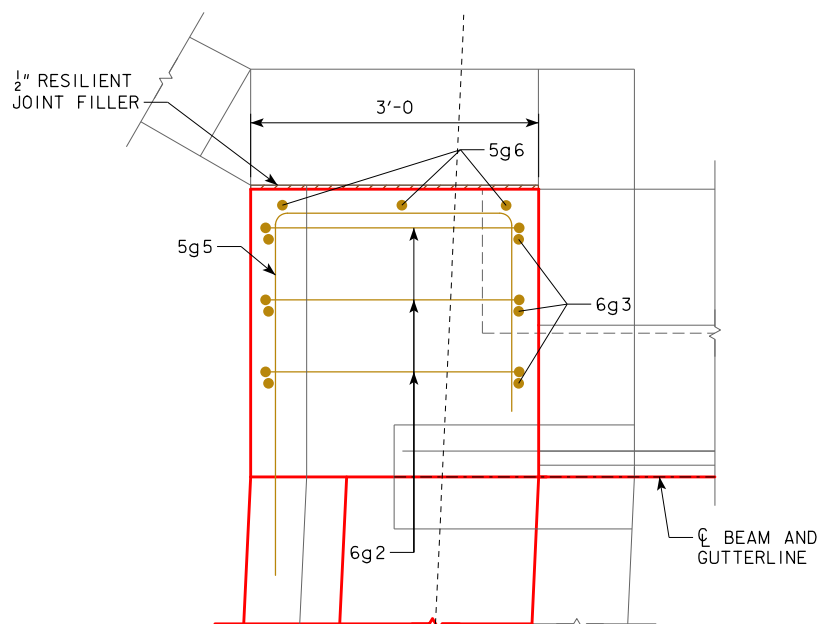


GUARD RAIL CONNECTION

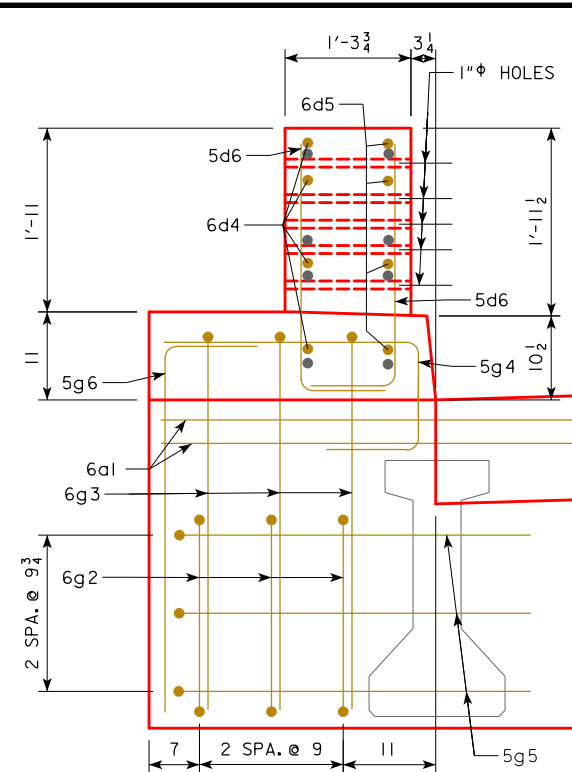


PART ELEVATION VIEW
AT GUTTERLINE

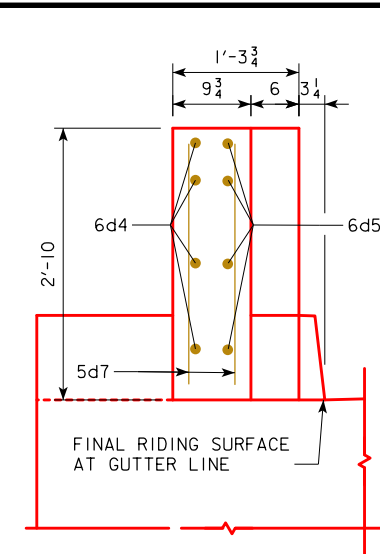
PROVIDE 7 HOLES FORMED WITH 1" ϕ PLASTIC CONDUIT. COST TO BE INCLUDED IN PRICE FOR "STRUCTURAL CONCRETE (MISC.)".



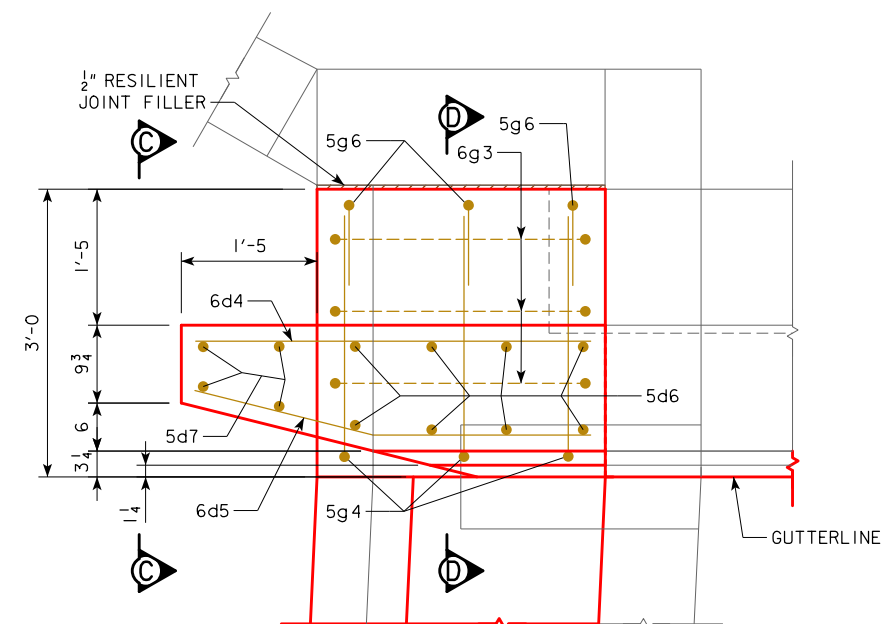
SECTION A-A
(DECK STEEL NOT SHOWN)



SECTION D-D



SECTION C-C

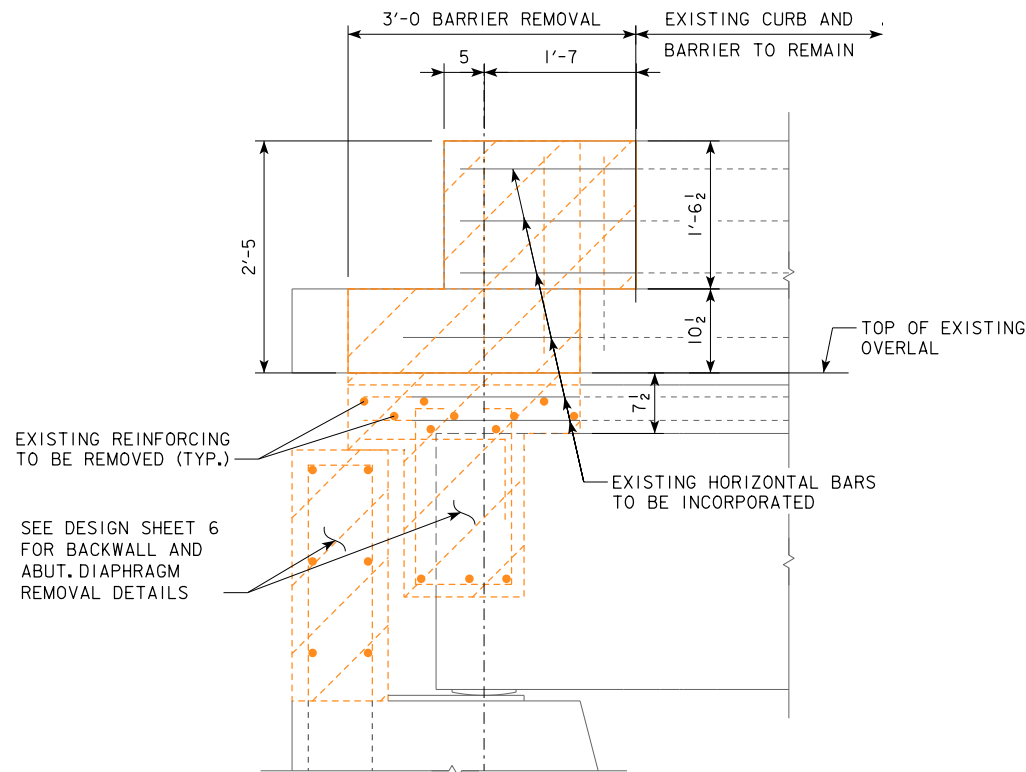


SECTION B-B
(DECK STEEL NOT SHOWN)

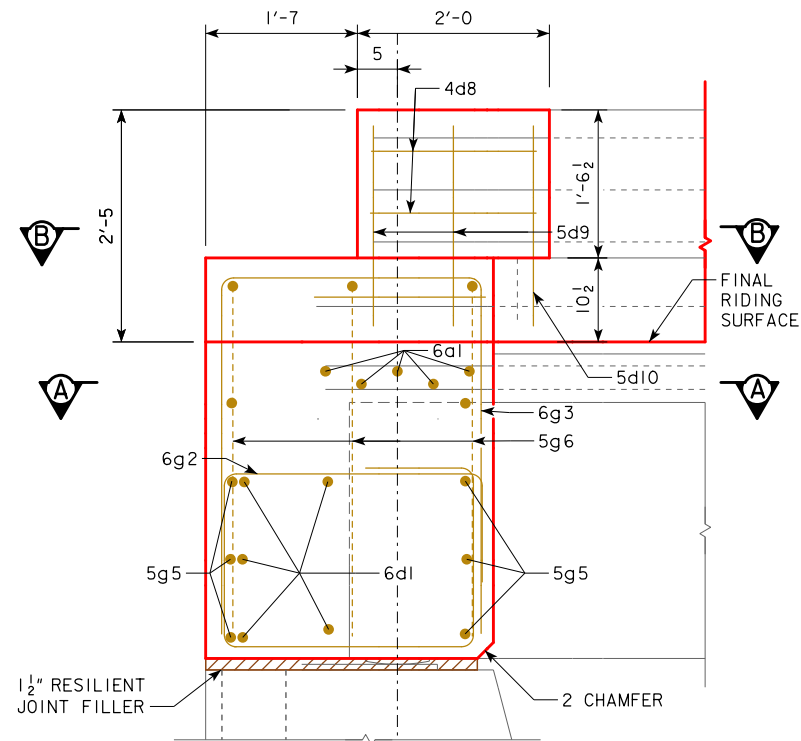
NOTES:

1. THIS SHEET IS FOR THE NORTHEAST AND SOUTHEAST CORNER BARRIER END SECTIONS. SEE DESIGN SHEET 12 FOR THE NORTHWEST AND SOUTHWEST CORNER BARRIER END SECTION.
2. SEE DESIGN SHEET 13 FOR ABUTMENT NOTES, BAR LIST, AND BENT BAR DETAILS.
3. INCORPORATE EXISTING REINFORCING INTO NEW WORK WHERE POSSIBLE. CUT BARS AS REQUIRED TO MAINTAIN CLEAR COVER.
4. CONSTRUCTION JOINT UNDER BARRIER SHALL BE INTENTIONALLY ROUGHENED.

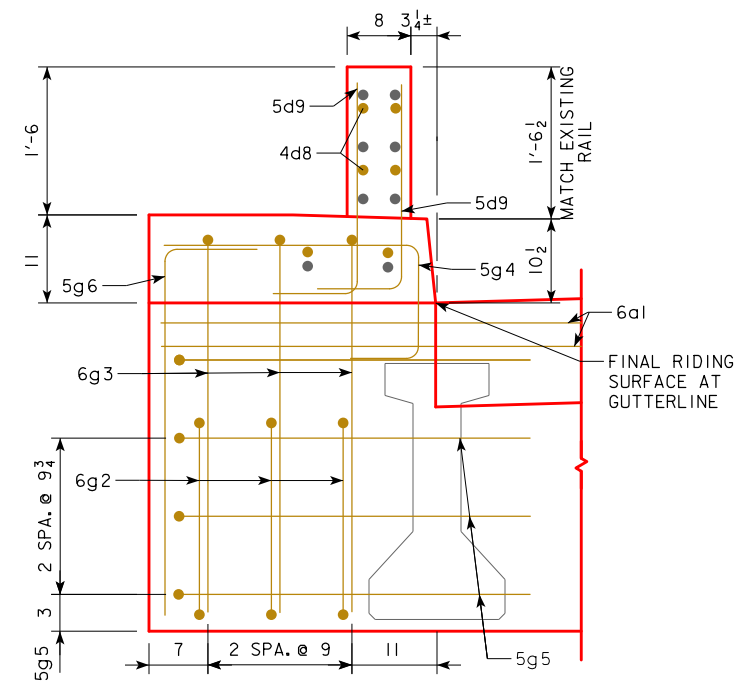
DESIGN FOR REPAIRS TO 2°40' SKEW (L.A.)
**125'-10 x 40'-0 PRETENSIONED
 PRESTRESSED CONCRETE BEAM W.B. BRIDGE**
 38'-11½" END SPANS 47'-11" INTERIOR SPAN
CURB AND BARRIER DETAILS
 STA. 58+60.62, 37.0' LT. (CL 1-80)
 IOWA COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 11 OF 14 FILE NO. 31539 DESIGN NO. 121
 DECEMBER 2020



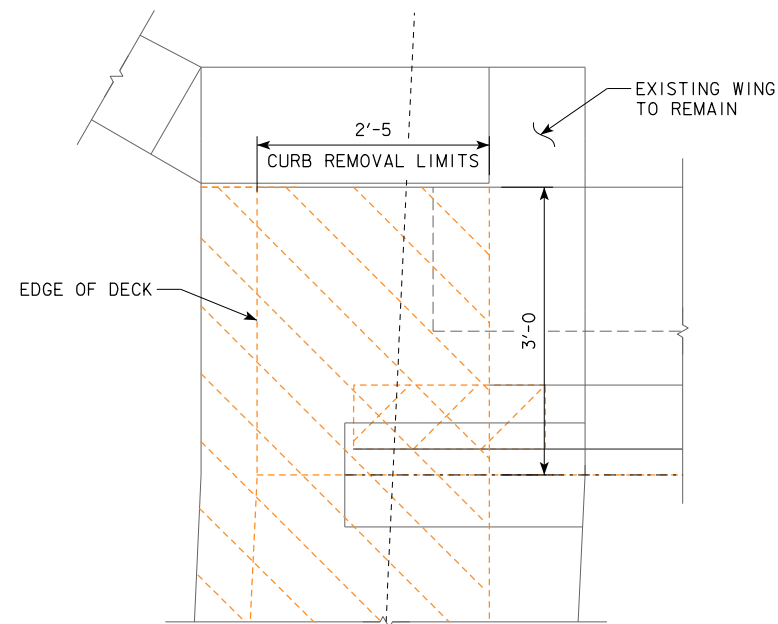
END SECTION PART REMOVAL ELEVATION
AT GUTTERLINE



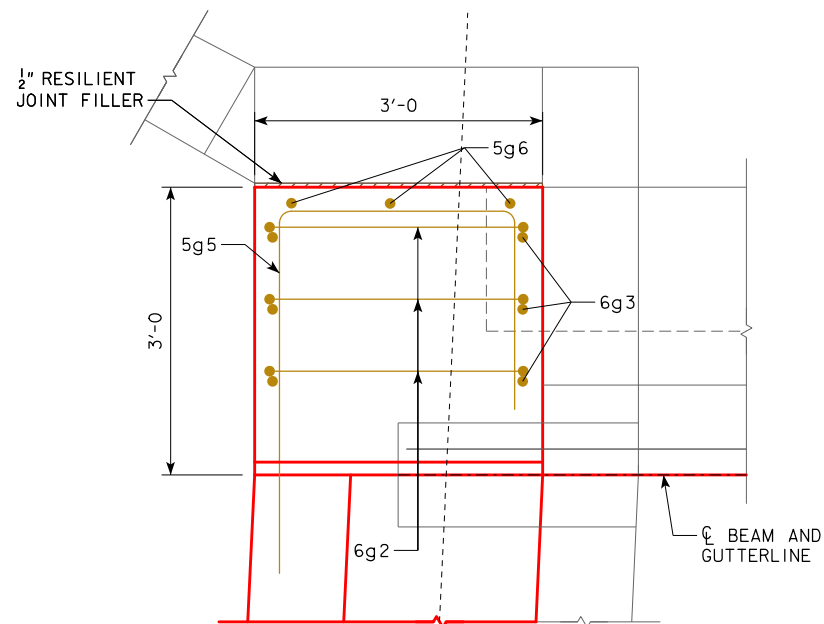
PART ELEVATION VIEW
AT GUTTERLINE



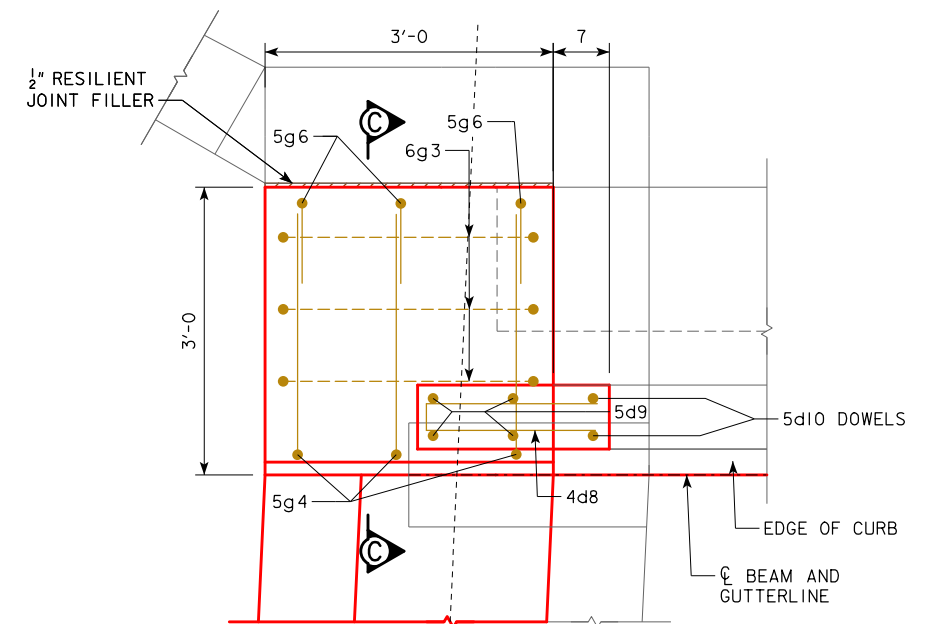
SECTION C-C



END SECTION PART REMOVAL PLAN



SECTION A-A
(DECK STEEL NOT SHOWN)



SECTION B-B
(DECK STEEL NOT SHOWN)

NOTES:

1. THIS SHEET IS FOR THE NORTHWEST AND SOUTHWEST CORNER BARRIER END SECTIONS. SEE DESIGN SHEET 11 FOR THE NORTHEAST AND SOUTHEAST CORNER BARRIER END SECTION.
2. SEE DESIGN SHEET 13 FOR ABUTMENT NOTES, BAR LIST, AND BENT BAR DETAILS.
3. INCORPORATE EXISTING REINFORCING INTO NEW WORK WHERE POSSIBLE. CUT BARS AS REQUIRED TO MAINTAIN CLEAR COVER.
4. CONSTRUCTION JOINT UNDER BARRIER SHALL BE INTENTIONALLY ROUGHENED.
5. SEE DESIGN SHEET 2 FOR DOWEL SETTING NOTES.

DESIGN FOR REPAIRS TO 2°40' SKEW (L.A.)
**125'-10 x 40'-0 PRETENSIONED
 PRESTRESSED CONCRETE BEAM W.B. BRIDGE**
 38'-11½ END SPANS 47'-11 INTERIOR SPAN
CURB AND BARRIER DETAILS
 STA. 58+60.62, 37.0' LT. (CL 1-80) DECEMBER 2020
IOWA COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 12 OF 14 FILE NO. 31539 DESIGN NO. 121

ABUTMENT NOTES:

MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR IS TO BE 2" UNLESS OTHERWISE NOTED OR SHOWN.

THE COST OF RESILIENT JOINT JOINT FILLER IS TO BE INCLUDED
IN THE PRICE BID FOR "STRUCTURAL CONCRETE (MISC.)"

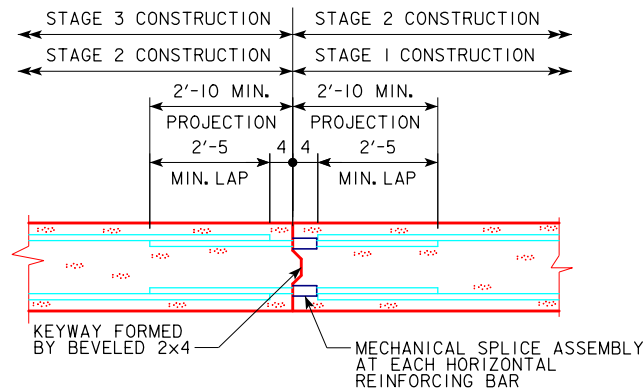
IF NECESSARY TO PREVENT DAMAGE TO THE END OF THE BRIDGE DECK AND BACKWALL FROM CONSTRUCTION EQUIPMENT, AN APPROPRIATE METHOD OF PROTECTION APPROVED BY THE ENGINEER SHALL BE PROVIDED BY THE BRIDGE CONTRACTOR AT NO EXTRA COST TO THE STATE.

MECHANICAL SPLICE ASSEMBLIES:

THE 6a1, AND 6a2 DECK SLAB BARS, 6d1 AND 6d2 BARS IN THE ABUTMENT BACKWALLS SHALL BE SPICED AT THE LOCATIONS SHOWN USING MECHANICAL SPLICE ASSEMBLIES. MECHANICAL SPLICE ASSEMBLIES CONSIST OF MECHANICAL SPICERS AND REINFORCING SPLICE BARS AS REQUIRED TO FACILITATE THE USE OF THE MECHANICAL SPICER. THE MECHANICAL SPLICE ASSEMBLY USED SHALL MEET THE REQUIREMENTS OF MATERIALS 1.M. 451 APPENDIX E. REINFORCING SPLICE BARS SHALL BE A MINIMUM OF 3/4 INCH DIA.

ALL MECHANICAL SPLICE ASSEMBLIES TO BE USED IN SHALL BE EPOXY COATED.

THE COST OF ALL SPLICE ASSEMBLIES IS TO BE INCLUDED IN THE PRICE BID FOR "REINFORCING STEEL EPOXY COATED" AND NO SEPARATE PAYMENT WILL BE MADE. THE WEIGHT OF MECHANICAL SPLICE ASSEMBLIES IS NOT INCLUDED IN THE QUANTITY SHOWN FOR "REINFORCING STEEL EPOXY COATED". A TOTAL OF 40 EPOXY COATED SPLICE ASSEMBLIES WILL BE REQUIRED (20 FOR EACH ABUTMENT).



MECHANICAL SPLICE DETAIL

[illegible]

BENT BAR DETAILS

NOTE: ALL DIMENSIONS ARE OUT TO OUT. D = PIN DIA

[illegible]

CONCRETE PLACEMENT QUANTITIES

LOCATION	WEST ABUTMENT		EAST ABUTMENT	
	ABUTMENT	BARRIER	ABUTMENT	BARRIER
STAGE 1	5.71	0.10	5.71	0.56
STAGE 2	3.17	0.00	3.17	0.00
STAGE 3	5.71	0.10	5.71	0.56
TOTAL (C.Y.)	14.59	0.20	14.59	1.12

DESIGN FOR REPAIRS TO 2°40' SKEW (L.A.)

125'-10" x 40'-0" PRETENSIONED
PRESTRESSED CONCRETE BEAM W.B. BRIDGE

38'-11½" END SPANS 47'-11" INTERIOR SPAN

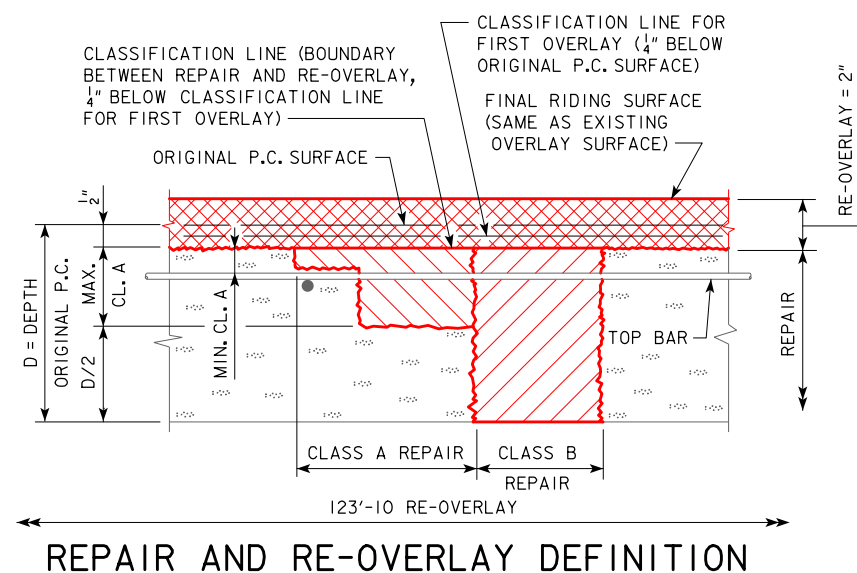
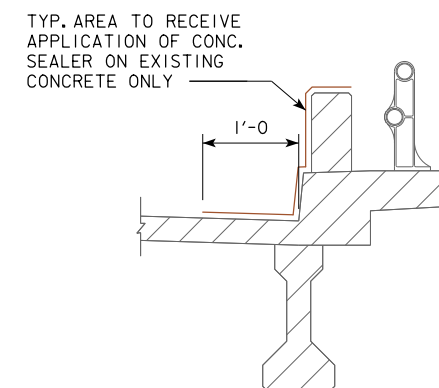
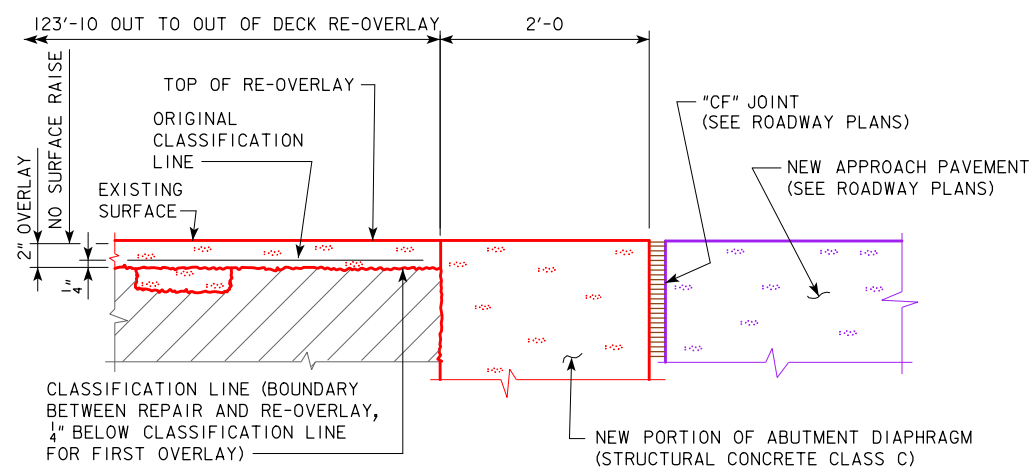
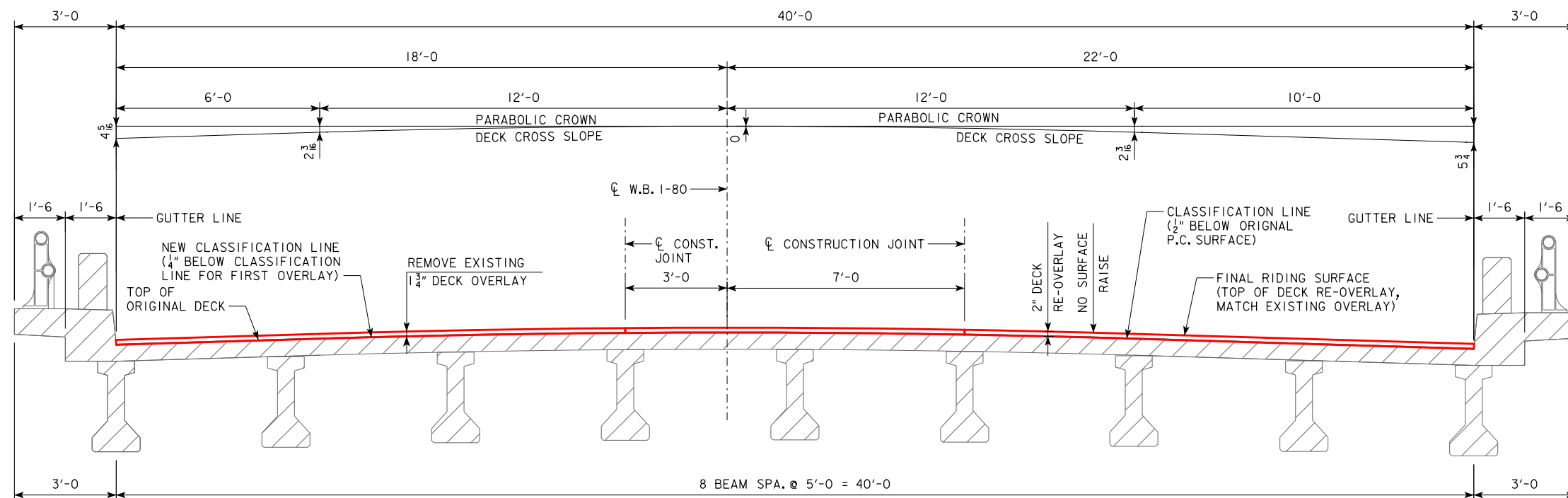
SUPERSTRUCTURE DETAILS

STA. 58+60.62, 37.0' LT. (C 1-80) DECEMBER 2020

IOWA COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 13 OF 14 FILE NO. 31539 DESIGN NO. 121



NOTE:
THE COST OF FURNISHING AND PLACING CONCRETE SEALER IS
TO BE INCLUDED IN THE PRICE BID FOR "DECK OVERLAY".

DESIGN FOR REPAIRS TO 2°40' SKEW (L.A.)
 125'-10" x 40'-0" PRETENSIONED
 PRESTRESSED CONCRETE BEAM W.B. BRIDGE
 38'-11½" END SPANS 47'-11" INTERIOR SPAN
 DECK OVERLAY DETAILS
 STA. 58+60.62, 37.0' LT. (C 1-80) DECEMBER 2020
 IOWA COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 14 OF 14 FILE NO. 31539 DESIGN NO. 121

		100-1D 10-18-05	
PROJECT DESCRIPTION			
This project involves bridge deck overlays and approach work on eastbound and westbound I-80 over county road V38, located at the junction of county road V38.			

[illegible]

ESTIMATE REFERENCE INFORMATION		
Item No.	Item Code	Description
1	2102-0425070	SPECIAL BACKFILL Refer to Tab 112-9 on Sheet C.4 for locations. 6" thickness. Refer to Detail 7158 on Sheet B.1 for additional details.
2	2123-7450000	SHOULDER CONSTRUCTION, EARTH Refer to Tab 112-9 on Sheet C.4 for locations. Refer to Detail 7158 on Sheet B.1 for additional details.
3	2301-0685550	BRIDGE APPROACH PAVEMENT, AS PER PLAN
4	2301-0690203	BRIDGE APPROACH, BR-203 Refer to Tab 112-6 on Sheet C.3 for details and locations. Refer to Sheet U.1-U.2 for eastbound approaches locations and details.
5	2412-0000100	LONGITUDINAL GROOVING IN CONCRETE Refer to Tab 100-28 on Sheet C.2 for location and additional details.
6	2505-4008120	REMOVAL OF STEEL BEAM GUARDRAIL Refer to Tab 110-7A on Sheet C.2 for locations and additional details.
7	2505-6765006	REMOVE AND REINSTALL FORMED STEEL BEAM GUARDRAIL This item is for the removal and installation of existing steel beam guardrail. Quantity is estimated at 20 linear feet at SW and NW corners of the EB bridge and 70 linear feet at NE and SE corners of the WB bridge. Method of Measurement: Linear feet of guardrail satisfactorily removed and reinstalled. Basis of Payment: Payment will be at the contract unit price per linear foot. Payment includes removing, storing, and reinstalling existing guardrail, including furnishing all materials, equipment, tools, and labor necessary to complete said work. Payment also includes furnishing any materials that are not serviceable at the time of reinstallation, including posts, spacer blocks, offset brackets, end anchors, terminal devices, hardware, delineators, and object markers.

[illegible]

FILE NO.	31539	ENGLISH	DESIGN TEAM	Stanley Consultants Inc.		IOWA	COUNTY	PROJECT NUMBER	IMN-080-6(395)206--0E-48	SHEET NUMBER	C.1	
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105-4
10-18-11

STANDARD ROAD PLANS

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

Number	Date	Title
BA-401	10-15-19	Temporary Barrier Rail (Precast Concrete)
BA-500	04-19-16	Temporary Crash Cushions Sand Barrel
BR-203	10-17-17	Double Reinforced 12" Approach
BR-211	10-17-17	Bridge Approach (Abutting PCC or Composite Pavement)
DR-306	10-16-18	Precast Concrete Headwall for Subdrain Outlets
EC-201	10-15-19	Silt Fence
EC-502	04-21-15	Seeding in Rural Areas
PM-110	04-21-20	Line Types
PV-12	10-20-20	Milled Shoulder Rumble Strips
PV-101	04-21-20	Joints
PV-102	04-21-20	PCC Curb Details
SI-881	04-16-19	Special Signs for Workzones
SI-882	10-18-16	Special Signs for Restricted Width Traffic Control Zones
TC-1	10-15-19	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-81	10-15-19	Restricted Width Signing (Less Than 14.5 Feet)
TC-202	04-21-15	Work Within 15 ft of Traveled Way
TC-402	04-21-15	Work Within 15 ft of Traveled Way
TC-418	04-21-20	Lane Closure on Divided Highway
TC-420	10-16-18	Lane Closure at Ramps
TC-433	10-17-17	Pavement Marking Operations

110-1
04-16-13

REMOVAL OF PAVEMENT

Refer to Tabulation 102-5

* Not a Bid Item

Begin Station	End Station	Side	Pavement Type	Area	Saw Cut*	Remarks
				SY	LF	
57+73.00	57+94.00	Both	PCC	88.5	42.0	EB West approach
59+20.00	59+41.00	Both	PCC	88.5	42.0	EB East approach
57+27.00	57+98.00	Both	Composite	221.8	142.0	WB West approach
59+24.00	59+95.00	Both	Composite	221.8	142.0	WB East approach
48+75.00	57+73.00	Rt	HMA	798.2	914.0	EB outside shldr (2.5" HMA and 8" Asphalt Treated Base)
48+75.00	57+73.00	Lt	HMA	598.7	910.0	EB inside shldr (2.5" HMA and 8" Asphalt Treated Base)
59+41.00	69+85.00	Rt	HMA	928.0	1060.0	EB outside shldr (2.5" HMA and 8" Asphalt Treated Base)
59+41.00	69+85.00	Lt	HMA	696.0	1056.0	EB inside shldr (2.5" HMA and 8" Asphalt Treated Base)
46+75.00	57+77.00	Rt	HMA	979.6	1118.0	WB outside shldr (2.5" HMA and 8" Asphalt Treated Base)
46+75.00	57+77.00	Lt	HMA	734.7	1114.0	WB inside shldr (2.5" HMA and 8" Asphalt Treated Base)
59+45.00	69+00.00	Rt	HMA	848.9	971.0	WB outside shldr (2.5" HMA and 8" Asphalt Treated Base)
59+45.00	69+00.00	Lt	HMA	636.7	967.0	WB inside shldr (2.5" HMA and 8" Asphalt Treated Base)
			Totals:	6841.2	8478.0	

108-35
04-17-12

TEMPORARY LANE SEPARATOR SYSTEM

See TC-61

Station to Station	Length LF	Remarks
44+00.00	56+50.00	EB - Stage 2
60+50.00	73+36.00	WB - Stage 5
	Totals:	5072

100-28
10-19-10

LONGITUDINAL GROOVING

Location	Total SY	Remarks
58+58.90	521.3	EB Bridge
58+58.90	79.8	EB West Approach
58+58.90	79.8	EB East Approach
58+58.90	521.3	WB Bridge
58+58.90	218.7	WB West Approach
58+58.90	218.7	WB East Approach
	Totals:	1639.5

110-7A
04-17-12

REMOVAL OF STEEL BEAM GUARDRAIL

① Lane(s) to which the installation is adjacent.

② Includes length of End Terminals and End Anchors.

Location					
No.	① Direction of Traffic	Station to Station	Side	Removal of Guardrail ② LF	
1	EB	59+18.00	59+82.00	0	64.0
2	WB	57+34.00	57+98.00	0	64.0
			Totals:		128.0

262-6
10-18-05

UTILITIES

(NOT A POINT 25 PROJECT)

This is NOT a POINT 25 project and is not subject to the provisions of IAC 761-115.25.

232-3A
04-16-19

EROSION CONTROL

(RURAL SEEDING)

Following the completion of work in a disturbed area and according to the seeding dates in Section 2601 of the Standard Specifications, place seed, fertilizer, and mulch on the disturbed area lying 8 feet adjacent to shoulder and median as follows:

Place seed and fertilize according to the requirements of Article 2601.03,C,3 and Section 4169 of the Standard Specifications.

Place mulch according to the requirements of Articles 2601.03,E,2,a and 4169.07,A of the Standard Specifications.

Preparing the seedbed, furnishing and applying seed, fertilizer, and mulch are all incidental to mobilization and will not be paid for separately.

232-3C
04-16-19

EROSION CONTROL

(NATIVE GRASS SEEDING)

Following the completion of work in a disturbed area and according to the seeding dates in Section 2601 of the Standard Specifications, place seed and mulch on the disturbed area lying 8 feet or more beyond the shoulder as follows:

SEED MIX:
Big bluestem (Andropogon gerardii) 6 lbs. PLS/Acre (7.0 kg/ha)
Indiangrass (Sorghastrum nutans) 6 lbs. PLS/Acre (7.0 kg/ha)
Little bluestem (Schizachyrium scoparium) 6 lbs. PLS/Acre (7.0 kg/ha)
Partridge Pea (Chamaecrista fasciculata) 4 lbs. PLS/Acre (4.5 kg/ha)
Sideoats grama (Bouteloua curtipendula) 4 lbs. PLS/Acre (4.5 kg/ha)
Canada wildrye (Elymus canadensis) 2 lbs. PLS/Acre (2.2 kg/ha)
Switchgrass (Panicum virgatum) 1 lbs. PLS/Acre (1.1 kg/ha)
Oats (Avena sativa) 32 lbs./Acre (36.0 kg/ha)

Furnish Big bluestem, Indiangrass, Canada wildrye and Little bluestem that is bearded or equal to facilitate the application of seed.

Furnish seed certified as Source Identified Class (Yellow Tag) Source G0-Iowa. Oats are excluded from this requirement.

Place seed according to the requirements of Article 4169.02 of the Standard Specifications.

Place mulch according to the requirements of Articles 2601.03,E,2,a and 4169.07,A of the Standard Specifications.

Preparing the seedbed, furnishing and applying seed and mulch are incidental to mobilization and will not be paid for separately.

111-25
10-18-11

INDEX OF TABULATIONS

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FILE NO. 31539

ENGLISH

DESIGN TEAM Stanley Consultants Inc.

IOWA COUNTY

PROJECT NUMBER IMN-080-6(395)206--0E-48

SHEET NUMBER C.2

11/24/2020

12:09:01 PM

8725

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CRASH CUSHIONS

(2) Complete this section when using the Temporary Crash Cushion bid item and Earthwork is needed for Sand Barrel placement. Refer to BA-500

TEMPORARY BARRIER RAIL

BRIDGE APPROACH SECTION

FILE NO. **31539** | ENGLISH | DESIGN TEAM **Stanley Consultants Inc.**

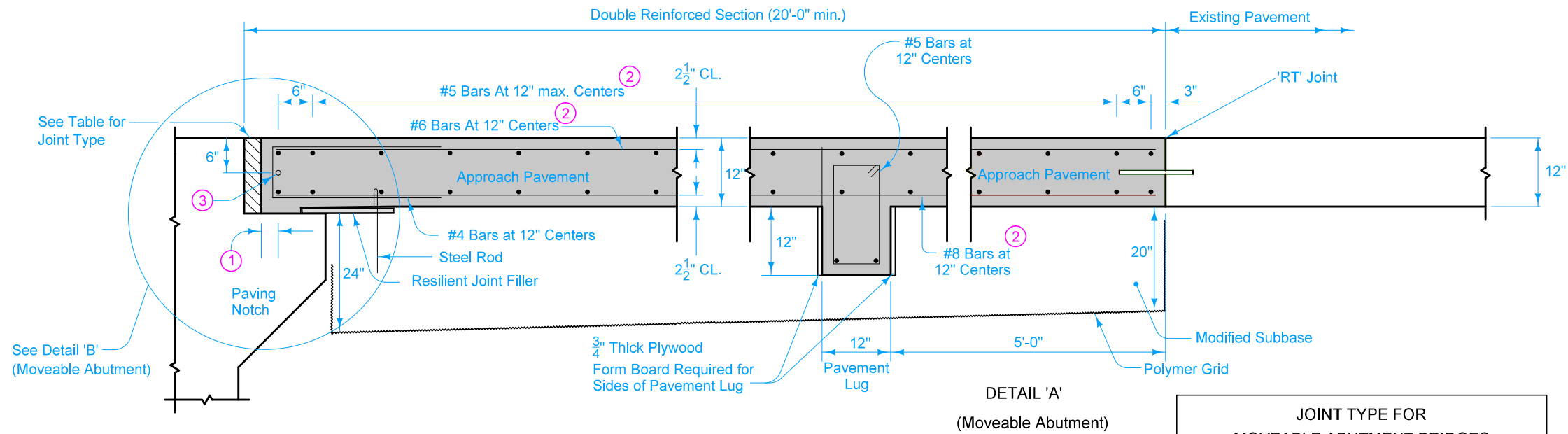
IOWA

PROJECT NUMBER

IMN-080-6(395)206--0E-48

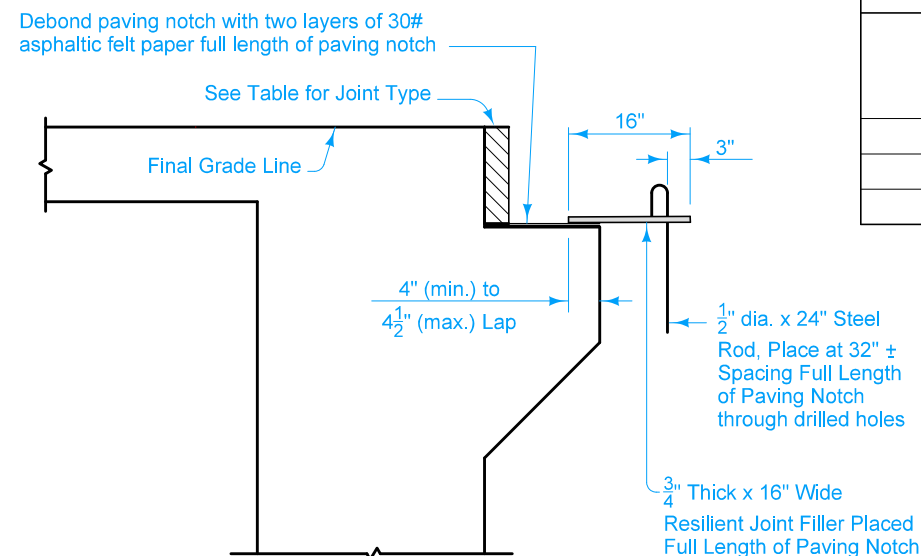
SHEET NUMBER

C.3



DETAIL 'A'
(Moveable Abutment)

JOINT TYPE FOR MOVEABLE ABUTMENT BRIDGES		
Joint	Maximum Bridge Length	
	Concrete Beam or Slab	Steel Girder
CF-1	370'	250'
CF-2	465'	320'
CF-3	575'	400'



DETAIL 'B' (Moveable Abutment)

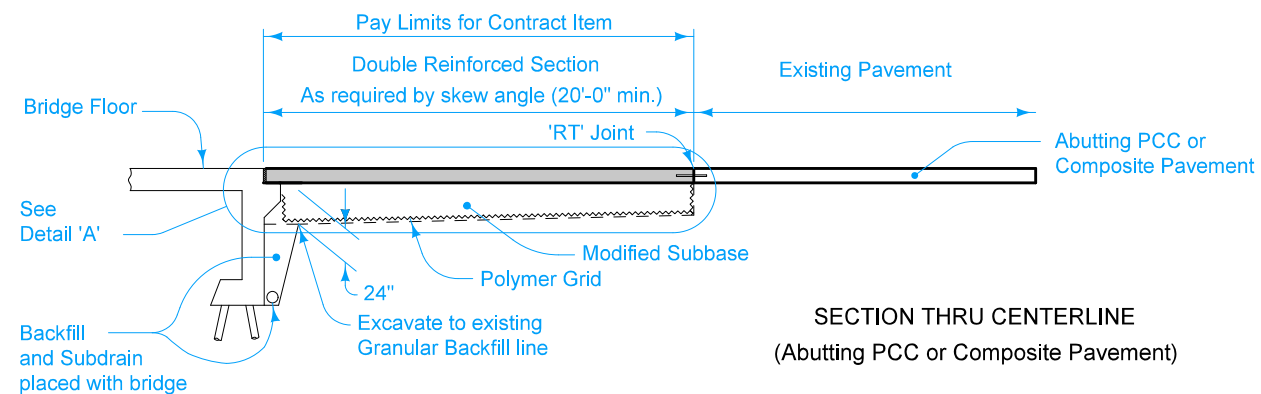
- ① 2" min. to 2 1/2" max. clear to bent bar.
- ② Minimum lap length: #5 Bars - 18"
#6 Bars - 27"
#8 Bars - 48"
- ③ If bridge is skewed, place additional #5 bar parallel to skewed face.

For joint details, refer to [PV-101](#).

For curb details, see Detail 'G'.

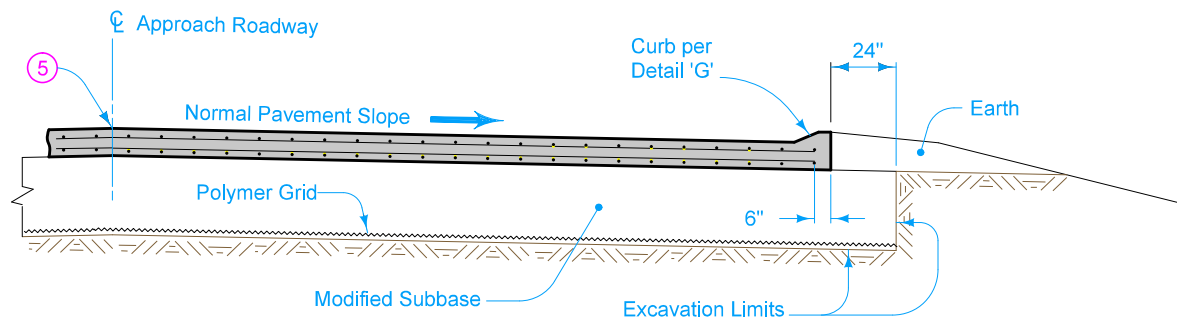
All transverse bars are #5.

Contract Item:
Bridge Approach Pavement, As Per Plan.
Tabulation:
112-6

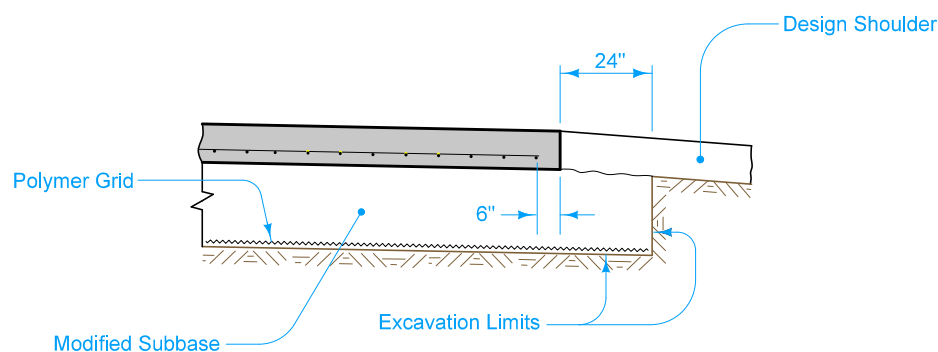


SECTION THRU CENTERLINE
(Abutting PCC or Composite Pavement)

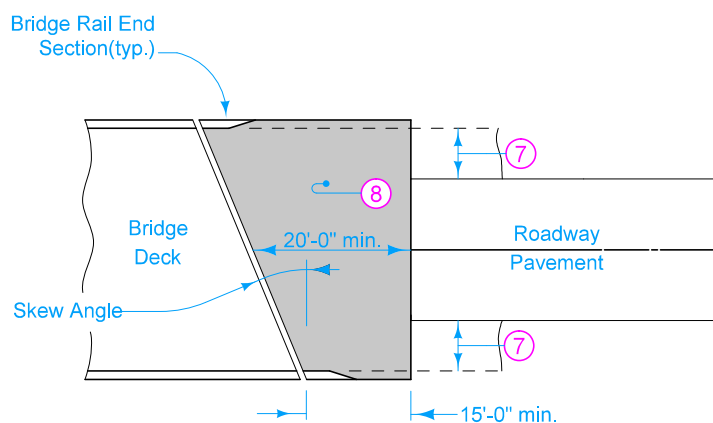
MODIFIED STANDARD ROAD PLAN	REVISION	
	1	10-17-17
BR-203		
SHEET 1 of 2		
MODIFICATIONS: Changed to show only the double reinforced section of the approach for EB bridge only.		
DOUBLE REINFORCED 12" APPROACH		



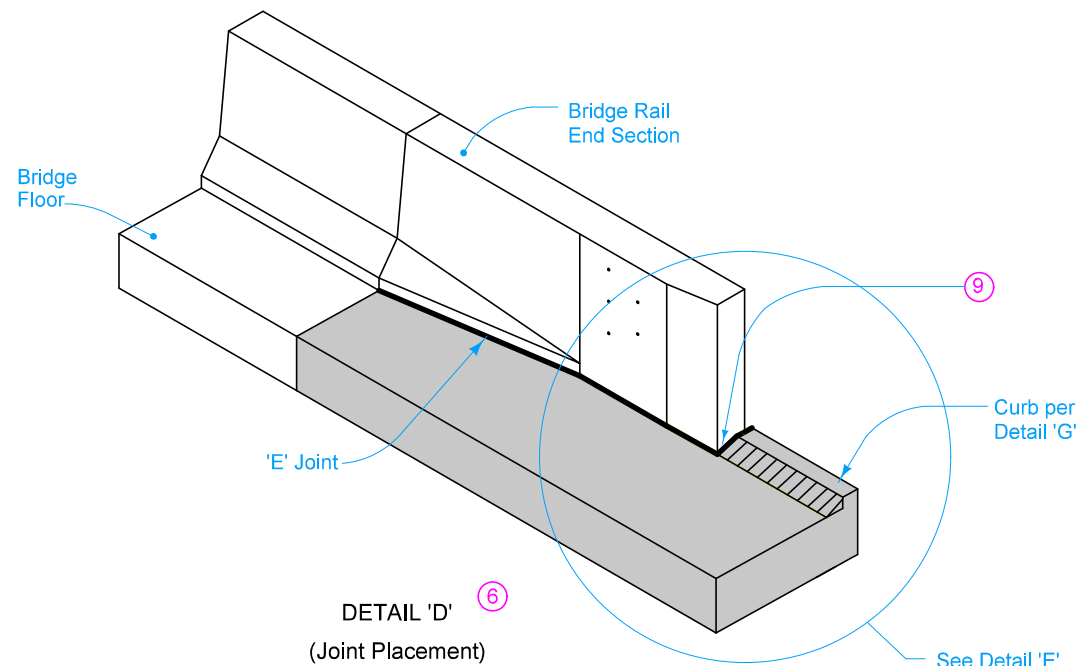
SECTION A-A



SECTION B-B



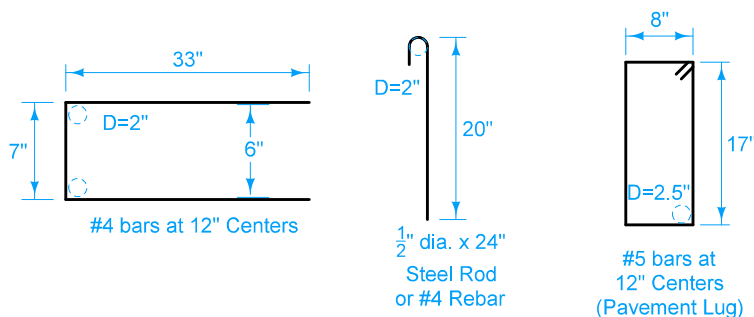
APPROACH PAVEMENT
LAYOUT AT A SKEW



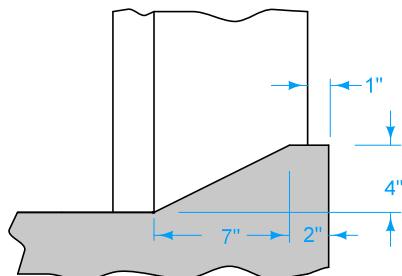
DETAIL 'D'
(Joint Placement)

- ⑤ Longitudinal Joint (**PV-101**):
Single pour - Saw cut joint per Detail B.
Two pours - Use 'KS-2' joint.
- ⑥ Refer to **BR-211**.
- ⑦ Design shoulder width.
- ⑧ Reinforced bridge approach section.
- ⑨ Expansion joint at end of Bridge Rail End Section: Place joint filler the full depth of the bridge approach pavement. In areas with curb, place full depth of pavement plus curb and shape material to fit the shape of the curb per Section B-B of **PV-101**. Seal joint per Detail F of **PV-101**.

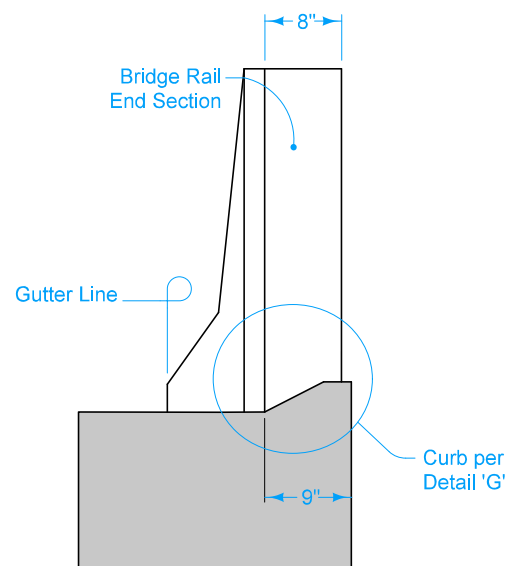
- Moveable Abutment Bridges: Flexible Foam Expansion Joint Filler complying with Section **4136** of the Standard Specifications. Minimum filler width is the abutment 'CF' joint width. Joint length as required to completely fill from back side of curb to front face of bridge wing.



BENT BAR SHAPES



DETAIL 'G'



DETAIL 'E'
(Back of Curb Placement)

MODIFIED STANDARD ROAD PLAN	REVISION	
	1	10-17-17
BR-203		
SHEET 2 of 2		
MODIFICATIONS: Changed to show only the double reinforced section of the approach for EB bridge only.		
DOUBLE REINFORCED 12" APPROACH		