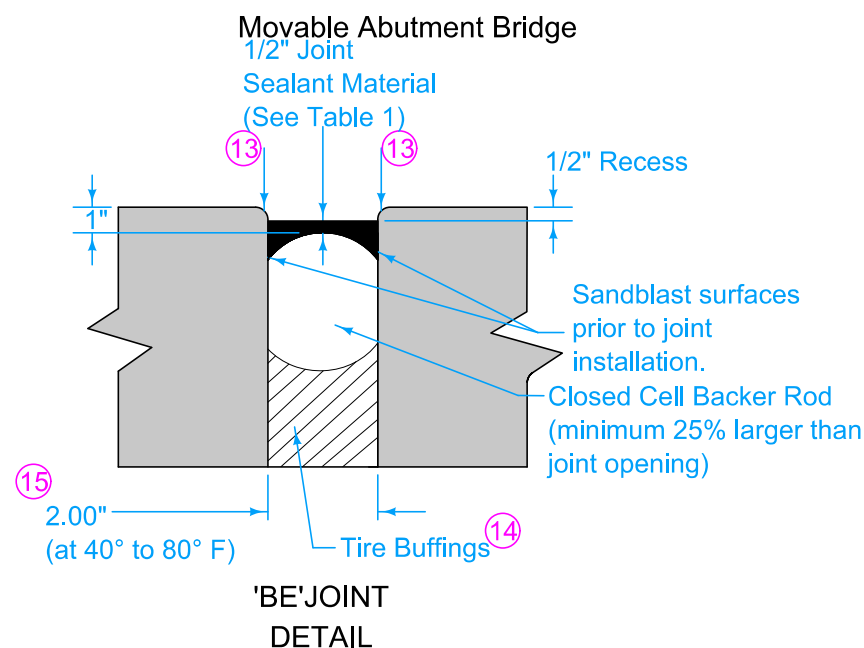
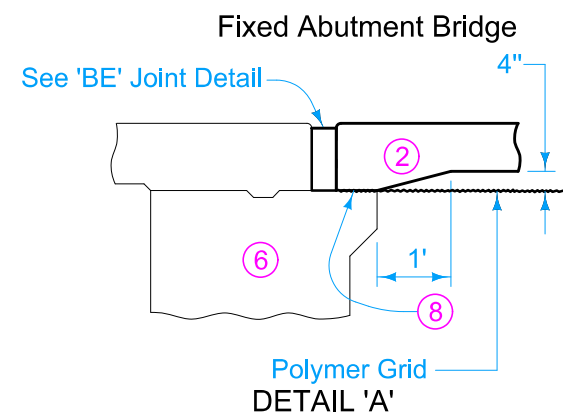
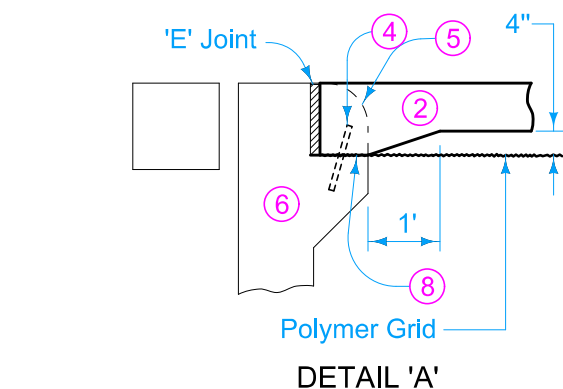
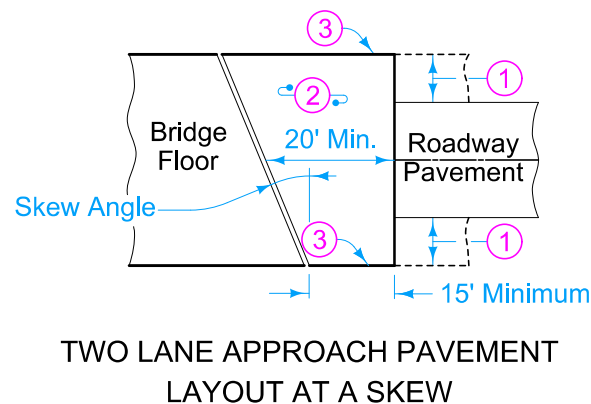
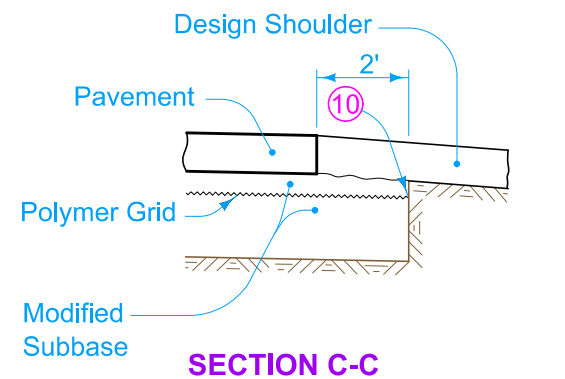
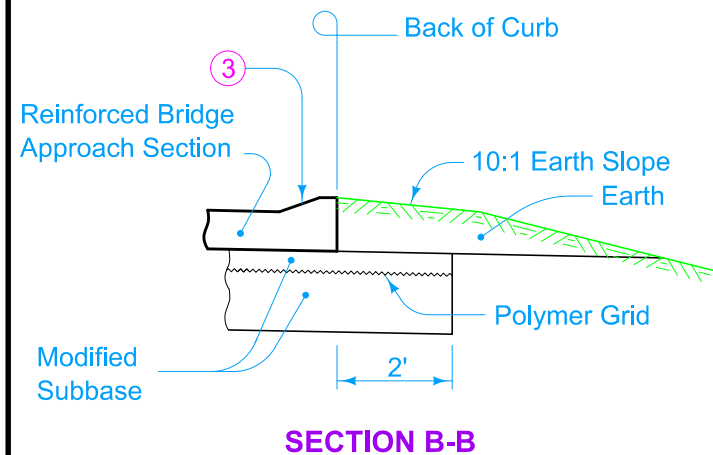
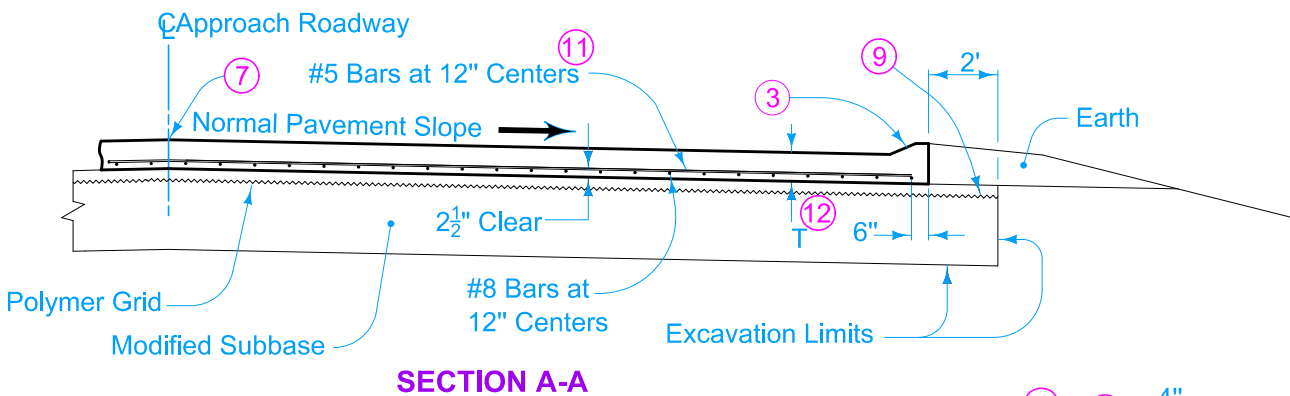


Bridge Approach

Bridge Approach

NO.	DATE	TITLE
BR-101	10-21-25	Bridge Approach Section (General Details)
BR-102	10-15-24	Bridge Approach Section (Two-Lane, Abutting PCC Pavement)
BR-103	10-15-24	Bridge Approach Section (Two-Lane for Bridge Reconstruction, PCC Pavement)
BR-104	10-15-24	Bridge Approach Section (at Existing Bridges, PCC Pavement)
BR-105	10-15-24	Bridge Approach Section (Two-Lane, HMA Pavement)
BR-106	10-15-24	Bridge Approach Section (Two-Lane for Bridge Reconstruction, HMA Pavement)
BR-107	10-15-24	Bridge Approach Section (at Existing Bridges, HMA Pavement)
BR-110	10-15-24	PCC Overlay of Bridge Approach Section
BR-112	10-15-24	Bridge Approach Details (in Conjunction with Bridge Deck Overlay)
BR-121	10-15-24	Bridge Approach Details (Secondary Roads)
BR-201	10-21-25	Double Reinforced 10" Approach
BR-202	10-21-25	Double Reinforced 10" Approach with Variable Depth Paving Notch
BR-203	10-21-25	Double Reinforced 12" Approach
BR-204	10-21-25	Double Reinforced 12" Approach with Variable Depth Paving Notch
BR-205	10-21-25	Double Reinforced 12" Approach (Slab Bridge)
BR-211	10-21-25	Bridge Approach (Abutting PCC or Composite Pavement)
BR-212	10-21-25	Bridge Approach (Abutting HMA Pavement)
BR-213	10-19-21	Bridge Approach (Abutting Pavement)
BR-231	10-21-25	Bridge Approach (Multi-Lane, Curbed Roadway)
BR-241	10-21-25	Double Reinforced 10" Approach On Gravel Roads



- ① Design Shoulder width.
- ② Reinforced Bridge Approach Section.
- ③ Build curb. See Detail 'C'. Refer to PV-102 for runout details.
- ④ Reinforcing Bar.
- ⑤ Temporary paving block removed by paving contractor.
- ⑥ Bridge Abutment.
- ⑦ Longitudinal Joint (PV-101):
Single pour - Saw cut joint per Detail B.
Two pours - Use 'KS-1' joint.
- ⑧ Secure polymer grid on top of paving notch.
- ⑨ Extend polymer grid to 2 feet outside edge of pavement.
- ⑩ Trim polymer grid to edge of excavation.
- ⑪ If bridge is skewed, place additional #5 bar parallel to skewed face.
- ⑫ T = 10 inches.

Sections and details apply to Standard Road Plans BR-112 and BR-102 through BR-107.

- ⑬ Edge with 1/4 inch tool for length of joint indicated if formed; edging not required when cut with diamond blade saw.
- ⑭ Compact tire buffings by spading with a square-nose shovel. Tire buffings shall not be larger than 1/2 inch.
- ⑮ Setting Width Notes:

- Width is perpendicular to abutment.



- Temperature of concrete deck on the underside or shaded portion of the deck shall be between 40 to 80 degrees Farenheit when placing approach slab concrete.

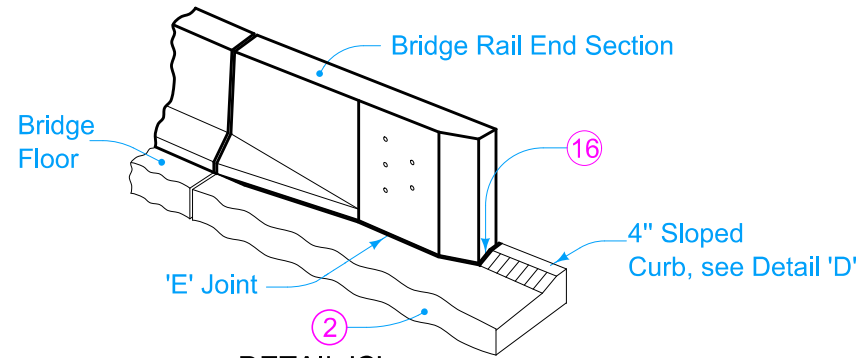
-This 'BE' joint and the setting temperatures may be used for all concrete beam or slab bridges up to 575' in length and for all steel girder bridges up to 400' in length.

Possible Contract Item:
Bridge Approach, Two Lane
Longitudinal Grooving in Concrete, Bridge Deck
Longitudinal Grooving in Concrete, Pavement

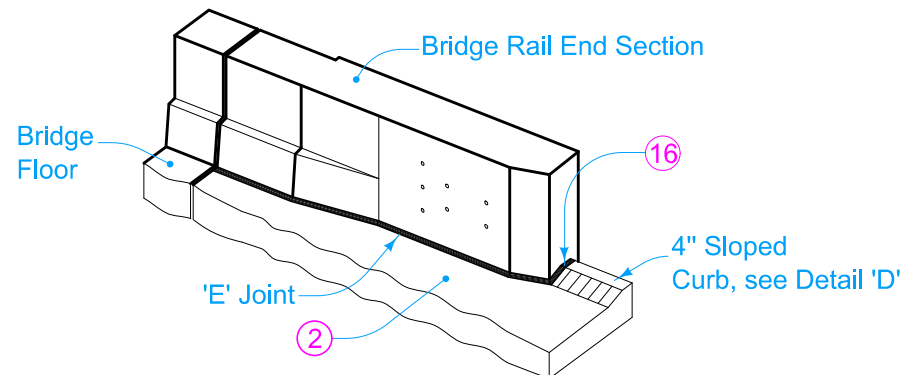
Possible Tabulation:
112-6

Table 1
Approved List of Sealant
Dow - Dowsil 902 RCS
Sika - Sikasil 728 RCS
Watson Bowman Acme - Wabo SiliconeSeal
Pecora - 322FC

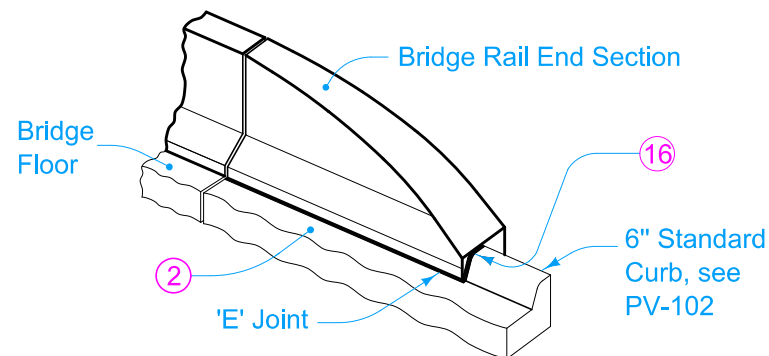
 IOWA DOT	REVISION	
	3	10-21-25
	BR-101	
	SHEET 1 of 2	
REVISIONS: Changed "fabric" to "polymer grid" in circle note ten.		
		
APPROVED BY DESIGN METHODS ENGINEER		
BRIDGE APPROACH SECTION (GENERAL DETAILS)		



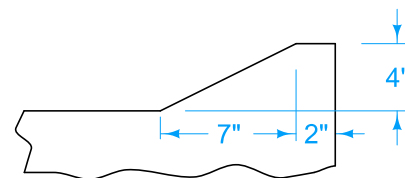
DETAIL 'C'
Five Hole Bridge Rail End Section



DETAIL 'C'
Retrofit Bridge Rail End Section




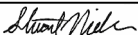
DETAIL 'C'
Low Speed Bridge Rail End Section

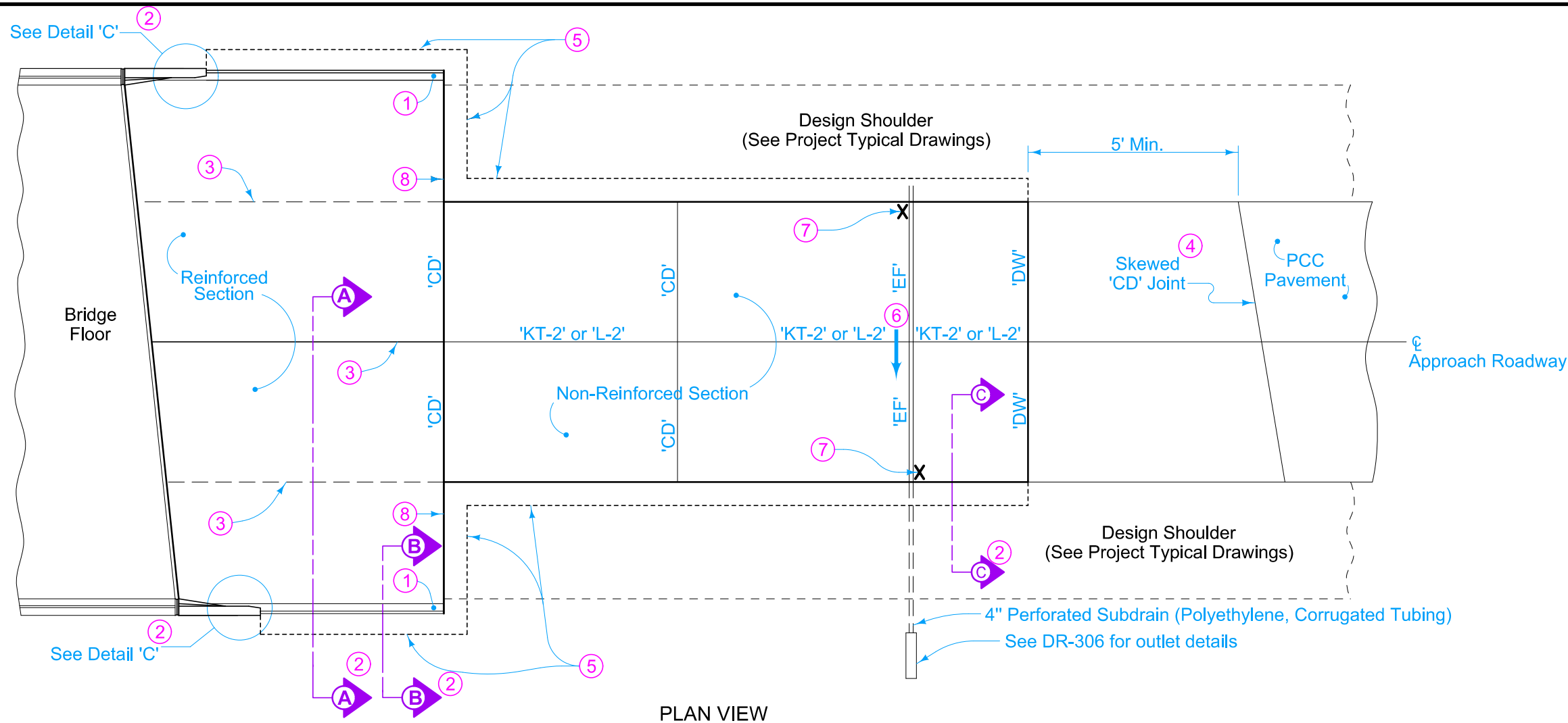


DETAIL 'D'
4" Sloped Curb

CURB ALIGNMENT AND
JOINT PLACEMENT

- (2) Reinforced Bridge Approach Section.
- (16) 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.
- Fixed Abutment Bridges: Type 'E' Joint.
 - Moveable Abutment Bridges: Flexible Foam Expansion Joint Filler complying with Section 4136 of the Standard Specifications. Set width of gap to 2 inches. Joint length as required to completely fill from back side of curb to front face of bridge wing.

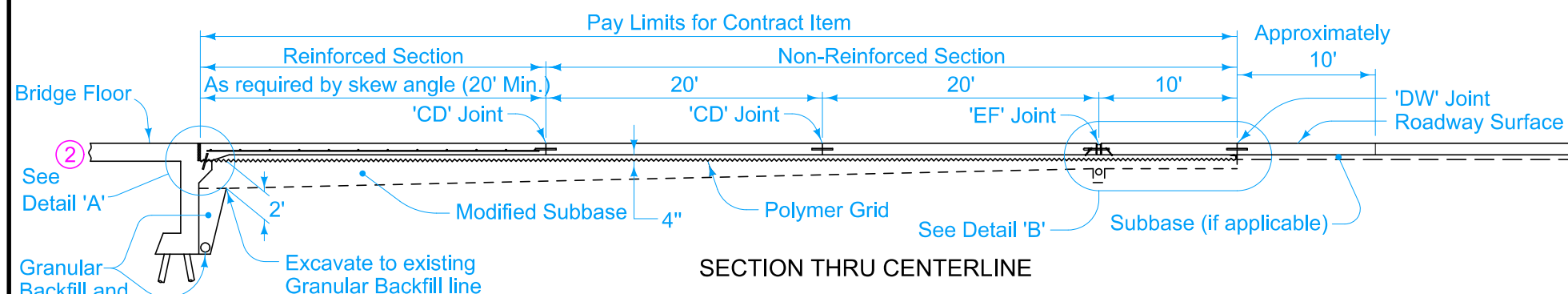
		REVISION	
		3	10-21-25
STANDARD ROAD PLAN		BR-101	
		SHEET 2 of 2	
REVISIONS: Changed "fabric" to "polymer grid" in circle note ten.			
			
APPROVED BY DESIGN METHODS ENGINEER			
BRIDGE APPROACH SECTION (GENERAL DETAILS)			



For joint details, see PV-101.

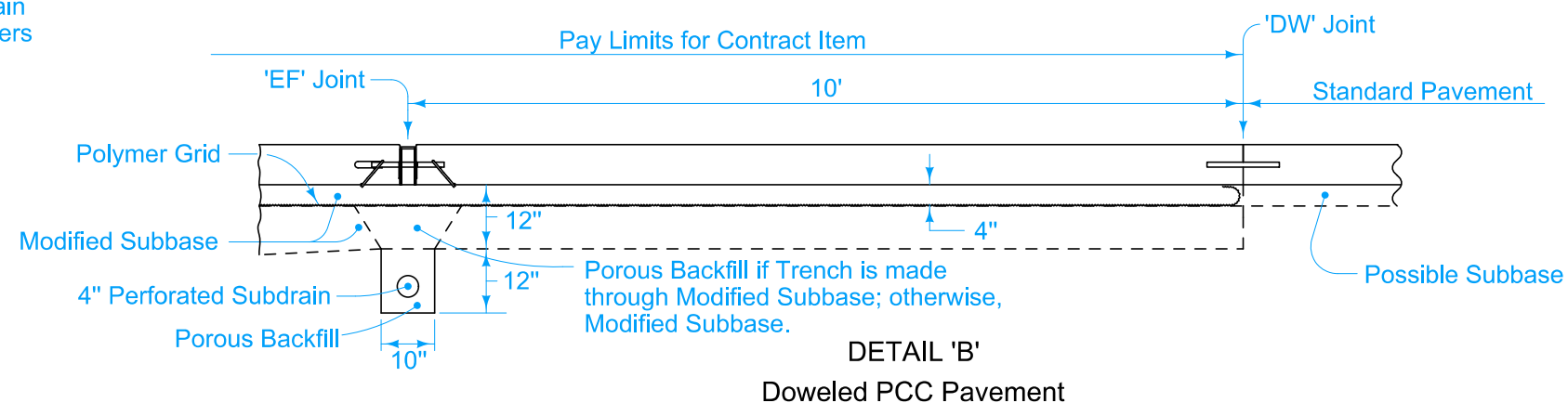
- ① Build curb to end of Reinforced Bridge Approach Section. See Curb Location Details (Section B-B on BR-101).
- ② See BR-101.
- ③ Longitudinal Joint (PV-101):
Single Pour - Saw cut joint per Detail B.
Two Pours - Use 'KS-1' joint.
- ④ 'CD' Joints required up to 300 feet each way from end of Reinforced Bridge Approach Section.
- ⑤ Excavation limits of Modified Subbase 2 feet outside of pavement edge, see BR-101.
- ⑥ Slope subdrain to drain.
- ⑦ Place an "X" in the plastic concrete near the 'EF' joint at the outside edge of pavement.
- ⑧ Place 'RD' joint where PCC shoulder. Place 'B' joint otherwise.

PLAN VIEW



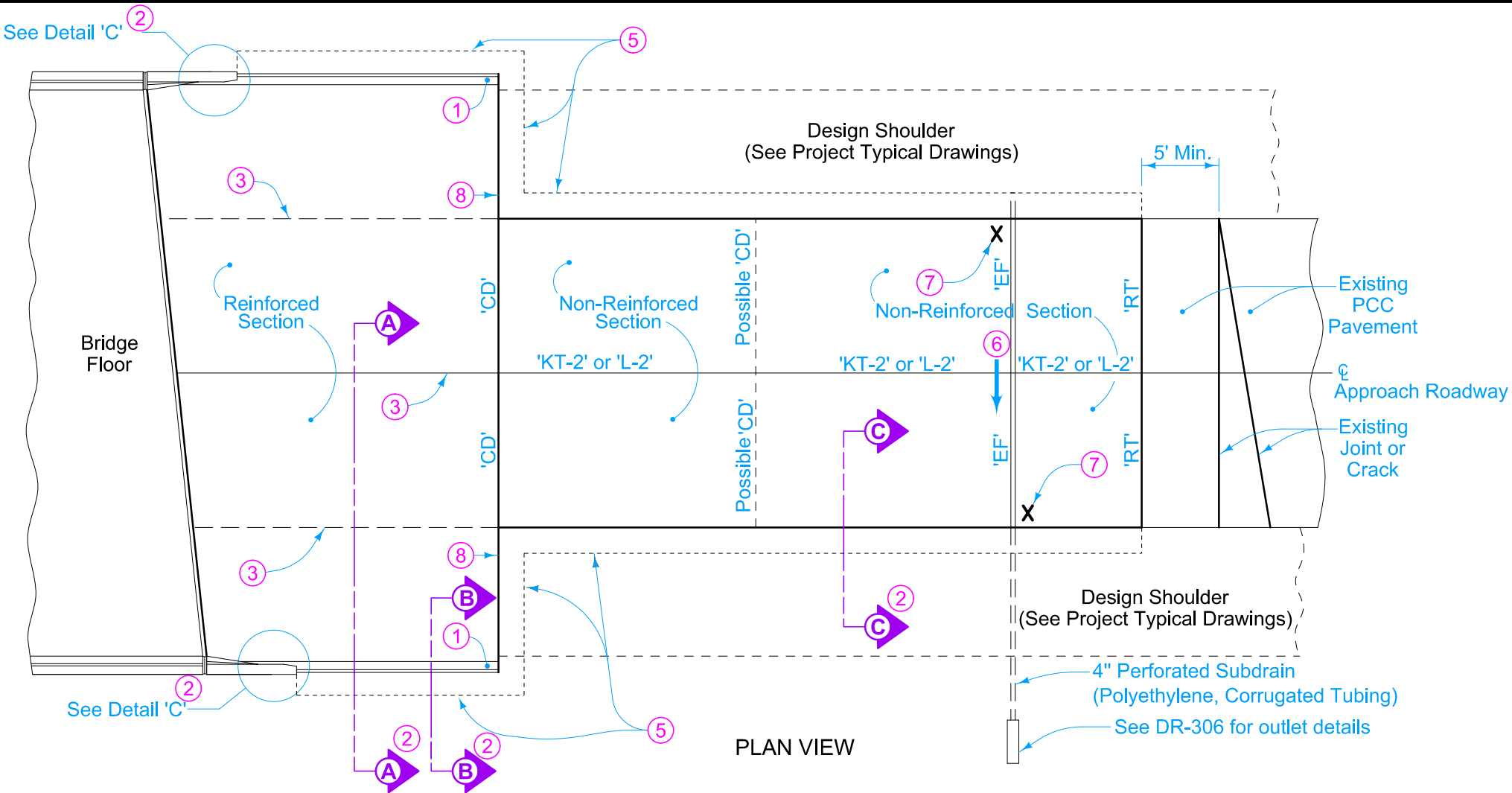
Possible Contract Item:
Bridge Approach, Two Lane
Longitudinal Grooving in Concrete, Bridge Deck
Longitudinal Grooving in Concrete, Pavement

Possible Tabulation:
112-6



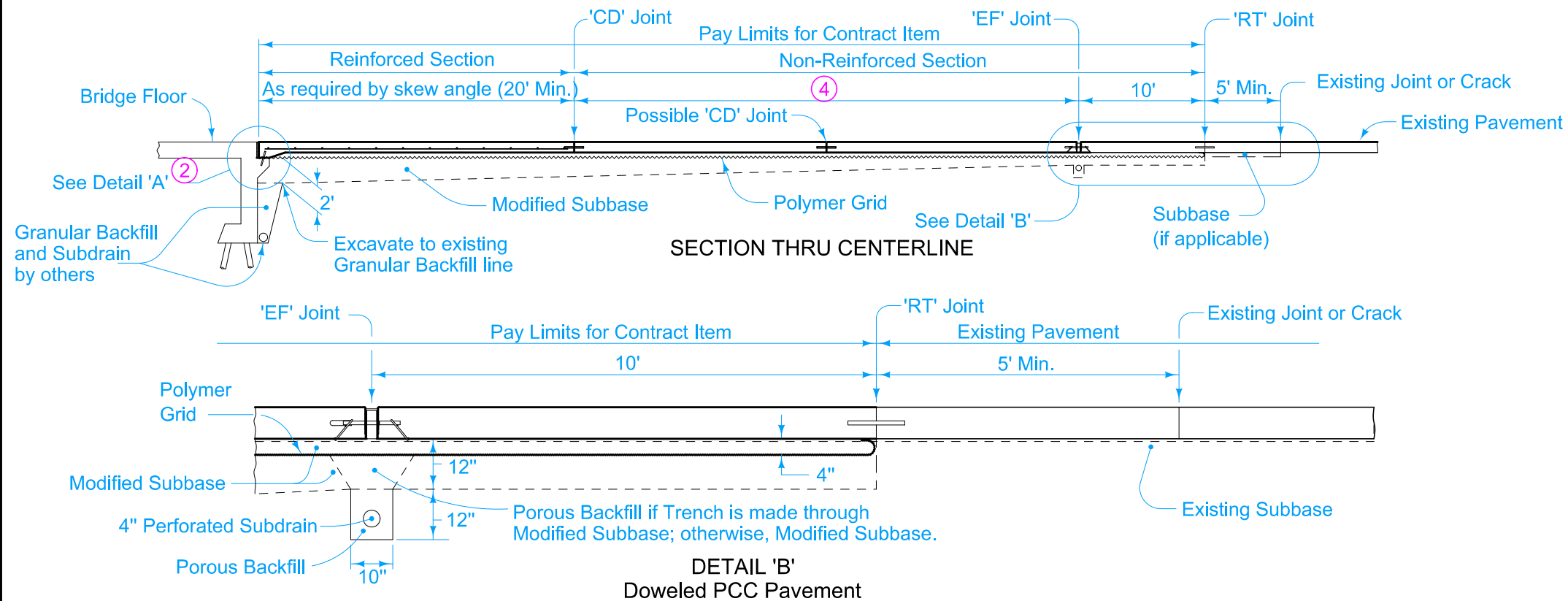
DETAIL 'B'
Doweled PCC Pavement

IOWA DOT STANDARD ROAD PLAN	REVISION	
	2	10-15-24
BR-102		SHEET 1 of 1
REVISIONS: Added Longitudinal Grooving in Concrete to possible contract item.		
 APPROVED BY DESIGN METHODS ENGINEER		
BRIDGE APPROACH SECTION (TWO-LANE, ABUTTING PCC PAVEMENT)		





For joint details, see PV-101.

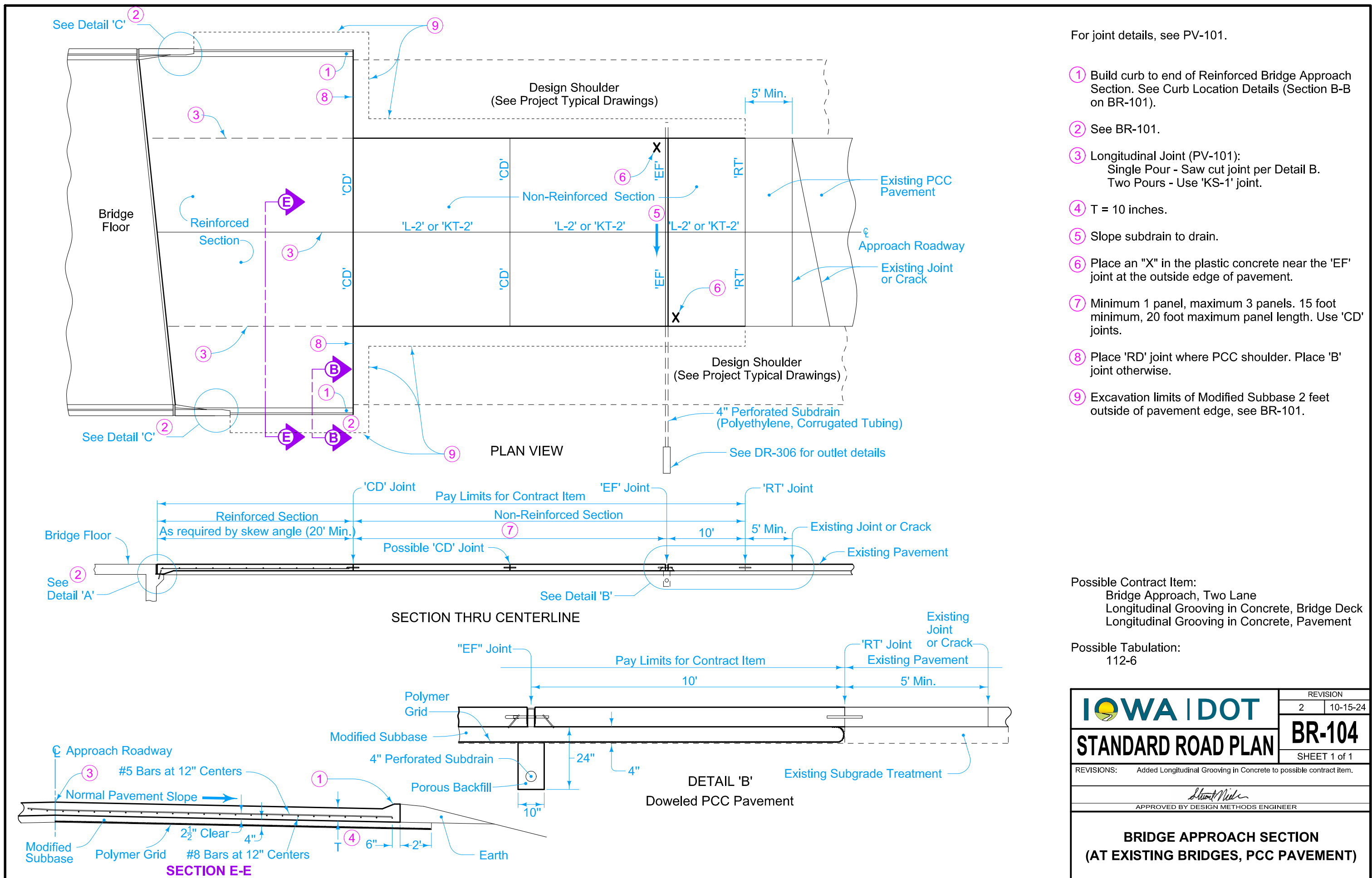
- ① Build curb to end of Reinforced Bridge Approach Section. See Curb Location Details (Section B-B on BR-101).
- ② See BR-101.
- ③ Longitudinal Joint (PV-101):
Single Pour - Saw cut joint per Detail B.
Two Pours - Use 'KS-1' joint.
- ④ Minimum 1 panel, maximum 3 panels. 15 foot minimum, 20 foot maximum panel length. Use 'CD' joints.
- ⑤ Excavation limits of Modified Subbase 2 feet outside of pavement edge, see BR-101.
- ⑥ Slope subdrain to drain.
- ⑦ Place an "X" in the plastic concrete near the 'EF' joint at the outside edge of pavement.
- ⑧ Place 'RD' joint where PCC shoulder. Place 'B' joint otherwise.

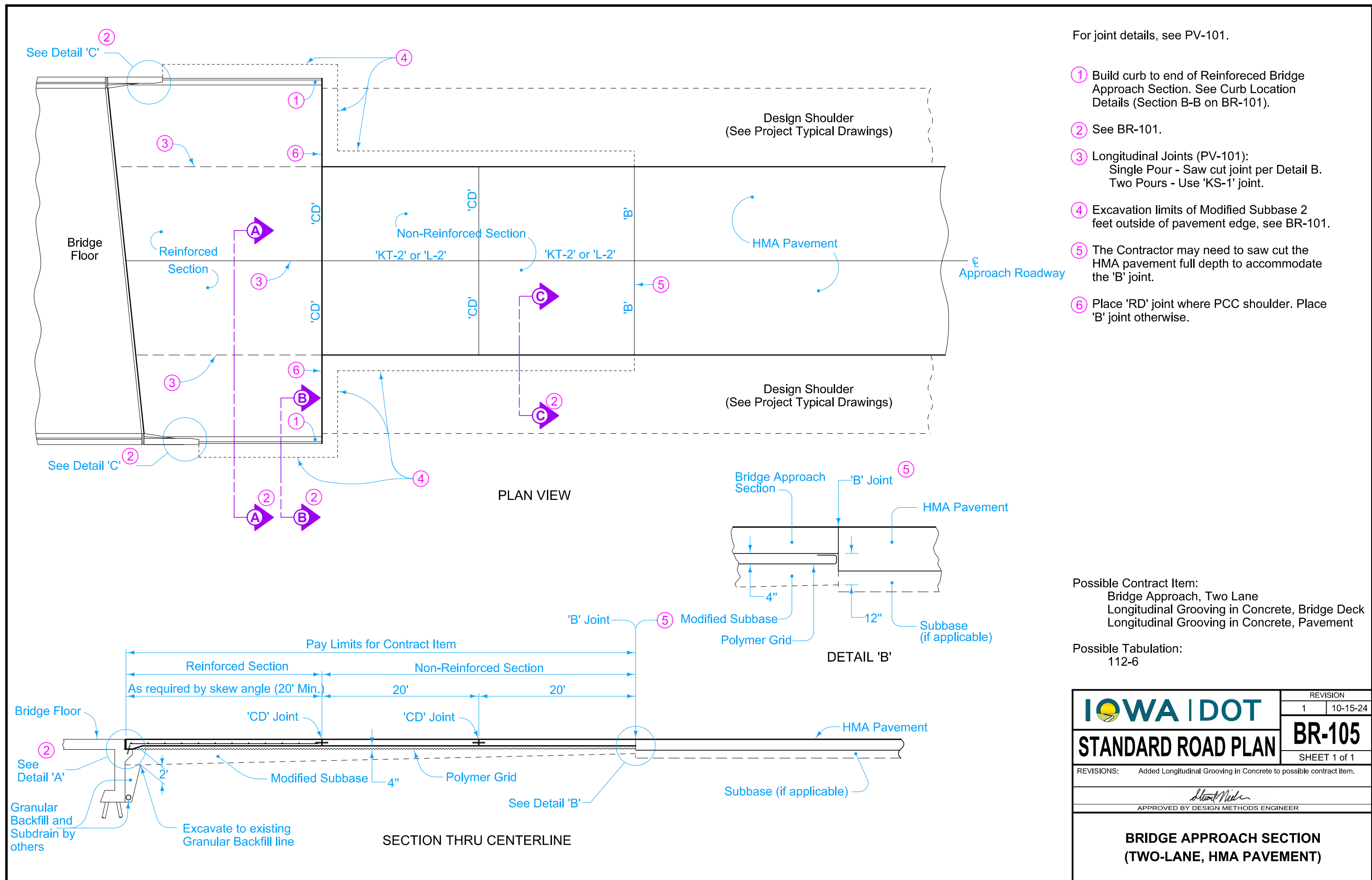


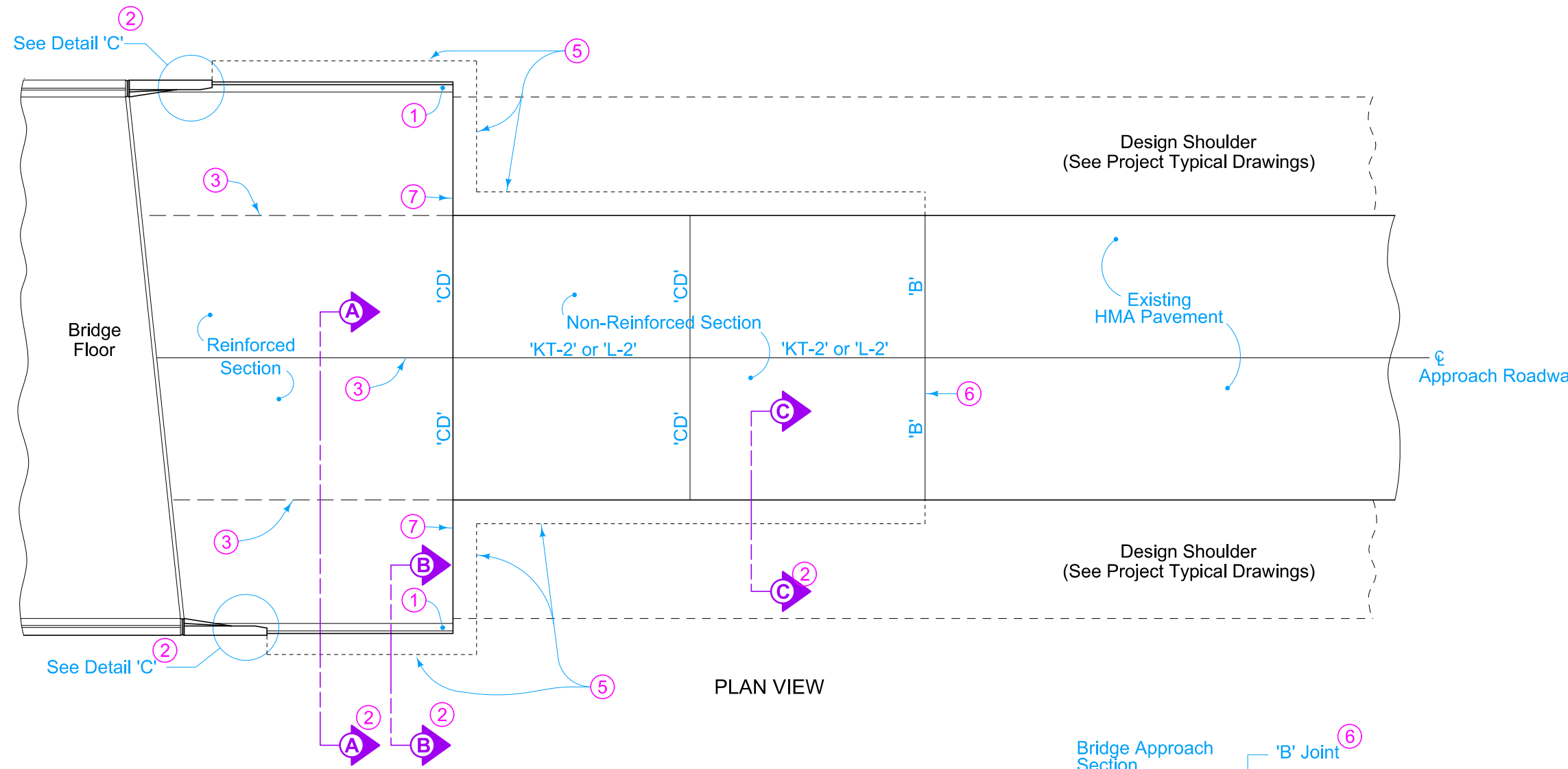
Possible Contract Item:
Bridge Approach, Two Lane
Longitudinal Grooving in Concrete, Bridge Deck
Longitudinal Grooving in Concrete, Pavement

Possible Tabulation:
112-6

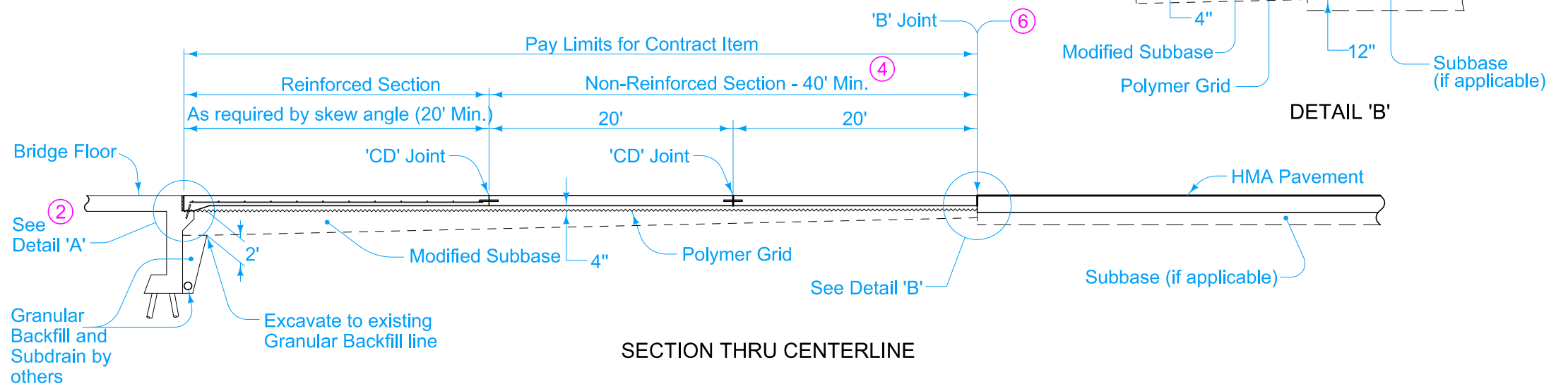
 IOWA DOT	REVISION	
	2	10-15-24
	BR-103	
STANDARD ROAD PLAN	SHEET 1 of 1	
REVISIONS: Added Longitudinal Grooving in Concrete to possible contract item.		
		
APPROVED BY DESIGN METHODS ENGINEER		
BRIDGE APPROACH SECTION (TWO-LANE FOR BRIDGE RECONSTRUCTION, PCC PAVEMENT)		



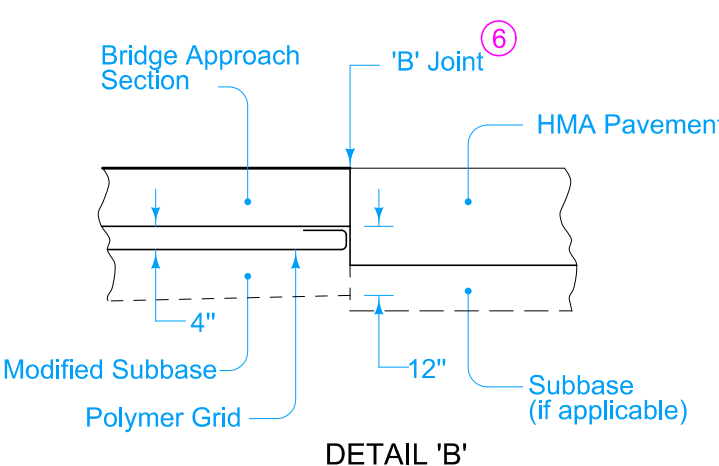




PLAN VIEW



SECTION THRU CENTERLINE





DETAIL 'B'

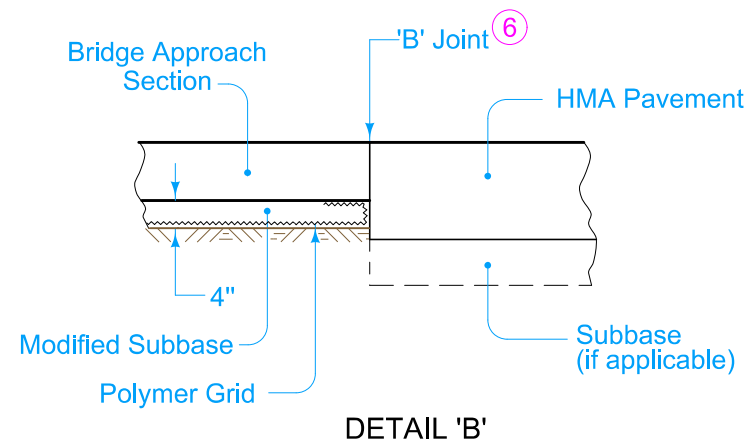
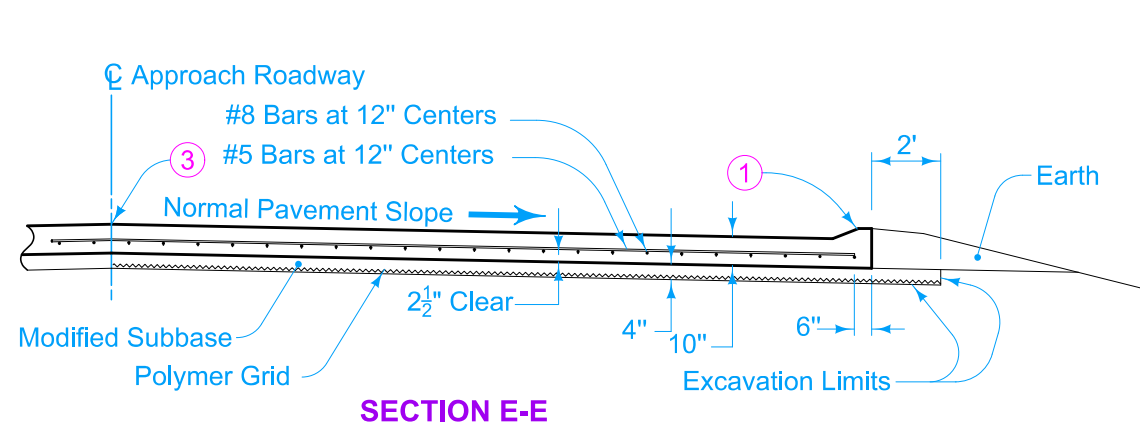
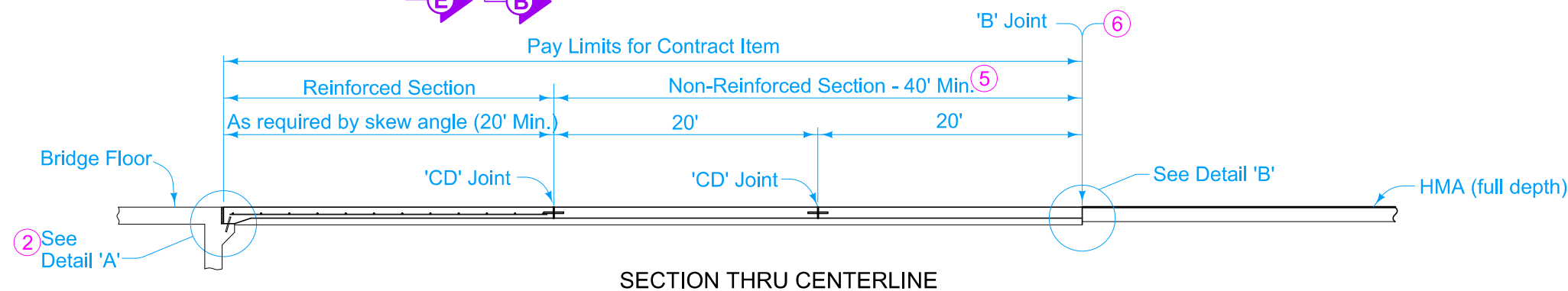
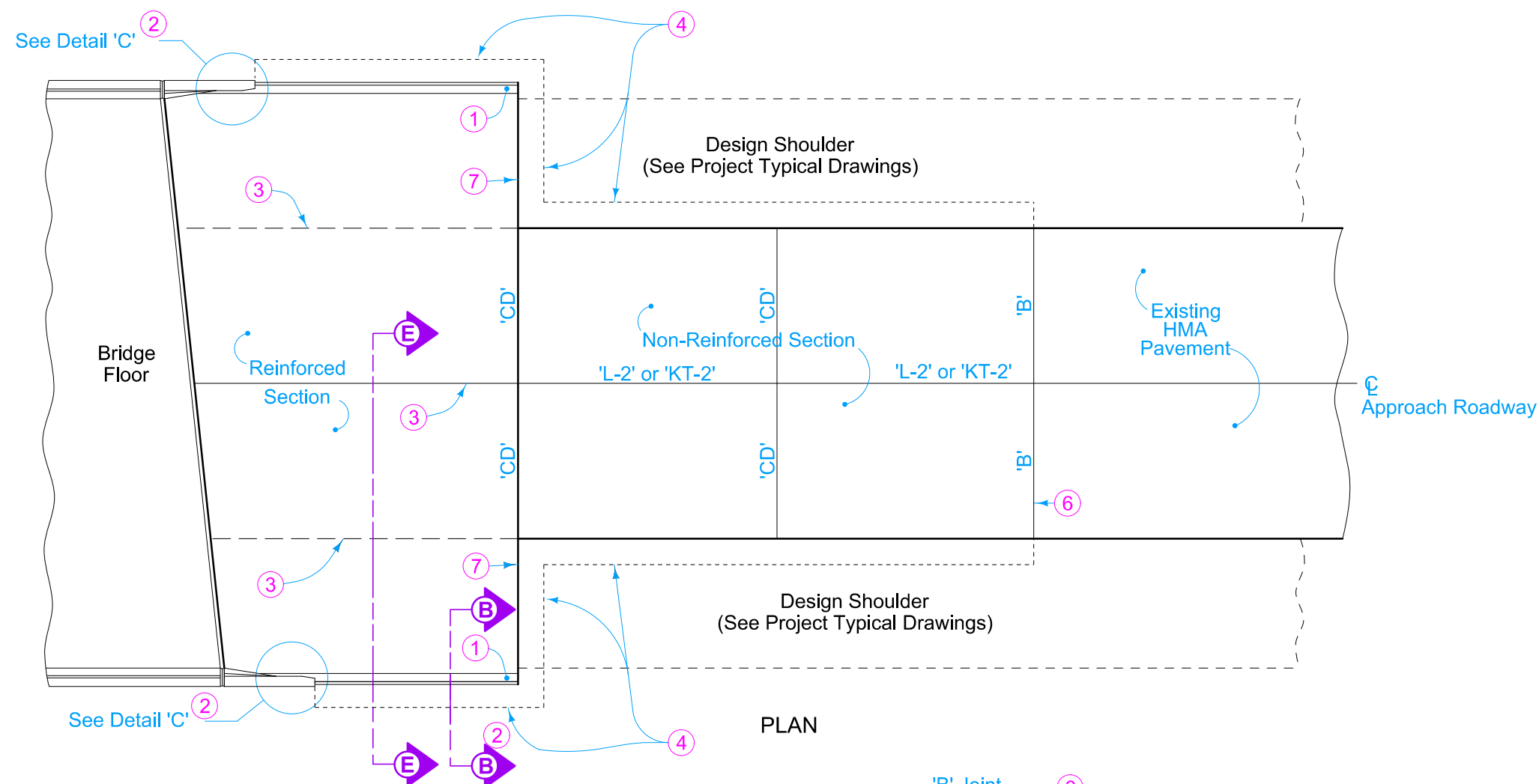
For joint details, see PV-101.

- ① Build curb to end of Reinforced Bridge Approach Section. See Curb Location Details (Section B-B on BR-101).
- ② See BR-101.
- ③ Longitudinal Joint (PV-101):
Single Pour - Saw cut joint per Detail B.
Two Pours - Use 'KS-1' joint.
- ④ Minimum 2 panels, maximum 3 panels. 20 foot panel length. Use 'CD' joints.
- ⑤ Excavation limits of Modified Subbase 2 feet outside of pavement edge, see BR-101.
- ⑥ The Contractor may need to saw cut the HMA pavement full depth to accommodate the 'B' joints.
- ⑦ Place 'RD' joint where PCC shoulder. Place 'B' joint otherwise.

Possible Contract Item:
Bridge Approach, Two Lane
Longitudinal Grooving in Concrete, Bridge Deck
Longitudinal Grooving in Concrete, Pavement

Possible Tabulation:
112-6

 IOWA DOT		REVISION	
		1	10-15-24
		BR-106	
		SHEET 1 of 1	
REVISIONS: Added Longitudinal Grooving in Concrete to possible contract item.			
			
APPROVED BY DESIGN METHODS ENGINEER			
BRIDGE APPROACH SECTION (TWO-LANE FOR BRIDGE RECONSTRUCTION, HMA PAVEMENT)			



For joint details, see PV-101.

- ① Build curb to end of Reinforced Bridge Approach Sections. See Curb Location Details (Section B-B on BR-101).
- ② See BR-101.
- ③ Longitudinal Joints (PV-101):
Single Pour - Saw cut joint per Detail B.
Two Pours - Use 'KS-1' joint.
- ④ Excavation limits of Modified Subbase 2 feet outside of pavement edge, see BR-101.
- ⑤ Minimum 2 panels, maximum 3 panels 20 foot panel length. Use 'CD' joints.
- ⑥ The contractor may need to saw cut the HMA pavement full depth to accommodate the 'B' joint.
- ⑦ Place 'RD' joint where PCC shoulder. Place 'B' joint otherwise.

Possible Contract Item:
Bridge Approach, Two Lane
Longitudinal Grooving in Concrete, Bridge Deck
Longitudinal Grooving in Concrete, Pavement

Possible Tabulation:
112-6

IOWA DOT	REVISION	
	1	10-15-24
STANDARD ROAD PLAN		
BR-107		
SHEET 1 of 1		
REVISIONS: Added Longitudinal Grooving in Concrete to possible contract item.		
APPROVED BY DESIGN METHODS ENGINEER		
BRIDGE APPROACH SECTION (AT EXISTING BRIDGES, HMA PAVEMENT)		

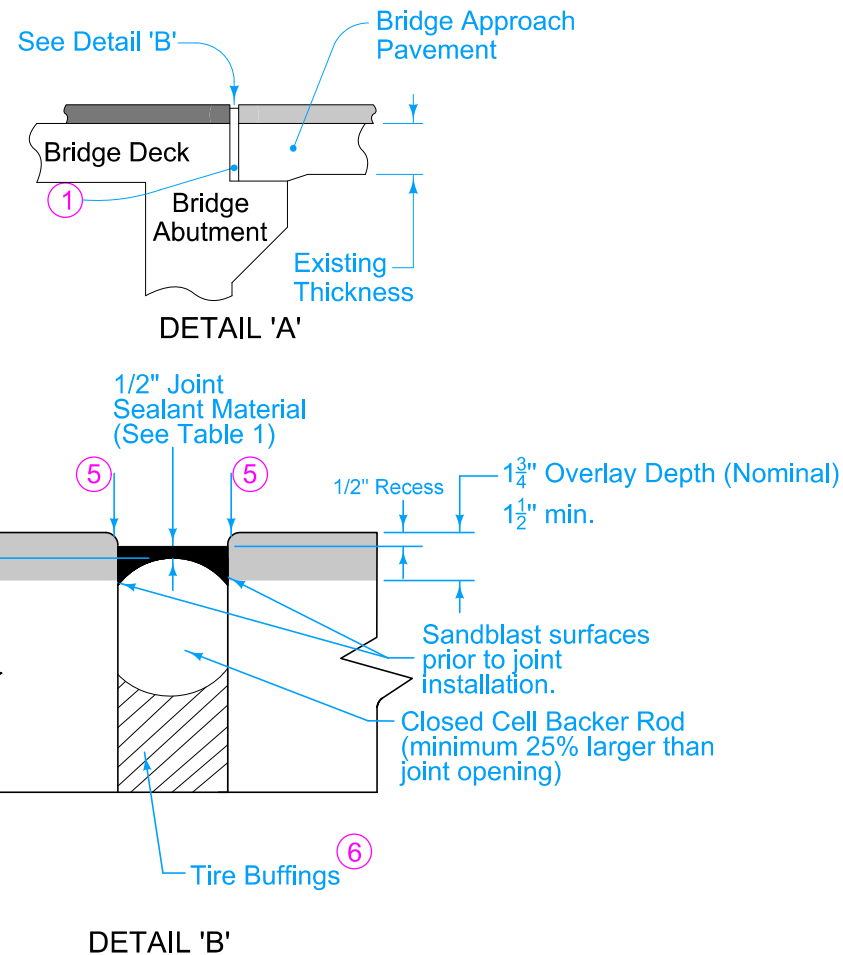
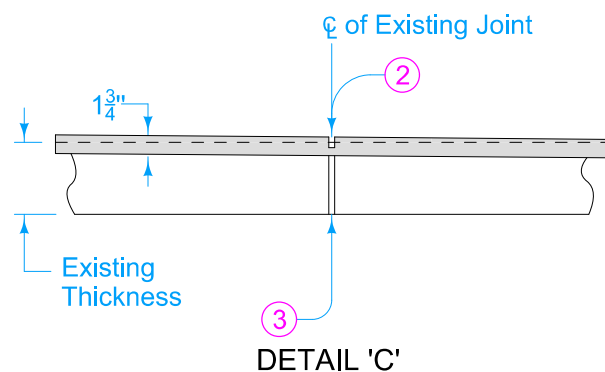
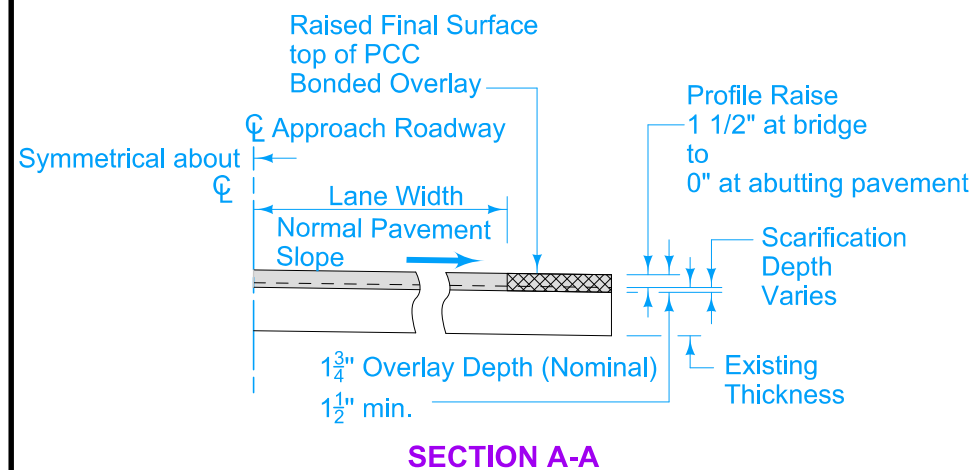
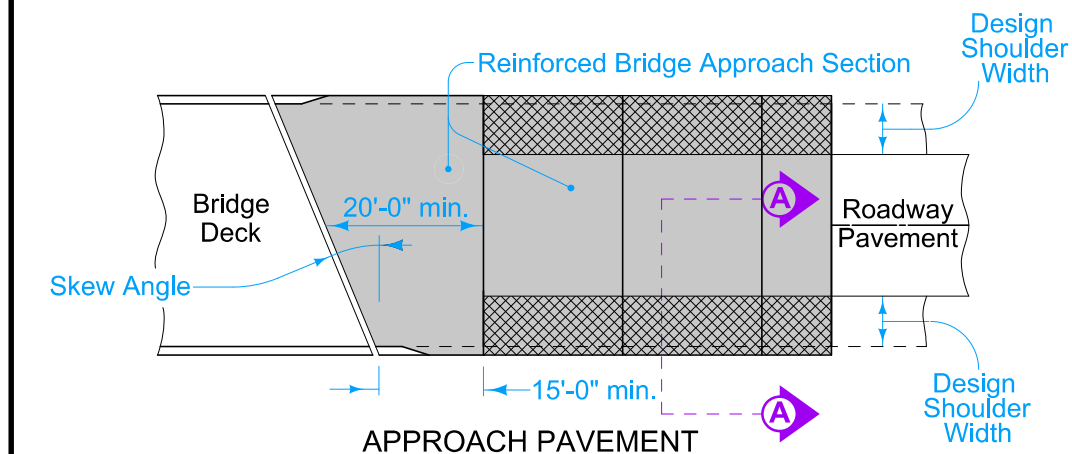
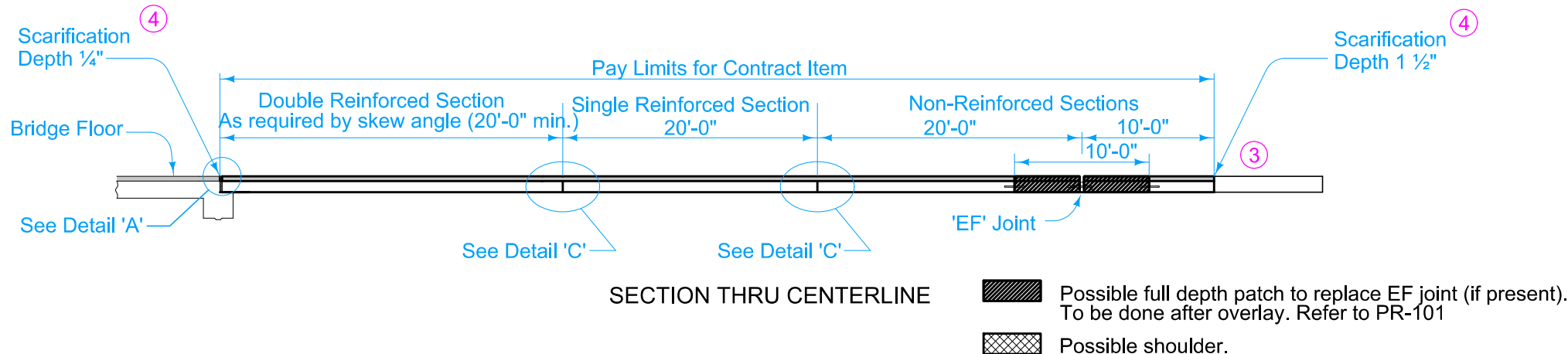


Table 1
Approved List of Sealant
Dow - Dowsil 902 RCS
Sika - Sikasil 728 RCS
Watson Bowman Acme - Wabo SiliconeSeal
Pecora - 322FC



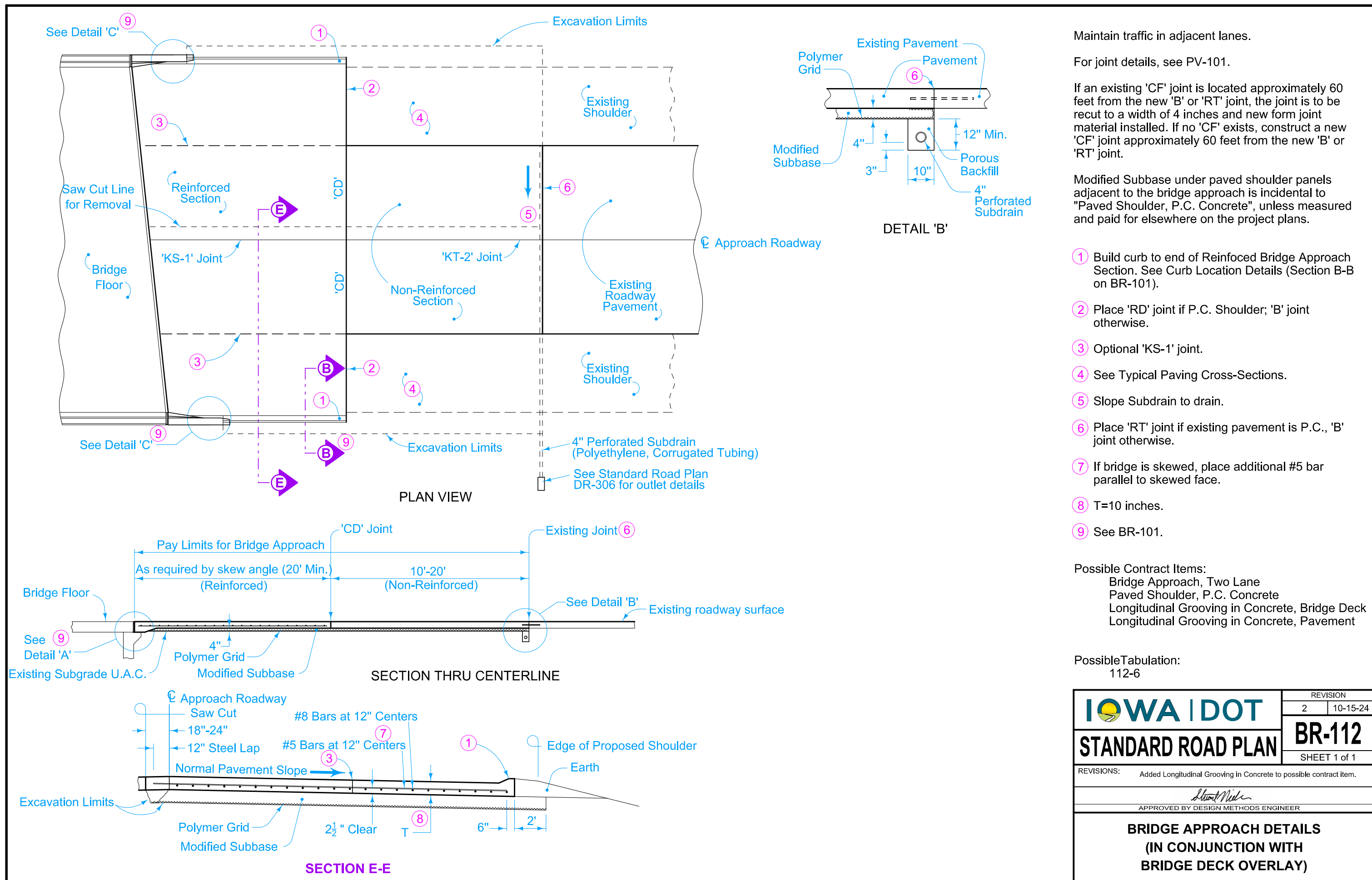
Remove all HMA within pay limits if present. Removal of previous HMA overlays will be incidental to "Deck Overlay" and will not be paid for separately. Full depth patch may be required to remove HMA, see project plans.

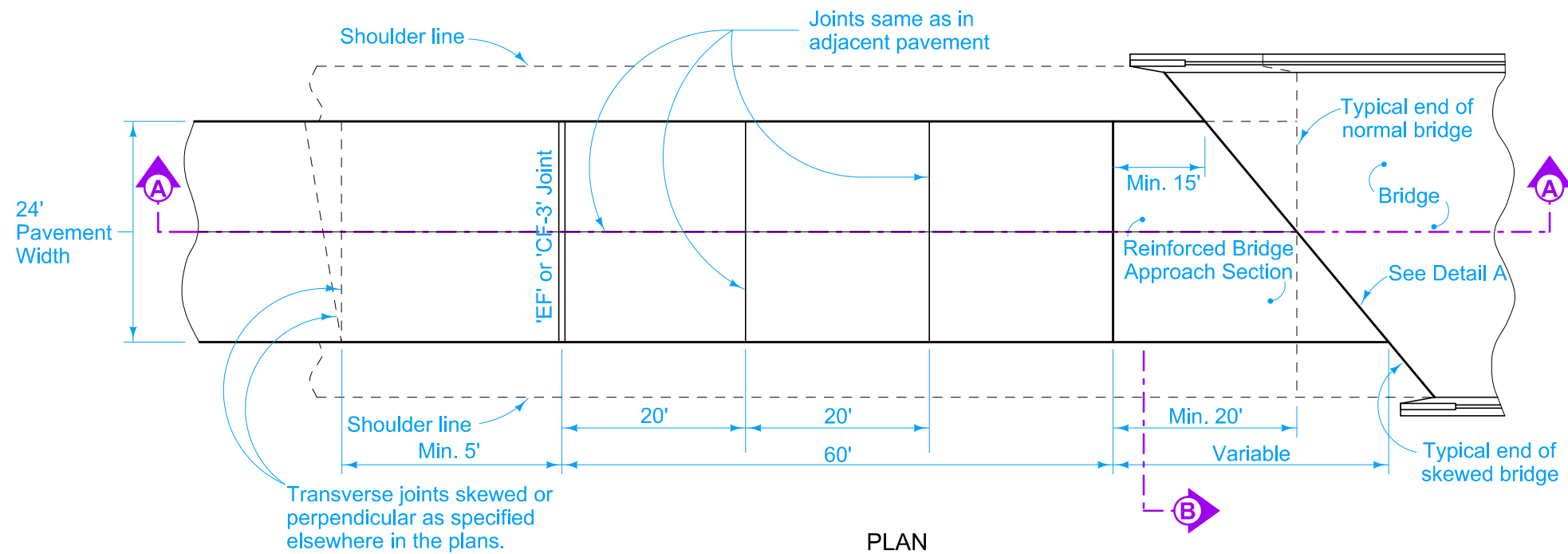
Overlying of the bridge approach pavement with PCC will be paid for at the contract unit price for "Deck Overlay" according to Section 2413 of the Standard Specifications. Scarification to the depth required and joint sealing is incidental to "Deck Overlay".

This standard may be used with bridge overlays resulting in a profile change of up to 1.5 inches.

- Existing joint. Remove all expansion material and clean joint area. Do not overlay and saw cut.
- Saw and seal over existing joint. Refer to Detail 'C' on PV-101.
- Existing joint. Remove debris and clean joint prior to overlay.
- Depth of scarification shall transition evenly between ends of bridge approach.
- Edge with 1/4 inch tool for length of joint indicated if formed; edging not required when cut with diamond blade saw.
- Tire buffings required when joint is 2 inches or greater. Compact tire buffings by spading with a square-nose shovel. Tire buffings shall not be larger than 1/2 inch.

IOWA DOT STANDARD ROAD PLAN	REVISION	
	New	10-15-24
	BR-110 SHEET 1 of 1	
REVISIONS: New. Replaces BR-111.		
APPROVED BY DESIGN METHODS ENGINEER		
PCC OVERLAY OF BRIDGE APPROACH SECTION		



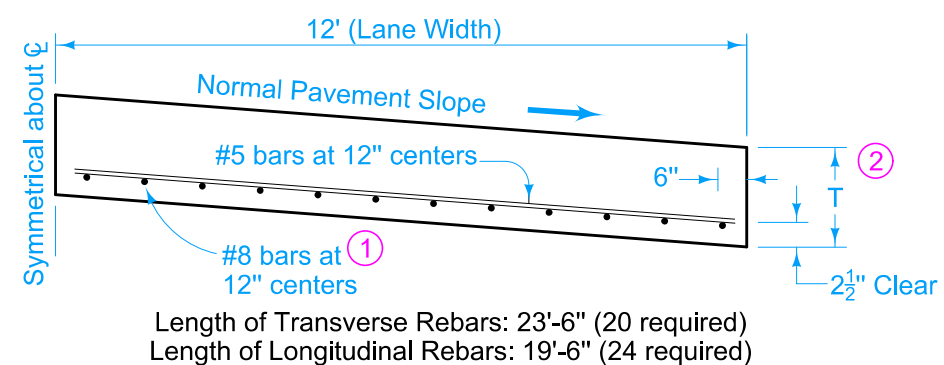
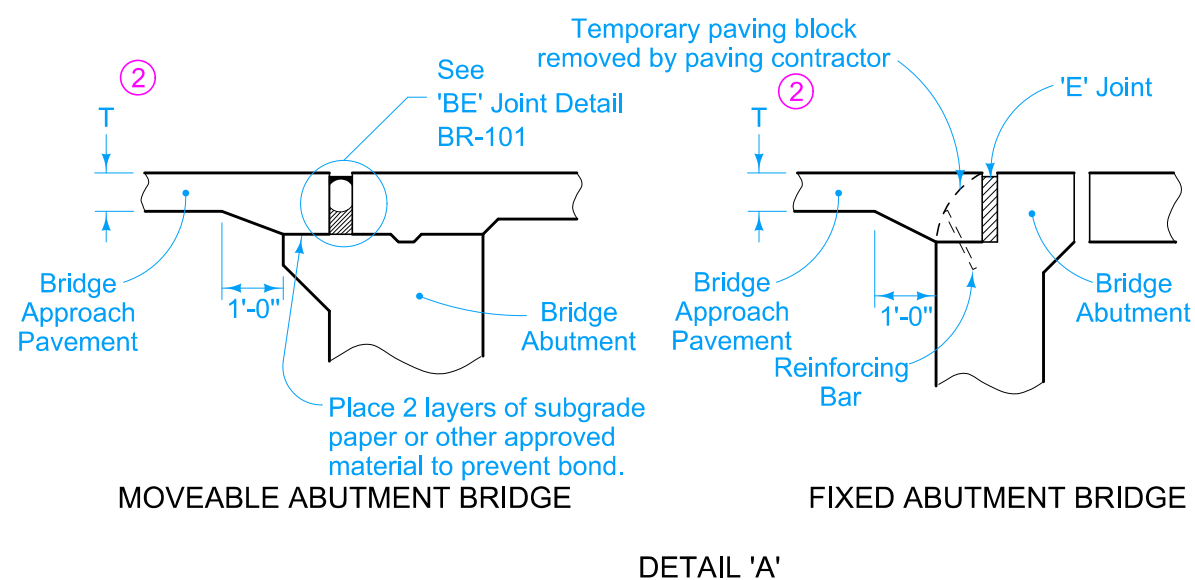
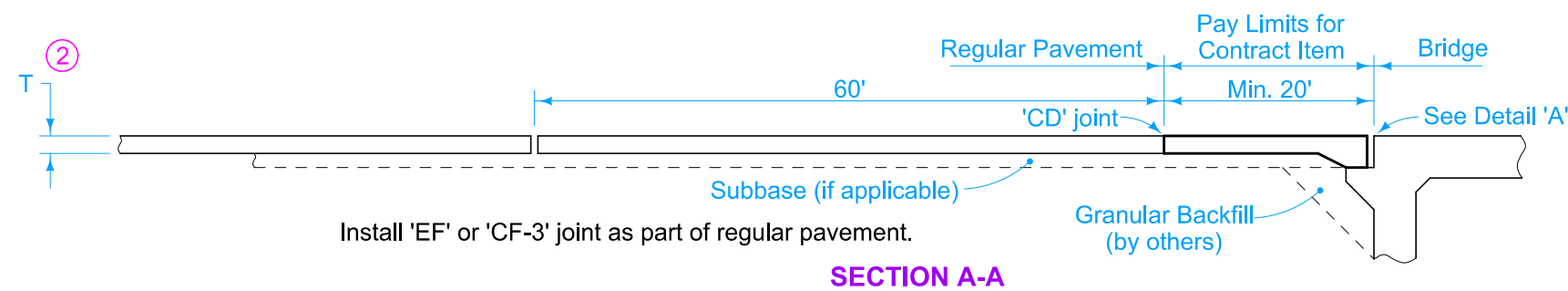


Use the same concrete for the bridge approach section as is used for the remainder of the project pavement.

For joint details, see PV-101.



- ① If bridge is skewed, place additional #5 bar parallel to skewed face.
- ② T is the same thickness as is required for the remainder of the project pavement.

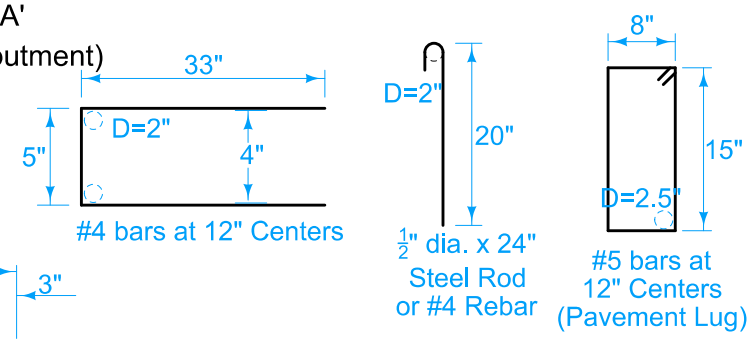
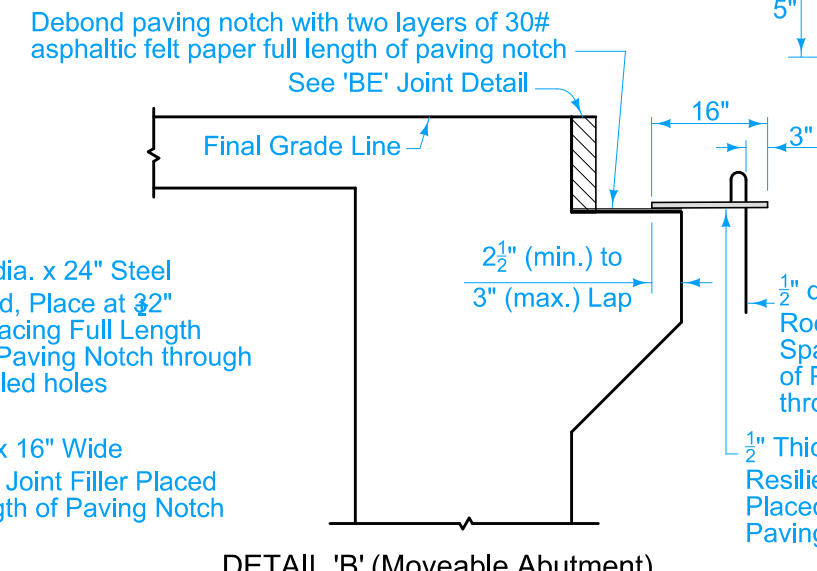
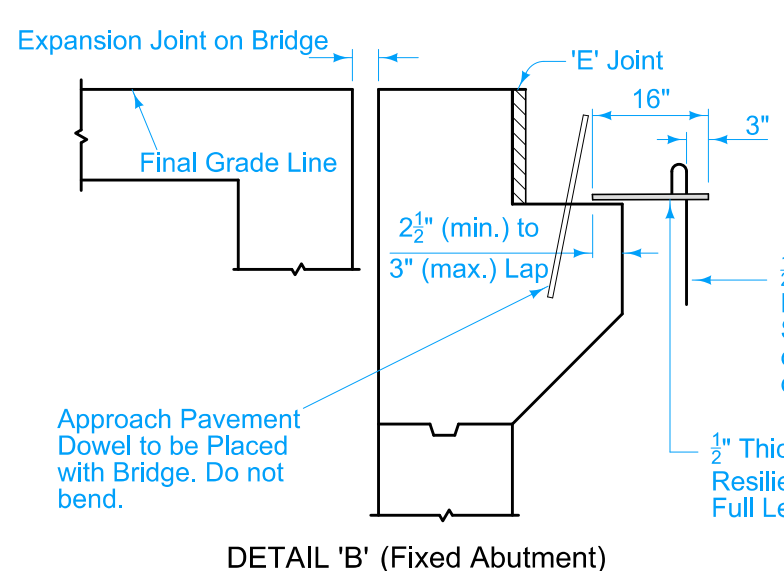
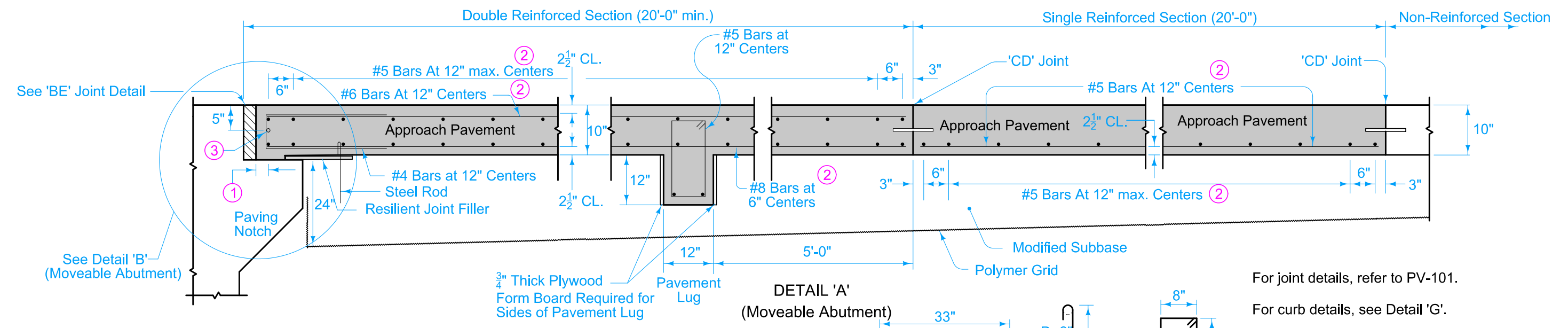
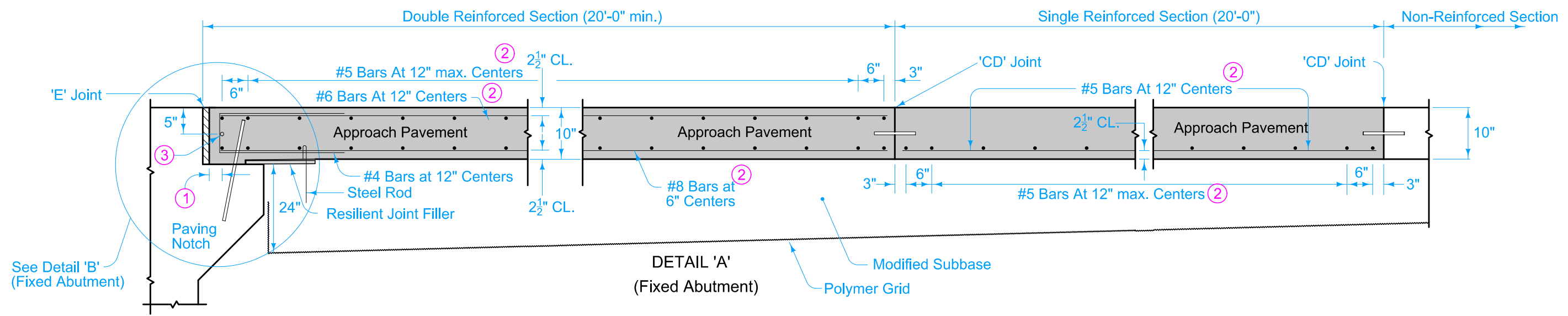
Quantity for 20 foot long approach section for 24 foot pavement is 53.33 square yards of "Bridge Approach."



Possible Contract Items:
 Bridge Approach, Secondary Roads
 Standard or Slip-Form PCC Pavement
 Longitudinal Grooving in Concrete, Bridge Deck
 Longitudinal Grooving in Concrete, Pavement

Possible Tabulation:
 112-6

 IOWA DOT	REVISION	
	1	10-15-24
	BR-121	
STANDARD ROAD PLAN	SHEET 1 of 1	
REVISIONS:	Added Longitudinal Grooving in Concrete to possible contract item. Added note referring to 'BE' joint.	
		
APPROVED BY DESIGN METHODS ENGINEER		
BRIDGE APPROACH DETAILS (SECONDARY ROADS)		





For joint details, refer to PV-101.

For curb details, see Detail 'G'.

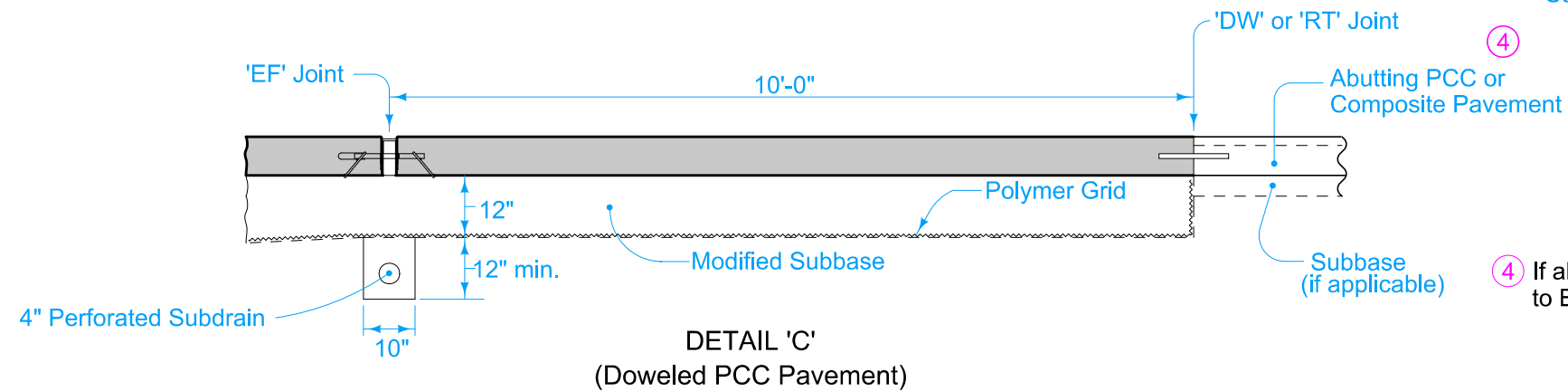
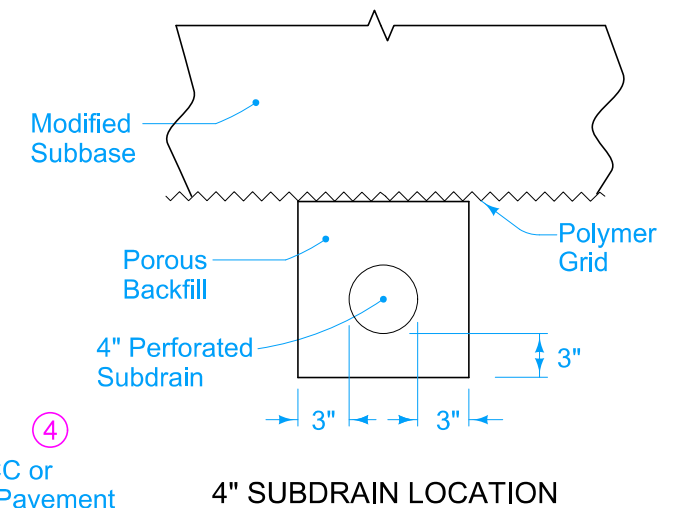
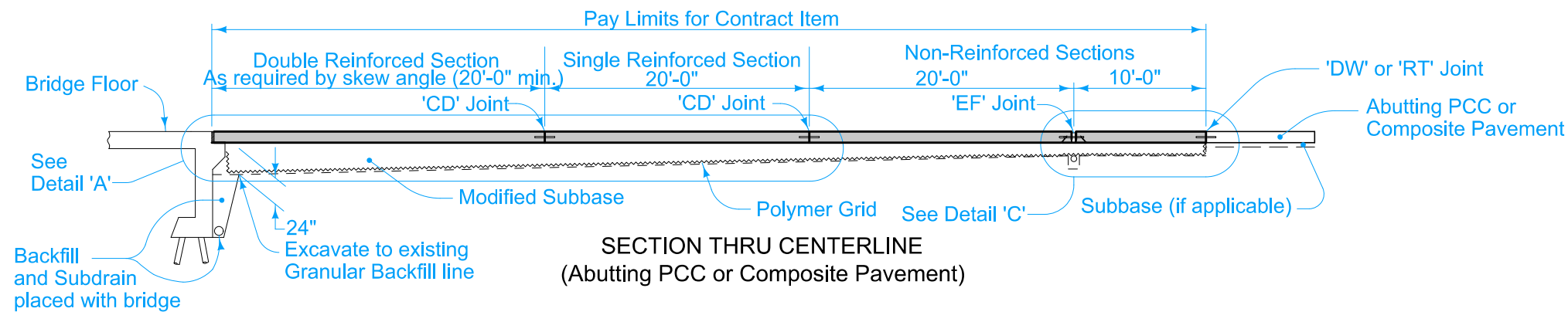
All transverse bars are #5.

Possible Contract Item:
Bridge Approach, BR-201
Longitudinal Grooving in Concrete, Bridge Deck
Longitudinal Grooving in Concrete, Pavement

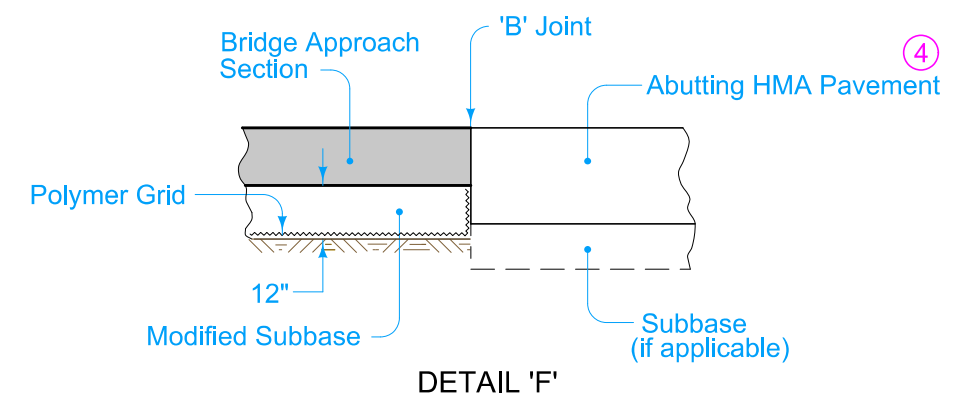
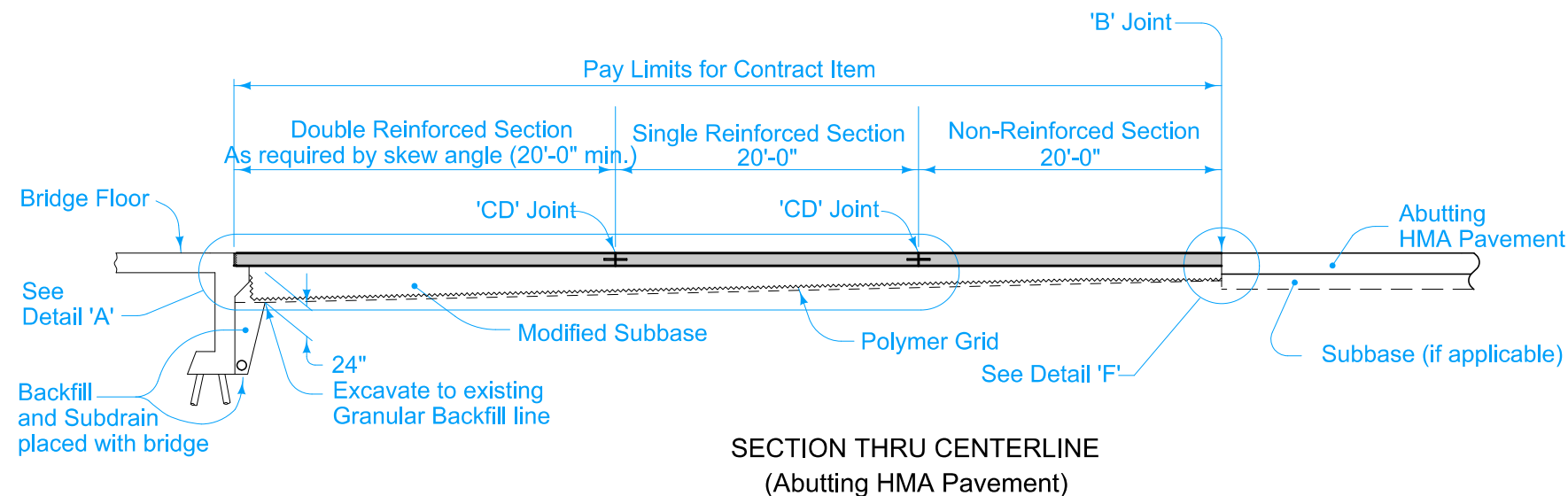
Possible Tabulation:
112-6

 IOWA DOT		REVISION		
		5	10-21-25	
ar.	STANDARD ROAD PLAN		BR-201	
			SHEET 1 of 3	
REVISIONS:		Changed 'KS-2' joint to 'BT-2' joint.		
				
APPROVED BY DESIGN METHODS ENGINEER				
DOUBLE REINFORCED 10" APPROACH				

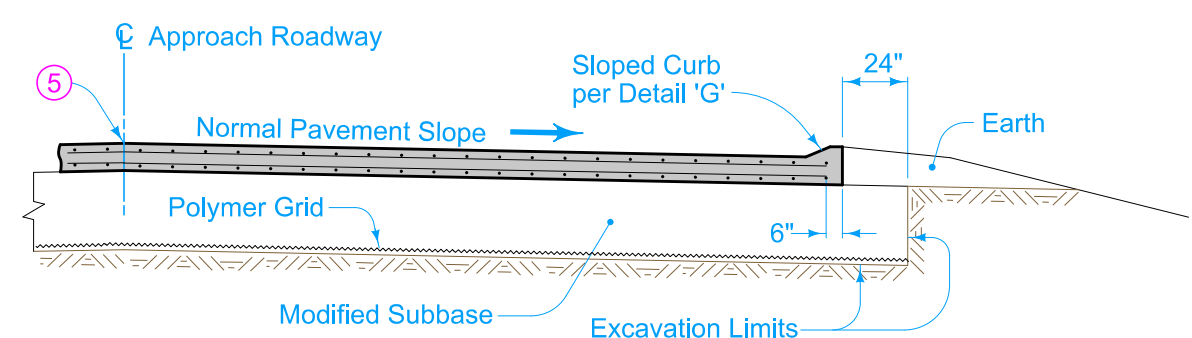
- ① 2" min. to 2 1/2" max. clear to bent bar.
- ② Minimum lap length: #5 Bars - 18"
#6 Bars - 27"
#8 Bars - 48"
- ③ If bridge is skewed, place additional #5 bar parallel to skewed face.



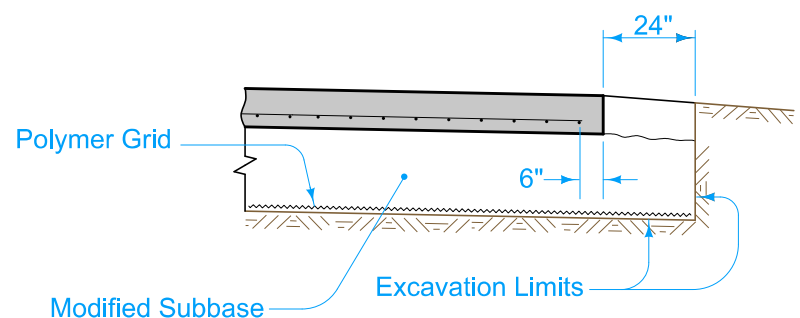
④ If abutting pavement (PCC or HMA) is not in place, refer to BR-213.



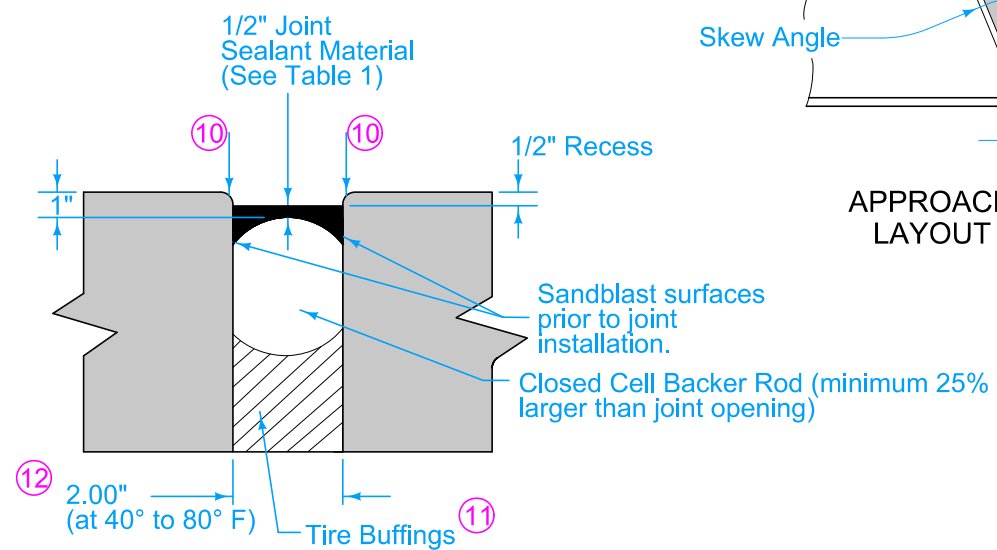
IOWA DOT STANDARD ROAD PLAN REVISIONS: Changed 'KS-2' joint to 'BT-2' joint. APPROVED BY DESIGN METHODS ENGINEER DOUBLE REINFORCED 10" APPROACH	REVISION	
	5	10-21-25
	BR-201	
	SHEET 2 of 3	



SECTION A-A

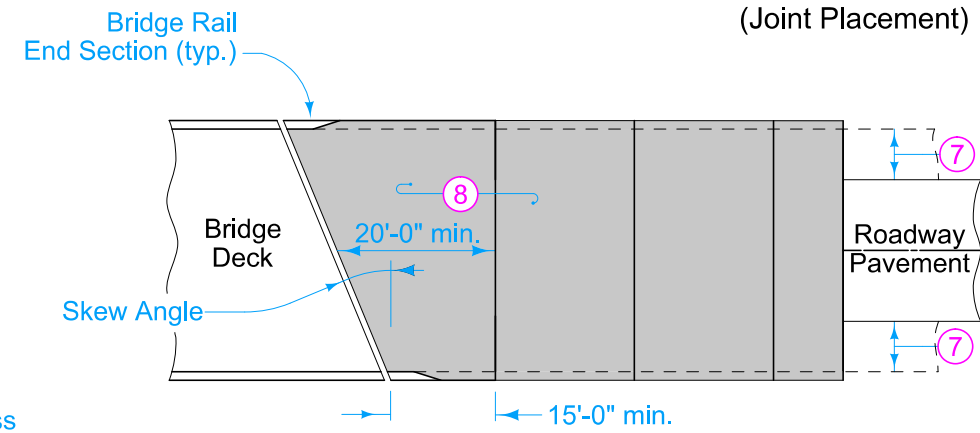


SECTION B-B

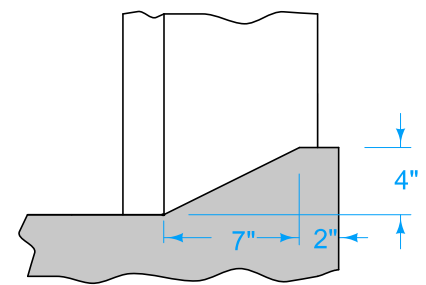


'BE' JOINT DETAIL

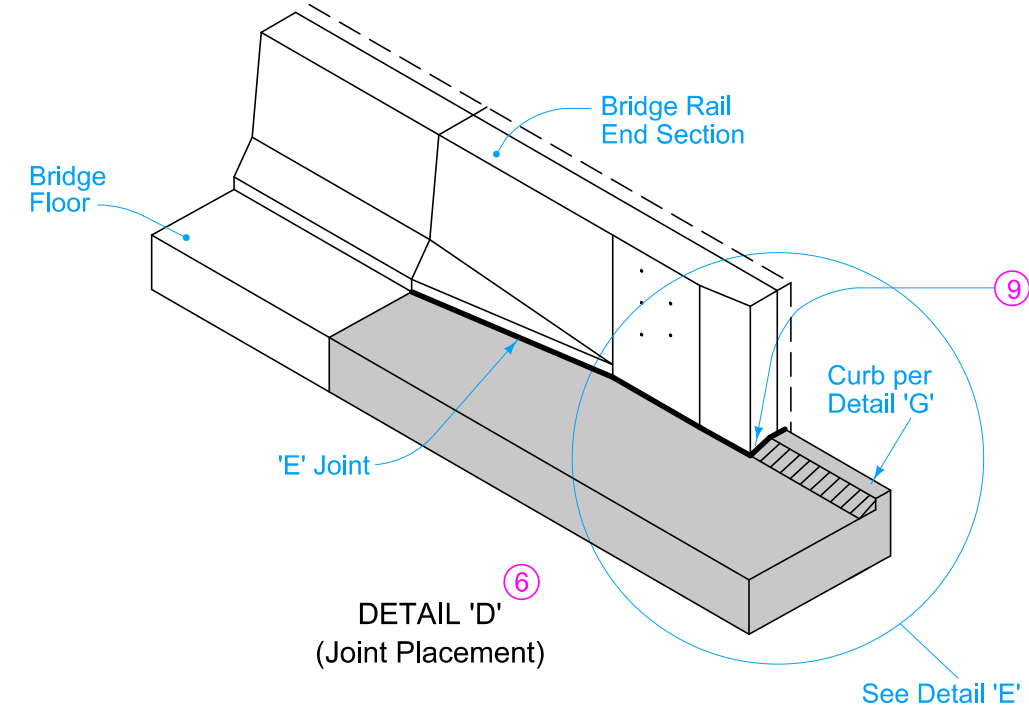
Table 1
Approved List of Sealant
Dow - Dowsil 902 RCS
Sika - Sikasil 728 RCS
Watson Bowman Acme - Wabo SiliconeSeal
Pecora - 322FC



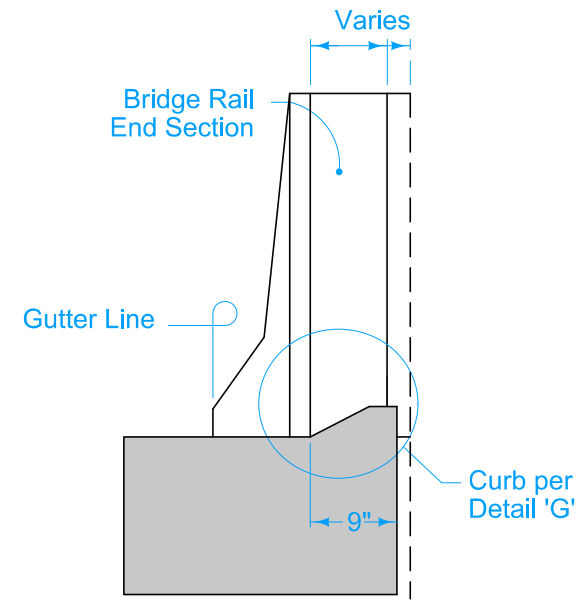
APPROACH PAVEMENT LAYOUT AT A SKEW



DETAIL 'G'



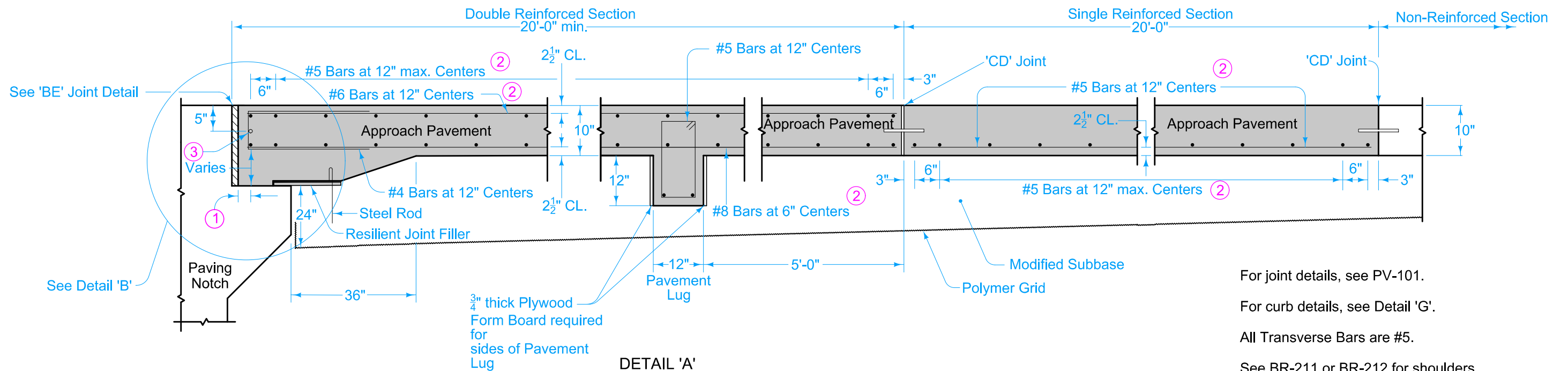
DETAIL 'D' (Joint Placement)



DETAIL 'E' (Back of Curb Placement)

- ⑤ Longitudinal Joint (PV-101):
Single pour - Saw cut joint per Detail B.
Two pours - Use 'BT-2' Joint.
- ⑥ Refer to BR-211, BR-212, or BR-231.
- ⑦ Design shoulder width.
- ⑧ Reinforced bridge approach section.
- ⑨ 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.
- Fixed Abutment Bridges: Type 'E' Joint.
- Moveable Abutment Bridges: Flexible Foam Expansion Joint Filler complying with Section 4136 of the Standard Specifications. Set width of gap to 2 inches. Joint length as required to completely fill from back side of curb to front face of bridge wing.
- ⑩ Edge with 1/4 inch tool for length of joint indicated if formed edging not required when cut with diamond blade saw.
- ⑪ Compact tire buffings by spading with a square-nose shovel. Tire buffings shall not be larger than 1/2 inch.
- ⑫ Setting Width Notes:
 - Width is perpendicular to abutment.
 - Temperature of concrete deck on the underside or shaded portion of the deck shall be between 40 to 80 degrees Fahrenheit when placing approach slab concrete.
 - This 'BE' joint and the setting temperatures may be used for all concrete beam or slab bridges up to 575' in length and for all steel girder bridges up to 400' in length.

	REVISION	
	5	10-21-25
	BR-201 SHEET 3 of 3	
REVISIONS: Changed 'KS-2' joint to 'BT-2' joint.		
APPROVED BY DESIGN METHODS ENGINEER		
DOUBLE REINFORCED 10" APPROACH		



For joint details, see PV-101.

For curb details, see Detail 'G'.

All Transverse Bars are #5.

See BR-211 or BR-212 for shoulders.

(1) 2" to 2½" clear to bent bar.

(2) Minimum lap length: #5 bars - 18 inches
#6 bars - 27 inches
#8 bars - 48 inches

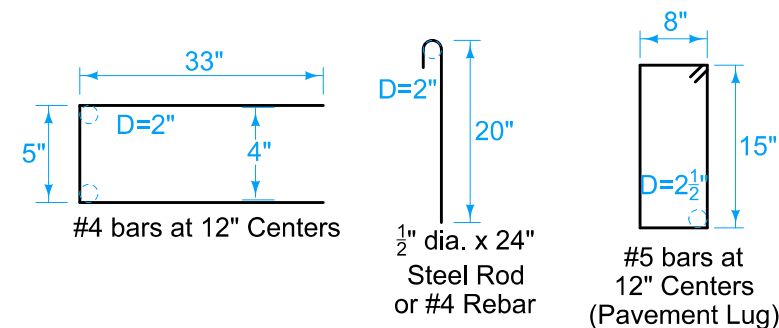
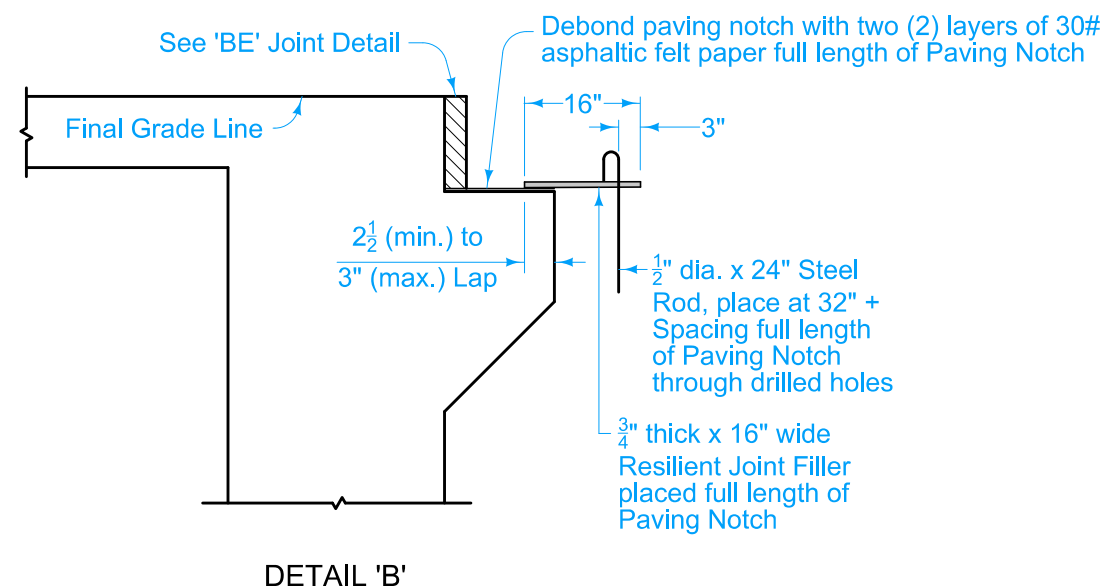
(3) If bridge is skewed, place additional #5 bar parallel to skewed face.

Possible Contract Item:
Bridge Approach, BR-202
Longitudinal Grooving in Concrete, Bridge Deck
Longitudinal Grooving in Concrete, Pavement

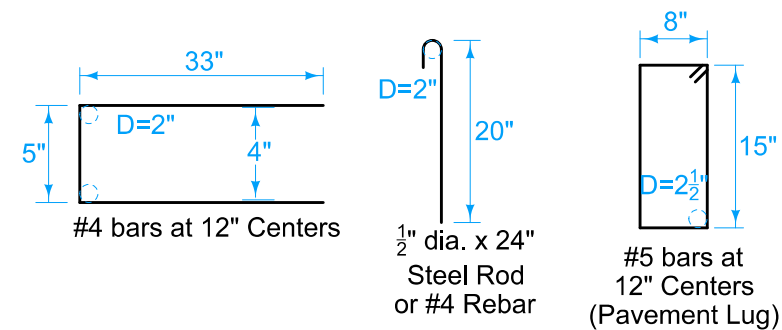
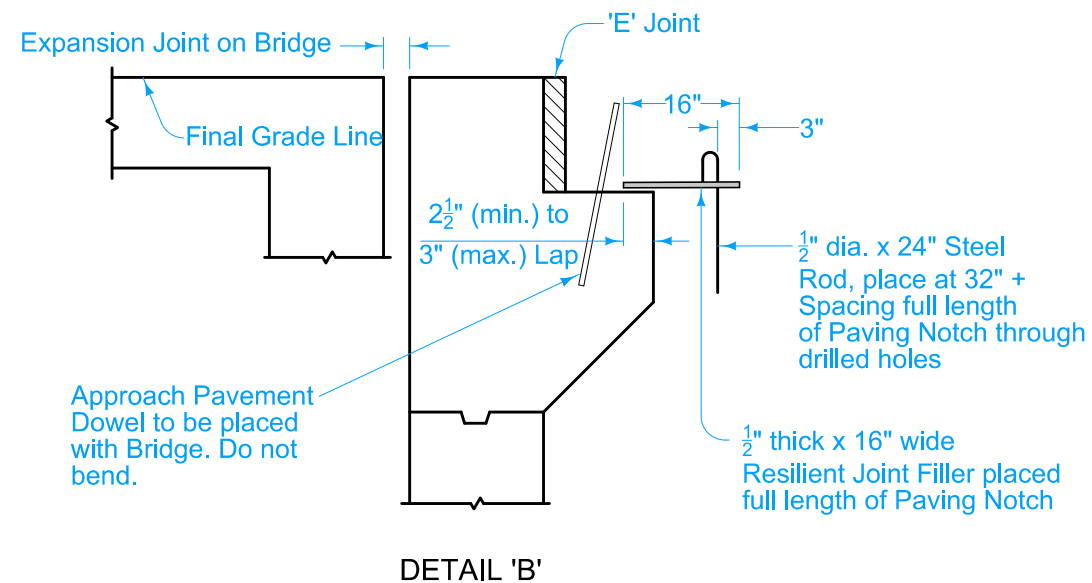
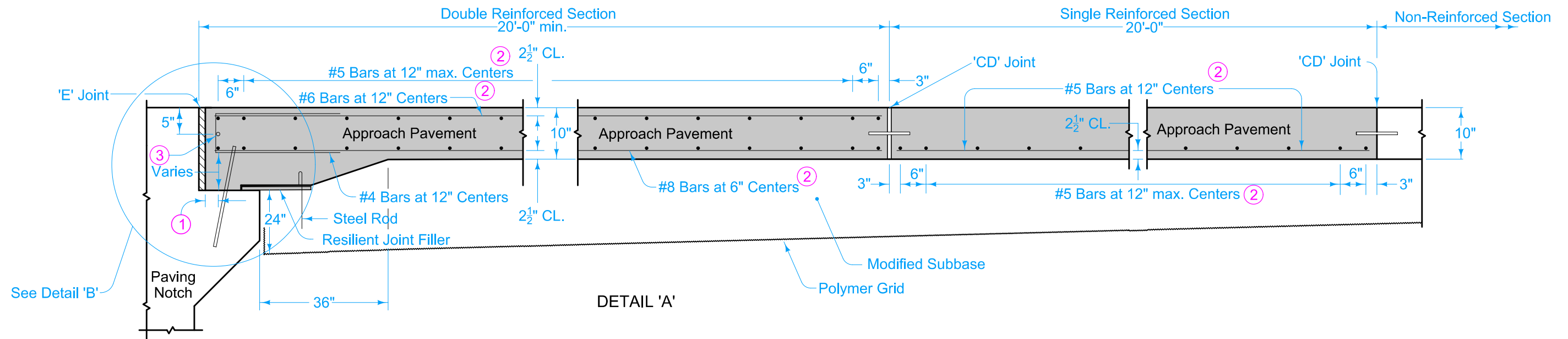
Possible Tabulation:
112-6

IOWA DOT		REVISION	
STANDARD ROAD PLAN		5	10-21-25
		BR-202	
REVISIONS:		Changed 'KS-2' joint to 'BT-2' joint.	
APPROVED BY DESIGN METHODS ENGINEER		SHEET 1 of 4	

**DOUBLE REINFORCED 10" APPROACH
WITH VARIABLE DEPTH PAVING NOTCH**





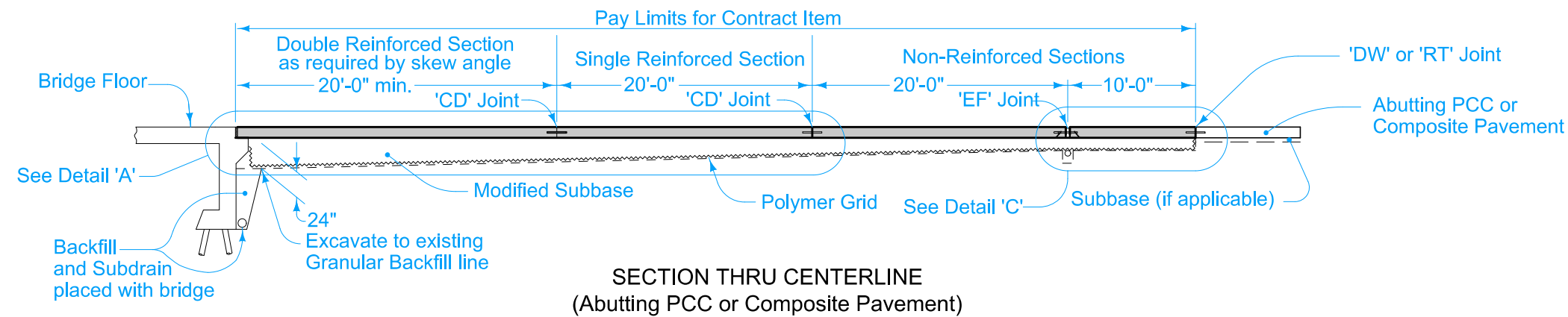
MOVEABLE ABUTMENT



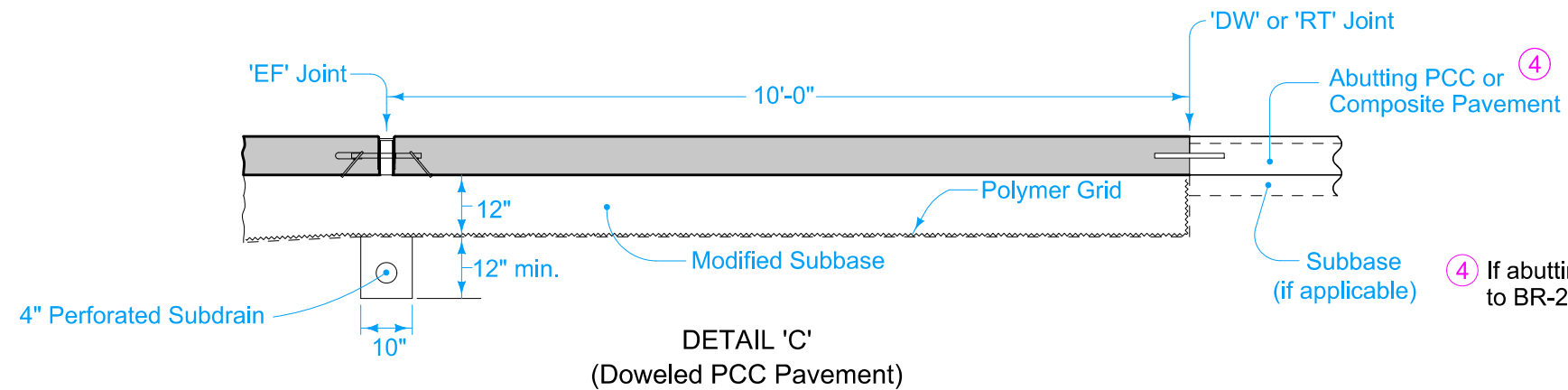
- ① 2" to 2 1/2" clear to bent bar.
- ② Minimum lap length: #5 bars - 18 inches
#6 bars - 27 inches
#8 bars - 48 inches
- ③ If bridge is skewed, place additional #5 bar parallel to skewed face.

FIXED ABUTMENT

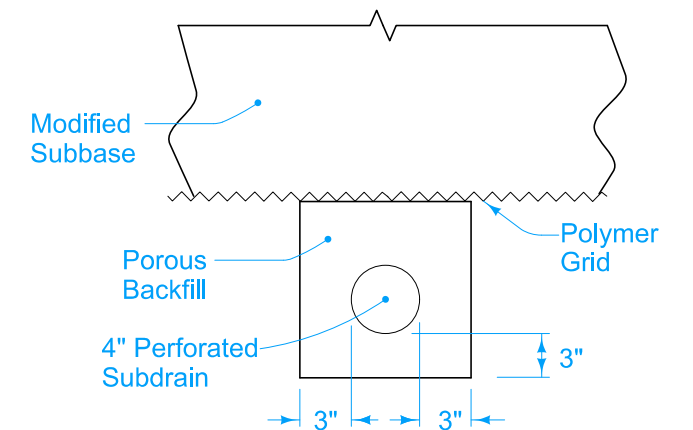
 IOWA DOT	REVISION	
	5	10-21-25
	BR-202	
	SHEET 2 of 4	
REVISIONS: Changed 'KS-2' joint to 'BT-2' joint.		
		
APPROVED BY DESIGN METHODS ENGINEER		
DOUBLE REINFORCED 10" APPROACH WITH VARIABLE DEPTH PAVING NOTCH		



SECTION THRU CENTERLINE
(Abutting PCC or Composite Pavement)

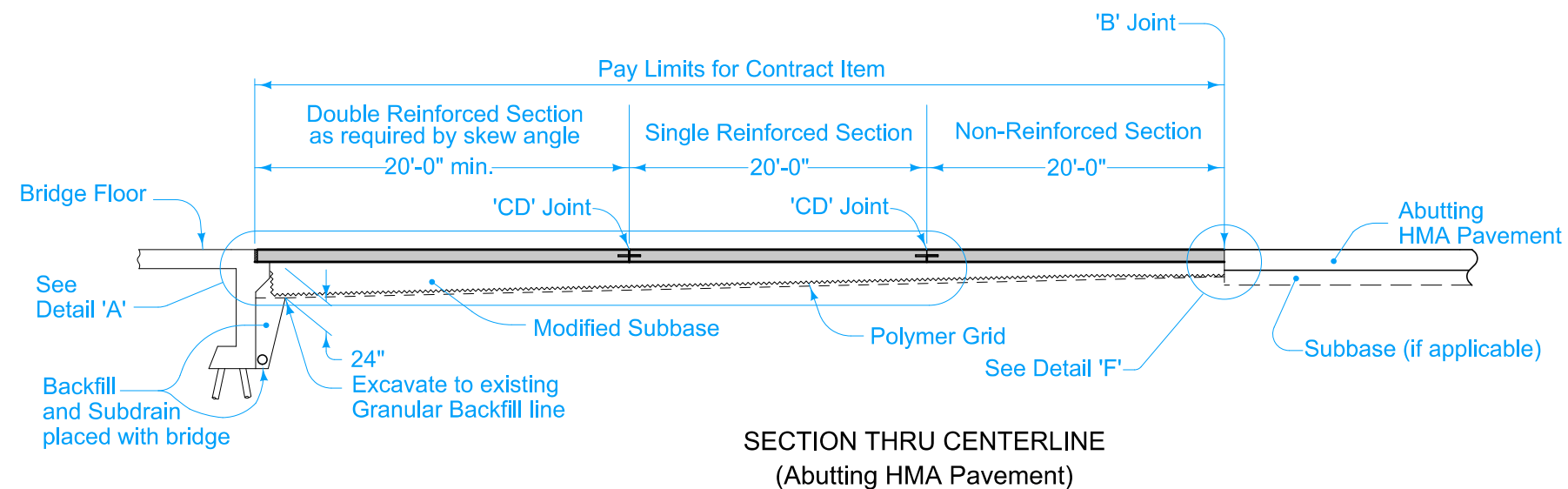


DETAIL 'C'
(Doweled PCC Pavement)

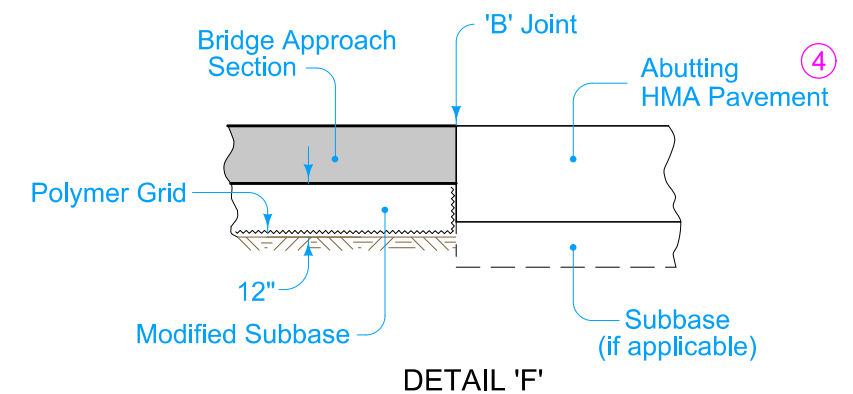


4" SUBDRAIN LOCATION

④ If abutting pavement (PCC or HMA) is not in place, refer to BR-213.

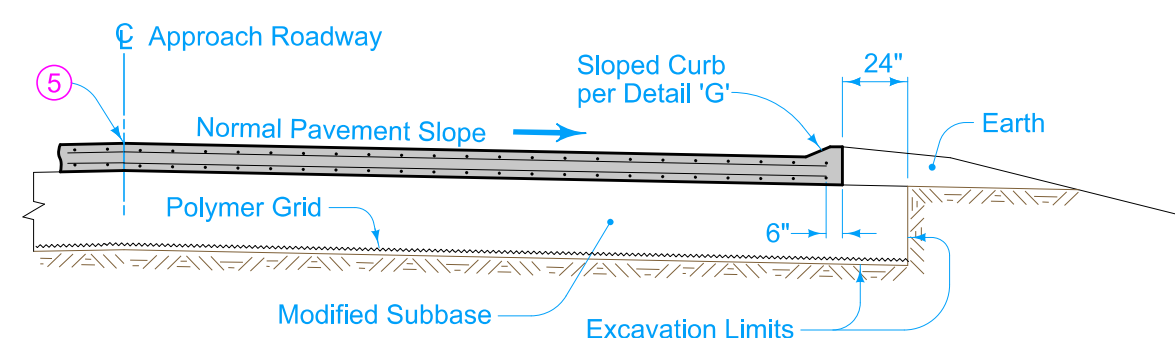


SECTION THRU CENTERLINE
(Abutting HMA Pavement)

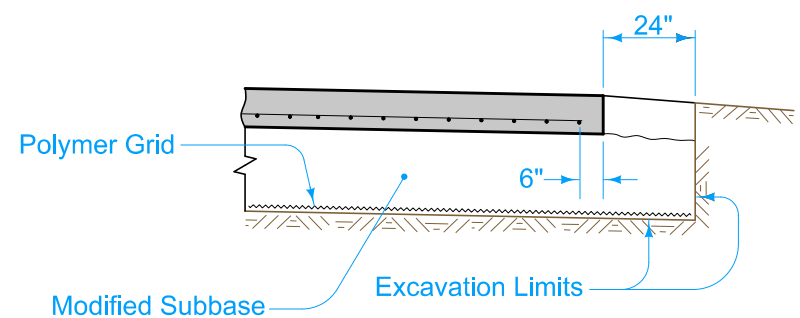


DETAIL 'F'

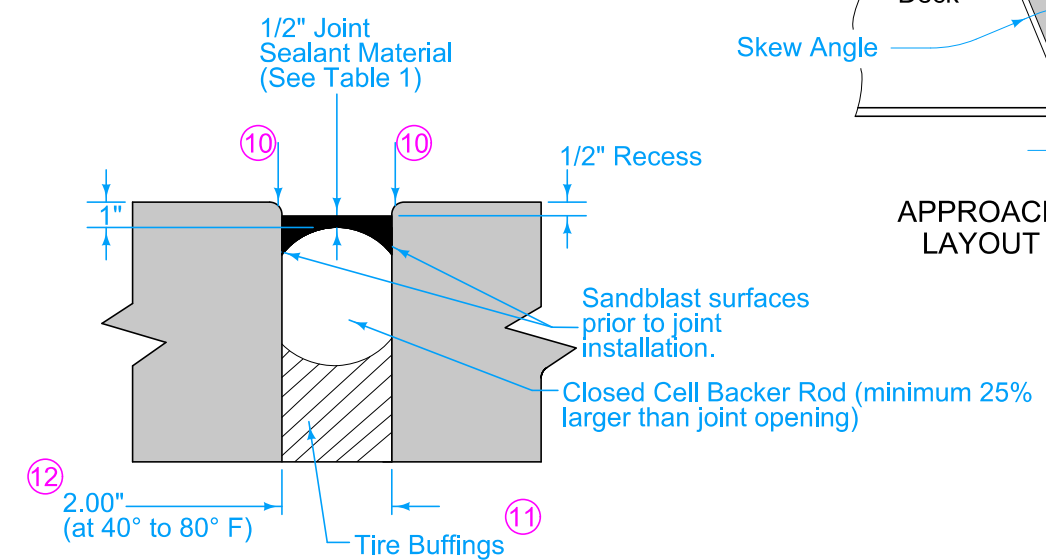
IOWA DOT STANDARD ROAD PLAN REVISIONS: Changed 'KS-2' joint to 'BT-2' joint. APPROVED BY DESIGN METHODS ENGINEER DOUBLE REINFORCED 10" APPROACH WITH VARIABLE DEPTH PAVING NOTCH	REVISION	
	5	10-21-25
	BR-202	
	SHEET 3 of 4	



SECTION A-A

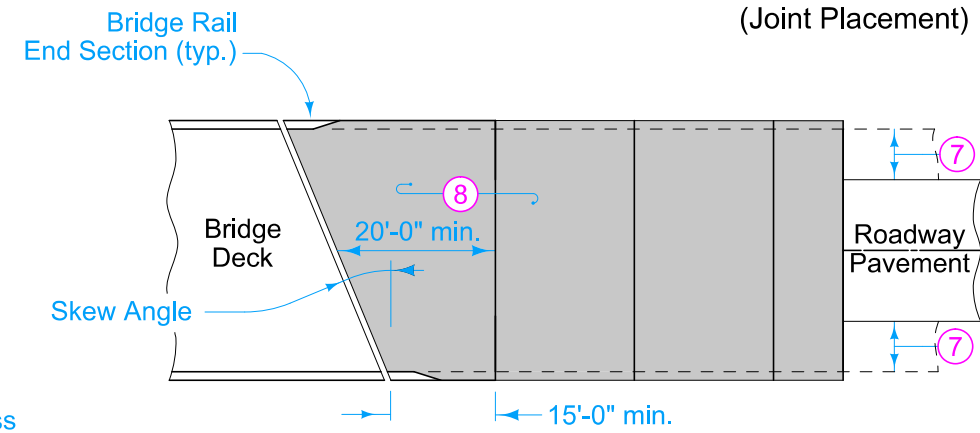


SECTION B-B

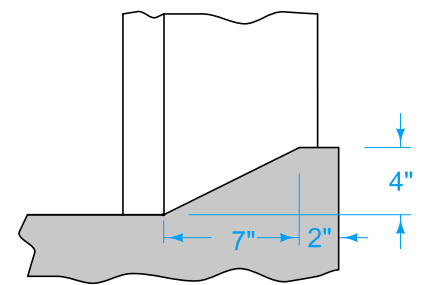


'BE' JOINT DETAIL

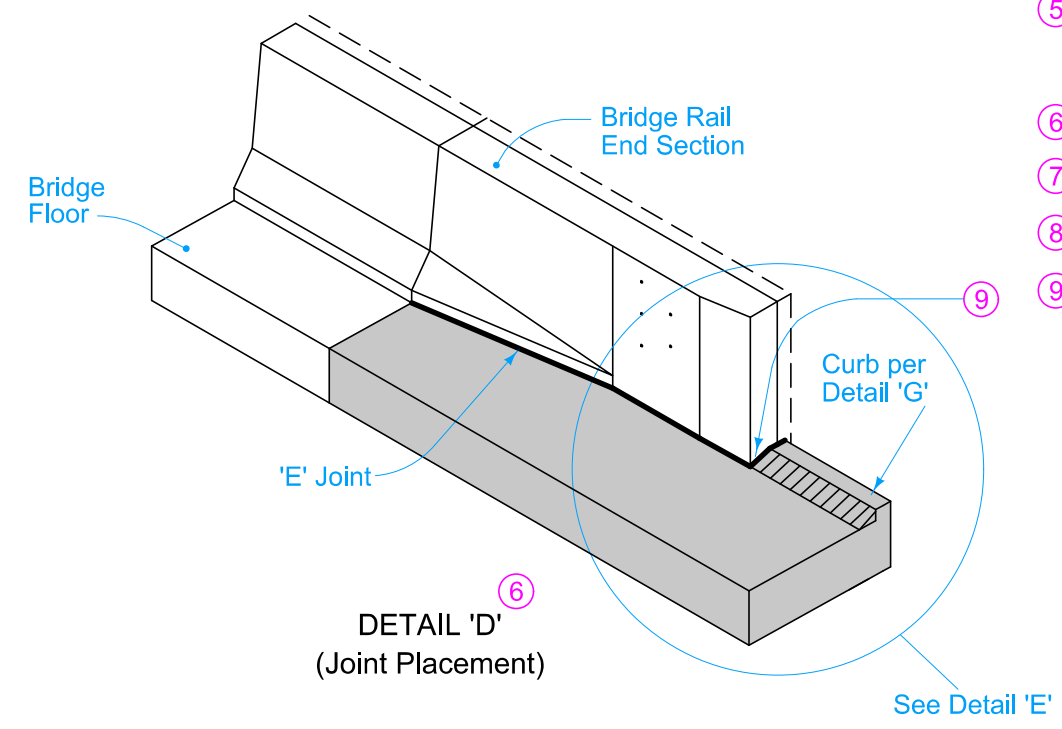
Table 1
Approved List of Sealant
Dow - Dowsil 902 RCS
Sika - Sikasil 728 RCS
Watson Bowman Acme - Wabo SiliconeSeal
Pecora - 322FC



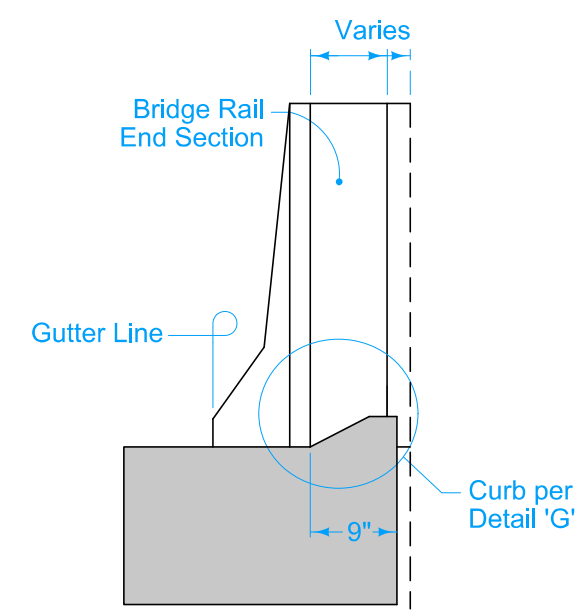
APPROACH PAVEMENT LAYOUT AT A SKEW



DETAIL 'G'



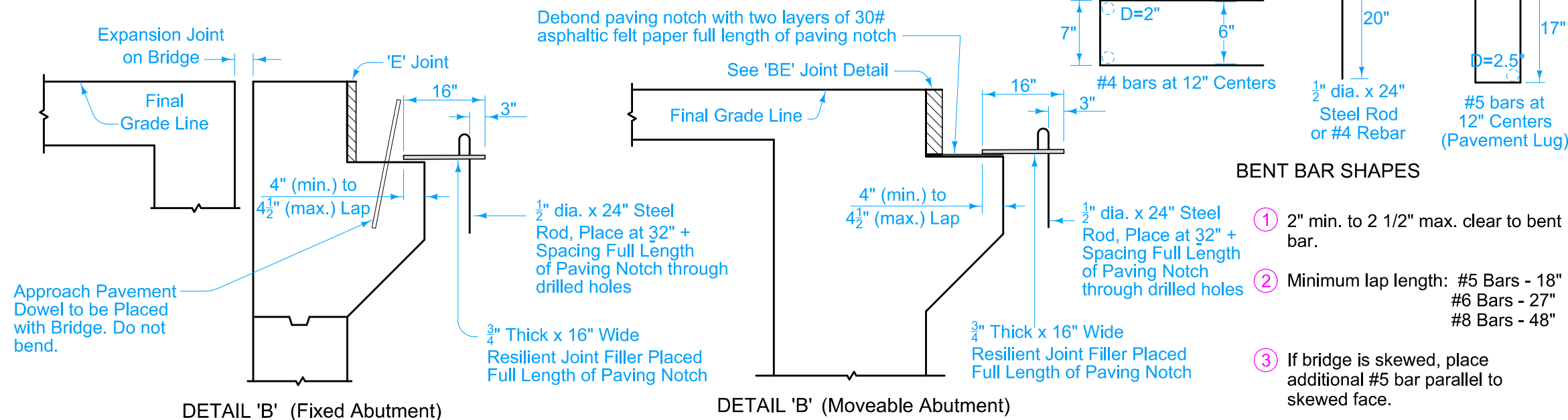
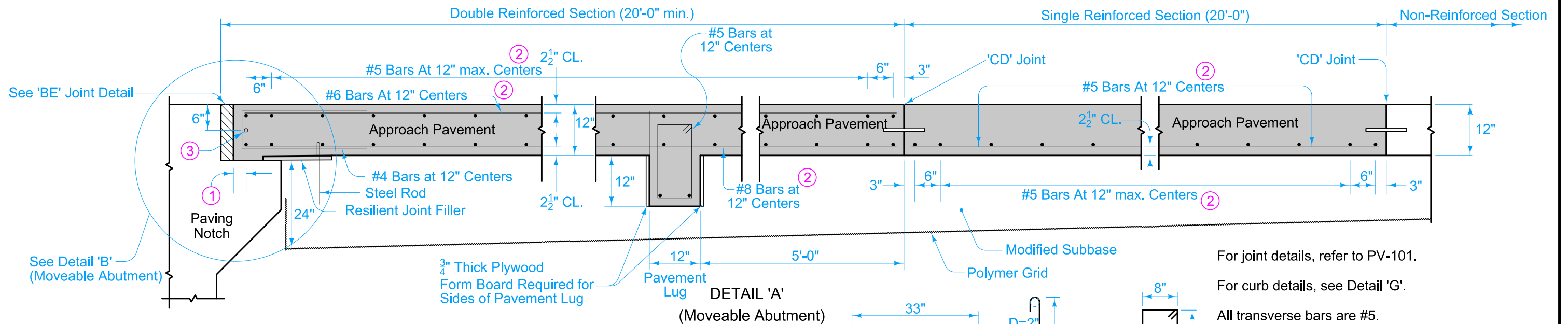
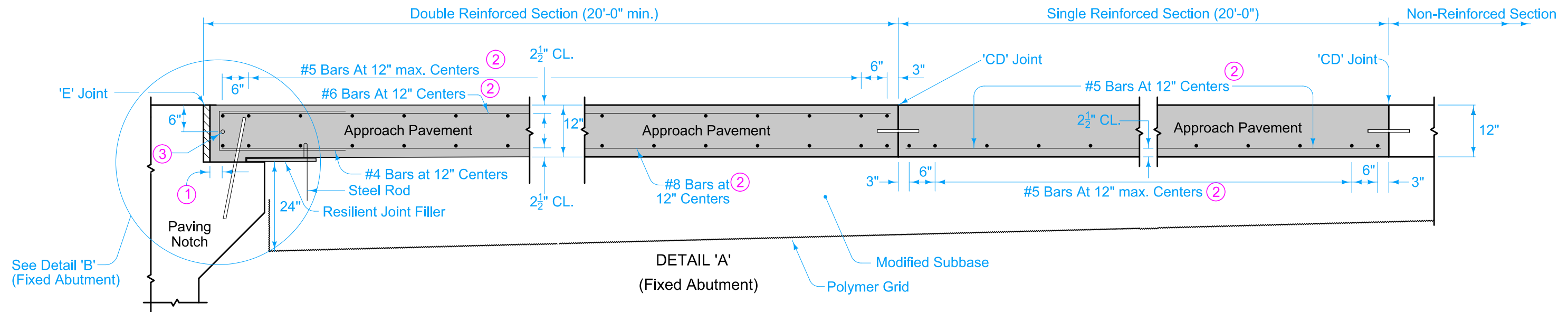
DETAIL 'D' (Joint Placement)



DETAIL 'E' (Back of Curb Placement)

- ⑤ Longitudinal Joint (PV-101):
Single pour - Saw cut joint per Detail B.
Two pours - Use 'BT-2' Joint.
- ⑥ Refer to BR-211, BR-212, or BR-231.
- ⑦ Design shoulder width.
- ⑧ Reinforced bridge approach section.
- ⑨ 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.
- Fixed Abutment Bridges: Type 'E' Joint.
- Moveable Abutment Bridges: Flexible Foam Expansion Joint Filler complying with Section 4136 of the Standard Specifications.
Set width of gap to 2 inches. Joint length as required to completely fill from back side of curb to front face of bridge wing.
- ⑩ Edge with 1/4 inch tool for length of joint indicated if formed edging not required when cut with diamond blade saw.
- ⑪ Compact tire buffings by spading with a square-nose shovel. Tire buffings shall not be larger than 1/2 inch.
- ⑫ Setting Width Notes:
 - Width is perpendicular to abutment.
 - Temperature of concrete deck on the underside or shaded portion of the deck shall be between 40 to 80 degrees Fahrenheit when placing approach slab concrete.
 - This 'BE' joint and the setting temperatures may be used for all concrete beam or slab bridges up to 575' in length and for all steel girder bridges up to 400' in length.

	REVISION	
	5	10-21-25
	BR-202	
SHEET 4 of 4		
REVISIONS: Changed 'KS-2' joint to 'BT-2' joint.		
APPROVED BY DESIGN METHODS ENGINEER		
DOUBLE REINFORCED 10" APPROACH WITH VARIABLE DEPTH PAVING NOTCH		



For joint details, refer to PV-101.

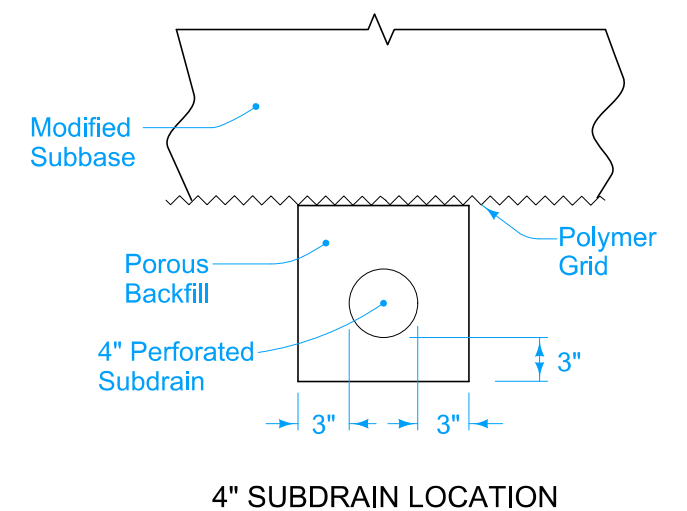
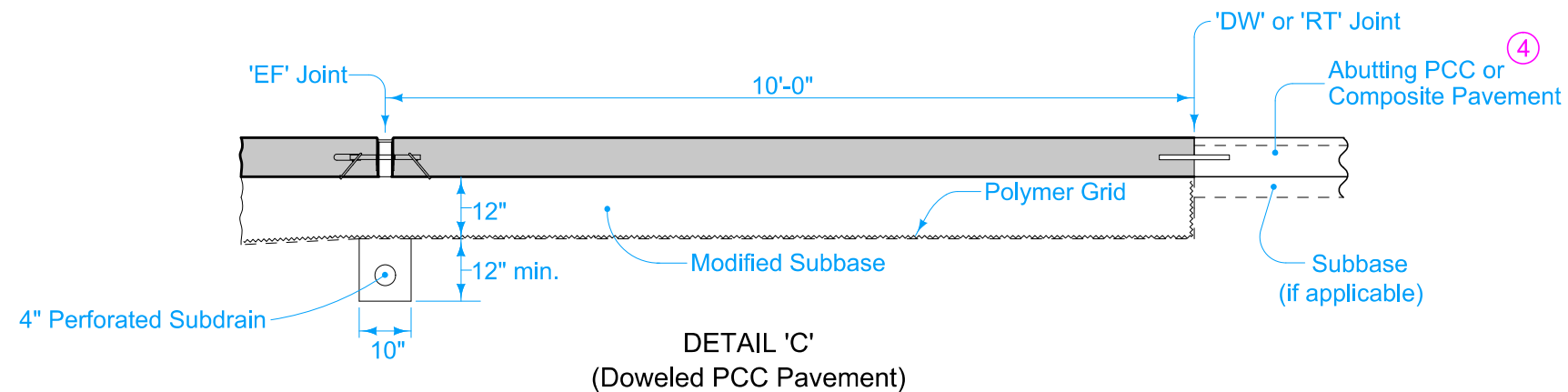
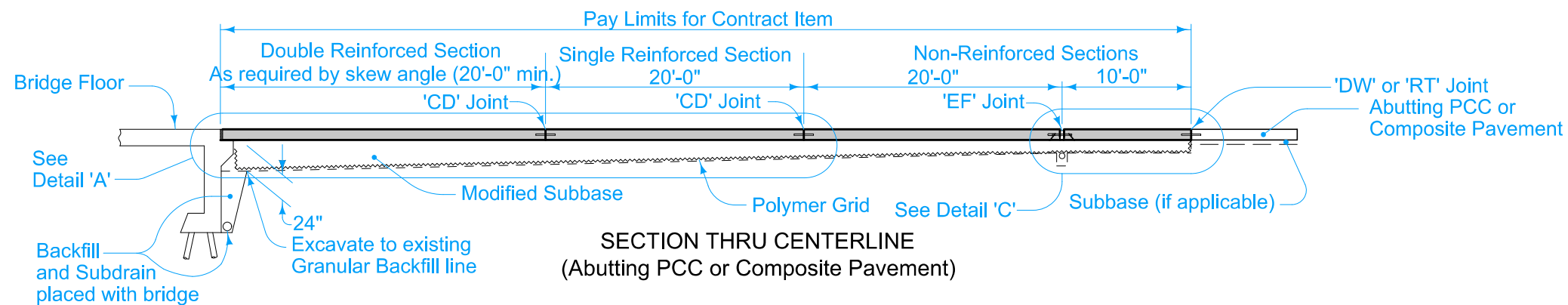
For curb details, see Detail 'G'.

All transverse bars are #5.

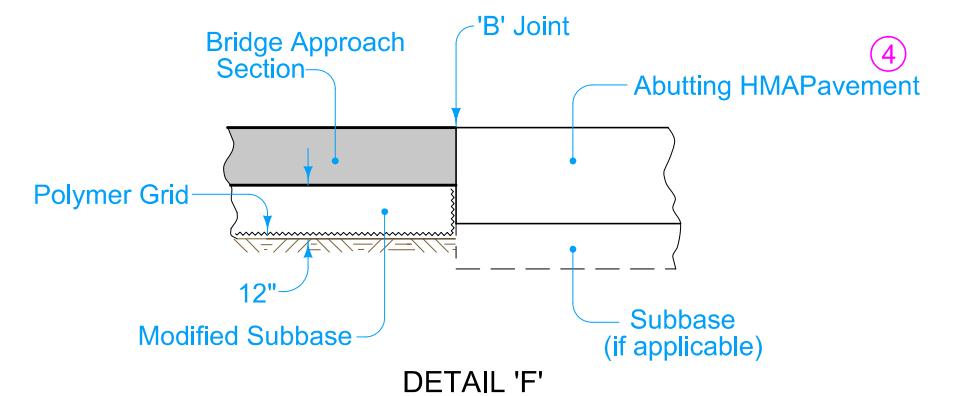
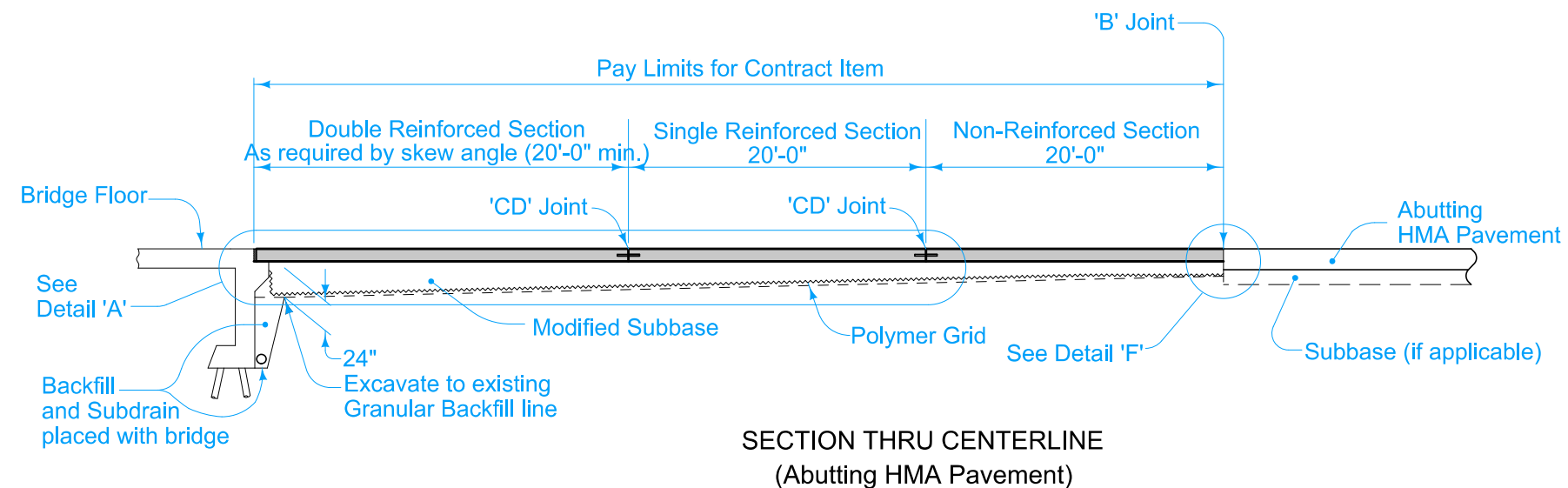
Possible Contract Item:
Bridge Approach, BR-203
Longitudinal Grooving in Concrete, Bridge Deck
Longitudinal Grooving in Concrete, Pavement



Possible Tabulation:
112-6

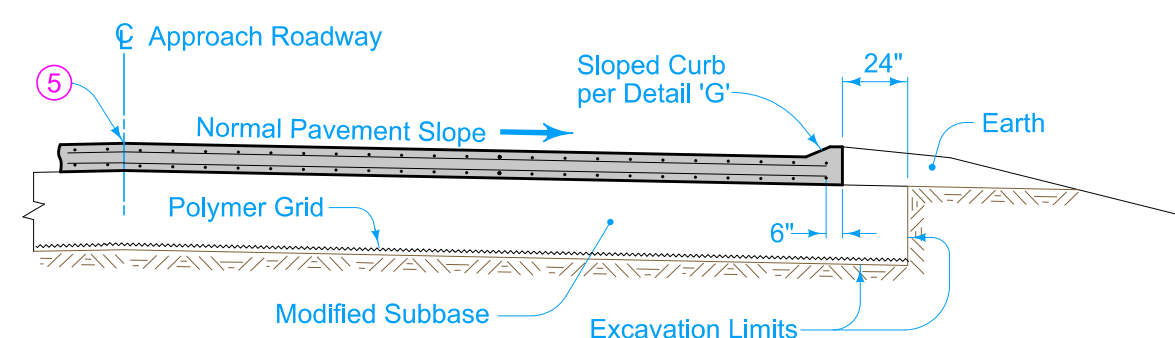
REVISION		BR-203
5	10-21-25	
SHEET 1 of 3		
IOWA DOT STANDARD ROAD PLAN		
REVISIONS: Changed 'KS-2' joint to 'BT-2' joint.		
APPROVED BY DESIGN METHODS ENGINEER		
DOUBLE REINFORCED 12" APPROACH		



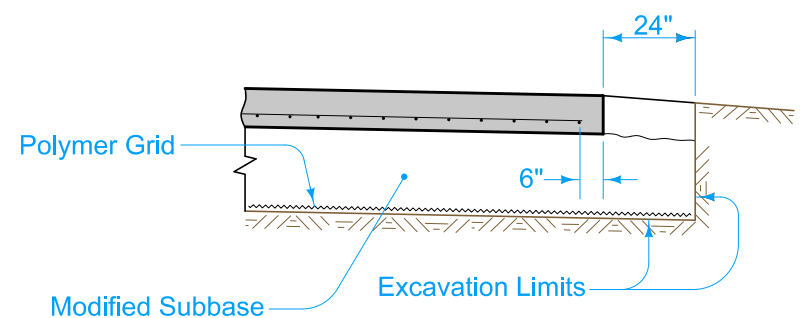
④ If abutting pavement (PCC or HMA) is not in place, refer to BR-213.



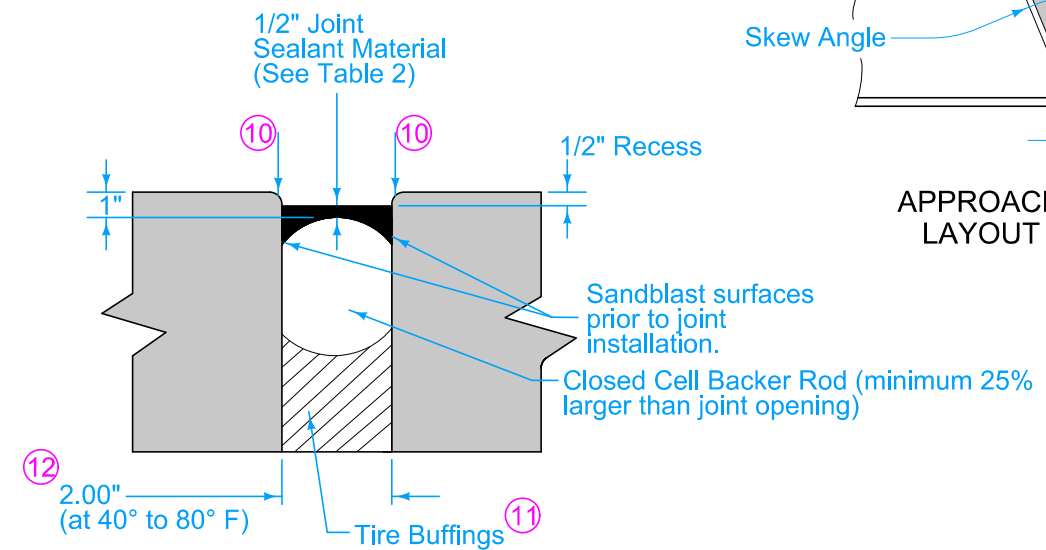
 IOWA DOT		REVISION	
		5	10-21-25
		BR-203	
		SHEET 2 of 3	
REVISIONS: Changed 'KS-2' joint to 'BT-2' joint.			
			
APPROVED BY DESIGN METHODS ENGINEER			
DOUBLE REINFORCED 12" APPROACH			



SECTION A-A

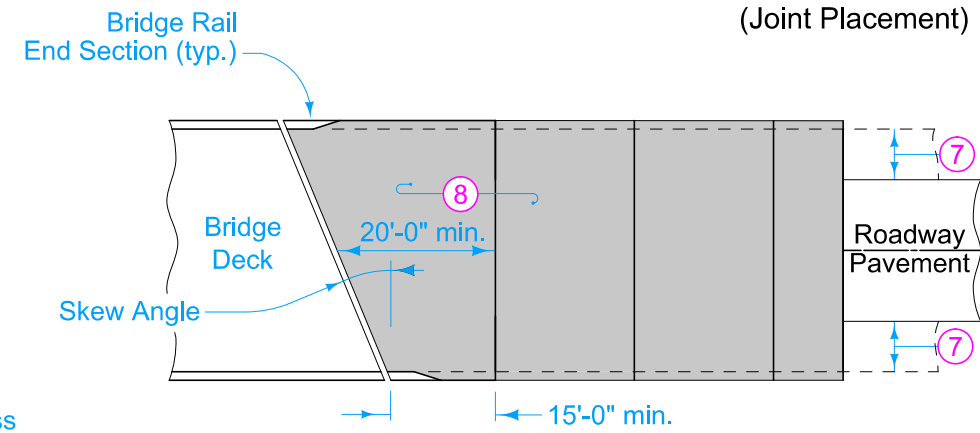


SECTION B-B

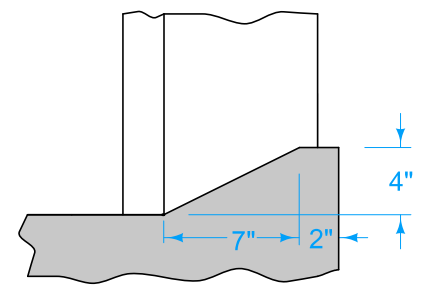


'BE' JOINT DETAIL

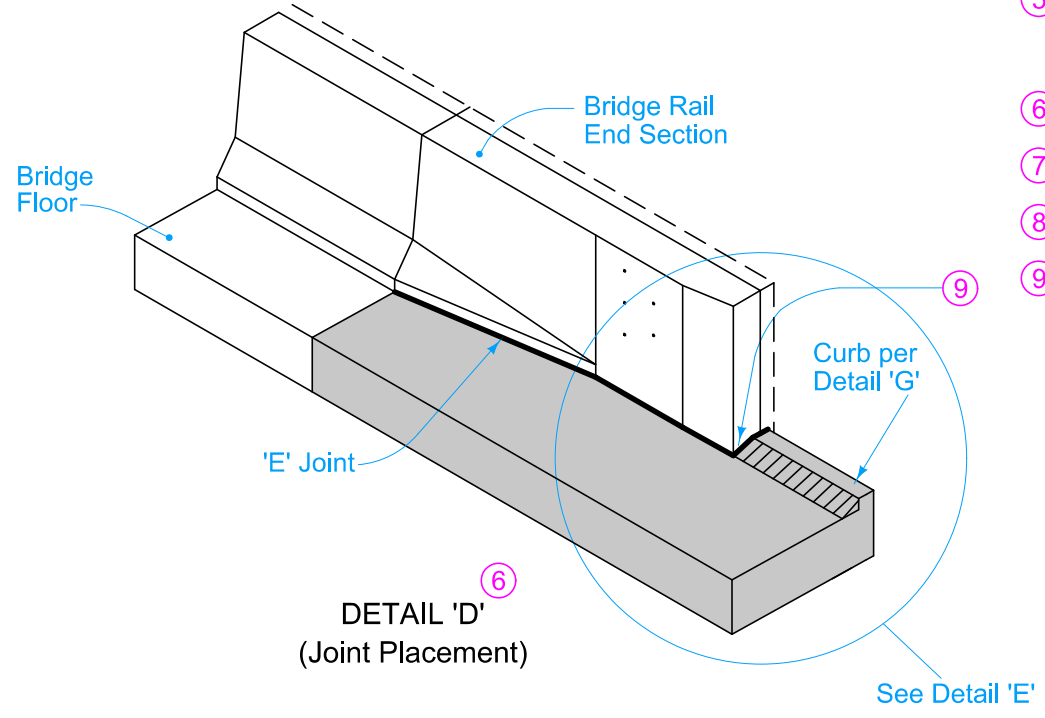
Table 2
Approved List of Sealant
Dow - Dowsil 902 RCS
Sika - Sikasil 728 RCS
Watson Bowman Acme - Wabo SiliconeSeal
Pecora - 322FC



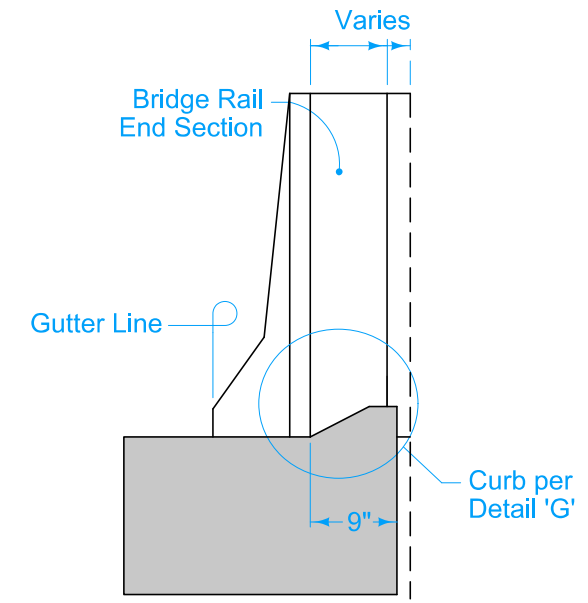
APPROACH PAVEMENT LAYOUT AT A SKEW



DETAIL 'G'



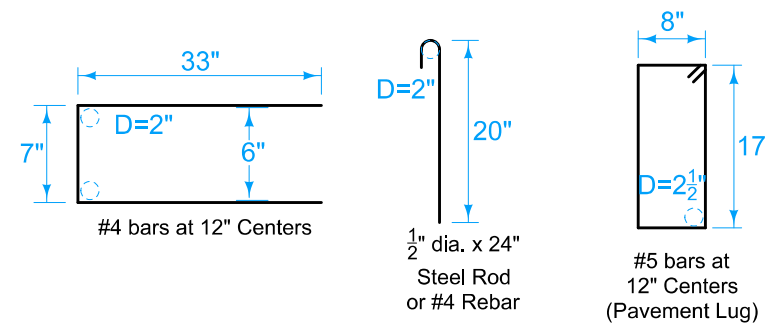
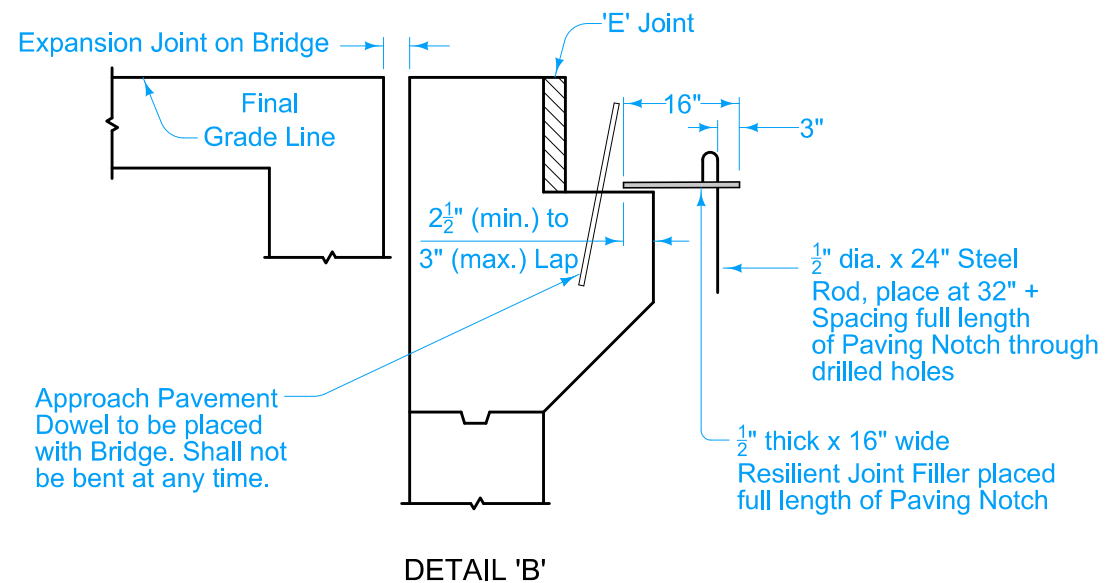
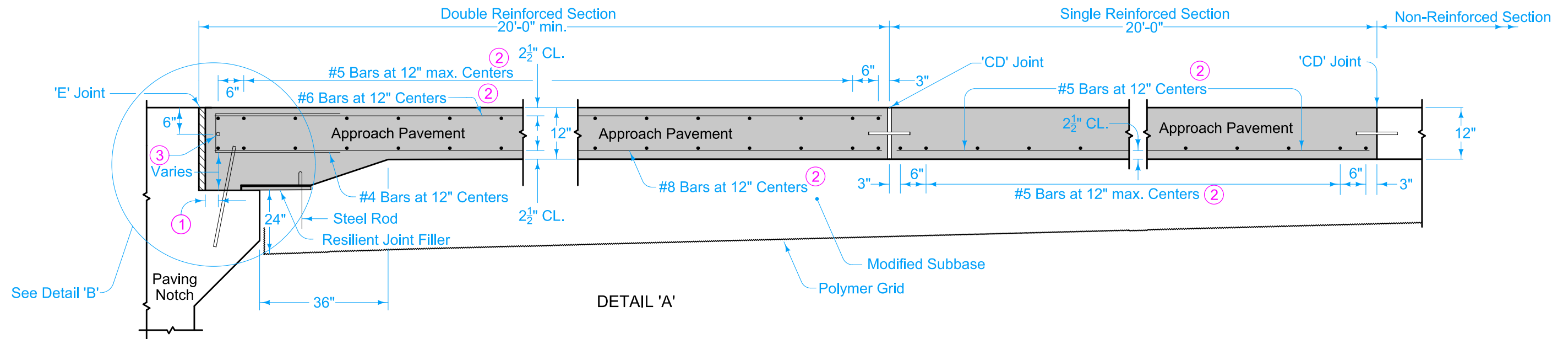
DETAIL 'D' (Joint Placement)



DETAIL 'E' (Back of Curb Placement)



- ⑤ Longitudinal Joint (PV-101):
Single pour - Saw cut joint per Detail B.
Two pours - Use 'BT-2' Joint.
- ⑥ Refer to BR-211, BR-212, or BR-231.
- ⑦ Design shoulder width.
- ⑧ Reinforced bridge approach section.
- ⑨ 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.
- Fixed Abutment Bridges: Type 'E' Joint.
- Moveable Abutment Bridges: Flexible Foam Expansion Joint Filler complying with Section 4136 of the Standard Specifications. Set width of gap to 2 inches. Joint length as required to completely fill from back side of curb to front face of bridge wing.
- ⑩ Edge with 1/4 inch tool for length of joint indicated if formed edging not required when cut with diamond blade saw.
- ⑪ Compact tire buffings by spading with a square-nose shovel. Tire buffings shall not be larger than 1/2 inch.
- ⑫ Setting Width Notes:
 - Width is perpendicular to abutment.
 - Temperature of concrete deck on the underside or shaded portion of the deck shall be between 40 to 80 degrees Fahrenheit when placing approach slab concrete.
 - This 'BE' joint and the setting temperatures may be used for all concrete beam or slab bridges up to 575' in length and for all steel girder bridges up to 400' in length.

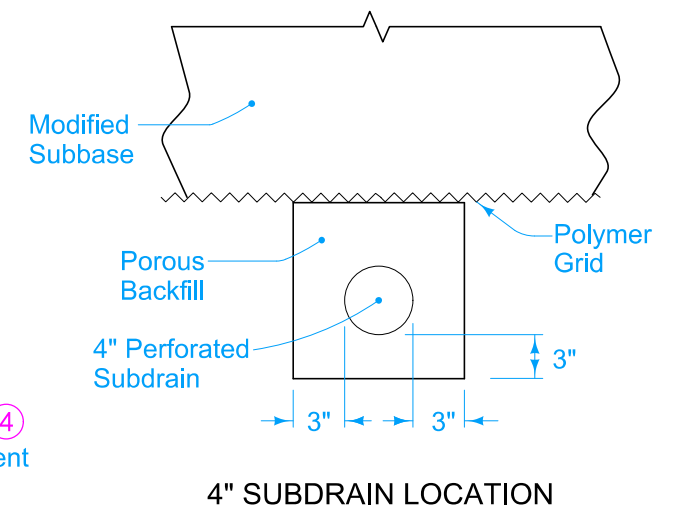
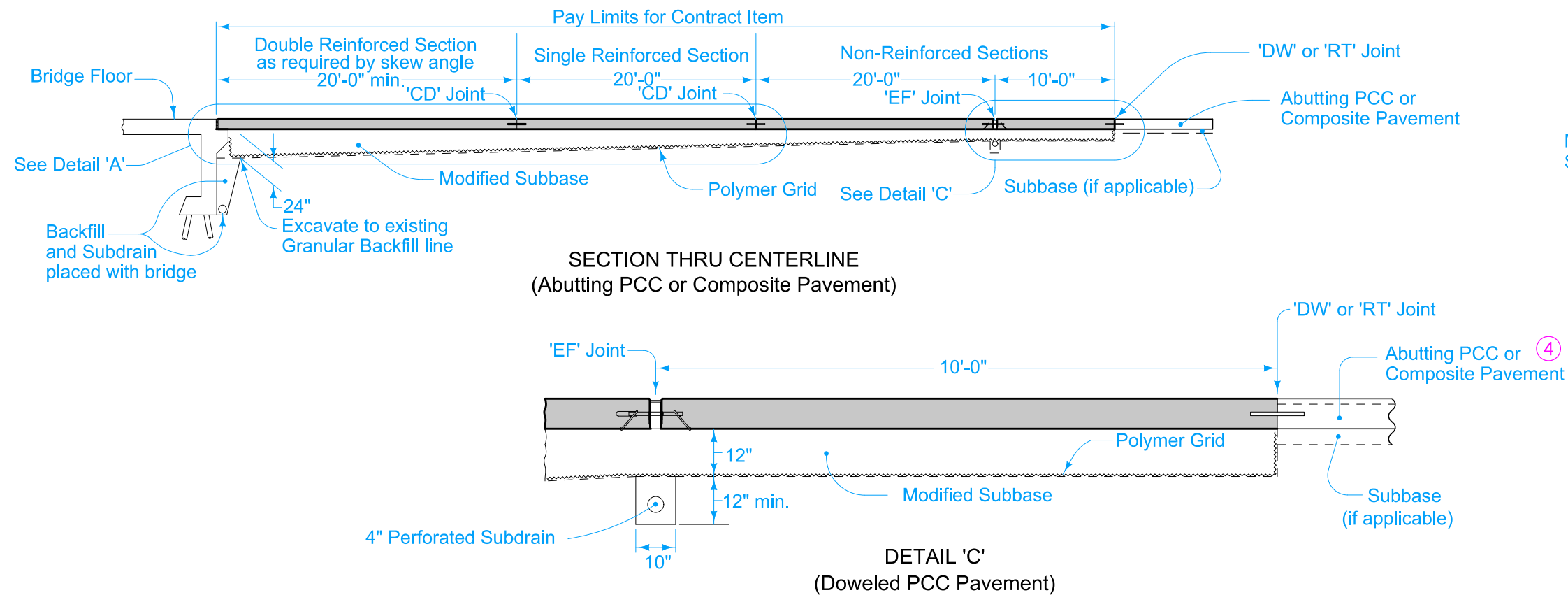
	REVISION	
	5	10-21-25
	BR-203	
SHEET 3 of 3		
REVISIONS: Changed 'KS-2' joint to 'BT-2' joint.		
APPROVED BY DESIGN METHODS ENGINEER		
DOUBLE REINFORCED 12" APPROACH		



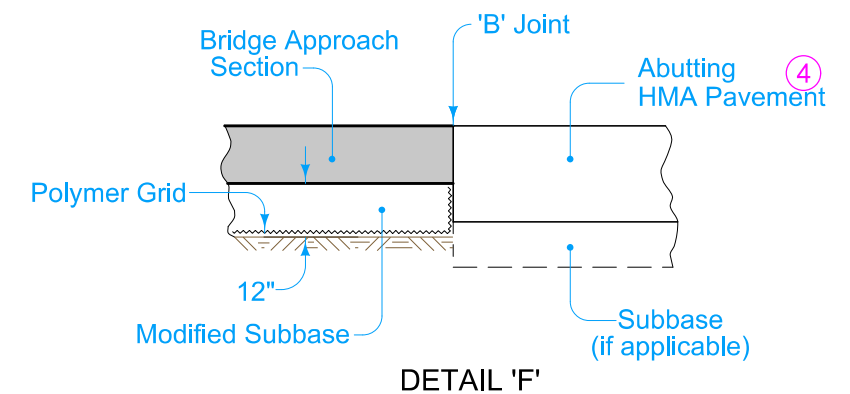
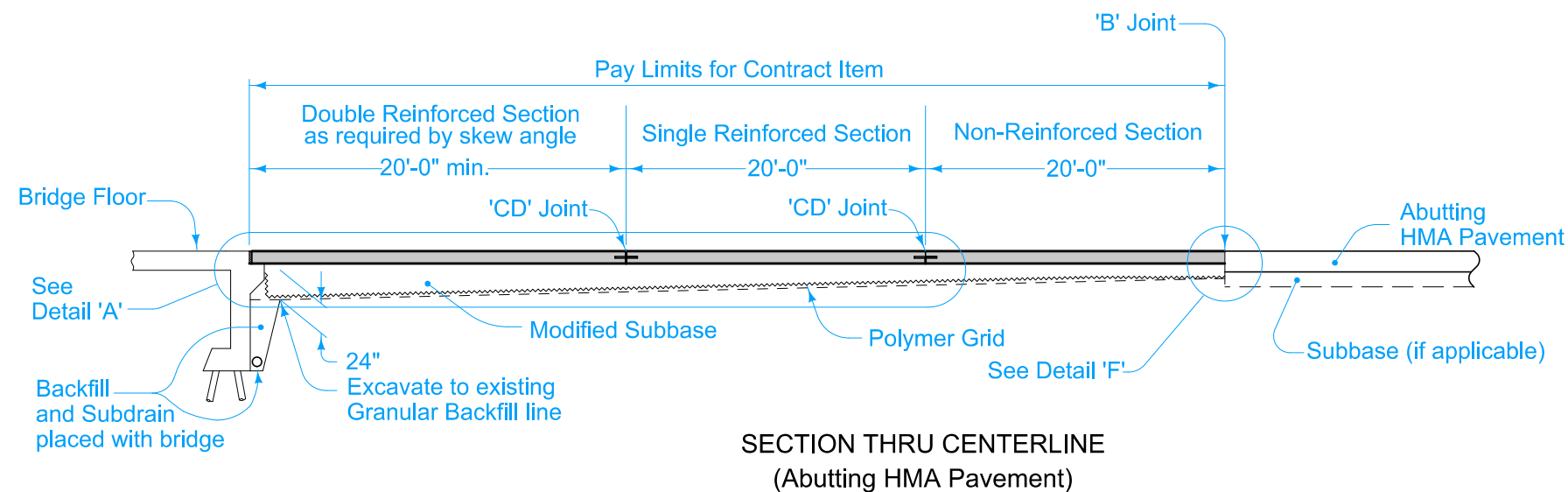
- ① 2" to 2½" clear to bent bar.
- ② Minimum lap length: #5 bars - 18 inches
#6 bars - 27 inches
#8 bars - 48 inches
- ③ If bridge is skewed, place additional #5 bar parallel to skewed face.

FIXED ABUTMENT

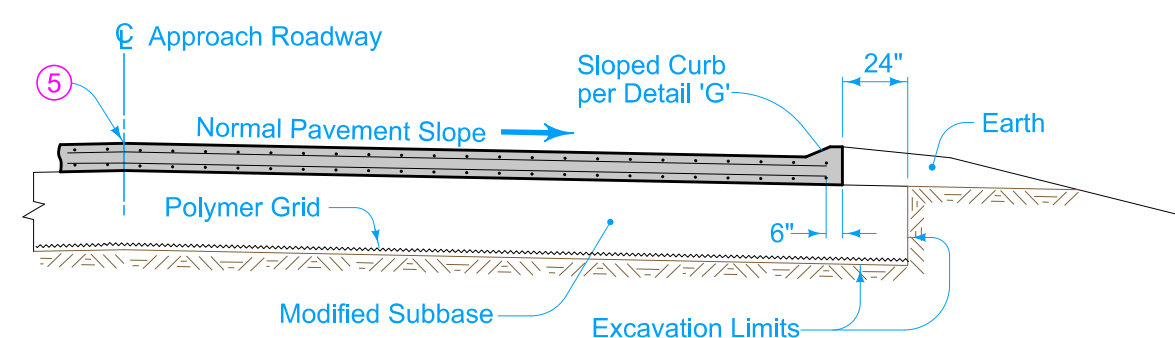
 IOWA DOT	REVISION	
	5	10-21-25
	BR-204	
STANDARD ROAD PLAN	SHEET 2 of 4	
REVISIONS: Changed 'KS-2' joint to 'BT-2' joint.		
		
APPROVED BY DESIGN METHODS ENGINEER		
DOUBLE REINFORCED 12" APPROACH WITH VARIABLE DEPTH PAVING NOTCH		



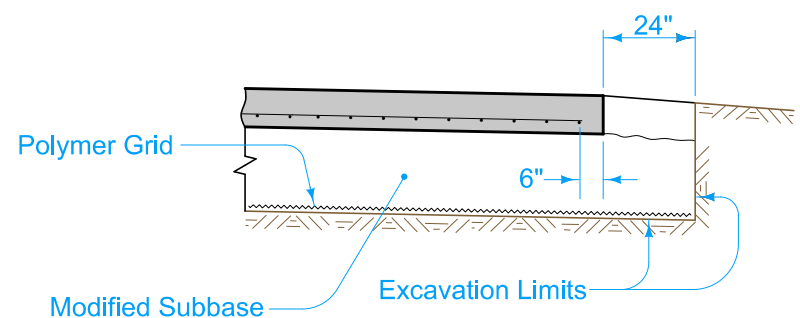
④ If abutting pavement (PCC or HMA) is not in place, refer to BR-213.



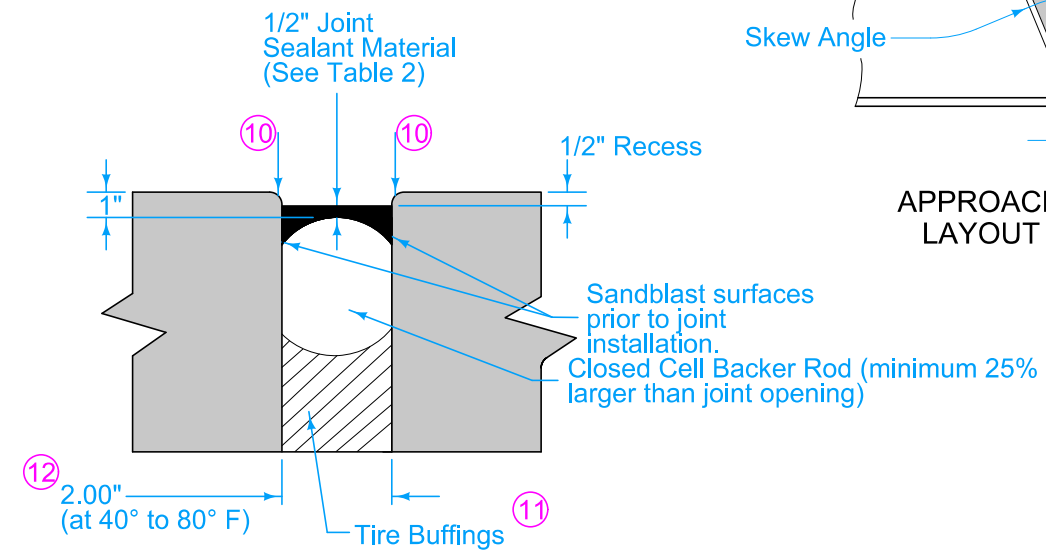
IOWA DOT STANDARD ROAD PLAN REVISIONS: Changed 'KS-2' joint to 'BT-2' joint. APPROVED BY DESIGN METHODS ENGINEER DOUBLE REINFORCED 12" APPROACH WITH VARIABLE DEPTH PAVING NOTCH	REVISION	
	5	10-21-25
	BR-204	
	SHEET 3 of 4	



SECTION A-A

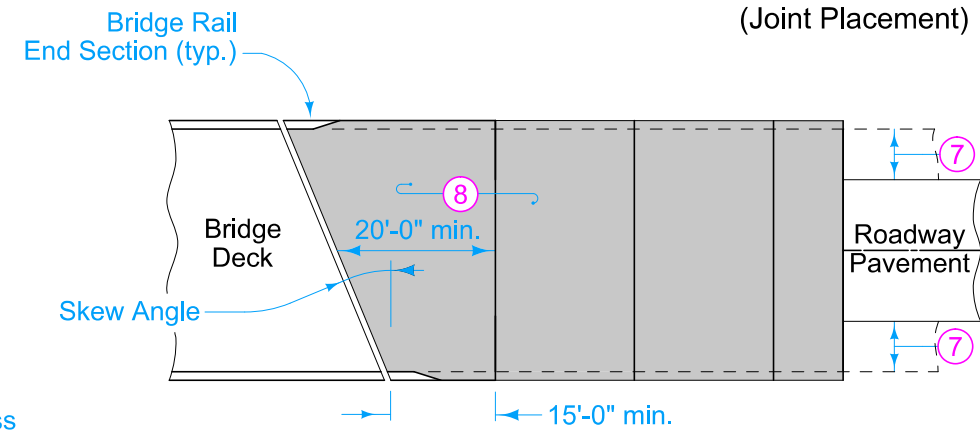


SECTION B-B

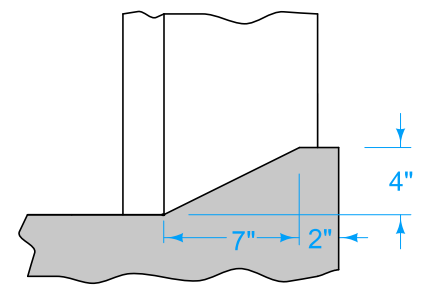


'BE' JOINT DETAIL

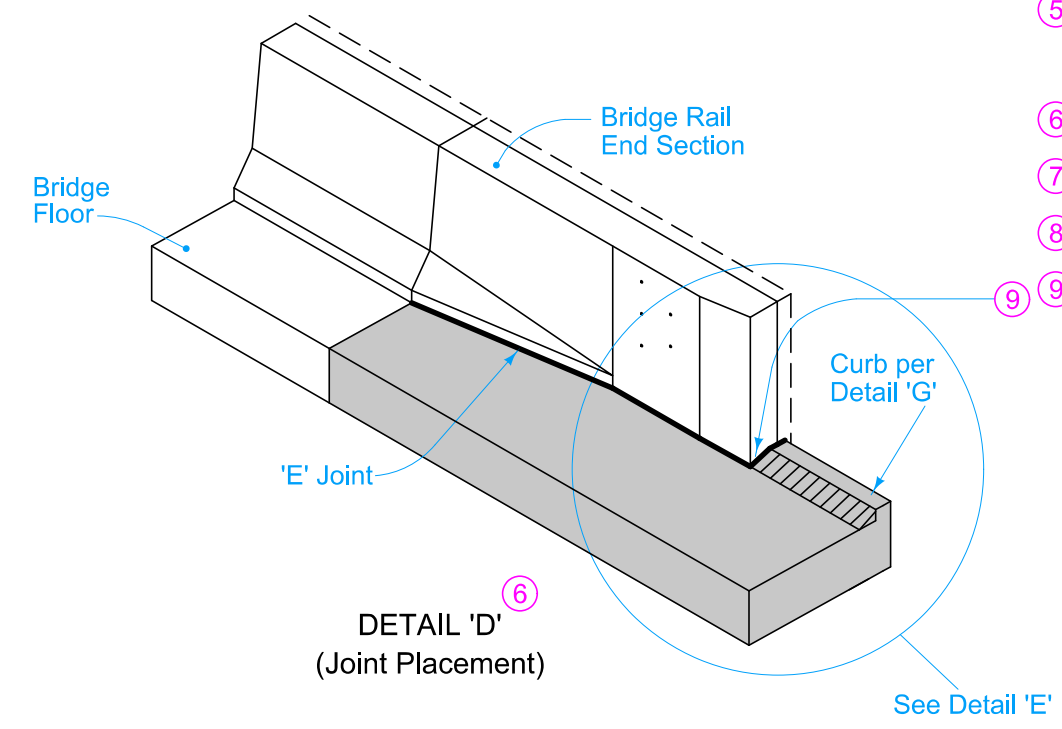
Table 2
Approved List of Sealant
Dow - Dowsil 902 RCS
Sika - Sikasil 728 RCS
Watson Bowman Acme - Wabo SiliconeSeal
Pecora - 322FC



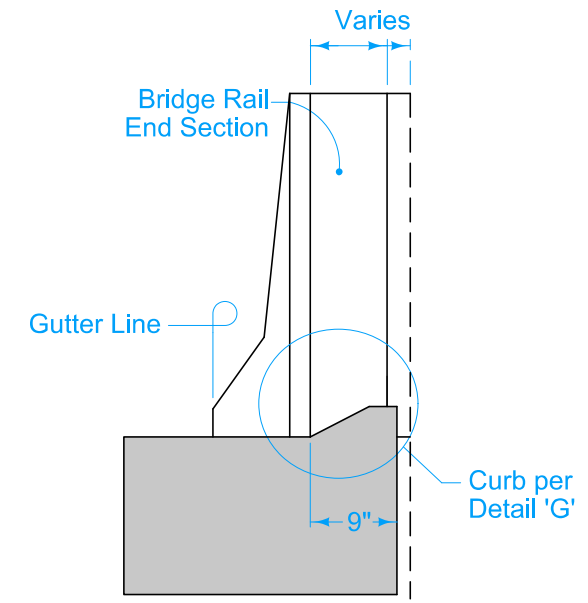
APPROACH PAVEMENT LAYOUT AT A SKEW



DETAIL 'G'



DETAIL 'D' (Joint Placement)



DETAIL 'E' (Back of Curb Placement)

- ⑤ Longitudinal Joint (PV-101):
Single pour - Saw cut joint per Detail B.
Two pours - Use 'BT-2' Joint.
- ⑥ Refer to BR-211, BR-212, or BR-231.
- ⑦ Design shoulder width.
- ⑧ Reinforced bridge approach section.
- ⑨ 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.
- Fixed Abutment Bridges: Type 'E' Joint.
- Moveable Abutment Bridges: Flexible Foam Expansion Joint Filler complying with Section 4136 of the Standard Specifications. Set width of gap to 2 inches. Joint length as required to completely fill from back side of curb to front face of bridge wing.
- ⑩ Edge with 1/4 inch tool for length of joint indicated if formed edging not required when cut with diamond blade saw.
- ⑪ Compact tire buffings by spading with a square-nose shovel. Tire buffings shall not be larger than 1/2 inch.
- ⑫ Setting Width Notes:
 - Width is perpendicular to abutment.
 - Temperature of concrete deck on the underside or shaded portion of the deck shall be between 40 to 80 degrees Farenheit when placing approach slab concrete.
 - This 'BE' joint and the setting temperatures may be used for all concrete beam or slab bridges up to 575' in length and for all steel girder bridges up to 400' in length.

IOWA DOT STANDARD ROAD PLAN	REVISION	
	5	10-21-25
	BR-204 SHEET 4 of 4	
REVISIONS: Changed 'KS-2' joint to 'BT-2' joint.		
APPROVED BY DESIGN METHODS ENGINEER		
DOUBLE REINFORCED 12" APPROACH WITH VARIABLE DEPTH PAVING NOTCH		

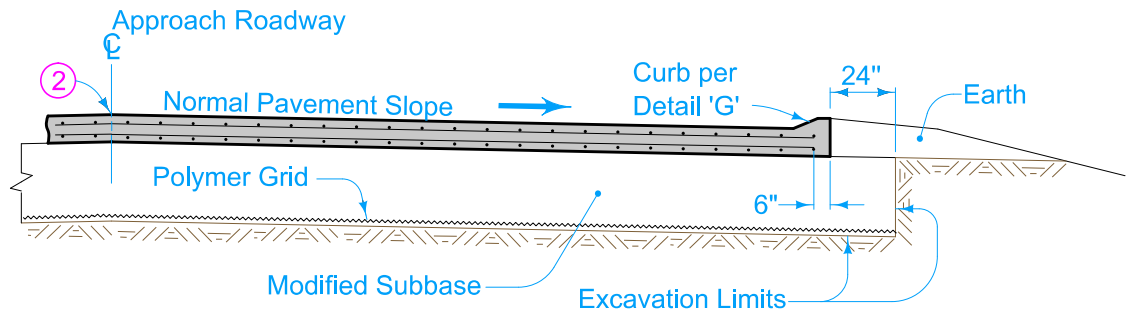
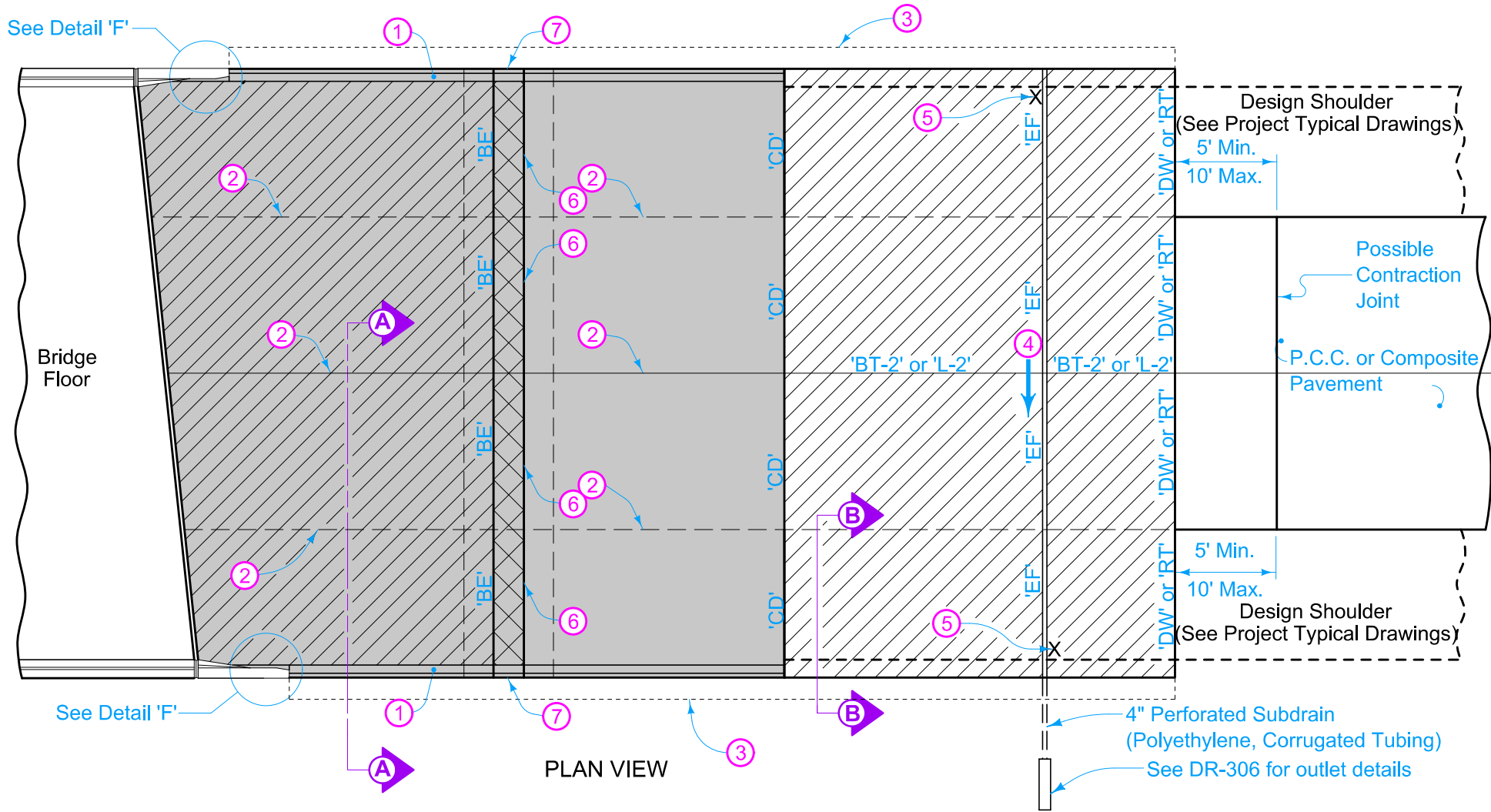
For joint details, see PV-101.

For curb details, see Detail 'G'.

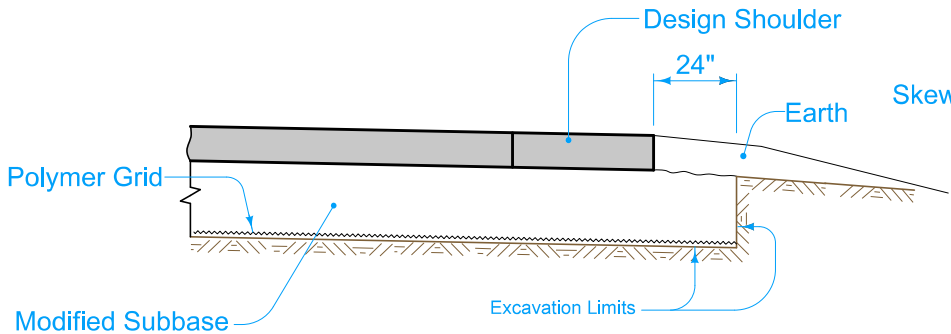
All transverse bars are #5.

Use epoxy coated bars for all reinforcement.

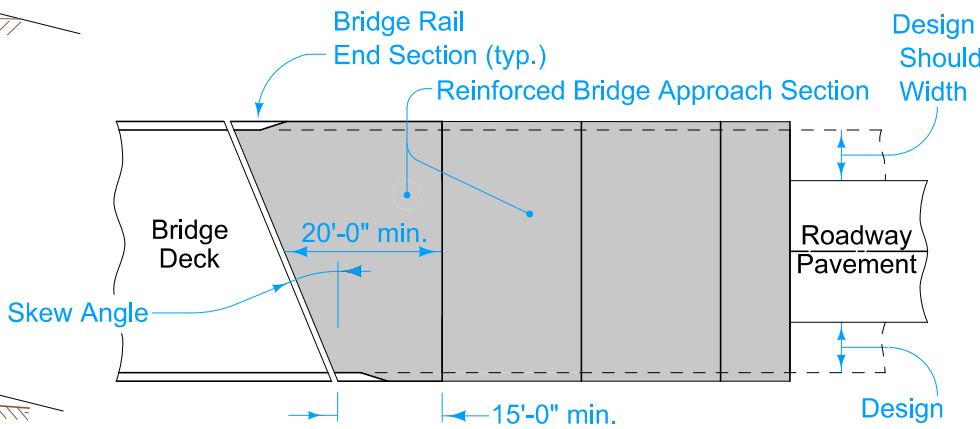
Quantities for both the 1'-9" top part of the sleeper slab and the 6'-3" portion under the approach pavement have been included in the double reinforced section quantities.



SECTION A-A



SECTION B-B



APPROACH PAVEMENT LAYOUT AT A SKEW

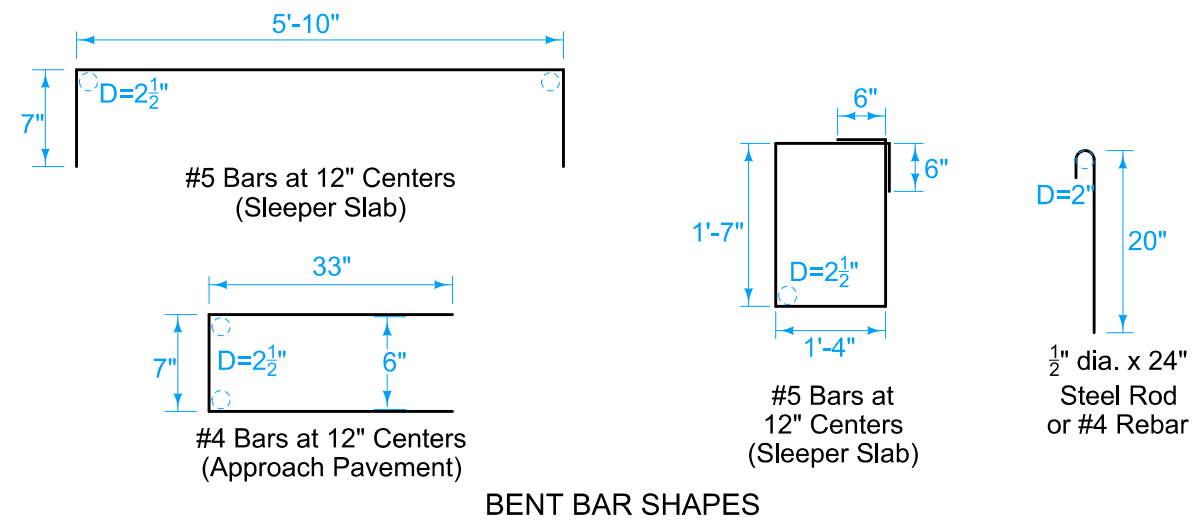
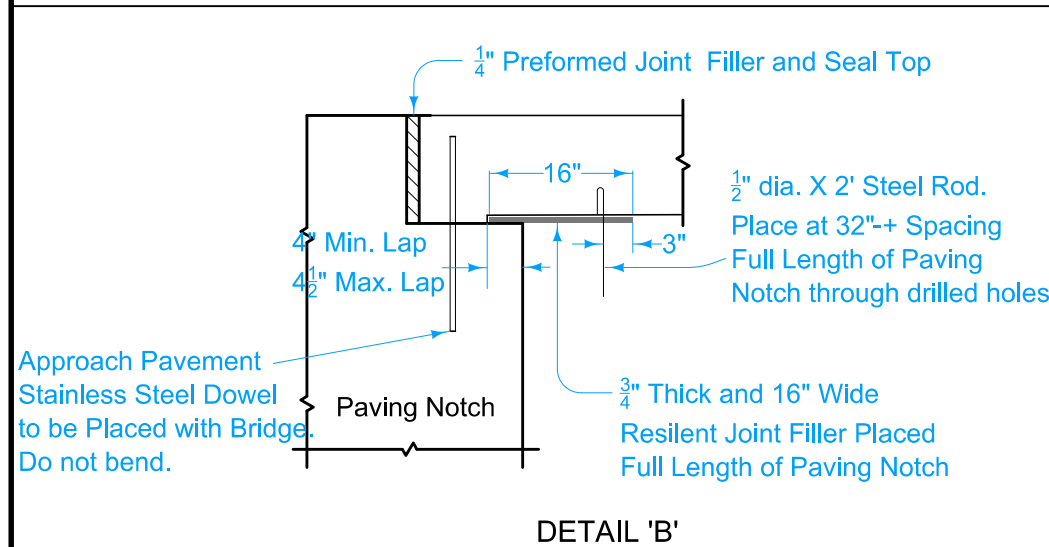
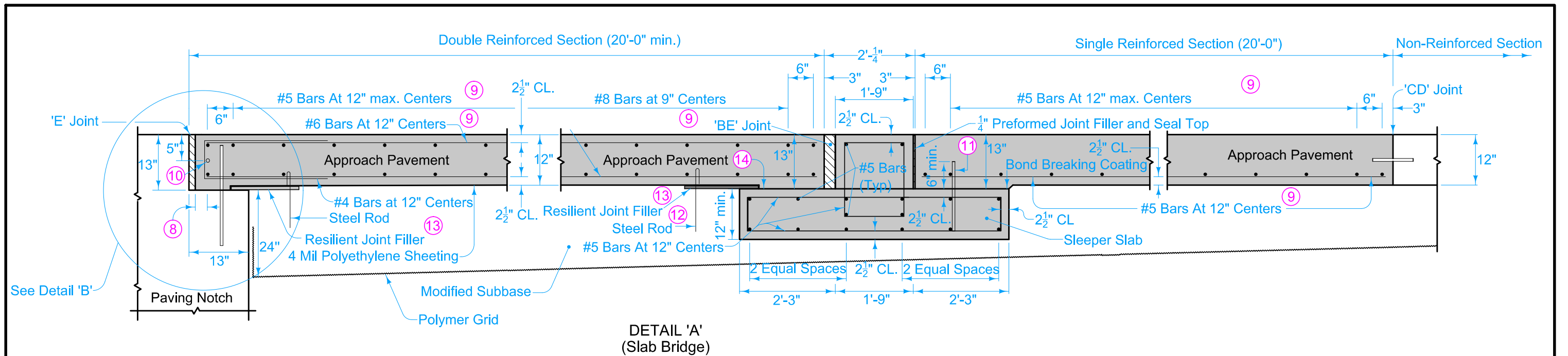
Pay limits for contract item include the following areas:

- Double Reinforced Section
- Sleeper Beam Section
- Single Reinforced Section
- Non-Reinforced Section

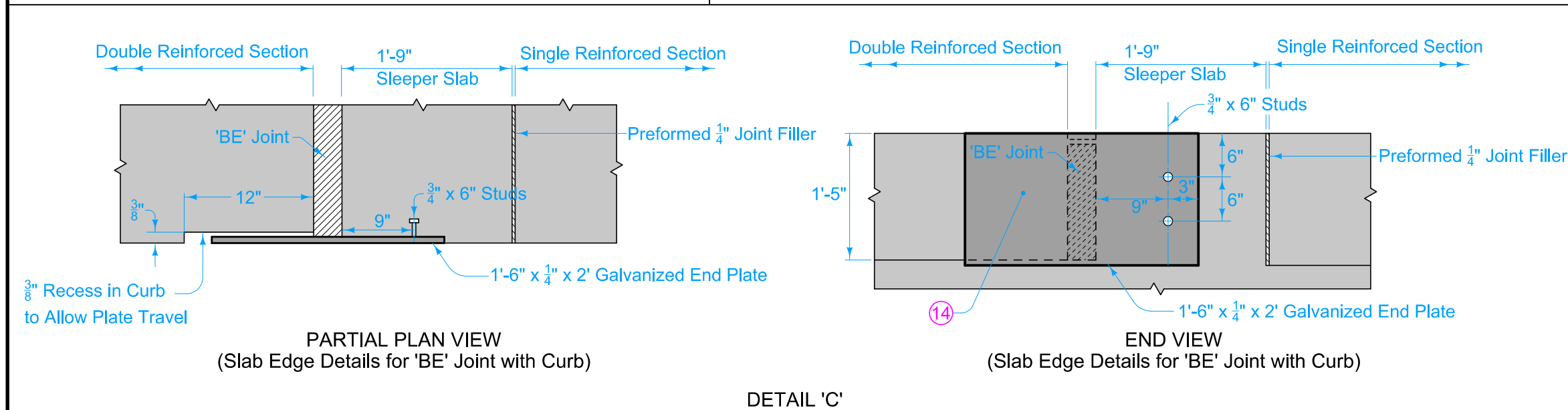
Possible Contract Item:
Bridge Approach, BR-205
Longitudinal Grooving in Concrete, Bridge Deck
Longitudinal Grooving in Concrete, Pavement

Possible Tabulation:
112-6

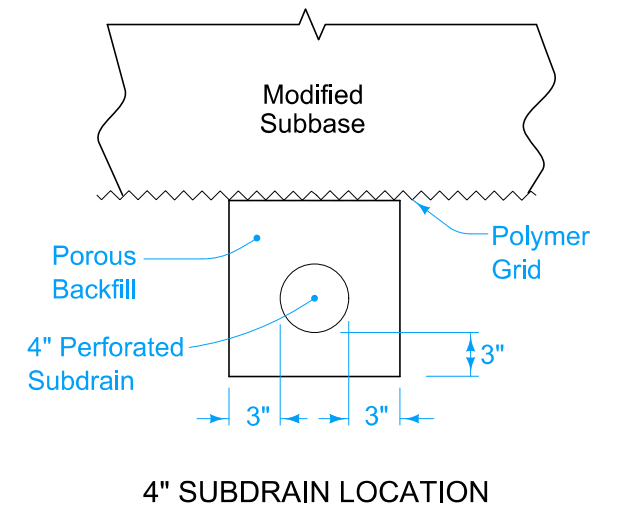
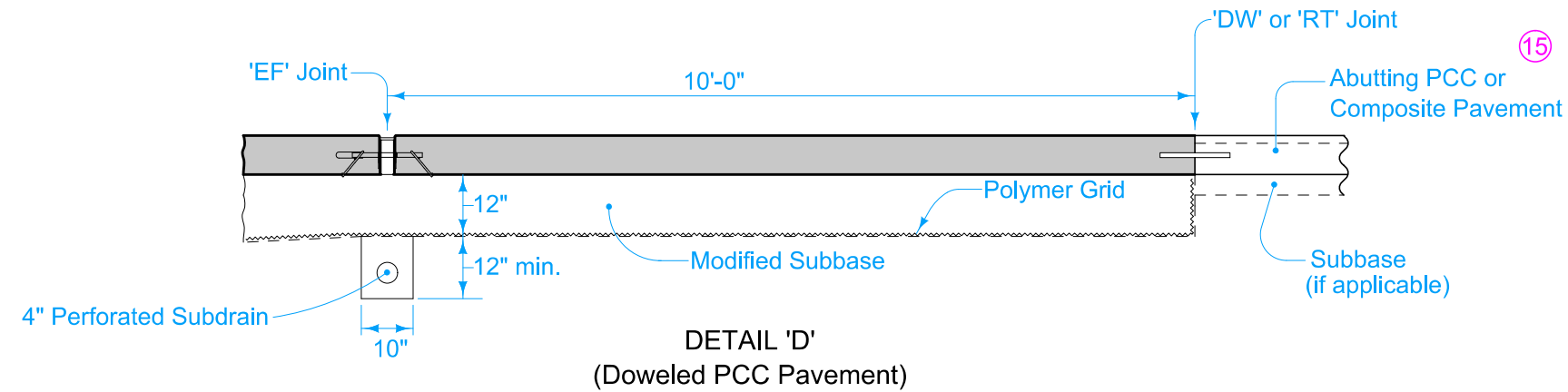
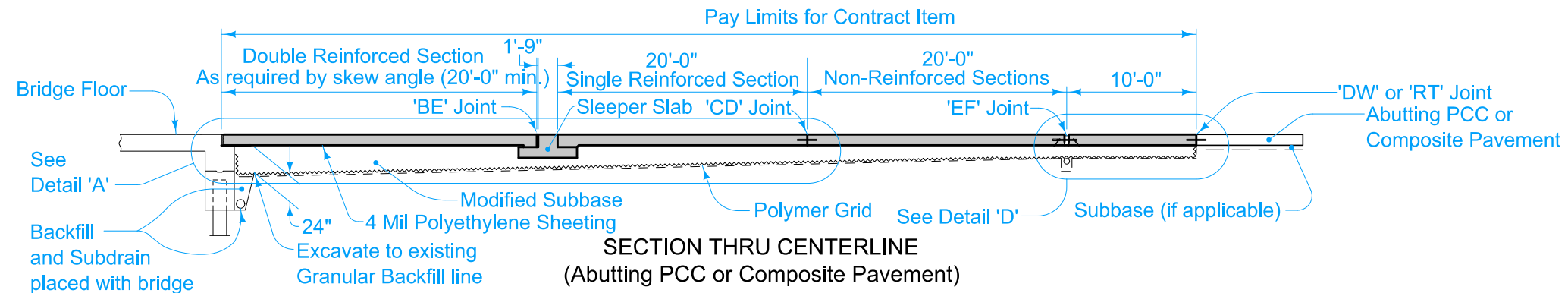
REVISION		BR-205
10	10-21-25	
IOWA DOT		SHEET 1 of 4
STANDARD ROAD PLAN		
REVISIONS: Changed 'KT' joints to BT joints.		
APPROVED BY DESIGN METHODS ENGINEER		
DOUBLE REINFORCED 12" APPROACH (SLAB BRIDGE)		



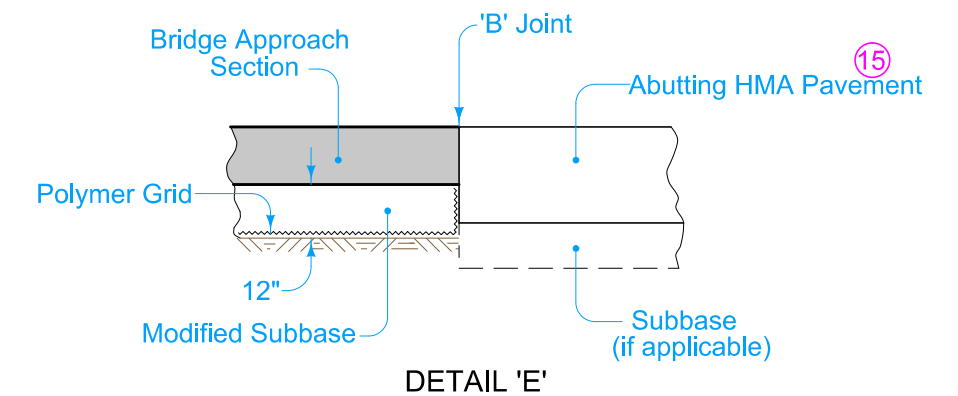
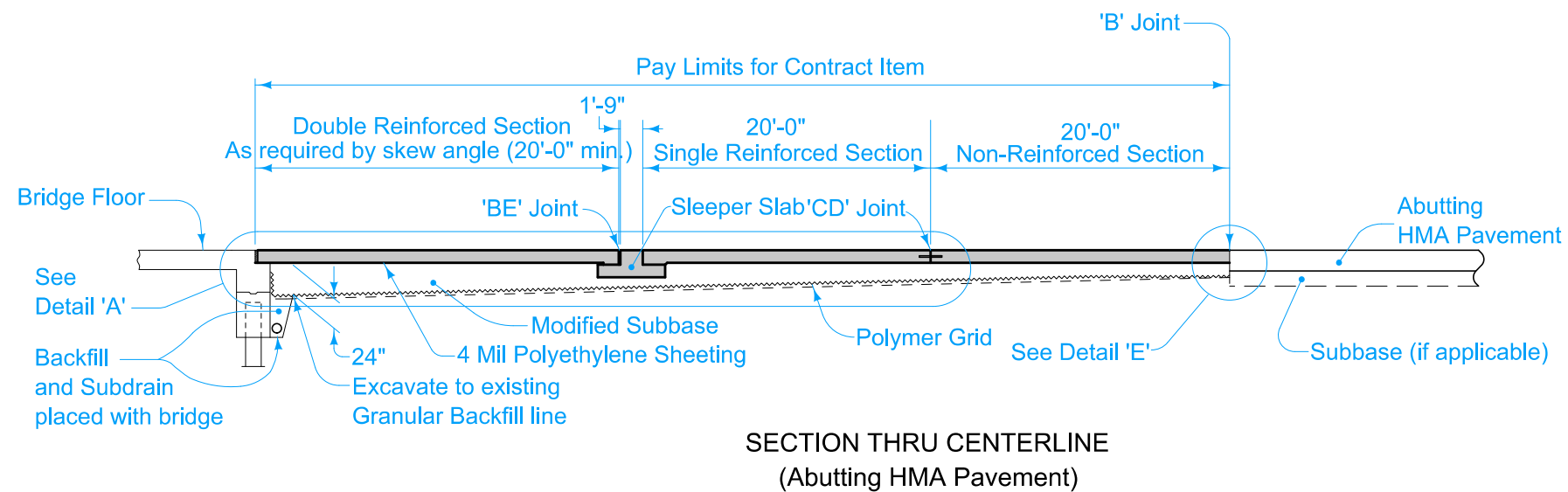
- (8) 2" min. to 2 1/2" max. clear to bent bar.
- (9) Minimum lap length: #5 Bars - 18"
#6 Bars - 27"
#8 Bars - 48"
- (10) If bridge is skewed, place additional #5 bar parallel to skewed face.
- (11) #8 dowels 1'-6" long with 2 1/2 inch bottom end clearance. Space at 24 inches O.C.
- (12) Space at 32" ± for full length of Sleeper Slab.
- (13) 3/4 inch thick x 16 inch wide Resilient Joint Filler for full length of Sleeper Slab.
- (14) Debond Paving Notch with 2 layers of 30# Asphaltic Felt Paper full length.





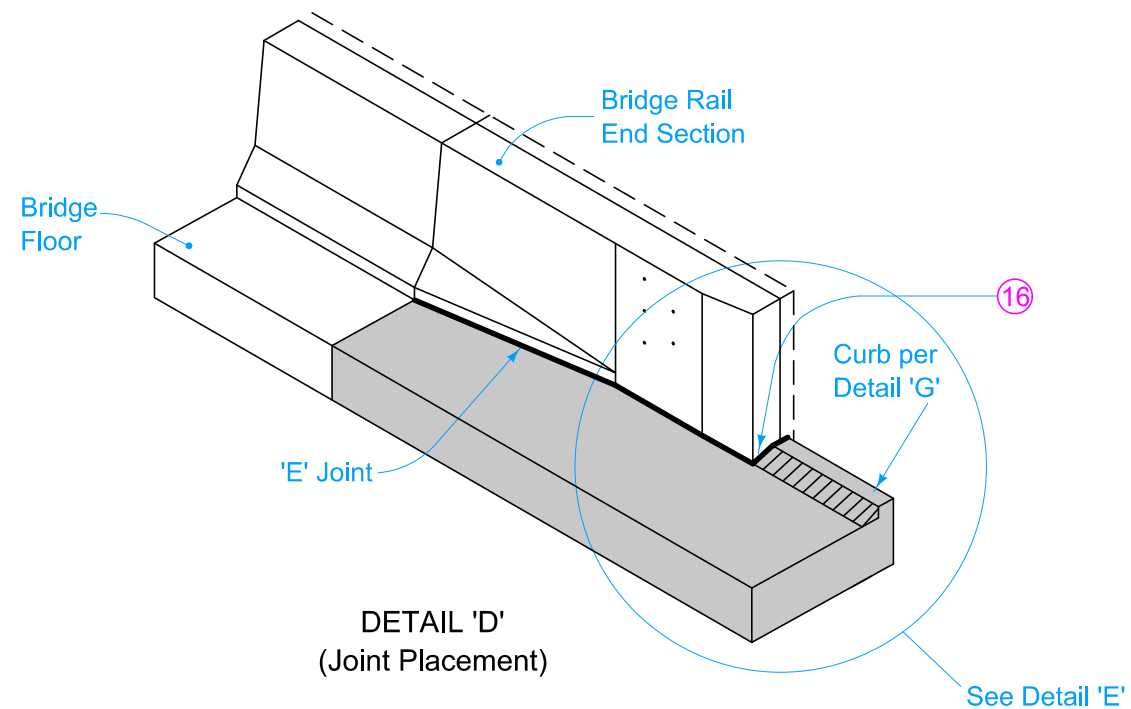
IOWA DOT STANDARD ROAD PLAN	REVISION	
	10	10-21-25
	BR-205 SHEET 2 of 4	
REVISIONS: Changed 'KT' joints to BT joints.		
APPROVED BY DESIGN METHODS ENGINEER		
DOUBLE REINFORCED 12" APPROACH (SLAB BRIDGE)		



15 If abutting pavement (PCC or HMA) is not in place, refer to BR-213.



 IOWA DOT	REVISION	
	10	10-21-25
	BR-205	
	SHEET 3 of 4	
REVISIONS: Changed 'KT' joints to BT joints.		
		
APPROVED BY DESIGN METHODS ENGINEER		
DOUBLE REINFORCED 12" APPROACH (SLAB BRIDGE)		



16 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.

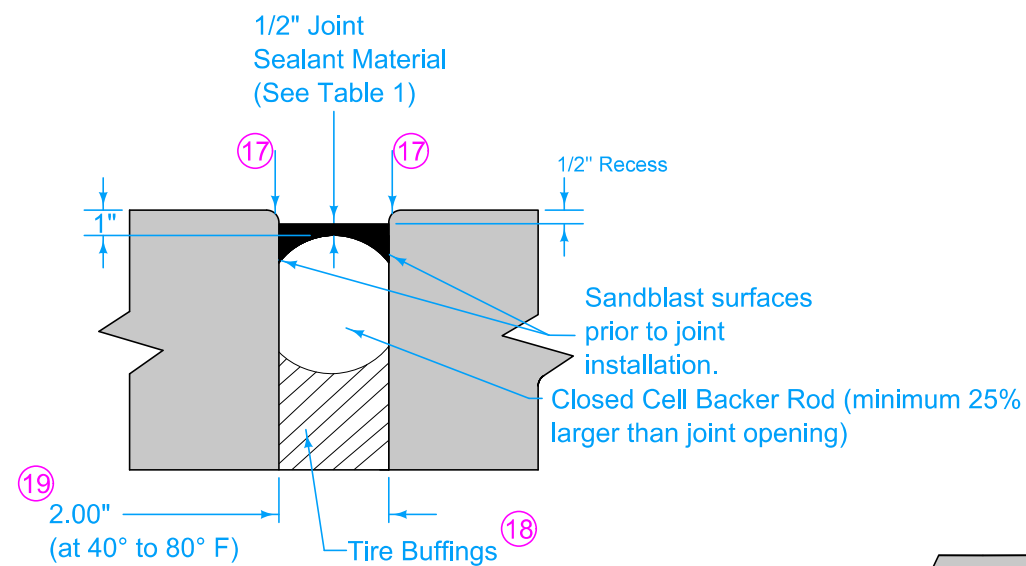
- Fixed Abutment Bridges: Type 'E' Joint.
- Moveable Abutment Bridges: Flexible Foam Expansion Joint Filler complying with Section 4136 of the Standard Specifications. Set width of gap to 2 inches. Joint length as required to completely fill from back side of curb to front face of bridge wing.

17 Edge with 1/4 inch tool for length of joint indicated if formed edging not required when cut with diamond blade saw.

18 Compact tire buffings by spading with a square-nose shovel. Tire buffings shall not be larger than 1/2 inch.

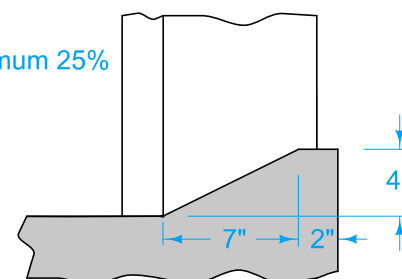
19 Setting Width Notes:

- Width is perpendicular to abutment.

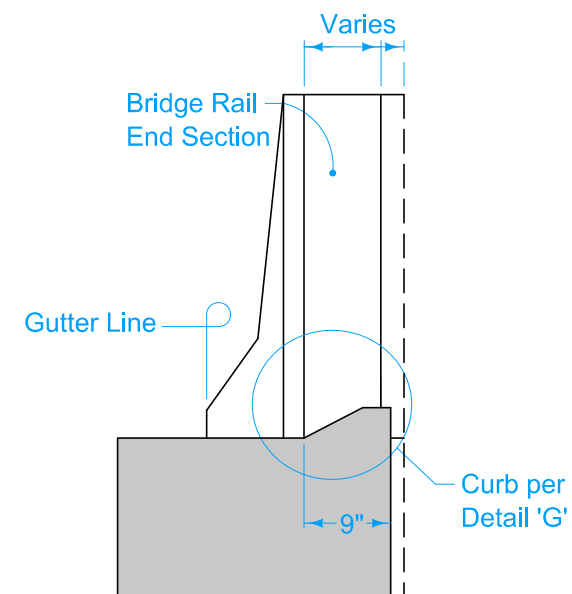


'BE' JOINT
DETAIL



Table 1
Approved List of Sealant
Dow - Dowsil 902 RCS
Sika - Sikasil 728 RCS
Watson Bowman Acme - Wabo SiliconeSeal
Pecora - 322FC



DETAIL 'G'

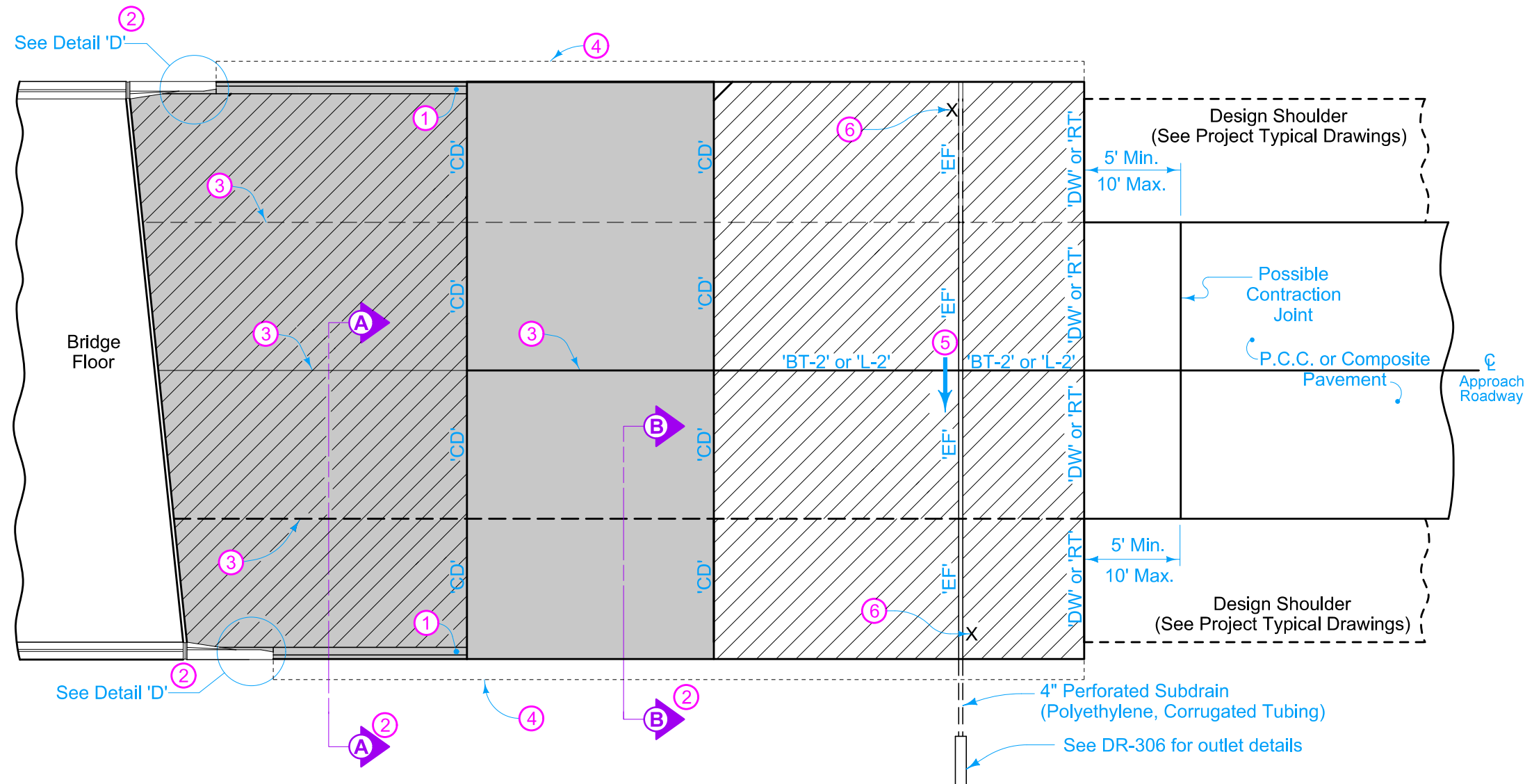


DETAIL 'E'
(Back of Curb Placement)

 IOWA DOT	REVISION	
	10	10-21-25
	BR-205	
STANDARD ROAD PLAN	SHEET 4 of 4	
REVISIONS: Changed 'KT' joints to BT joints.		
		
APPROVED BY DESIGN METHODS ENGINEER		
DOUBLE REINFORCED 12" APPROACH (SLAB BRIDGE)		




For joint details, see PV-101.



- ① Build 4 inch Sloped Curb to end of Double Reinforced Section. Refer to PV-102 for curb and runout details.
- ② See BR-201, BR-202, BR-203, or BR-204.
- ③ Longitudinal Joint (PV-101):
Single Pour - Saw cut joint per Detail B .
Two Pours - Use 'BT-2' joint
- ④ Polymer Grid and excavation limits of Modified Subbase 2 feet outside of pavement edge. See BR-201, BR-202, BR-203, or BR-204.
- ⑤ Slope subdrain to drain.
- ⑥ Place an "X" in the plastic concrete near the 'EF' joint at the outside edge of pavement.



PLAN VIEW

Pay limits for contract item include the following areas:

-  Double Reinforced Section
 -  Single Reinforced Section
 -  Non-Reinforced Section

 IOWA DOT STANDARD ROAD PLAN	REVISION	
	4	10-21-25
	BR-211 SHEET 1 of 1	
REVISIONS: Changed "KT" joints to "BT" joints.		
		
APPROVED BY DESIGN METHODS ENGINEER		
<p align="center"> BRIDGE APPROACH (ABUTTING PCC OR COMPOSITE PAVEMENT) </p>		

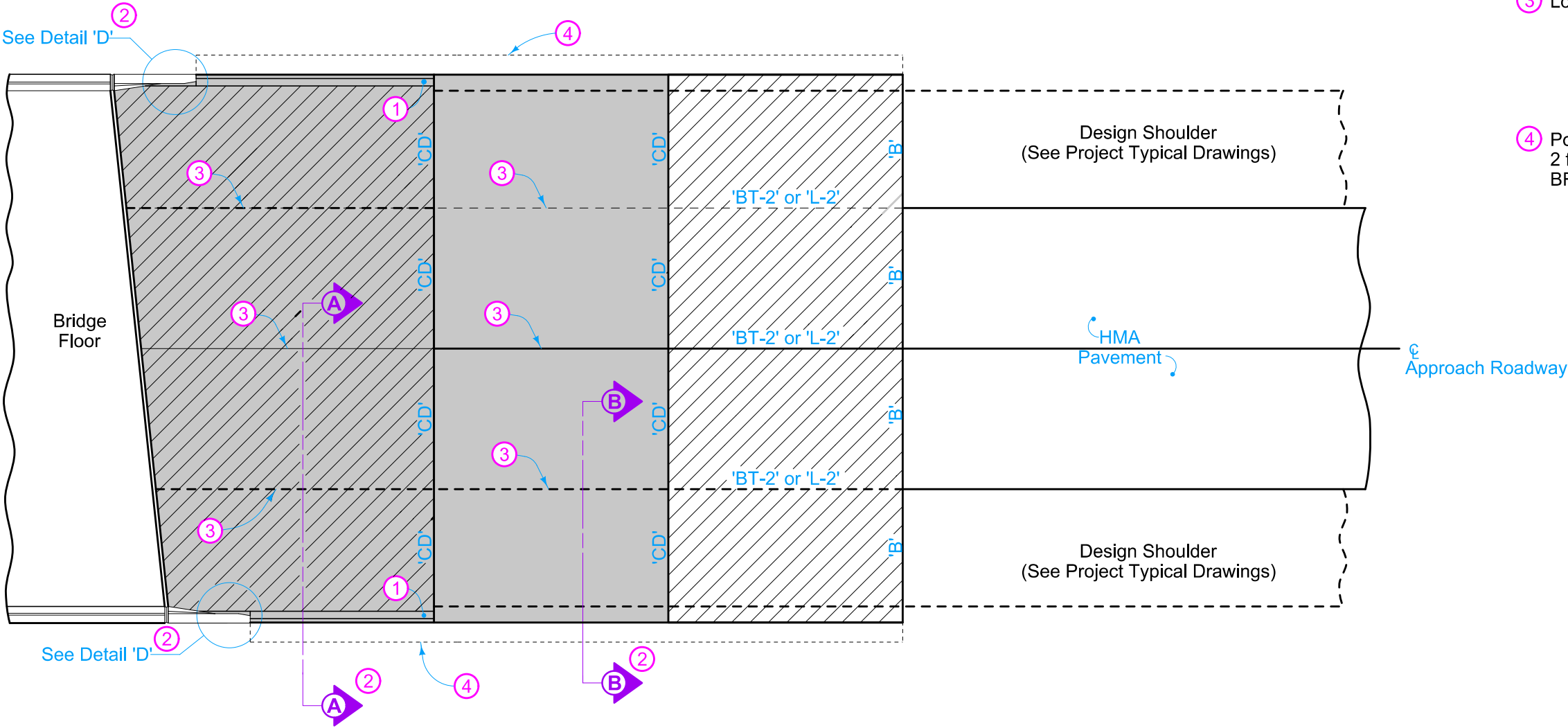
For joint details, see PV-101.

① Build 4 inch Sloped Curb to end of Double Reinforced Section. Refer to PV-102 for curb and runout details.

② See BR-201, BR-202, BR-203, or BR-204.




③ Longitudinal Joint (PV-101):
Single Pour - Saw cut joint per Detail B .
Two Pours - Use 'BT-2' joint.

④ Polymer Grid and excavation limits of Modified Subbase 2 feet outside of pavement edge. See BR-201, BR-202, BR-203, or BR-204.



PLAN VIEW

Pay limits for contract item include the following areas:

-  Double Reinforced Section
-  Single Reinforced Section
-  Non-Reinforced Section

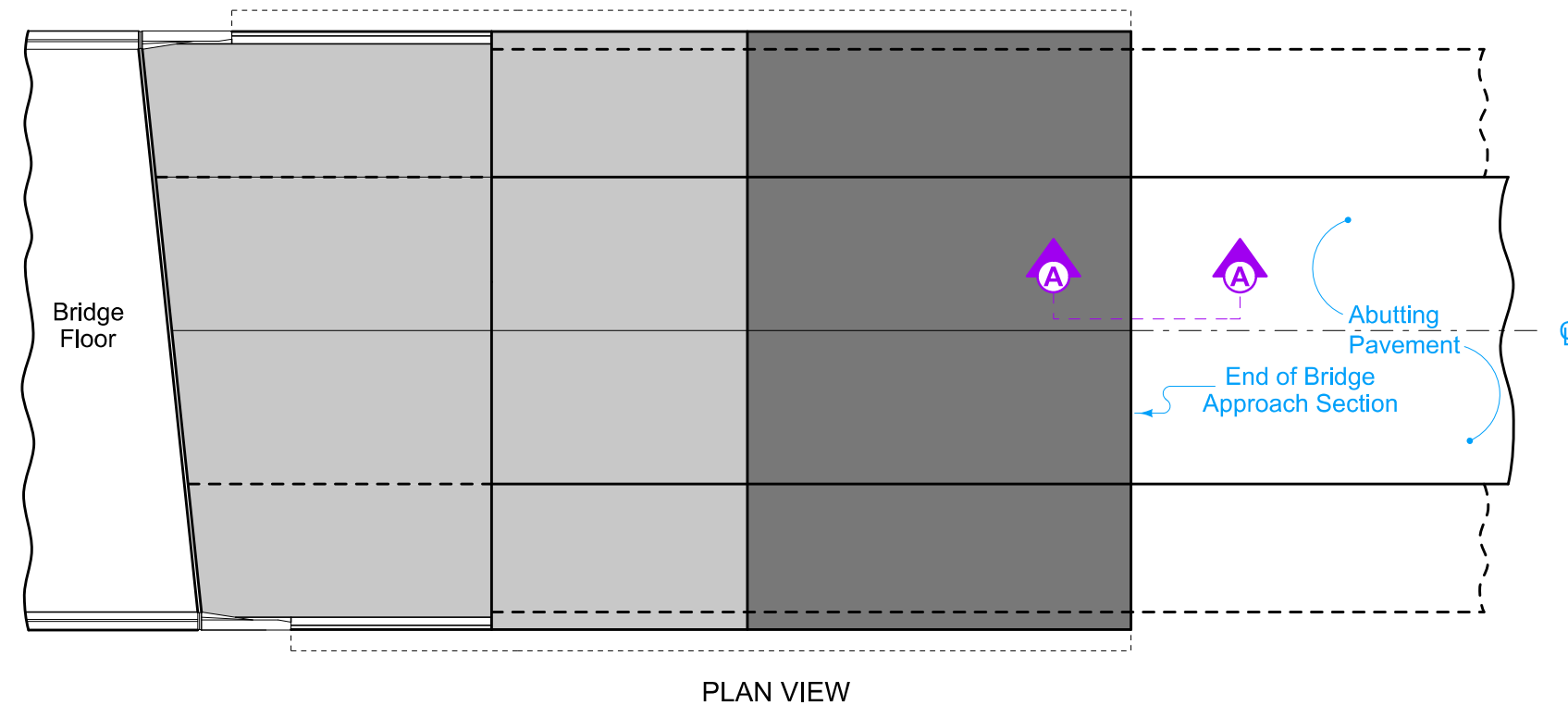
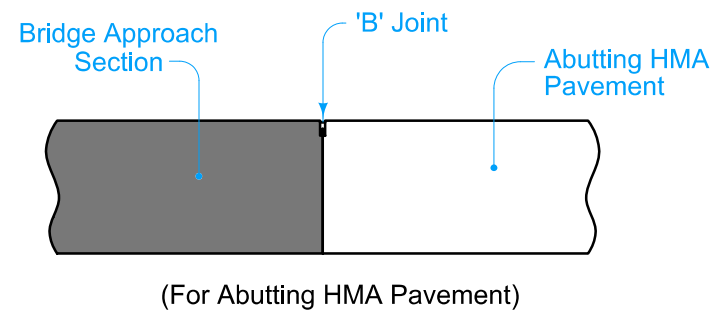
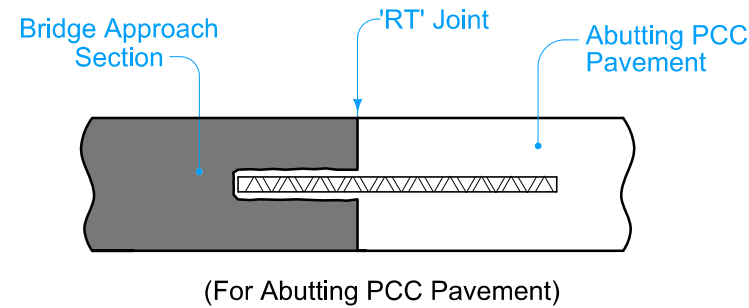
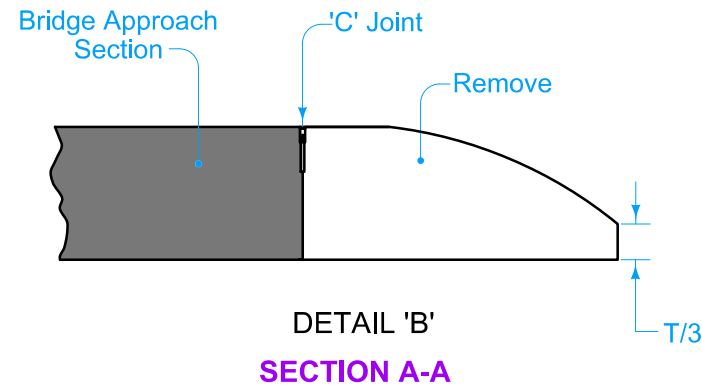
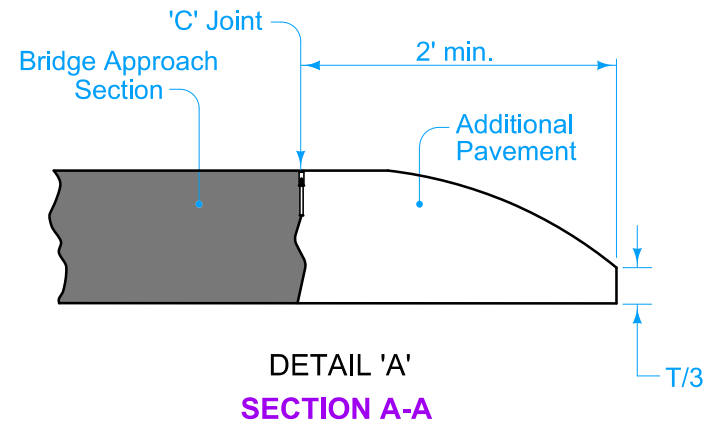
IOWA DOT	REVISION	
	4	10-21-25
STANDARD ROAD PLAN		
BR-212		
SHEET 1 of 1		

REVISIONS: Changed 'KT' joints to 'BT' joints.

Shawn Miller

APPROVED BY DESIGN METHODS ENGINEER

**BRIDGE APPROACH
(ABUTTING HMA PAVEMENT)**



For Jointing Details, see PV-101.

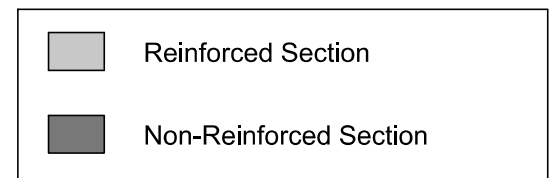
If abutting pavement (PCC or HMA) is not in place when bridge approach pavement is constructed, the following procedure applies:



1. The paving contractor of bridge the approach pavement paves Additional Pavement (as shown in Detail 'A'), constructs 'C' joint at end of bridge approach section, and leaves in this state.
2. The paving contractor of the abutting pavement saw cuts full depth at 'C' joint and removes Additional Pavement (see Detail 'B'), then
3. The paving contractor of the abutting pavement constructs 'RT' joint or 'B' joint, accordingly (see Detail 'C').

This work is incidental to other work as follows:

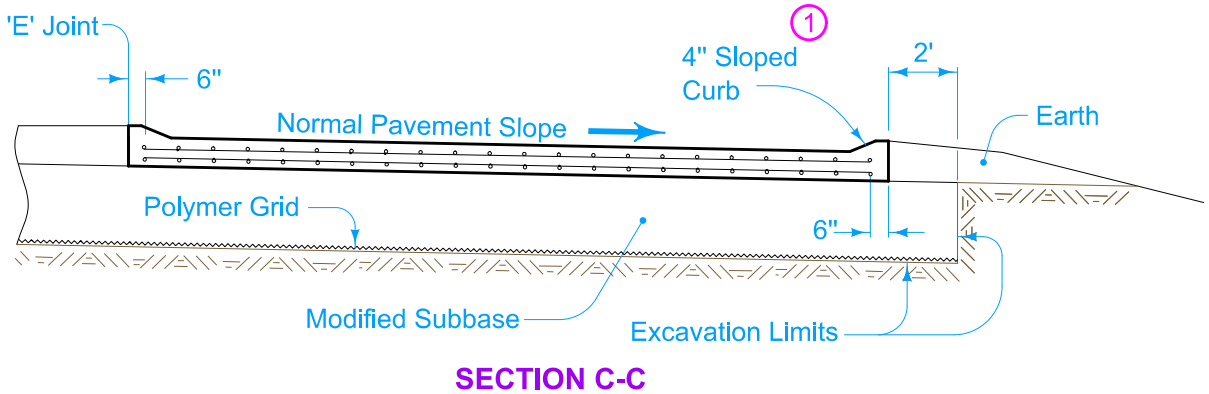
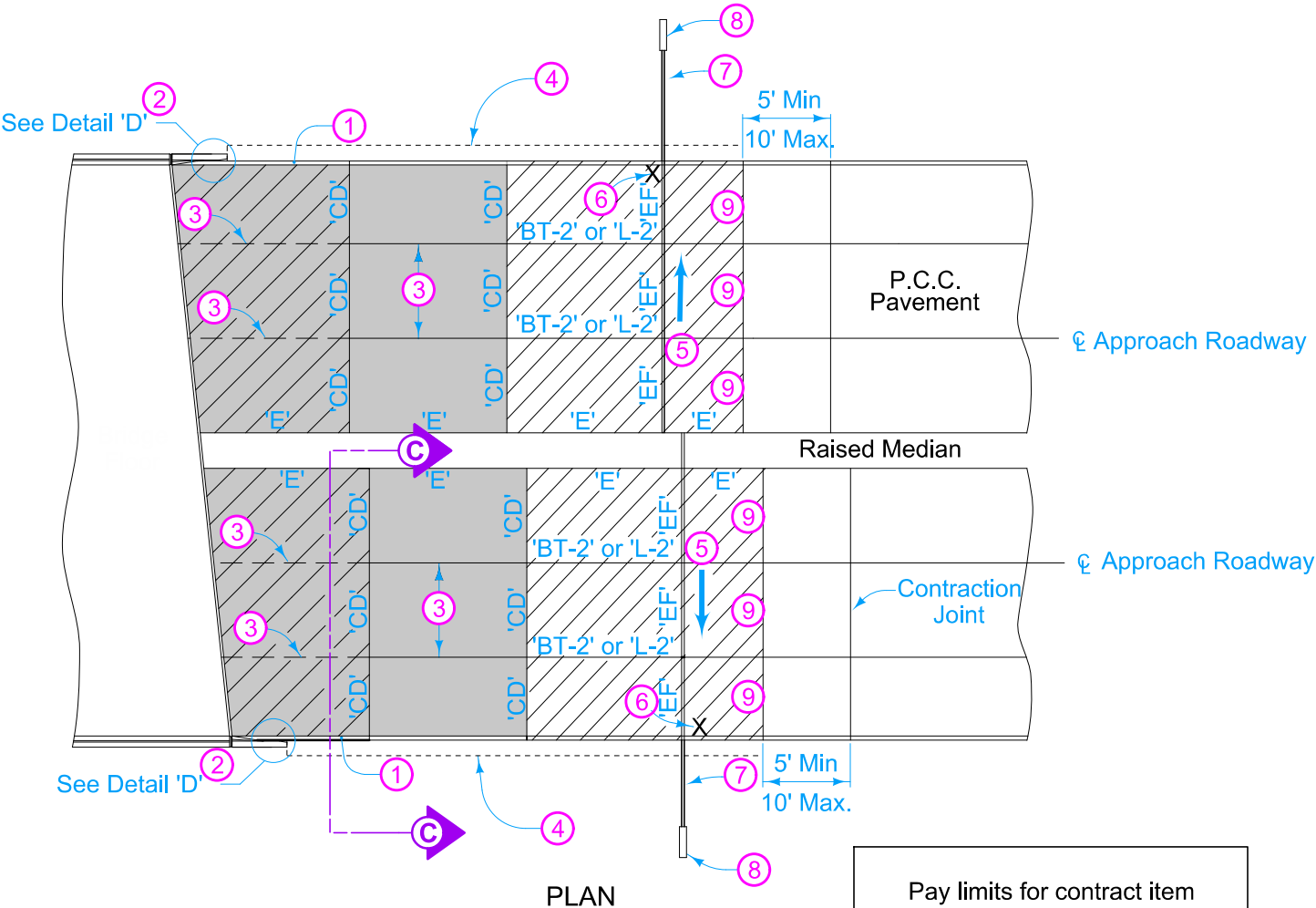
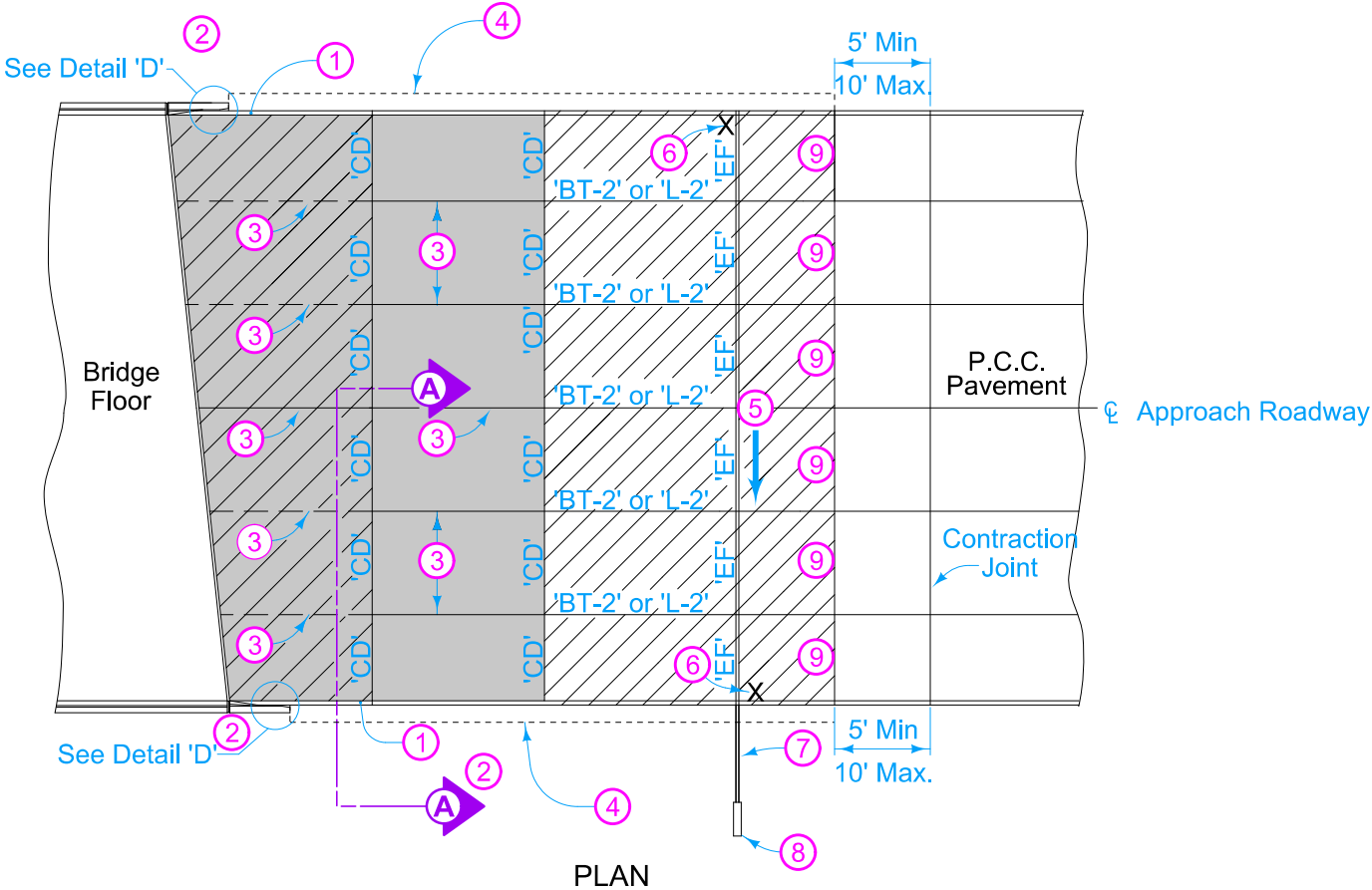
Detail 'A': Bridge Approach, BR-203.

Details 'B' and 'C': Standard or Slip Form PCC Pavement, or Hot Mix Asphalt Mixture.



 IOWA DOT	REVISION	
	1	10-19-21
	BR-213	
	SHEET 1 of 1	
REVISIONS: Added shoulders to single and non-reinforced sections.		
		
APPROVED BY DESIGN METHODS ENGINEER		
BRIDGE APPROACH (ABUTTING PAVEMENT)		

For joint details, see PV-101.



- 1 Build 4 inch Sloped Curb, unless noted otherwise in the plans. Refer to PV-102 for curb and runout details.
- 2 See BR-201, BR-202, BR-203, or BR-204.
- 3 Longitudinal Joint (PV-101):
Single Pour - Saw cut joint per Detail B.
Two Pours - Use 'BT-2' joint.
- 4 Polymer Grid and excavation limits of Modified Subbase 2 feet outside of pavement edge. See BR-201, BR-202, BR-203, or BR-204.
- 5 Slope subdrain to drain.
- 6 Place an "X" in the plastic concrete near the 'EF' joint at the outside edge of pavement.
- 7 4 inch perforated subdrain (polyethylene, corrugated tubing).
- 8 See DR-303 or DR-306 for outlet details
- 9 'DW' or 'RT' joint.

Pay limits for contract item include the following areas:

- Double Reinforced Section
- Single Reinforced Section
- Non-Reinforced Section

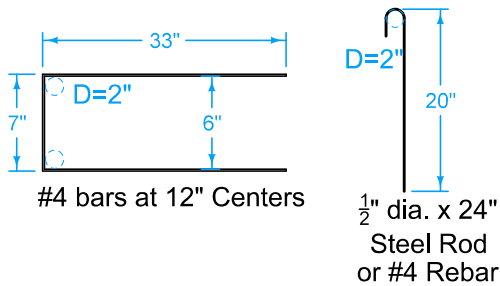
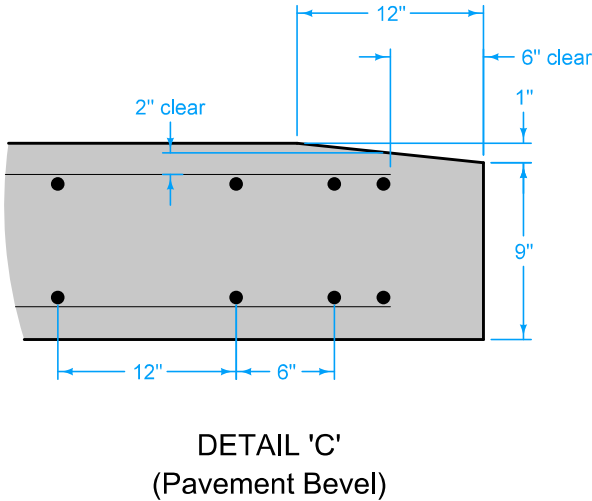
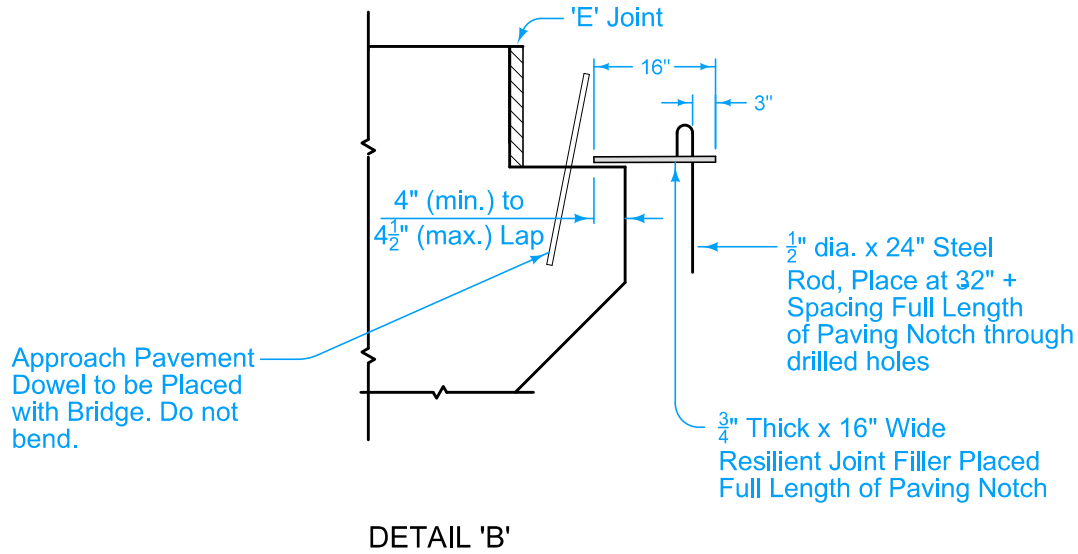
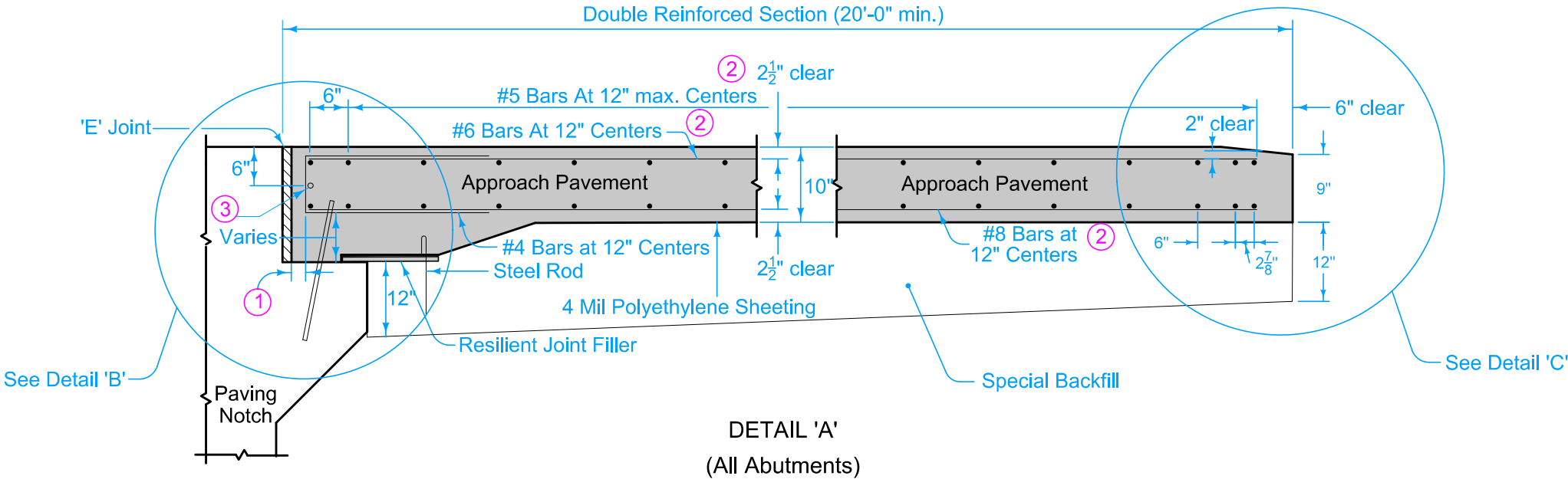
IOWA DOT STANDARD ROAD PLAN	REVISION	
	3	10-21-25
	BR-231	
SHEET 1 of 1		
REVISIONS: Changed 'K' joints to 'BT' joints.		
<i>Shawn Miller</i> APPROVED BY DESIGN METHODS ENGINEER		
BRIDGE APPROACH (MULTI-LANE, CURBED ROADWAY)		

For joint details, refer to PV-101.

For curb details, see Detail 'F'.



All transverse bars are #5.

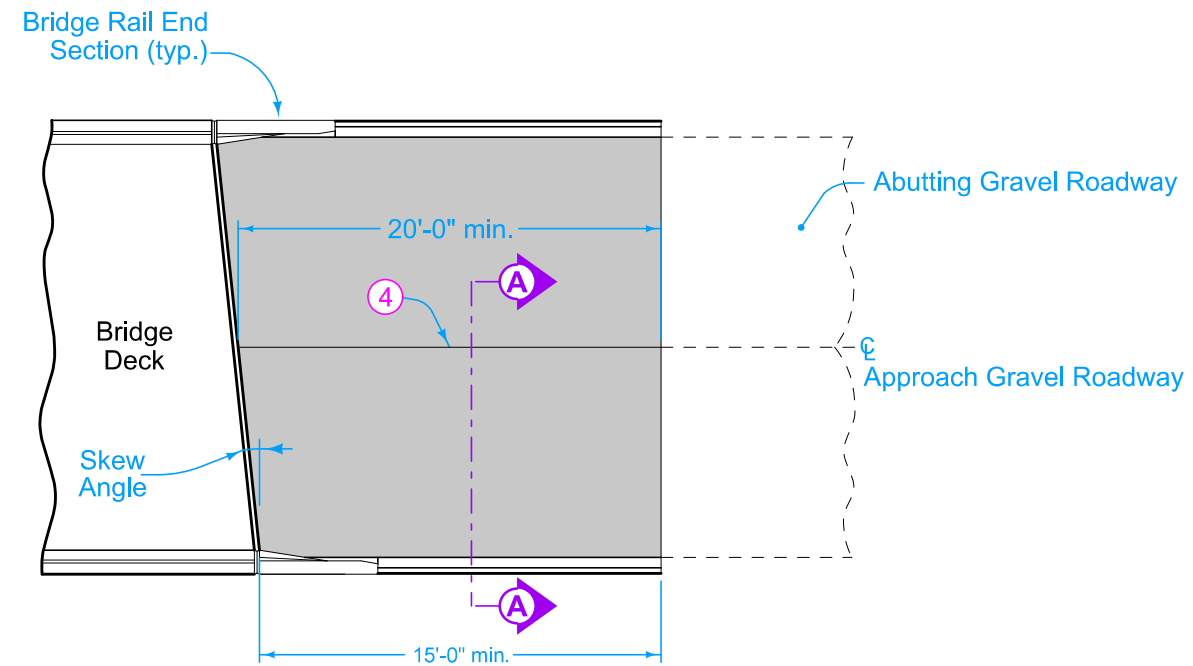
- ① 2" min. to 2 1/2" max. clear to bent bar.
- ② Minimum lap length: #5 Bars - 38"
#6 Bars - 45"
#8 Bars - 59"
- ③ If bridge is skewed, place additional #5 bar parallel to skewed face.



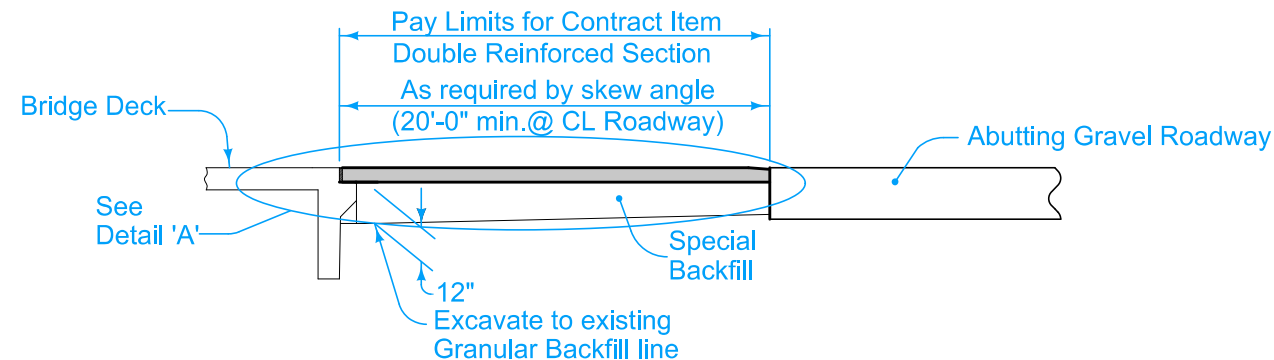
Possible Contract Item:
Bridge Approach, BR-241
Longitudinal Grooving in Concrete, Bridge Deck
Longitudinal Grooving in Concrete, Pavement

Possible Tabulation:
112-6

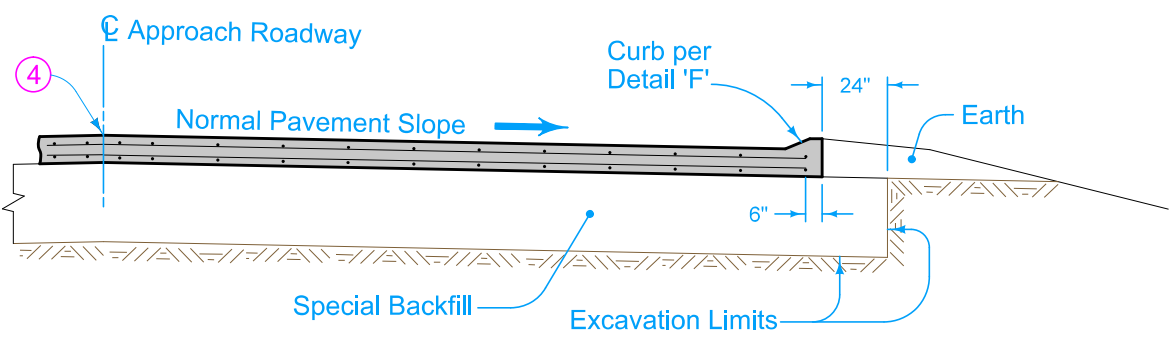
	REVISION		
	3	10-21-25	
	BR-241		
STANDARD ROAD PLAN			
		SHEET 1 of 3	
REVISIONS: Changed 'KS-2' joint to 'BT-2' joint.			
			
APPROVED BY DESIGN METHODS ENGINEER			
DOUBLE REINFORCED 10" APPROACH ON GRAVEL ROADS			



PLAN VIEW





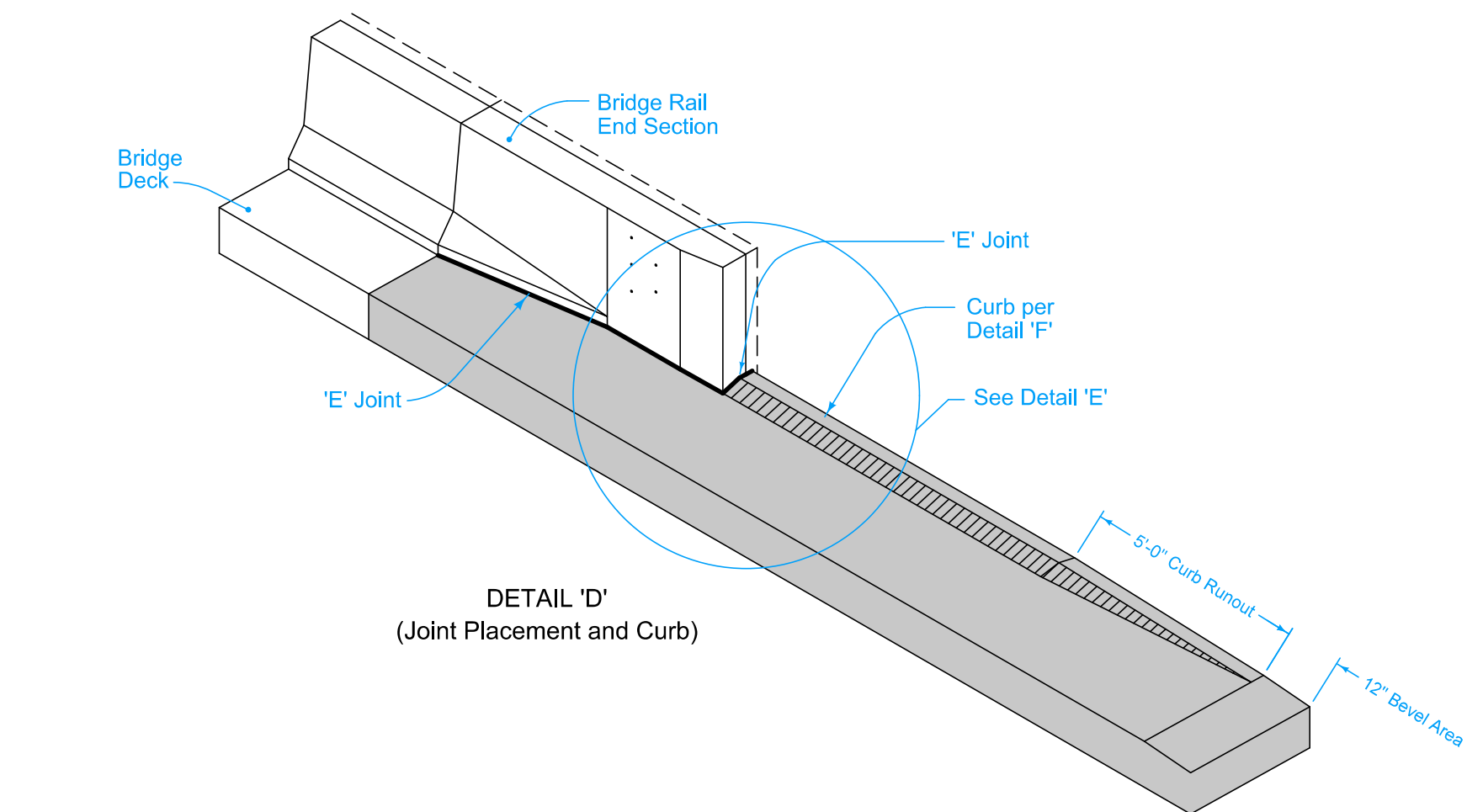
SECTION THRU CENTERLINE



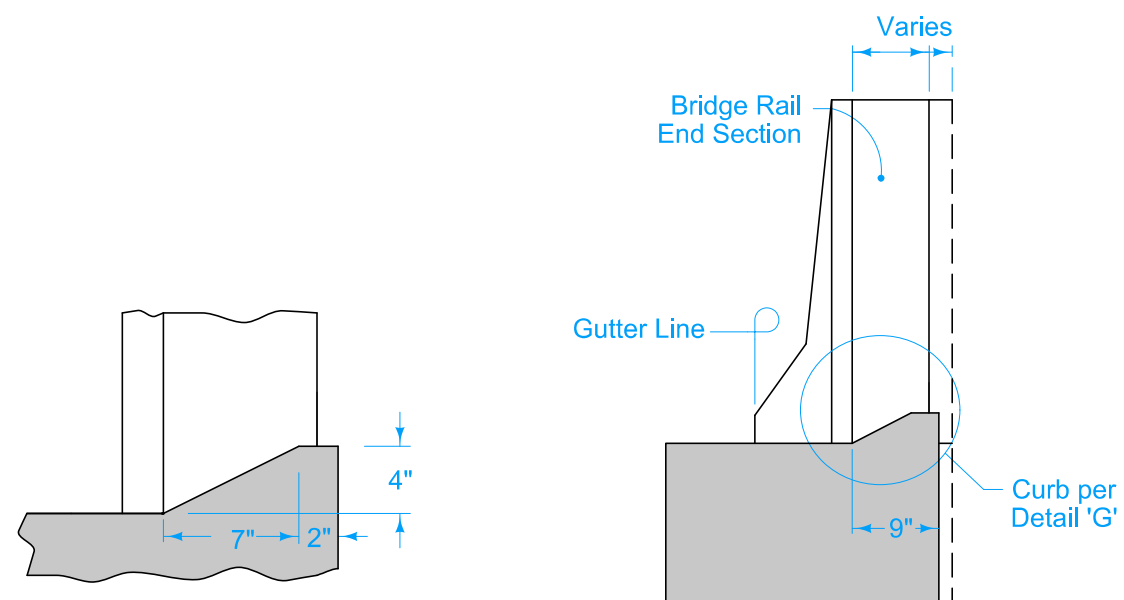
SECTION A-A

④ Longitudinal Joint (PV-101):
Single pour - Saw cut joint per Detail B.
Two pours - Use 'BT-2' joint.

 STANDARD ROAD PLAN	REVISION	
	3	10-21-25
	BR-241 SHEET 2 of 3	
REVISIONS: Changed 'KS-2' joint to 'BT-2' joint.		
 APPROVED BY DESIGN METHODS ENGINEER		
DOUBLE REINFORCED 10" APPROACH ON GRAVEL ROADS		





DETAIL 'D'
(Joint Placement and Curb)



DETAIL 'G'

DETAIL 'E'
(Back of Curb Placement)

 IOWA DOT	REVISION	
	3	10-21-25
	BR-241	
	SHEET 3 of 3	
REVISIONS: Changed 'KS-2' joint to 'BT-2' joint.		
		
APPROVED BY DESIGN METHODS ENGINEER		
DOUBLE REINFORCED 10" APPROACH ON GRAVEL ROADS		