

INDEX

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GENERAL NOTES:

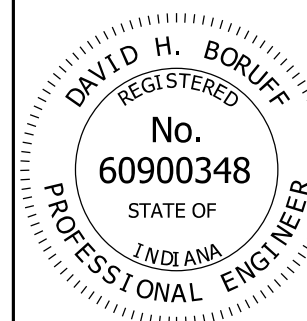
1. Shoulder corrugations use a conventional milled pavement corrugation pattern.
2. Rumble strips and rumble stripes use a sinusoidal milled pavement corrugation pattern.

INDIANA DEPARTMENT OF TRANSPORTATION

PAVEMENT CORRUGATIONS,
INDEX AND GENERAL NOTES

SEPTEMBER 2019

STANDARD DRAWING NO. E 606-SHCG-01

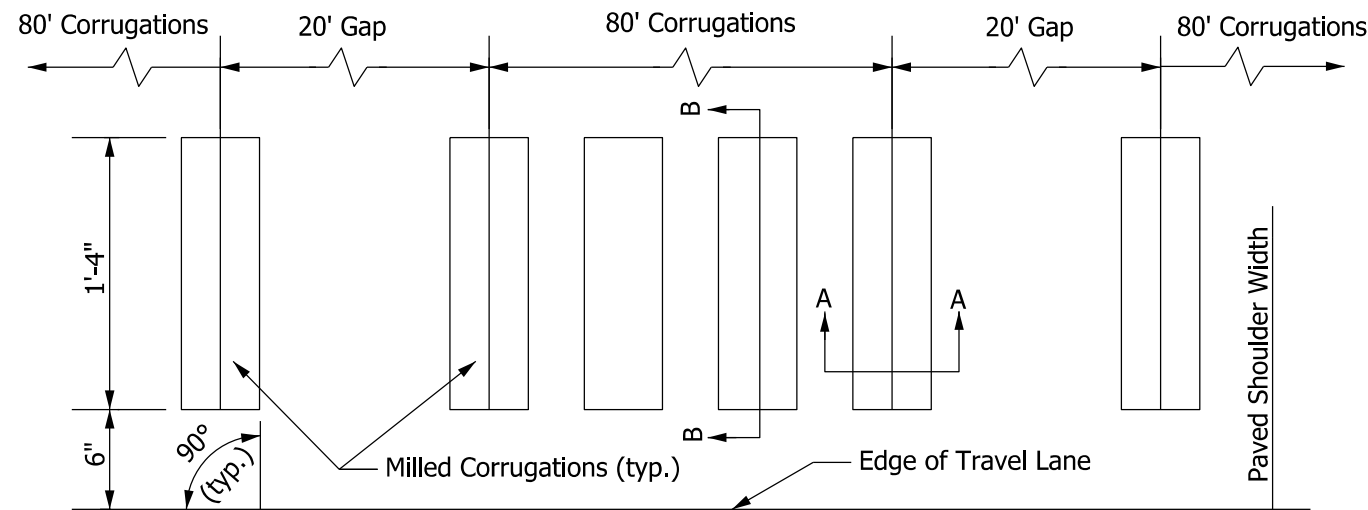


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DESIGN STANDARDS ENGINEER DATE

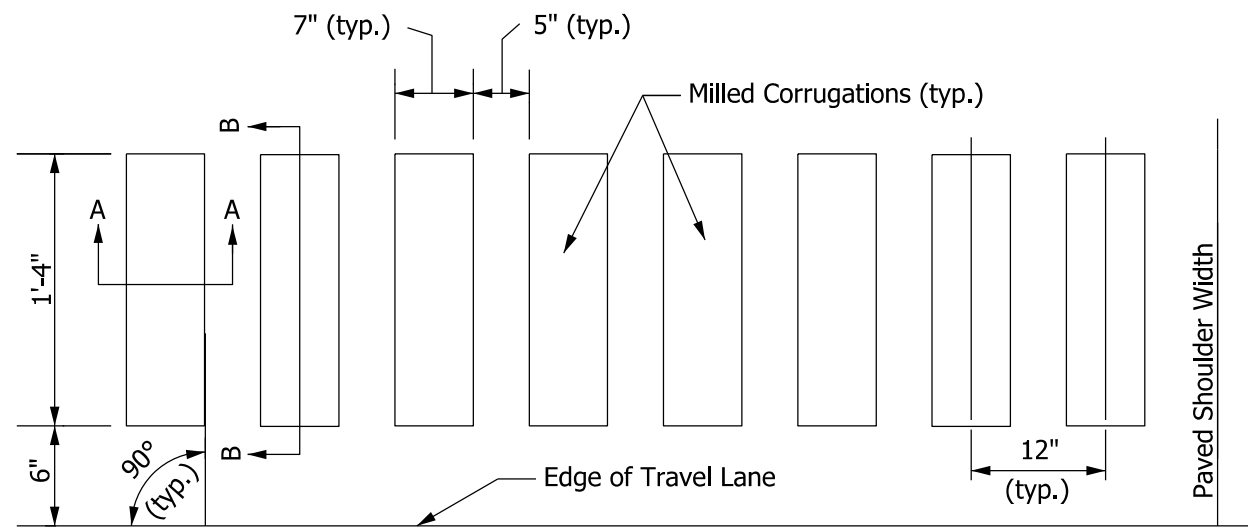
[Signature] 6/02/2019
CHIEF ENGINEER DATE

NOTES:

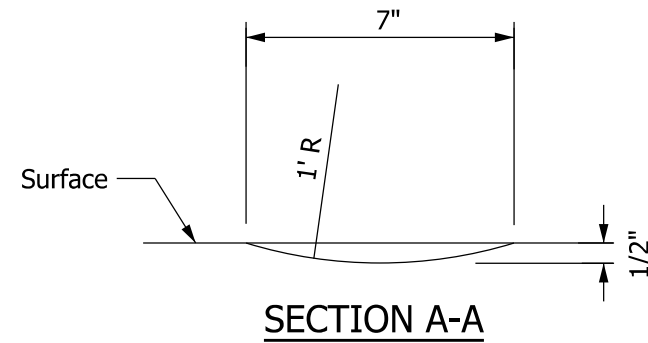
1. Continuous corrugation installation shall be used on Interstates and intermittent installation shall be used on all other facilities.
2. Refer to E 606-SHCG-03 for corrugation instructions for HMA shoulders adjacent to a widened PCCP outside lane.



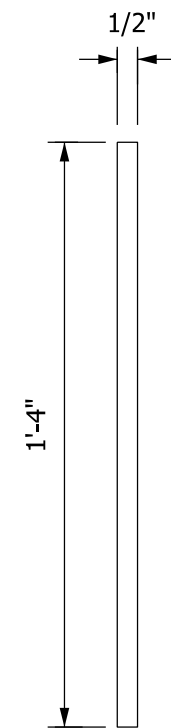
**INTERMITTENT INSTALLATION
PLAN VIEW**



**CONTINUOUS INSTALLATION
PLAN VIEW**

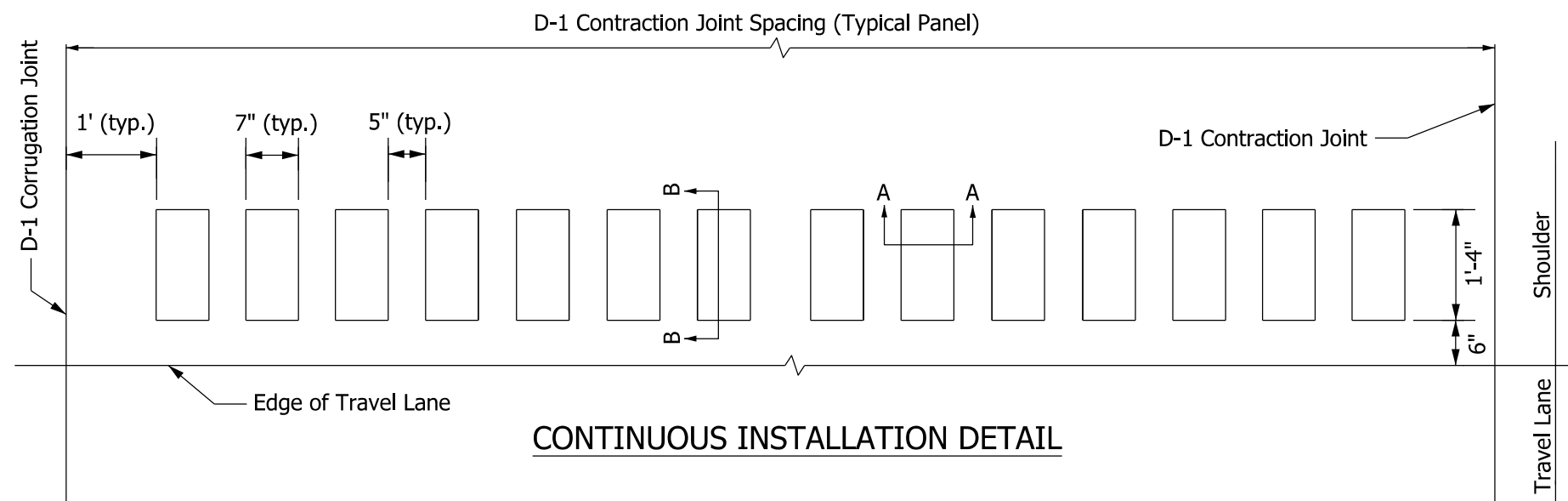


SECTION A-A



SECTION B-B

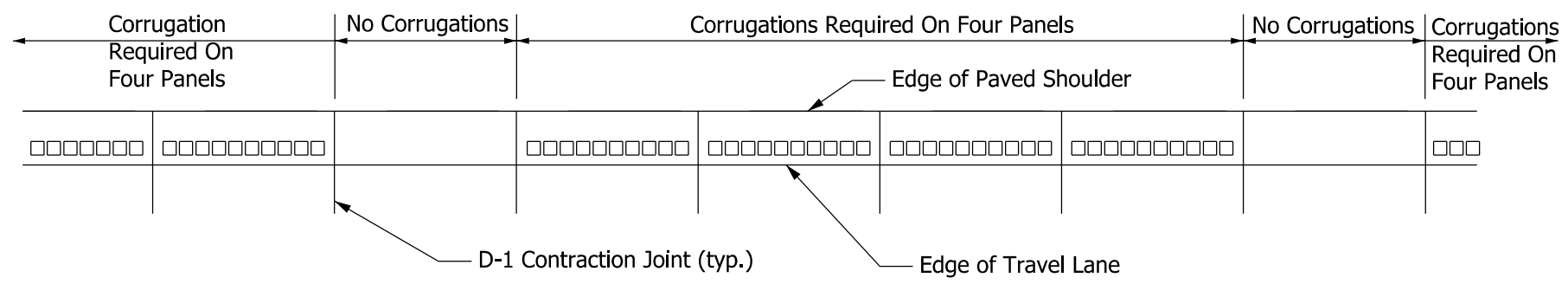
INDIANA DEPARTMENT OF TRANSPORTATION	
SHOULDER CORRUGATIONS, HMA	
SEPTEMBER 2019	
STANDARD DRAWING NO.	E 606-SHCG-02
	 DESIGN STANDARDS ENGINEER 5/21/19 DATE
	 CHIEF ENGINEER 6/03/2019 DATE



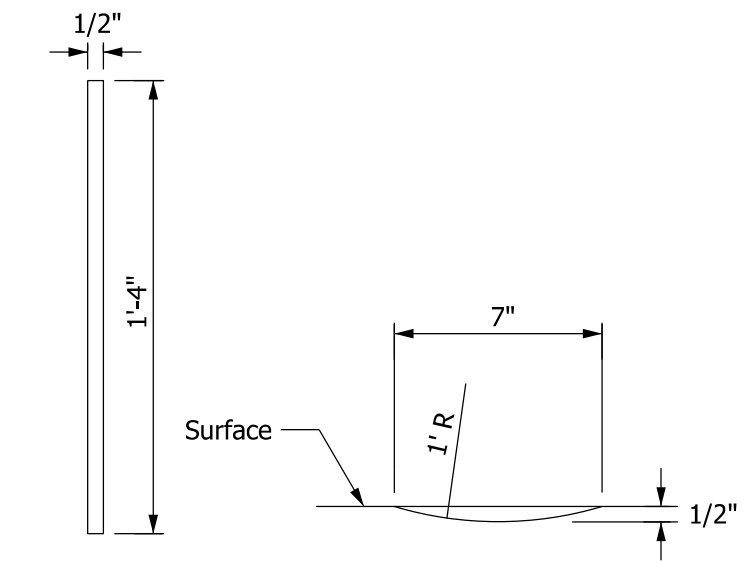
CONTINUOUS INSTALLATION DETAIL

NOTES:

1. Continuous corrugations shall be required on every PCCP shoulder panel on Interstates. Intermittent corrugations shall be required for all other facilities.
2. On facilities with a widened outside PCCP lane, the corrugations shall be installed on the portion of the PCCP located outside the edge of travel lane and in accordance with this sheet.

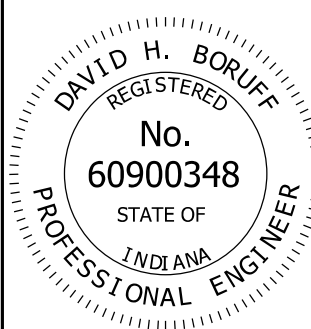
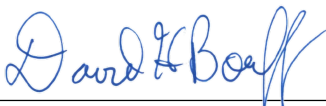



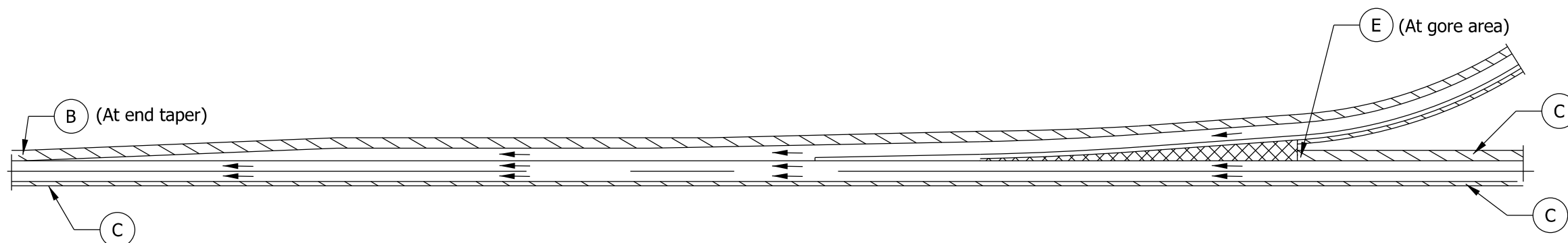
INTERMITTENT INSTALLATION DETAIL



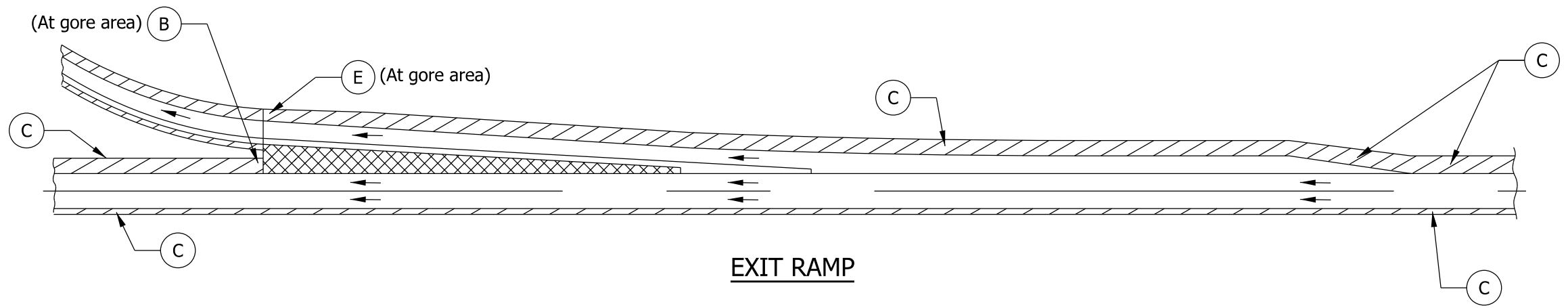
SECTION B-B

SECTION A-A

INDIANA DEPARTMENT OF TRANSPORTATION	
SHOULDER CORRUGATIONS, PCCP	
SEPTEMBER 2019	
STANDARD DRAWING NO.	E 606-SHCG-03
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ENTRANCE RAMP



EXIT RAMP

LEGEND

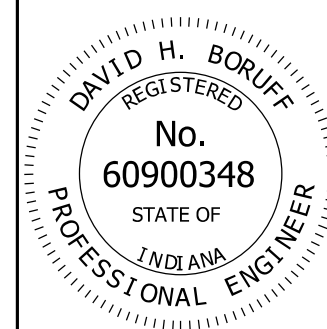
- (B) Begin Shoulder Corrugations
- (C) Shoulder Corrugations
- (E) End Shoulder Corrugations
- Gore Area
- Shoulder
- Direction of Traffic

INDIANA DEPARTMENT OF TRANSPORTATION

SHOULDER CORRUGATION LIMITS:
ENTRANCE AND EXIT RAMP

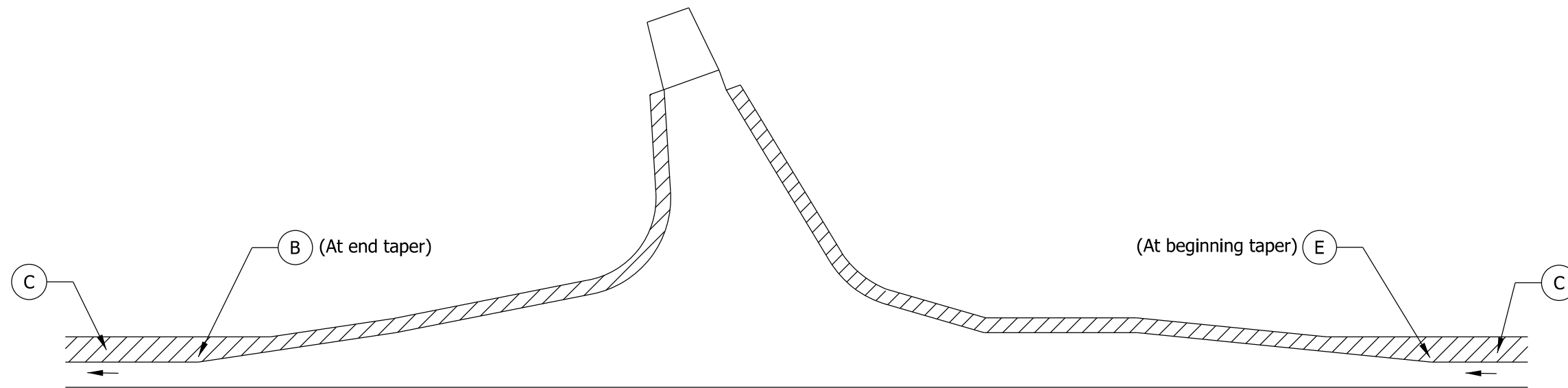
SEPTEMBER 2019

STANDARD DRAWING NO. E 606-SHCG-04



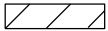

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DATE

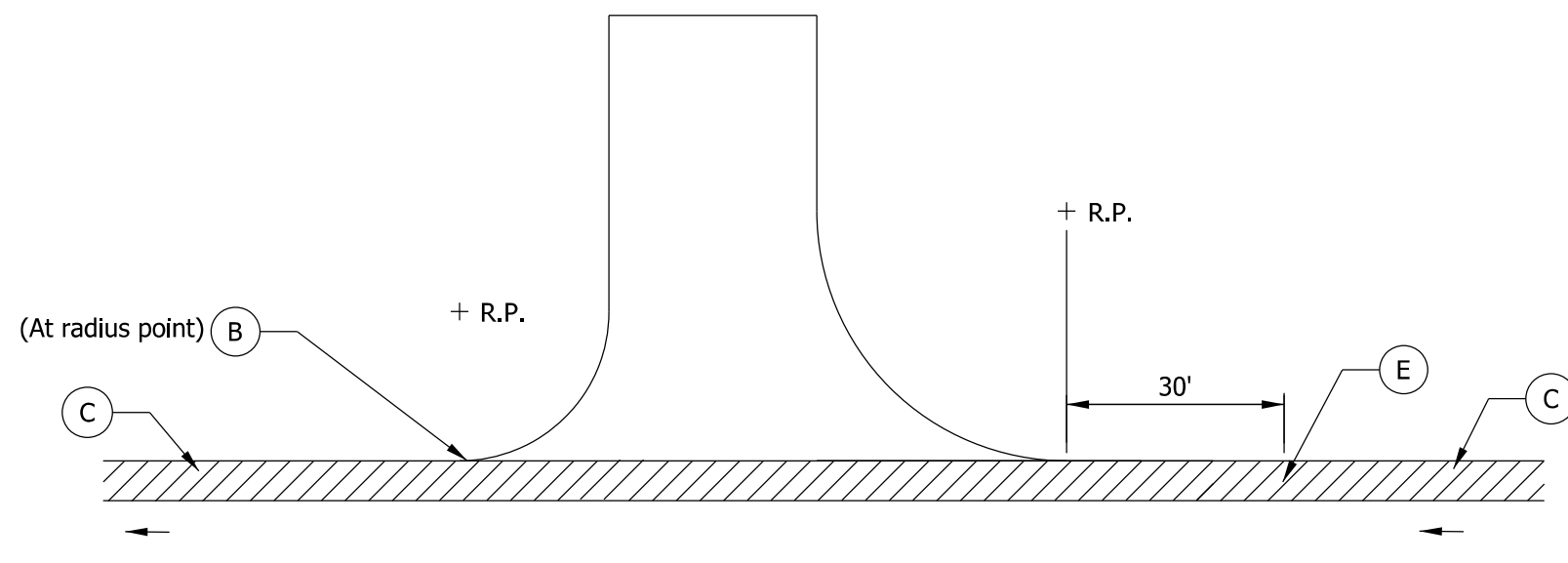
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CHIEF ENGINEER 6/03/2019
DATE



APPROACH WITH TURN LANE

LEGEND

- (B) Begin Shoulder Corrugations
- (C) Shoulder Corrugations
- (E) End Shoulder Corrugations
-  Shoulder
-  Direction of Traffic



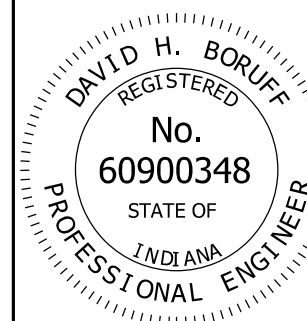
APPROACH WITHOUT TURN LANE

INDIANA DEPARTMENT OF TRANSPORTATION

SHOULDER CORRUGATION LIMITS:
APPROACH WITH AND WITHOUT TURN LANE

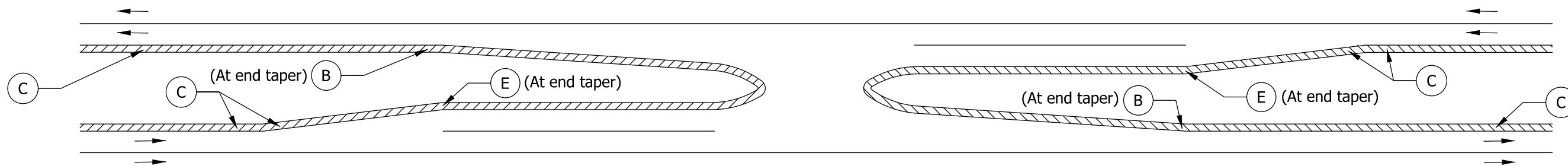
SEPTEMBER 2019

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

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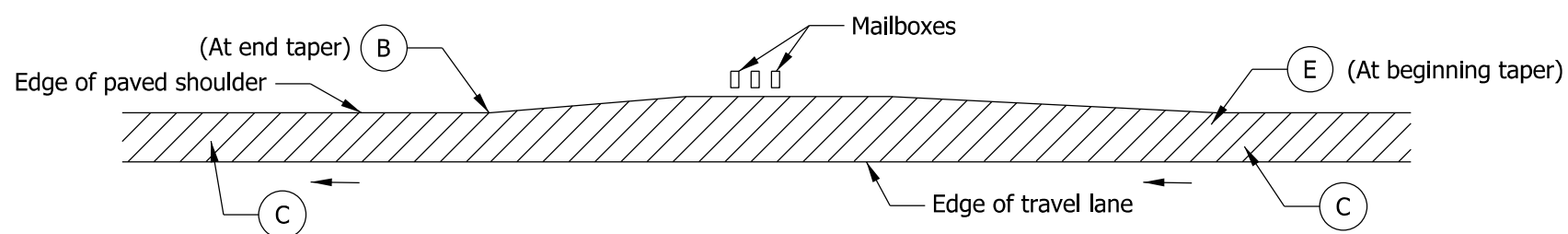
[Signature] 6/03/2019
CHIEF ENGINEER DATE



MEDIAN CROSSOVER / LEFT TURN LANE

LEGEND

- (B) Begin Shoulder Corrugations
- (C) Shoulder Corrugations
- (E) End Shoulder Corrugations
-  Shoulder
-  Direction of Traffic

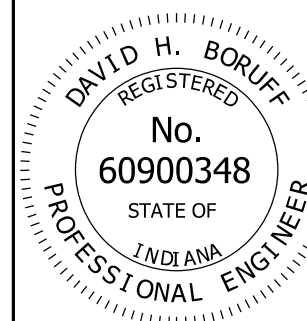


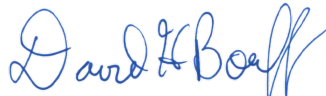

TYPICAL MAILBOX APPROACH

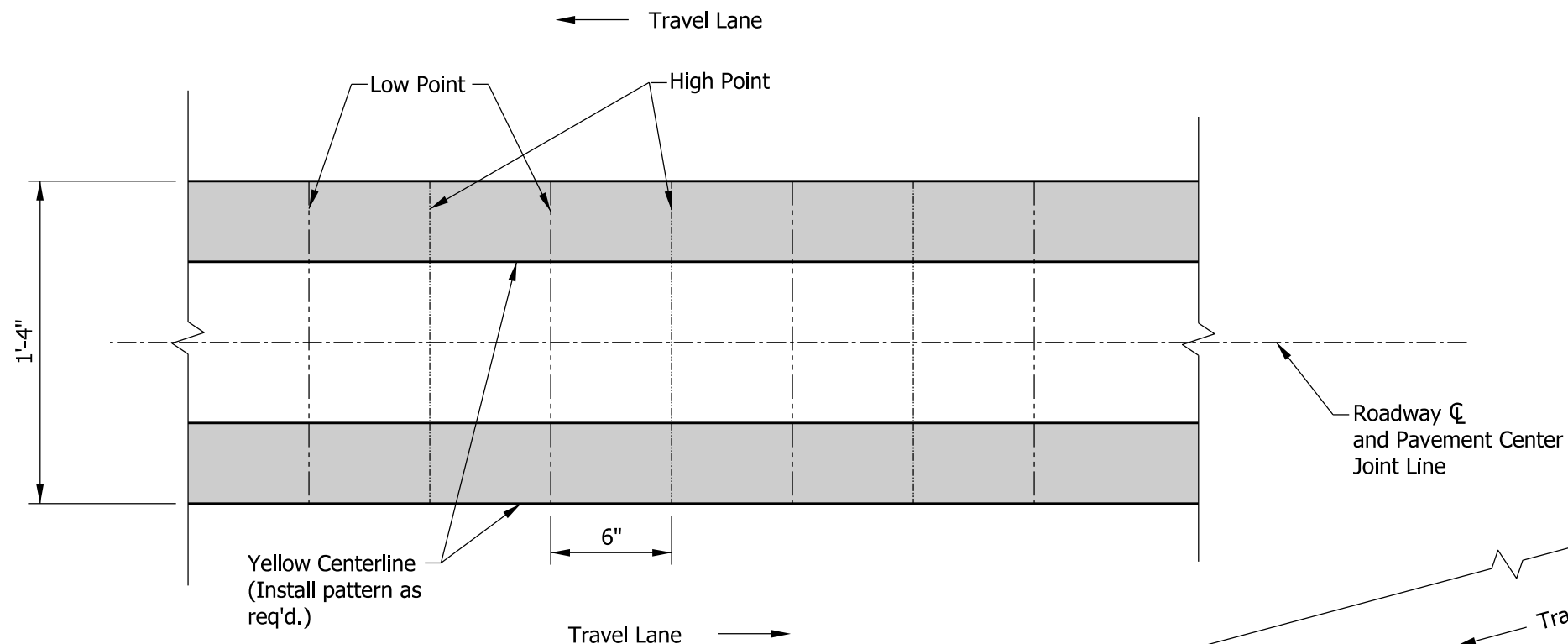
INDIANA DEPARTMENT OF TRANSPORTATION

SHOULDER CORRUGATION LIMITS:
MEDIAN CROSSOVER AND
TYPICAL MAILBOX APPROACH
SEPTEMBER 2019

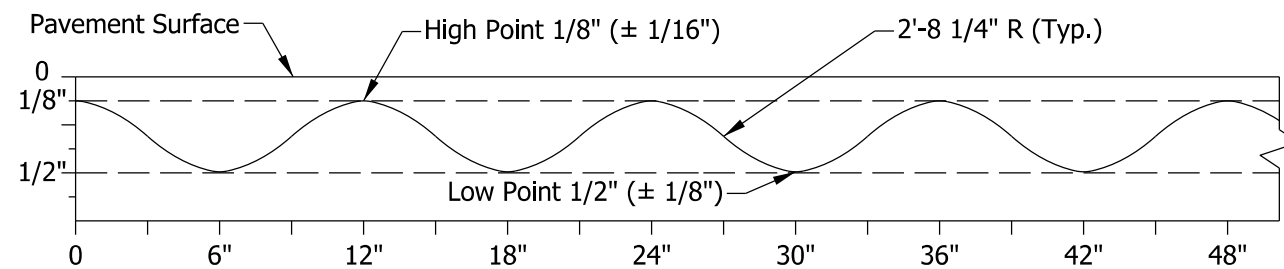
STANDARD DRAWING NO. E 606-SHCG-06



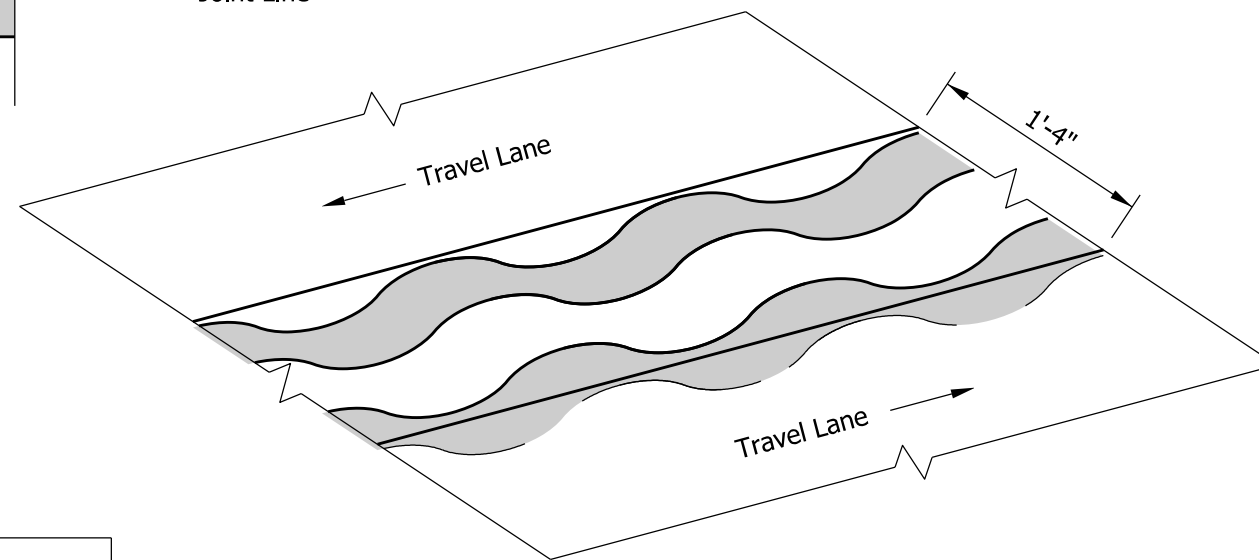
	5/21/19
DESIGN STANDARDS ENGINEER	DATE
	6/03/2019
CHIEF ENGINEER	DATE



PLAN



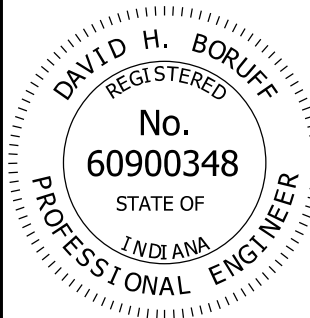
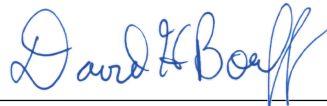

PROFILE

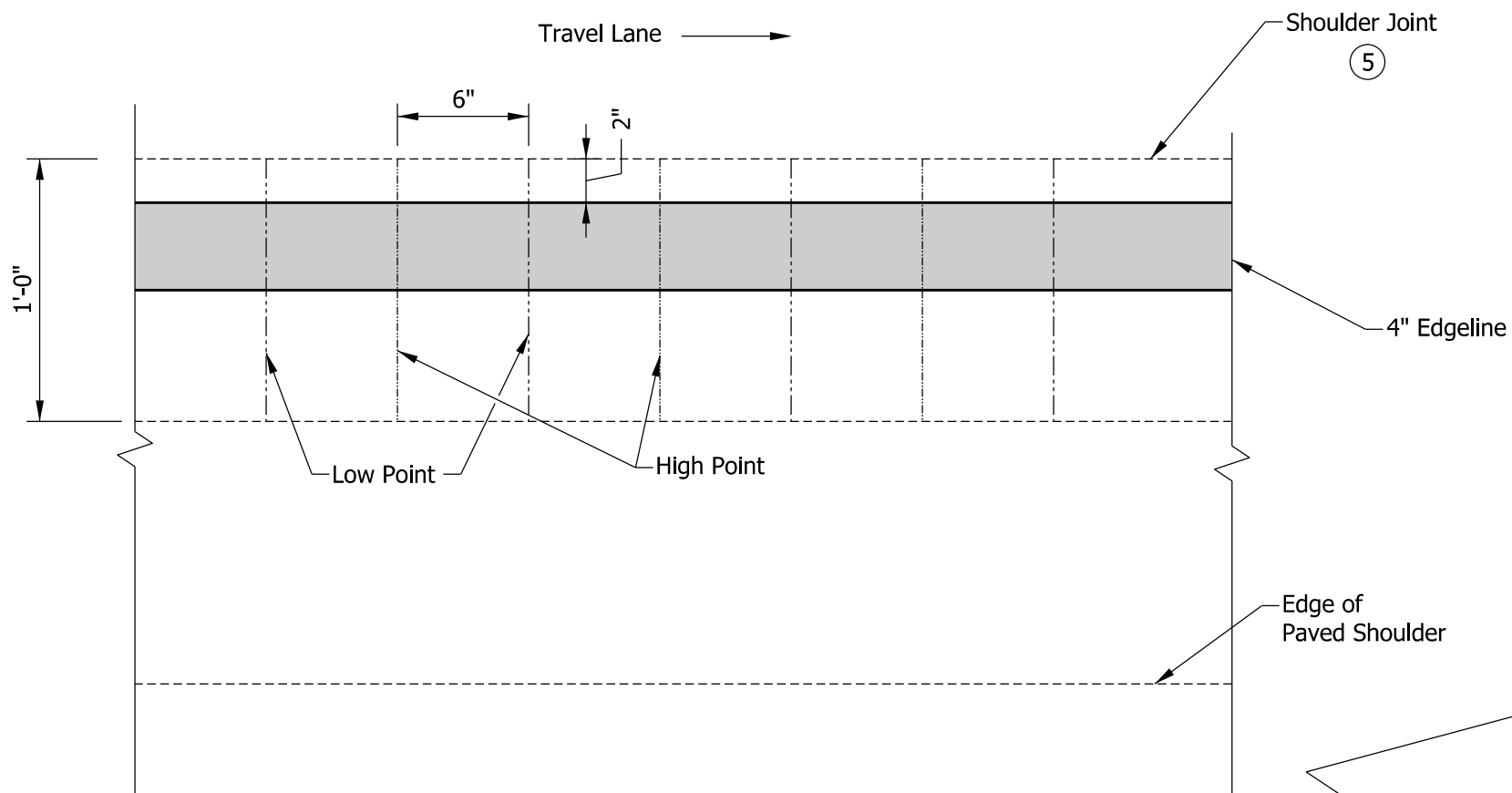


ISOMETRIC VIEW

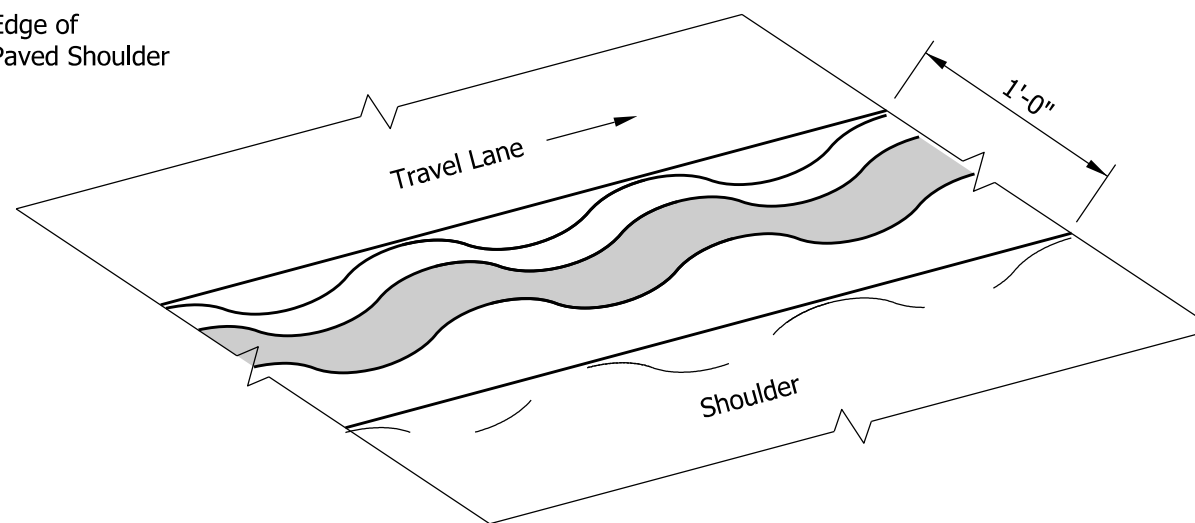
NOTES:

1. See Standard Drawing E 606-SHCG-09 for break in rumble stripe near an intersection, drive, bridge, or railroad crossing.
2. Rumble stripe shall be centered about the roadway centerline.
3. The liquid asphalt sealant width shall be a minimum of 24 in. centered on the pavement center joint line, and shall be extended, where directed, to provide coverage beyond the edge of the corrugation.
4. The corrugations shall be no closer than 6 in. to a casting or a concrete pavement transverse joint.

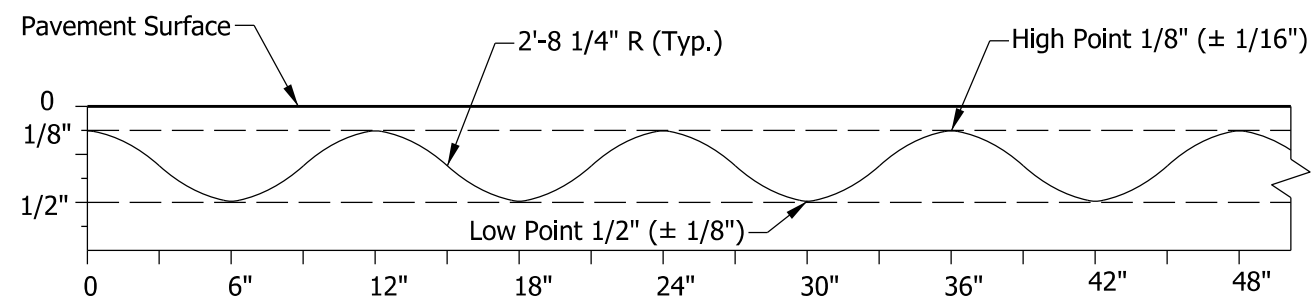
INDIANA DEPARTMENT OF TRANSPORTATION	
CENTERLINE RUMBLE STRIPES	
SEPTEMBER 2019	
STANDARD DRAWING NO. E 606-SHCG-07	
	<div style="text-align: right; margin-bottom: 10px;">  DESIGN STANDARDS ENGINEER 5/21/19 DATE </div> <div style="text-align: right;">  CHIEF ENGINEER 6/03/2019 DATE </div>



PLAN



ISOMETRIC VIEW



PROFILE

NOTES:

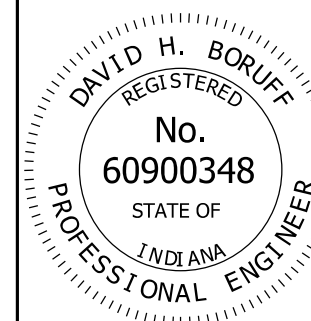
1. See Standard Drawing E 606-SHCG-09 for break in longitudinal rumble stripe limits near an intersection, drive, bridge, or railroad crossing.
 2. Where the paved shoulder width is at least 2 ft, a 12-ft longitudinal gap in the corrugations shall be provided every 60 ft to accommodate bicycles.
 3. The liquid asphalt sealant width shall be a minimum of 24 in. centered on the shoulder joint line.
 4. The corrugations shall be no closer than 6 in. to a casting or a concrete pavement transverse joint.
- ⑤ New edge of travel lane if shoulder joint is not apparent.

INDIANA DEPARTMENT OF TRANSPORTATION

EDGELINE RUMBLE STRIPES

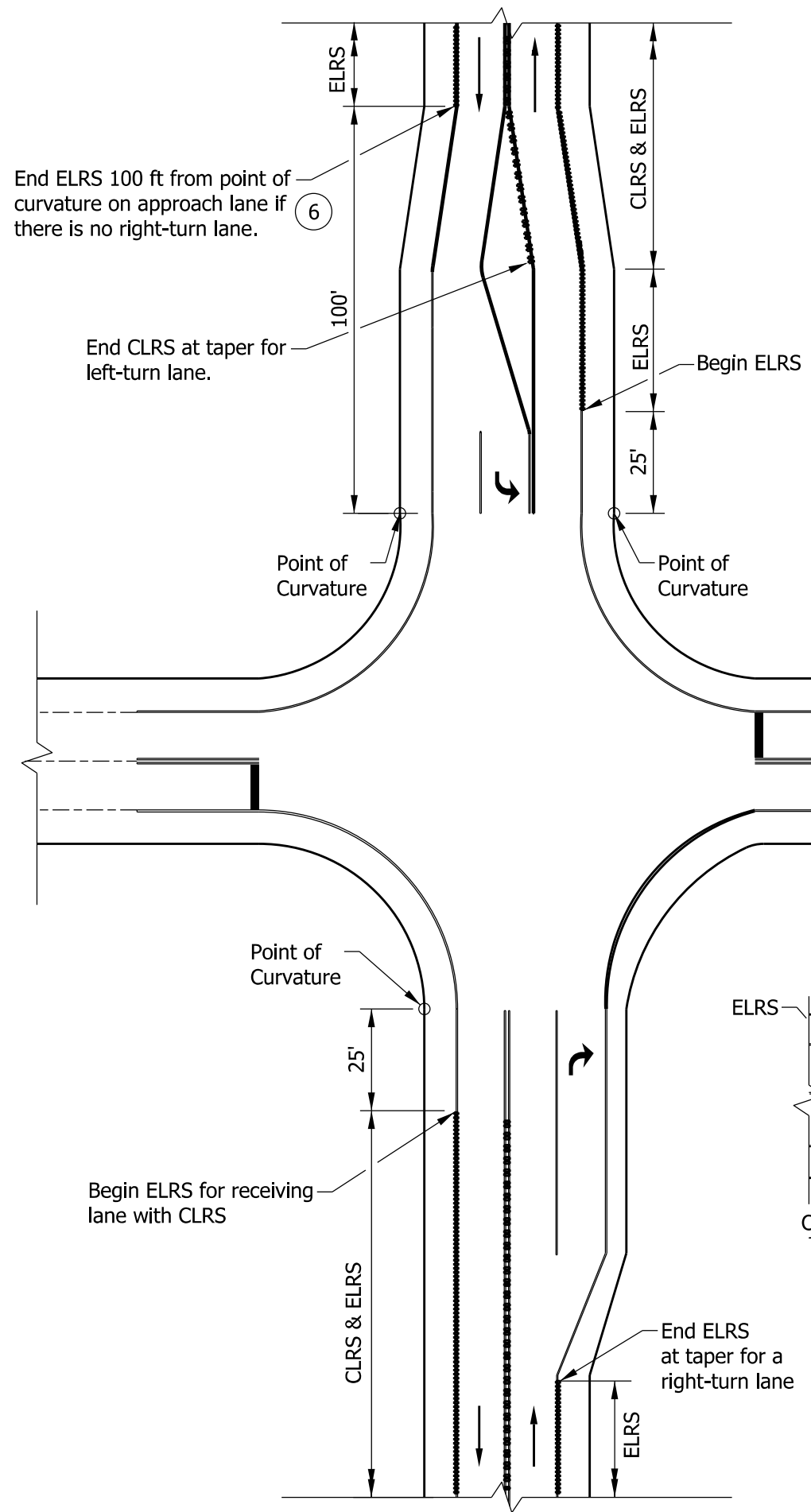
SEPTEMBER 2019

STANDARD DRAWING NO. E 606-SHCG-08

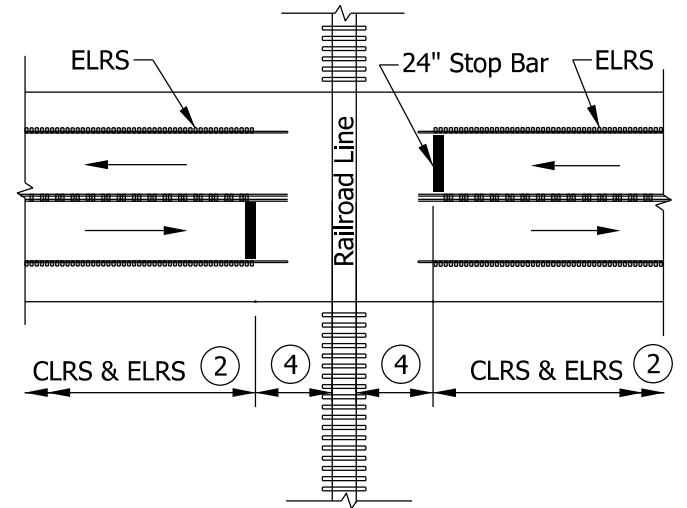


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DESIGN STANDARDS ENGINEER DATE

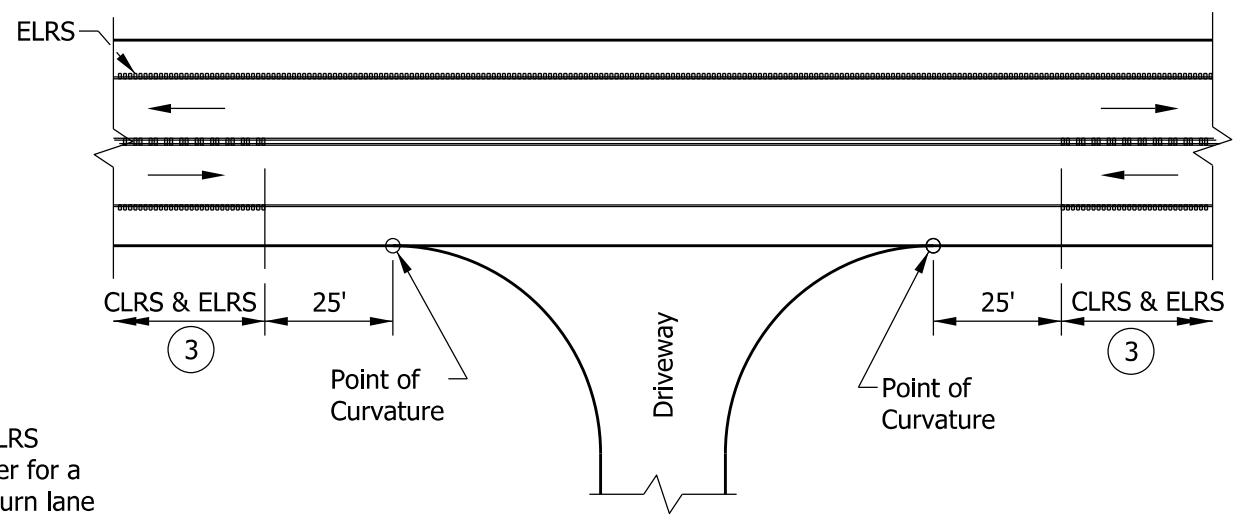
[Signature] 6/03/2019
CHIEF ENGINEER DATE



BREAK NEAR AN INTERSECTION



BREAK NEAR A RAILROAD CROSSING



BREAK NEAR A COMMERCIAL OR INDUSTRIAL DRIVEWAY

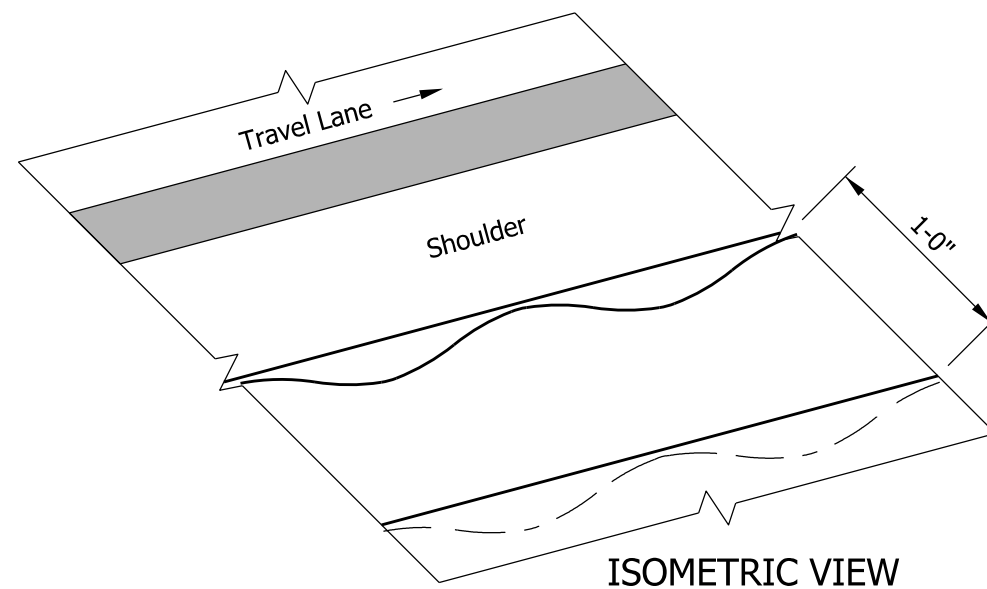
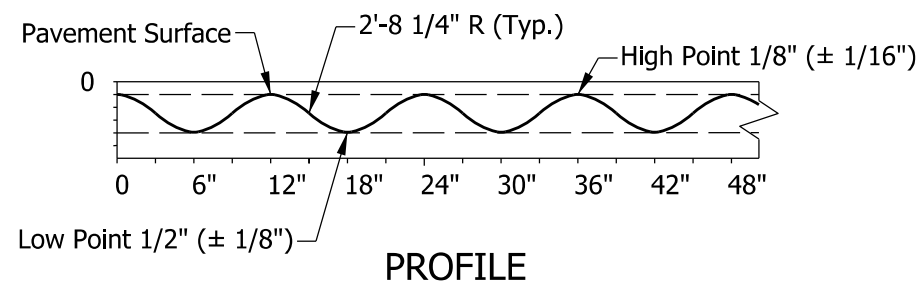
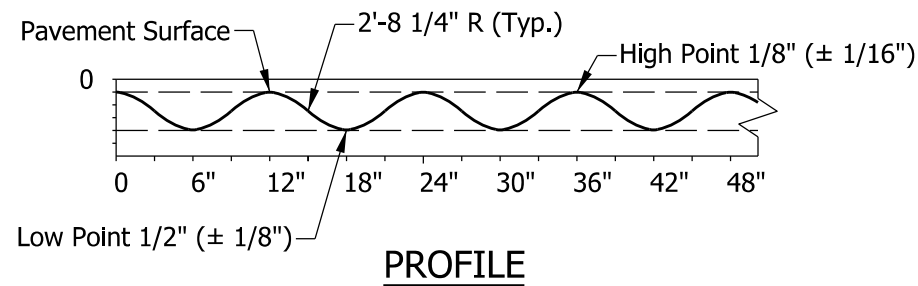
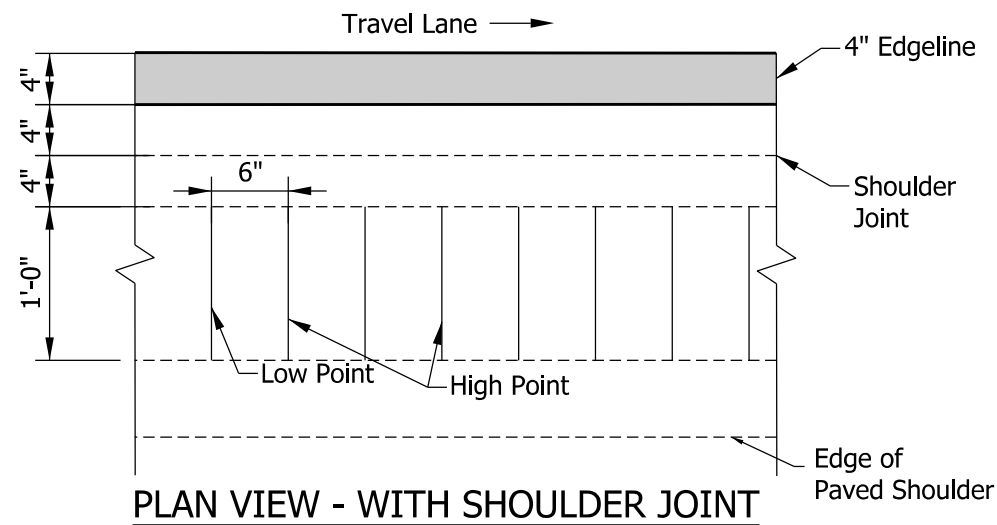
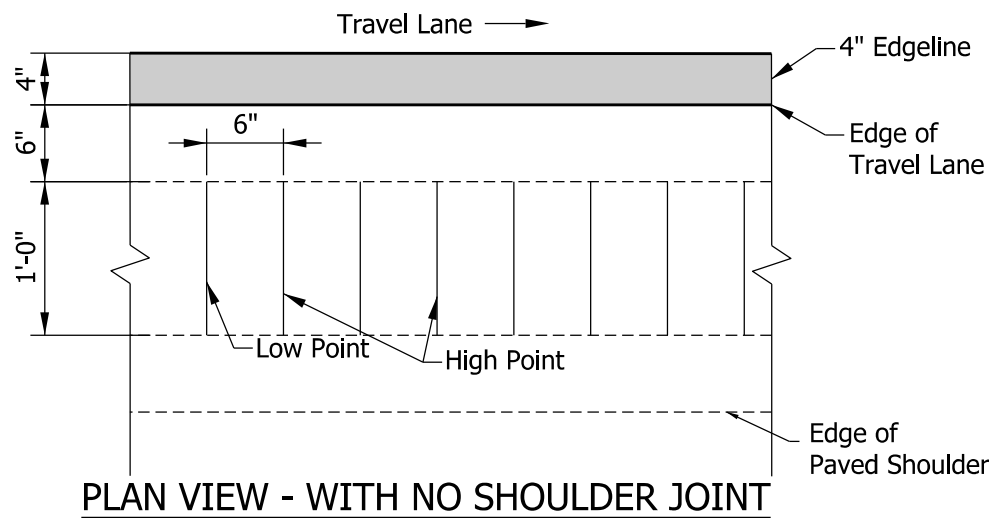
NOTES:

1. See Standard Drawing E 606-SHCG-07 for centerline corrugation pattern details and Standard Drawing E 606-SHCG-08 for edgeline corrugation pattern details.
- ② Rumble stripe shall begin or end at the stop bar location.
- ③ Rumble stripe shall be continued through driveway access points for minor driveways.
- ④ Gap is 15 ft for a railroad crossing without gates or signals and 25 ft for railroad crossing with gates or signals.
5. For a bridge deck, end corrugations a maximum of 5 ft and a minimum of 6 in. before an approach slab and begin corrugations a minimum of 6 in. and a maximum of 5 ft after the approach slab on the other side of the bridge deck
- ⑥ End ELRS 400 ft from point of curvature on approach lane if there is no right-turn lane and the paved shoulder width is 8 ft or greater.

KEY:

CLRS = Centerline Longitudinal Rumble Stripe
 ELRS = Edgeline Longitudinal Rumble Stripe

INDIANA DEPARTMENT OF TRANSPORTATION	
RUMBLE STRIPE LIMITS: NEAR AN INTERSECTION, DRIVE, BRIDGE, OR RAILROAD SEPTEMBER 2019	
STANDARD DRAWING NO. E 606-SHCG-09	
	<p style="text-align: right;"><i>David H. Boruff</i> DESIGN STANDARDS ENGINEER 5/21/19 DATE</p> <p style="text-align: right;"><i>[Signature]</i> CHIEF ENGINEER 6/03/2019 DATE</p>



NOTES:

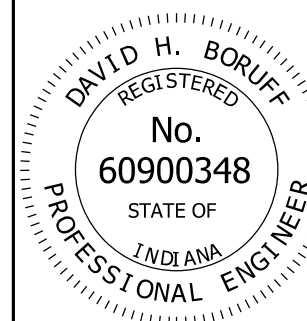
1. See Standard Drawing E 606-SHCG-11 for rumble strip limits near an intersection, drive, bridge, or railroad.
2. Where the paved shoulder width is at least 3 ft, a 12 ft longitudinal gap in the corrugations shall be provided every 60 ft to accommodate bicycles.
3. The liquid asphalt sealant width shall be a minimum of 24 in. centered on the shoulder joint line.
4. The corrugations shall be no closer than 6 in. to a casting.

INDIANA DEPARTMENT OF TRANSPORTATION

SHOULDER RUMBLE STRIPS
(UNDIVIDED HIGHWAY)

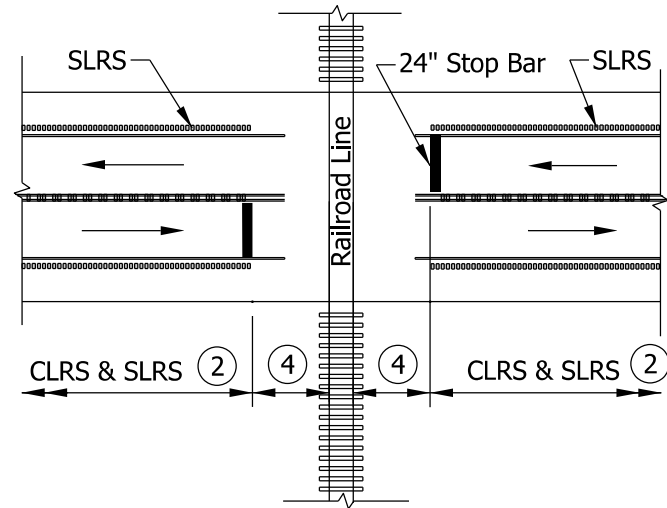
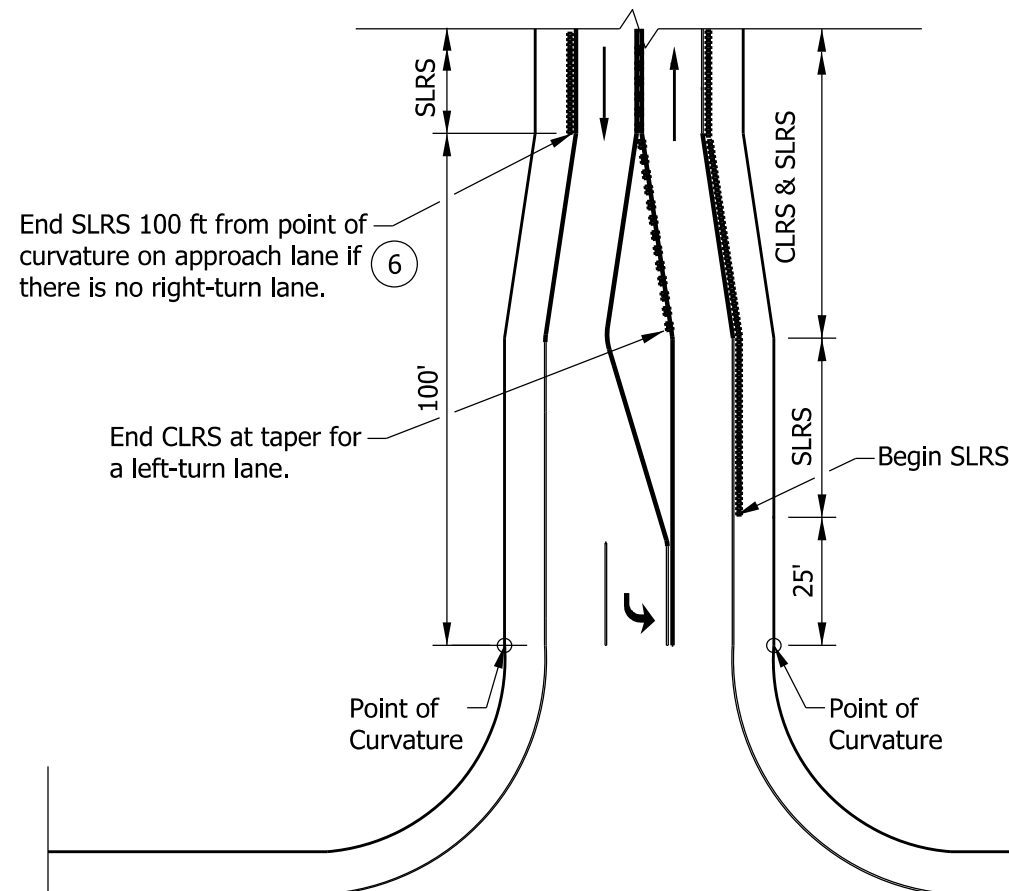
SEPTEMBER 2019

STANDARD DRAWING NO. E 606-SHCG-10

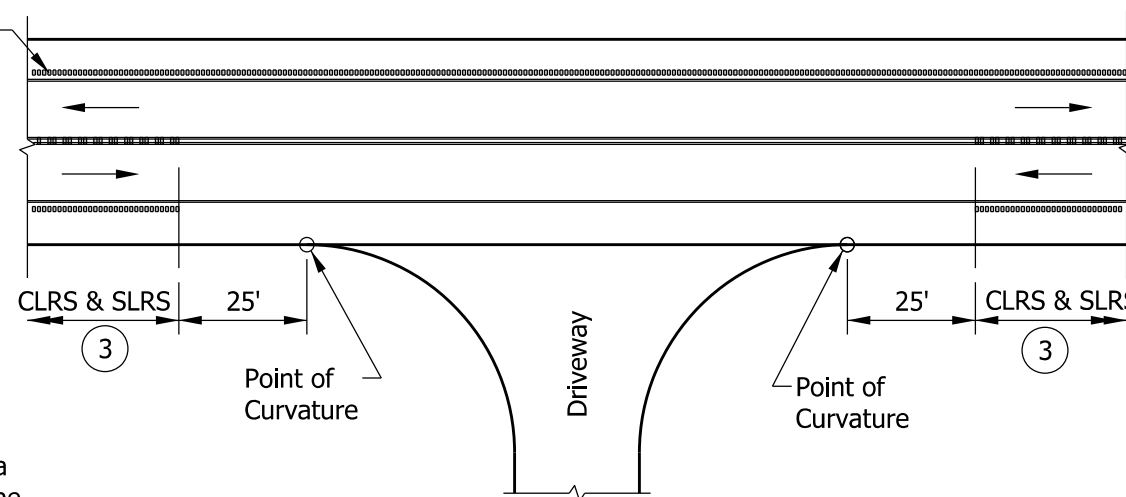
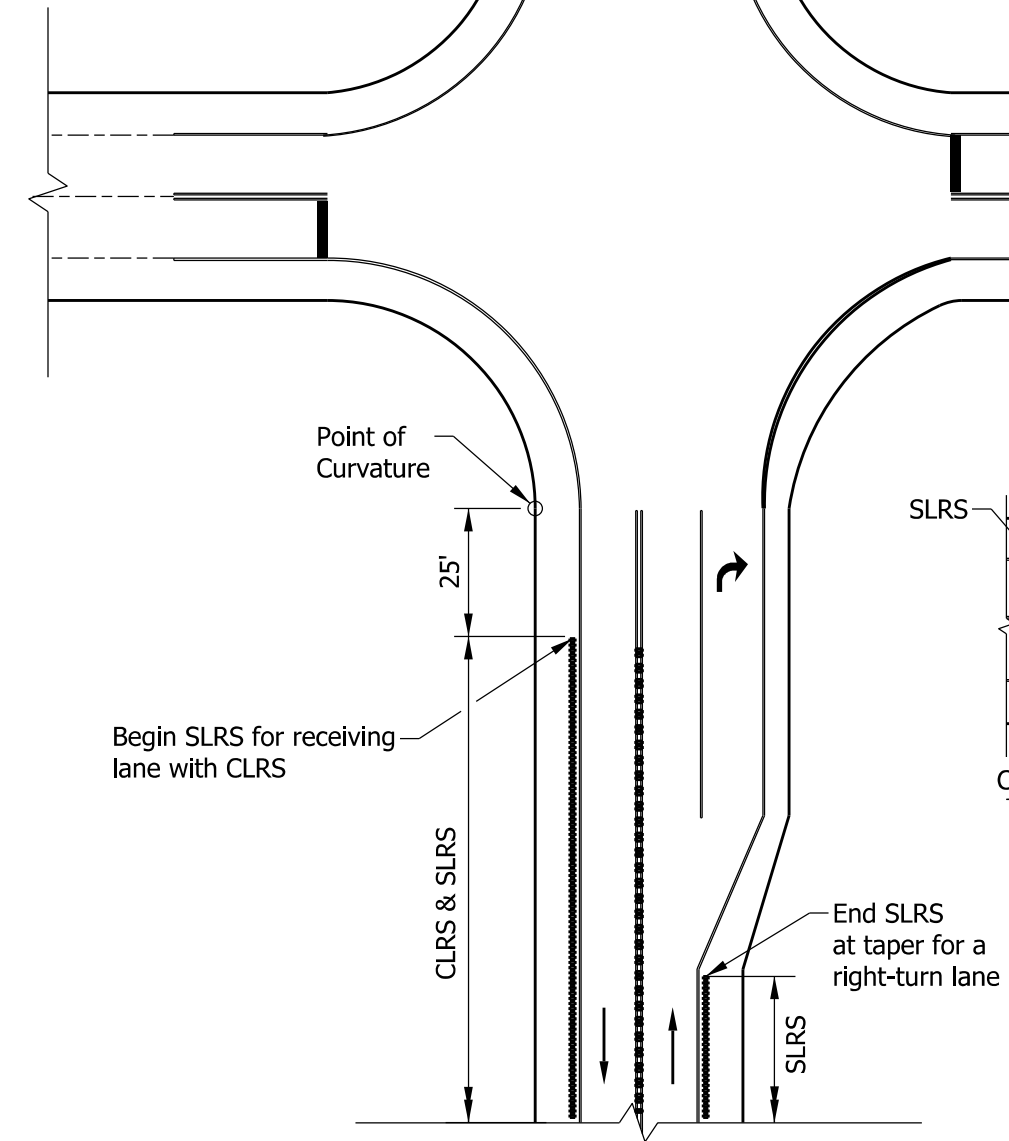


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BREAK NEAR A RAILROAD CROSSING



BREAK NEAR A COMMERCIAL OR INDUSTRIAL DRIVEWAY

BREAK NEAR AN INTERSECTION

NOTES:

1. See Standard Drawing E 606-SHCG-07 for centerline corrugation pattern details and Standard Drawing E 606-SHCG-10 for shoulder rumble strip corrugation pattern details.
- ② Rumble strip shall begin or end at the stop bar location.
- ③ Rumble strip shall be continued through driveway access points for minor driveways.
- ④ Gap is 15 ft for a railroad crossing without gates or signals and 25 ft for railroad crossing with gates or signals.
5. For a bridge deck, end corrugations a maximum of 5 ft and a minimum of 6 in. before an approach slab and begin corrugations a minimum of 6 in. and a maximum of 5 ft after the approach slab on the other side of the bridge deck.
- ⑥ End SLRS 400 ft from point of curvature on approach lane if there is no right-turn lane and the paved shoulder width is 8 ft or greater.

KEY:

CLRS = Centerline Longitudinal Rumble Stripe
 SLRS = Shoulder Longitudinal Rumble Strip

INDIANA DEPARTMENT OF TRANSPORTATION	
RUMBLE STRIP LIMITS: NEAR AN INTERSECTION, DRIVE, BRIDGE, OR RAILROAD SEPTEMBER 2019	
STANDARD DRAWING NO. E 606-SHCG-11	
	<p style="text-align: right;"><i>David H. Boruff</i> 5/21/19 DESIGN STANDARDS ENGINEER DATE</p> <p style="text-align: right;"><i>[Signature]</i> 6/03/2019 CHIEF ENGINEER DATE</p>