
Index 521-001 Concrete Barrier

ORIGINATION

Date: 07/21/22

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COMMENTARY

Miscellaneous clarifications were made based on District questions and feedback, described above.

The Structures Design Office determined that General Surface Finish was more appropriate for roadside Concrete Barriers, so this change was made in General Note 1.

To allow for more design flexibility when using symmetrical Median Barriers, a "Minor Grade Separation" option is being added per Sheet 2, Note 5. This allows for the shoulder pavement on one side of the barrier to be up to 2 inches lower without changes to the basic barrier shape.

COMMENTS AND RESPONSES

BLACK = Industry Review Comments **BLUE** = Standard Plans Response **GREEN** = Change Made to Index

Name: Carnot Evans

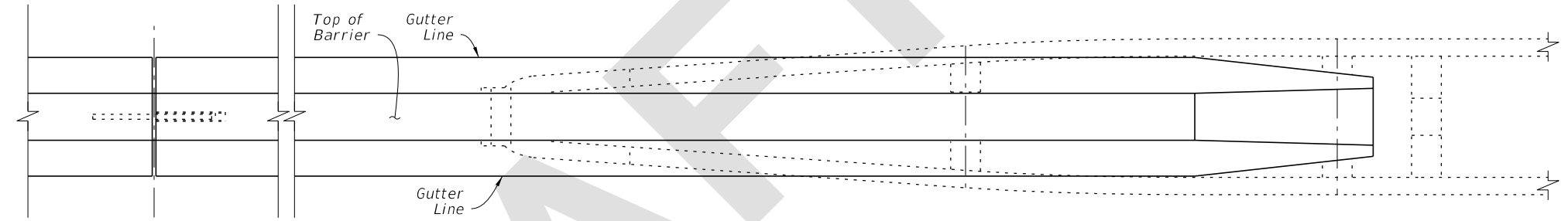
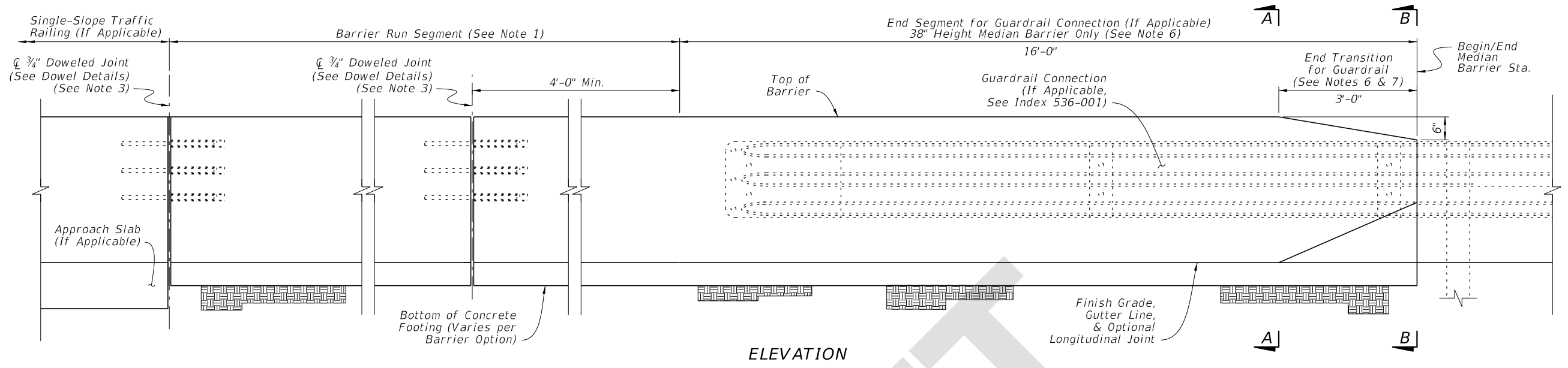
Date: 8/17/22

COMMENT: Sheet 2, Note 5 for Minor Grade Separation: Given that the normal symmetrical foundation is 6" below top of pavement, lowering one side of the pavement would still have 4" below that top of pavement. So is that second sentence only referring to the details on sheets 6-9 regarding barrier transitions for sign structures? Is that suggesting that for those areas with less than 2" of pavement difference we could use that standard detail with only 1" embedment?

RESPONSE: The first interpretation was correct. The note's second sentence begins with, "If applicable for variable section width barriers". This means that the sentence applies to the "variable section width barriers" on Sheets 6-9 that would require deepening to remain embedded at least 1". The stationing limits for "variable section width" are called out in the elevation views on Sheets 6-9, and these correspond to the same Pay Item name. That said, this new note will be changed to specifically mention Sheets 6-9 to further clarify

CHANGE MADE TO INDEX: Updated Sheet 2, Note 5.

Response Date: 8/19/22



ELEVATION

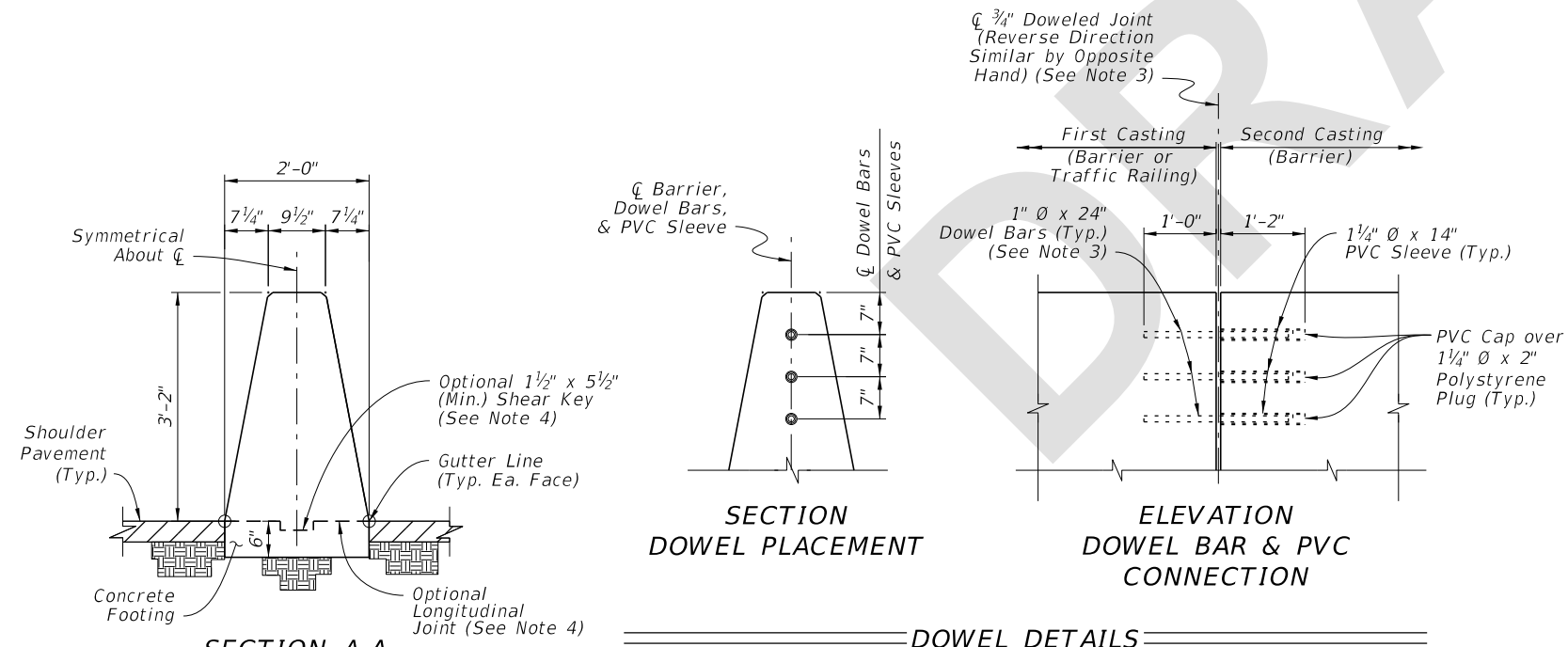
PLAN

MEDIAN BARRIER NOTES:

- BARRIER RUN SEGMENT:** Within the Barrier Run Segment, either the 38" Height Median Barrier or the differing Median Barrier sections shown throughout the Index may be placed as required per the Plans.
- SECTION VIEWS:** For additional Views A-A and B-B, see Sheet 3.
- DOWELED JOINTS:** See the General Notes on Sheet 1 for usage of joint types. Place Doweled Joints at 100-foot maximum intervals. Place steel reinforcing with a longitudinal 3" cover adjacent to the joint face(s) in the barrier. Use ASTM A36 smooth round bars with hot-dip galvanization.

For the dowel connection into the first casting, the dowel may be cast-in-place for new concrete or placed into a 1 1/8" x 13" (± 1/2") drilled hole for cured concrete. For drilled holes larger than 1 1/8", secure the dowel with adhesive in accordance with Specification 416. No load testing is required.

For the dowel connection into the second casting, use a 1 1/4" NPS Schedule 80 PVC pipe with a sealed cap, cast-in-place as shown.
- OPTIONAL LONGITUDINAL JOINT:** When a longitudinal joint is placed above the footing, use the Optional 1 1/2" x 5 1/2" Shear Key shown. As a substitute for the Shear Key, the concrete footing's top surface may be raked to provide additional shear friction. Rake the fresh concrete surface so that about half of the surface area consists of approximately 1/4" depth longitudinal grooves, distributed evenly and approved by the Engineer.
- MINOR GRADE SEPARATIONS:** Where called for in the Plans, the nominal shoulder pavement surface elevation may be placed 2" below the location shown herein on one side of the barrier. For barriers with shallow embedments shown on Sheets 6 thru 9, extend the barrier's concrete lower across its entire section such that the barrier's concrete bottom remains embedded at least 1" below the lowered pavement surface.
- GUARDRAIL CONNECTIONS:** Connect Guardrail using the Transition Connections to Rigid Barrier per Index 536-001 in conjunction with the 16'-0" End Segment for Guardrail shown herein.
- CRASH CUSHION CONNECTIONS:** Connect Crash Cushions per Index 544-001 in conjunction with the 3'-0" End Transition for Guardrail as shown herein.
- FREE ENDS:** When the barrier end does not terminate with a Traffic Railing Connection, Guardrail Connection, Crash Cushion Connection, or Sloped End Treatment as called for in the Plans, terminate in accordance with the Free End Reinforcing detail on Sheet 3.



SECTION A-A
38" HEIGHT MEDIAN BARRIER
(See Sheet 3 for Steel Reinforcing Details)


SECTION DOWEL PLACEMENT

ELEVATION DOWEL BAR & PVC CONNECTION

DOWEL DETAILS

8/23/2022 10:00:45 AM

MEDIAN BARRIER

LAST REVISION 11/01/22	REVISION	DESCRIPTION:	 FY 2023-24 STANDARD PLANS	CONCRETE BARRIER	INDEX 521-001	SHEET 2 of 26
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