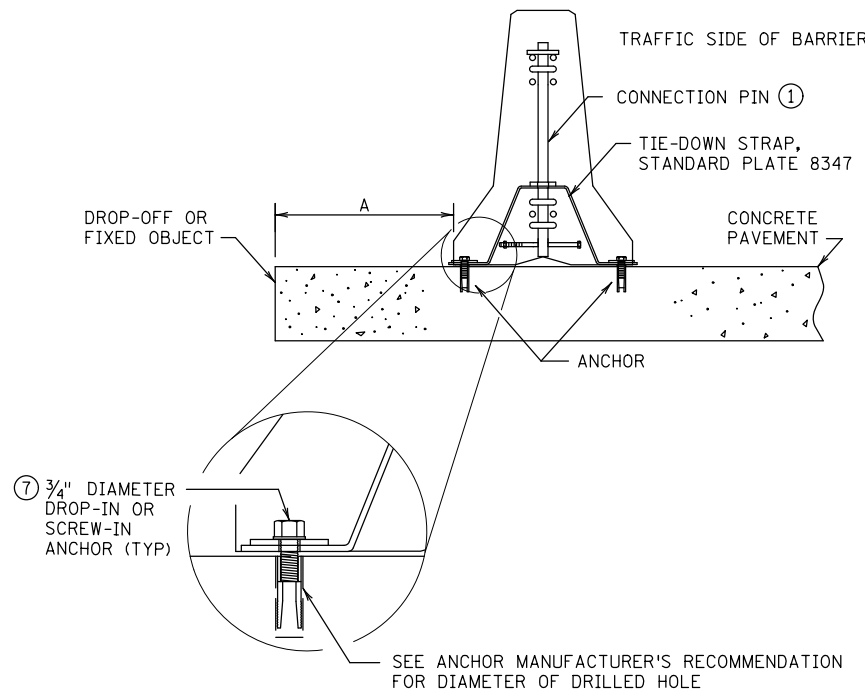
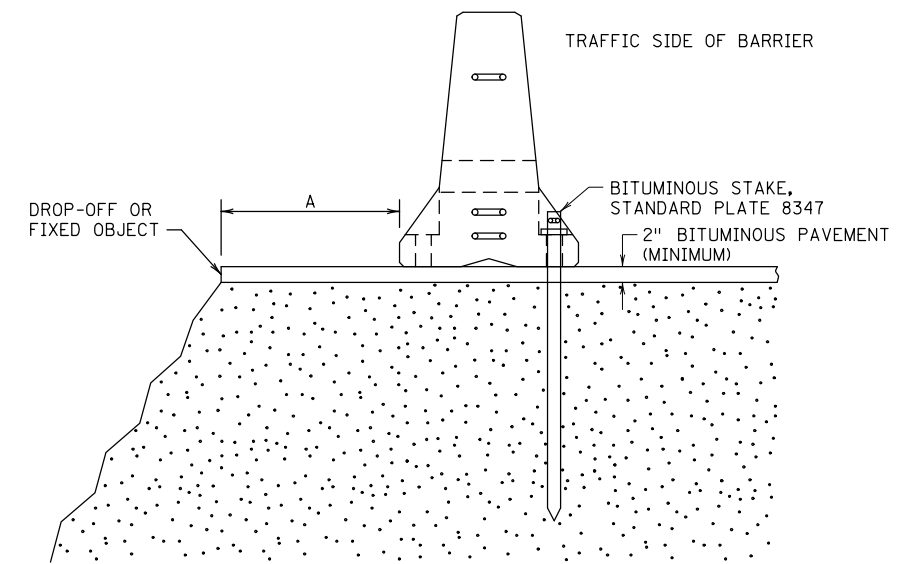


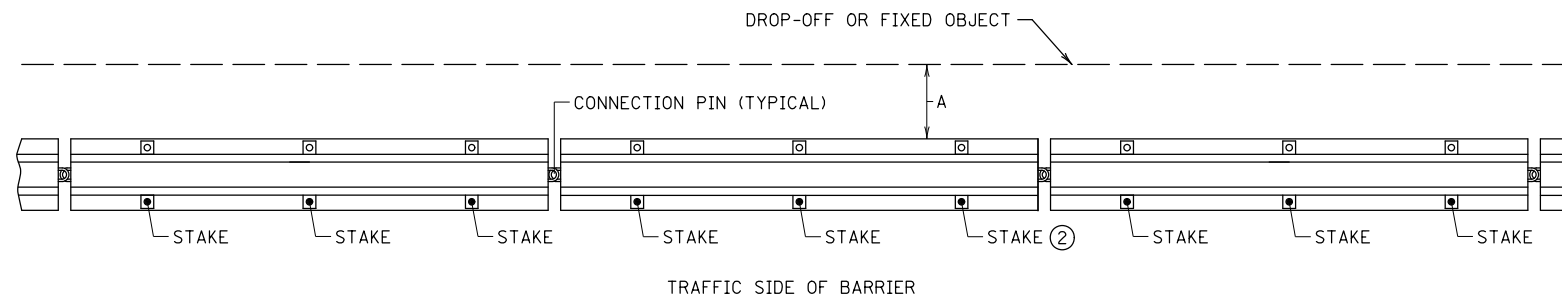
APPROACH PANEL BOLT-DOWN ANCHOR



TIE-DOWN STRAP ANCHOR ⑧



BITUMINOUS ANCHORAGE

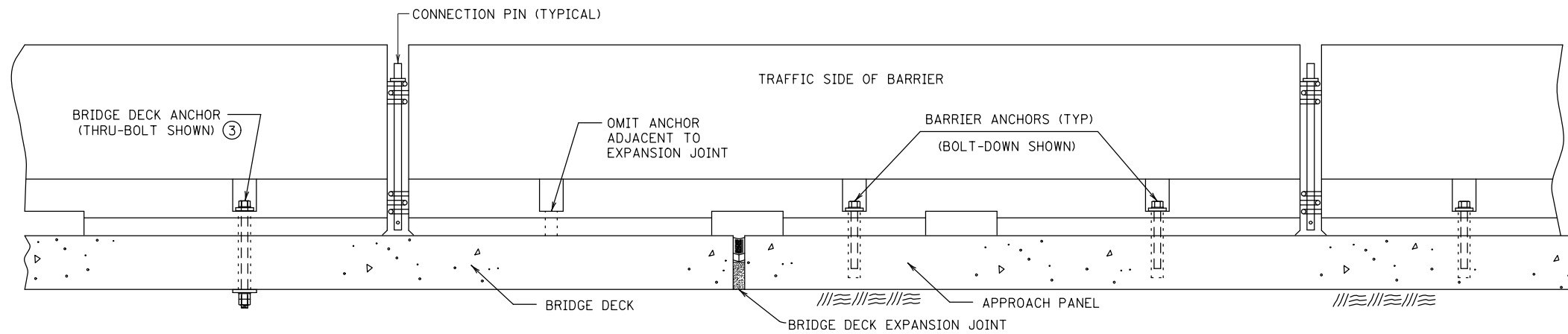


BITUMINOUS ANCHORAGE

POSTED SPEED LIMIT	MINIMUM REQUIRED DEFLECTION DISTANCE (A) BEHIND ANCHORED PORTABLE CONCRETE BARRIER				FIXED OBJECTS ⑥
	LONGITUDINAL DROP-OFF DEPTH				
	<1'	1'-3'	>3'-8'	EDGES OF BRIDGES AND DROP-OFFS >8'	
≤30 MPH	④	④	0.5'	0.5'	0.5'
35-50 MPH	0.5'	0.5'	1.0'	1.5' (2.0' ⑤⑧)	1.5' (2.0' ⑤)
≥55 MPH	0.5'	1.0'	2.0'	2.0' (4.0' ⑤⑧)	2.0' (4.0' ⑤)

NOTES:

- BARRIER SECTIONS SHALL NOT BE PERMANENTLY INCORPORATED INTO CONSTRUCTION OR MAINTENANCE PROJECTS.
- A DROP-OFF IS CONSIDERED A SLOPE STEEPER THAN 1(V):3(H).
- FIXED OBJECTS ARE HAZARDS THAT ARE FIRM, UNYIELDING, AND GREATER THAN 4 INCHES IN HEIGHT.
- ALL BARRIERS ARE DESIGN 8337 AND SHALL HAVE CONNECTION PINS. SEE STANDARD PLATE 8337.
- ① RETAINER BOLT AND NUT REQUIRED. SEE STANDARD PLATE 8337 FOR DETAILS.
- ② 3 STAKES REQUIRED PER BARRIER SECTION, PLACED ON TRAFFIC SIDE OF BARRIER.
- ③ REFER TO MnDOT BRIDGE STANDARD DETAIL B920 FOR ANCHORING BARRIER ONTO BRIDGE.
- ④ BARRIER NOT REQUIRED FOR DROP-OFF PROTECTION.
- ⑤ DEFLECTION DISTANCE FOR TIE-DOWN STRAP ANCHOR SYSTEM.
- ⑥ IF THE FIXED OBJECT IS ≥1.5' BEYOND INPLACE CURB AND THE POSTED SPEED IS ≤35 MPH, TEMPORARY BARRIER IS OPTIONAL.
- ⑦ SEE SPEC. 2533.
- ⑧ TIE-DOWN STRAP ANCHOR IS NOT TO BE USED ON BRIDGE DECKS.



ANCHOR TREATMENT AT BRIDGE DECK EXPANSION JOINT (EXPANSION LESS THAN 1 1/2")

REVISION:

APPROVED: JULY 16, 2019

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NANCY YOO
DESIGN SUPPORT DIRECTOR
OFFICE OF PROJECT MANAGEMENT & TECHNICAL SUPPORT

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DEPARTMENT OF TRANSPORTATION

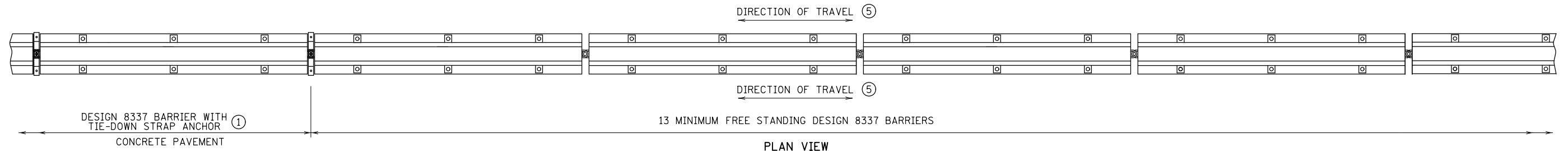
STANDARD PLAN 5-297.680 1 OF 2

Tom Styrbicki
THOMAS STYRBICKI
STATE DESIGN ENGINEER

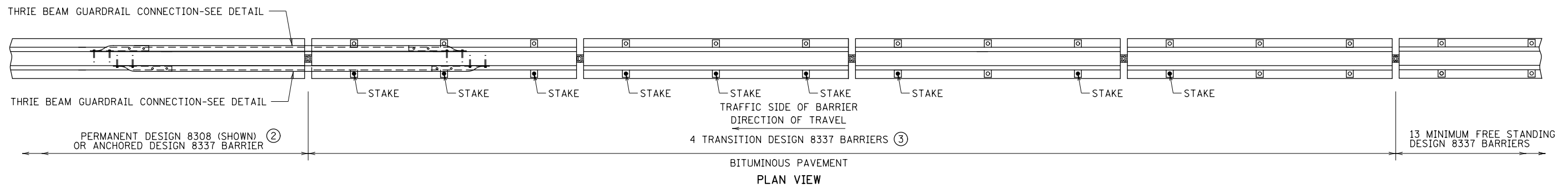
APPROVED: 7-16-2019
REVISED:

STATE PROJ. NO. (T.H.) SHEET NO. OF SHEETS

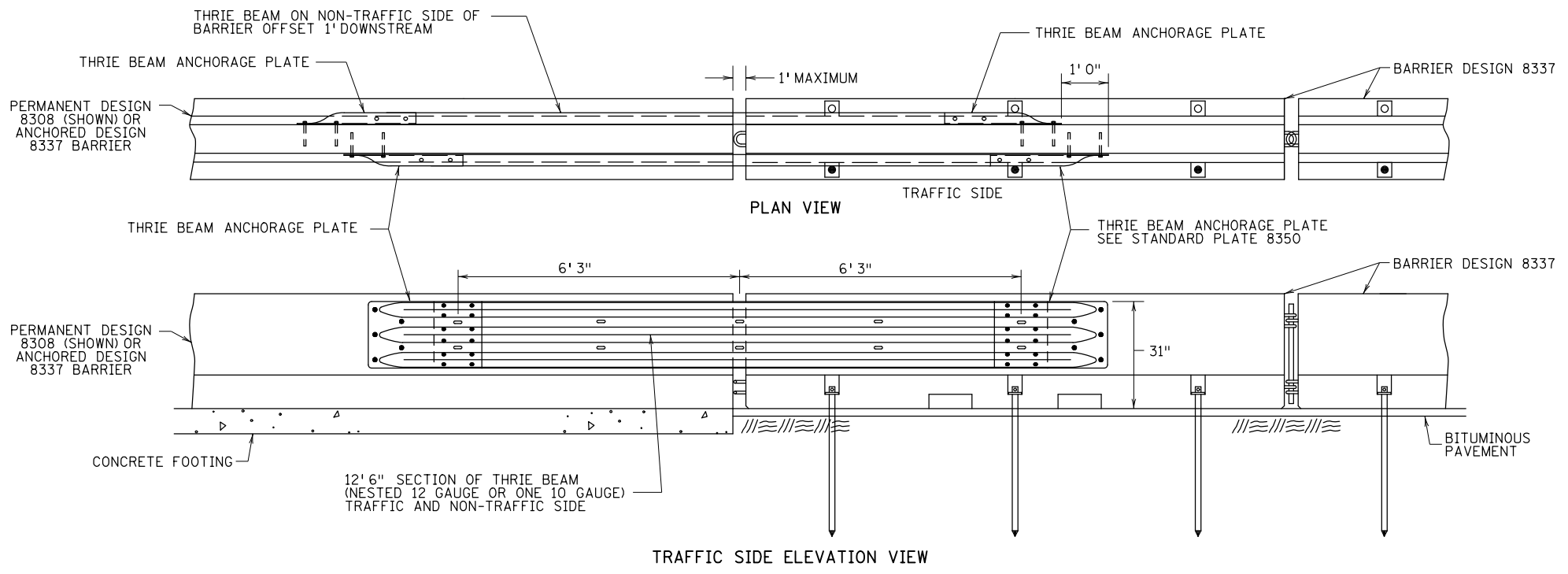
TEMPORARY PORTABLE PRECAST CONCRETE BARRIER ANCHORING



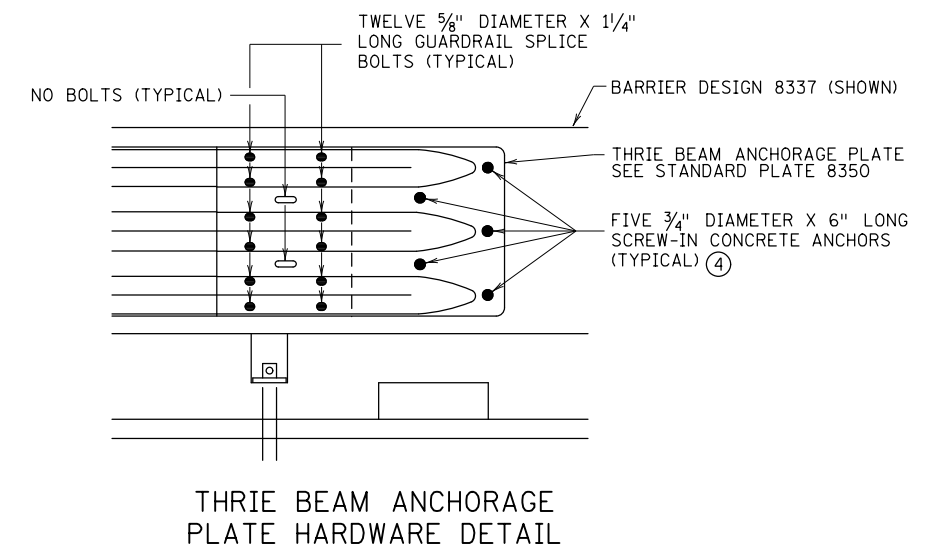
PLAN VIEW
TRANSITION FROM FREE-STANDING BARRIER TO TIE-DOWN STRAP-ANCHORED BARRIER



PLAN VIEW
TRANSITION FROM FREE-STANDING BARRIER TO PERMANENT BARRIER DESIGN 8308 OR ANCHORED PORTABLE BARRIER DESIGN 8337



TRAFFIC SIDE ELEVATION VIEW
THRIE BEAM GUARDRAIL CONNECTION DETAIL



- NOTES:
- BARRIER SECTIONS SHALL NOT BE PERMANENTLY INCORPORATED INTO CONSTRUCTION OR MAINTENANCE PROJECTS.
 - CONNECTION PINS REQUIRED WITH ALL DESIGN 8337 BARRIERS.
 - THRIE BEAM SHALL CONFORM TO AASHTO M 180.
 - ① WHEN FREE-STANDING BARRIERS CONNECT TO TIE-DOWN STRAP-ANCHORED BARRIERS, TRANSITION BARRIERS AND THRIE BEAM CONNECTION NOT REQUIRED.
 - ② THRIE BEAM GUARDRAIL CONNECTION REQUIRED BETWEEN TRANSITION BARRIERS AND PERMANENT OR ANCHORED BARRIERS.
 - ③ TRANSITION BARRIERS REQUIRED BETWEEN FREE-STANDING DESIGN 8337 BARRIERS AND PERMANENT OR ANCHORED BARRIERS.
 - ④ REINFORCEMENT STEEL WITHIN BARRIER SHALL NOT BE DISTURBED WHEN ANCHORS ARE PLACED.
 - ⑤ TIE-DOWN STRAP-ANCHORED BARRIER IS SUITABLE FOR BOTH UNIDIRECTIONAL AND BIDIRECTIONAL TRAFFIC.

REVISION:
APPROVED: JULY 16, 2019
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m MINNESOTA
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STANDARD PLAN 5-297.680
2 OF 2
Tom Styrbicki
THOMAS STYRBICKI
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TEMPORARY PORTABLE PRECAST CONCRETE BARRIER ANCHORING TRANSITION SYSTEMS