



ALABAMA DEPARTMENT OF TRANSPORTATION CONSTRUCTION BUREAU

1409 Coliseum Boulevard, Montgomery, Alabama 36110
P. O. Box 303050, Montgomery, Alabama 36130-3050
Phone: 334-242-6218 FAX: 334-264-3727



Kay Ivey
Governor

John R. Cooper
Transportation Director

July 27, 2020

Construction Information Memorandum No. 4 - 2020

TO: Region Engineers

ATTN: Area Operations, Construction, Materials, and Local Transportation Engineers

FROM: Winston J. Powe, PE 
State Construction Engineer

RE: Revision of Special Project Detail 325 Guardrail Height Adjustment
Pay Item 631C Guardrail Reset

Along with the attached July 17, 2020 emails, the Design Bureau distributed a revised version of Special Project Detail 325 with changes and clarifications related to guardrail height adjustment. A detailed drawing of the Mondo GB14SH1 composite guardrail blockout was also distributed.

Please note the following changes and points of emphasis:

- 1) Currently, the only composite blockout approved for use with the resetting of guardrail is the Mondo GB14SH1, which is shown in List II-17 of the MSDSAR Manual under the new heading **MASH TL3 Adjustable Height Compliant**. New wood blockouts are also MASH compliant.
- 2) Only one bolt is required to attach guardrail at each post. The previous drawing showed two bolts per blockout for the 4" adjustment. Only one bolt was intended to have gone through the rail.
- 3) Existing hardware (bolts, nuts, washers) may be used if in good condition, as determined by the Engineer.

The revised drawing is applicable to all on-going projects. These drawing revisions will not result in any additional work or materials; therefore, no cost increase will be due to the Contractor.

Please insure that your inspectors are aware of this guidance in this CIM and the related drawing revision.

WJP/JLB/jlb

Attachments (July 17, 2020 emails, Special Project Detail 325, Mondo Blockout drawing, List 11-17)

pc: Mr. George Conner, PE	Mr. Don Arkle, PE	Mr. William Adams, PE
Mr. Scott George, PE	Mr. Stacey Glass, PE	Mr. Steve Walker, PE
Mr. Terry McDuffie, PE	Mr. Ed Phillips, PE	Mr. Clay McBrien, PE
FHWA	ARBA	AAPA
ALBCA	ACIA	ACEA

CIM File

Benefield, Jeff

From: Welch, David
Sent:  Friday, July 17, 2020 8:39 AM
To: Beaird, Paul B.; Benefield, Jeff; Clark, Martin M.; Harry, Andrew O.; Nichols, Bryan E.; Sanford, Adam; Sean (FHWA); Thomas, Joe; ACESS; AECOM; Steven Schwantes; Keith Kelley; Gregg Bissot; AECOM; ARCADIS; ARCADIS; Atkins; Atkins; Atkins; McCullough, Andrew; Westbrook, William Z.; Barge Design Solutions; Barge, Waggoner, Sumner, and Cannon; Mark Eckert; Bhate Engineering; Clay Randolph; Burk-Kleinpeter; Burk-Kleinpeter; Burk-Kleinpeter; Burk-Kleinpeter; Carr & Associates; CDG Engineers; CDG Engineers; CDG Engineers; CDG Engineers; City of Tuscaloosa; Driven Engineering; Driven Engineering; Pendley, Daniel; Figg Engineering; Garver Engineers; Garver Engineers; Doug Peterson; Gonzalez-Strength & Associates; Goodwyn, Mills, and Cawood; Goodwyn, Mills, and Cawood; Goodwyn, Mills, and Cawood; Goodwyn, Mills, and Cawood; Goodwyn, Mills, and Cawood; Gresham Smith; Gresham Smith; Brian Hynniman; Hydro-Engineering Solutions; Jacobs; Jones, Blair, Waldrup, and Tucker; Jones, Blair, Waldrup, and Tucker; Jones, Blair, Waldrup, and Tucker; Lanier Environmental Consultants; Long Engineering; Long Engineering; Long Engineering; Long Engineering; Long Engineering; Lowe Engineering; McCrory & Williams; Metric Engineering; Metric Engineering; Metric Engineering; Michael Baker; jbmiller; Michael Baker; Neel-Schaffer; Neel-Schaffer; Neel-Schaffer; Bob Portera; Neel-Schaffer; Neel-Schaffer; Neel-Schaffer; Palmer Engineering; Polyengineering; Sain; Jim Meads; Stantec; The Cassady Company; Moore, Gary; TTL; TTL; Rob Vermillion; Volkert; Volkert & Associates; Volkert and Associates; Wm. Barry Robinson, Architect; Colquett, Tim; Glass, Stacey; McBrien, Clay; McDuffie, Terry; Phillips, Ed; Powe, Skip; Shamburger, Philip; Walker, Steve; Benifield, Waymon; Biddick, Stan; Clay, Natasha; Franklin, Nicholas D.; Henry, Wade D; Ingram, Brian; Merchant, Latasha R.; Moore, Gary; Rogers, Scott; Scott, Darren; Stoudenmire, Taylor; Walker, John M.; Welch, David; Brown, James; Ericksen, Matthew; Graben, Steven; Leonard, Dejarvis; Vincent, Curtis; Ashmore, Tyler; Corley, Steven; Darden, Stephan B.; Ellis, Rodney E.; Haynes, Steve; Kemp, David; Kervin, Joshua W.; Miller, S. Blake; Perry, Edwin L.; Teague, Allen
Subject: FW: Guardrail Height Adjustment
Attachments: SPD_0325_071620.pdf; GB14SH1.pdf

Ladies and Gentlemen,

I was in error in 2a) below, the replacement of blocks is to be included in the reset pay item. See note 9 in the drawing.

ALSO, due to the critical nature of these changes, **this drawing is to be effective immediately.**

*David J. Welch, P.E.
Design Services Engineer
ALDOT, Design Bureau
334-242-6842*

From: Welch, David
Sent:  Friday, July 17, 2020 7:58 AM
To:
Subject: Guardrail Height Adjustment

Ladies and Gentlemen,

The Special Project Detail for Guardrail Height Adjustment has been revised. There were several inconsistencies and unclear language that has now been updated. Things to note are:

- 1) The original blockouts on an installation can only be retained if they are wood or Mondo composite. All other types (including King composite and steel) MUST be replaced as part of the raising. I have attached the manufacturer's details for one of the Mondo blocks for your reference.
- 2) The designer needs to be VERY clear in the box sheet what is required as part of the raising. This includes, but is not limited to:
 - a. Block Replacement (paid separately from the raising)
 - b. What height is being raised (this will affect which holes are to be drilled, see (3) below).
- 3) There is only one bolt required for the raising, therefore the drawing has been revised to show only one series of new holes in the guardrail post, and then only the holes that are needed (either at the 2" raising level or the 4", but not both). The required bolt can be the original bolt if it is serviceable.
- 4) This drawing reflects the requirements for raising guardrail in accordance with a system MASH crash-tested and compliant. ANY change to this drawing will render the system as NON-MASH compliant.

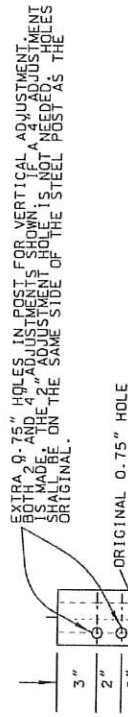
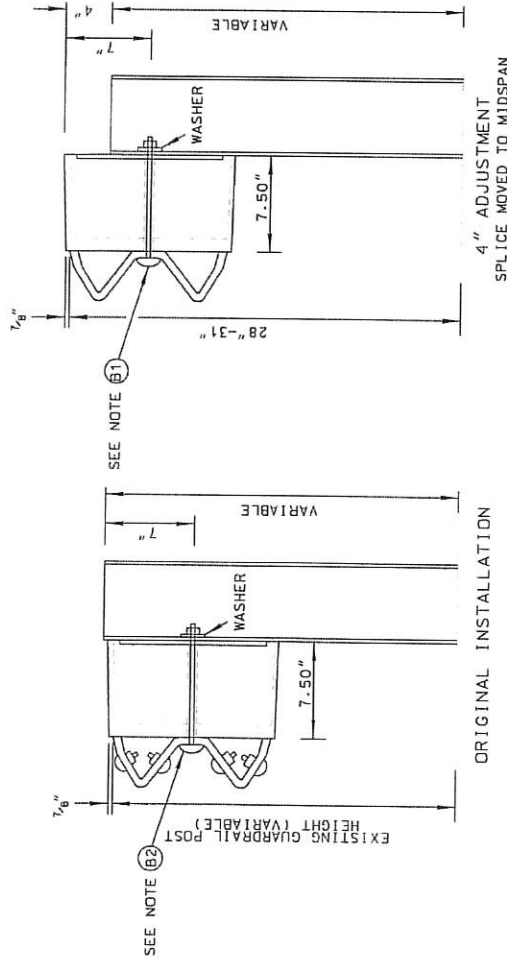
As always if you have questions, PLEASE ask. MASH has greatly changed the rules of what is acceptable and what isn't.

David J. Welch, P.E.
Design Services Engineer
ALDOT, Design Bureau
334-242-6842

GUARDRAIL HEIGHT ADJUSTMENT (USING ADJUSTMENT HOLES)

THIS DRAWING IS TO BE USED FOR RESURFACING, MAINTENANCE, AND
BRIDGE REPAIR PROJECTS ONLY. THIS DRAWING IS NOT INTENDED TO
BE USED FOR NEW CONSTRUCTION PROJECTS.

REFERENCE PROJECT NO.	FISCAL YEAR	SHEET NO.



GUARDRAIL HEIGHT ADJUSTMENT TABLE		
EXISTING HEIGHT	ADJUSTMENT	FINAL
24"	4"	28"
25"	4"	29"
26"	4"	30"

ADJUSTABLE STEEL POSTS AND BLOCK-OUTS

GENERAL NOTES

- SEE STANDARD DRAWING GR-630-S, SHEETS 1.2 & 3 FOR ADDITIONAL POST DETAILS AND SPECIFICATIONS.
- THE STEEL POST SHOWN ON THIS SHEET MAY BE USED WITH WOOD OR COMPOSITE BLOCKOUTS.
- ONLY COMPOSITE OR WOOD GUARDRAIL BLOCK-OUTS LISTED ON THE ALABAMA DEPARTMENT OF TRANSPORTATION'S QUALIFIED PRODUCT LIST AS APPROVED FOR GUARDRAIL HEIGHT ADJUSTMENT SHALL BE USED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CHANGE THE BLOCK-OUT TYPE ON A GIVEN PROJECT. THE COMPOSITE BLOCK-OUT BRAND TYPE SHOULD NOT BE MIXED ON A GIVEN RUN OF GUARDRAIL.
- UP TO 4" BLOCKOUT ADJUSTMENTS HAVE BEEN EVALUATED UNDER MASH TL-3.
- IF EXISTING POSTS DO NOT HAVE PUNCHED HOLES, INDICATE IN THE REMARKS COLUMN ON THE GUARDRAIL SUMMARY BOX. THE CONTRACTOR SHALL FIELD PUNCH OR DRILL THE POSTS FOR A 4" ADJUSTMENT.
- NO STEEL BLOCKOUTS MAY BE RETAINED ON ADJUSTED GUARDRAIL. WOOD AND COMPOSITE BLOCKOUTS MAY BE USED. COMPOSITE BLOCKOUTS MUST BE TESTED FOR HEIGHT ADJUSTMENT AS SHOWN ON THE QUALIFIED PRODUCTS LIST.
- ALL PUNCHED OR DRILLED HOLES ON RAILS OR POSTS WILL BE FIELD GALVANIZED AS PER ARTICLE 631 IN THE ALDOT SPECIFICATIONS.
- GUARDRAIL RESET ITEM 631C-XXX, LF, SHALL INCLUDE RAISING THE RAIL 2" OR 4", CHANGING THE BLOCKOUTS TO THE NEW HEIGHT, MOVING THE SPLICE TO MIDSPAN, PUNCHING OR DRILLING NEW HOLES IN THE RAIL, PUNCHING OR DRILLING NEW HOLES IN THE POST IF REQUIRED, AND THE TRANSITION AS SHOWN ON STD DWG GR-630-S (SHEET 2 OF 3).
- BLOCKOUTS REQUIRED FOR REPLACEMENT OF STEEL BLOCKOUTS OR REPLACEMENT OF COMPOSITE BLOCKOUTS NOT REQUIRED FOR HEIGHT ADJUSTMENT WILL BE PAID UNDER ITEM 631C.

INSTALLATION NOTES FOR BLOCK-OUTS WITH HORIZONTAL ADJUSTMENT HOLES

- THE 2" OR 4" ADJUSTMENT WILL REQUIRE ONE 5/8" DIAMETER X 10" LONG BUTTON HEAD BOLT. EACH BOLT WILL REQUIRE ONE ROUND STEEL WASHER.
- THE ORIGINAL BOLT, NUT, AND WASHER MAY BE USED IN THE ADJUSTMENT IF APPROVED BY THE ENGINEER.

ALABAMA DEPARTMENT OF TRANSPORTATION
DESIGN BUREAU SPECIAL DRAWING

THIS DRAWING, PREPARED BY THE ALABAMA DEPARTMENT OF TRANSPORTATION, IS TO BE USED FOR THE DESIGN OF THE GUARDRAIL HEIGHT ADJUSTMENT. IT IS NOT TO BE USED FOR ANY OTHER PURPOSE. ANY REVISIONS TO THIS DRAWING MUST BE APPROVED BY THE ALABAMA DEPARTMENT OF TRANSPORTATION. ANY REVISIONS TO THIS DRAWING MUST BE APPROVED BY THE ALABAMA DEPARTMENT OF TRANSPORTATION.

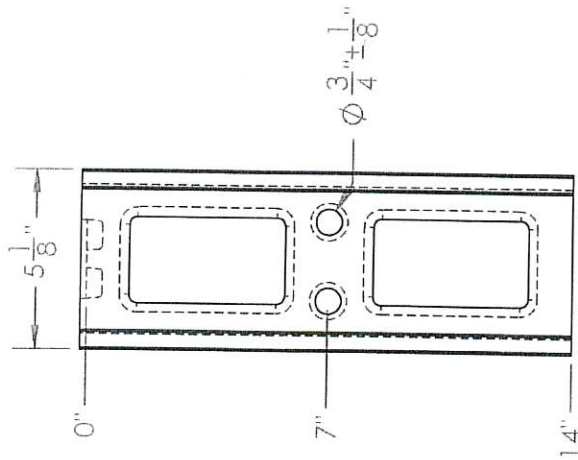
DESIGNED BY: [Signature]
 CHECKED BY: [Signature]
 DATE: [Date]

ALABAMA DEPARTMENT OF TRANSPORTATION
 DESIGN BUREAU
 1000 MONROE AVENUE, SUITE 1000
 MONTGOMERY, AL 36102-2000

PROJECT NO. [Blank]
 SPECIAL PROJECT DETAIL: [Blank]
 SHEET NO. 329

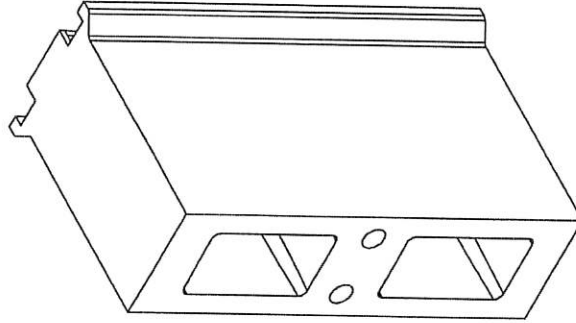
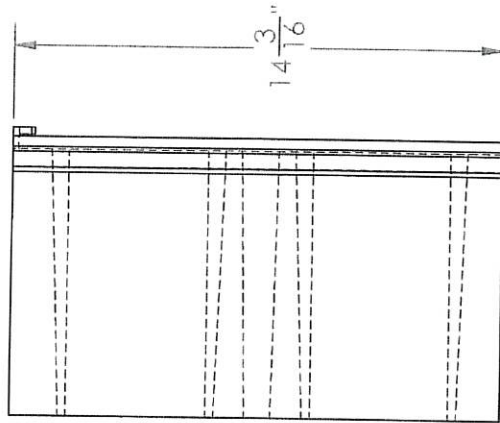
NOT TO SCALE

2

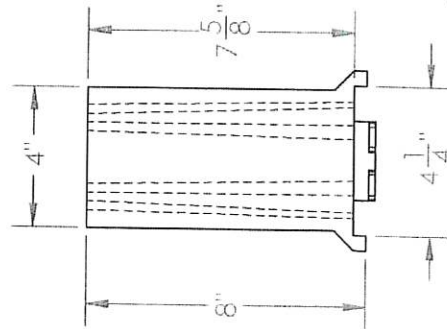


B

B



A



2

FHWA NCHRP 350
APPROVAL
HSA-10/B-39A

FHWA MASH ELIGIBILITY
HSST/B-39D

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS
DRAWING IS THE SOLE PROPERTY OF
MONDO POLYMER TECHNOLOGIES. ANY
REPRODUCTION IN PART OR AS A WHOLE
WITHOUT THE WRITTEN PERMISSION OF
MONDO POLYMER TECHNOLOGIES IS
PROHIBITED

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
BOLT HOLES $\pm 1/8"$
ALL OTHERS $\pm 1/4"$
RECYCLED THERMOPLASTIC
MATERIAL POLYOLEFIN

DRAWN
REVISION
COMMENTS:

NAME
RICK H

DATE
4/28/16

MONDO MODEL NO.
GB14SH(1)

SIZE DWG. NO. REV

A

SCALE: 1:5 SHEET 1 OF 1

1

GUARDRAIL AND ACCESSORIES PRODUCERS					
PRODUCER	ADDRESS	PEB #	PAY ITEM #	APPROVED DATE	Notes
SPIG INDUSTRY, INC.	14675 Industrial Park Road Bristol, VA 24202 276-644-9510 https://spigindustry.com/			7/6/2009	
TRINITY HIGHWAY PRODUCTS Plant 55	425 East O-Conner Ave. Lima, OH 45801 419-221-9101 https://trinityhighway.com/			2/5/1990	
TRINITY HIGHWAY PRODUCTS Plant 16	2548 Northeast 28th Street Ft. Worth, TX 76111 817-625-1173 https://trinityhighway.com/			2/5/1990	
TRINITY HIGHWAY PRODUCTS Plant 478	600 Prosperity Road Orangeburg, SC 29115 803-395-7045 https://trinityhighway.com/			5/5/2008	
GREGORY HIGHWAY PRODUCTS	4100 13th Street P O Box 80508 Canton, OH 44708 330-477-4800 https://www.gregorycorp.com/index.htm			8/1/1994	
R.G. STEEL CORPORATION	8301 Mercer Street Pulaski, PA 16143 724-656-1722 http://www.rgsteel.com/			9/25/2009	

POLYMER & COMPOSITE BLOCKOUTS *

MASH TL-3 COMPLIANT

PRODUCT	PRODUCER	PEB #	APPROVED DATE	Notes
MONDO 8" BLOCK GB14SH (1)	Mondo Polymers Technologies, Inc. 27620 State Route 7 North, Box 250 Reno, OH 45773 740-376-9396 https://www.mondopolymer.com/	1310	2/11/2019	
MONDO 8" BLOCK GB14SH (2)	Mondo Polymers Technologies, Inc. 27620 State Route 7 North, Box 250 Reno, OH 45773 740-376-9396 https://www.mondopolymer.com/	4900	2/11/2019	
MONDO 12" BLOCK MGS14SH	Mondo Polymers Technologies, Inc. 27620 State Route 7 North, Box 250 Reno, OH 45773 740-376-9396 https://www.mondopolymer.com/	4901	2/11/2019	

MASH TL-3 ADJUSTABLE HEIGHT COMPLIANT

PRODUCT	PRODUCER	PEB #	APPROVED DATE	Notes
MONDO 8" BLOCK GB14SH (1)	Mondo Polymers Technologies, Inc. 27620 State Route 7 North, Box 250 Reno, OH 45773 740-376-9396 https://www.mondopolymer.com/	1310	2/11/2019	

* Wood blockouts meeting AASHTO PDB01a-b are allowed.

POLYMER & COMPOSITE BLOCKOUTS *
NCHRP-350 COMPLIANT

PRODUCT	PRODUCER	APPROVED DATE	Notes
MONDO BLOCK	Mondo Polymers Technologies, Inc. 27620 State Route 7 North, Box 250 Reno, OH 45773 740-376-9396 https://www.mondopolymer.com/	5/5/2003	
TIMBEREX OFFSET BLOCKOUT	Mobile Chemical P O Box 5445 Norwalk, CT 06856	4/5/1993	
"CENTRAL" RECYCLE PLASTIC BLOCK	Central Fabricators P O Box 930 Kosciusko, MS 39090 662-289-2958	8/3/1998	
CAMCO PLASTIC BLOCKOUT	Camco, Inc. 1800 Greenbrier Road Anniston, AL 36207	5/8/2000	
VALLEY RUBBER 6" BLOCKOUT	Valley Rubber, LLC P O Box 1209 Hartselle, AL 35640 256-784-5231 https://www.valleyrubber.solutions/	1/2/2001	
VALLEY RUBBER 8" BLOCKOUT	Valley Rubber, LLC P O Box 1209 Hartselle, AL 35640 256-784-5231 https://www.valleyrubber.solutions/	4/2/2001	
KING BLOCK	Trinity Highway Products, LLC 2525 Stemmons Freeway Dallas, TX 75207 205-473-2664 https://trinityhighway.com/	1/7/2002	
POLYLUMBER PL5814R RECYCLED PLASTIC OFFSET BLOCK	Ramco International of Delaware, LLC P O Box 56 Imperial, PA 15126	1/6/2003	
MONROEVILLE 8" COMPOSITE OFFSET BLOCK	Monroeville Industrial Molding, Inc. 75 Ontario Street Norwalk, OH 44857	6/10/2009	
POLYLUMBER PLASTIC BLOCKOUT	Ramco International of Delaware, LLC p o box 9625 Pittsburg, PA 15226	2/6/2001	
* Wood blockouts meeting AASHTO PDB01a-b are allowed.			