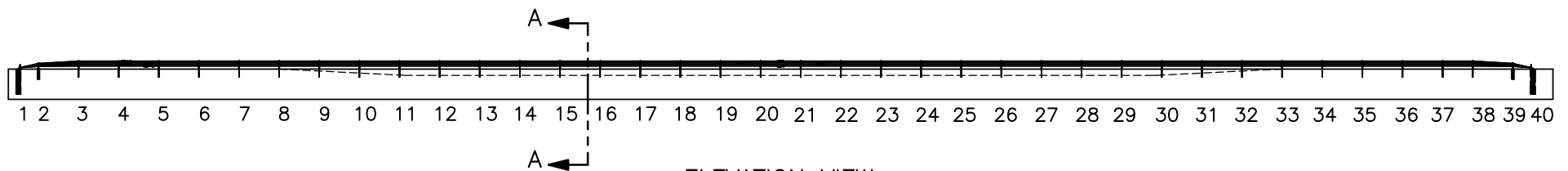
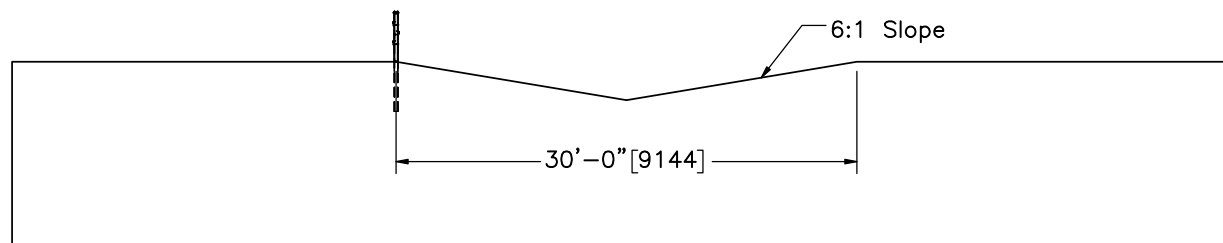


PLAN VIEW



ELEVATION VIEW



SECTION A-A  
SCALE 1:150

- Notes: (1) Test shall be performed according to test designation no. 3-17 using MASH 2016 criteria.  
 (2) The impact location is 96" [2438] upstream from post no. 17.  
 (3) At a minimum, critical post nos. 14-25 are placed in 18" [457] diameter hole backfilled and tamped in well compacted soil.  
 (4) Test cable tensions of  $2500 \pm 200$  lb [ $11.1 \pm 0.890$  kN].  
 (5) Bottom cable attached to line posts on impact side.  
 (6) System posts are centered on slope break point.



Midwest Roadside  
Safety Facility

Non-Proprietary Cable  
Median Barrier  
Test No. MTP-2

System Layout

DWG. NAME.  
MTP-2\_R6

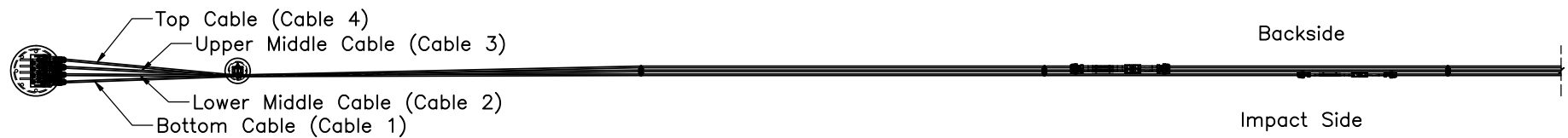
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UNITS: in.[mm]

SHEET:  
1 of 26

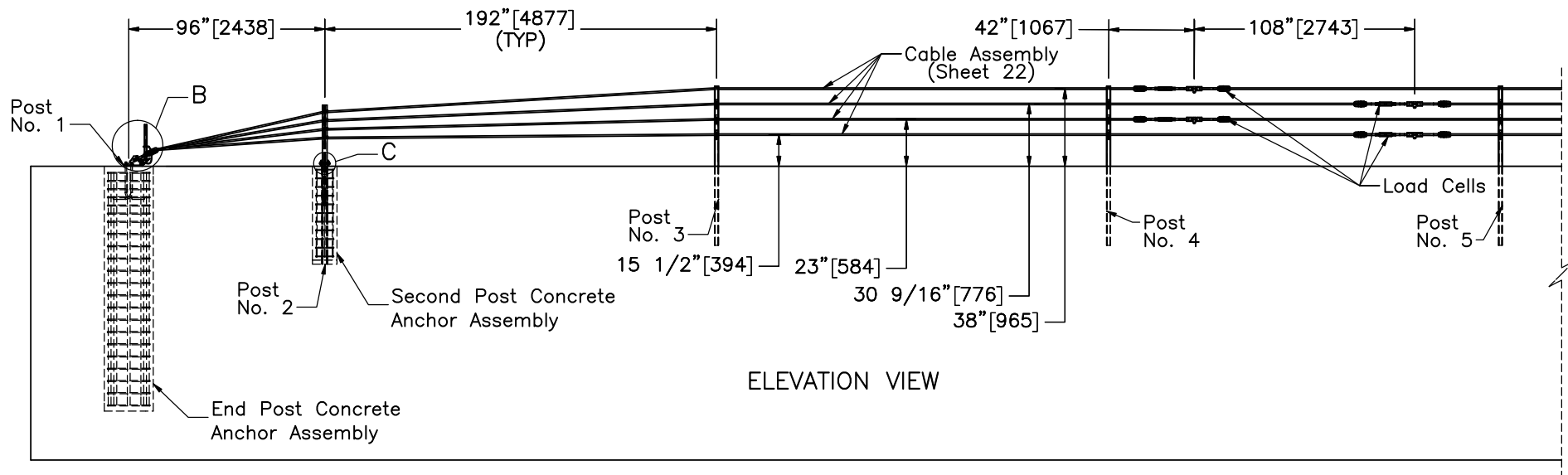
DATE:  
7/16/2019

DRAWN BY:  
DJW/JEK/JR  
D

REV. BY:  
KAL




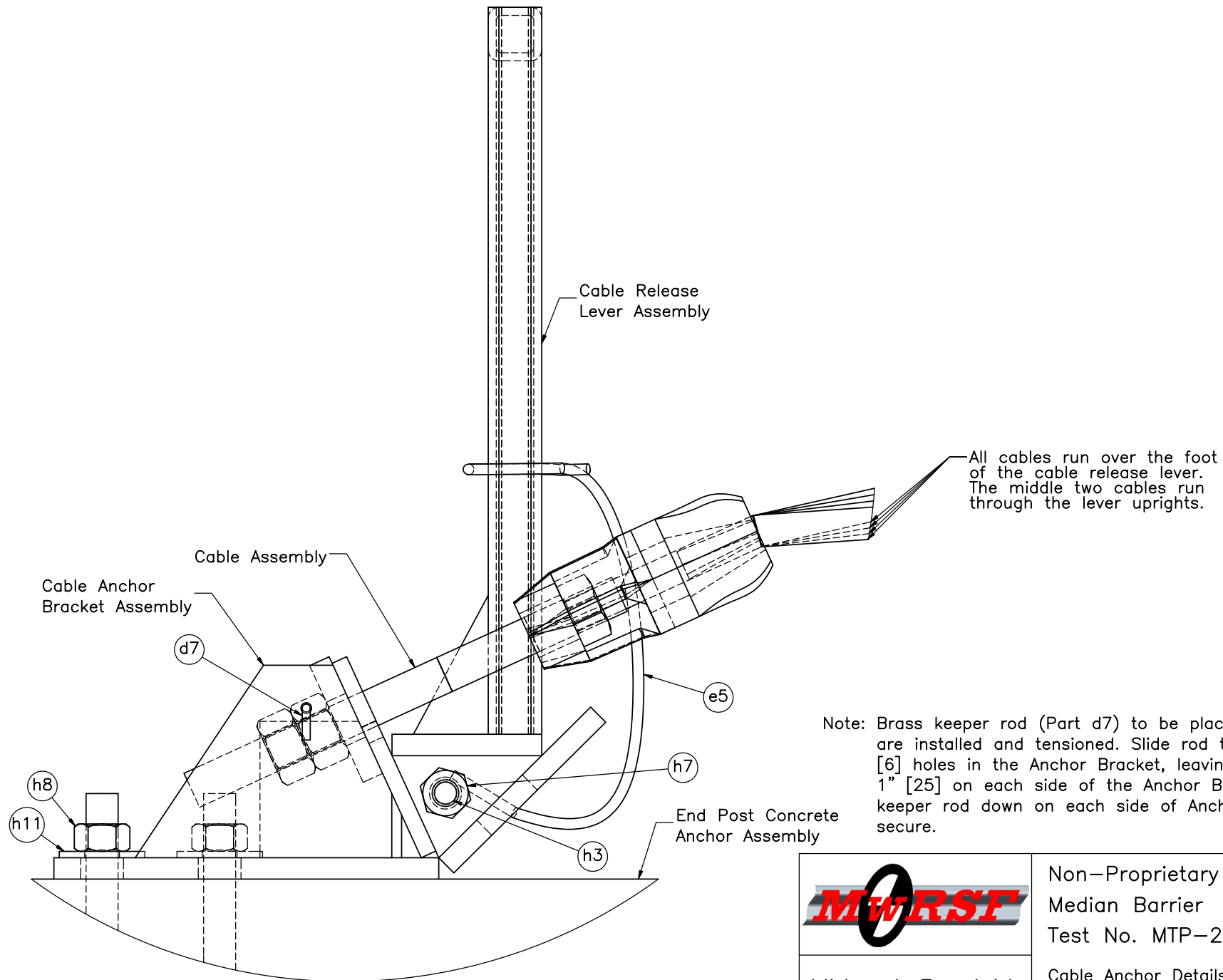
PLAN VIEW



ELEVATION VIEW

Notes: (1) Bottom cable attached to line posts on impact side.

	Non-Proprietary Cable Median Barrier Test No. MTP-2		SHEET: 2 of 26
	Cable Terminal Detail		DATE: 7/16/2019
Midwest Roadside Safety Facility	DWG. NAME: MTP-2_R6		DRAWN BY: DJW/JEK/JRD
	SCALE: 1:78 UNITS: in./mm		REV. BY: KAL



Note: Brass keeper rod (Part d7) to be placed after all cables are installed and tensioned. Slide rod through the 1/4" [6] holes in the Anchor Bracket, leaving a minimum of 1" [25] on each side of the Anchor Bracket. Bend brass keeper rod down on each side of Anchor Bracket to secure.

DETAIL B



Midwest Roadside  
Safety Facility

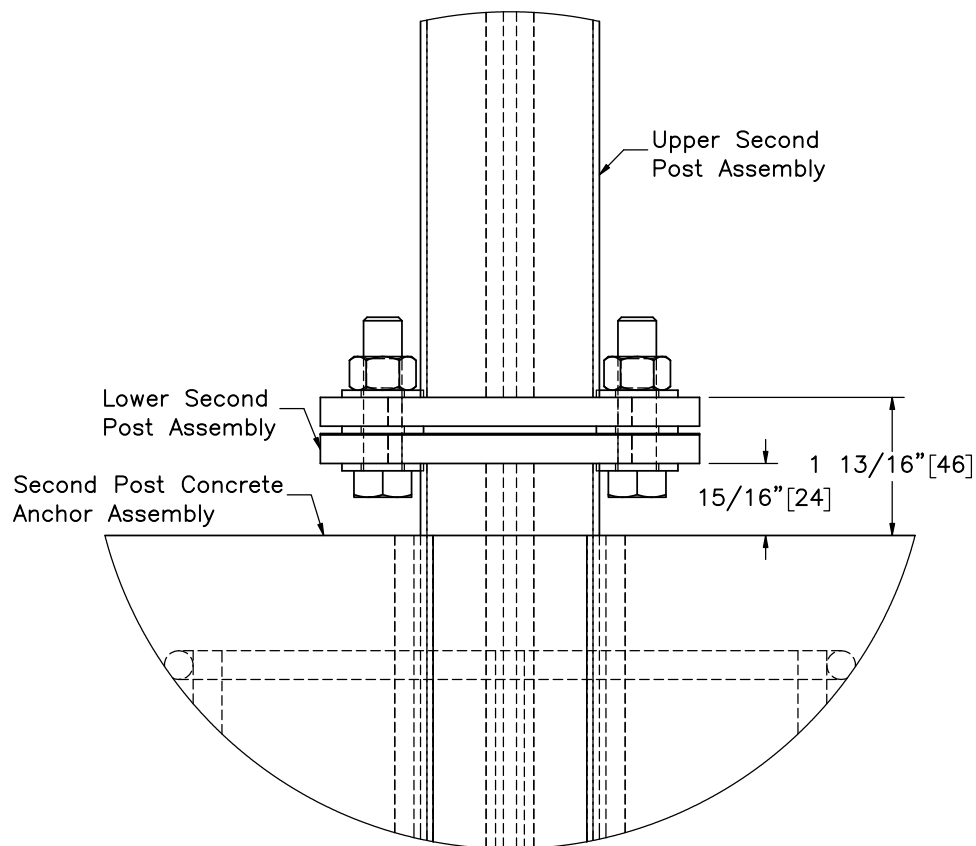
Non-Proprietary Cable  
Median Barrier  
Test No. MTP-2

Cable Anchor Details

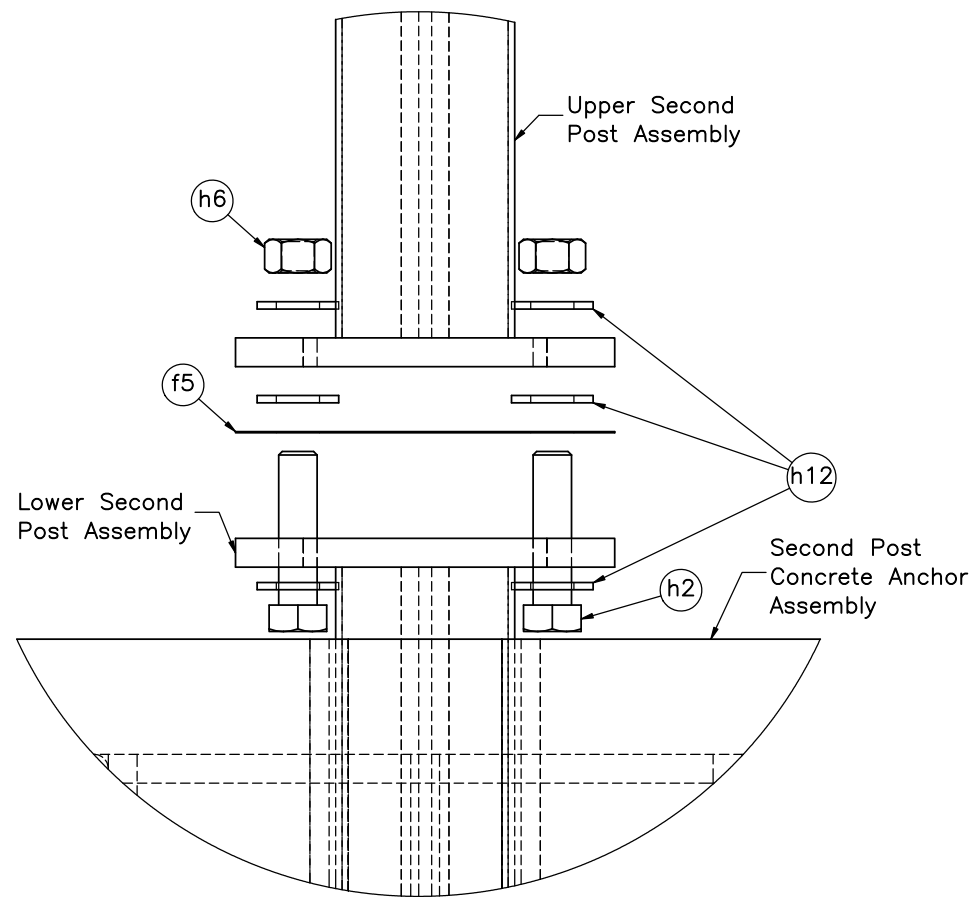
DWG. NAME.  
MTP-2\_R6

SCALE: 5:16  
UNITS: in.[mm]

SHEET:  
3 of 26  
DATE:  
7/16/2019  
DRAWN BY:  
DJW/JEK/JR  
D  
REV. BY:  
KAL



DETAIL C



DETAIL C  
(EXPLODED)

Note: (1) Part h2 to be torqued to 25 ft-lb [33.9 N-m].



Midwest Roadside  
Safety Facility

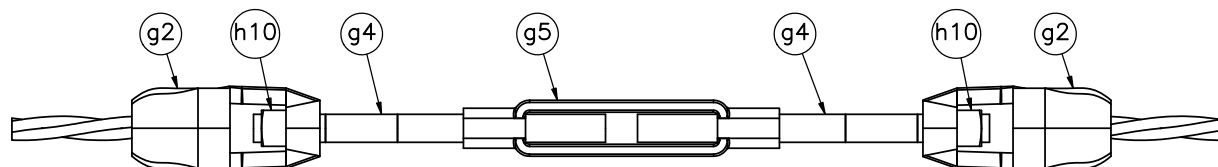
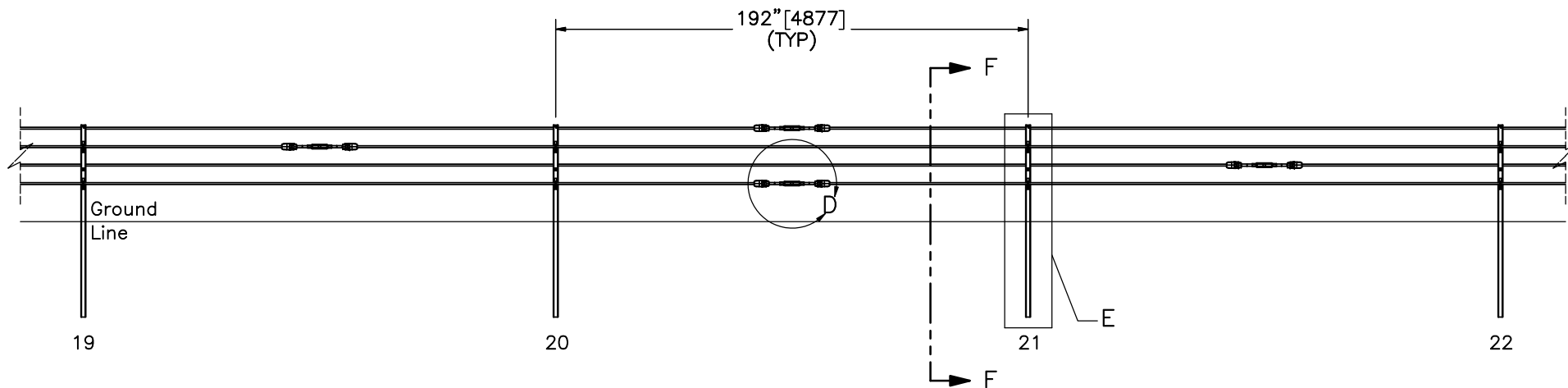
Non-Proprietary Cable  
Median Barrier  
Test No. MTP-2

2nd Post Attachment Detail

DWG. NAME.  
MTP-2\_R6

SCALE: 2:5  
UNITS: in.[mm]

SHEET:  
4 of 26  
DATE:  
7/16/2019  
DRAWN BY:  
DJW/JEK/JR  
D  
REV. BY:  
KAL



DETAIL D  
SCALE 1:6

Notes: (1) The splice locations may be moved as long as two adjacent cable splices are not located on top of one another in the same post span and are not too far from impact location.



Midwest Roadside  
Safety Facility

Non-Proprietary Cable  
Median Barrier  
Test No. MTP-2

Cable Splice Location and  
Detail

DWG. NAME:  
MTP-2\_R6

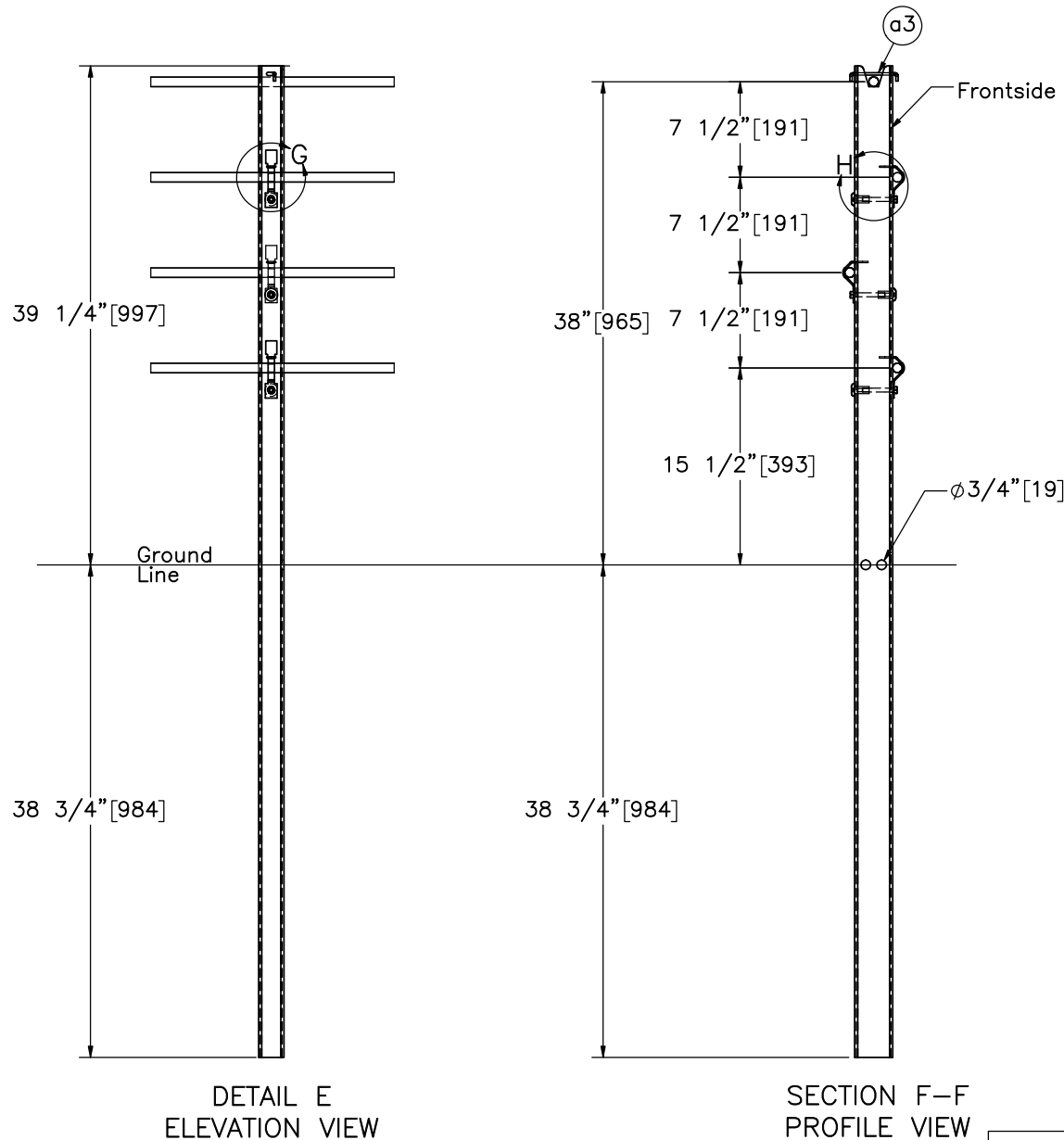
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UNITS: in./mm

SHEET:  
5 of 26

DATE:  
7/16/2019

DRAWN BY:  
DJW/JEK/JR  
D

REV. BY:  
KAL



Note: (1) Brass cable clip (Part a3) should be inserted into designated hole and slot in the post top.



Midwest Roadside  
Safety Facility

Non-Proprietary Cable  
Median Barrier  
Test No. MTP-2

Cable Post Details

DWG. NAME.  
MTP-2\_R6

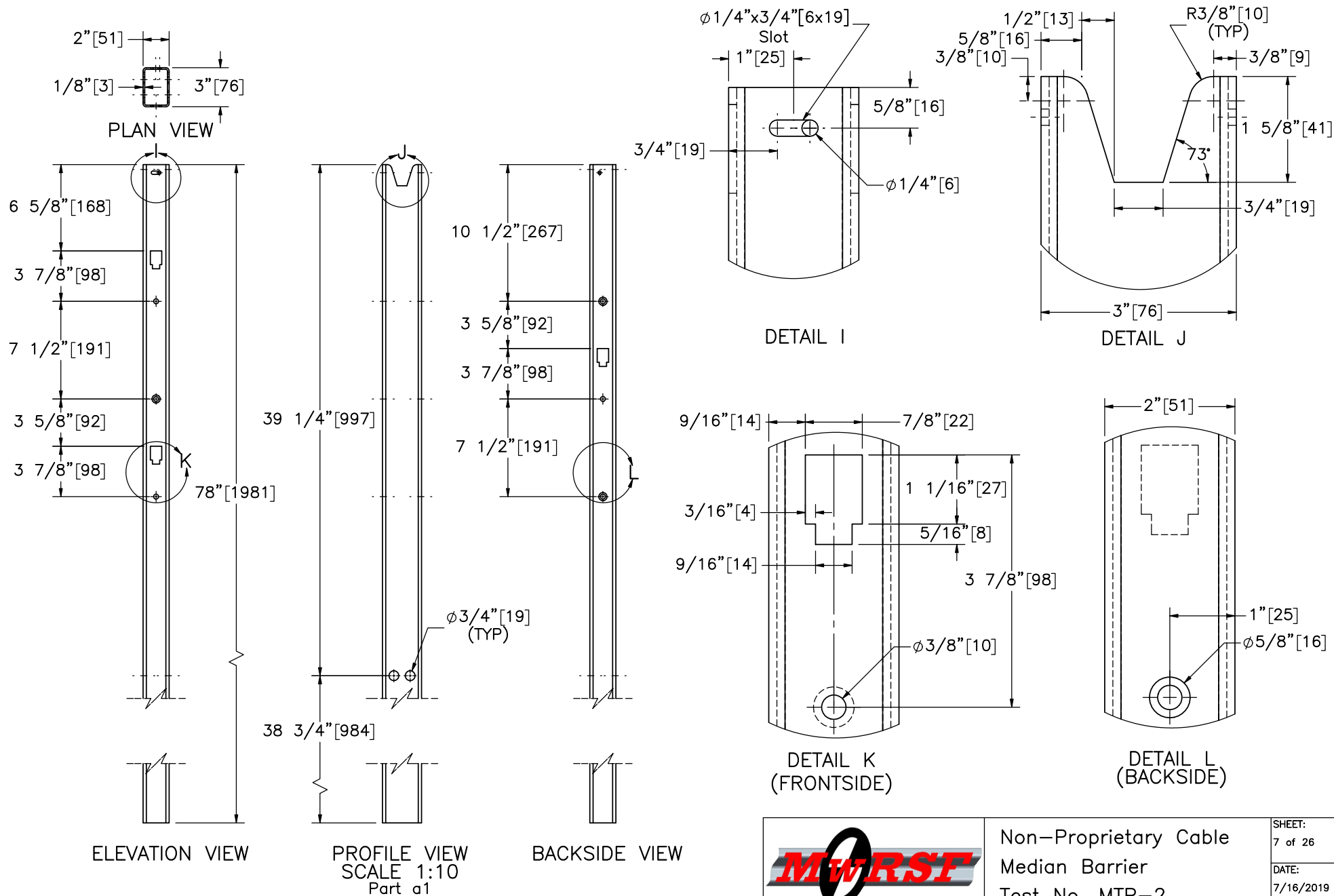
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SHEET:  
6 of 26

DATE:  
7/16/2019

DRAWN BY:  
DJW/JEK/JR  
D

REV. BY:  
KAL



Note: (1) Hidden lines not shown on full post views.



Midwest Roadside  
Safety Facility

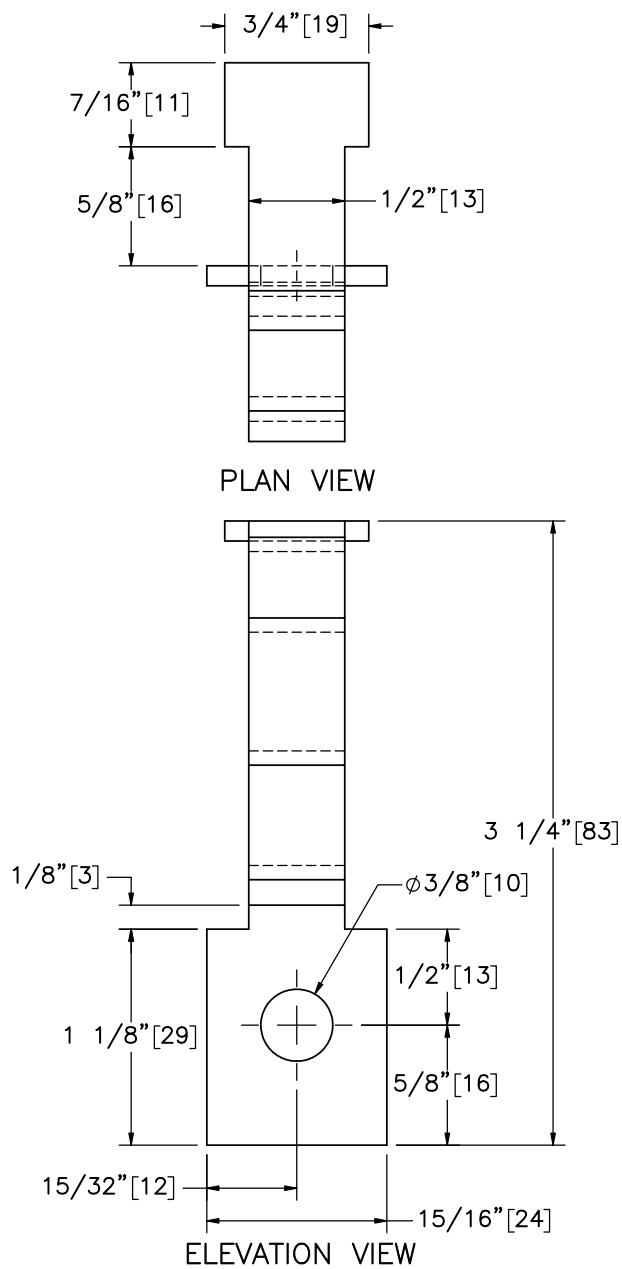
Non-Proprietary Cable  
Median Barrier  
Test No. MTP-2

Post Nos. 3-38

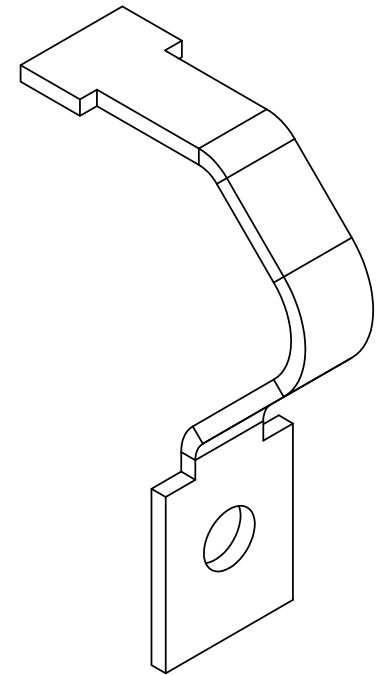
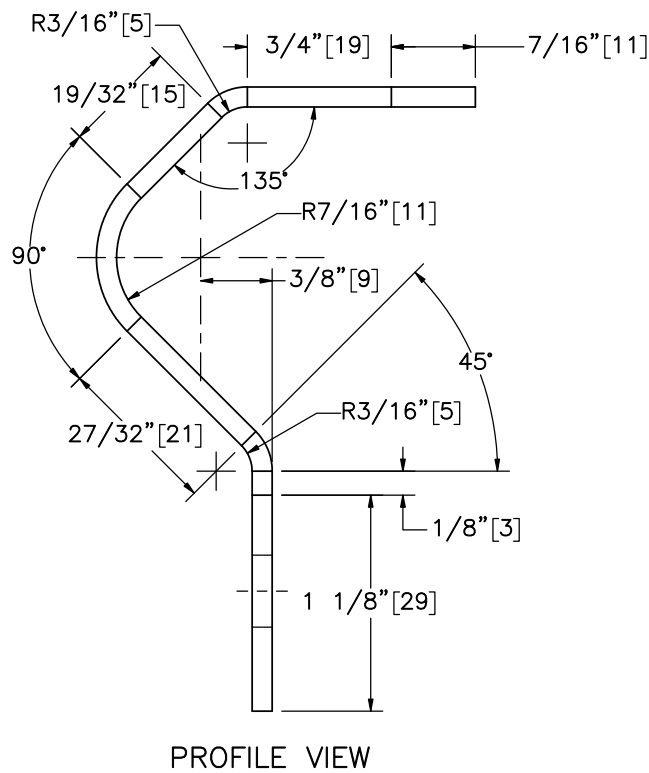
DWG. NAME.  
MTP-2\_R6

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SHEET:  
7 of 26  
DATE:  
7/16/2019  
DRAWN BY:  
DJW/JEK/JR  
D  
REV. BY:  
KAL



Part a2



ISOMETRIC VIEW



Midwest Roadside  
Safety Facility

Non-Proprietary Cable  
Median Barrier  
Test No. MTP-2

Tabbed Bracket

DWG. NAME.  
MTP-2\_R6

SCALE: 1:1  
UNITS: in.[mm]

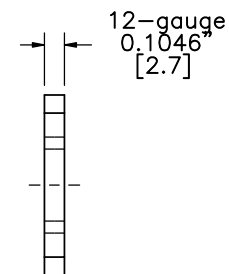
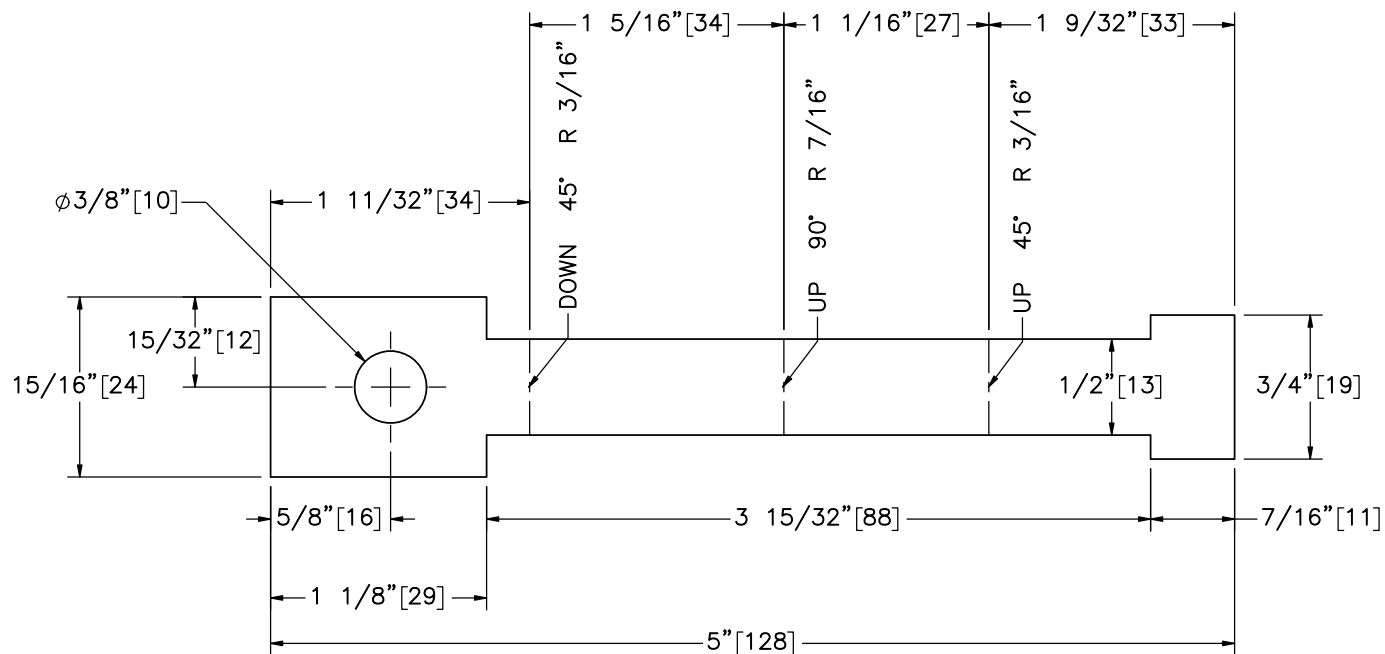
SHEET:  
8 of 26

DATE:  
7/16/2019

DRAWN BY:  
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REV. BY:  
KAL





Midwest Roadside  
Safety Facility

Non-Proprietary Cable  
Median Barrier  
Test No. MTP-2

Tabbed Bracket Flat Pattern

DWG. NAME.  
MTP-2\_R6

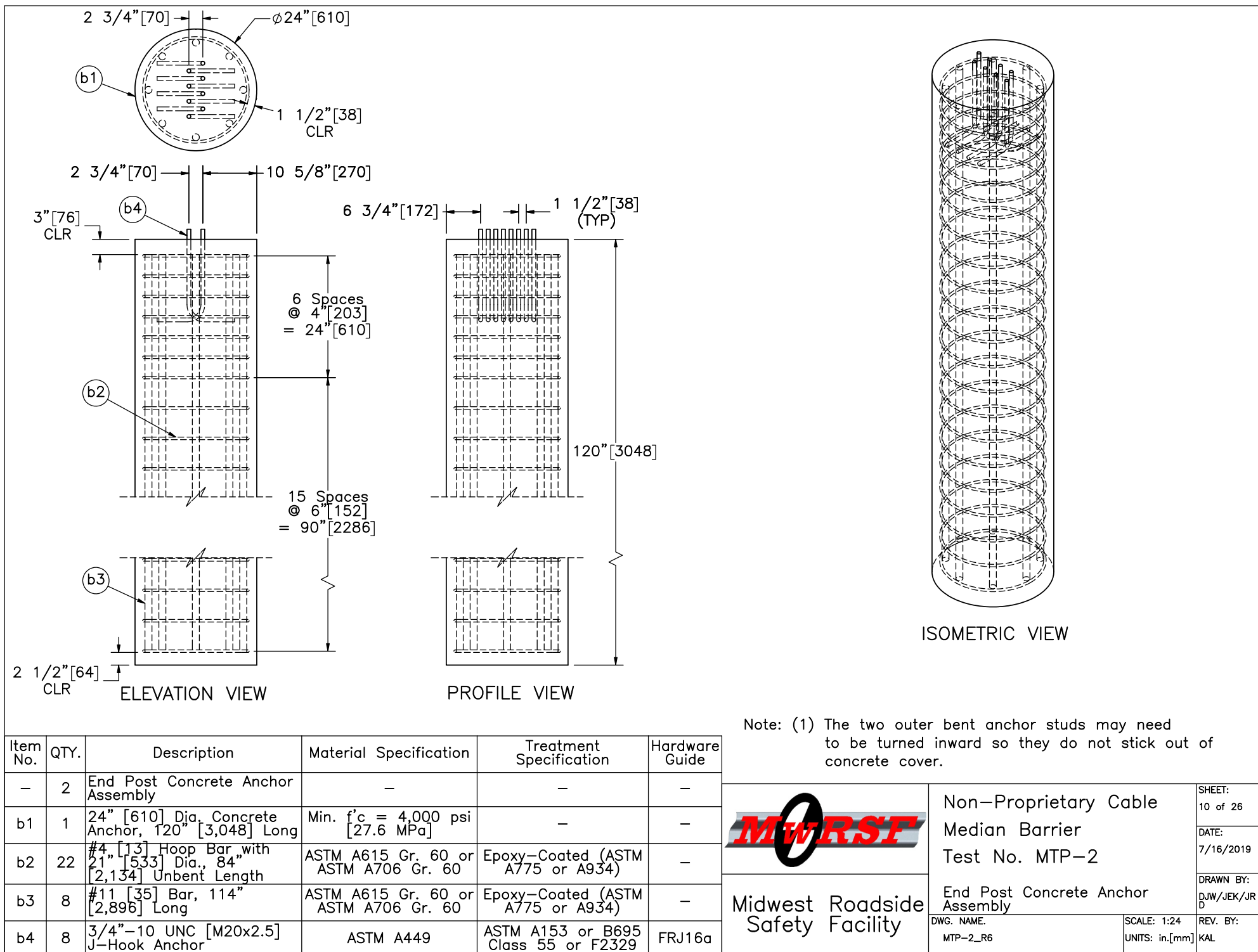
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SHEET:  
9 of 26

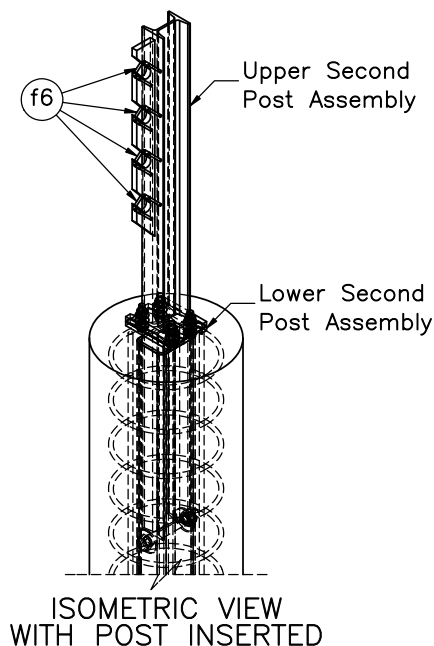
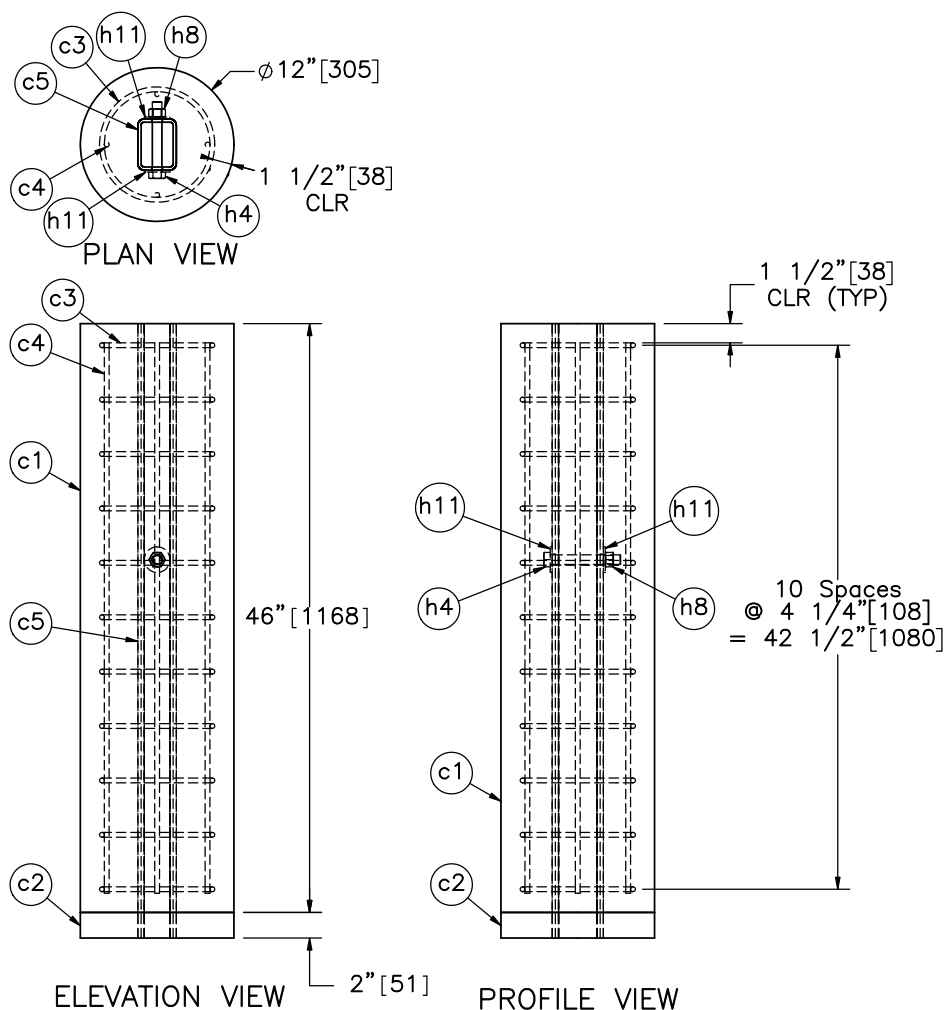
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7/16/2019

DRAWN BY:  
DJW/JEK/JRD


REV. BY:  
KAL

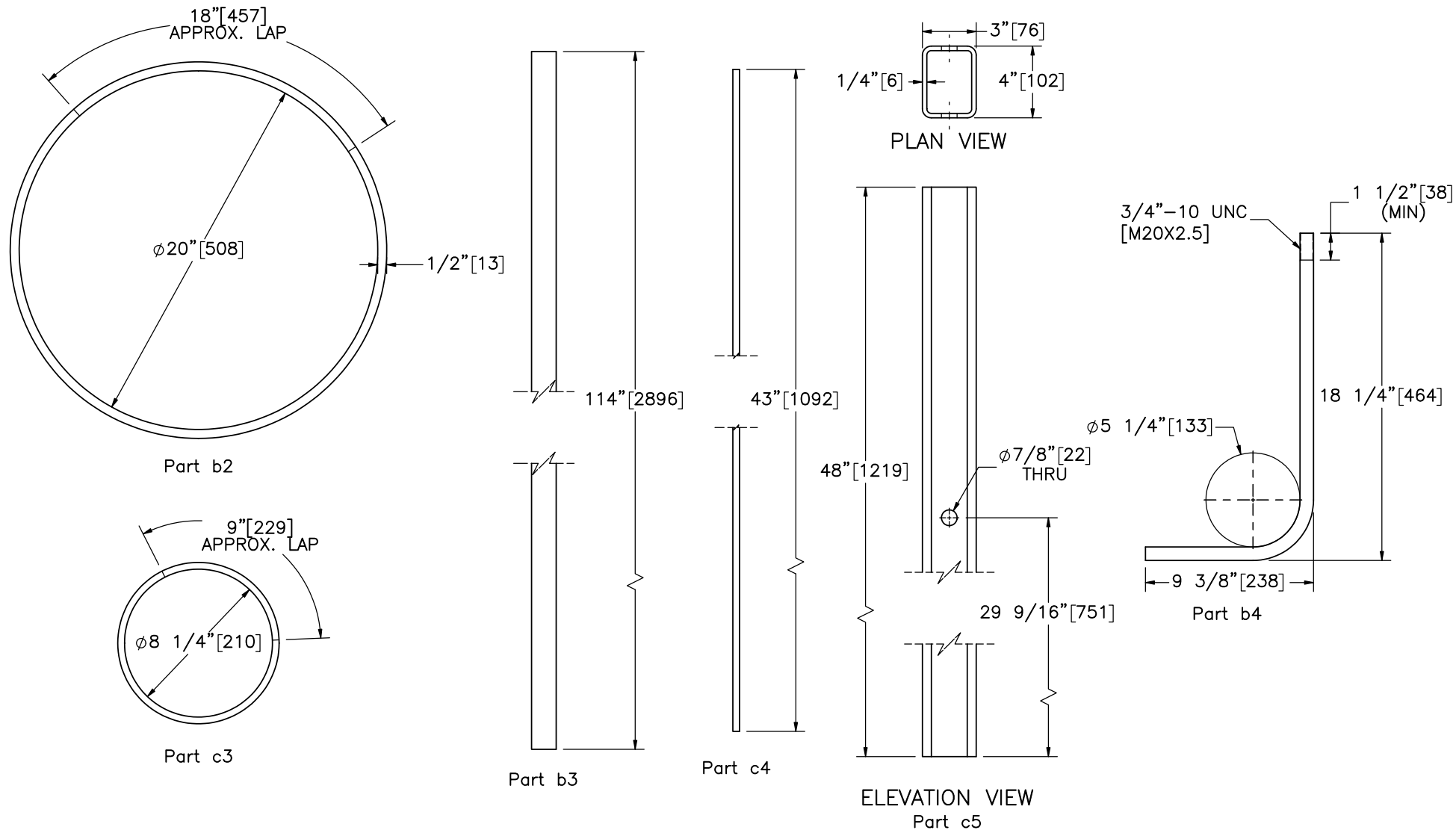


Item No.	QTY.	Description	Material Specification	Treatment Specification	Hardware Guide
—	2	Second Post Concrete Anchor Assembly	—	—	—
c1	1	12" [305] Dia. 2nd Post Concrete Anchor, 46" [1,168] Long	Min. f'c = 4,000 psi [27.6 MPa]	—	—
c2	1	12" [305] Dia. 2nd Post Anchor Aggregate, 2" [51] Deep	Standard Strong Soil	—	—
c3	11	#3 [10] Hoop Bar with 9" [229] Dia., 37" [940] Unbent Length	ASTM A615 Gr. 60 or ASTM A706 Gr. 60	Epoxy-Coated (ASTM A775 or A934)	—
c4	4	#3 [10] Bar, 43" [1,092] Long	ASTM A615 Gr. 60 or ASTM A706 Gr. 60	Epoxy-Coated (ASTM A775 or A934)	—
c5	1	4"x3"x1/4" [102x76x6] Foundation Tube, 48" [1,219] Long	ASTM A500 Gr. B	ASTM A123	—
h4	1	3/4"-10 UNC [M20x2.5], 5 1/2" [140] Long Hex Bolt	ASTM A307 Gr. A	ASTM A153 or B695 Class 55 or F2329	FBX20a
h8	1	3/4"-10 UNC [M20x2.5] Hex Nut	ASTM A563A or equivalent	ASTM A153 or B695 Class 55 or F2329	FNX20a
h11	2	3/4" [19] Dia. Plain USS Washer	ASTM F844	ASTM A123 or A153 or F2329	FWC20a



Note: (1) Brass cable retainers (Part f6) should be inserted into designated holes, and the ends of the retainers should be bent to retain retainers in the holes.

	Non-Proprietary Cable		SHEET:
	Median Barrier		11 of 26
	Test No. MTP-2		DATE:
			7/16/2019
Midwest Roadside Safety Facility	Second Post Concrete Anchor Assembly		DRAWN BY:
			DJW/JEK/JR D
DWG. NAME:	MTP-2_R6		REV. BY:
			KAL
	SCALE: 1:15	UNITS: in./mm	



Note: (1) Part b4 total unbent length is 25 9/16" [649].

Bill of Bars					
Bar	QTY.	Size	Total Unbent Length	Material Specification	Treatment Specification
b2	44	#4	84" [2,134]	ASTM A615 Gr. 60 or ASTM A706 Gr. 60	Epoxy-Coated (ASTM A775 or A934)
b3	16	#11	114" [2,896]	ASTM A615 Gr. 60 or ASTM A706 Gr. 60	Epoxy-Coated (ASTM A775 or A934)
c3	22	#3	37" [940]	ASTM A615 Gr. 60 or ASTM A706 Gr. 60	Epoxy-Coated (ASTM A775 or A934)
c4	8	#3	43" [1,092]	ASTM A615 Gr. 60 or ASTM A706 Gr. 60	Epoxy-Coated (ASTM A775 or A934)



Midwest Roadside  
Safety Facility

Non-Proprietary Cable  
Median Barrier  
Test No. MTP-2

Reinforcement Details

DWG. NAME.  
MTP-2\_R6

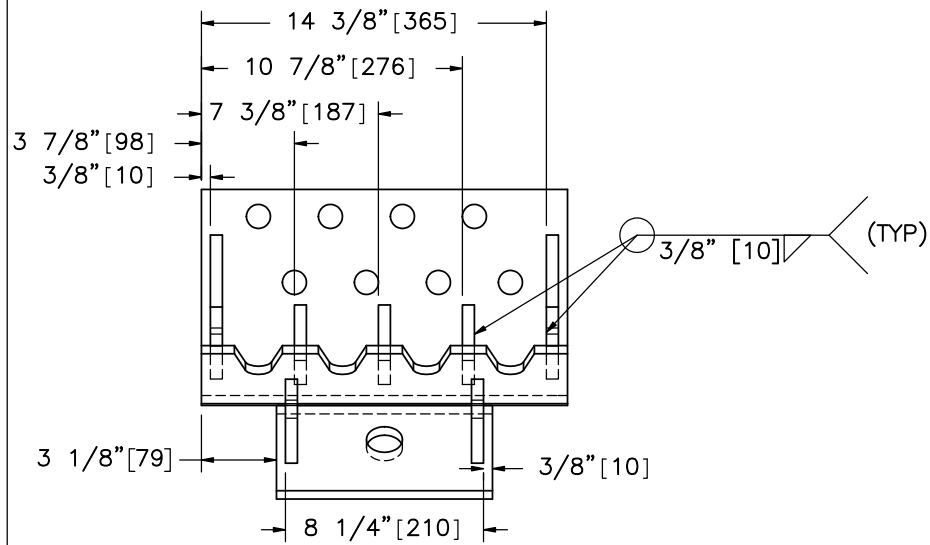
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SHEET:  
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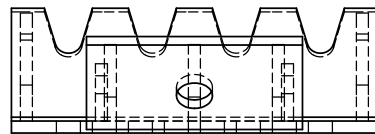
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DJW/JEK/JR  
D

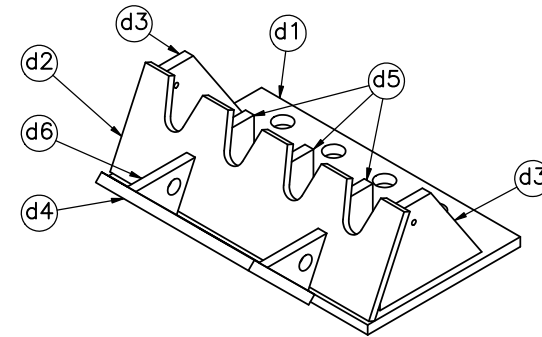
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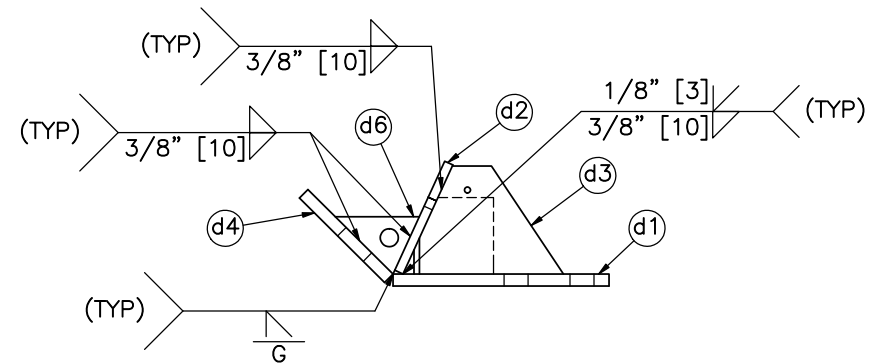
PLAN VIEW



ELEVATION VIEW



ISOMETRIC VIEW



PROFILE VIEW

Item No.	QTY.	Description	Material Specification	Treatment Specification	Hardware Guide
—	2	Cable Anchor Bracket Assembly	—	ASTM A123	FPA02
d1	1	15 1/4"x9"x1/2" [387x229x13] Cable Anchor Base Plate	ASTM A36	See Assembly	—
d2	1	15 1/4"x5"x3/8" [387x127x10] Anchor Bracket Plate	ASTM A36	See Assembly	—
d3	2	6"x4 1/2"x1/2" [152x114x13] Exterior Cable Plate Gusset	ASTM A36	See Assembly	—
d4	1	9"x5"x1/2" [229x127x13] Release Lever Plate	ASTM A36	See Assembly	—
d5	3	3 5/16"x3 3/16"x1/2" [84x81x13] Interior Cable Plate Gusset	ASTM A36	See Assembly	—
d6	2	3 1/2"x2 3/8"x1/2" [89x61x13] Release Gusset	ASTM A36	See Assembly	—



Midwest Roadside  
Safety Facility

Non-Proprietary Cable  
Median Barrier  
Test No. MTP-2

Cable Anchor Bracket Assembly

DWG. NAME.  
MTP-2\_R6

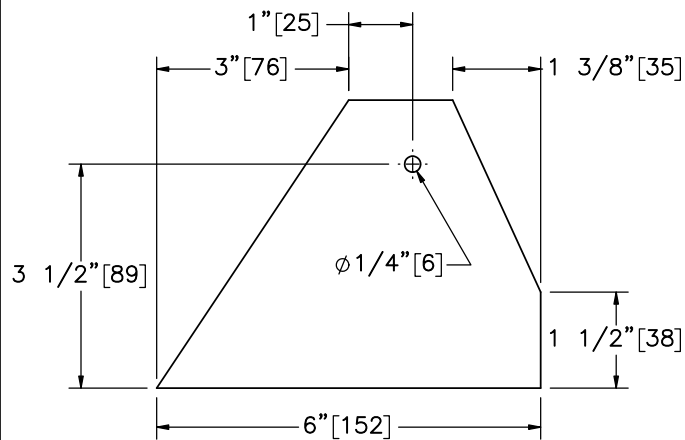
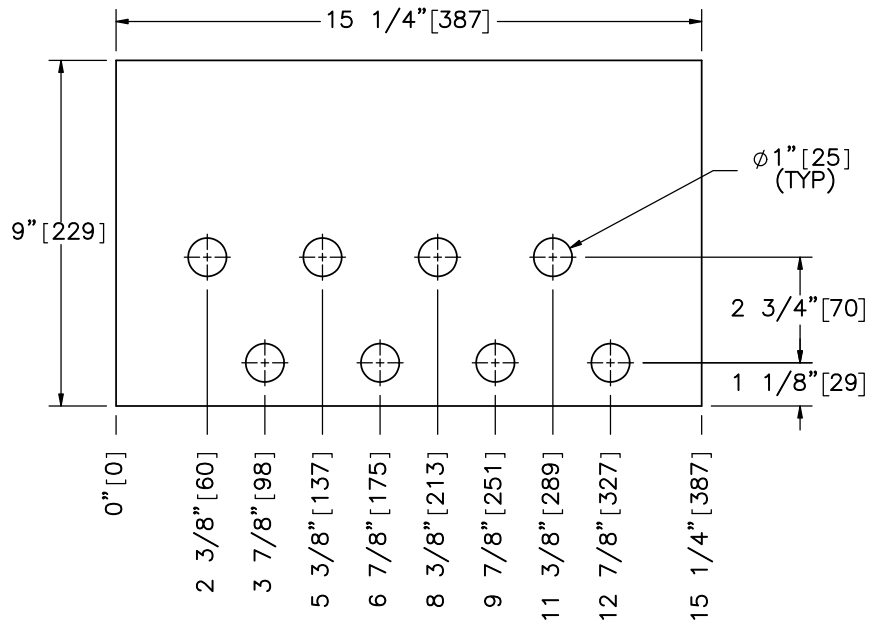
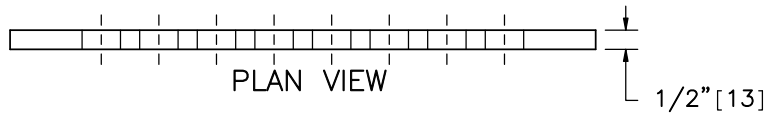
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13 of 26

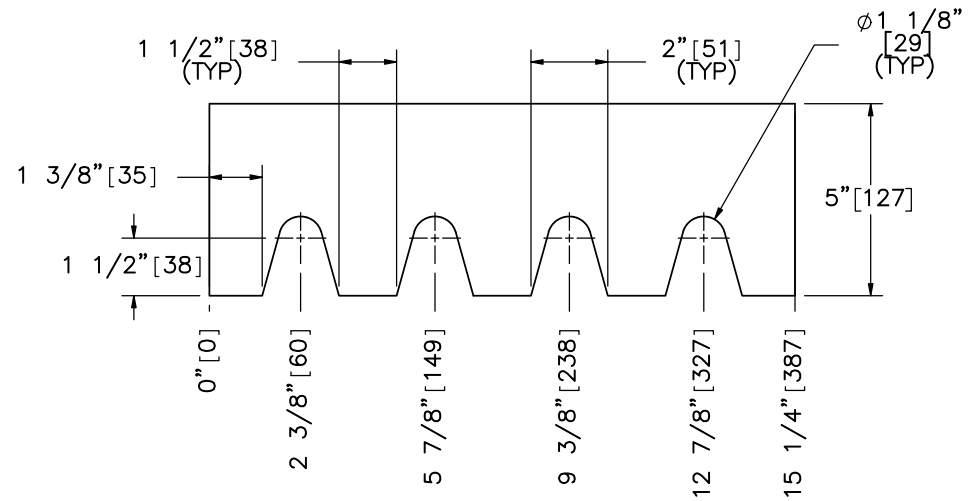
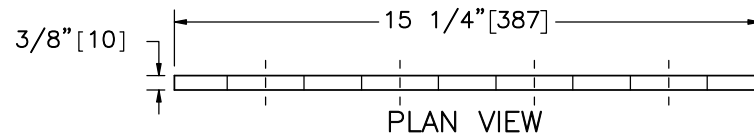
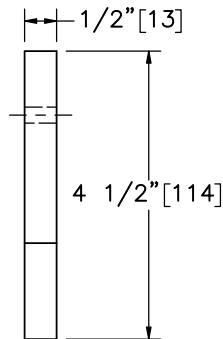
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DJW/JEK/JRD

REV. BY:  
KAL



SCALE 1:3  
Part d3



Midwest Roadside  
Safety Facility

Non-Proprietary Cable  
Median Barrier  
Test No. MTP-2

Cable Anchor Bracket  
Components

DWG. NAME:  
MTP-2\_R6

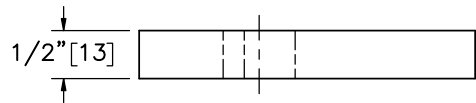
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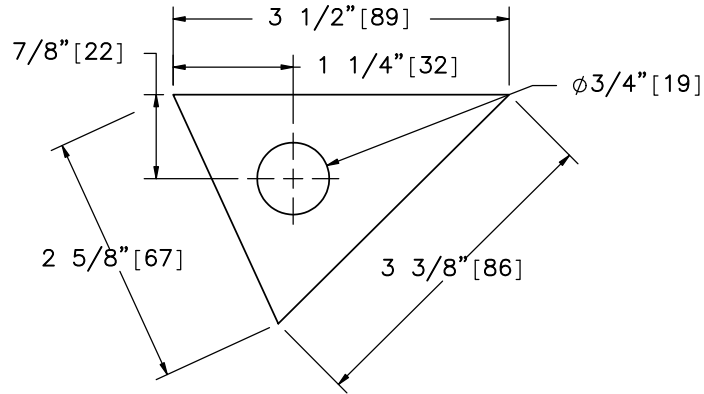
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7/16/2019

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DJW/JEK/JR  
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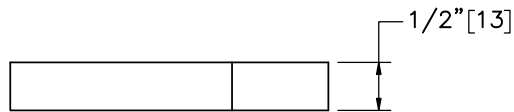
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KAL



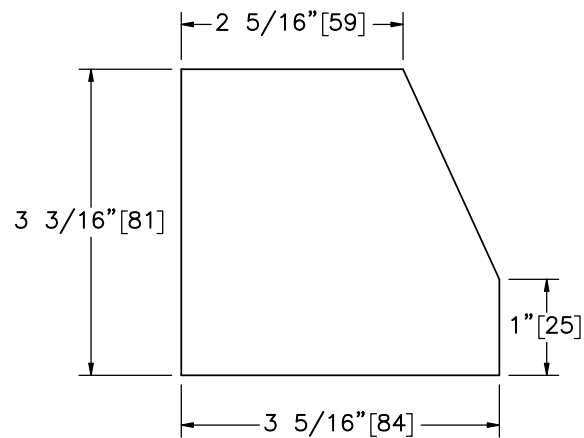
PLAN VIEW



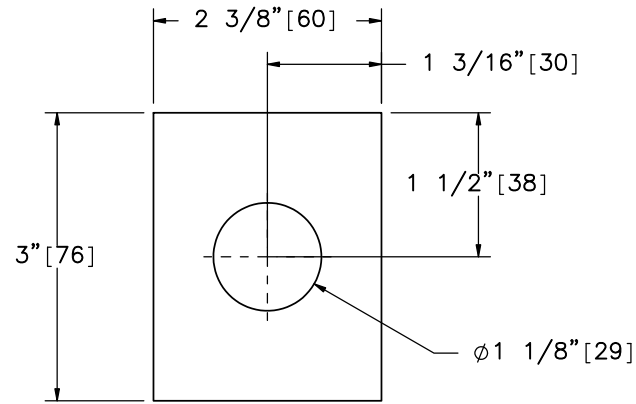
ELEVATION VIEW  
Part d6



PLAN VIEW

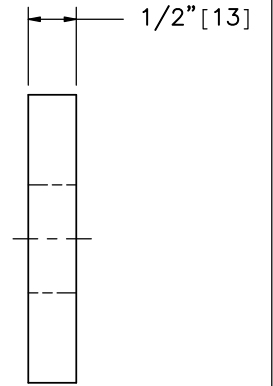


ELEVATION VIEW  
Part d5

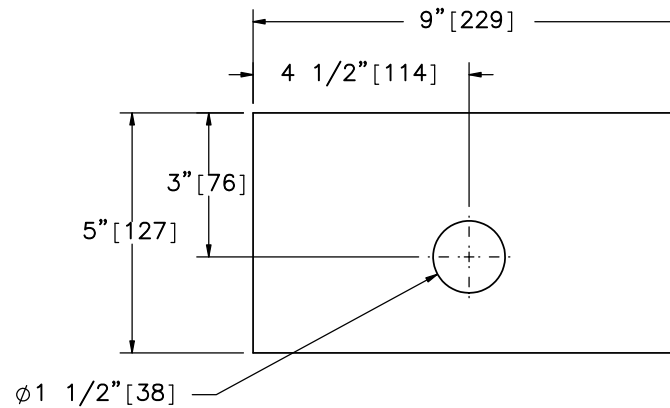


ELEVATION VIEW

Part h13

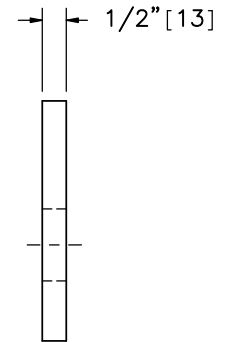


PROFILE VIEW



ELEVATION VIEW

SCALE 1:4  
Part d4



PROFILE VIEW



Midwest Roadside  
Safety Facility

Non-Proprietary Cable  
Median Barrier  
Test No. MTP-2

Cable Anchor Bracket  
Components

DWG. NAME:  
MTP-2\_R6

SCALE: 1:2  
UNITS: in.[mm]

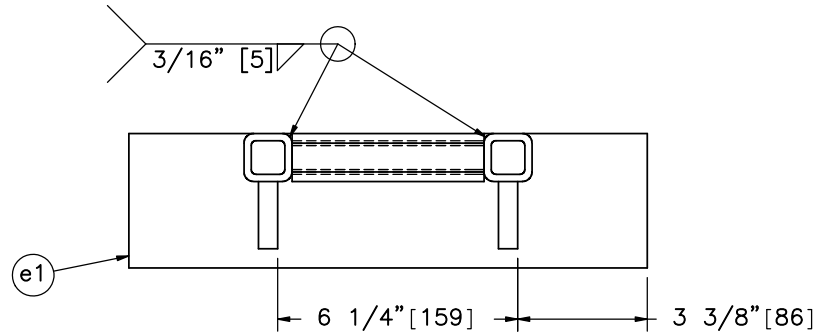
SHEET:  
15 of 26

DATE:  
7/16/2019

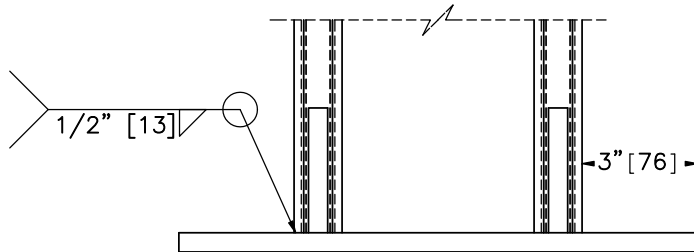
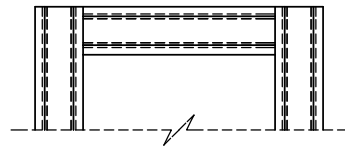
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DJW/JEK/JRD

REV. BY:  
KAL

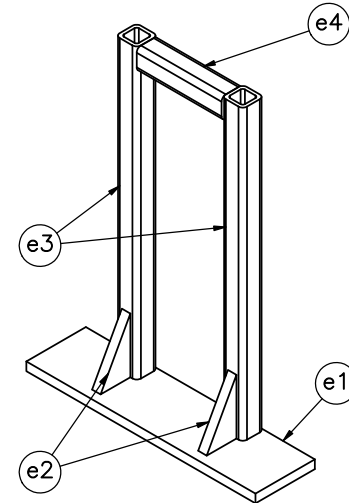
- Notes: (1) The kicker lever should be flush with the top of the kicker plate.  
 (2) The 3 1/4" [83] leg of the kicker plate gusset should line up with the kicker lever.  
 (3) The bottom of the cable release lever should rest upon part d6.



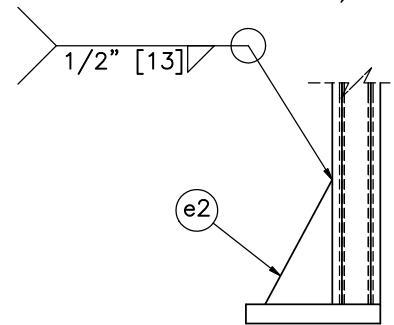
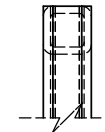
PLAN VIEW



ELEVATION VIEW



ISOMETRIC VIEW



PROFILE VIEW

Item No.	QTY.	Description	Material Specification	Treatment Specification	Hardware Guide
—	2	Cable Release Lever Assembly	—	ASTM A123	—
e1	1	13 1/2"x3 1/2"x1/2" [343x89x13] Kicker Plate	ASTM A36	See Assembly	—
e2	2	3 1/4"x1 3/4"x1/2" [83x44x13] Kicker Gusset	ASTM A36	See Assembly	—
e3	2	1 1/4"x1 1/4"x3/16" [32x32x5], 17" [432] Long Square Tube	ASTM A500 Gr. B	See Assembly	—
e4	1	1 1/4"x1 1/4"x3/16" [32x32x5], 5" [127] Long Square Tube	ASTM A500 Gr. B	See Assembly	—



Midwest Roadside  
Safety Facility

Non-Proprietary Cable  
Median Barrier  
Test No. MTP-2

Cable Release Lever Assembly

DWG. NAME.  
MTP-2\_R6

SCALE: 1:5  
UNITS: in./mm

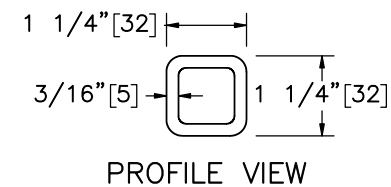
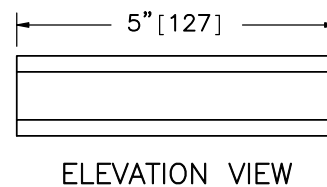
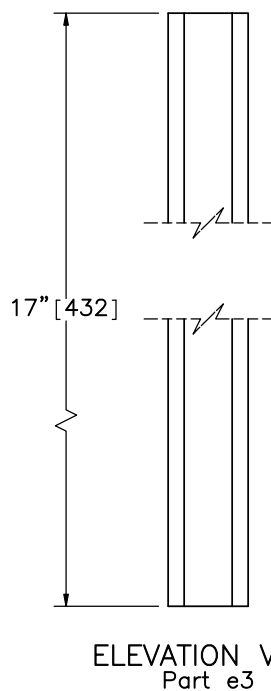
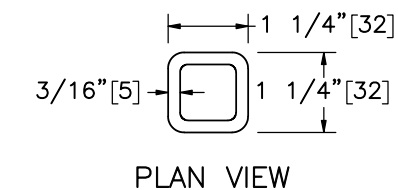
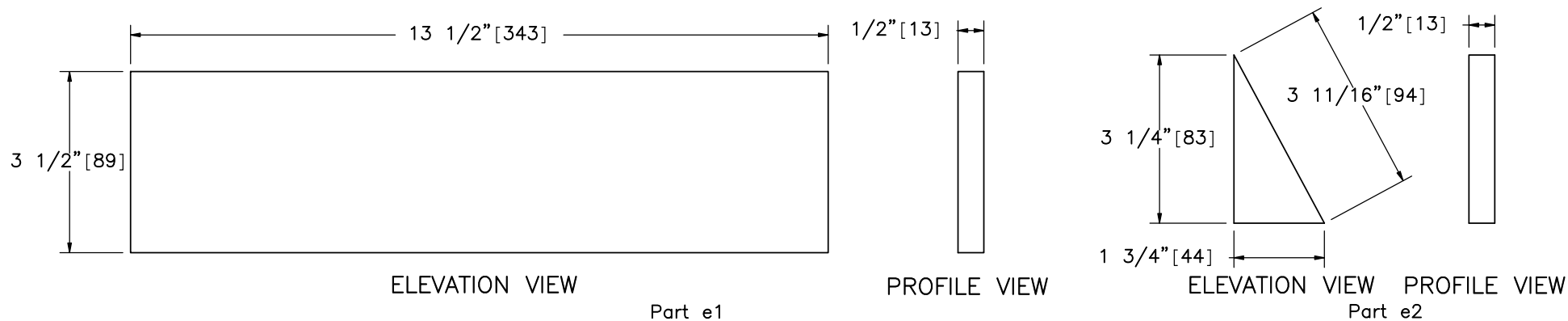
SHEET:  
16 of 26

DATE:  
7/16/2019

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DJW/JEK/JR  
D

REV. BY:  
KAL





Midwest Roadside  
Safety Facility

Non-Proprietary Cable  
Median Barrier  
Test No. MTP-2

Cable Release Lever  
Components

DWG. NAME.  
MTP-2\_R6

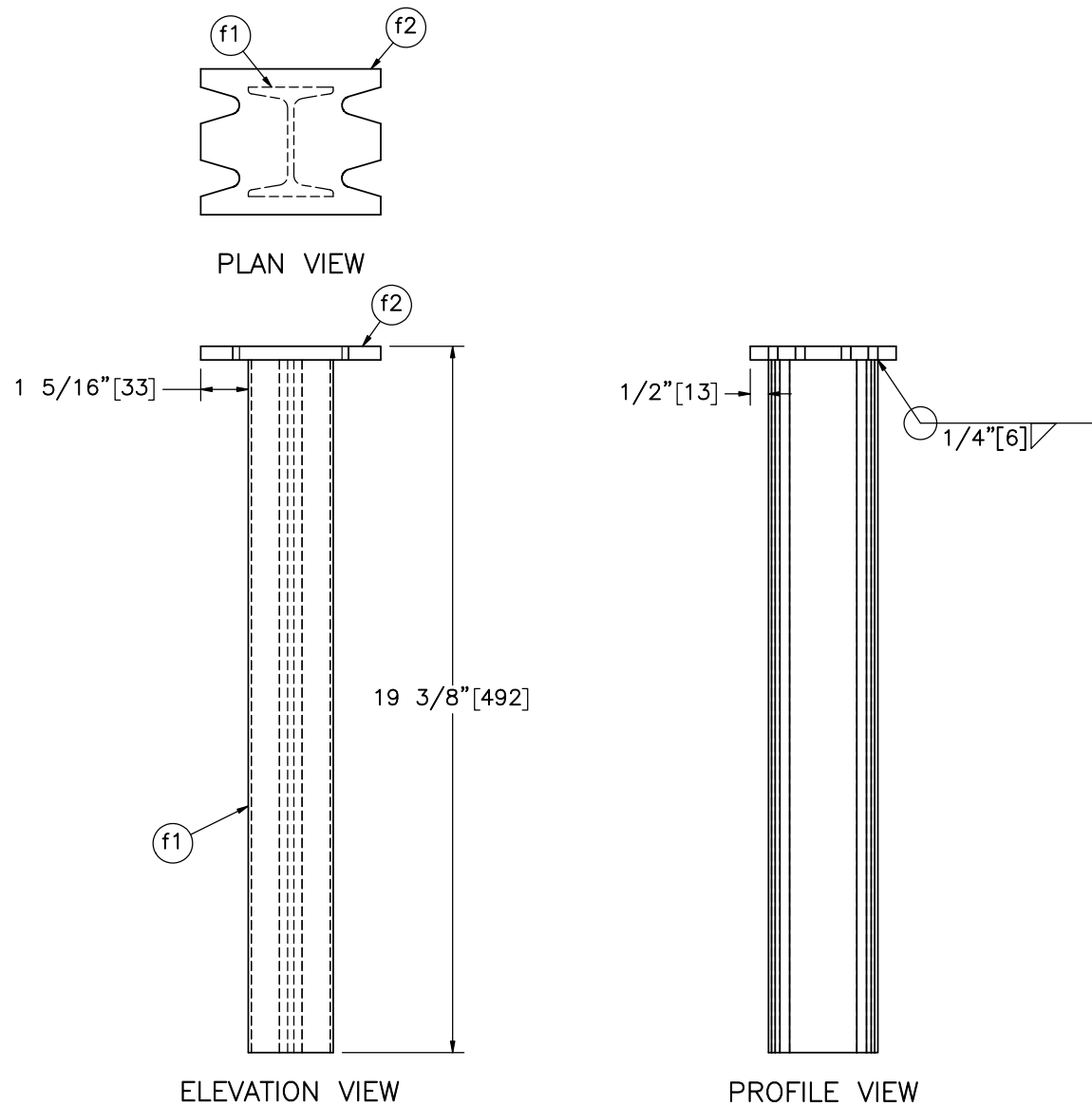
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SHEET:  
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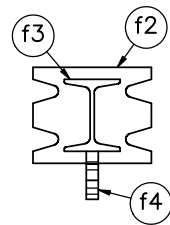
DATE:  
7/16/2019

DRAWN BY:  
DJW/JEK/JR  
D

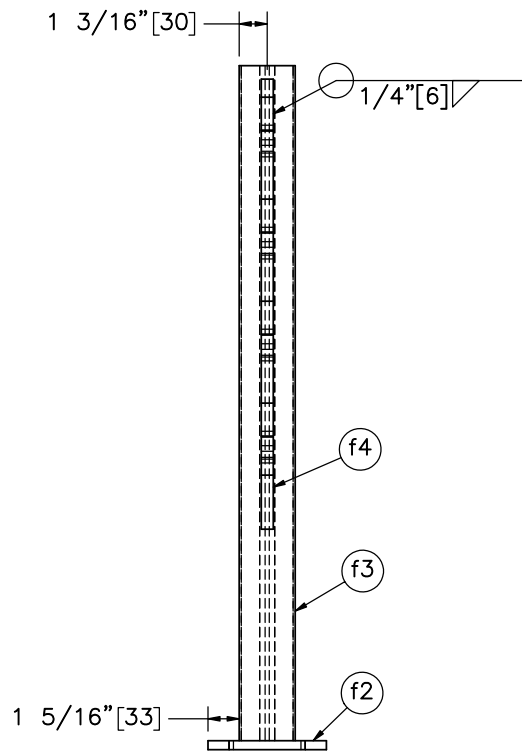
REV. BY:  
KAL



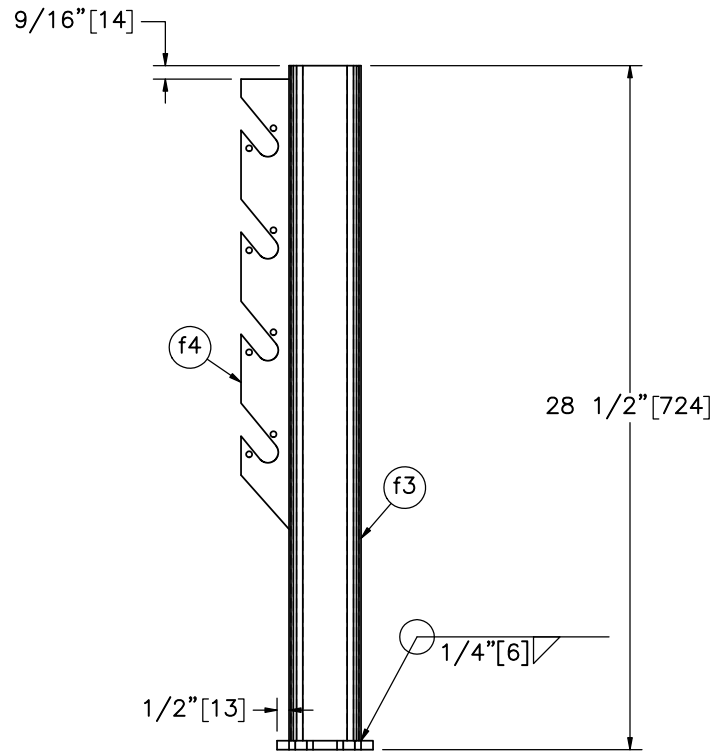
Item No.	QTY.	Description	Material Specification	Treatment Specification		Non-Proprietary Cable Median Barrier Test No. MTP-2	Lower Second Post Assembly	DWG. NAME: MTP-2_R6	SCALE: 1:5 UNITS: in./mm	SHEET: 18 of 26  DATE: 7/16/2019  DRAWN BY: DJW/JEK/JRD  REV. BY: KAL
-	2	Lower Second Post Assembly	-	ASTM A123	Midwest Roadside Safety Facility					
f1	1	S3x5.7 [S75x8.5], 19" [483] Long Post	ASTM A36	See Assembly						
f2	1	4 15/16"x4"x3/8" [125x102x10] Base Plate	ASTM A36	See Assembly						




PLAN VIEW

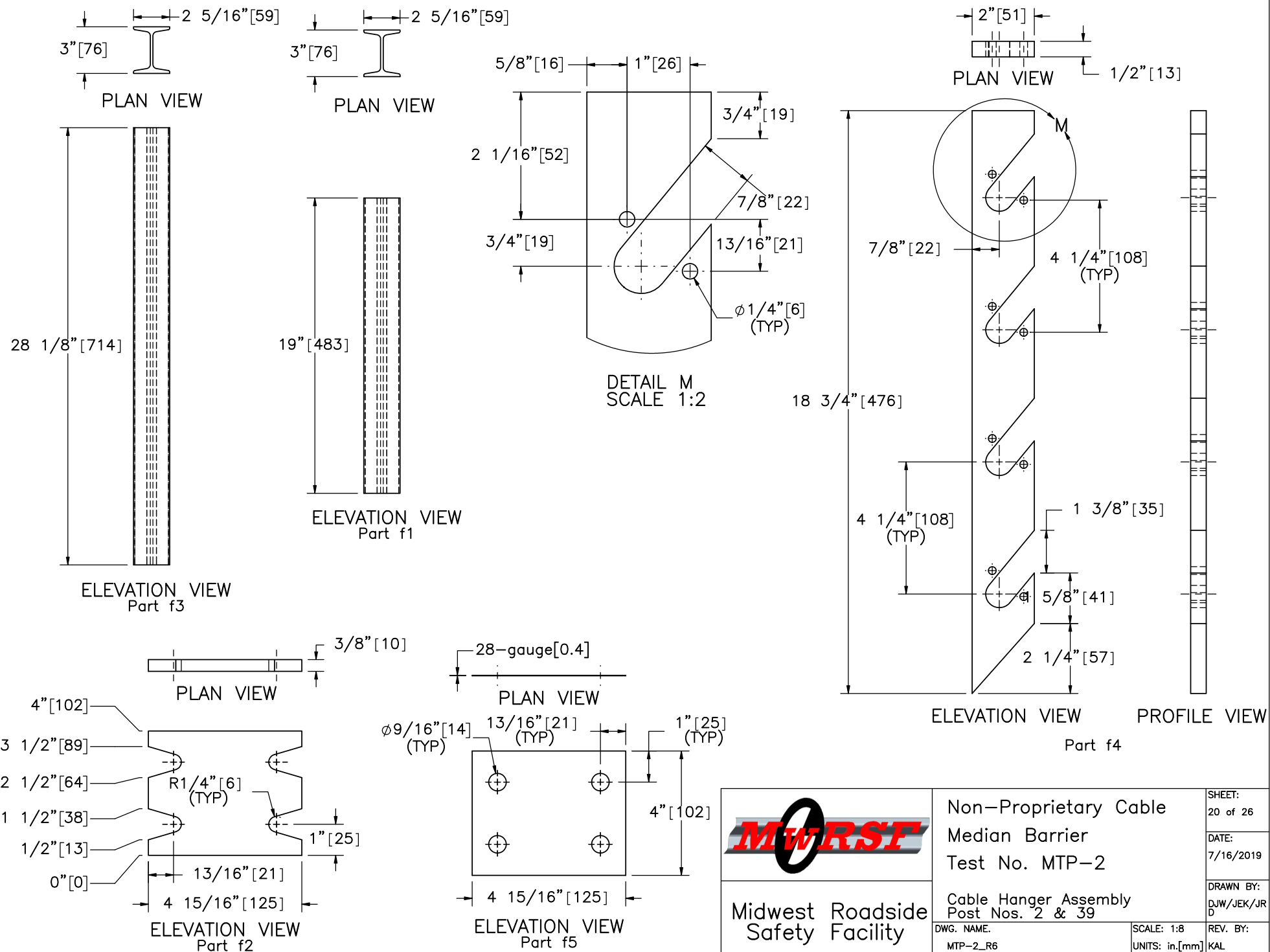


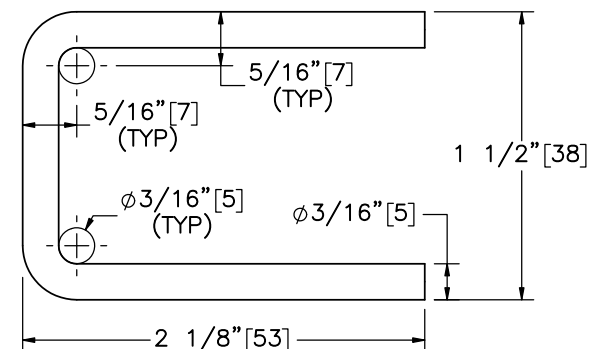
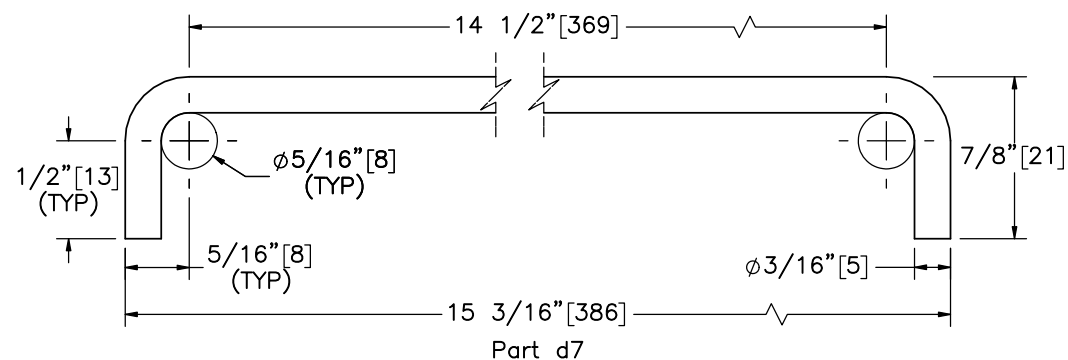
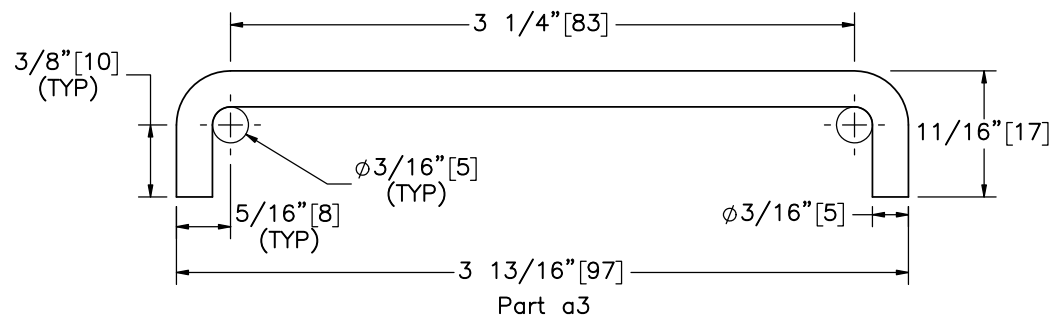
ELEVATION VIEW



PROFILE VIEW

Item No.	QTY.	Description	Material Specification	Treatment Specification	 Midwest Roadside Safety Facility	Non-Proprietary Cable Median Barrier Test No. MTP-2 Upper Second Post Assembly		SHEET: 19 of 26
								DATE: 7/16/2019
—	2	Upper Second Post Assembly	—	ASTM A123				
f2	1	4 15/16"x4"x3/8" [125x102x10] Base Plate	ASTM A36	See Assembly				
f3	1	S3x5.7 [S75x8.5], 28 1/8" [714] Long Post	ASTM A36	See Assembly				
f4	1	18 3/4"x2"x1/2" [476x51x13] Cable Hanger	ASTM A36	See Assembly				
					DWG. NAME: MTP-2_R6	SCALE: 1:8 UNITS: in./mm	REV. BY: KAL	





Bar	Total Unbent Length
a3	4 9/16" [116]
d7	16 1/4" [413]
f6	5 1/8" [130]



Midwest Roadside  
Safety Facility

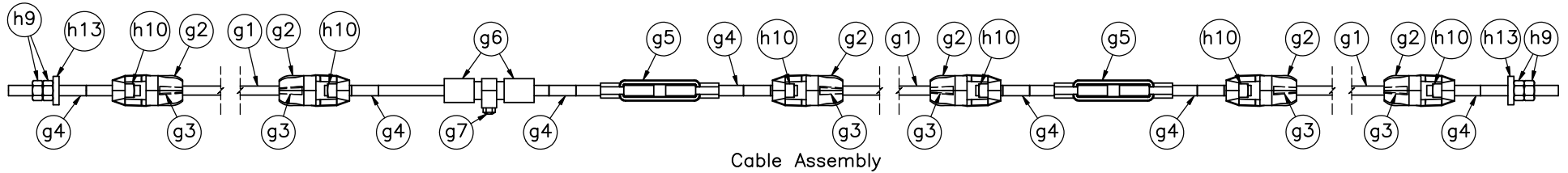
Non-Proprietary Cable  
Median Barrier  
Test No. MTP-2

Brass Cable Clip Details

DWG. NAME.  
MTP-2\_R6

SCALE: 1:1  
UNITS: in./mm

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DRAWN BY:  
DJW/JEK/JR  
D  
REV. BY:  
KAL



Item No.	QTY.	Description	Material Specification	Treatment Specification	Hardware Guide
—	4	Cable Assembly	—	—	—
g1	3	3/4" [19] Dia. 3x7 IWRC IPS Wire Rope — Lengths as Needed	ASTM A741 Type 1	Class A Coating	RCM01
g2	6	Bennett Cable End Fitter — 7/8" [22] Dia.	ASTM A220 Gr. 50005	ASTM A153 or B695	RCE03
g3	6	Cable Wedge	ASTM A47 Gr. 32510 or A536 Gr. 65–45–12	—	FMM01
g4	7	7/8"—9 UNC [M22x2.5], 11" [279] Long Threaded Rod	ASTM A449 Type 1 or ASTM A193 Gr. B7	ASTM A153 or B695 Class 55 or F2329	RCE03
g5	2	Bennett Short 7/8"—9 UNC [M22x2.5] Threaded Turnbuckle	As Supplied	As Supplied	—
g6	2	Threaded Load Cell Coupler	—	—	—
g7	1	50,000-lb [222.4-kN] Load Cell	—	—	—
h9	4	7/8"—9 UNC [M22x2.5] Heavy Hex Nut	ASTM A563C or equivalent	ASTM A153 or B695 Class 55 or F2329	FNX22b
h10	6	7/8"—9 UNC [M22x2.5] Heavy Square Nut	ASTM A563DH or equivalent	ASTM A153 or B695 Class 55 or F2329	—
h13	2	3"x2 3/8"x1/2" [76x60x13] Rectangular Washer Plate	ASTM A36	ASTM A123	—



Midwest Roadside  
Safety Facility

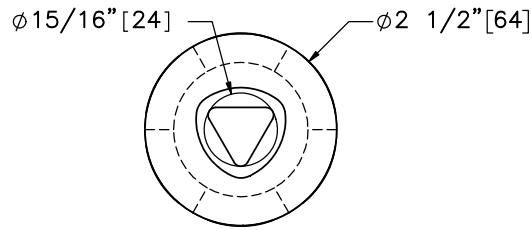
Non-Proprietary Cable  
Median Barrier  
Test No. MTP-2

Cable Assembly

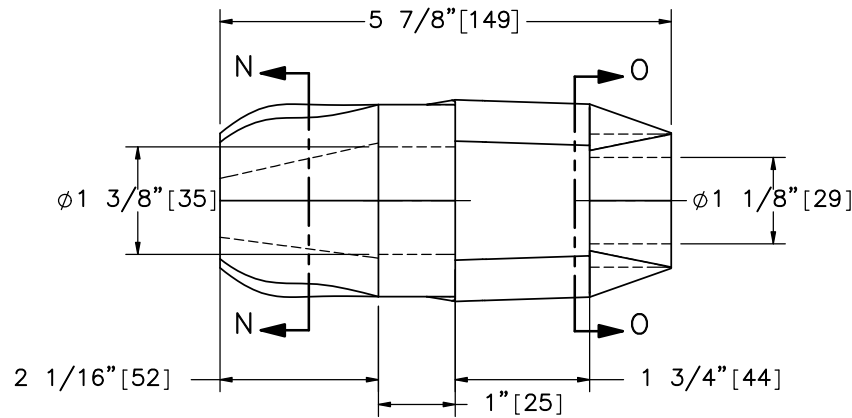
DWG. NAME.  
MTP-2\_R6

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UNITS: in.[mm]

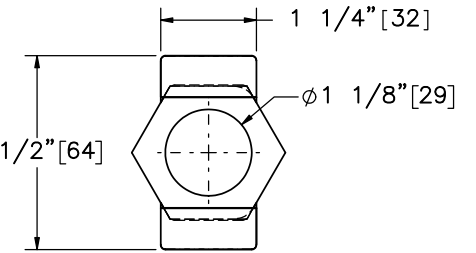
SHEET:  
22 of 26  
DATE:  
7/16/2019  
DRAWN BY:  
DJW/JEK/JR  
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REV. BY:  
KAL



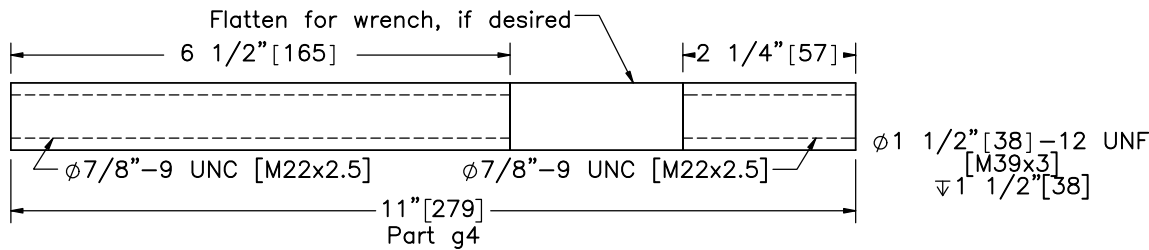
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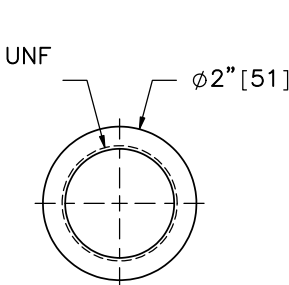
ELEVATION VIEW  
Part g2



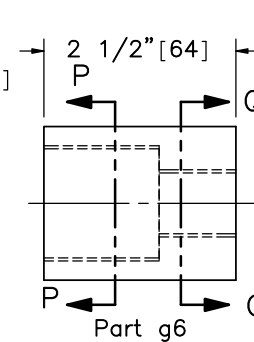
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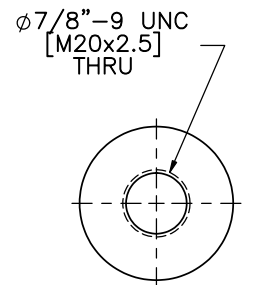
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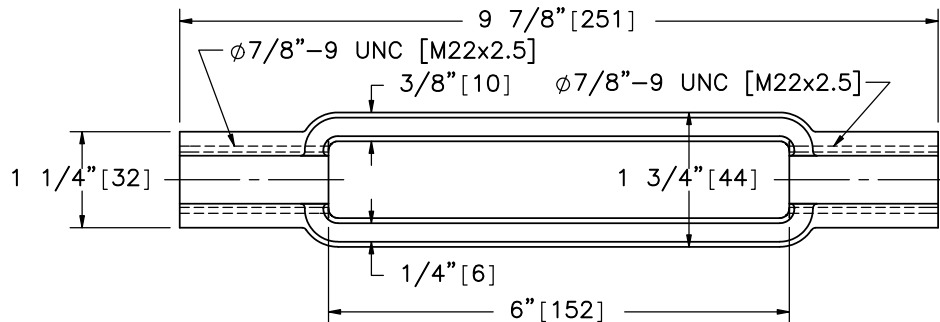
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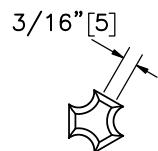
Part g6



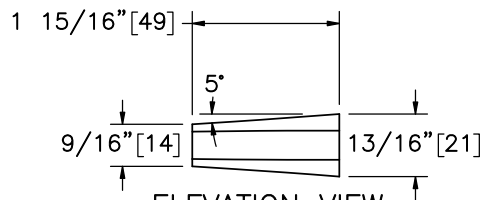
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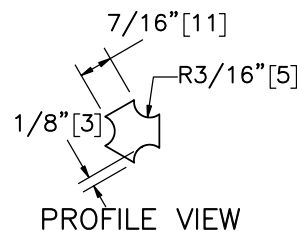
Part g5



REAR VIEW



ELEVATION VIEW  
Part g3



PROFILE VIEW



Midwest Roadside  
Safety Facility

Non-Proprietary Cable  
Median Barrier  
Test No. MTP-2

Load Cell Assembly Component  
Details

DWG. NAME:  
MTP-2\_R6

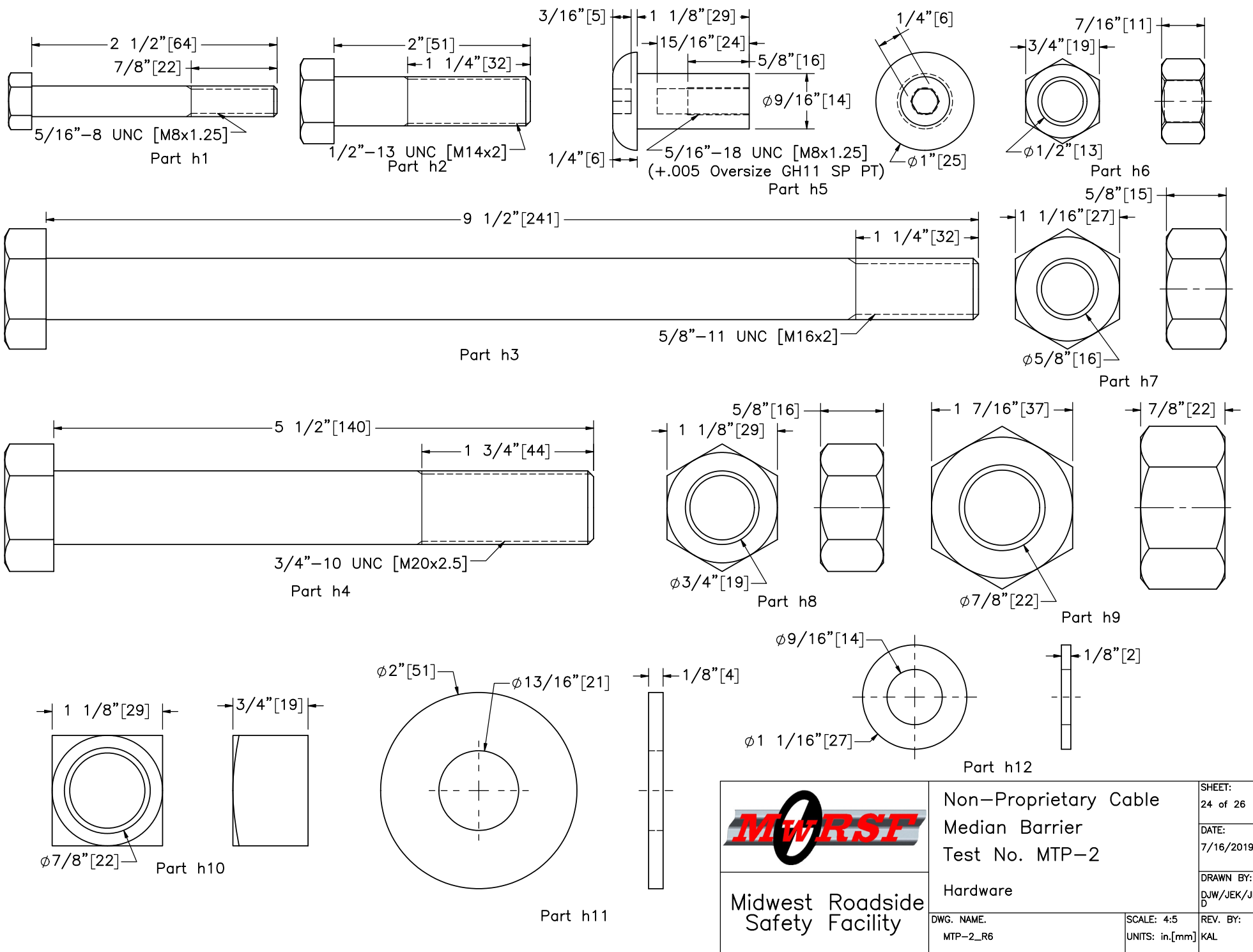
SCALE: 2:5  
UNITS: in./mm

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DATE:  
7/16/2019

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KAL



Midwest Roadside  
Safety Facility

Non-Proprietary Cable  
Median Barrier  
Test No. MTP-2

Hardware

DWG. NAME.  
MTP-2\_R6

SCALE: 4:5  
UNITS: in.[mm]

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DATE:  
7/16/2019

DRAWN BY:  
DJW/JEK/JR  
D

REV. BY:  
KAL



Item No.	QTY.	Description	Material Specification	Treatment Specification	Hardware Guide
a1	36	HSS 3x2x1/8 [76x51x3], 78" [1,981] Long Steel Post with two 3/4" [19] holes	ASTM A500 Gr. C	ASTM A123	—
a2	108	5"x15/16"x12—Gauge [128x24x2.7] Tabbed Bracket	Hot—Rolled ASTM A1011 HSLA Gr. 50	ASTM A123	—
a3	36	3/16" [5] Dia. Brass Cable Clip, 4 9/16" [116] Long Unbent	ASTM B16—00	—	—
b1	2	24" [610] Dia. Concrete Anchor, 120" [3,048] Long	Min. f'c = 4,000 psi [27.6 MPa]	—	—
b2	44	#4 [13] Hoop Bar with 21" [533] Dia., 84" [2,134] Unbent Length	ASTM A615 Gr. 60 or ASTM A706 Gr. 60	Epoxy—Coated (ASTM A775 or A934)	—
b3	16	#11 [35] Bar, 114" [2,896] Long	ASTM A615 Gr. 60 or ASTM A706 Gr. 60	Epoxy—Coated (ASTM A775 or A934)	—
b4	16	3/4"—10 UNC [M20x2.5] J—Hook Anchor	ASTM A449	ASTM A153 or B695 Class 55 or F2329	FRJ16a
c1	2	12" [305] Dia. 2nd Post Concrete Anchor, 46" [1,168] Long	Min. f'c = 4,000 psi [27.6 MPa]	—	—
c2	2	12" [305] Dia. 2nd Post Anchor Aggregate, 2" [51] Deep	Standard Strong Soil	—	—
c3	22	#3 [10] Hoop Bar with 9" [229] Dia., 37" [940] Unbent Length	ASTM A615 Gr. 60 or ASTM A706 Gr. 60	Epoxy—Coated (ASTM A775 or A934)	—
c4	8	#3 [10] Bar, 43" [1,092] Long	ASTM A615 Gr. 60 or ASTM A706 Gr. 60	Epoxy—Coated (ASTM A775 or A934)	—
c5	2	4"x3"x1/4" [102x76x6] Foundation Tube, 48" [1,219] Long	ASTM A500 Gr. B	ASTM A123	—
d1	2	15 1/4"x9"x1/2" [387x229x13] Cable Anchor Base Plate	ASTM A36	See Assembly	—
d2	2	15 1/4"x5"x3/8" [387x127x10] Anchor Bracket Plate	ASTM A36	See Assembly	—
d3	4	6"x4 1/2"x1/2" [152x114x13] Exterior Cable Plate Gusset	ASTM A36	See Assembly	—
d4	2	9"x5"x1/2" [229x127x13] Release Lever Plate	ASTM A36	See Assembly	—
d5	6	3 5/16"x3 3/16"x1/2" [84x81x13] Interior Cable Plate Gusset	ASTM A36	See Assembly	—
d6	4	3 1/2"x2 3/8"x1/2" [89x61x13] Release Gusset	ASTM A36	See Assembly	—
d7	2	3/16" [5] Dia. Brass Keeper Rod, 16 1/4" [413] Long Unbent	ASTM B16—00	—	—
e1	2	13 1/2"x3 1/2"x1/2" [343x89x13] Kicker Plate	ASTM A36	See Assembly	—
e2	4	3 1/4"x1 3/4"x1/2" [83x44x13] Kicker Gusset	ASTM A36	See Assembly	—
e3	4	1 1/4"x1 1/4"x3/16" [32x32x5], 17" [432] Long Square Tube	ASTM A500 Gr. B	See Assembly	—
e4	2	1 1/4"x1 1/4"x3/16" [32x32x5], 5" [127] Long Square Tube	ASTM A500 Gr. B	See Assembly	—
e5	2	1/4" [6] Dia. 7x19 Aircraft Retaining Cable, 36" [914] Long	ASTM A1023	Hot—Dipped Galvanized	—



Midwest Roadside  
Safety Facility

Non—Proprietary Cable  
Median Barrier  
Test No. MTP—2

Bill of Materials

DWG. NAME.  
MTP—2\_R6

SCALE: None  
UNITS: in.[mm]

SHEET:  
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7/16/2019

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KAL

Item No.	QTY.	Description	Material Specification	Treatment Specification	Hardware Guide
f1	2	S3x5.7 [S75x8.5], 19" [483] Long Post	ASTM A36	See Assembly	—
f2	4	4 15/16"x4"x3/8" [125x102x10] Base Plate	ASTM A36	See Assembly	—
f3	2	S3x5.7 [S75x8.5], 28 1/8" [714] Long Post	ASTM A36	See Assembly	—
f4	2	18 3/4"x2"x1/2" [476x51x13] Cable Hanger	ASTM A36	See Assembly	—
f5	2	4 15/16"x4"x28—Guage [125x102x0.4] Keeper Plate	ASTM A36	—	—
f6	8	3/16" [5] Dia., 5 1/8" [130] Long Unbent Brass Rod	ASTM B16—00	—	—
g1	12	3/4" [19] Dia. 3x7 IWRC IPS Wire Rope — Lengths as Needed	ASTM A741 Type 1	Class A Coating	RCM01
g2	24	Bennett Cable End Fitter — 7/8" [22] Dia.	ASTM A220 Gr. 50005	ASTM A153 or B695	RCE03
g3	24	Cable Wedge	ASTM A47 Gr. 32510 or A536 Gr. 65—45—12	—	FMM01
g4	28	7/8"—9 UNC [M22x2.5], 11" [279] Long Threaded Rod	ASTM A449 Type 1 or ASTM A193 Gr. B7	ASTM A153 or B695 Class 55 or F2329	RCE03
g5	8	Bennett Short 7/8"—9 UNC [M22x2.5] Threaded Turnbuckle	As Supplied	As Supplied	—
g6	8	Threaded Load Cell Coupler	—	—	—
g7	4	50,000—Ib [222.4—kN] Load Cell	—	—	—
h1	108	5/16"—18 UNC [M8x1.25], 2 1/2" [64] Long Heavy Hex Bolt	SAE J429 Gr. 5	ASTM A153 or B695 Class 55 or F2329	FBX08b
h2	8	1/2"—13 UNC [M14x2], 2" [51] Long Hex Bolt	ASTM A307 Gr. A	ASTM A153 or B695 Class 55 or F2329	FBX14a
h3	2	5/8"—11 UNC [M16x2], 9 1/2" [241] Long Heavy Hex Bolt	ASTM A449 or equivalent	ASTM A153 or B695 Class 55 or F2329	FBX16b
h4	2	3/4"—10 UNC [M20x2.5], 5 1/2" [140] Long Hex Bolt	ASTM A307 Gr. A	ASTM A153 or B695 Class 55 or F2329	FBX20a
h5	108	5/16"—18 UNC [M8x1.25] Sleeve Nut	ASTM A311 Gr. 1144 Class B	ASTM A123 or A153	—
h6	8	1/2"—13 UNC [M14x2] Hex Nut	ASTM A563A or equivalent	ASTM A153 or B695 Class 55 or F2329	FBX14a
h7	2	5/8"—11 UNC [16x2] Heavy Hex Nut	ASTM A563C or equivalent	ASTM A153 or B695 Class 55 or F2329	FNX16b
h8	18	3/4"—10 UNC [M20x2.5] Hex Nut	ASTM A563A or equivalent	ASTM A153 or B695 Class 55 or F2329	FNX20a
h9	16	7/8"—9 UNC [M22x2.5] Heavy Hex Nut	ASTM A563C or equivalent	ASTM A153 or B695 Class 55 or F2329	FNX22b
h10	24	7/8"—9 UNC [M22x2.5] Heavy Square Nut	ASTM A563DH or equivalent	ASTM A153 or B695 Class 55 or F2329	—
h11	20	3/4" [19] Dia. Plain USS Washer	ASTM F844	ASTM A123 or A153 or F2329	FWC20a
h12	24	1/2" [13] Dia. Plain SAE Washer	ASTM F844	ASTM A123 or A153 or F2329	—
h13	8	3"x2 3/8"x1/2" [76x60x13] Rectangular Washer Plate	ASTM A36	ASTM A123	—



Midwest Roadside  
Safety Facility

Non—Proprietary Cable  
Median Barrier  
Test No. MTP—2

Bill of Materials

DWG. NAME.  
MTP—2\_R6

SCALE: None  
UNITS: in.[mm]

SHEET:  
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DATE:  
7/16/2019  
DRAWN BY:  
DJW/JEK/JR  
D  
REV. BY:  
KAL

REV.	DATE OF ISSUE	Page	NATURE OF CHANGES	REVIEWER	REVISED BY
0	2/8/2019	–	Created from drawing MTP-1_R2.	–	DJW
		–	Addition of ditch on backside. Changes in post spacing.		
1	2/12/2019	1	Adjusted total length dim location to center of brackets.	KAL	JEK
2	4/26/2019	1	Changed spacing between Post Nos. 37 & 38 to 12'.	KAL	DJW
3	6/11/2019	–	Rotated post nos. 3 through 38 by 180 degrees. Adjusted cables for new post orientation.	KAL	JRD
		6	Updated views for new post orientation. Annotation moved to new frontside of post.		
		7	Updated views for new post orientation. Renamed detail views.		
4	6/18/2019	1	Note 5 edit.	KAL	JEK
5	7/16/2019	2	Added note 1. Added backside and impact side annotations.	KAL	JRD
6	4/2/2021	2	Added note calling out load cells in drawing.	KAL	CJN
			Added note refereing to location of cable assembly drawing.		