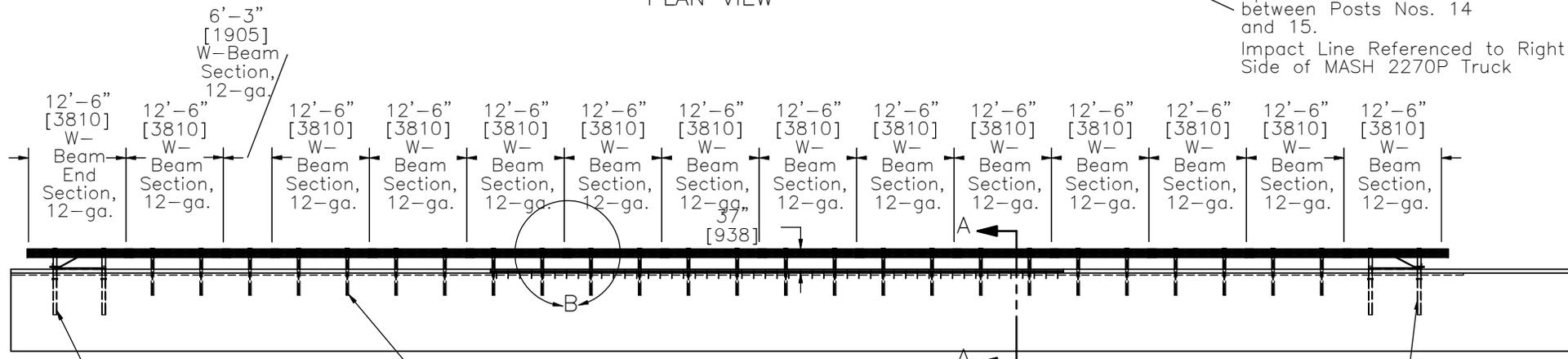


PLAN VIEW



ELEVATION VIEW

- Notes:
- (1) Use 2 ft [610] of Level NCHRP 350 Soil Fill Behind Posts Before Tapering Downward.
  - (2) Asphalt Extends Entire Length of System.
  - (3) Post Nos. 1-8 and 20-29 are in 2' [610] Diameter Holes, and Post Nos. 9-19 are in 3' [914] Diameter Holes.

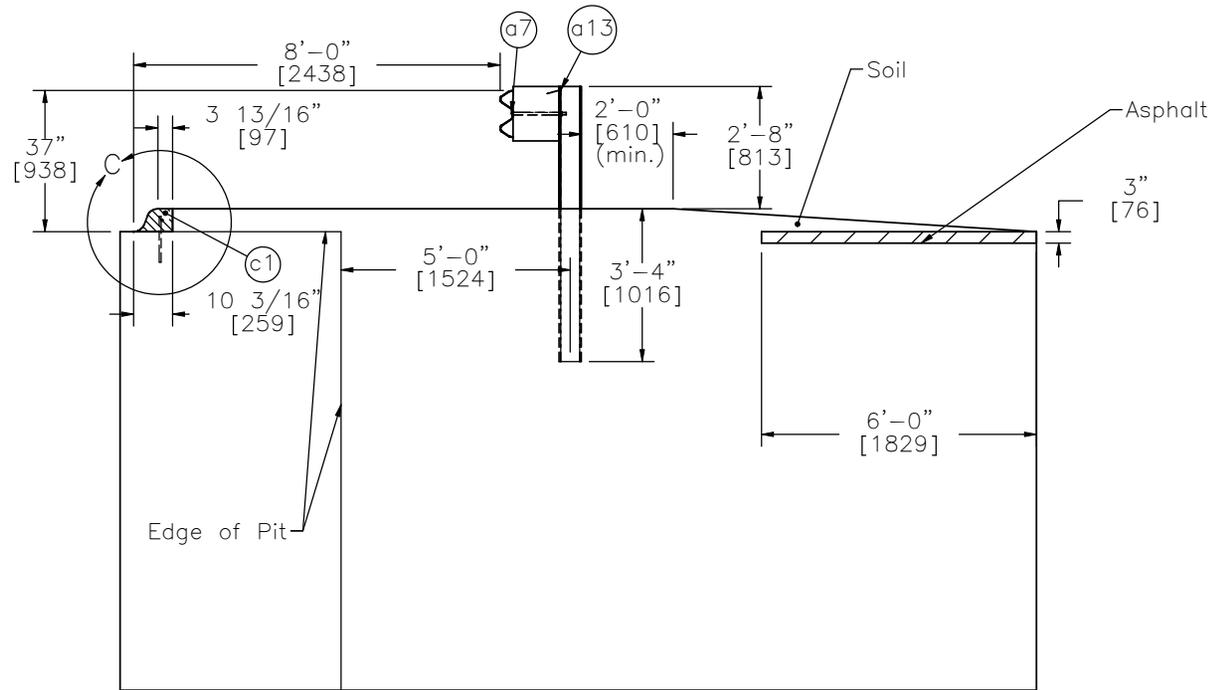


Midwest Roadside Safety Facility

MGS with 6-in. Type B Curb  
System Layout

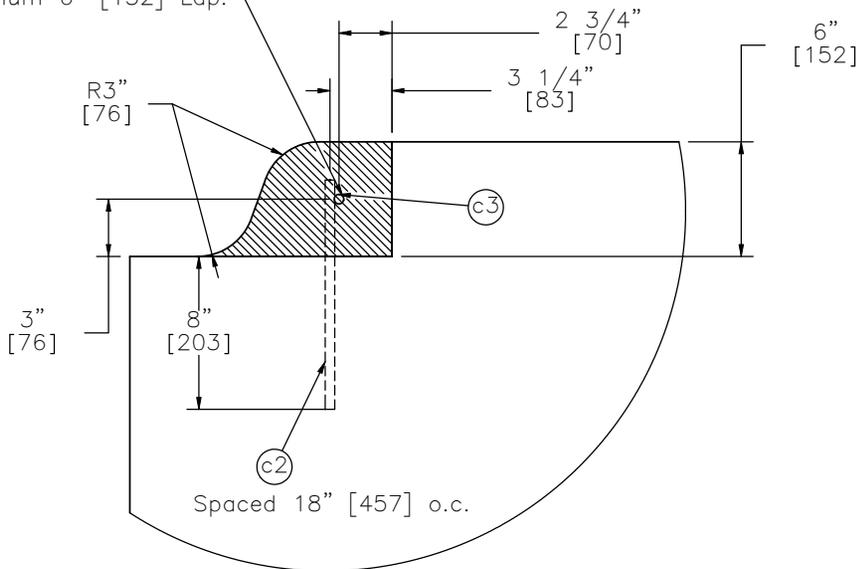
DWG. NAME: MGSC-5\_R11  
SCALE: 1:240  
UNITS: In.,[mm]

SHEET: 1 of 10  
DATE: 7/15/2009  
DRAWN BY: RJT/CDB/EAJ/MJW  
REV. BY: KAL/RKF



SECTION A-A

Use any Number of Pieces to Fit the Length, with a Minimum 6" [152] Lap.



DETAIL C  
SCALE 1 : 10

Note: (1) Curb Offset has a Tolerance of 1 3/4" [44] Located Between the Tangent Edge of Curb and Front Face of the guardrail.



Midwest Roadside  
Safety Facility

MGS with 6-in. Type B  
Curb  
Posts 3-27 Detail

SHEET:  
2 of 10

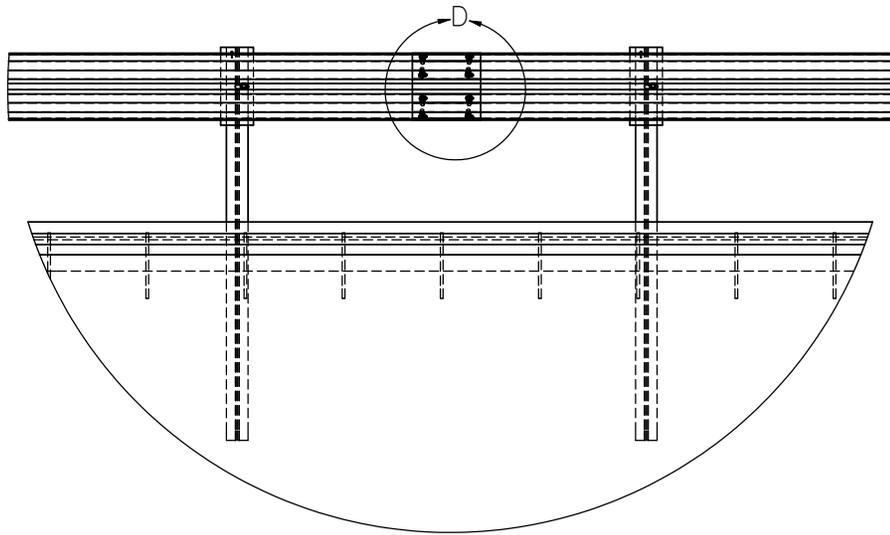
DATE:  
7/15/2009

DRAWN BY:  
RJT/CDB/  
EAJ/MJW

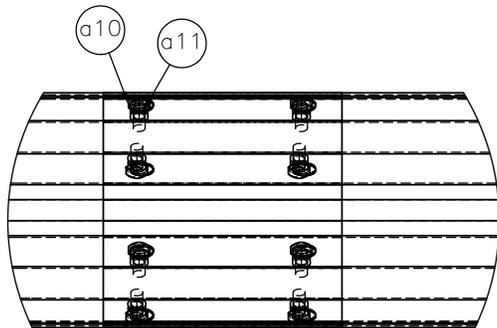
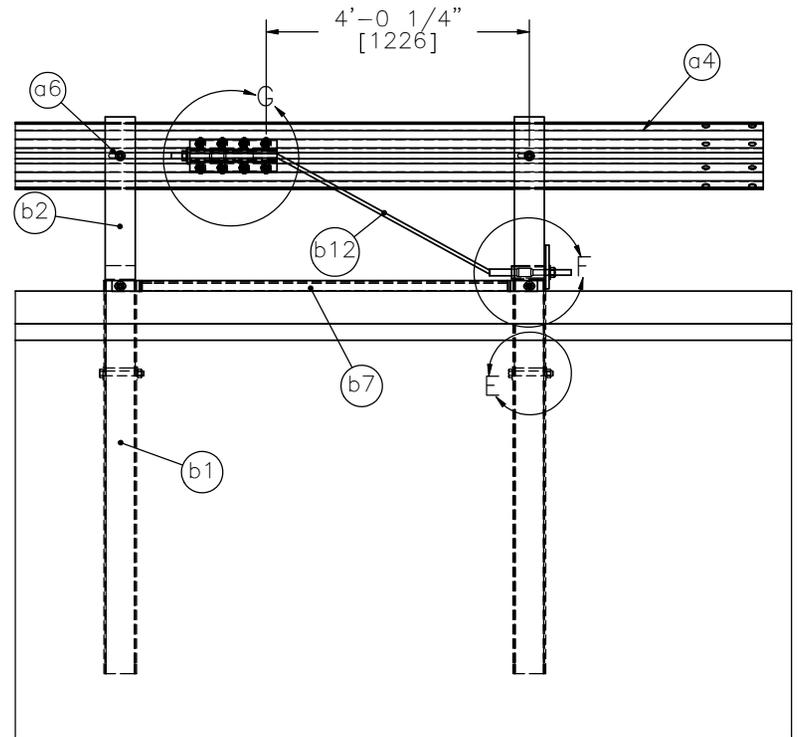
DWG. NAME:  
MGSC-5\_R11

SCALE: 1:50  
UNITS: In.[mm]

REV. BY:  
KAL/RKF



DETAIL B



DETAIL D  
SCALE 1 : 10



MGS with 6-in. Type B  
Curb

End Rail Detail  
Splice Detail

Midwest Roadside  
Safety Facility

DWG. NAME.  
MGSC-5\_R11

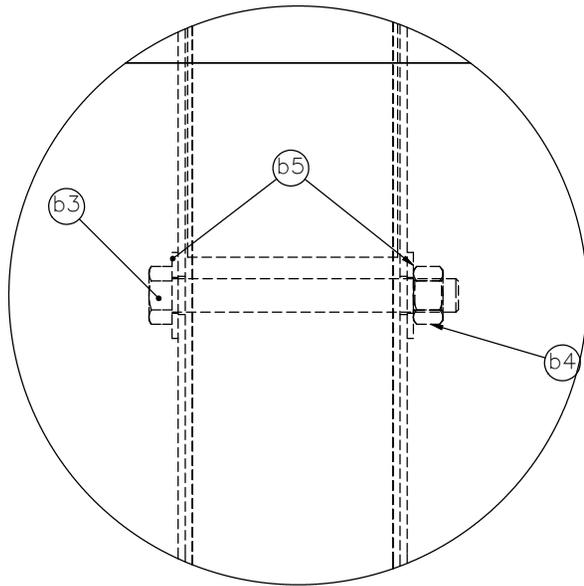
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UNITS: In.[mm]

SHEET:  
3 of 10

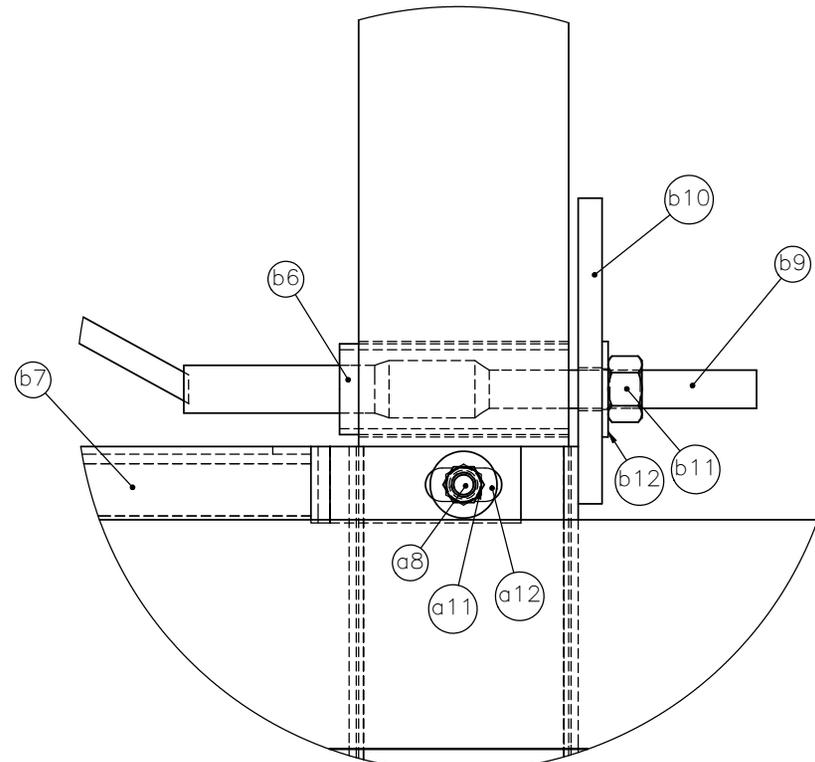
DATE:  
7/15/2009

DRAWN BY:  
RJT/CDB/  
EAJ/MJW

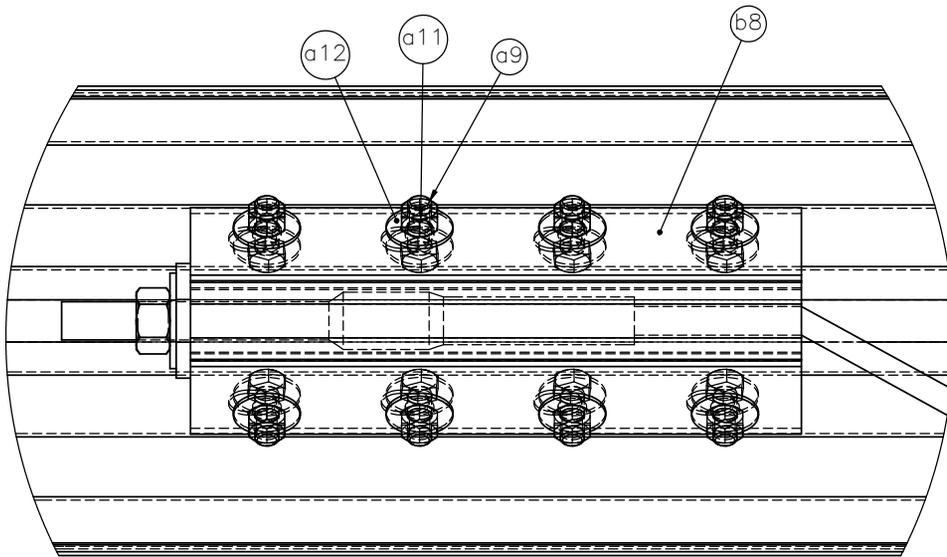
REV. BY:  
KAL/RKF



DETAIL E



DETAIL F



DETAIL G



Midwest Roadside  
Safety Facility

MGS with 6-in. Type B  
Curb

Anchor Details

DWG. NAME.  
MGSC-5\_R11

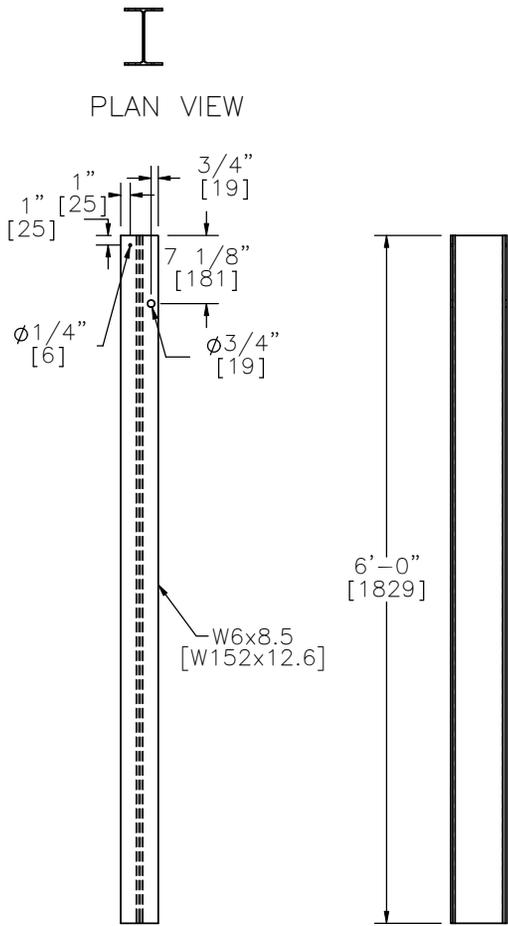
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UNITS: In./mm

SHEET:  
4 of 10

DATE:  
7/15/2009

DRAWN BY:  
RJT/CDB/EAJ/MJW

REV. BY:  
KAL/RKF

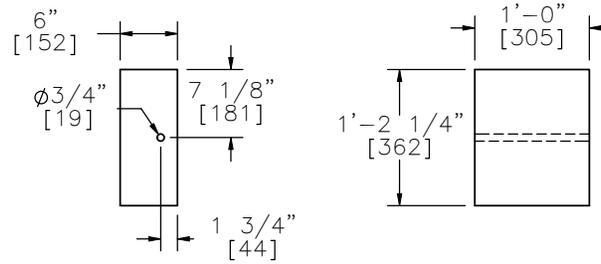


PLAN VIEW

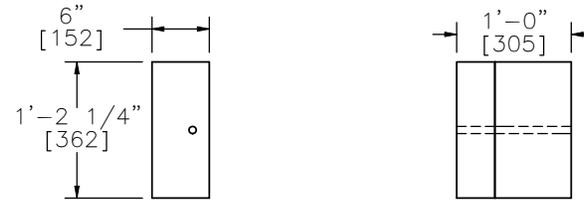
FRONT VIEW

SIDE VIEW

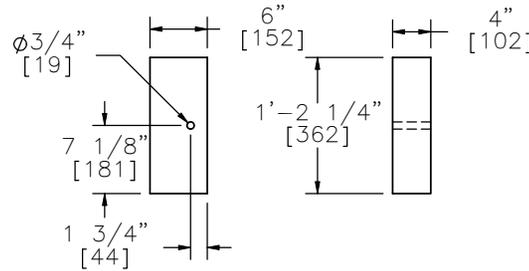
Line Post  
Part a1



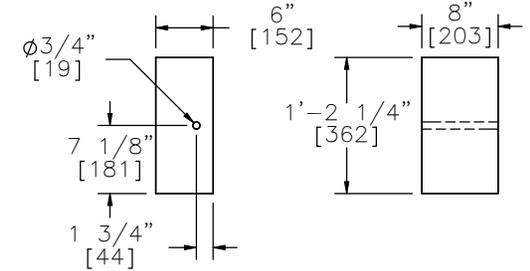
W-Beam Blockout  
Part a2



Alternate Blockout Option -  
6"x4"x14 1/4" [152x102x362] Blockout  
with 6"x8"x14 1/4" [152x203x362] Blockout



6"x4"x14 1/4"  
[152x102x362] Blockout



6"x8"x14 1/4"  
[152x203x362] Blockout



Midwest Roadside  
Safety Facility

MGS with 6-in. Type B  
Curb

Post and Blockout Detail

DWG. NAME.  
MGSC-5\_R11

SCALE: 1:20  
UNITS: In.,[mm]

SHEET:  
5 of 10

DATE:  
7/15/2009

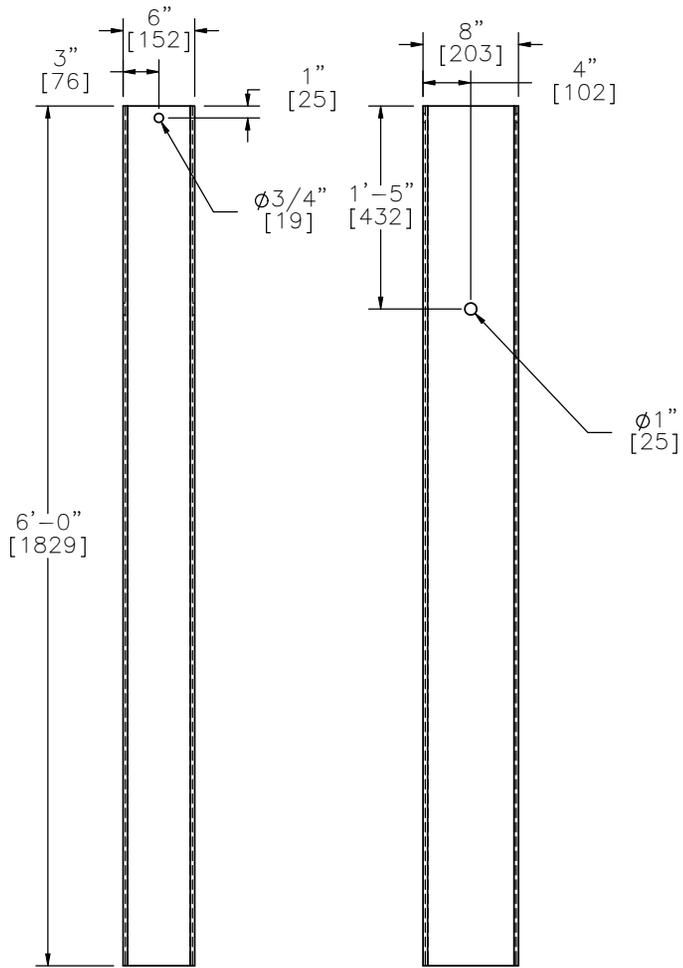
DRAWN BY:  
RJT/CDB/  
EAJ/MJW

REV. BY:  
KAL/RKF



TS 8x6x3/16 [203x152x1.5]

PLAN VIEW



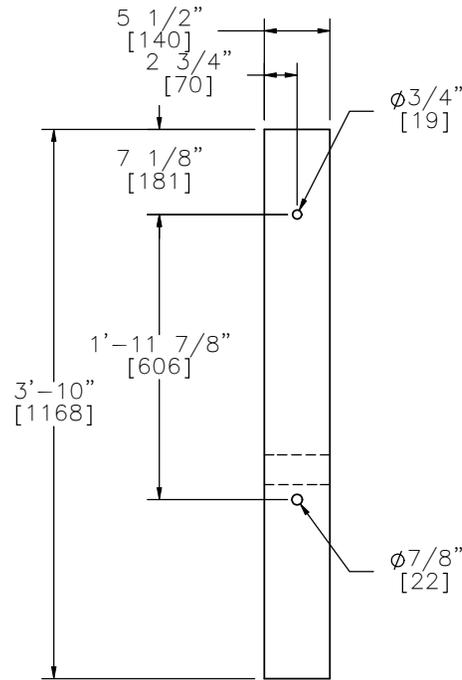
FRONT VIEW

PROFILE VIEW

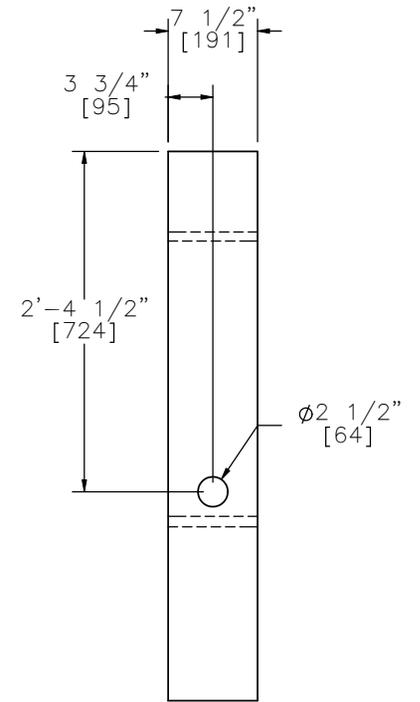
Foundation Tube  
Part b1



PLAN VIEW



FRONT VIEW



SIDE VIEW

BCT (MGS) Timber Post  
Part b2



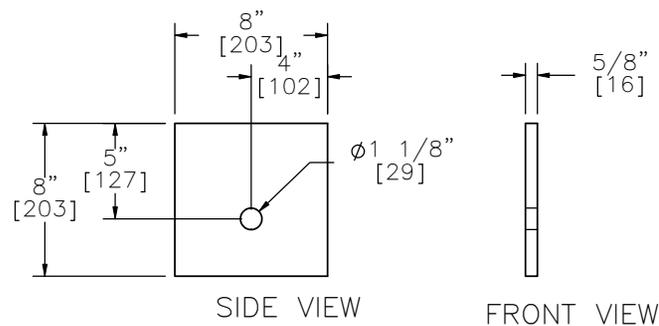
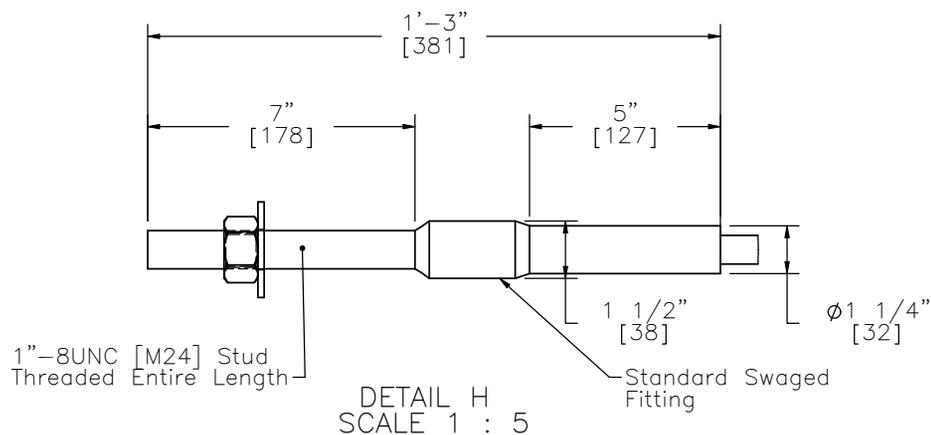
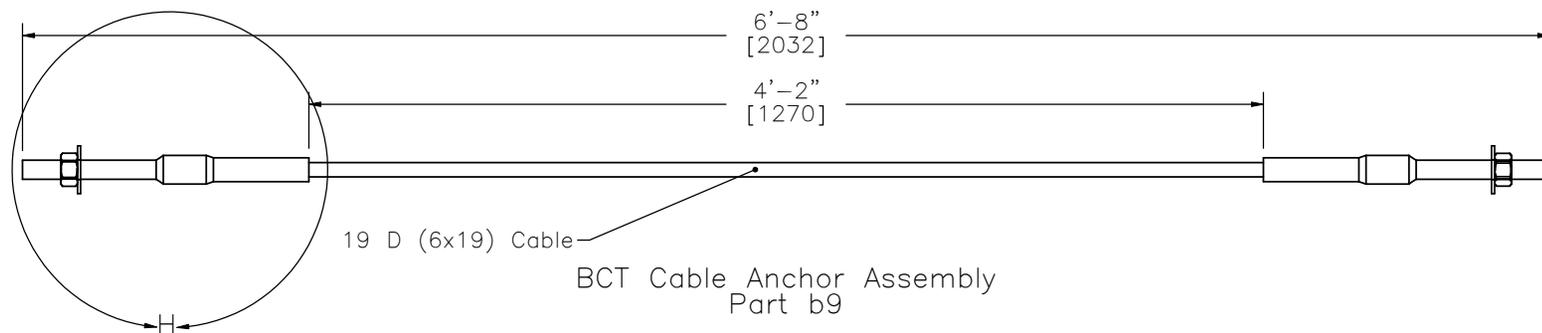
Midwest Roadside  
Safety Facility

MGS with 6-in. Type B  
Curb  
BCT Timber Posts &  
Foundation Tube Detail

DWG. NAME.  
MGSC-5\_R11

SCALE: 1:16  
UNITS: In.,[mm]

SHEET:  
6 of 10  
DATE:  
7/15/2009  
DRAWN BY:  
RJT/CDB/  
EAJ/MJW  
REV. BY:  
KAL/RKF



Anchor Cable Bearing Plate  
Part b10



Midwest Roadside  
Safety Facility

MGS with 6-in. Type B  
Curb

BCT Anchor Cable Detail

DWG. NAME.  
MGSC-5\_R11

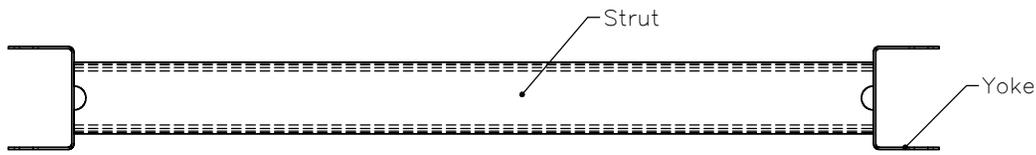
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UNITS: In.[mm]

SHEET:  
7 of 10

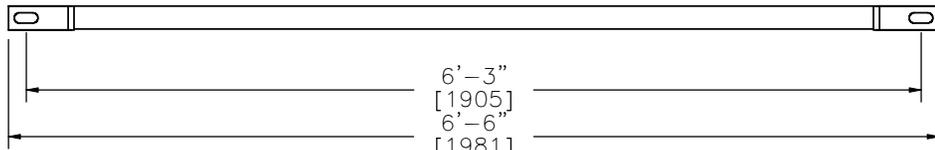
DATE:  
7/15/2009

DRAWN BY:  
RJT/CDB/  
EAJ/MJW

REV. BY:  
KAL/RKF

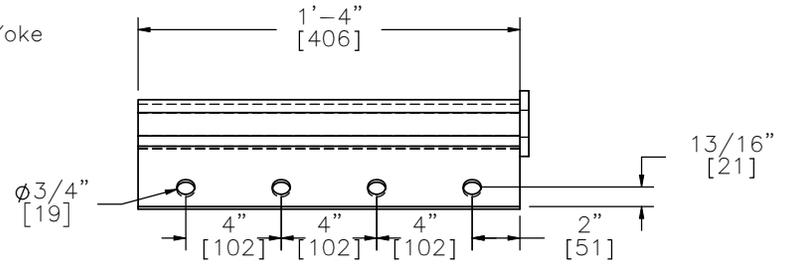


PLAN VIEW

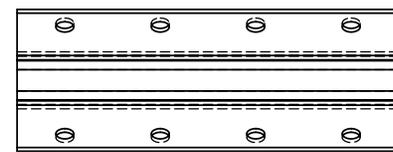


FRONT VIEW

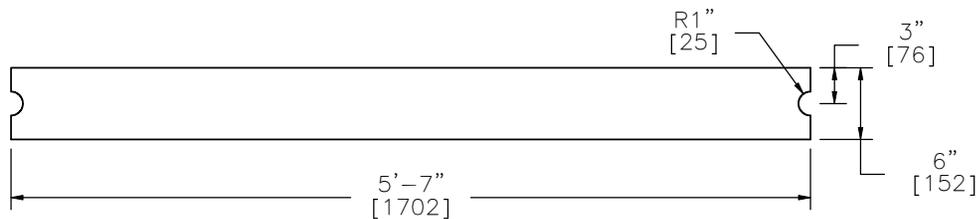
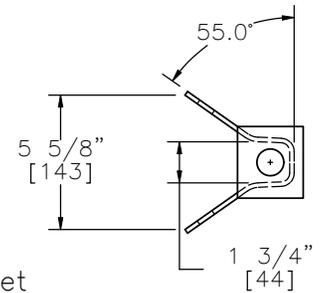
Strut and Yoke Assembly  
Part b7



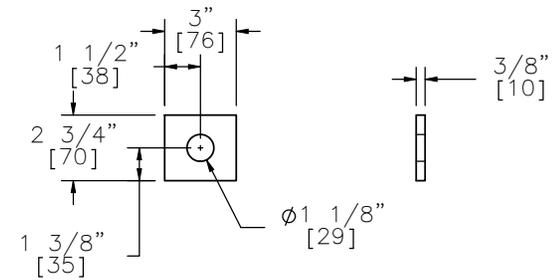
Anchor Bracket  
Bearing Plate



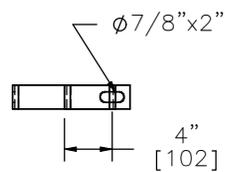
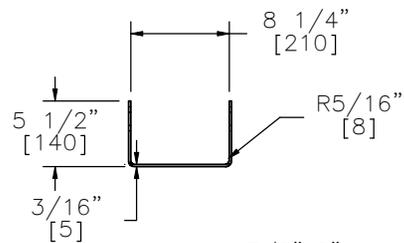
Anchor Bracket  
(FPA01)  
Part b8  
SCALE 1:8



Strut  
C6x8.2 [C152x12.2] Channel Section



Anchor Bracket Bearing Plate  
SCALE 1:8



Yoke



MGS with 6-in. Type B  
Curb

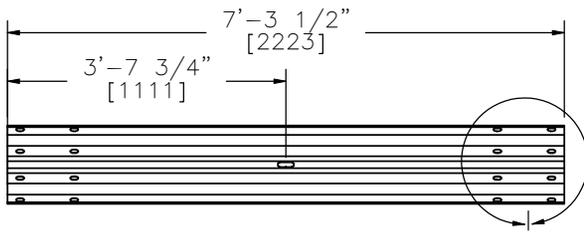
Ground Strut & Anchor  
Bracket Details

Midwest Roadside  
Safety Facility

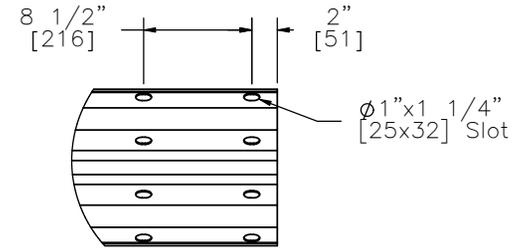
DWG. NAME.  
MGSC-5\_R11

SCALE: 1:16  
UNITS: In.[mm]

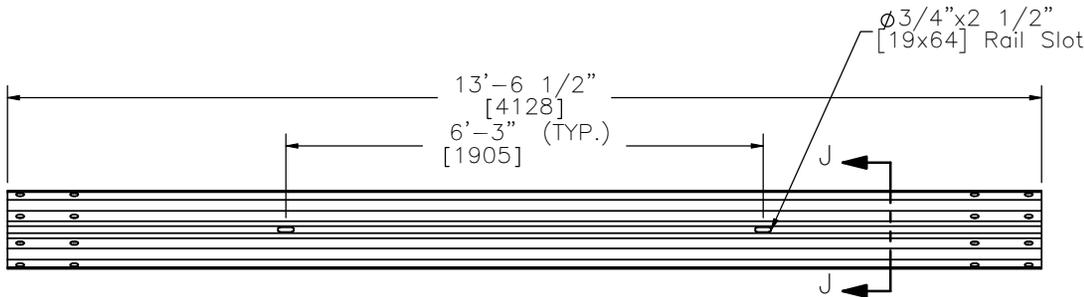
SHEET:  
8 of 10  
DATE:  
7/15/2009  
DRAWN BY:  
RJT/CDB/  
EAJ/MJW  
REV. BY:  
KAL/RKF



6'-3" [1905] W-Beam Section, 12 gauge [2.7]  
Part a5

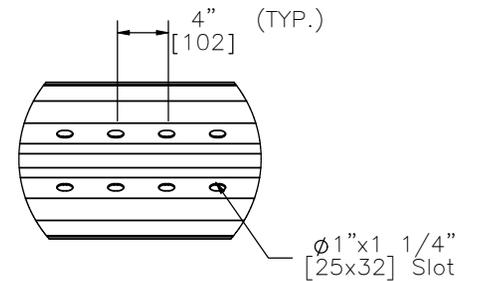


DETAIL I  
SCALE 1 : 15

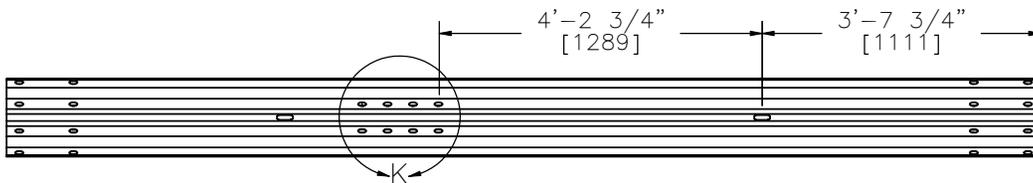


12'-6" [3810] W-Beam Section, 12 gauge [2.7]  
Part a3

SECTION J-J



DETAIL K  
SCALE 1 : 15



12'-6" [3810] W-Beam Section, 12 gauge [2.7], End Section  
Part a4

Note: Part Nos. a3 and a4 can also be 25' [7620] Sections.

	<b>MGS with 6-in. Type B Curb</b>		SHEET: 9 of 10
	Rail Section Details		DATE: 7/15/2009
<b>Midwest Roadside Safety Facility</b>	DWG. NAME: MGSC-5_R11		DRAWN BY: RJT/CDB/ EAJ/MJW
	SCALE: 1:30 UNITS: In.[mm]		REV. BY: KAL/RKF

Item No.	QTY.	Description	Material Spec	Hardware Guide
a1	25	W6x8.5 [W152x12.6] 72" [1829] long	A36 Steel	—
a2	25	6x12x14 1/4" [152x305x362] Blockout	SYP Grade No.1 or better	PDB10a-b
a3	12	12'-6" [3810] W-Beam MGS Section	12 gauge [2.7] AASHTO M180	RWM04a
a4	2	12'-6" [3810] W-Beam MGS End Section	12 gauge AASHTO M180	RWM04a
a5	1	6'-3" [1905] W-Beam MGS Section	12 gauge [2.7] AASHTO M180	RWM01a
a6	4	5/8" [16] Dia. x 10" [254] long Guardrail Bolt	A307	FBB03
a7	25	5/8" [16] Dia. x 14" [356] long Guardrail Bolt	A307	FBB06
a8	4	5/8" [16] Dia. x 10" [254] long Hex Head Bolt	A307	FBX16a
a9	16	5/8" [16] Dia. x 1 1/2" [38] long Hex Head Bolt	A307	FBX16a
a10	112	5/8" [16] Dia. x 1 1/2" [38] Guardrail Bolt	A307	FBB01
a11	161	5/8" [16] Dia. Hex Nut	A563DH	FBX16a
a12	44	5/8" [16] Dia. Flat Washer	F436 Gr. 1	FWC16b
a13	25	16D Double Head Nail	—	—
b1	4	72" [1829] Foundation Tube	A500 Gr. B	PTE05
b2	4	BCT Timber Post	SYP Grade No. 1 or better (No knots, 18" [457] above or below ground tension face)	PDF01
b3	4	7/8" [22] Dia. x 7 1/2" [191] long Hex Head Bolt	A325	FBX22a
b4	4	7/8" [22] Dia. Hex Nut	A563DH	FBX22a
b5	8	7/8" [22] Dia. Flat Washer	F436 Gr. 1	FWC22a
b6	2	2 3/8" [60] O.D.x 6" [152] long BCT Post Sleeve	ASTM A53 Grade B Schedule 40	FMM02
b7	2	Strut and Yoke Assembly	A36 Steel	PFP01
b8	2	Anchor Bracket	A36	FPA01
b9	2	BCT Cable Anchor Assembly	ø3/4" [19] 6x19 IWRC IPS Galvanized Wire Rope	FCA01-02
b10	2	8"x8"x5/8" [203x203x16] Anchor Bearing Plate	A36 Steel	FPB01
b11	4	1" [25] Dia. Hex Nut	A563DH	FNX24a
b12	4	1" [25] Dia. Flat Washer	F436 Gr. 1	FWC24a
c1	1	Curb	Concrete (s/g mix) – Min. 4000 psi [27.6 MPa] Comp. Strength	—
c2	49	#4 Rebar 12" [305] Long	Grade 60	—
c3	1	#4 Rebar 73' [22.3 m] Long	Grade 60	—



Midwest Roadside  
Safety Facility

MGS with 6-in. Type B  
Curb

Bill of Materials

SHEET:  
10 of 10

DATE:  
7/15/2009

DRAWN BY:  
RJT/CDB/  
EAJ/MJW

DWG. NAME:  
MGSC-5\_R11

SCALE: None  
UNITS: In.[mm]

REV. BY:  
KAL/RKF