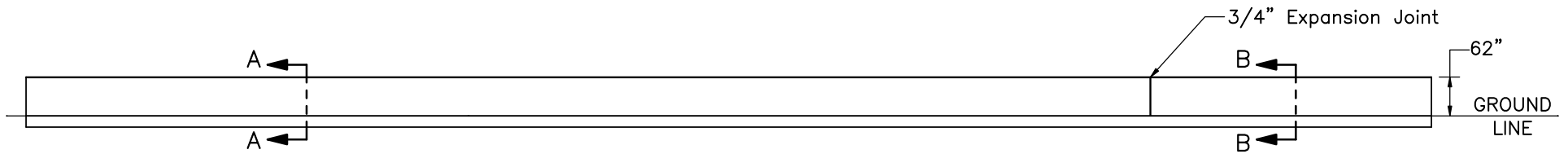



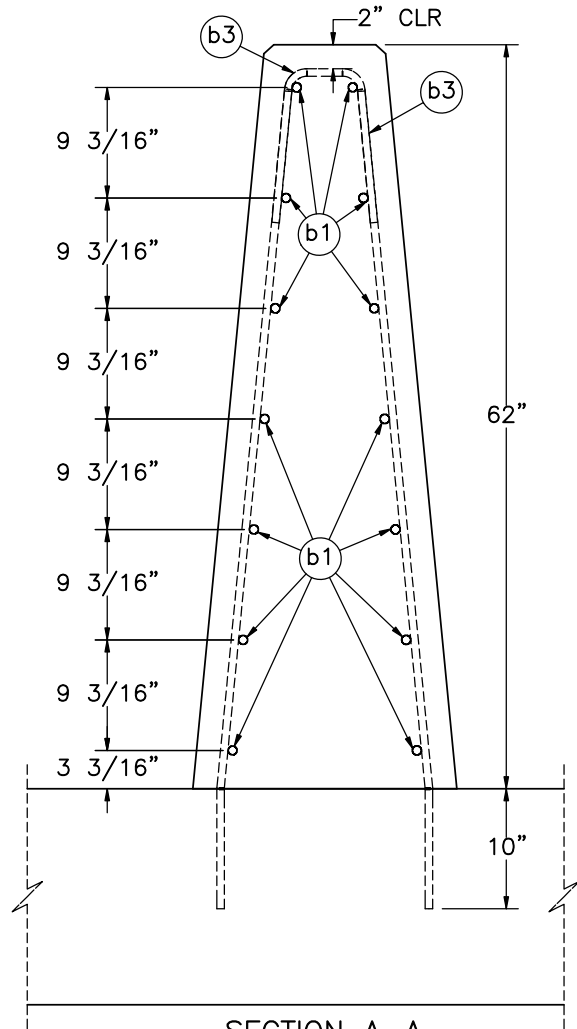
PLAN VIEW



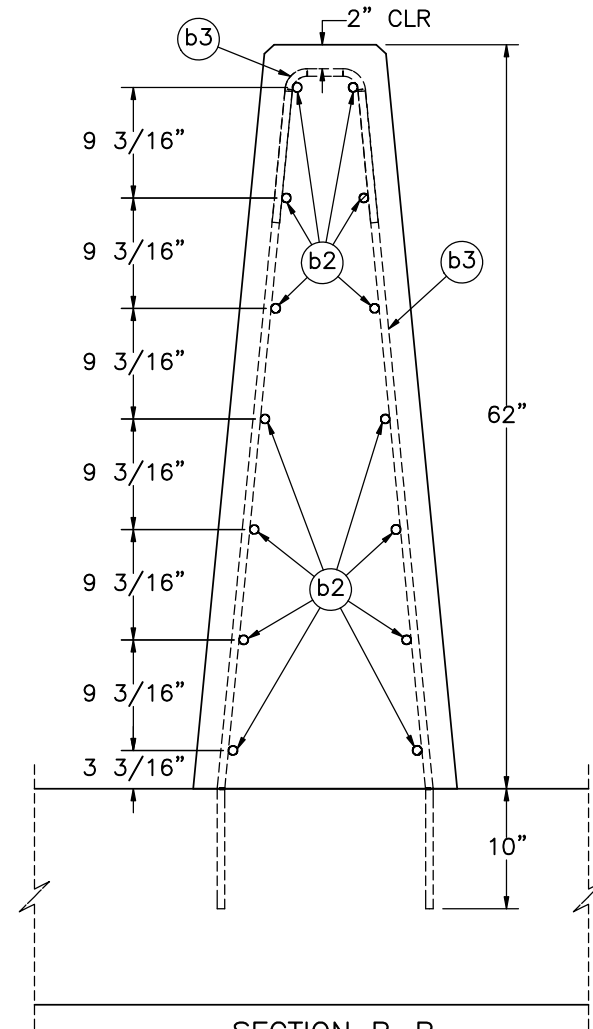
ELEVATION VIEW

- Notes: (1) Test shall be performed according to test designation no. 6-12 of MASH 2016.
 (2) The impact location is 450 in. downstream from the upstream end of the barrier.

 Midwest Roadside Safety Facility	MATC MASH TL-6 62" Tall Concrete Barrier MTL6-1	SHEET: 1 of 6
	Barrier Layout	DATE: 10/4/2021
DWG. NAME: MTL6-1_R9	SCALE: 1:250 UNITS: in.	DRAWN BY: GHR/LJP/S BW
		REV. BY: KAL/CSS

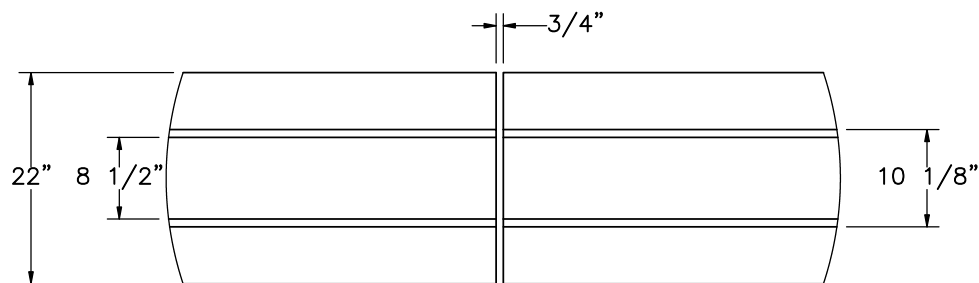


SECTION A-A
DOWNSTREAM SECTION



SECTION B-B
UPSTREAM SECTION

- Notes: (1) Concrete Tarmac hidden in Detail C.
 (2) Rebar (Part b3) shall be epoxied into existing concrete tarmac with HILTI HIT RE-500 V3 (Part c1) or an epoxy of equivalent strength.



DETAIL C
JOINT VIEW



Midwest Roadside
Safety Facility

MATC MASH TL-6
62" Tall Concrete Barrier
MTL6-1

Barrier Section Views

DWG. NAME:
MTL6-1_R9

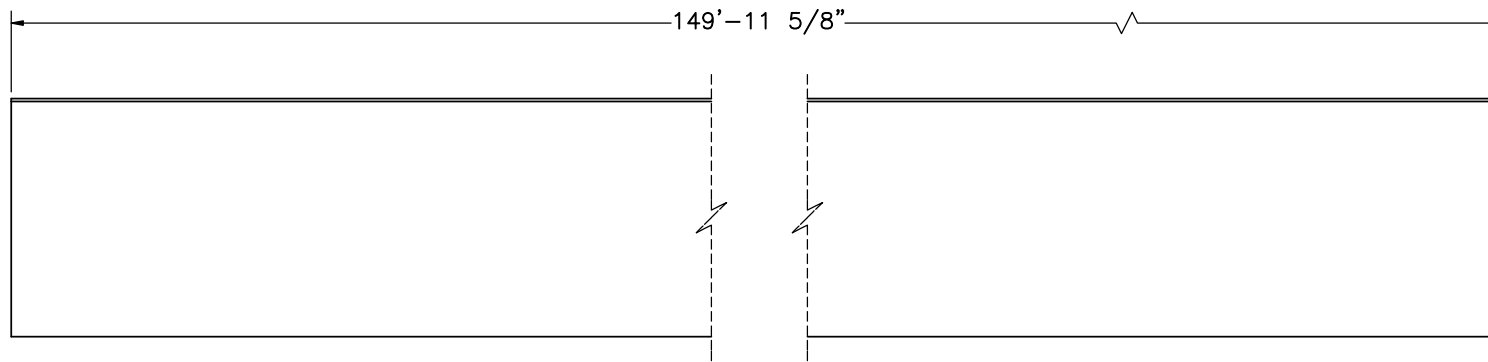
SCALE: 1:20
UNITS: in.

SHEET:
2 of 6

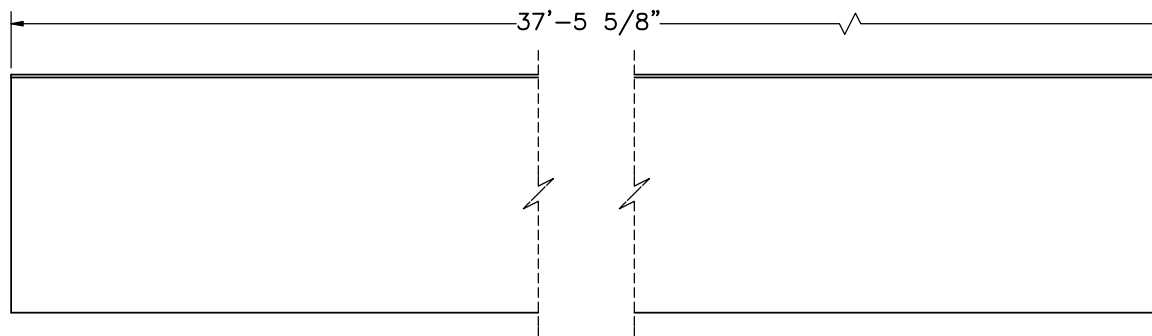
DATE:
10/4/2021

DRAWN BY:
GHR/LJP/S
BW

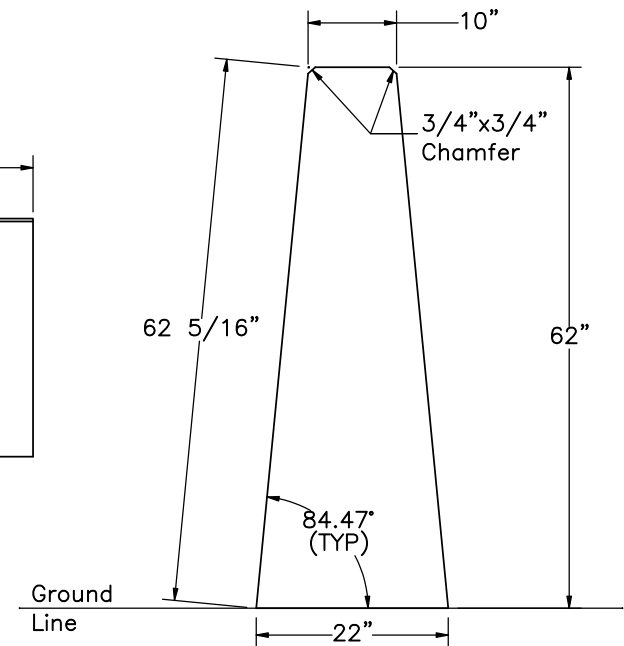
REV. BY:
KAL/CSS



ELEVATION VIEW
(DOWNSTREAM SECTION)




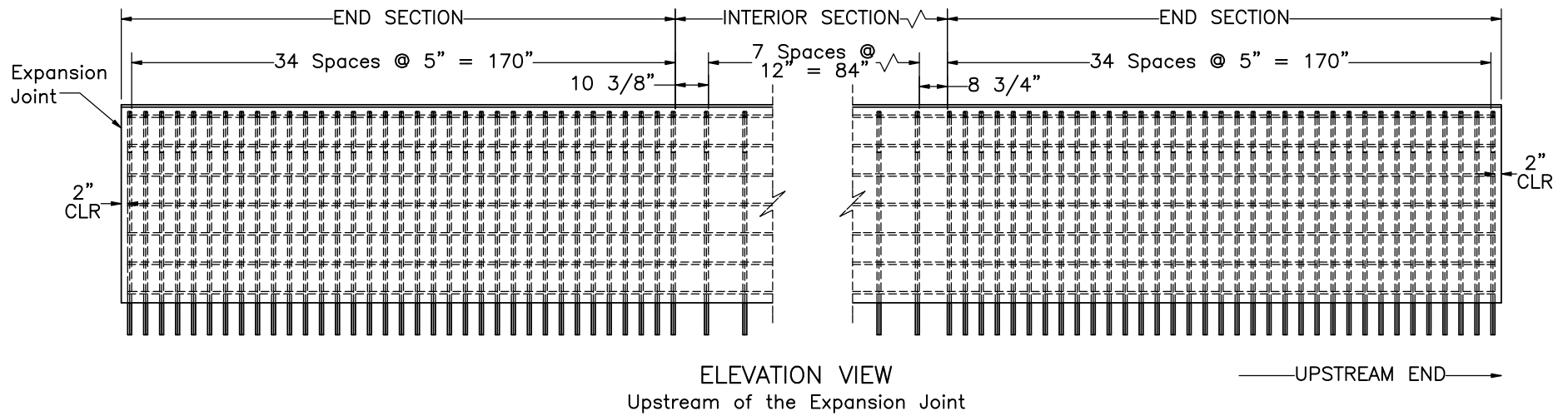
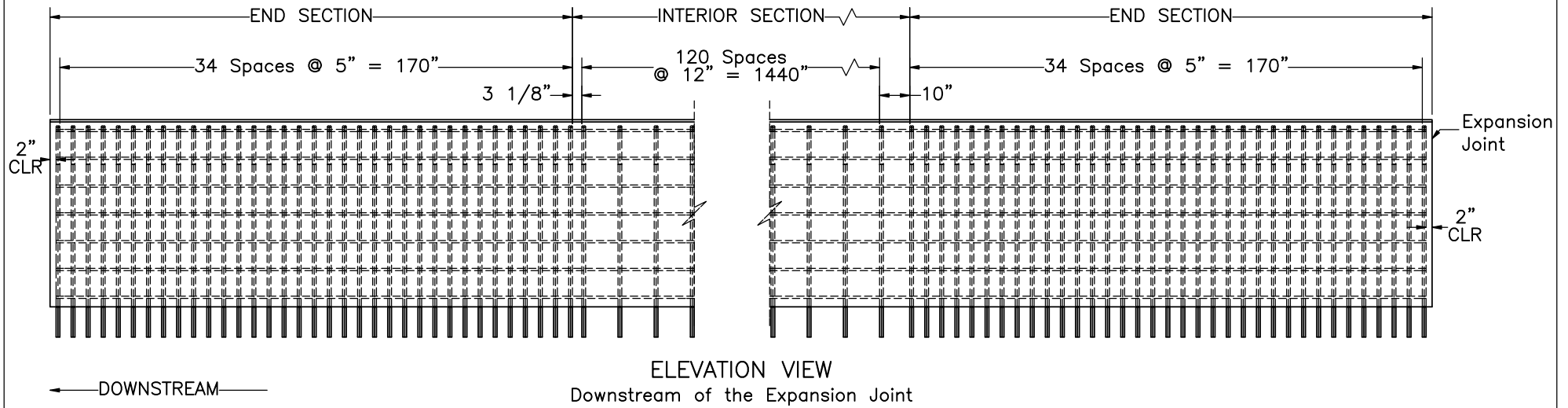
ELEVATION VIEW
(UPSTREAM SECTION)



PROFILE VIEW
SCALE 1:22

Note: (1) Both the upstream and downstream concrete barrier sections have the same profile view.

 Midwest Roadside Safety Facility	MATC MASH TL-6 62" Tall Concrete Barrier MTL6-1	SHEET: 3 of 6
	Concrete Barrier Details	DATE: 10/4/2021
DWG. NAME: MTL6-1_R9	SCALE: 1:50 UNITS: in.	DRAWN BY: GHR/LJP/S BW
		REV. BY: KAL/CSS



- Notes:
- (1) Same vertical bars (Part b3) are used both the interior and end sections.
 - (2) 2 in. clear cover for all rebar.
 - (3) A minimum of 14-ft on each end of the barriers have 5-in. spacing of the vertical bars (Part b3) while the interior has 12-in. spacing.
 - (4) Each vertical bar assembly consists of two mirrored vertical bars (Part b3).



Midwest Roadside
Safety Facility

MATC MASH TL-6
62" Tall Concrete Barrier
MTL6-1

Rebar Layout

DWG. NAME.
MTL6-1_R9

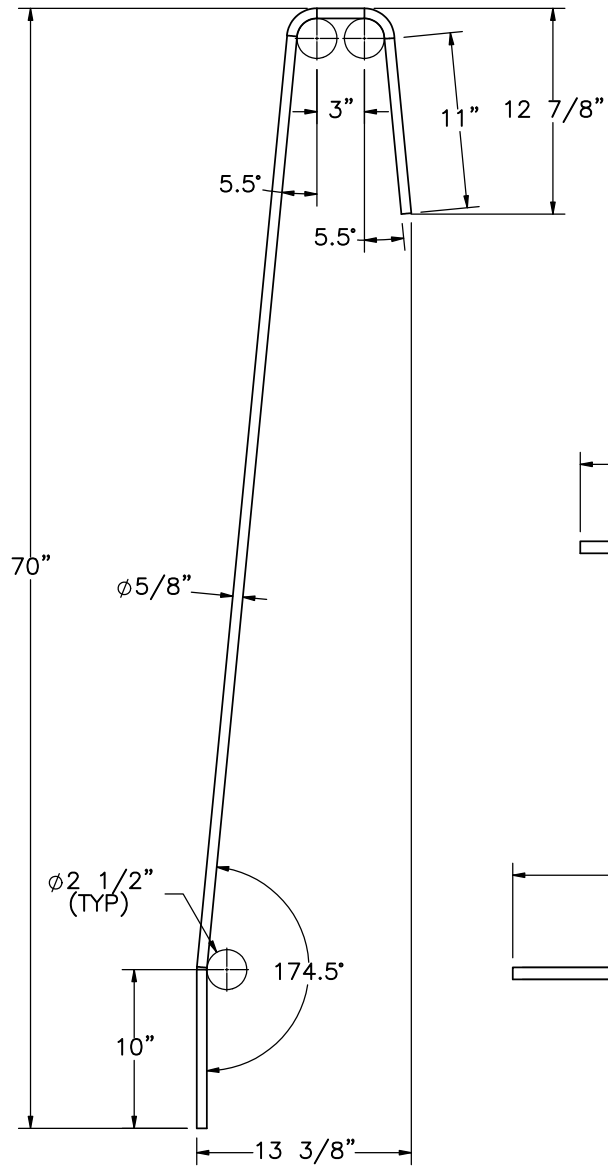
SCALE: 1:50
UNITS: in.

SHEET:
4 of 6

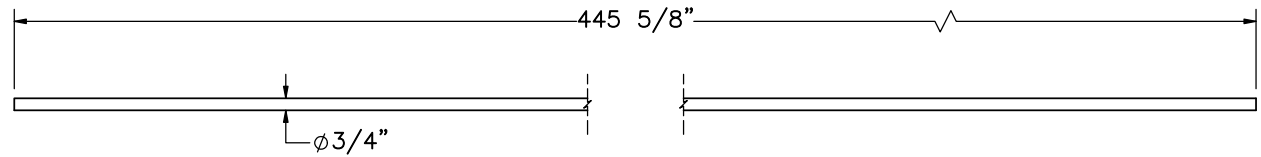
DATE:
10/4/2021

DRAWN BY:
GHR/LJP/S
BW

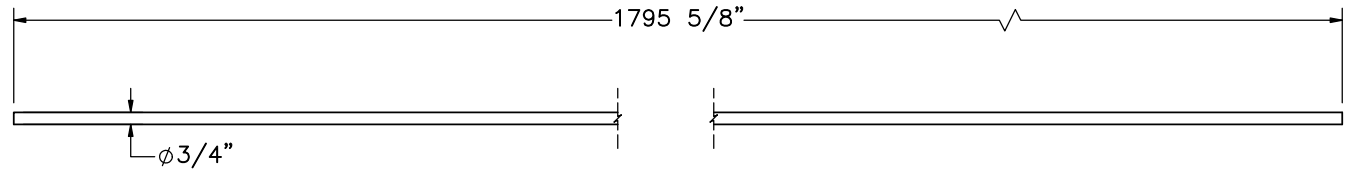
REV. BY:
KAL/CSS



Part b3



Part b2



Part b1

BILL OF BARS

Item No.	QTY.	Size	Lap Length	Total Length	Material Specification
b1	14	#6	36"	1,795 5/8"	ASTM A615 Gr. 60
b2	14	#6	36"	445 5/8"	ASTM A615 Gr. 60
b3	538	#5	-	87 3/8"	ASTM A615 Gr. 60



Midwest Roadside Safety Facility

MATC MASH TL-6
62" Tall Concrete Barrier
MTL6-1

Rebar Details

DWG. NAME:
MTL6-1_R9

SCALE: 1:12
UNITS: in.


SHEET:
5 of 6

DATE:
10/4/2021

DRAWN BY:
GHR/LJP/S
BW

REV. BY:
KAL/CSS

Item No.	QTY.	Description	Material Specification	Treatment Specification	Hardware Guide
a1	—	Concrete	Min. f'c = 5.0 ksi	—	—
b1	14	#6 Rebar, 1,795 5/8" Total Length	ASTM A615 Gr. 60	Epoxy Coated (ASTM A775 or A934)	—
b2	14	#6 Rebar, 445 5/8" Total Length	ASTM A615 Gr. 60	Epoxy Coated (ASTM A775 or A934)	—
b3	538	#5 Rebar, 87 3/8" Unbent Length	ASTM A615 Gr. 60	Epoxy Coated (ASTM A775 or A394)	—
c1	—	Epoxy Adhesive	HILTI HIT RE-500 V3 or Equivalent	—	—

	MATC MASH TL-6 62" Tall Concrete Barrier MTL6-1		SHEET: 6 of 6
	Bill of Materials		DATE: 10/4/2021
Midwest Roadside Safety Facility	DWG. NAME: MTL6-1_R9	SCALE: None UNITS: in.	DRAWN BY: GHR/LJP/S BW
			REV. BY: KAL/CSS

REV.	DATE OF ISSUE	Page	NATURE OF CHANGES	REVIEWER	REVISED BY
0	4/23/2021	-	Design based on Manitoba TL-5 Bridge Rail	-	GHR
1	4/26/2021	ALL	Added 1/2" expansion joint @ 450" downstream of the upstream end of the system	KAL	GHR
		2	Added Detail C, showing expansion joint		
		3	Added page showing the concrete barrier on each side of expansion joint		
		5, BOM	Changed part b1 from 2,246" long to 1,795 3/4" long. Changed part b2 to "#6 Rebar, 445 3/4" Total Length." Changed original part b2 to part b3.		
2	5/11/2021	1	Added additional end section labels. Removed old section B.	CSS	LJP
		2	Previous part b3 was broken up into parts b3 and b4. Showed lap splice. Removed note 3. Increased sheet scale.		
		3	Increased scale of profile view to replace old section B.		
		4	Added additional end section rebar. Removed note 4. Edited notes 1 and 3.		
		5	New parts b3 and b4. Updated bill of bars.		
3	5/17/2021	1	Changed overall length dimension to ft-in. Added "to center of expansion joint" to impact dimension,	CSS	LJP
		2	Added note 3. Lap location changed.		
		3	Changed barrier lengths to ft-in.		
		4	Edited note 3. Extended end sections to 34 spaces. Updated interior spacing.		
		5	Edited part b3 and b4 dimensions. Removed lap lengths and updated total lengths for part b3 and b4.		
4	5/26/2021	ALL	Changed stirrup shape. Increased expansion joint to 3/4". Changed title to "MATC MASH TL-6 62" Tall Concrete Barrier MTL6-1"	CSS	GHR
		2	Removed lap length note for Part b3.		
		2,4	Changed notes to removed reference to Part b4		
		5, BOM	Deleted Part b4. All rebar bend radii set to 2 1/2" I.D. Changed Part b3 to new stirrup design.		
		5	Changed rebar lap length to 48 1/2".		
5	6/8/2021	5	Changed Parts b1 & b2 Lap Length to 98" from 48 1/2"	CSS	GHR

6	9/7/2021	4	Changed interior spacing dimensions for upstream section.	KAL	GHR
7	9/17/2021	5	Edited lap lengths from 98" to 36" for parts b1 and b2.	KAL	SBW
8	9/23/2021	2	Corrected detail name in note 1.	KAL	GHR
		3	Added interior angles to profile view. Added slope length to profile view.		
9	10/4/2021	3	Adjusted dimensioning in profile view.	KAL	SBW