

- Notes:
- (1) FRP deck panels are to be installed starting with panel no. 11 (P11) and ending with panel no. 1 (P1).
 - (2) Barriers are to be installed starting with barrier section no. 1 (B1) and ending with barrier section no. 6 (B6).
 - (3) Details are not provided for attaching FRP deck panels to steel girders.



**Midwest Roadside
Safety Facility**

Kansas Temporary Concrete
Barrier for FRP Decks

Plan View

Drawing Name:
Kansas TCB on FRP Deck_v6

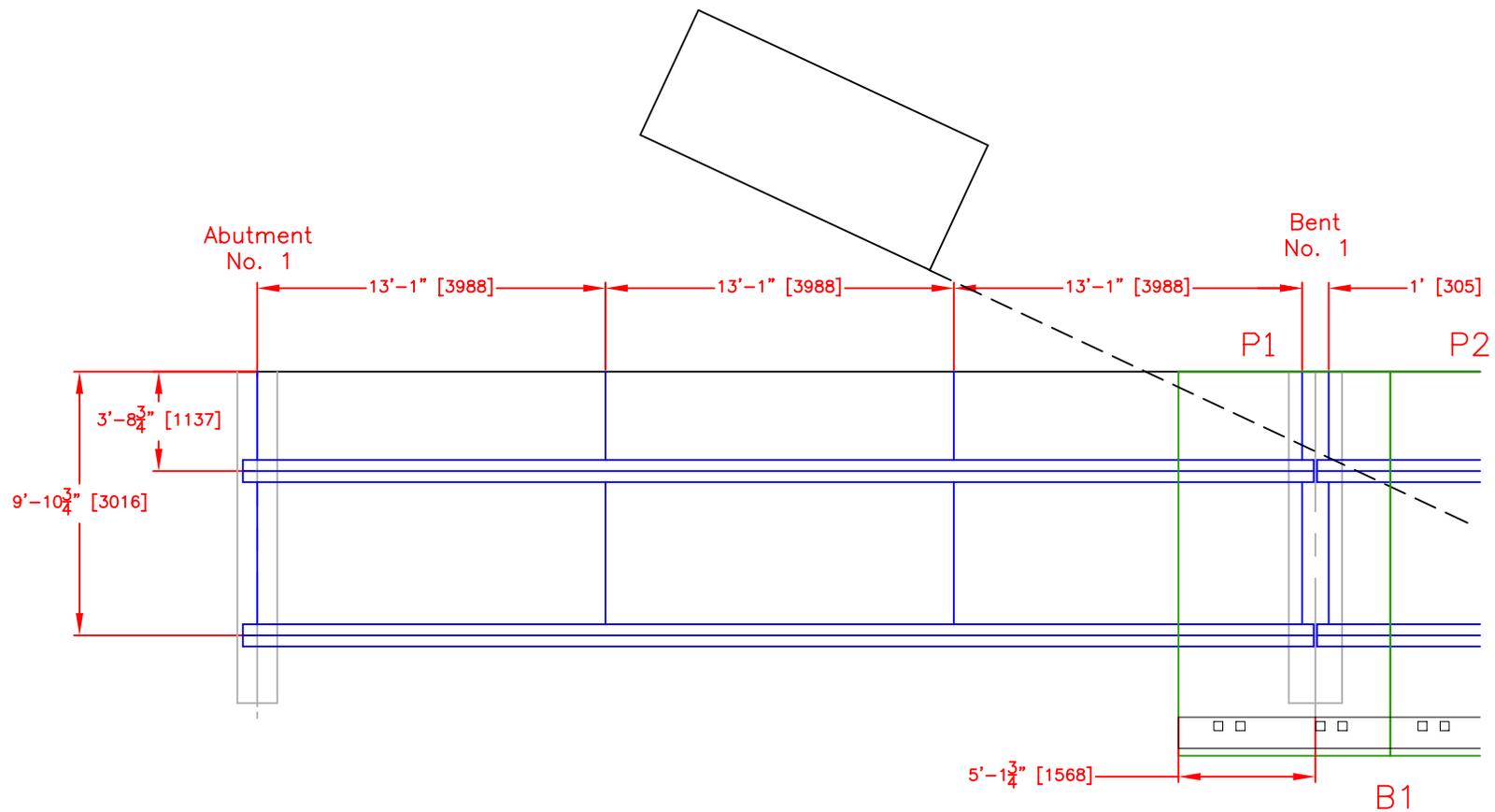
Scale:
1:155

Sheet:
1 of 10

Date:
5/22/09

By:
EAJ

Rev:
RKF



NOTE: All dimensions are approximate.



**Midwest Roadside
Safety Facility**

**Kansas Temporary Concrete
Barrier for FRP Decks**

View from
Abutment 1 - Bent 1

Drawing Name:
Kansas TCB on FRP Deck_v6

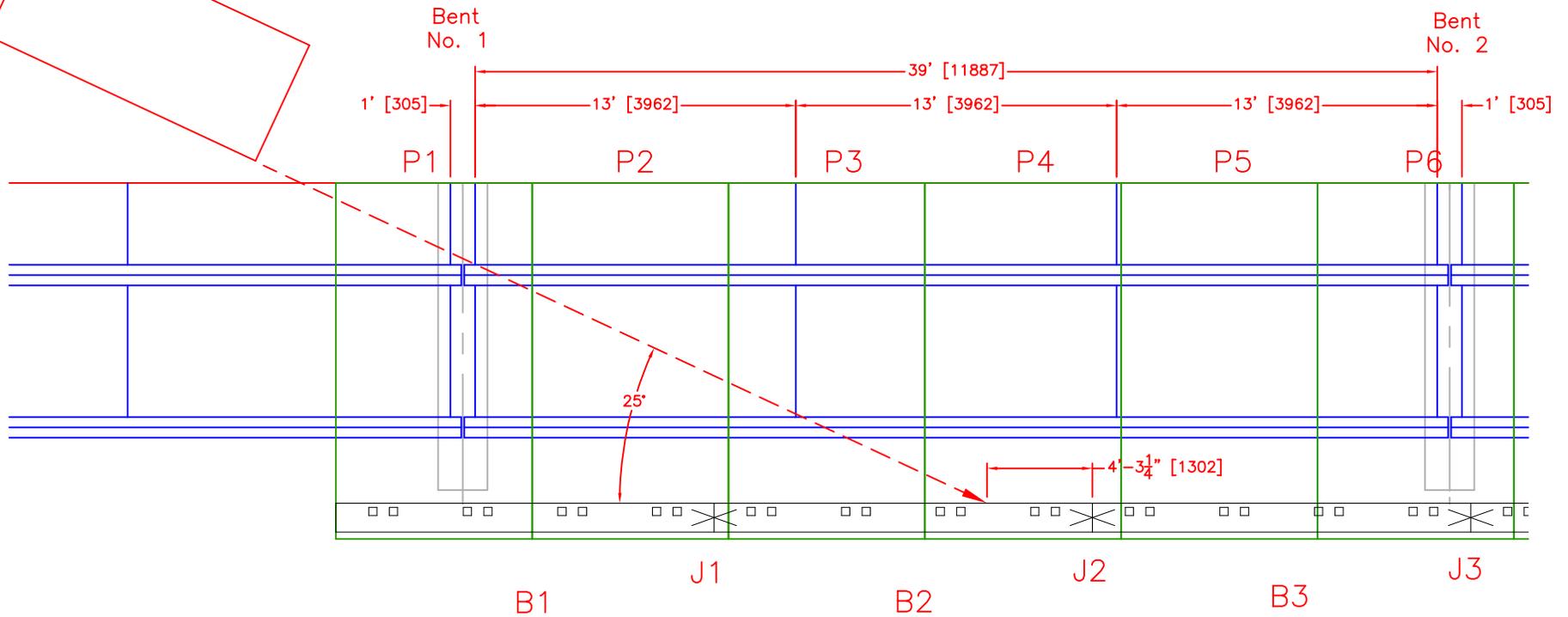
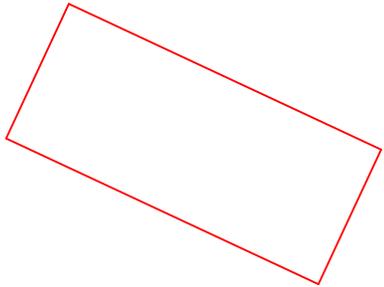
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Sheet:
2 of 10

Date:
5/22/09

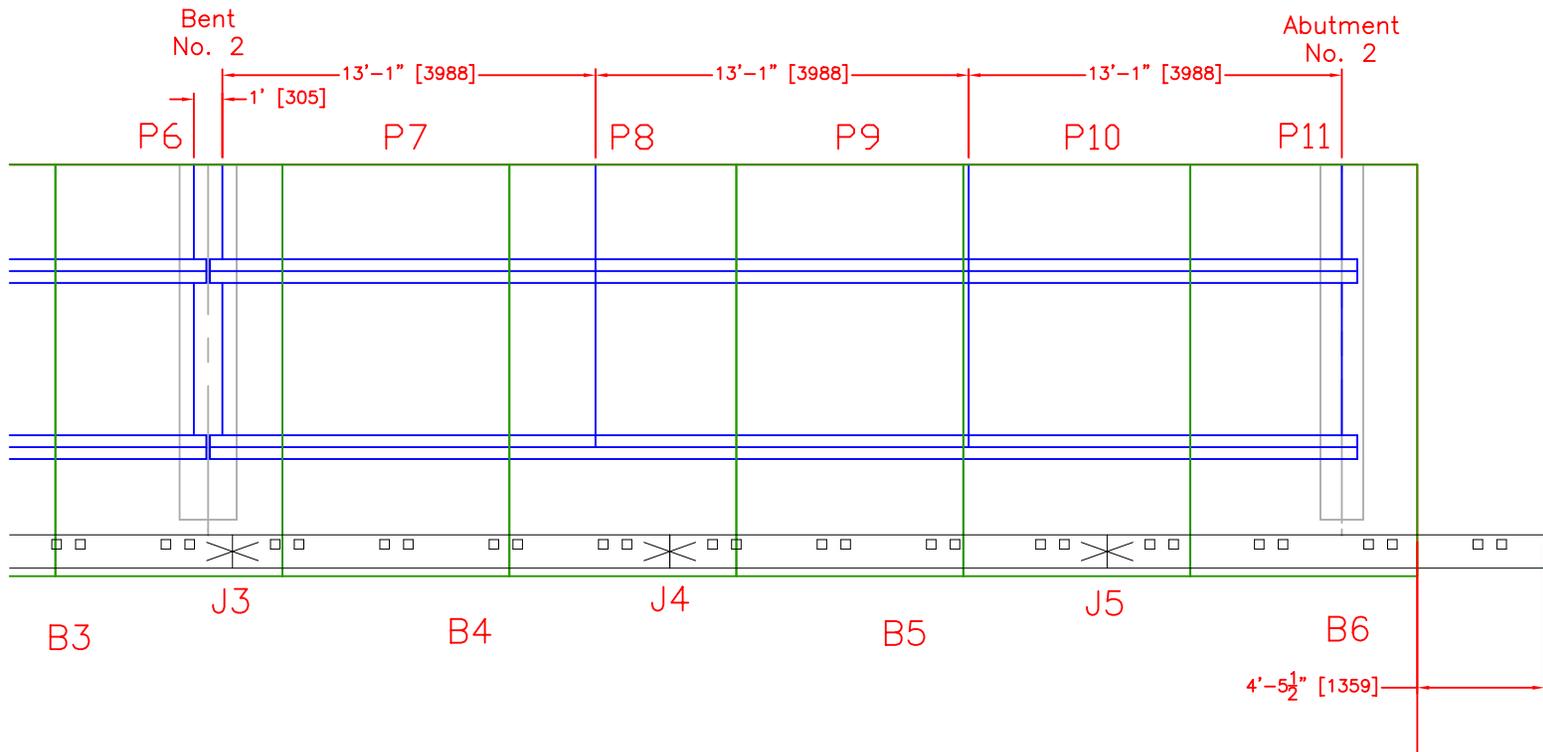
By:
EAJ

Rev:
RKF



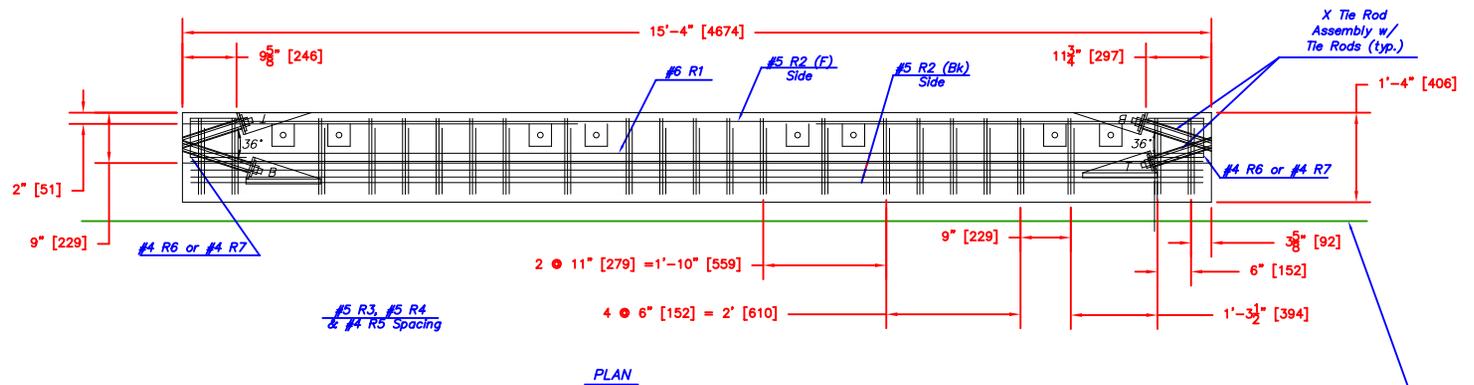
NOTE: All dimensions are approximate.

	Kansas Temporary Concrete Barrier for FRP Decks		Sheet: 3 of 10
	View from Bent 1 - Bent 2		Date: 5/22/09
Midwest Roadside Safety Facility	Drawing Name: Kansas TCB on FRP Deck_v6	Scale: 1:70	By: EAJ
			Rev: RKF



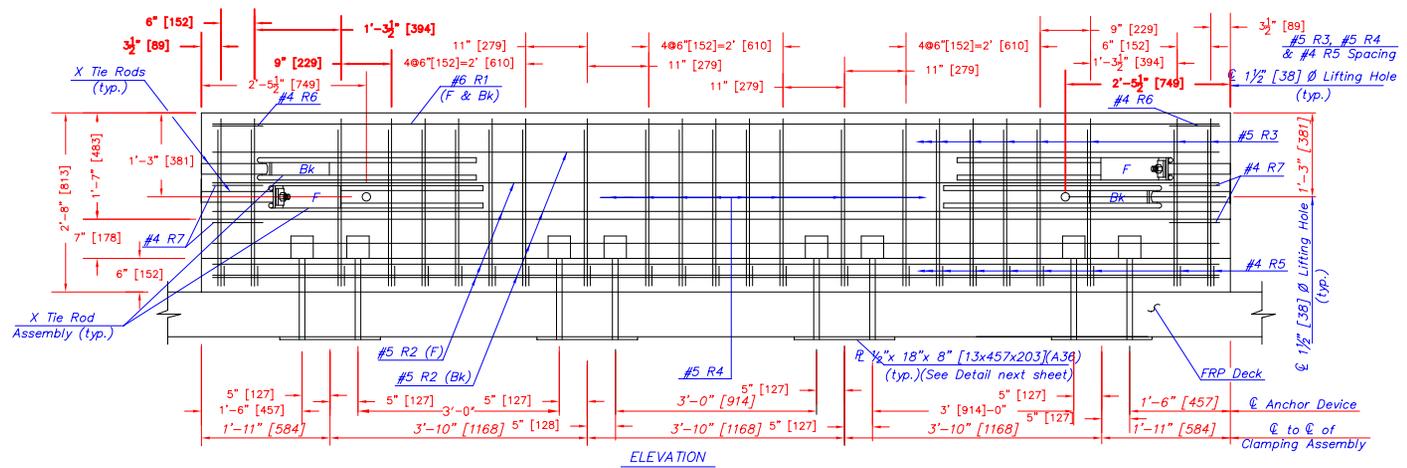
NOTE: All dimensions are approximate.

	Kansas Temporary Concrete Barrier for FRP Decks		Sheet: 4 of 10
	View from Bent 2 - Abutment 2		Date: 5/22/09
Midwest Roadside Safety Facility	Drawing Name: Kansas TCB on FRP Deck_v6	Scale: 1:70	By: EAJ
			Rev: RKF



PLAN

Line represents back edge of bridge panel



ELEVATION



**Midwest Roadside
Safety Facility**

**Kansas Temporary Concrete
Barrier for FRP Decks**

Detail of Concrete Barriers

Drawing Name:
Kansas TCB on FRP Deck_v6

Scale:
1:25

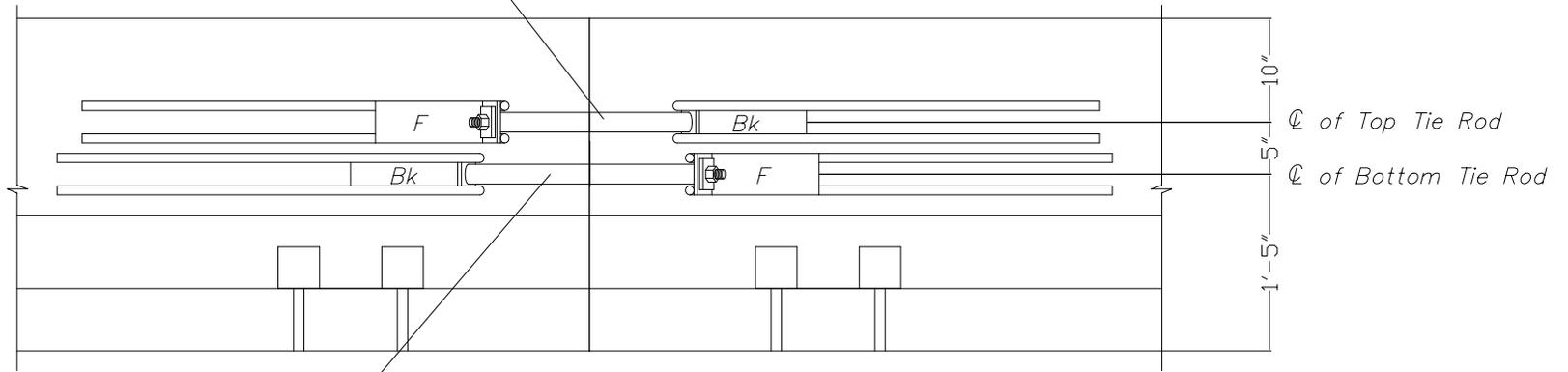
Sheet:
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Date:
5/22/09

By:
EAJ

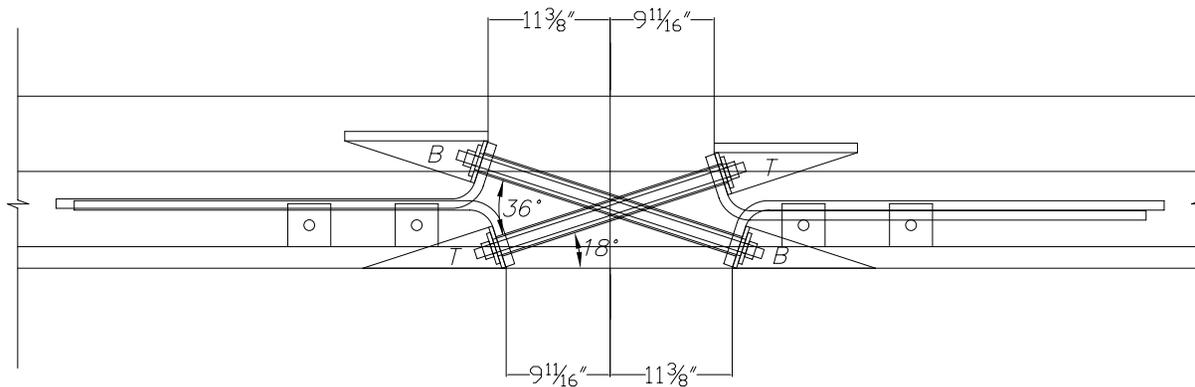
Rev:
RKF

$\frac{7}{8}$ " [22] \varnothing , 26 $\frac{1}{2}$ " [673] Long, Gr. 5 Tie Rod
or Equivalent Threaded Rod,
Plate Washer and Nut on Each End.



$\frac{7}{8}$ " [22] \varnothing , 30" [762] Long, Gr. 5 Tie Rod
or Equivalent Threaded Rod,
Plate Washer and Nut on Each End.

ELEVATION



PLAN

ASSEMBLED BARRIER SECTIONS



**Midwest Roadside
Safety Facility**

**Kansas Temporary Concrete
Barrier for FRP Decks**

Detail of Concrete Barrier Connection

Drawing Name:
Kansas TCB on FRP Deck_v6

Scale:
1:15

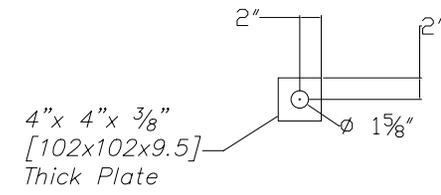
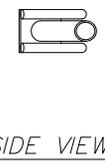
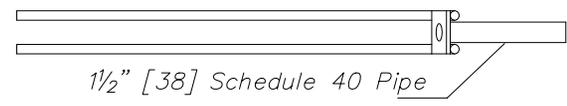
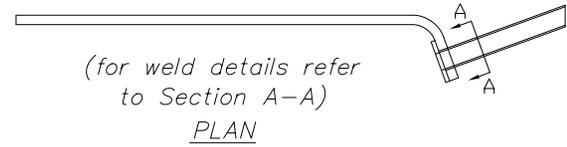
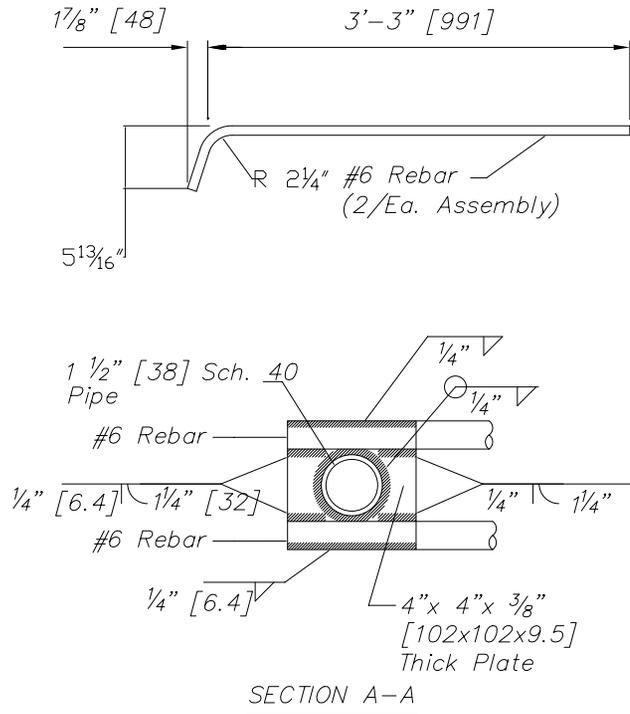
Sheet:
6 of 10

Date:
5/22/09

By:
EAJ

Rev:
RKF

X TIE ROD ASSEMBLY DETAILS



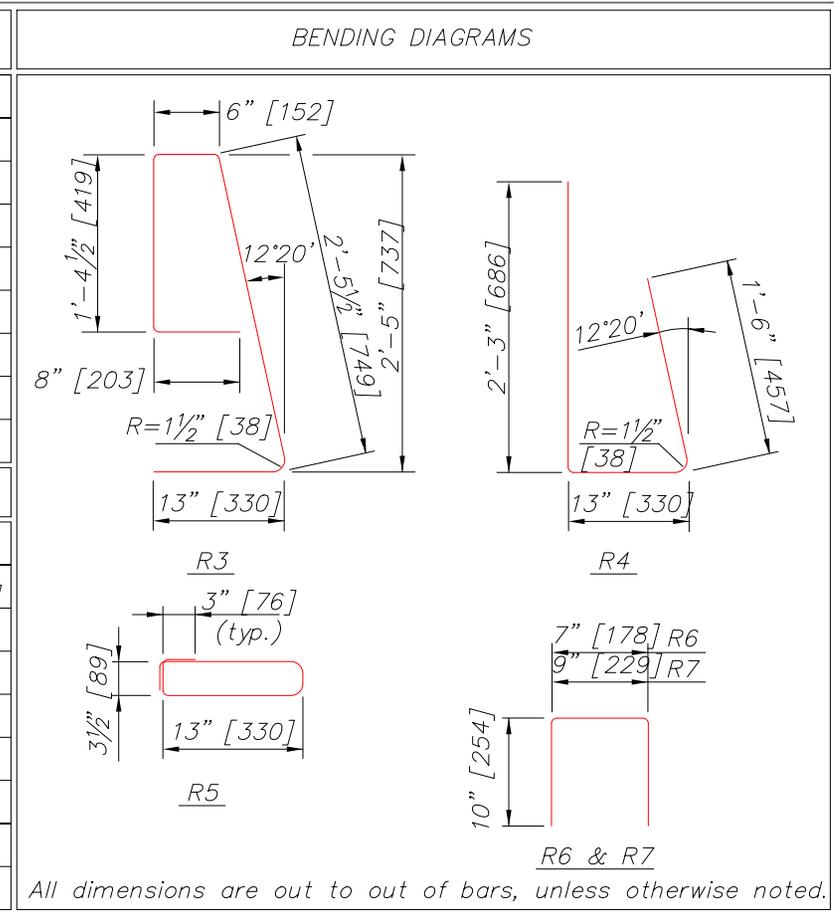
Wt. Each Assembly = 13.0 lbs. [5.9 kg]
(4 req'd each barrier section)
Total Wt./ Barrier Section = 52.0 lbs. [23.6 kg]

 Midwest Roadside Safety Facility	Kansas Temporary Concrete Barrier for FRP Decks		Sheet: 7 of 10
	Connection Detail		Date: 5/22/09
		Drawing Name: Kansas TCB on FRP Deck_v6	By: EAJ
		Scale: 1:15	Rev: RKF

* See bending Diagrams

BILL OF REINFORCING STEEL (One Barrier Section)			
Mark	Size	Number	Length
R1	#6	2	15'-0" [4572]
R2	#5	8	15'-0" [4572]
*R3	#5	23	5'-5" [1651]
*R4	#5	23	4'-10" [1473]
*R5	#4	23	3'-3" [991]
*R6	#4	2	2'-3" [686]
*R7	#4	4	2'-5" [737]

SUMMARY OF QUANTITIES (One Barrier Section)		
ITEM	QUANTITY	UNIT
Grade 5.0 Concrete (AE)	1.5 [0.38]	Cu. Yds. [Cu. m]
**Reinforcing Steel (Gr. 60)	609 [276]	Lbs. [kg]
1" [25] Ø, 19" [483] long, Gr. 5 Anchor Rods	8	Ea.
7/8" [22] Ø, 26 1/2" [673] long, Gr. 5 Tie Rods	1	Ea.
7/8" [22] Ø, 30" [762] long, Gr. 5 Tie Rods	1	Ea.
Total Wt. of One Barrier Section = 3.04 tons [2758 kg]		
**Includes X Tie Rod Assembly and 1/2"x18"x8" [13x457x203] Steel Plate Quantities.		



Midwest Roadside Safety Facility

Kansas Temporary Concrete Barrier for FRP Decks

Rebar Details

Drawing Name:
Kansas TCB on FRP Deck_v6

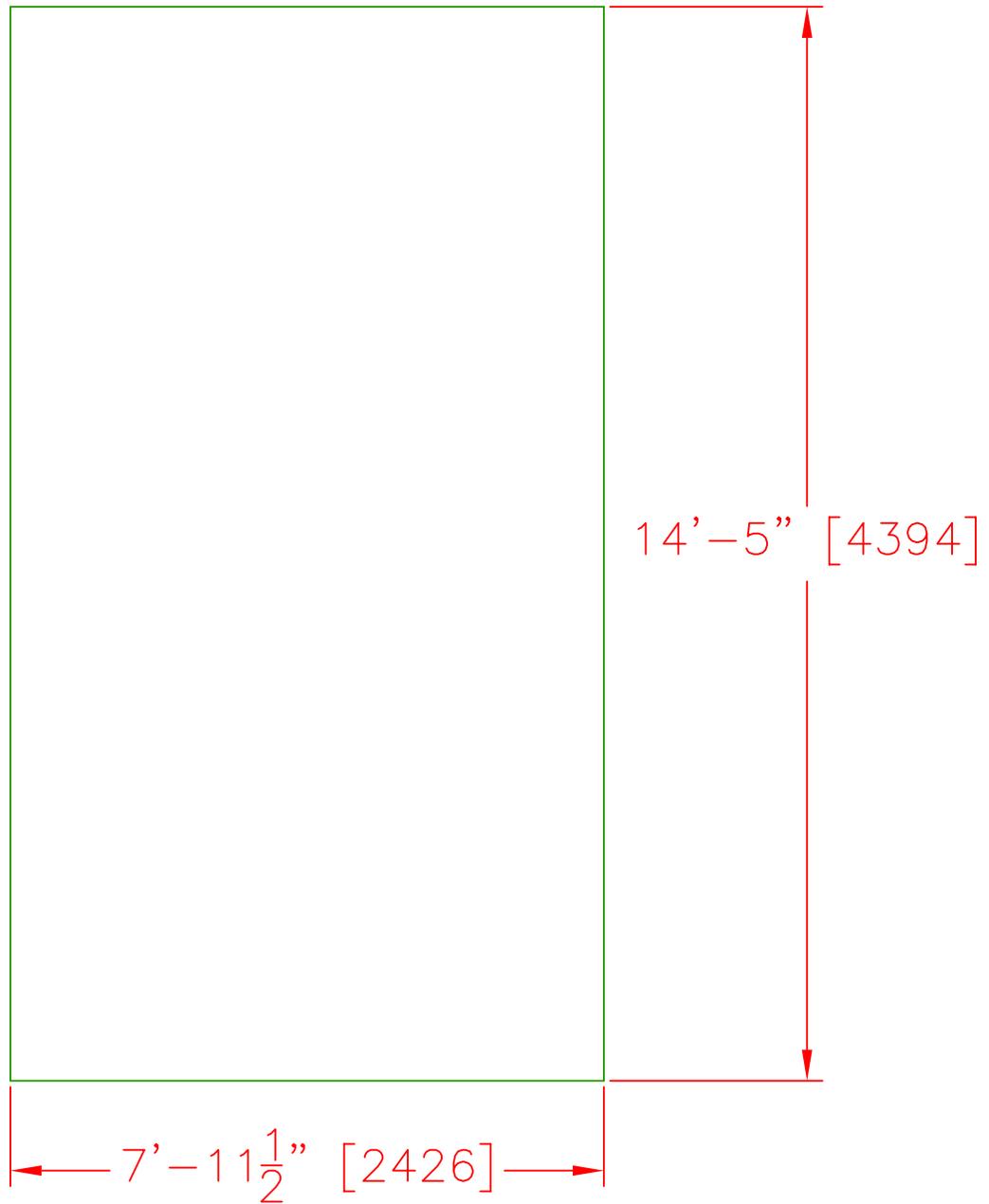
Scale:
1:15

Sheet:
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Date:
5/22/09

By:
EAJ

Rev:
RKF



- NOTES: (1) All dimensions are approximate.
 (2) Field drill needed for barrier tie-down installment

 Midwest Roadside Safety Facility	Kansas Temporary Concrete Barrier for FRP Decks		Sheet: 10 of 10
	Detail of FRP Panel		Date: 5/22/09
	Drawing Name: Kansas TCB on FRP Deck_v6	Scale: 1:20	By: EAJ
			Rev: RKF