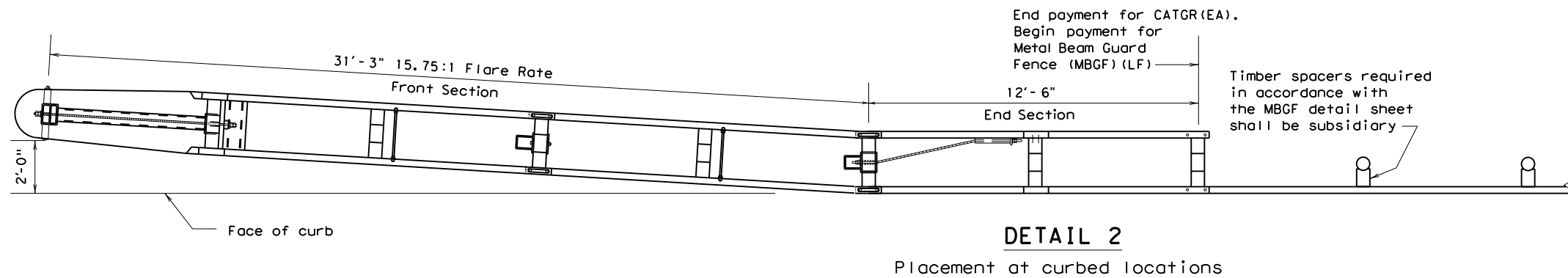
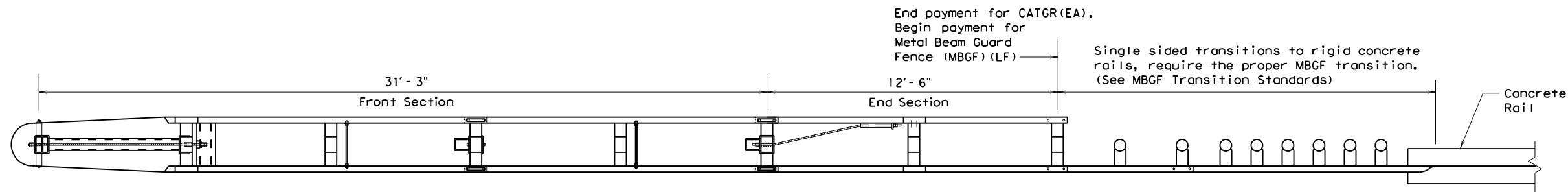
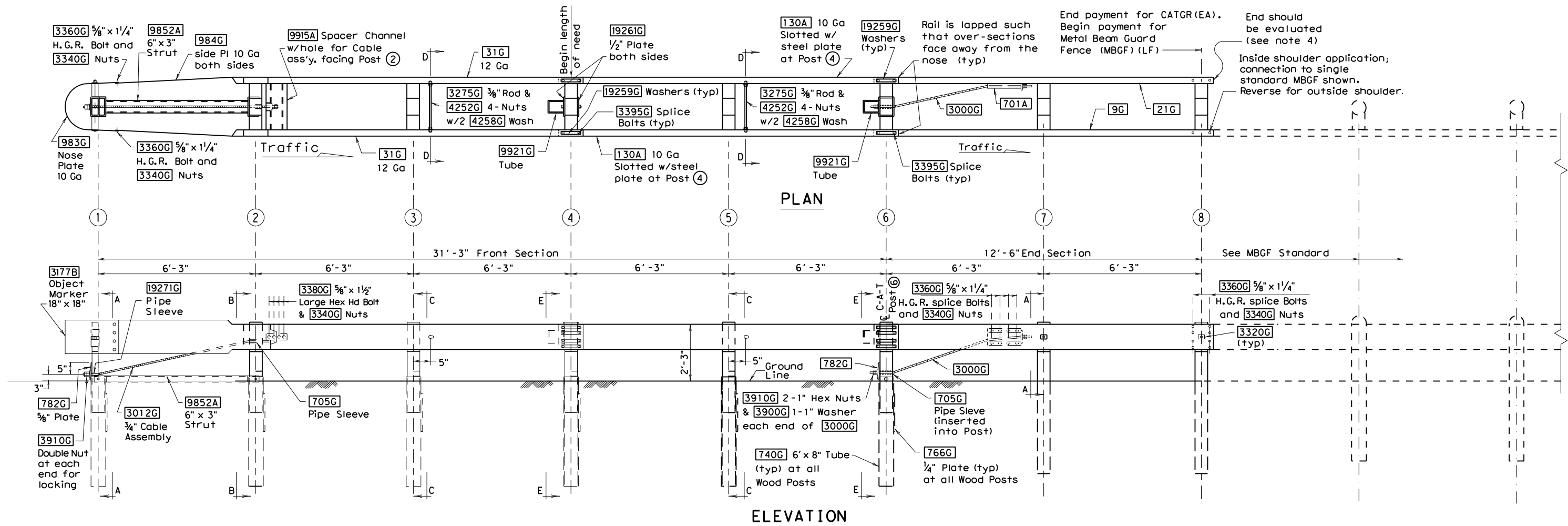


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SHEET 1 OF 2

Texas Department of Transportation
Design Division Standard

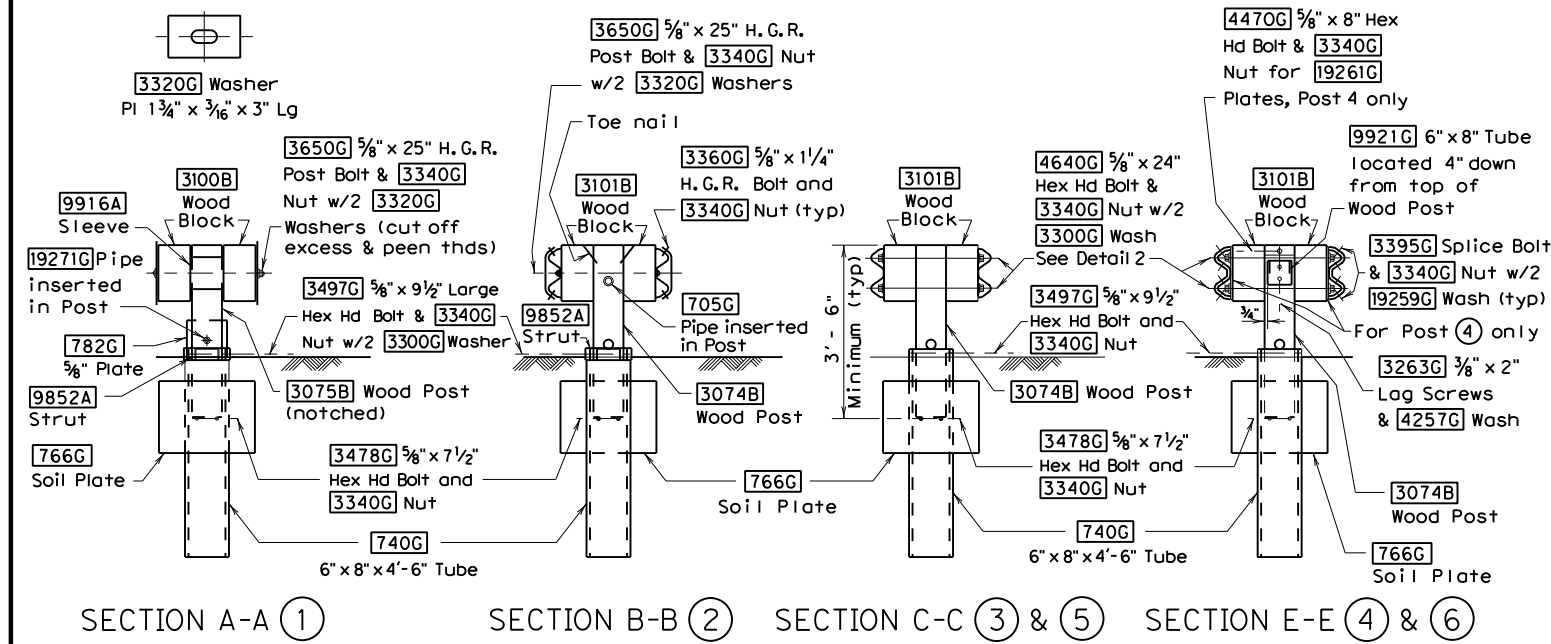
**TRINITY HIGHWAY
ENERGY ABSORPTION
CRASH CUSHION
(GUARDRAIL)
CATGR (2) - 17**

FILE: catgr17.dgn	DN: TxDOT	CK: KM	DW: BD	CK: VP
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REVISIONS REVISED 03, 2015 VP REVISED 03, 2017 KM	DIST	COUNTY	SHEET NO.	

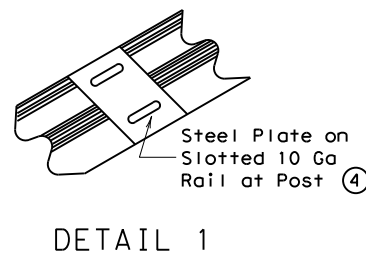
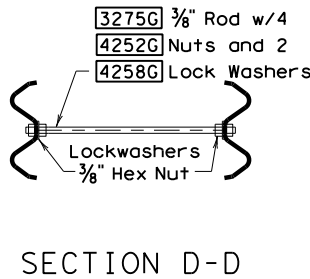
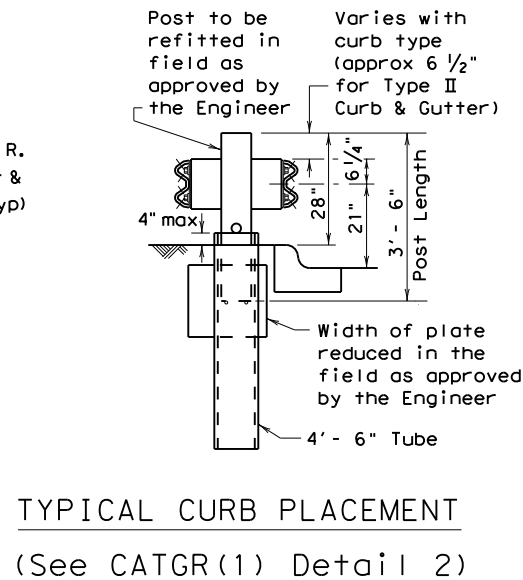
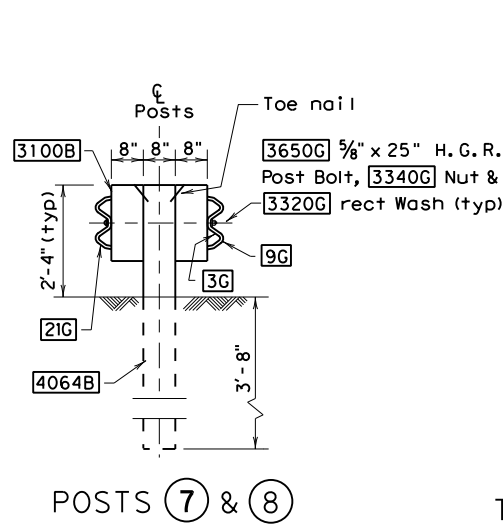
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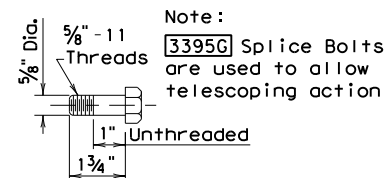
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Note:
There are no Rail to Post attachments for Posts (3), (5), & (6)



DETAIL 1



3395G SPLICE BOLT

CATGR GUARDRAIL TERMINAL (POSTS 1-6) BILL OF MATERIALS

Mfr Code #	QTY	DESCRIPTION
983G	1	Nose Plate x 10 GA
984G	2	Side Plate x 10 GA
31G	2	"W" Beam 12 GA x 13' - 6 1/2"
130A	2	"W" Beam 10 GA x 13' - 6 1/2"
9852A	1	Channel Strut x 6' - 6"
740G	6	Steel Foundation Tube
766G	6	Soil Plate 18" x 24"
3075B	1	Wood Post 5 1/2" x 7 1/2" (Notched) (Post 1)
3074B	5	Wood Post 5 1/2" x 7 1/2" (Post 2 - 6)
3100B	2	Wood Block 5 1/2" x 7 1/2" (Post 1)
3101B	10	Wood Block 5 1/2" x 7 1/2" (Post 2 - 6)
9916A	1	Sleeve (Post 1)
9915A	1	Spacer Channel (Post 2)
9921G	2	Steel Tube (Post 4 & 6)
19271G	1	Pipe Sleeve (Post 1)
705G	1	Pipe Sleeve (Post 2)
19261G	2	Post Plate (Post 4)
782G	1	Bearing Plate (Post 1)
3012G	1	Cable Assembly (From Post 1 to 2)
3275G	2	3/8" Restraint Rod (Post 3 & 5)
19259G	32	Plate Washer (Post 4 & 6)

HARDWARE

3263G	4	3/8" x 2" Lg Lag Screw
4252G	8	3/8" Hex Nut
4258G	4	3/8" Lock Washer
4257G	4	3/8" Flat Washer
3320G	4	Rectangular Washer
3395G	32	5/8" x 1 1/4" H.H. Splice Bolt
3650G	2	5/8" x 25" Lg H.G.R. Bolt
4640G	8	5/8" x 24" Lg H.H. Bolt
3478G	13	5/8" x 7 1/2" Lg H.H. Bolt
3380G	8	5/8" x 1 1/2" Lg H.H. Bolt
3360G	16	5/8" x 1 1/4" Lg H.G.R. Bolt
3340G	85	5/8" H.G.R. Nut
3300G	8	3/8" Flat Washer
3497G	6	5/8" x 9 1/2" Lg H.H. Bolt
3910G	4	1" Hex Nut
3900G	2	1" Flat Washer

DELINEATOR

3177B	1	Object Marker (18" x 18") (Cut to fit)
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CATGR GUARDRAIL TERMINAL (POSTS 7-8) BILL OF MATERIALS

Mfr Code #	QTY	DESCRIPTION
4064B	2	Wood Post 5 1/2" x 7 1/2" x 6'
3101B	4	Wood Block 5 1/2" x 7 1/2"
21G	1	"W" Beam Guard Rail (12 Ga)
9G	1	"W" Beam Guard Rail (12 Ga)
701A	1	Bracket
782G	1	Bearing Plate (Post 6)
705G	1	Pipe Sleeve (Post 6)
3000G	1	Cable Assembly (from Post 6 to Rail)
3320G	2	Rectangular Washer

HARDWARE

3360G	24	5/8" x 1 1/4" H.G.R. Splice Bolt
3400G	4	5/8" x 25" H.G.R. Post Bolt
3380G	8	5/8" x 1 1/2" Hex Hd Bolt
3340G	28	5/8" H.G.R. Nut
3300G	8	3/8" Washer
3910G	4	1" Hex Nut
3900G	2	1" Washer

GENERAL NOTES

- For specific information regarding installation and technical guidance of the system, contact: Trinity Highway at 1(888)323-6374, 70 W. Madison St. Suite 2350, Chicago, IL 60602
- Crown will be widened to accommodate the CAT system. The crown should extend at least 3 feet beyond the inside face of rail. The ground line at posts should be an extension of the roadway surface crown.
- All bolts, nuts, washers, cable assemblies, cable anchors, post tubes, backup plates, and soil plates shall be galvanized.
- The exposed end segment of an "End Section" should be evaluated as a potential obstacle in the determination of the need of MGBF for the opposing direction of traffic.
- If a "single sided" transition is required, (as shown in Detail 3) the proper MGBF transition standards are required.
- For placement at curb sections, the height from gutter pan to post bolt will be 21", and the front section shall be flared (See Detail 2).
- The wood blockouts shall be "toe nailed" to the rectangular wood posts to prevent them from turning when the wood shrinks.
- Either 6" x 8" or 5 1/2" x 7 1/2" wood blocks may be used at posts 1 through 8 as supplied by the manufacturer.
- An object marker shall be installed on the front of the terminal as detailed on the D&M(VIA).

SHEET 2 OF 2

		Design Division Standard	
TRINITY HIGHWAY ENERGY ABSORPTION CRASH CUSHION (GUARDRAIL)			
CATGR (2) - 17			
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REVISED 03, 2016 VP	REVISIONS		HIGHWAY
REVISED 03, 2017 KM	DIST	COUNTY	SHEET NO.

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