

INFORMATION HANDOUT

For Contract No. 10-0W6004
At 10-Ama-88-PM R66.6/71.7

Identified by
Project ID 1012000018

MATERIALS INFORMATION

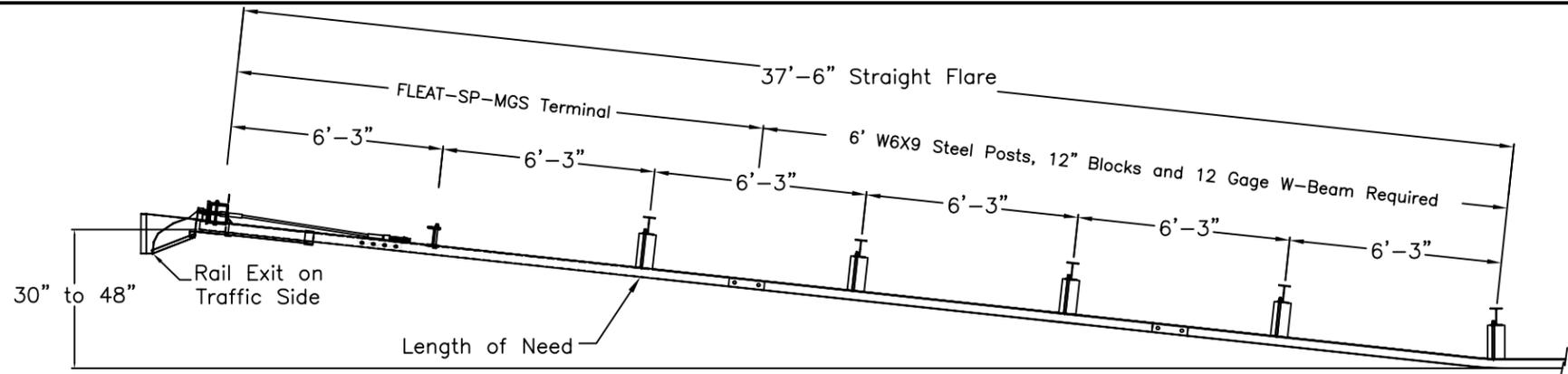
Alternative Flared Terminal System Details

Water Source Information

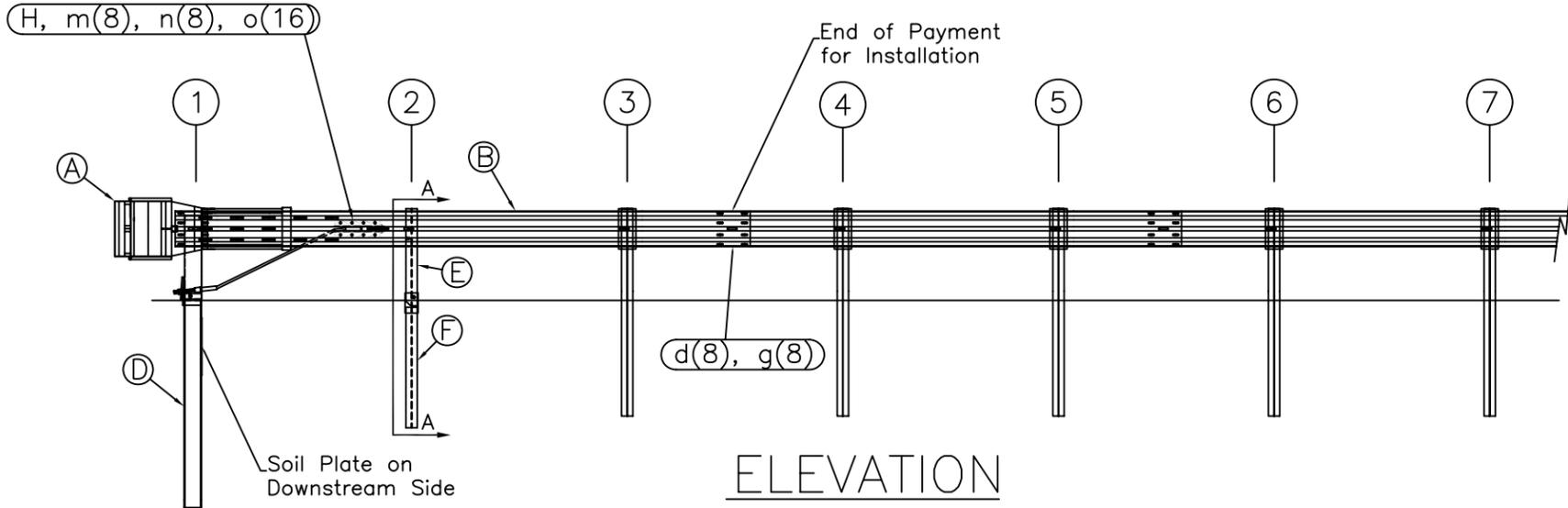
10-0W6001

10-Ama-88-PM R66.7/71.7

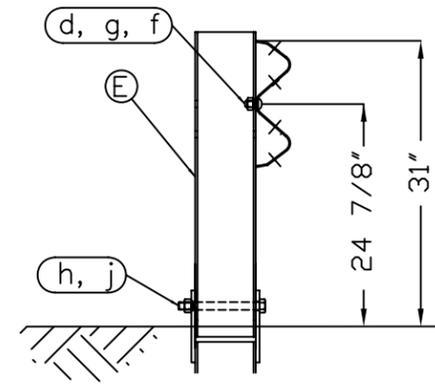
Project ID 1012000018



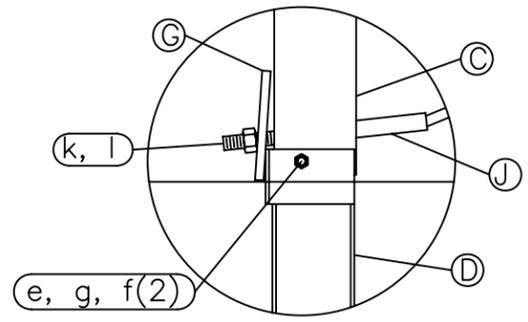
PLAN



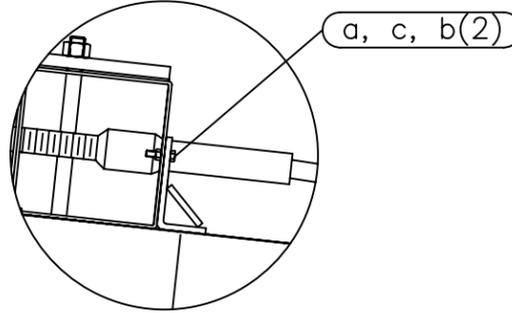
ELEVATION



SECTION A-A
Post #2



Post #1 Connection Detail



Impact Head Connection Detail

ITEM	QTY	BILL OF MATERIALS	ITEM NO.
A	1	IMPACT HEAD	F3000
B	1	W-BEAM GUARDRAIL END SECTION, 12 Ga.	MGS-SF1303
C	1	FIRST POST TOP (6X6X $\frac{1}{8}$ " Tube)	TPHP1A
D	1	FIRST POST BOTTOM (6' W6X15)	TPHP1B
E	1	SECOND POST ASSEMBLY TOP	UHP2A
F	1	SECOND POST ASSEMBLY BOTTOM	HP3B
G	1	BEARING PLATE	E750
H	1	CABLE ANCHOR BOX	S760
J	1	BCT CABLE ANCHOR ASSEMBLY	E770

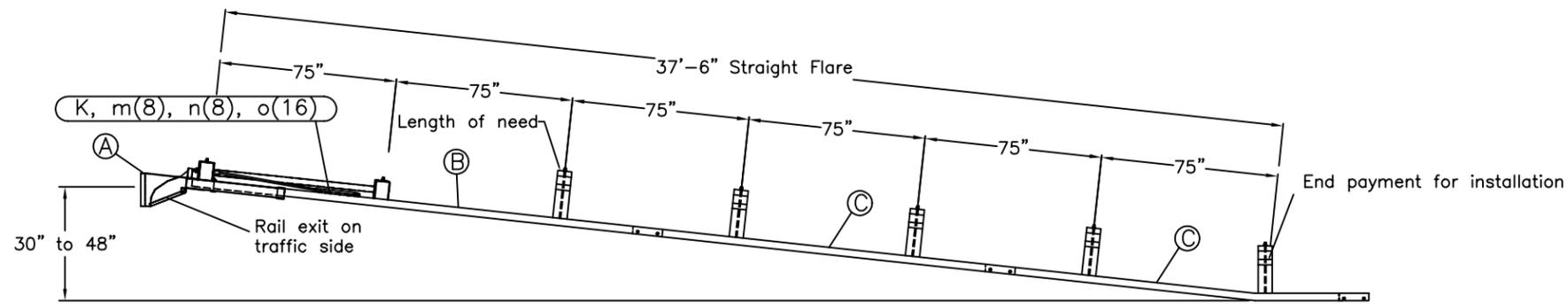
HARDWARE (ALL DIMENSIONS IN INCHES)			
a	2	5/16 x 1 HEX BOLT GRD 5	B5160104A
b	4	5/16 WASHER	W0516
c	2	5/16 HEX NUT	N0516
d	9	5/8 Dia. x 1 1/4 SPLICE BOLT (POST #2)	B580122
e	1	5/8 Dia. x 9 HEX BOLT GRD 5	B580904A
f	3	5/8 WASHER	W050
g	10	5/8 Dia. H.G.R NUT	N050
h	1	3/4 Dia. x 8 1/2 HEX BOLT GRD A449	B340854A
j	1	3/4 Dia. HEX NUT	N030
k	2	1 ANCHOR CABLE HEX NUT	N100
l	2	1 ANCHOR CABLE WASHER	W100
m	8	CABLE ANCHOR BOX SHOULDER BOLT	SB58A
n	8	1/2 A325 STRUCTURAL NUT	N055A
o	16	1 1/16 OD x 9/16 ID A325 STR. WASHER	W050A

GENERAL NOTES:

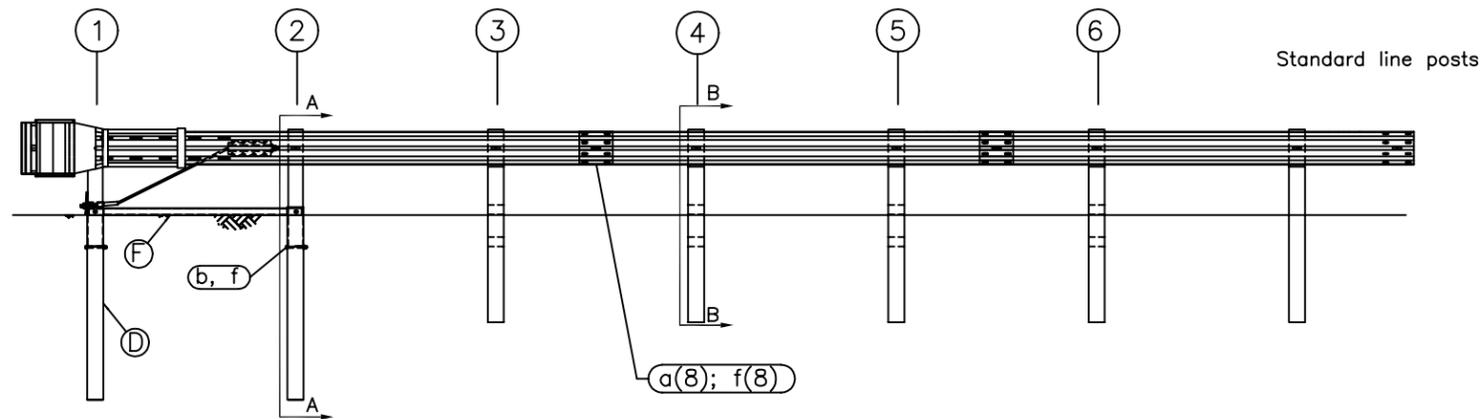
- All bolts, nuts, cable assemblies, cable anchors and bearing plates shall be galvanized.
- The lower sections of the Posts 1&2 shall not protrude more than 4 in above the ground (measured along a 5' cord). Site grading may be necessary to meet this requirement.
- The lower sections of the hinged posts should not be driven with the upper post attached. If the post is placed in a drilled hole, the backfill material must be satisfactorily compacted to prevent settlement.
- When competent rock is encountered, a 12" Ø post hole, 20 in. deep cored into the rock surface may be used if approved by the engineer for post 1. Granular material will be placed in the bottom of the hole, approximately 2.5" deep to provide drainage. The first post can be field cut to length, placed in the hole and backfilled with suitable backfill. The soil plate may be trimmed if required.
- The breakaway cable assembly must be taut. A locking device (vice grips or channel lock pliers) should be used to prevent the cable from twisting when tightening nuts.

Big Spring, TX
Phone: 432-263-2435
or Phone: 330-346-0721

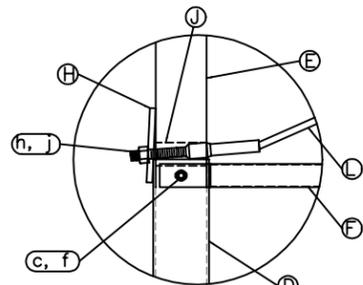
FLEAT-SP-MGS Terminal Midwest Guardrail System 31" Top of Rail		Sheet:	1
		Date:	02/24/10
Drawing Name: FLT-SP-S-MGS		By:	JRR
		Scale:	None
		Rev:	0



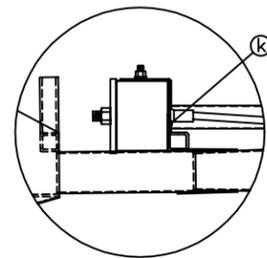
TRAFFIC → PLAN



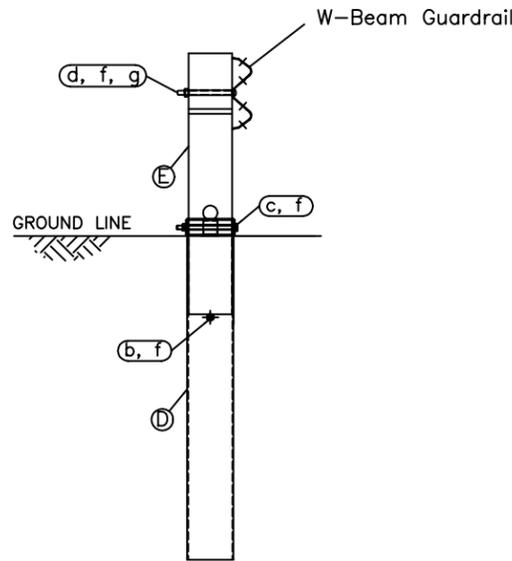
ELEVATION



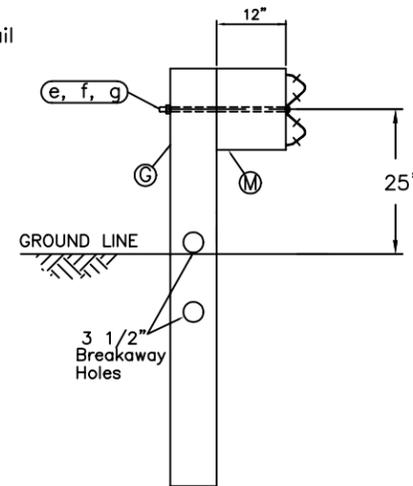
POST #1 CONNECTION DETAILS



IMPACT HEAD CONNECTION DETAIL



SECTION A-A
Post #2



SECTION B-B
Posts 3 thru 6

ITEM	QTY	BILL OF MATERIALS	ITEM NO.
A	1	IMPACT HEAD	F3000
B	1	W-BEAM GUARDRAIL END SECTION, 12 Ga.	F1303 MGS
C	2	W-BEAM GUARDRAIL, 12 Ga.	G1203 MGS
D	2	FOUNDATION TUBE	E731
E	2	BCT WOOD POST	P650 MGS
F	1	GROUND STRUT	E780
G	4	CRT WOOD POST	P671 MGS
H	1	BEARING PLATE	E750
J	1	PIPE SLEEVE	E740
K	1	CABLE ANCHOR BOX	S760
L	1	BCT CABLE ANCHOR ASSEMBLY	E770
M	4	MGS TIMBER BLOCKOUT OR RECYC. EQUIV.	P618
HARDWARE (ALL DIMENSIONS IN INCHES)			
a	16	5/8 ϕ x 1 1/4 SPLICE BOLT	B580122
b	2	5/8 ϕ x 7 1/2 HEX BOLT	B580754
c	2	5/8 ϕ x 10 HEX BOLT	B581004
d	1	5/8 ϕ x 10 H.G.R. BOLT	B581002
e	4	5/8 ϕ x 22 H.G.R. BOLT	B582202
f	25	5/8 ϕ H.G.R. NUT	N050
g	5	H.G.R. WASHER	W050
h	1	ANCHOR CABLE HEX NUT	N100
j	2	ANCHOR CABLE WASHER	W100
k	2	3/8 x 3 LAG SCREW	E350
m	8	CABLE ANCHOR BOX SHOULDER BOLT	SB58A
n	8	1/2 A325 STRUCTURAL NUT	N055A
o	16	1 1/16 OD x 9/16 ID A325 STR. WASHER	W050A

GENERAL NOTES:

- Breakaway posts are required with the FLEAT.
- All bolts, nuts, cable assemblies, cable anchors and bearing plates shall be galvanized.
- The foundation tubes shall not protrude more than 4 in above the ground (measured along a 5' cord). Site grading may be necessary to meet this requirement.
- When rock is encountered, a 12" ϕ post hole, 20 in into the rock surface may be used if approved by the engineer. Granular material will be placed in the bottom of the hole, approximately 2.5" deep to provide drainage. The first two posts can be field cut to length, placed in the hole and backfilled with adequately compacted material excavated from the hole.
- The breakaway cable assembly must be taut. A locking device (vice grips or channel lock pliers) should be used to prevent the cable from twisting when tightening nuts.
- The soil tubes may be driven with an approved driving head. They shall not be driven with the post in the tube.
- The wood blockouts should be "toe-nailed" to the rectangular wood posts to prevent them from turning when the wood shrinks.



Road Systems, Inc.

Big Spring, TX
Phone: 432-263-2435
or Phone: 330-346-0721

Flared Energy Absorbing
Terminal - FLEAT Assembly
Midwest Guardrail System

Wood Post System

Drawing Name:
FLT-MGS-W-US

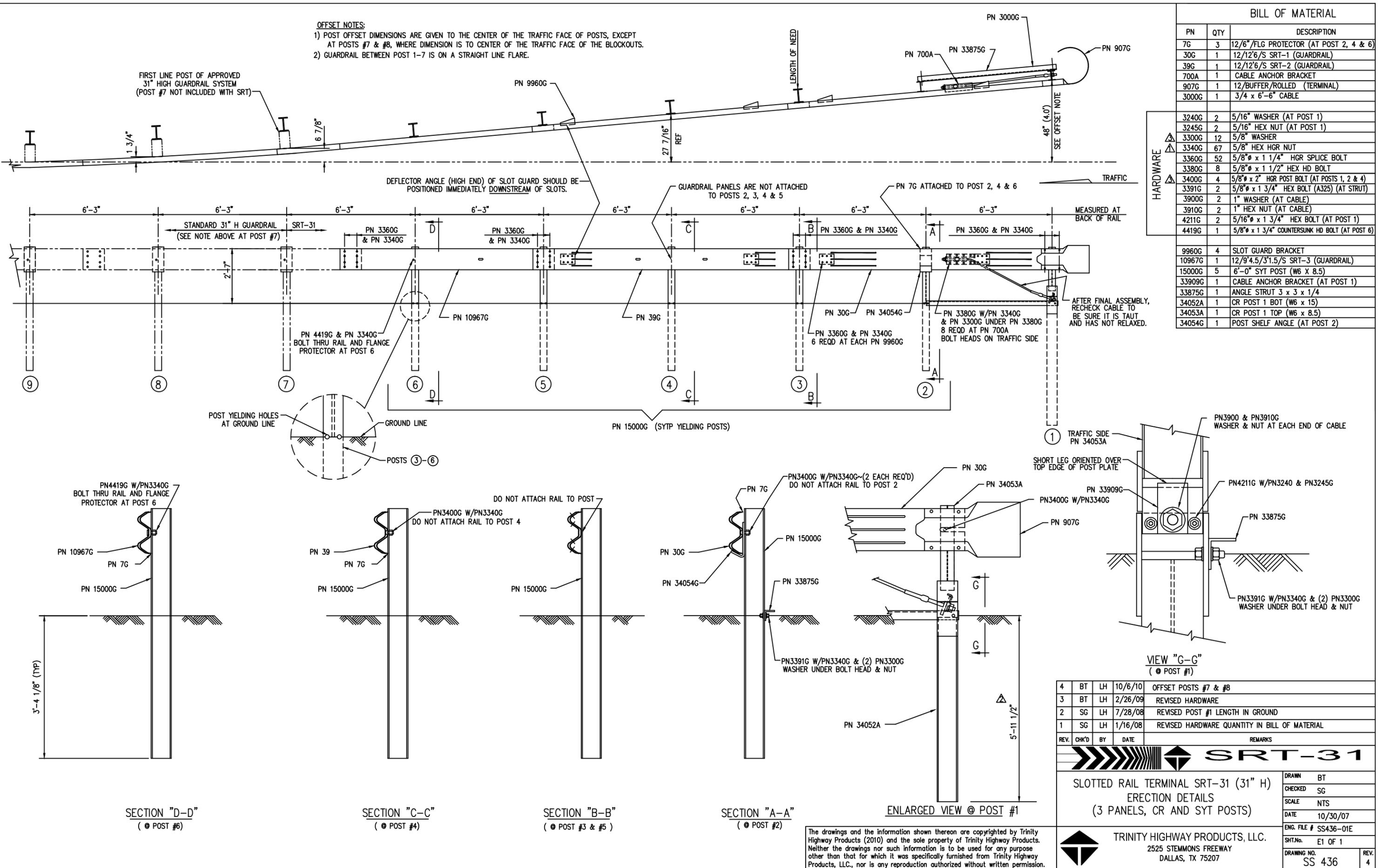
Scale:
None

Sheet:
A1
Date:
12/01/2004
By:
JRR
Rev:
0

OFFSET NOTES:

- 1) POST OFFSET DIMENSIONS ARE GIVEN TO THE CENTER OF THE TRAFFIC FACE OF POSTS, EXCEPT AT POSTS #7 & #8, WHERE DIMENSION IS TO CENTER OF THE TRAFFIC FACE OF THE BLOCKOUTS.
- 2) GUARDRAIL BETWEEN POST 1-7 IS ON A STRAIGHT LINE FLARE.

FIRST LINE POST OF APPROVED 31" HIGH GUARDRAIL SYSTEM (POST #7 NOT INCLUDED WITH SRT)



BILL OF MATERIAL

PN	QTY	DESCRIPTION
7G	3	12/6" FLG PROTECTOR (AT POST 2, 4 & 6)
30G	1	12/12/6" SRT-1 (GUARDRAIL)
39G	1	12/12/6" SRT-2 (GUARDRAIL)
700A	1	CABLE ANCHOR BRACKET
907G	1	12/BUFFER/ROLLED (TERMINAL)
3000G	1	3/4 x 6'-6" CABLE
HARDWARE		
3240G	2	5/16" WASHER (AT POST 1)
3245G	2	5/16" HEX NUT (AT POST 1)
3300G	12	5/8" WASHER
3340G	67	5/8" HEX HGR NUT
3360G	52	5/8" x 1 1/4" HGR SPLICE BOLT
3380G	8	5/8" x 1 1/2" HEX HD BOLT
3400G	4	5/8" x 2" HGR POST BOLT (AT POSTS 1, 2 & 4)
3391G	2	5/8" x 1 3/4" HEX BOLT (A325) (AT STRUT)
3900G	2	1" WASHER (AT CABLE)
3910G	2	1" HEX NUT (AT CABLE)
4211G	2	5/16" x 1 3/4" HEX BOLT (AT POST 1)
4419G	1	5/8" x 1 3/4" COUNTERSUNK HD BOLT (AT POST 6)
9960G	4	SLOT GUARD BRACKET
10967G	1	12/9/4.5/31.5/S SRT-3 (GUARDRAIL)
15000G	5	6'-0" SYT POST (W6 X 8.5)
33909G	1	CABLE ANCHOR BRACKET (AT POST 1)
33875G	1	ANGLE STRUT 3 x 3 x 1/4
34052A	1	CR POST 1 BOT (W6 X 15)
34053A	1	CR POST 1 TOP (W6 X 8.5)
34054G	1	POST SHELF ANGLE (AT POST 2)

REV.	CHK'D	BY	DATE	REMARKS
4	BT	LH	10/6/10	OFFSET POSTS #7 & #8
3	BT	LH	2/26/09	REVISED HARDWARE
2	SG	LH	7/28/08	REVISED POST #1 LENGTH IN GROUND
1	SG	LH	1/16/08	REVISED HARDWARE QUANTITY IN BILL OF MATERIAL

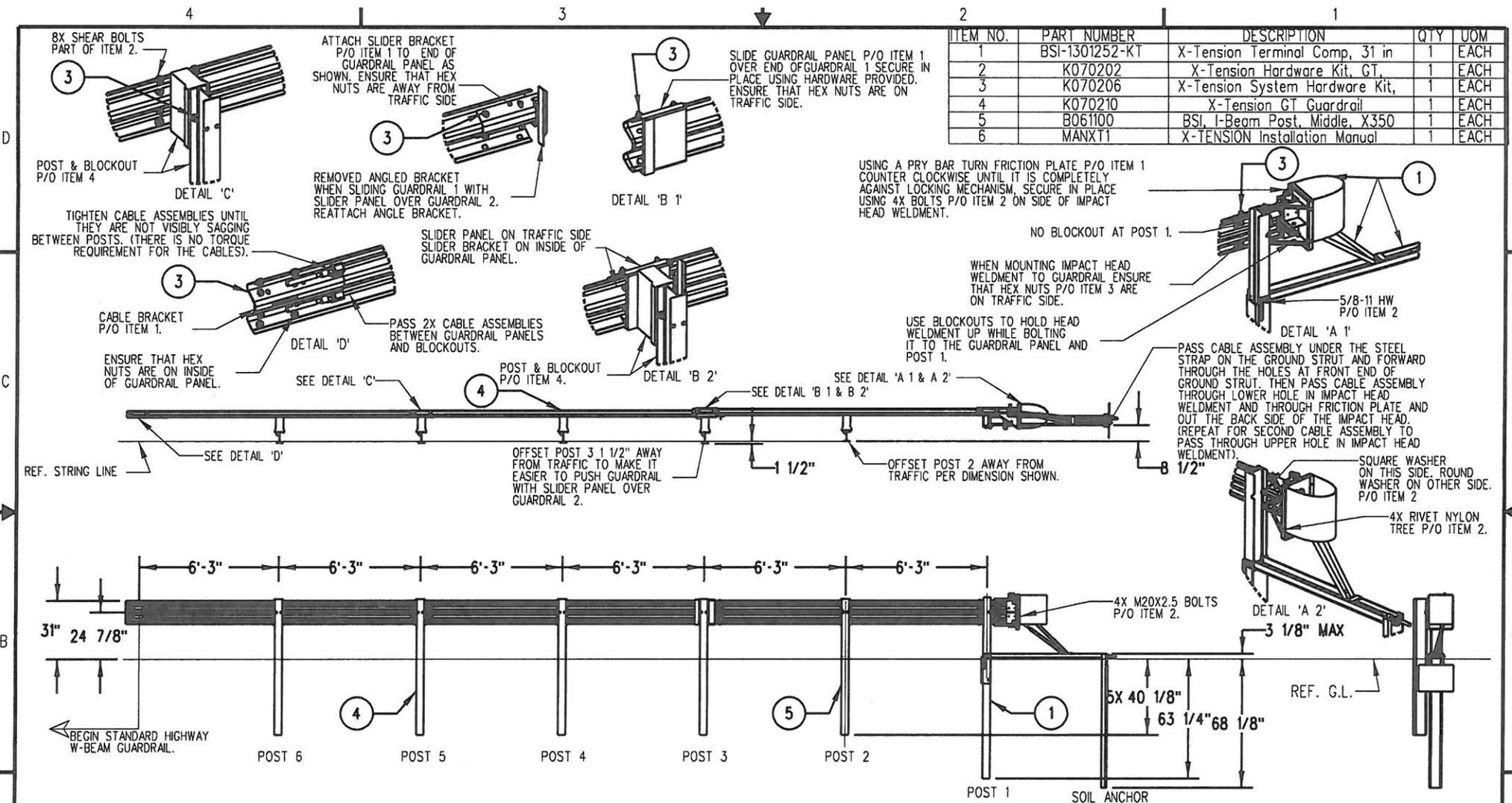
SRT-31

SLOTTED RAIL TERMINAL SRT-31 (31" H)
ERECTION DETAILS
(3 PANELS, CR AND SYT POSTS)

DRAWN	BT
CHECKED	SG
SCALE	NTS
DATE	10/30/07
ENG. FILE #	SS436-01E
SHT.No.	E1 OF 1
DRAWING NO.	SS 436
REV.	4

TRINITY HIGHWAY PRODUCTS, LLC.
2525 STEMMONS FREEWAY
DALLAS, TX 75207

The drawings and the information shown thereon are copyrighted by Trinity Highway Products (2010) and the sole property of Trinity Highway Products. Neither the drawings nor such information is to be used for any purpose other than that for which it was specifically furnished from Trinity Highway Products, LLC., nor is any reproduction authorized without written permission.



ITEM NO.	PART NUMBER	DESCRIPTION	QTY	UOM
1	BSI-1301252-KT	X-Tension Terminal Comp, 31 in	1	EACH
2	K070202	X-Tension Hardware Kit, GT.	1	EACH
3	K070206	X-Tension System Hardware Kit,	1	EACH
4	K070210	X-Tension GT Guardrail	1	EACH
5	B061100	BSL I-Beam Post, Middle, X350	1	EACH
6	MANXT1	X-TENSION Installation Manual	1	EACH

- NOTES: UNLESS OTHERWISE SPECIFIED.
- SYSTEM TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS.
 - ONLY TIGHTEN THE CABLE ASSEMBLIES USING THE NUTS AT THE CABLE BRACKET (SEE DETAIL 'D'). DO NOT TIGHTEN THE CABLES AT THE FRONT OF THE GROUND ANCHOR.
 - WHEN DRIVING STEEL POST, ENSURE THAT A DRIVING CAP WITH TIMBER OR PLASTIC INSERT IS USED TO PREVENT DAMAGE TO THE GALVANIZING TO THE TOP OF THE POST.

<small>©2012 BARRIER SYSTEMS INC. THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BARRIER SYSTEMS INC. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF BARRIER SYSTEMS INC. IS PROHIBITED.</small>		<small>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:</small> <small>FRACTIONS DECIMAL ANGLES</small> <small>± 1/16 .003 ± .03 ± 1/2°</small> <small>.XXX ± .010</small>				<small>BARRIER SYSTEMS INC.</small> <small>3333 Voco Valley Parkway, Ste 800</small> <small>Yonkers, CA 95688</small> <small>Tel: 800-800-5691</small> <small>www.barriersystemsinc.com</small>	
APPROVALS				TITLE X-TENSION GUARDRAIL TERMINAL SYSTEM STEEL POST WITH COMPOSITE BLOCKOUT 31" RAIL HEIGHT			
<small>DRAWN BY:</small> NMV <small>DRAWN DATE:</small> 2/08/13 <small>APPR'D BY:</small> JMT <small>APPR'D DATE:</small> 2/08/13	<small>THIRD ANGLE PROJECTION</small> 	<small>REV</small> <small>ECN*</small>	<small>DATE</small>	<small>SIZE</small> <small>DWG NO.</small>	<small>SCALE</small> 1:50	<small>REV.</small> <small>B</small>	<small>SHEET</small> 1 OF 1

From: Kandola, Baljit@DOT
To: Chouang, Christy@DOT
Subject: FW: Water Source Agency
Date: Friday, November 14, 2014 9:01:45 AM

Please see below the approval for Water Source.

Baljit S. Kandola
Design IV, Branch X
(559) 243-3859

From: Mark Gonzales [<mailto:MarkG@gardnervillewater.org>]
Sent: Friday, November 14, 2014 7:06 AM
To: Kandola, Baljit@DOT
Subject: RE: Water Source Agency

Baljit,

Yes, the Gardnerville Water Company can supply the water from our fill station located in Gardnerville, Nevada for your Caltrans Project in Amador County, California. The designated contractor will need to follow the directions below to allow access to our 24/7 water fill station.

Mark Gonzales, P.E.
Manager/Engineer
Gardnerville Water Company
markg@gardnervillewater.org
775-782-2339

From: Kandola, Baljit@DOT [<mailto:baljit.s.kandola@dot.ca.gov>]
Sent: Thursday, November 13, 2014 5:38 PM
To: Mark Gonzales
Subject: FW: Water Source Agency

Hi Mark, per your confirmation below for water use on a project in Alpine County, would you please confirm that Gardnerville Water Agency can supply water to Caltrans project in Amador County? Caltrans have a project on State Route 88, In Amador County, postmile 66.6 to 71.7, from Silver Lake Campground to Alpine County Line.

Appreciate your help.

Baljit S. Kandola
Design IV, Branch X
(559) 243-3859

From: Mark Gonzales [<mailto:MarkG@gardnervillewater.org>]

Sent: Wednesday, November 05, 2014 9:26 AM
To: Emukpoeruo, Donald O@DOT
Subject: RE: Water Source Agency

Mr. Emukpoeruo,

Re: Construction Water Supply, Gardnerville Water Company, Gardnerville, Nevada

The Gardnerville Water Company operates a 24/7 construction water fill station located at 1579 Virginia Ranch Road, Gardnerville, Nevada. **Construction water can only be taken from this facility within the Gardnerville Water Company District Service area serving the Town of Gardnerville, Nevada.** The facility has an overhead fill and a 2 ½ inch fire connection. Contractors who wish to utilize the GWC water fill station must request and fill out an Application for Tanker Water and return the completed form to the Gardnerville Water Company at 1579 Virginia Ranch Road, Gardnerville, Nevada 89410 or fax the completed form to GWC at 775-782-2491. Construction water is billed out on a monthly basis at \$3.00 per 1,000 gallons.

For more information on Applications for Tanker Water, contractors may call our office at 775-782-2339.

If you wish additional information, please call me at the above listed number.

Mark Gonzales, P.E.
Manager/Engineer
Gardnerville Water Company
markg@gardnervillewater.org
775-782-2339

From: Emukpoeruo, Donald O@DOT [<mailto:donald.emukpoeruo@dot.ca.gov>]
Sent: Tuesday, November 04, 2014 4:22 PM
To: Mark Gonzales
Cc: Oamilda, Jhoanna R@DOT
Subject: Water Source Agency

Hi Mark,
Could you please confirm that Gardnerville Water Agency can supply water to our projects in Alpine County?
It will be greatly appreciated if you can give us immediate reply.

Thanks.
Donald Emukpoeruo
209-948-3638