

INFORMATION HANDOUT

For Contract No. **10-1C2204**

At

Mer, SJ, Sta, Tuo-5,99,108,120,152,205-Var

Identified by

Project ID **1014000103**

MATERIALS INFORMATION

[Foundation Report](#)

[Manufacturer's Drawings for Alternative Flared Terminal System](#)

Memorandum

To: PATRICIA L. TECZON
Project Design Engineer
Office of Design IV
Branch H

Date: February 12, 2015

File: 10-SJ-120-7.61 EB
Type 500 CMS
EA 10-1C2201
EFIS 1014000103

From: **DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
GEOTECHNICAL SERVICES**

Subject: Foundation Report for a Type 500 CMS

A foundation investigation was completed in January 2015 for the proposed Type 500 CMS. The CMS will be located at SJ-120-7.61 eastbound. One five inch diameter hollow stem auger boring with SPT was drilled at the CMS location as shown on the layout sheet dated September 2014. The results of the field investigation are shown on the LOTB sheet, which must be included in the contract plans.

Geology

The foundation materials consist of loose to medium dense silty sand, very stiff silt, medium dense to dense poorly graded sand and very stiff fat clay. The bottom of the borehole was approximately elevation 25.5, 26.5 feet below the ground surface. Ground water was not detected at the time of the field investigation.

There is no potential for liquefaction at the proposed CMS location. Foundation soils are not expected to be corrosive.

Foundation Recommendations

The proposed Type 500 CMS may be supported by a CIDH pile foundation as shown on Standard Plan S116. The pile diameter is 5 feet and the approximate length is 22 feet (Sign Reference Sheets).

Supplemental Project Information

Standard Specifications Section 2-1.06B, "Supplemental Project Information," indicates that the special provisions will make supplemental project information to bidders. Items listed to be included in the information handout will be provided in Acrobat (.pdf) format to the addressee(s) of this report via electronic mail.

Data and information attached with the project plans include:

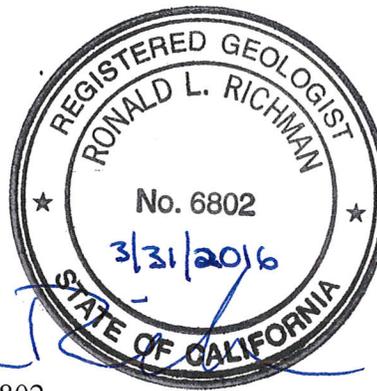
- A. Log of Test Borings for Type 500 CMS

Data and Information included in the Information Handout include:

- A. Foundation Report for a Type 500 CMS, dated February 12, 2015.

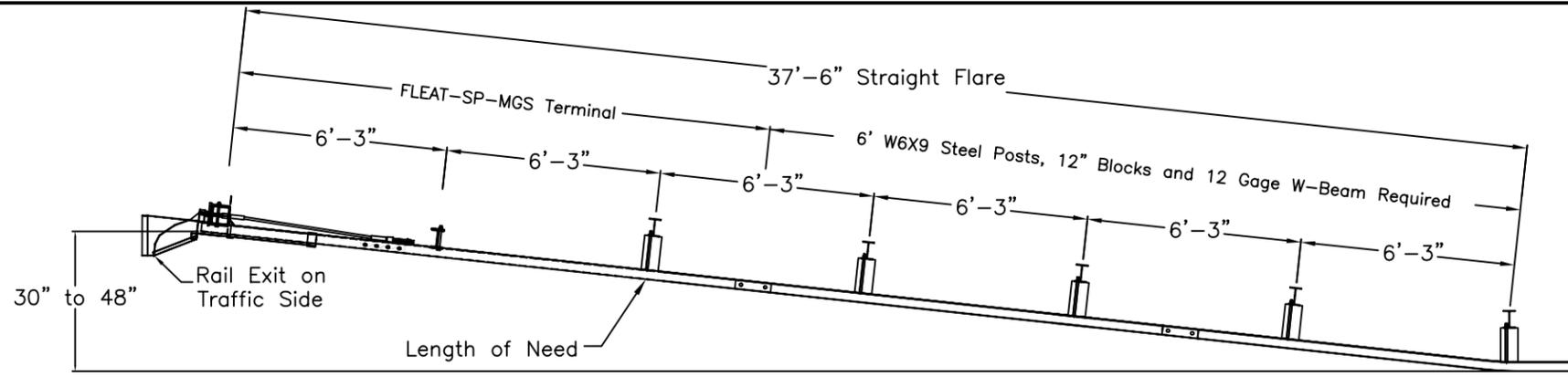
The Foundation Recommendations included in this Foundation Report are based on specific project information regarding structure type and structure location that has been provided by the Office of Design IV. If you have any questions or comments, please contact Ron Richman (805) 549-3385.

Report by:

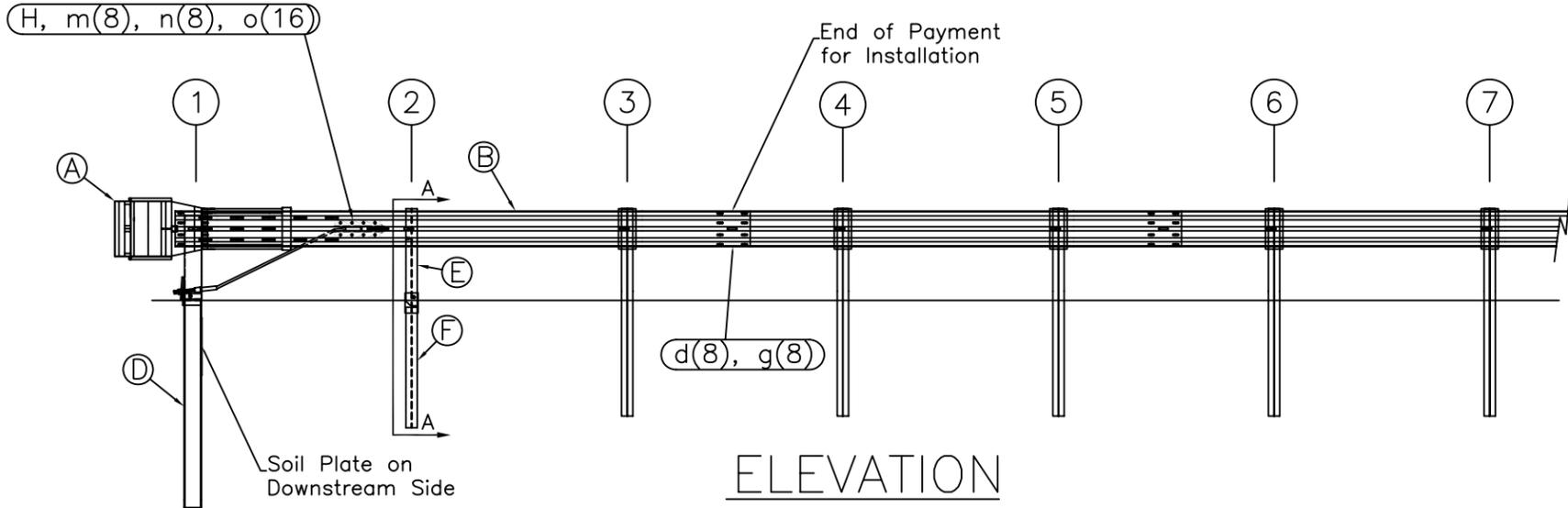


RON RICHMAN, P.E., No. 039869, P.G. 6802
Senior Materials & Research Engineer
Office of Geotechnical Design-North

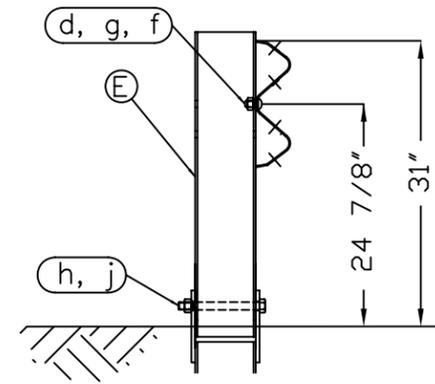
- c: Job File / Branch D Records
Traci Menard / GDN Records



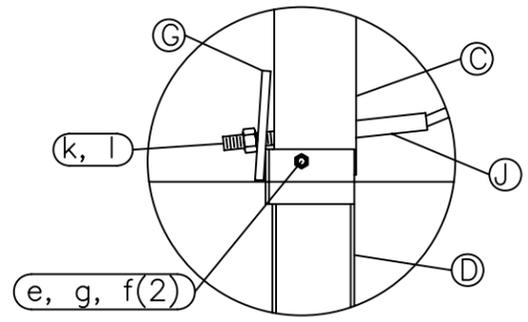
PLAN



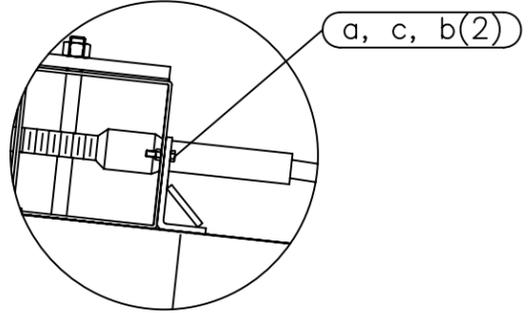
ELEVATION



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

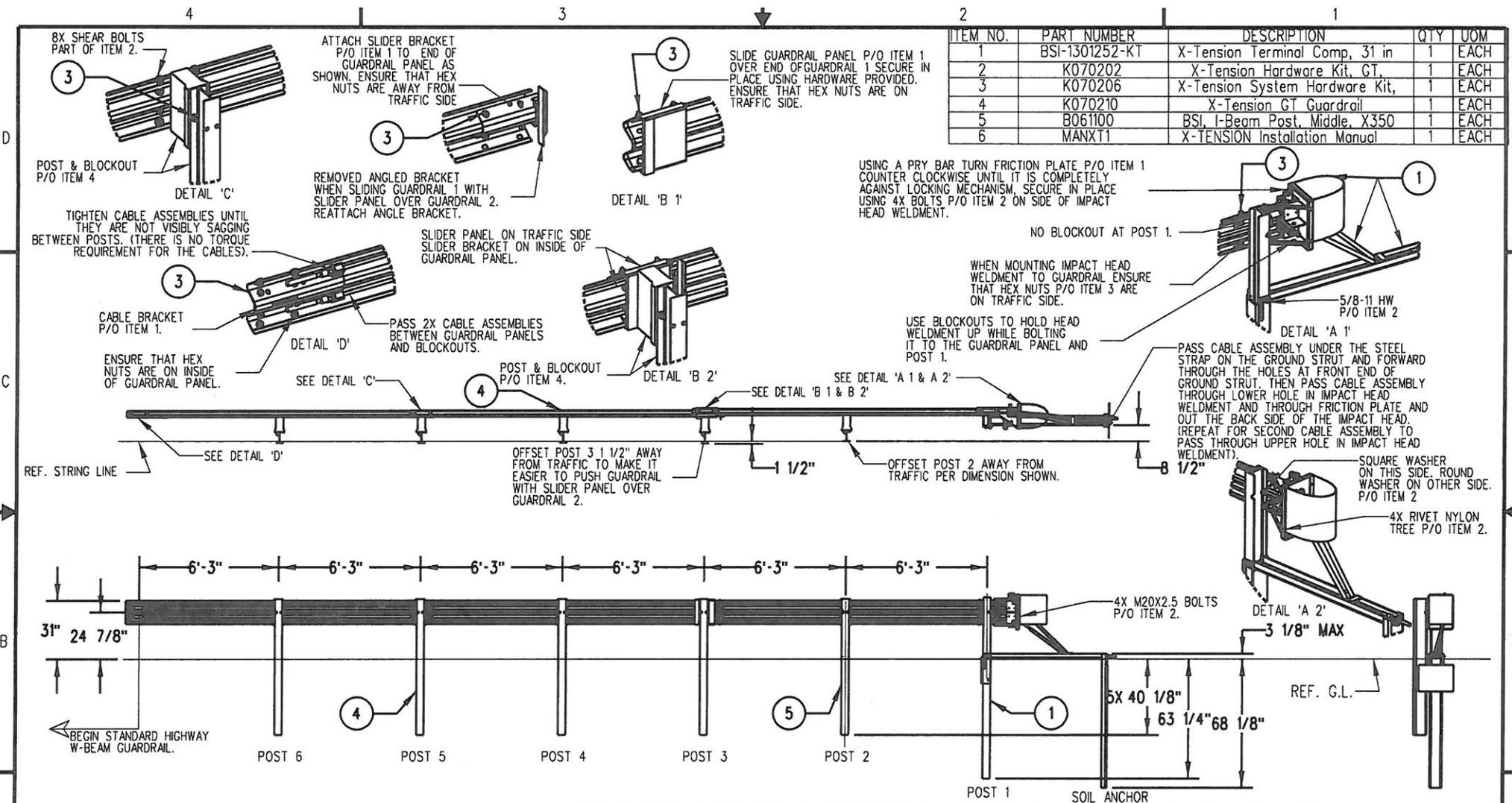
HARDWARE (ALL DIMENSIONS IN INCHES)			
a	2	5/16 x 1 HEX BOLT GRD 5	B5160104A
b	4	5/16 WASHER	W0516
c	2	5/16 HEX NUT	N0516
d	9	5/8 Dia. x 1 1/4 SPLICE BOLT (POST #2)	B580122
e	1	5/8 Dia. x 9 HEX BOLT GRD 5	B580904A
f	3	5/8 WASHER	W050
g	10	5/8 Dia. H.G.R NUT	N050
h	1	3/4 Dia. x 8 1/2 HEX BOLT GRD A449	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



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.

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APPROVALS DRAWN BY: NMV DRAWN DATE: 2/08/13 APPR'D BY: JMT APPR'D DATE: 2/08/13				<small>THIRD ANGLE PROJECTION</small> 		TITLE X-TENSION GUARDRAIL TERMINAL SYSTEM STEEL POST WITH COMPOSITE BLOCKOUT 31" RAIL HEIGHT	
REV: B		DATE: 2/08/13		SCALE: 1:50		SHEET: 1 OF 1	