



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

ENGINEER'S DAILY REPORT

LAN Engineering Consultant

REPORT NO.	DATE		
645 {7-day} { + 210 Project Work Day}	September 18, 2008	M T W T F S S (DAY)	
NORMAL WORK HOUR:	WEATHER:		
START: 6:00AM STOP: 3:30PM	CLEAR / SUNNY		
LOCATION :			
Construction Field Office :	333 Burma Road, Oakland 94607		
Working Drawing Campus Office :	375 Burma Road, Oakland 94607		

04-SF-80-13.2/13.9
Contract No. 04-0120F4
{SAS Superstructure}

Caltrans Supervisor:
Gary Lai *Kai 9-23-08*
Senior Bridge Engineer

Office Work:

❖ **CCO # 75 Review Ongoing.**

- Performing a complete review and comment package for the PB design group. Worked with Sandy Michelotti on the package.

❖ **CCO # 59/68 OBG/Tower Additional penetrations.**

- Working on the Master Penetration Charts (OBG Structure).
- Adding the bottom plate penetrations east of E2 close to Panel Point 120 (Lift 13).

❖ **MEP Shop Drawing Work.**

- Talked to Max Takaki (PB) about the placement of the bottom plate penetrations east of E2 close to Panel Point 120. He and abdi had placed the penetrations on the shop drawings.
- Reviewing the shop drawings for penetration location and placing the information in the master penetration charts as an update.
- Developed a layout sheet showing the location of the OBG penetrations in respect to the E2 cap Beam. The layout was modified to reflect the changes made in the shop drawings previously sent to me.
- Commented on the location of the conduit sizes in respect to the E2 cap beam. I recommended changing a couple of the locations due to size of conduits and closeness to the cap beam.
- See attachment for the layout sent to PB with my comments incorporated.

REC'D *08 SEP-27 #006709



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

ENGINEER'S DAILY REPORT

LAN Engineering Consultant

REPORT NO.

DATE

645 {7-day}{+210 Project Work Day}

September 18, 2008

M T W **T** F S S (DAY)

❖ **Tower Piping Bracket / Shop Drawing Submittal 365R12.**

- Received an email about the shop drawing submittal package 365R12 and the relined mounting brackets for the piping installed.
- After reviewing all the emails and information I could find on the subject I replied to the email. See Attached.

Any questions or comments you can reach me at (916) 919-7158. My E-Mail address is Mike.Travis@LANEngineering.com or Michael_Travis@dot.ca.gov

END OF REPORT

Work hours 0545-1730 – 10 hours regular

Attachments:

1. E2 layout showing shop drawing penetrations.
2. Email coving tower piping attachments issues.

SIGNATURE

Name

Michael F. Travis

TITLE

Electrical Engineer – LAN Engineering

DRAFT

Attachment #1 (1/1)

7585

Bearing assembly
(see Notes 1
and 3)

1715 1715

5535

Eastbound Bottom Plate Penetration
Layout. September 18, 2008 MFT

3930 5500

PP 119

PP 119 +2750

PP 119 +3250 (119.65)

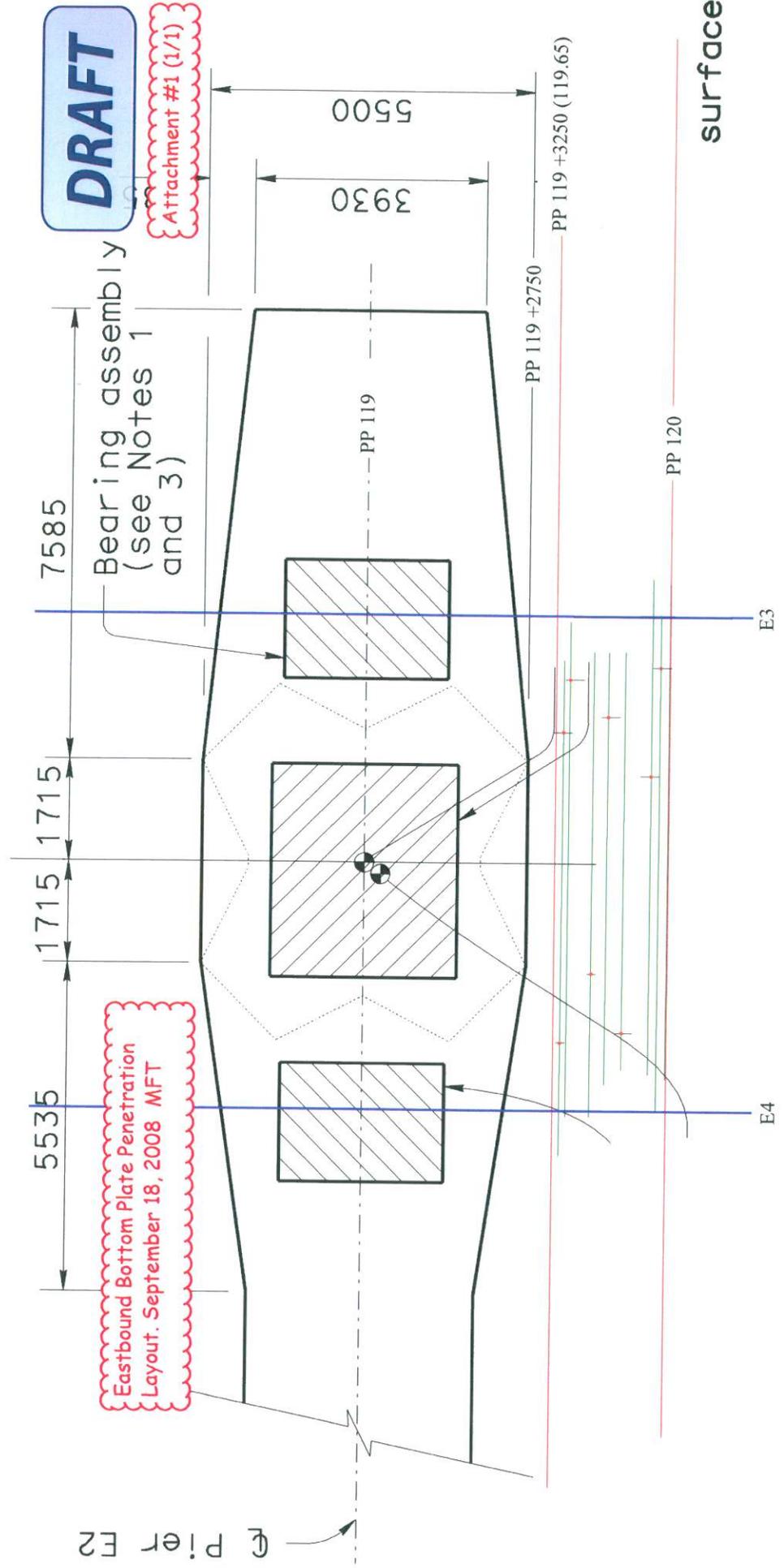
PP 120

E3

E4

Q Pier E2

surface)



Attachment #2 (1/8)



Michael
Travis/HQ/Caltrans/CAGov
09/18/2008 02:53 PM

To Gary J Lai/D04/Caltrans/CAGov@DOT
cc "Bill Shedd" <bill_shedd@dot.ca.gov>, "Chris Havel"
<chris_havel@dot.ca.gov>, "Sanei, Abdi"
<Sanei@pbworld.com>, Takaki@pbworld.com
bcc

Subject Re: PB Response to OBG Submittals 655R01 and 365R12 

I would like to explain the sequence of events that let us to this point.
I am to blame for this little fiasco that took place.

First there was a conversation with team china in August discussing the exterior attachments to the tower.
In the conversation the piping attachment to the "D" face of the tower was discussed.
I was to send some plans to Scott and Ken on the tower piping attachment.



Max sent me an email with the attachments on August 19 : Piping 8.19.2008 A.pdf

On the same day I replied to Max's email telling him about the meeting that took place on August 06,



2008: Piping 8.19.2008 B.pdf

At that time I only knew about the CCO#31 that has the original detail showing the mounting plate being installed on the tower structure.

When I found out about the second change in the CCO #31 which changes the mounting bracket to the piping, I sent an email to make sure everyone is aware of the change.
The statement made in the meeting on August 06, 2008 therefore was not totally correct about the mounting bracket.



Email September 10, 2008 : Piping 8.19.2008 C.pdf

In conclusion I would like to apologize for the confusion that I generated on this subject.
The only thing I wanted to make clear is that CCO # 31 has changed several times.
In the meeting on August 06, 2008 statements were made not knowing all the detail changes.
I only want to make sure the correct information does get out to those people that made the statements.
The decision to make any additional changes should come from the Project Manager.

Michael Travis
SFOBB Construction Offices
Design Campus Building
375 Burma Road
Oakland Ca. 94607
Phone: 510-808-4618

Gary J Lai/D04/Caltrans/CAGov

Attachment #2 (2/8)

Gary J
Lai/D04/Caltrans/CAGov
09/18/2008 12:56 PM

To "Sanei, Abdi" <Sanei@pbworld.com>
cc "Bill Shedd" <bill_shedd@dot.ca.gov>, "Chris Havel"
<chris_havel@dot.ca.gov>, Takaki@pbworld.com, Michael
Travis/HQ/Caltrans/CAGov@DOT
Subject Re: PB Response to OBG Submittals 655R01 and 365R12

With regards to Submittal 655, has this markup ever been made before in the subassembly submittals?

On submittal 365R01 - Irregardless of what the Architect wants, direction must come from the Project Manager to make the change to the mounting plate so I believe that we should stick with what has already been approved by Contract.

Gary Lai
Senior Bridge Engineer
(510) 808-4542 Voice
(510) 286-0550 Fax
(650) 222-7520 Mobile
Working Drawing Campus

"Sanei, Abdi" <Sanei@pbworld.com>



"Sanei, Abdi"
<Sanei@pbworld.com>
09/18/2008 12:41 PM

To "Takaki, Maxwell" <Takaki@pbworld.com>, "Martin Chandrawinata" <martin_chandrawinata@dot.ca.gov>, "Bill Shedd" <bill_shedd@dot.ca.gov>, "Jing Chen" <jing_z_chen@dot.ca.gov>, "John Lyons" <john_p_lyons@dot.ca.gov>, "Tim Daszko" <timothy_daszko@dot.ca.gov>, "Gary Lai" <gary_j_lai@dot.ca.gov>, "Chris Havel" <chris_havel@dot.ca.gov>, "Jim Reid" <james_reid@dot.ca.gov>, "Nhan Vo" <nvo@tylin.com>, "Tom Ho" <tho@tylin.com>
cc "Lucas, Ellery" <Lucas@pbworld.com>, "Dan Turner" <turner@wai.com>, "Mike Travis" <mike.travis@Lanengineering.com>, "Melvin, Bob" <Melvin@pbworld.com>, "Katie Sanders" <katie.sanders@tylin.com>, "Rachel Liu" <rachel_liu@dot.ca.gov>, "John Chan" <jchan@tylin.com>, <Veronica.Verduzco@tylin.com>, "King, Nick" <KingN@pbworld.com>, "Garcia, Rocky" <GarciaR@pbworld.com>, "Sanei, Abdi" <Sanei@pbworld.com>
Subject PB Response to OBG Submittals 655R01 and 365R12

To All,

Attached, please find PB review comment to subject submittals for your continuing action/record. PB response memos were deposited in PMIV today.

Attachment #2 (3/8)

Regards,
Max Takaki
510-808-4558
415-290-1056 cell

NOTICE: This communication and any attachments ("this message") may contain confidential information for the sole use of the intended recipient(s). Any unauthorized use, disclosure, viewing, copying, alteration, dissemination or distribution of, or reliance on this message is strictly prohibited. If you have received this message in error, or you are not an authorized recipient, please notify the sender immediately by replying to this message, delete this message and all copies from your e-mail system and



destroy any printed copies. MT655PB1.pdf MT365PB12.doc MT365PB12.pdf MT655PB1.doc

Attachment #2 (4/8)



"Takaki, Maxwell"
<Takaki@pbworld.com>

08/19/2008 11:53 AM

To <Michael_Travis@dot.ca.gov>

cc "Mike Travis" <mike.travis@Lanengineering.com>, "Martin Chandrawinata" <martin_chandrawinata@dot.ca.gov>, "Sanei, Abdi" <Sanei@pbworld.com>

bcc

Subject Mechanical Piping Support on SAS Tower T1 Shaft SW Skin Plate D

Mike,

If you already sent the attachment to Scott Kennedy and Ken Lee per their request, then please ignore this message.

Regards,
Max Takaki

NOTICE: This communication and any attachments ("this message") may contain confidential information for the sole use of the intended recipient(s). Any unauthorized use, disclosure, viewing, copying, alteration, dissemination or distribution of, or reliance on this message is strictly prohibited. If you have received this message in error, or you are not an authorized recipient, please notify the sender immediately by replying to this message, delete this message and all copies from your e-mail system and destroy any printed copies.



Sub 112R03 Water & Air Piping on Tower D Skin SW Shaft.pdf

Attachment #2 (5/8)



"Mike Travis"
<Mike.Travis@lanengineering.com>

08/19/2008 01:13 PM

To "Takaki, Maxwell" <Takaki@pbworld.com>, <Michael_Travis@dot.ca.gov>
cc "Martin Chandrawinata" <martin_chandrawinata@dot.ca.gov>, "Sanei, Abdi" <Sanei@pbworld.com>

bcc

Subject RE: Mechanical Piping Support on SAS Tower T1 Shaft SW Skin Plate D

Max,

In the meeting with the Clive, Gary Pursell made a decision to only install the mounting plates for the piping. There should be mounting plates installed in China.

I have not sent anything to Team China yet on this but need to look into who is processing this information.

Thanks for the information.

Michael Travis
Electrical/Structural Construction Engineer

Lim And Nascimento Eng. Corp.
Department of Transportation
SAS Construction Office
333 Burma Road
Oakland, California 94607
510-808-4618 Office
916.919.7158 cell

From: Takaki, Maxwell [mailto:Takaki@pbworld.com]
Sent: Tue 8/19/2008 11:53 AM
To: Michael_Travis@dot.ca.gov
Cc: Mike Travis; Martin Chandrawinata; Sanei, Abdi
Subject: Mechanical Piping Support on SAS Tower T1 Shaft SW Skin Plate D

Mike,

If you already sent the attachment to Scott Kennedy and Ken Lee per their request, then please ignore this message.

Regards,
Max Takaki

NOTICE: This communication and any attachments ("this message") may contain confidential information for the sole use of the intended recipient(s). Any unauthorized use, disclosure, viewing, copying, alteration, dissemination or distribution of, or reliance on this message is strictly prohibited. If you have received this message in error, or you are not an authorized recipient, please notify the sender immediately by replying to this message, delete this message and all copies from your e-mail system and

Attachment #2 (6/8)



Michael
Travis/HQ/Caltrans/CAGov
09/10/2008 07:49 AM

To Bill Shedd/D04/Caltrans/CAGov@DOT
cc Gary J Lai/D04/Caltrans/CAGov@DOT
bcc SAS - Caltrans
Subject Piping Attachment to the Tower Structure (CCO 31)

Bill,

During the meeting covering the placement of piping on the tower structure on "D" face a proposal was made by Gary Purcell. The proposal was to install the mounting plates on the tower structure and make a decision on installing the piping at a later date.

The original plan sheet and CCO#31 R1 does show a mounting plate for the piping. See attachment below:



Sheet 55R1 : 04-0120f1_0055R01MFT.pdf

The later update of CCO #31 changed the mounting to a bracket between the tower and mounting plate. See attachment below.



Sheet 55R2 : 04-0120f1_0055R02MFT.pdf

Due to this change there will be a different configuration of mounting on the tower structure for the piping then what was addressed in the meeting.

Any questions or comments please let me know.

Michael Travis
SFOBB Construction Offices
Design Campus Building
375 Burma Road
Oakland Ca. 94607
Phone: 510-808-4618

DIST. COUNTY ROUTE 04 SF 80 13.2/13.9 55R11 1204

KILOMETER POST SHEET TOTAL
NO. SHEETS

PLANS APPROVAL DATE 12-6-04

REGISTERED PROFESSIONAL ENGINEER
DATE OF EXPIRATION

Bob J. Howell
REGISTERED MECHANICAL ENGINEER
DATE OF EXPIRATION

PARSONS BRINCKERHOFF QUAD & DOUGLAS, INC.
303 SECOND STREET, SUITE 700 N
SAN FRANCISCO, CA 94017

The State of California is the official of record and is responsible for the accuracy or completeness of electronic copies of this plan set.

To go to the web site, go to <http://www.ca.gov>

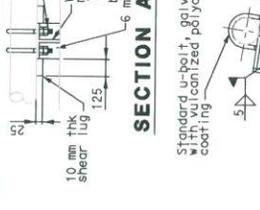
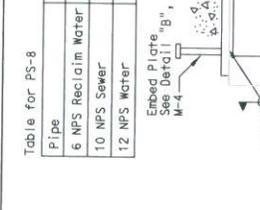
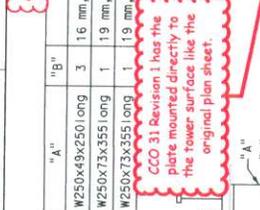
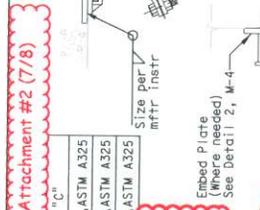
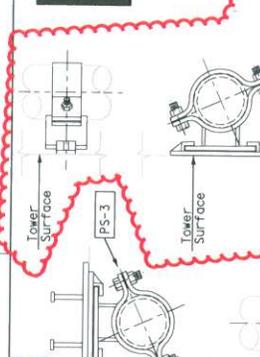


Table for PS-8

PIPE	"A"	"B"	"C"
6 NPS Reclaim Water	W250x49x250 long	3	16 mm ASTM A325
10 NPS Sewer	W250x73x355 long	1	19 mm ASTM A325
12 NPS Water	W250x73x355 long	1	19 mm ASTM A325

Embed Plate See Detail "B", M-4

12 NPS Water
10 NPS Sewer
6 NPS Reclaim Water

Base Elbow

150

Shim 4 NPS pipe as needed, 9 mm max.

Table for PS-3 to use with PS-9

PIPE	Verif. Load (kg)	Lat. Load (kg)	Axial Load (kg)
2 1/2 NPS	-	30	38
3 NPS	-	30	38
4 NPS	-	40	38

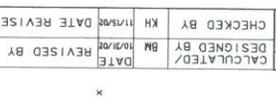
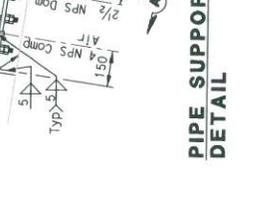
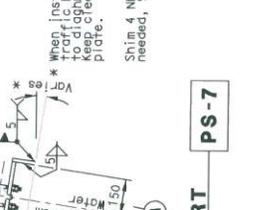
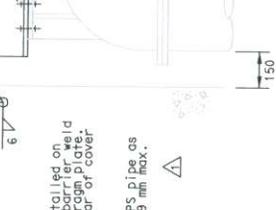
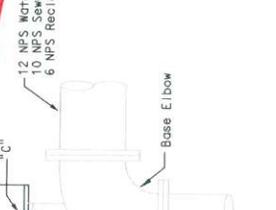
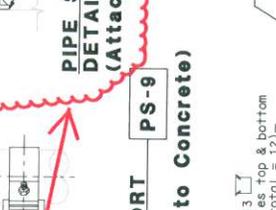


Table for PS-11

PIPE	"A"	"B"	"C"
6 NPS Reclaim Water	W150X30	4	13
10 NPS Sewer	W200X46	4	13
12 NPS Water	W200X46	4	13

12 NPS Water
6 NPS Reclaim Water

West Bound

Thrust Collar (typ)

19 dia bolt w/ nut & washer (2 each side)

Butt support to pipe bell

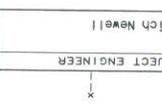
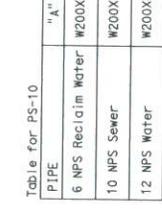
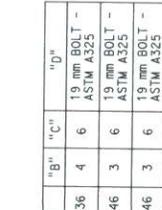
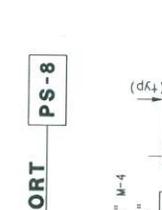
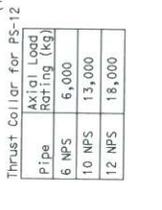
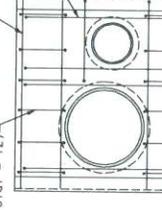
Table for PS-12

PIPE	Axial Load Rating (kg)
6 NPS	6,000
10 NPS	13,000
12 NPS	18,000

5 #16 each face horizontal (total = 10)
4 #19 each face vertical (total = 8)
C380X50 (typ)

Thrust Collar for PS-12

Tiles Top & bottom (total = 12)



Attachment #2 (7/8)

CO 31 Revision 1 has the plate mounted directly to the tower surface like the original plan sheet.

When installed on traffic barrier weld to diaphragm plate. See Detail "B", M-4.

Standard u-bolt, galvanized with vulcanized polyethylene coating.

* Fasten piping securely to support member.

ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE SHOWN

SCALE: 50 mm = 100 mm

CONTRACT CHANGE ORDER NO. 31

SHEET ___ OF ___

MECHANICAL
REVISIONS
BY: C.L. COO
DATE: 11/13/03

MARK: 11/13/03

DESCRIPTION: MECHANICAL

REVISIONS

BY: C.L. COO

DATE: 11/13/03

MECHANICAL
REVISIONS
BY: C.L. COO
DATE: 11/13/03

MARK: 11/13/03

DESCRIPTION: MECHANICAL

REVISIONS

BY: C.L. COO

DATE: 11/13/03

MECHANICAL
REVISIONS
BY: C.L. COO
DATE: 11/13/03

MARK: 11/13/03

DESCRIPTION: MECHANICAL

REVISIONS

BY: C.L. COO

DATE: 11/13/03

MECHANICAL
REVISIONS
BY: C.L. COO
DATE: 11/13/03

MARK: 11/13/03

DESCRIPTION: MECHANICAL

REVISIONS

BY: C.L. COO

DATE: 11/13/03

MECHANICAL
REVISIONS
BY: C.L. COO
DATE: 11/13/03

MARK: 11/13/03

DESCRIPTION: MECHANICAL

REVISIONS

BY: C.L. COO

DATE: 11/13/03

MECHANICAL
REVISIONS
BY: C.L. COO
DATE: 11/13/03

MARK: 11/13/03

DESCRIPTION: MECHANICAL

REVISIONS

BY: C.L. COO

DATE: 11/13/03

MECHANICAL
REVISIONS
BY: C.L. COO
DATE: 11/13/03

MARK: 11/13/03

DESCRIPTION: MECHANICAL

REVISIONS

BY: C.L. COO

DATE: 11/13/03

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER Rich Newell

DESIGNED BY

CHECKED BY

CALCULATED BY

DATE

REVISIONS

DATE

REVISIONS

DATE

REVISIONS

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER Rich Newell

DESIGNED BY

CHECKED BY

CALCULATED BY

DATE

REVISIONS

DATE

REVISIONS

DATE

REVISIONS

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER Rich Newell

DESIGNED BY

CHECKED BY

CALCULATED BY

DATE

REVISIONS

DATE

REVISIONS

DATE

REVISIONS

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER Rich Newell

DESIGNED BY

CHECKED BY

CALCULATED BY

DATE

REVISIONS

DATE

REVISIONS

DATE

REVISIONS

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER Rich Newell

DESIGNED BY

CHECKED BY

CALCULATED BY

DATE

REVISIONS

DATE

REVISIONS

DATE

REVISIONS

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER Rich Newell

DESIGNED BY

CHECKED BY

CALCULATED BY

DATE

REVISIONS

DATE

REVISIONS

DATE

REVISIONS

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER Rich Newell

DESIGNED BY

CHECKED BY

CALCULATED BY

DATE

REVISIONS

DATE

REVISIONS

DATE

REVISIONS

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER Rich Newell

DESIGNED BY

CHECKED BY

CALCULATED BY

DATE

REVISIONS

DATE

REVISIONS

DATE

REVISIONS

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER Rich Newell

DESIGNED BY

CHECKED BY

CALCULATED BY

DATE

REVISIONS

DATE

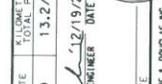
REVISIONS

DATE

REVISIONS

Table for PS-8

Pipe	"A"	"B"
6 NPS Reclaim Water	W250x49x250 long	3 16 mm ASTM A325
10 NPS Sewer	W250x73x355 long	1 19 mm ASTM A325
12 NPS Water	W250x23x355 long	1 19 mm ASTM A325



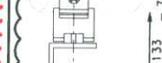
SECTION A-A
Standard u-bolt, galvanized with vulcanized polyolefin coating



SECTION B-B
* When installed on traffic barrier, weld to diagonal plate, rear of cover plate.



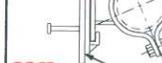
SECTION C-C
Shim 4 NPS pipe as needed, 9 mm max.



SECTION D-D
* When installed on traffic barrier, weld to diagonal plate, rear of cover plate.



SECTION E-E
* When installed on traffic barrier, weld to diagonal plate, rear of cover plate.



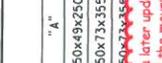
SECTION F-F
* When installed on traffic barrier, weld to diagonal plate, rear of cover plate.



SECTION G-G
* When installed on traffic barrier, weld to diagonal plate, rear of cover plate.



SECTION H-H
* When installed on traffic barrier, weld to diagonal plate, rear of cover plate.



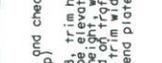
SECTION I-I
* When installed on traffic barrier, weld to diagonal plate, rear of cover plate.



SECTION J-J
* When installed on traffic barrier, weld to diagonal plate, rear of cover plate.



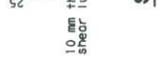
SECTION K-K
* When installed on traffic barrier, weld to diagonal plate, rear of cover plate.



SECTION L-L
* When installed on traffic barrier, weld to diagonal plate, rear of cover plate.



SECTION M-M
* When installed on traffic barrier, weld to diagonal plate, rear of cover plate.



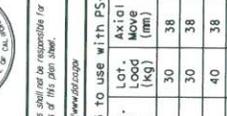
SECTION N-N
* When installed on traffic barrier, weld to diagonal plate, rear of cover plate.



SECTION O-O
* When installed on traffic barrier, weld to diagonal plate, rear of cover plate.

Table for PS-9

Pipe	Vert. Load (kg)	Lot Load (kg)	Axial Move (mm)
2 NPS	-	30	38
2 1/2 NPS	-	30	38
3 NPS	-	40	38
4 NPS	-	60	38



SECTION PS-9
Rebars beyond



SECTION PS-10
Rebars beyond



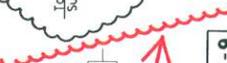
SECTION PS-11
Rebars beyond



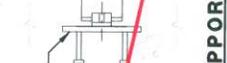
SECTION PS-12
Rebars beyond



SECTION PS-13
Rebars beyond



SECTION PS-14
Rebars beyond



SECTION PS-15
Rebars beyond



SECTION PS-16
Rebars beyond



SECTION PS-17
Rebars beyond



SECTION PS-18
Rebars beyond



SECTION PS-19
Rebars beyond



SECTION PS-20
Rebars beyond



SECTION PS-21
Rebars beyond



SECTION PS-22
Rebars beyond



SECTION PS-23
Rebars beyond



SECTION PS-24
Rebars beyond

Table for PS-11

Pipe	"A"	"B"	"C"
6 NPS Reclaim Water	W150X30	4	13
10 NPS Sewer	W200X46	4	13
12 NPS Water	W200X46	4	13



SECTION PS-11
Embed Plate See Detail "B" M-4



SECTION PS-12
Embed Plate See Detail "B" M-4



SECTION PS-13
Embed Plate See Detail "B" M-4



SECTION PS-14
Embed Plate See Detail "B" M-4



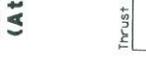
SECTION PS-15
Embed Plate See Detail "B" M-4



SECTION PS-16
Embed Plate See Detail "B" M-4



SECTION PS-17
Embed Plate See Detail "B" M-4



SECTION PS-18
Embed Plate See Detail "B" M-4



SECTION PS-19
Embed Plate See Detail "B" M-4



SECTION PS-20
Embed Plate See Detail "B" M-4



SECTION PS-21
Embed Plate See Detail "B" M-4



SECTION PS-22
Embed Plate See Detail "B" M-4



SECTION PS-23
Embed Plate See Detail "B" M-4



SECTION PS-24
Embed Plate See Detail "B" M-4



SECTION PS-25
Embed Plate See Detail "B" M-4



SECTION PS-26
Embed Plate See Detail "B" M-4

Table for PS-12

Pipe	"A"	"B"	"C"
6 NPS Reclaim Water	W150X30	4	13
10 NPS Sewer	W200X46	4	13
12 NPS Water	W200X46	4	13



SECTION PS-12
Embed Plate See Detail "B" M-4



SECTION PS-13
Embed Plate See Detail "B" M-4



SECTION PS-14
Embed Plate See Detail "B" M-4



SECTION PS-15
Embed Plate See Detail "B" M-4



SECTION PS-16
Embed Plate See Detail "B" M-4



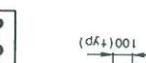
SECTION PS-17
Embed Plate See Detail "B" M-4



SECTION PS-18
Embed Plate See Detail "B" M-4



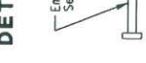
SECTION PS-19
Embed Plate See Detail "B" M-4



SECTION PS-20
Embed Plate See Detail "B" M-4



SECTION PS-21
Embed Plate See Detail "B" M-4



SECTION PS-22
Embed Plate See Detail "B" M-4



SECTION PS-23
Embed Plate See Detail "B" M-4



SECTION PS-24
Embed Plate See Detail "B" M-4



SECTION PS-25
Embed Plate See Detail "B" M-4



SECTION PS-26
Embed Plate See Detail "B" M-4



SECTION PS-27
Embed Plate See Detail "B" M-4

Table for PS-13

Pipe	"A"	"B"	"C"
6 NPS Reclaim Water	W150X30	4	13
10 NPS Sewer	W200X46	4	13
12 NPS Water	W200X46	4	13



SECTION PS-13
Embed Plate See Detail "B" M-4



SECTION PS-14
Embed Plate See Detail "B" M-4



SECTION PS-15
Embed Plate See Detail "B" M-4



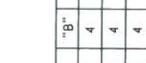
SECTION PS-16
Embed Plate See Detail "B" M-4



SECTION PS-17
Embed Plate See Detail "B" M-4



SECTION PS-18
Embed Plate See Detail "B" M-4



SECTION PS-19
Embed Plate See Detail "B" M-4