



P.O. BOX 23223 Oakland, CA 94623
 Phone (510) 419-0120 / Fax (510) 839-0666

LETTER OF SUBMITTAL
KFM Skyway Project # 04-012024

Run Date 23-May-05
 Time 12:22 PM

Dated: 23-May-2005

SUBMITTAL No: KFM-SUB-004528

Rev: 00

To: Doug Coe
 Caltrans-Skyway Project
 345 Burma Road
 Oakland CA 94607
 Phone: Fax:

Co/Job # 364-3726
 Contract # 04-012024
 Sub/Supplier: USI
 Sub/Supplier No: 685

Subject: USI - Closing Documents for KFM NCR 114 (METS NCR 99)

Special Provis. (SP) REF: 10-1.44
 Standard Spec. (SS) REF:

RESUBMITTAL/SUPPLEMENTAL REF:

We are sending the following attached items: Attached

Via Fax

- | | | |
|---------------------------------------|---|---|
| <input type="checkbox"/> Drawing | <input checked="" type="checkbox"/> Plans | <input type="checkbox"/> Prog. Pmt |
| <input type="checkbox"/> Samples | <input type="checkbox"/> Certificates of Compliance | <input type="checkbox"/> Calculations |
| <input type="checkbox"/> Payroll | <input type="checkbox"/> Specs | <input type="checkbox"/> Copy of Letter |
| <input type="checkbox"/> Change Order | <input type="checkbox"/> Schedule | <input type="checkbox"/> Invoice |

Item	Date	Copies	Description	Drawing No	Rev	Status	Pages
01	19-May-05	1	USI Letter		0	Pending	2
02	20-Apr-05	1	USI - Closing Documents for KFM NCR 114 (METS NCR 99)		0	Pending	23

These are transmitted as checked below:

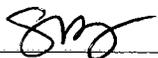
- | | | |
|--|---|--|
| <input checked="" type="checkbox"/> For Approval | <input type="checkbox"/> For Review/comment | <input type="checkbox"/> Return For Correction |
| <input type="checkbox"/> For Your Use | <input type="checkbox"/> As Requested | <input type="checkbox"/> For Information |

Remarks:

CC:

Please review / approve by : 30-May-2005

Submitted By: Rich Bienek
 (KFM Staff Member – Originator of Transmittal)

Checked & Sent By: 
 Contract Admin/DCS Staff



UNIVERSAL STRUCTURAL, INC.

604 S.E. Victory Ave.
Vancouver, WA 98661

P.O. Box 1030
Vancouver, WA 98666

Vancouver (360) 695-1261
Portland (503) 227-2419
FAX (360) 696-3590

May 19, 2005

Kiewit / FCI / Manson, JV (KFM)
220 Burma Road
Oakland, CA 94607
Phone: (510) 419-0120
Fax: (510) 839-0666

Attention: Paul Hegarty / Rich Bienek

Reference: SFOBB Skyway Project
USI #23932 (NCR LTR# 114.051105)

Subject: Response to Caltrans State Letter #5.03.1-007551, DTD 04/20/05
KFM NCR #114

Mr. Hegarty & Mr. Bienek,

Universal Structural, Inc. has not received Caltrans State Letter # 5.03.1-007551, dated April 20, 2005. Caltrans stated:

"KFM's QCM and onsite representative allowed USI to support Assembly 2A differently from the locations and details submitted and approved in KFM-SUB-3599R1. A shim was placed between the bearing plate and soffit plate at the southwest corner resulting in the bearing plates not being in full contact with the soffit plate. The removal of the shim resulted in the sub-assembly being fully supported by only three 90 mm bearing plates. The locations of all four supports also do not appear to comply with the approved submittal."

USI was in error in the placement of a shim between the bearing plate and the soffit plate at the southwest corner of Girder 2A. All parties involved in this incident, including the Bay Foreman and General Foreman have been reprimanded and proper instruction has been given. Great care was taken in the removal and replacement of the shim. Please review the attached information from Smith & Monroe & Gray Engineers dealing with this issue.



Category III

A Subsidiary of

HARDER MECHANICAL CONTRACTORS



- Copy of Caltrans State Letter #5.03.1-007551
- Copy of Caltrans State Letter #5.03.1-006801
- Copy of SMG Stamped sketches (9 pages)
- Copy of Caltrans State Letter #5.03.1-007614
- Copy of USI Letter # 117.050205
- Copy of SMG Memo, dated April 29, 2005
- Copy of SMG Memo, dated May 2, 2005
- Copy of SMG Memo, dated April 29, 2005
- Copy of SMG sketches (7 pages)

Please review and submit to Caltrans for a letter to close this NCR. If you have any questions or need further clarification, please contact me at your earliest possible convenience.

Sincerely,

Universal Structural, Inc.

A handwritten signature in black ink that reads "Brad Murphy". The signature is written in a cursive style with a long, sweeping underline that extends to the right.

Brad Murphy
Sales Manager

cc: USI file

DEPARTMENT OF TRANSPORTATION

SFOBB - Skyway Project
345 Burma Road
Oakland, CA 94607
Facsimile Number: (510) 622-5165



Flex Your Power
Be Energy Efficient!

April 20, 2005

KFM, a JV
220 Burma Road
Oakland, CA 94607

Contract: 04-012024
04-SF, Ala-80-13.9/14.3, 0.0/1.6
SFOBB Skyway Project
State Letter # 5.03.1-007551

KFM NCR 114

Subject: USI NCR No. 99: Bearing Plates Not in Full Contact with the Soffit Plate

Dear Mr. Skoro,
Attention: Mr. Rich Bienek,

This Non-Conformance Report (NCR) is issued by the Engineer to KFM as a result of your supplier, USI, for the following reason:

1. KFM's QCM and onsite representative allowed USI to support Assembly 2A differently from the locations and details submitted and approved in KFM-SUB-3599R1. A shim was placed between the bearing plate and soffit plate at the southwest corner resulting in the bearing plates not being in full contact with the soffit plate. The removal of the shim resulted in the sub-assembly being fully supported by only three 90 mm bearing plates. The locations of all four supports also do not appear to comply with the approved submittal.

This NCR will be tracked as USI NCR No. 99. USI was verbally notified of this NCR by Caltrans' METS on 04/14/05. Please review and address how you plan to resolve this NCR and bring your work back into compliance with our contract.

Should you have any questions, please contact David Wu at (510) 622-5104 or Patrick Lowry at (858) 344-2712.

Sincerely,

David Wu

David Wu
Senior Bridge Engineer

For: Mr. Douglas Coe
Resident Engineer

cc: P. Lowry, D. Coe, I. Khinsann, D. Wu, S. Abbas, B. Chew, V. Iyer, I. Kwong, D. Salladay, H. El-Natur
file: 5.03.1, 9.07.8

DEPARTMENT OF TRANSPORTATION

SFOBB – Skyway Project
345 Burma Road
Oakland, CA 94607
Facsimile Number: (510) 622-5165



Flex Your Power
Be Energy Efficient!

February 04, 2005

KFM, a JV
220 Burma Road
Oakland, CA 94607

Contract: 04-012024
04-SF, Ala-80-13.9/14.3, 0.0/1.6
SFOBB Skyway Project
State Letter # 5.03.1-006801

Subject: Response to KFM-SUB-003599R01: Tub Moving Plans in Subassembly

Dear Mr. Skoro,
Attention: Paul Hegarty,

The Engineer has reviewed KFM-SUB-003599R01: Tub Moving Plans in Subassembly which consists of supporting calculations for USI's plan for moving and support of the orthotub girder segments. The subject submittal in conjunction with Rev.0 of the submittal is now approved. Attached are the approved stamped copies of the subject submittal.

Should you have any questions, please contact David Wu at (510) 622-5104.

Sincerely,

David Wu
Senior Bridge Engineer

For: Mr. Douglas Coe
Resident Engineer

Attachments: Approved Stamped Copies of Calculations

cc: D. Coe, I. Khinsann, V. Iyer, D. Wu, S. Abbas, B. Chew, H. El-Natur, P. Lowry, I. Kwong

file: 5.03.1, 9.06.8

SKYWAY-BAY BRIDGE PROJECT	
KIEWIT / FCI / MANSON, A JV	
DATE: 2/10/05	CO/JOB: 364-3726
ROUTED BY: SWU	NO: 04-012024
TO: P. Hegarty	SPECIAL NOTES:
INTERNAL KFM COPIES TO:	
EXTERNAL COPIES TO:	
SCANNED: (Y) N	FILED TO: SUB 3599R1

SMITH & MONROE & GRAY ENGINEERS, INC.

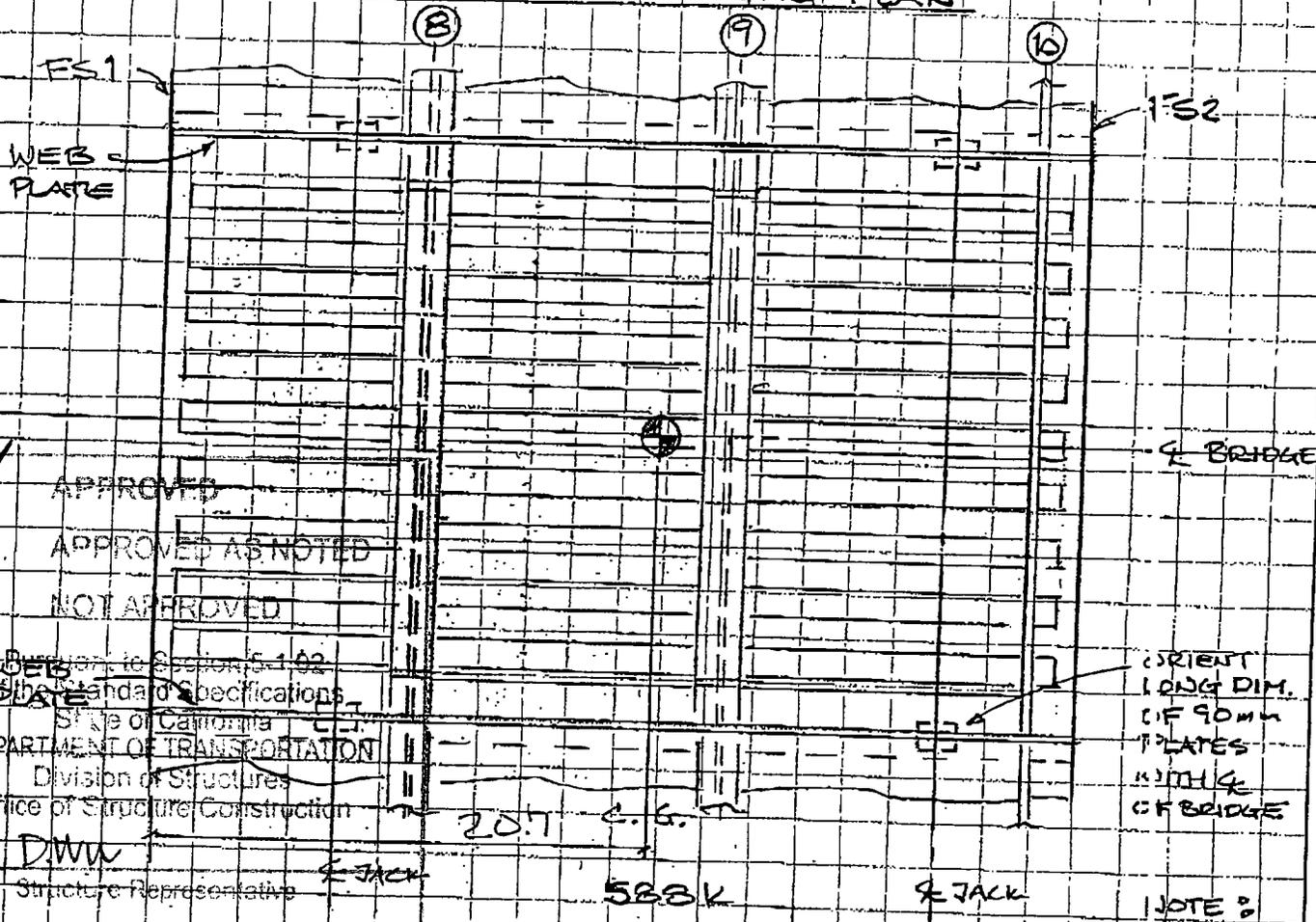
CIVIL & STRUCTURAL ENGINEERS
MATERIAL HANDLING & MECHANICAL

CLIENT USI
PROJECT SFRRB-TRANSITION TUB
SUPPORT

BY AJMM DATE 12-1-04 REV. C
JOB NO. 04-209 SHEET C OF

WEST TUB

TUB SUB-SECTION - 2A - JACKING PLAN



- APPROVED
- APPROVED AS NOTED
- NOT APPROVED

Refer to Section 5.1.02
of the Standard Specifications
State of California
DEPARTMENT OF TRANSPORTATION
Division of Structures
Office of Structure Construction

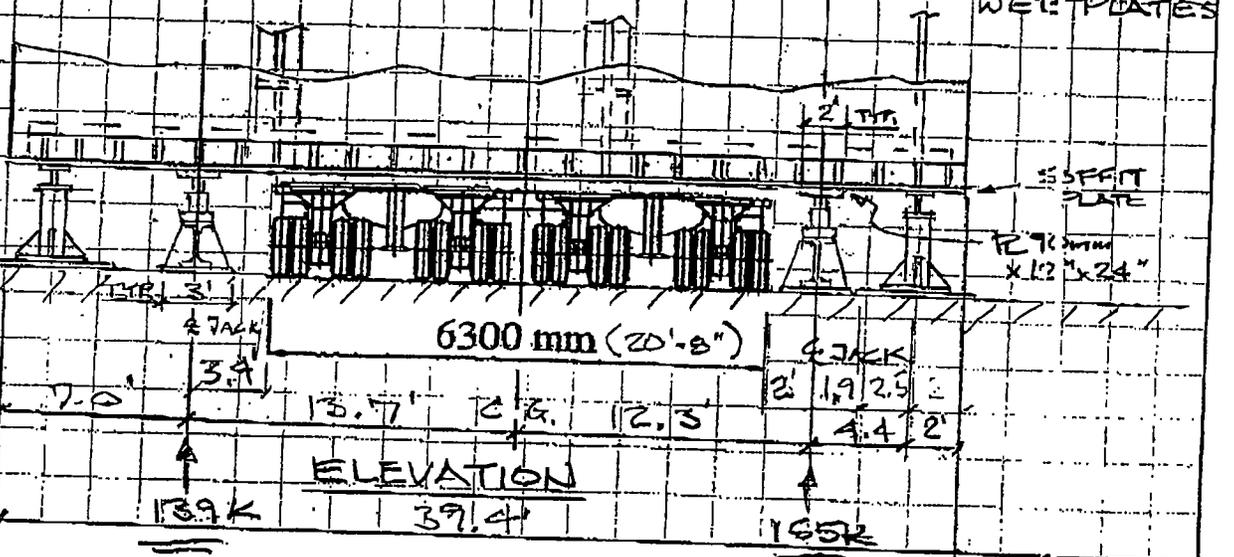
ORIENT
LONG DIM.
OF 90mm
PLATES
WITH
C.G. OF BRIDGE

Signed DMM
Structure Representative

Date 2/4/05

NOTE:
PLACE JACKS
CENTERED
UNDER TUB
WEB PLATES

PLAN VIEW



ELEVATION

SMITH & MONROE & GRAY ENGINEERS, INC.

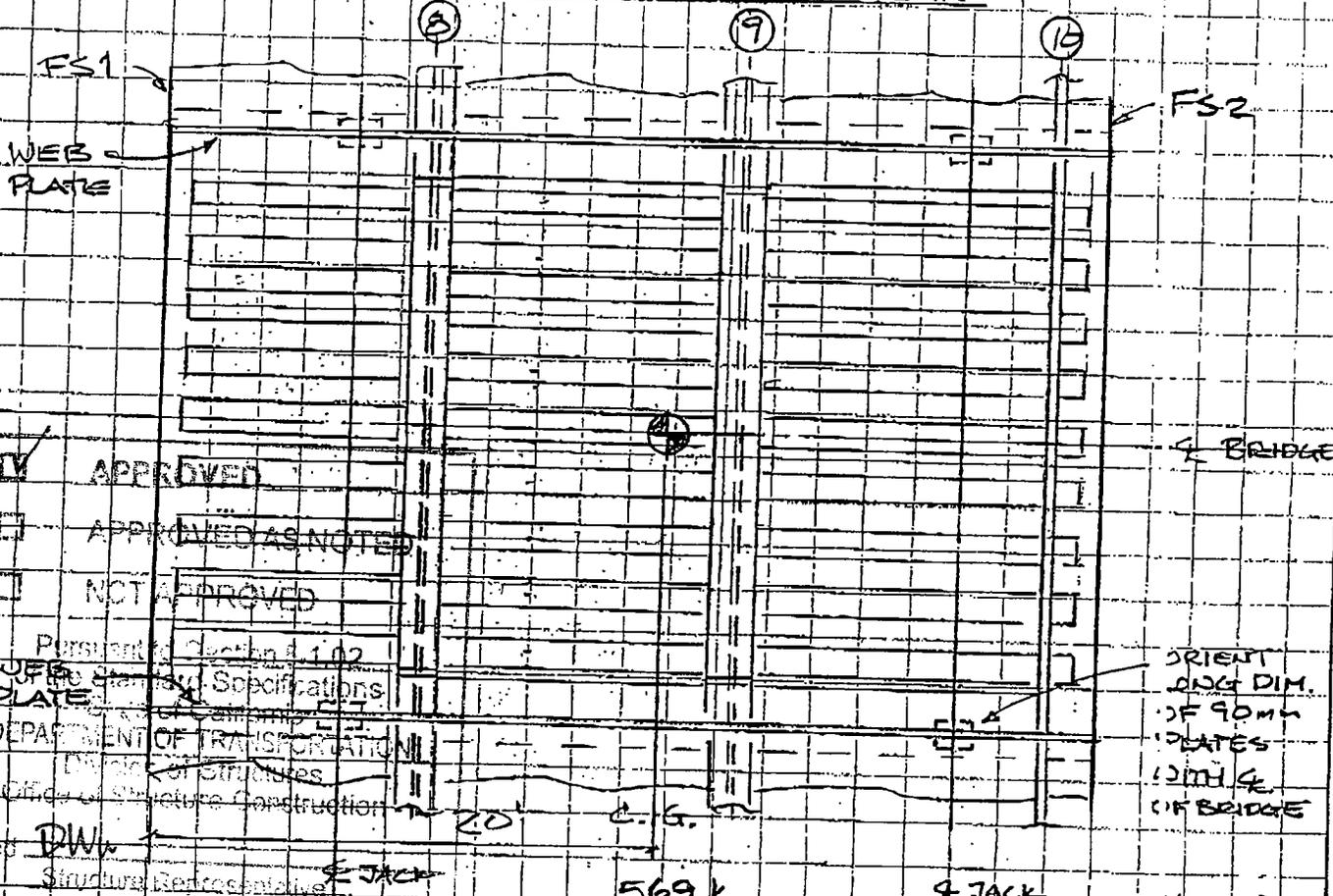
CIVIL & STRUCTURAL ENGINEERS
MATERIAL HANDLING & MECHANICAL

CLIENT USI
PROJECT SFOBB-TRANSITION TUB SUPPORT

BY AJMM DATE 12-1-04 REV. _____
JOB NO. 04-209 SHEET 10 OF _____

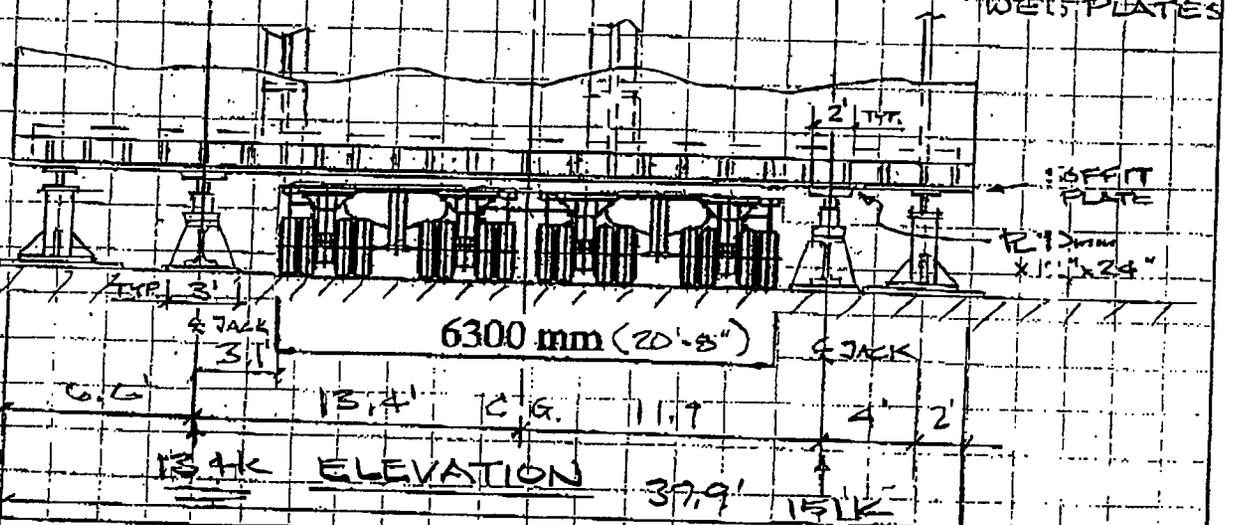
EAST TUB

TUB SUB-SECTION -2A- JACKING PLAN



PLAN VIEW

NOTE:
PLACE JACKS
CENTERED
UNDER TUB
WEB PLATES



ELEVATION

SMITH & MONROE & GRAY ENGINEERS, INC.

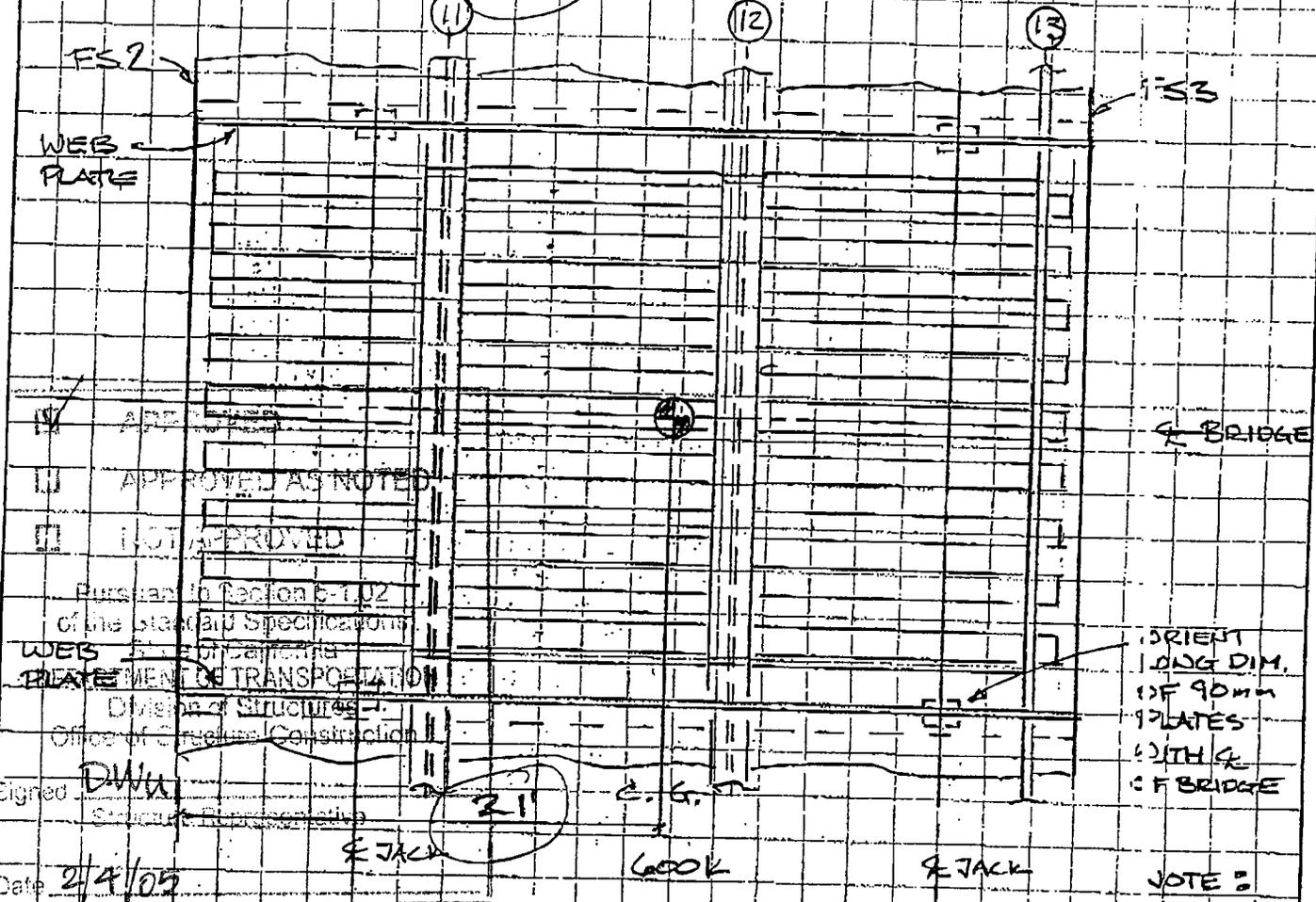
CIVIL & STRUCTURAL ENGINEERS
MATERIAL HANDLING & MECHANICAL

CLIENT USI
PROJECT SFORB-TRANSITION TUB
SUPPORT

BY AJMM DATE 12-1-04 R.V.
JOBNO. 04-209 SHEET 11 OF

WEST TUB

TUB SUB-SECTION - 3A - JACKING PLAN



- APPROVED
- APPROVED AS NOTED
- NOT APPROVED

Pursuant to Section 5-1.02
of the Standard Specifications
of the State of California
DEPARTMENT OF TRANSPORTATION
Division of Structures
Office of Structural Construction

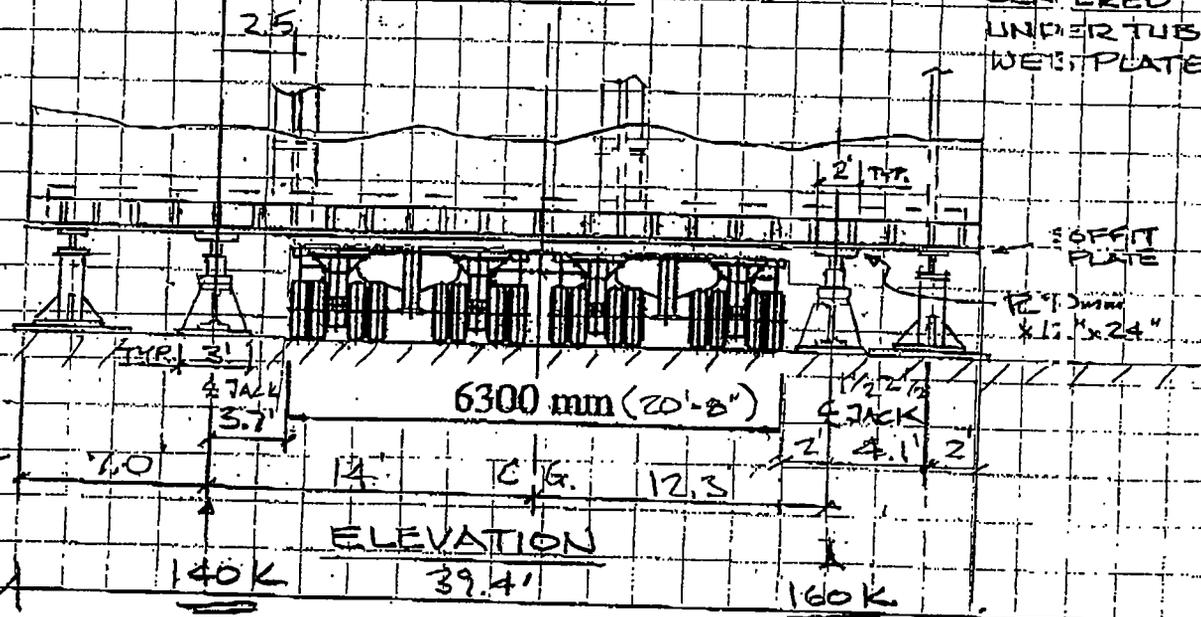
Signed DW
Structural Representative

Date 2/4/05

ORIENT LONG DIM. OF 90mm PLATES WITH C OF BRIDGE

PLAN VIEW

NOTE:
PLACE JACKS CENTERED UNDER TUB WEB PLATES



ELEVATION

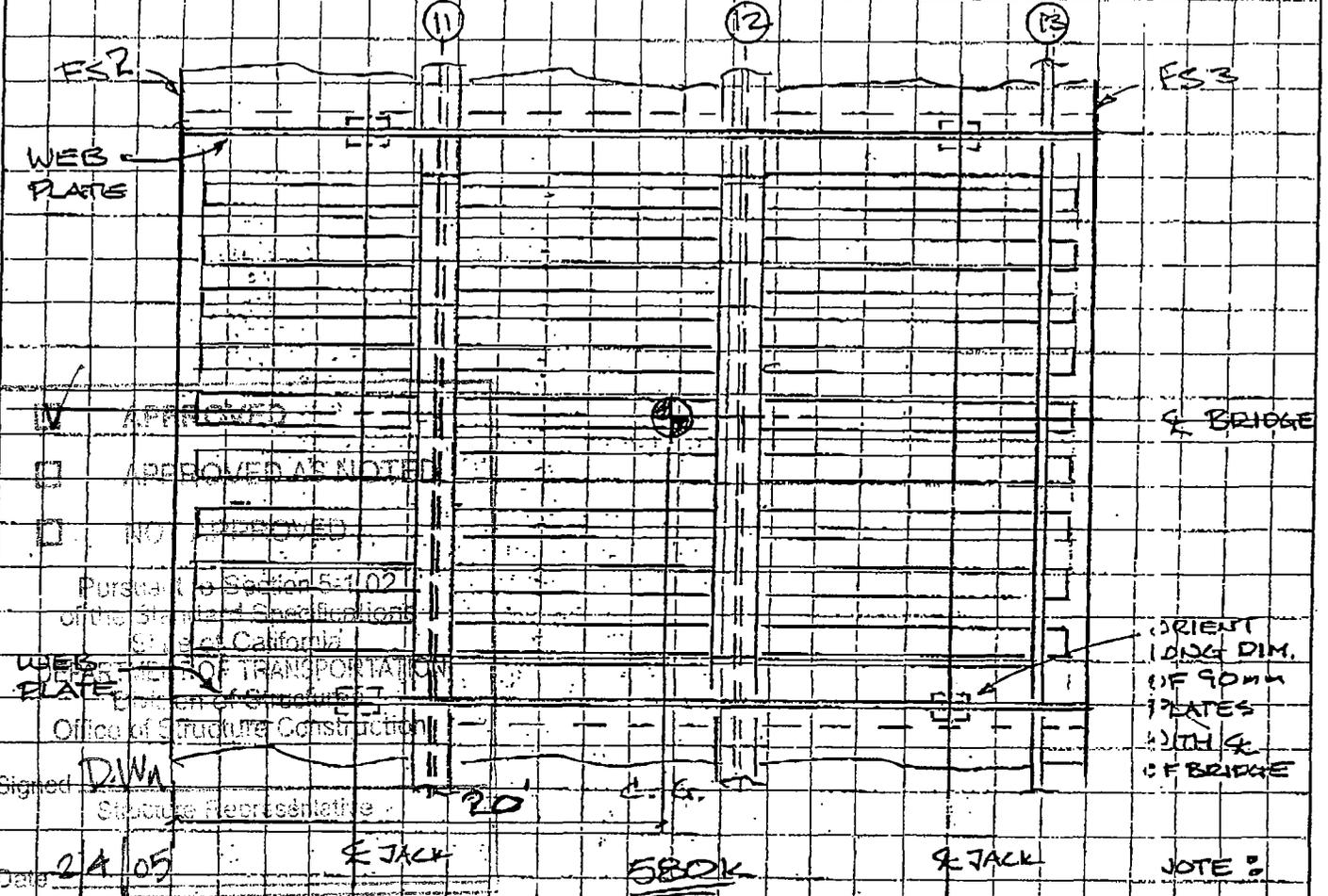
SMITH & MONROE & GRAY ENGINEERS, INC.

CIVIL & STRUCTURAL ENGINEERS
MATERIAL HANDLING & MECHANICAL

CLIENT USI
PROJECT SFORB-TRANSITION TUB
SUPPORT
BY AJMM DATE 12-1-04 FIG. V.
JOB NO. 04-209 SHEET 17 OF

EAST TUB

TUB SUB-SECTION - 3A - JACKING PLAN



APPROVED
 APPROVED AS NOTED
 NOT APPROVED
 Pursuant to Section 5-102
 of the State of California
 Department of Transportation
 Office of Structure Construction
 Signed DWA
 Structure Representative

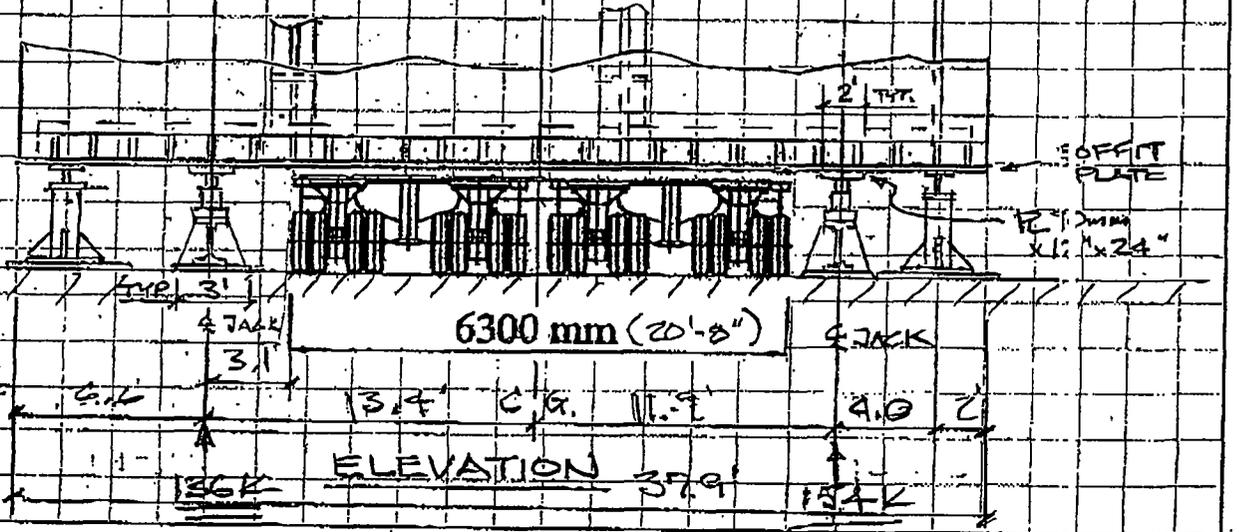
Date 24 05

5 JACK 580K 5 JACK

NOTE :

PLAN VIEW

PLACE JACKS
CENTERED
UNDER TUB
WEB PLATES



31.9

SMITH & MONROE & GRAY ENGINEERS, INC.

CIVIL & STRUCTURAL ENGINEERS
MATERIAL HANDLING & MECHANICAL

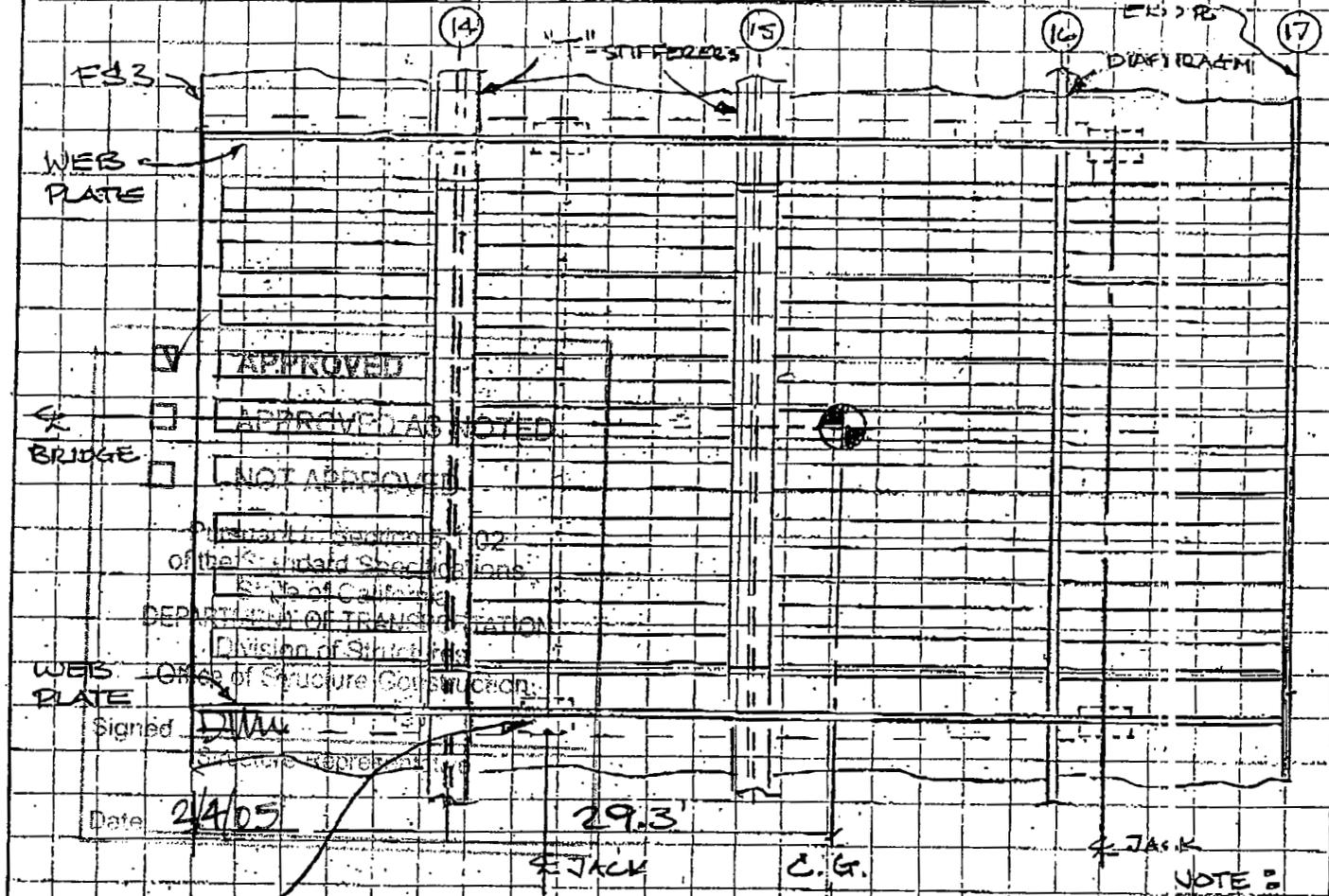
CLIENT USI
PROJECT SFORB-TRANSITION TUB
SUPPORT

BY AJMM DATE 12-1-04 R.V.

JOB NO. 04-209 SHEET 13 OF

WEST TUB

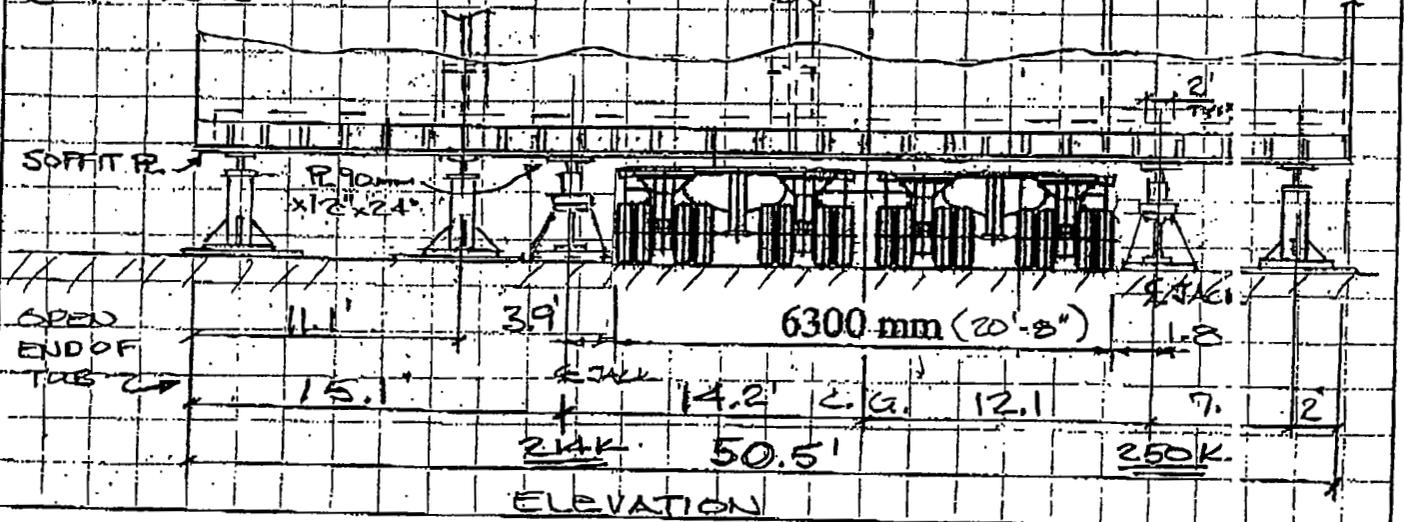
TUB SUB-SECTION - 4A - JACKING PLAN



ORIENT LONG
 DIM. OF 90mm
 PLATES WITH
 Q OF WEB PL.

PLAN VIEW

NOTE: PLACE JACKS CENTERED UNDER TUB WEB PLATES



SMITH & MONROE & GRAY ENGINEERS, INC.

CIVIL & STRUCTURAL ENGINEERS
MATERIAL HANDLING & MECHANICAL

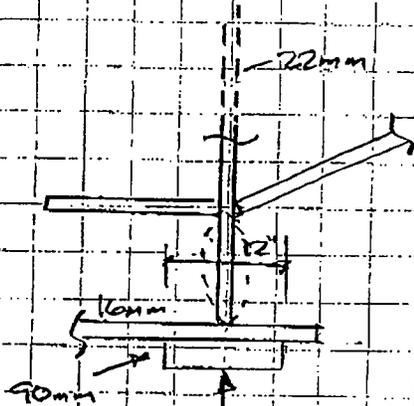
CLIENT _____

PROJECT _____

BY ADMM DATE 12-1-04 P. 3.

JOB NO. 04-209 SHEET 13 OF _____

CHECK TUB WEB @ JACK -



APPROVED 22mm (.87")

APPROVED NOT PLAN

NOT APPROVED

Permit of the State of California
Department of Transportation
Division of Structures
Office of Bridge Construction

Signed DMW
SOFFIT IR
16mm (.63")
Date 2/1/05

250K

90mm (.354")

CHECK WEB YIELDING - [AISC (K1-2)]

$$\frac{R}{t_w(N+5K)} < .66F_y = .66(50) = 33 \text{ ksi}$$

$$\frac{250}{.87(24+5(.63))} = 10.6 \text{ ksi} < 33 \text{ ksi} \quad \underline{\underline{OK}}$$

CHECK - [AISC K1-4]

ASSUME $d = 25.25"$

$$R_{ALLOW} = 67.5 t_w^2 \left[1 + 3 \left(\frac{N}{d} \right) \left(\frac{t_w}{t_f} \right)^{1.5} \right] \left(F_{yw} \left(\frac{t_w}{t_f} \right) \right)^{1/2}$$

$$= 67.5 (.87^2) \left[1 + 3 \left(\frac{24}{25.25} \right) \left(\frac{.87}{.63} \right)^{1.5} \right] \left(50 \left(\frac{.63}{.87} \right) \right)^{1/2}$$

$$= 51.09 [5.63] (6.02) = 1730 \text{ K} >> 250 \text{ K}$$

OK

SMITH & MONROE & GRAY ENGINEERS, INC.

CIVIL & STRUCTURAL ENGINEERS
MATERIAL HANDLING & MECHANICAL

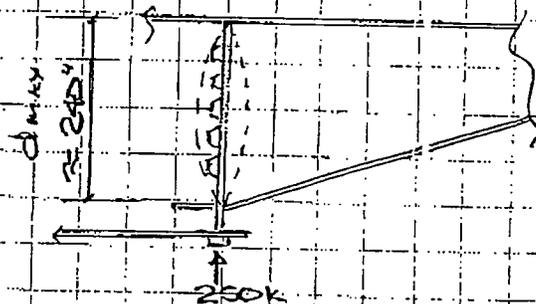
CLIENT _____

PROJECT _____

BY AJMM DATE 12-1-04 REV. _____

JOB NO. 04-209 SHEET 133 OF _____

CHECK FULL DEPTH OF WEB FOR OUT-OF-PLANE BUCKLING ABOVE WING SOFFIT PLATE -



EFFECTIVE LTH OF BEARING, USE $N = 24"$

[AISC K1.4]

$$\begin{aligned}
 R_{ALLOW} &= 67.5 t_w^2 \left[1 + 3 \left(\frac{N}{d} \right) \left(\frac{t_w}{t_f} \right)^{1.5} \right] \left(F_{yw} \left(\frac{t_f}{t_w} \right) \right)^{1/2} \\
 &= 67.5 (.87^2) \left[1 + 3 \left(\frac{24}{240} \right) \left(\frac{.87}{.63} \right)^{1.5} \right] \left(50 \left(\frac{.63}{.87} \right) \right)^{1/2} \\
 &= 51.09 [1.49] (6.02) = 457.3 K > 250 K \\
 &\quad \underline{\underline{OK}}
 \end{aligned}$$

- APPROVED
- APPROVED AS NOTED
- NOT APPROVED

Submittal to Section 5-1.02
of the Standard Specifications
State of California
DEPARTMENT OF TRANSPORTATION
Division of Structures
Office of Structure Construction

Signed D.W.
Structure Representative

Date: 2/4/05

SMITH & MONROE & GRAY ENGINEERS, INC.

CIVIL & STRUCTURAL ENGINEERS
MATERIAL HANDLING & MECHANICAL

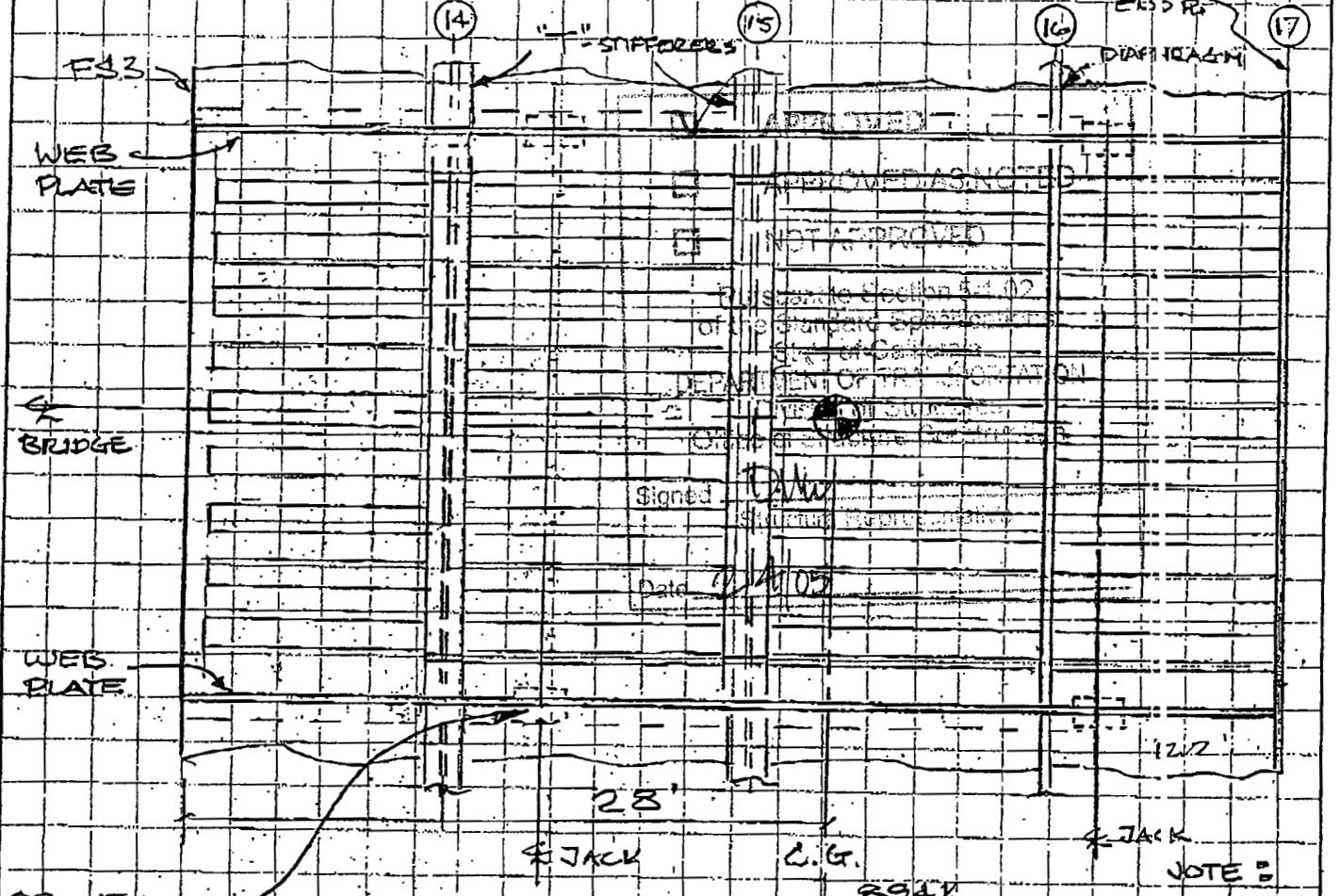
CLIENT USI
PROJECT SFORB-TRANSITION TUB
SUPPORT

BY AJMM DATE 12-1-04 REV.

JOB NO. 04-209 SHEET 1 OF

EAST TUB

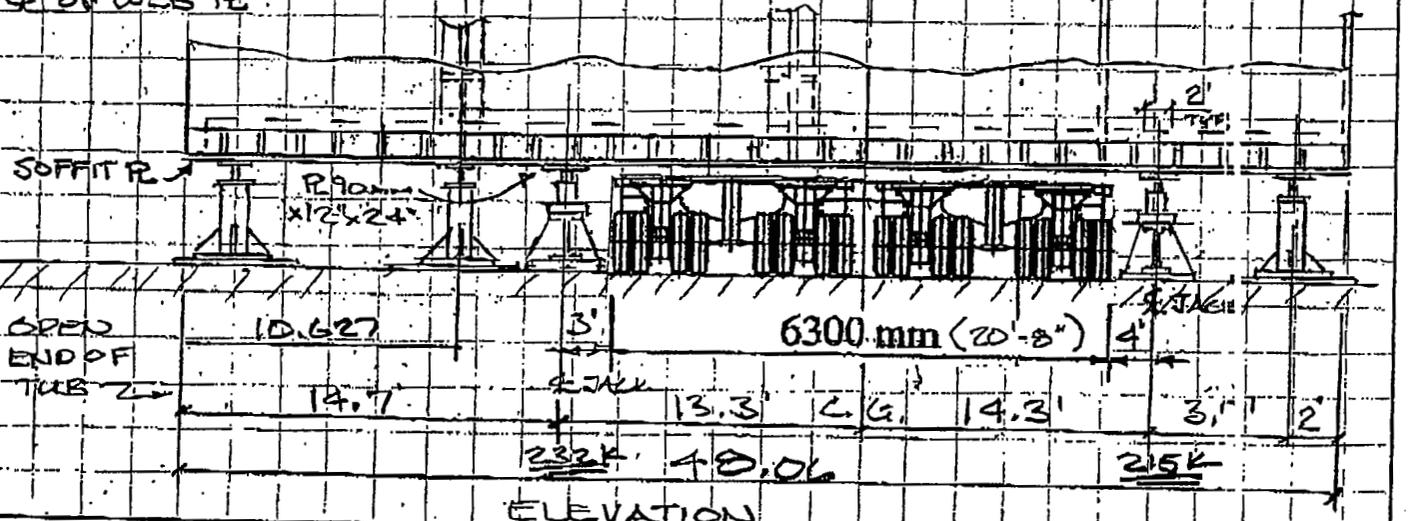
TUB SUB-SECTION - 9A - JACKING PLAN



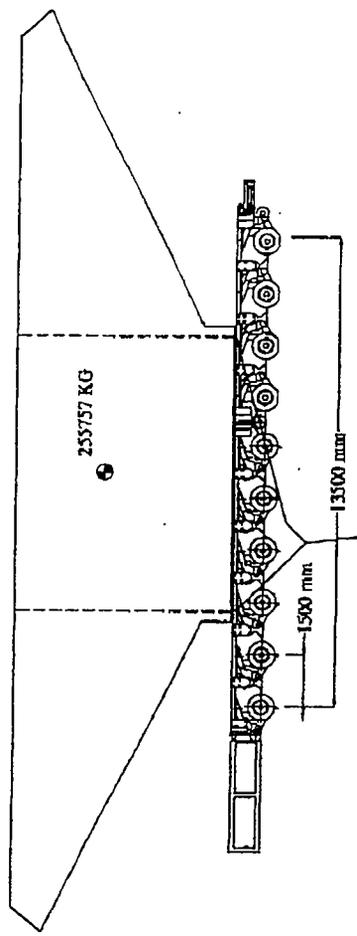
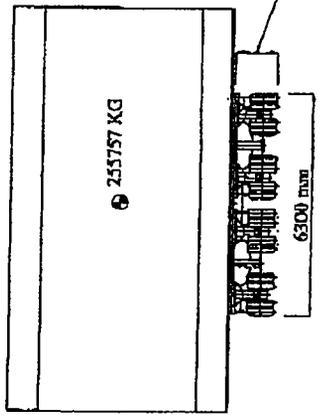
ORIENT LONG
DIM. OF 90MM
PLATES WITH
C OF WEB PL.

PLAN VIEW

JACK NOTE =
PLACE JACKS
CENTERED
UNDER TUB
WEB PLATES



ELEVATION



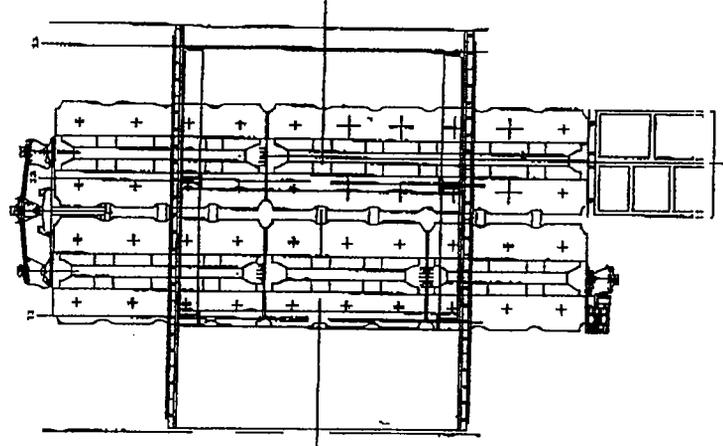
MAX. GROSS = 680,000 KG
TARE = 80,500 KG
MAX PAYLOAD = 599,500 KG
ACT. PAYLOAD = 255,757 KG

APPROVED
 APPROVED AS SHOWN
 NOT APPROVED

Pursuant to Section 5-1.02
of the Standard Specifications
State of California
DEPARTMENT OF TRANSPORTATION
Division of Structures
Office of Structural Engineering

Signed DNW
Structure Preparation

Date 2/4/05



NO.	DATE	BY	DESCR.	ISSUED	APPROVED

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SLAUGHTERNESSY

ST. HAY BRIDGE EAST SPAN
TRANSITION GIRDER SECTION E-A3
4FT 10L HAULING ARRANGEMENT
USI

SCALE: 1:250
ENGR. No. 000000
DWG. No. 000000
TG E-A3 4K10
SHEET 00 of 00
REV. 00 of 00

BLPH
5/2/05

DEPARTMENT OF TRANSPORTATION

SFOBB – Skyway Project
345 Burma Road
Oakland, CA 94607
Facsimile Number: (510) 622-5165



*Flex Your Power
Be Energy Efficient!*

April 27, 2005

KFM, a JV
220 Burma Road
Oakland, CA 94607

Contract: 04-012024
04-SF, Ala-80-13.9/14.3, 0.0/1.6
SFOBB Skyway Project
State Letter # 5.03.1-007614

Subject: Response to Submittal 3921R1 - 5A and 10A final assembly transport and support conditions

Dear Mr. Skoro,
Attention: Paul Hegarty,

The Engineer has reviewed the subject submittal consisting of supporting calculations for the supports and jacking conditions for Assembly 5A and 10A. The subject submittal is approved with comments per the conversation with the Contractor on 4/26/05. The State understands the Contractor is in the process of 1) providing supporting calculations to demonstrate 3-support scenarios are adequate for Assemblies 2A, 3A, 4A, 7A, 8A, and 9A, 2) determining the minimum number of supports necessary to support Assemblies 1A and 6A, and 3) calculating the maximum allowable deviation between the actual jacking locations and the specified support conditions.

Should you have any questions, please contact Patrick Lowry at 858-344-2712 or Dave Wu at 510-622-5104.

Sincerely,

A handwritten signature in cursive script that reads "David Wu".

David Wu
Senior Bridge Engineer

For: Mr. Douglas Coe
Resident Engineer

cc: P. Lowry, D. Coe, I. Khinsann, D. Wu, S. Abbas, B. Chew, V. Iyer, I. Kwong, D. Salladay, H. El-Natur

file: 5.03.1, 9.03.8

UNIVERSAL STRUCTURAL, INC.

USI

UNIVERSAL STRUCTURAL, INC.
SUB OF HARDER MECHANICAL

May 2, 2005

Kiewit / FCI / Manson, JV (KFM)
220 Burma Road
Oakland, CA 94607
Phone: (510) 419-0120
Fax: (510) 839-0666

Attention: Paul Hegarty

Reference: SFOBB Skyway Project
USI #23932 (LTR 117.050205)

Subject: Response to State Letter 7614 –
5A and 10A Final Assembly Support Conditions

Mr. Hegarty,

Universal Structural, Inc. (USI) is in receipt of Caltrans State Letter # 5.03.1-007614, "Supporting Calculations for A1, A6 Tub Moving Plans in Subassembly".

As requested, USI provides the following responses to Caltrans requests:

- (1) **Providing supporting calculations to demonstrate 3-support scenarios are adequate for Assemblies 2A, 3A, 4A, 7A, 8A, and 9A** – See attached Smith & Monroe & Grey (SMG) letter "YARD SUPPORT FOR TUB ASSEMBLY" dated April 29, 2006.
- (2) **Determining the minimum number of supports necessary to support assemblies 1A and 6A** – See attached SMG letter "YARD SUPPORT FOR TUB ASSEMBLY" dated April 29, 2006.
- (3) **Calculating the maximum allowable deviation between the actual jacking locations and the specified support conditions** – See attached SMG letters "TUB JACK /SUPPORT LOCATIONS" dated May 2, 2005 and "TEMPORARY SUPPORT AND TUB MOVING" Dated April 29, 2005.

If you have any questions or comments concerning this letter, please feel free to contact me at your earliest convenience at (360) 695-1261.

Sincerely,
Universal Structural, Inc.


Brad Young
Estimator/Project Manager

cc: Dave Williams, Ralph S., Keith S., Keith D., file



Category III

HARDER MECHANICAL CONTRACTORS





SMITH & MONROE & GRAY ENGINEERS, INC.
10700 S.W. BEAVERTON HWY. SUITE 210
BEAVERTON, OREGON 97005
PHONE: (503) 643-8595 FAX: (503) 643-8610
e-mail: smg@smgengr.com

M E M O

TO: Brad Young	COMPANY: Universal Structural, Inc. Fax: (360) 696-3590
FROM: Stephen Rinella	COMPANY: SMG
PROJECT: SFOBB SKYWAY TUB	DATE: April 29, 2005
RE: YARD SUPPORT FOR TUB ASSEMBLY	

As you requested, we reviewed some support and fit-up details of tub pieces in your yard for assembly. As outlined previously, tub pieces 1A, 2A, 3A and 4A are set on bunks in the yard for final trim and preparation before assembly. They are set on multiple supports, similar to support provided in the shop during fabrication. Pieces 2A, 3A and 4A are supported at four locations; piece 1A, the largest/heaviest piece, is supported on eight locations. The support locations are generally positioned about the centroid of the piece to provide equal distribution. If the supports are not shimmed properly and/or if settlement occurs due to soft sub-grade soils, some unequal support will occur. Generally the soil would depress in the higher loaded areas to redistribute the load, however there still may be some unequal distribution. We reviewed our calculations submitted previously including the piece weights and support reactions, tub web capacity near and away from a free edge. We reviewed pieces 2A, 3A and 4A for support at only three of the four supports and piece 1A for support at only six of the eight; in all cases the tub can safely maintain support without any overstress or web crippling conditions.

Let me know if you need anything else from me on the matter.



Exp 2/19/06



SMITH & MONROE & GRAY ENGINEERS, INC.

10700 S.W. BEAVERTON HWY. SUITE 210

BEAVERTON, OREGON 97005

PHONE (503) 643-8595

FAX: (503) 643-8610

e-mail: smg@smgengr.com

M E M O

TO: Brad Young**COMPANY:** Universal Structural, Inc.

Fax: (360) 696-3590

FROM: Stephen Rinella**COMPANY:** SMG**PROJECT:** SFOBB SKYWAY TUB**DATE:** May 2, 2005**RE:** TUB JACK/SUPPORT LOCATIONS

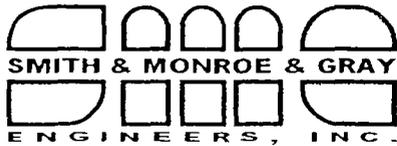
This is in response to Caltrans State Letter # 5.03.1-007614 regarding support for the tub during fabrication and assembly. Specifically item 3) of that report requests "maximum allowable deviation between the actual jacking locations and the specified support conditions." Last week, we forwarded to you, recommended jack, roller and support conditions before trim and final prep of each piece and then final assembly set-up. The jack and support locations generally were determined considering the center-of-mass of the piece assembly and web support capacity relative to transverse T-stiffeners, diaphragms and free ends.

Support and jack location deviation should be within two feet of the locations shown with no jack closer than 3 feet of a piece "free end." A "free end" is an end where there is no transverse T-stiffener or diaphragm between the jack and piece end. Jacks can be placed within a foot of a piece end that has a transverse T-stiffener or diaphragm at the end or between the jack and the end.

Let me know if you need anything else on the matter.



Exp 3/31/06



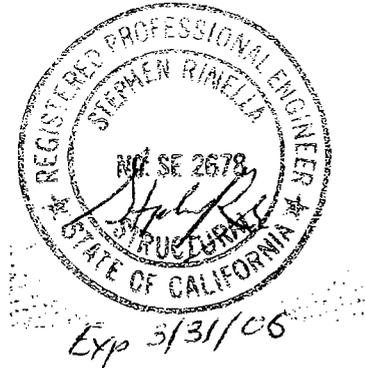
SMITH & MONROE & GRAY ENGINEERS, INC.
10700 S.W. BEAVERTON HWY. SUITE 210
BEAVERTON, OREGON 97005
PHONE: (503) 643-8595 FAX: (503) 643-8610
e-mail: smg@smgengr.com

M E M O

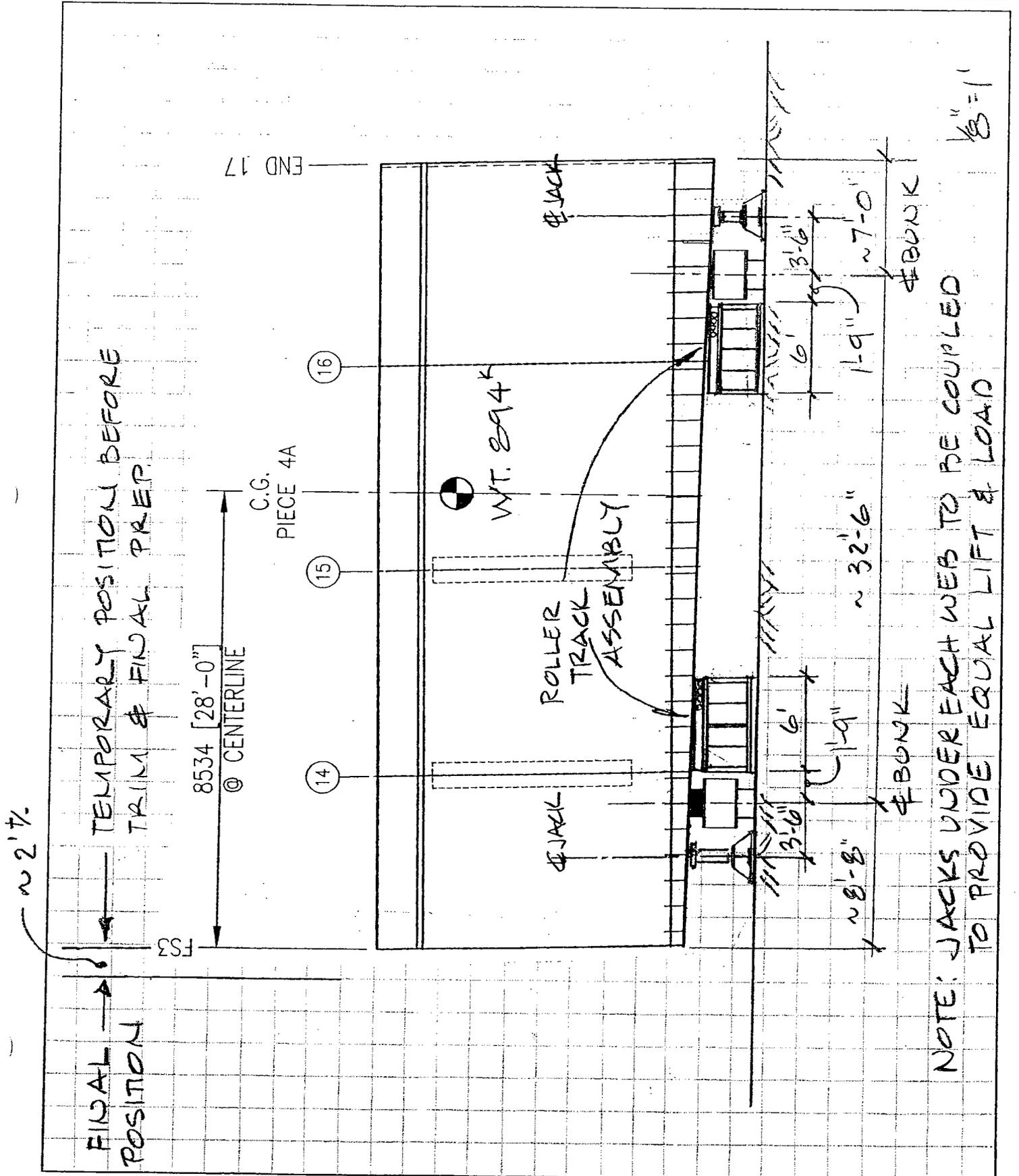
TO: Brad Young	COMPANY: Universal Structural, Inc. Fax: (360) 696-3590
FROM: Stephen Rinella	COMPANY: SMG
PROJECT: SFOBB SKYWAY TUB	DATE: April 29, 2005
RE: TEMPORARY SUPPORT AND TUB MOVING	

As you requested, we reviewed some support and fit-up details of tub pieces in your yard for assembly. We reviewed your plan to temporarily support the tub pieces about 2 feet from final position then jack and roll to final position after trim and prep. Attached are sketches showing recommended jack and roller assembly locations to assure the tubs are safely supported before final set. Notice the two or three jacks under a common web must be hydraulically coupled/synchronized to provide equal load and lift.

Let me know if you need anything else on the matter.

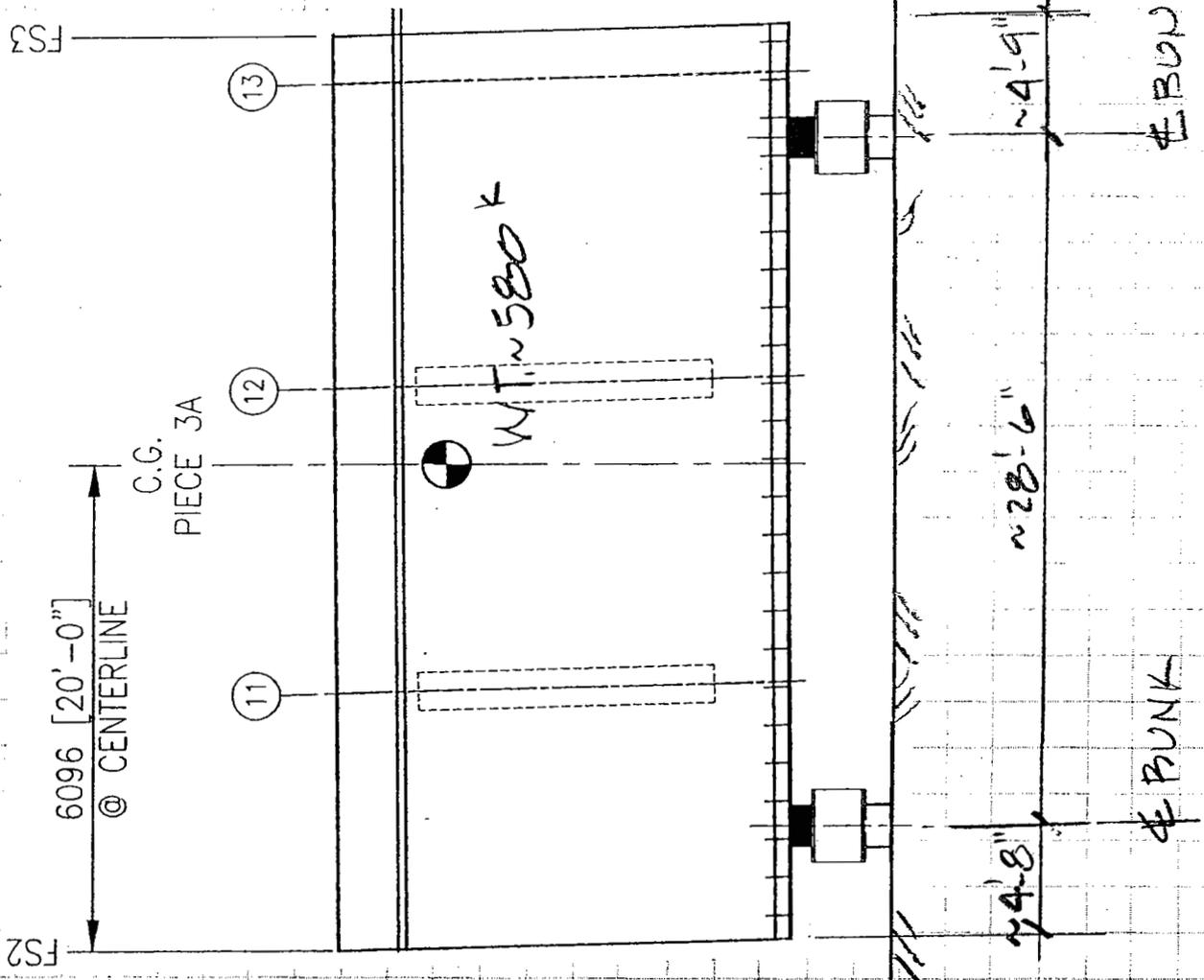


4A/ BEFORE MOVE

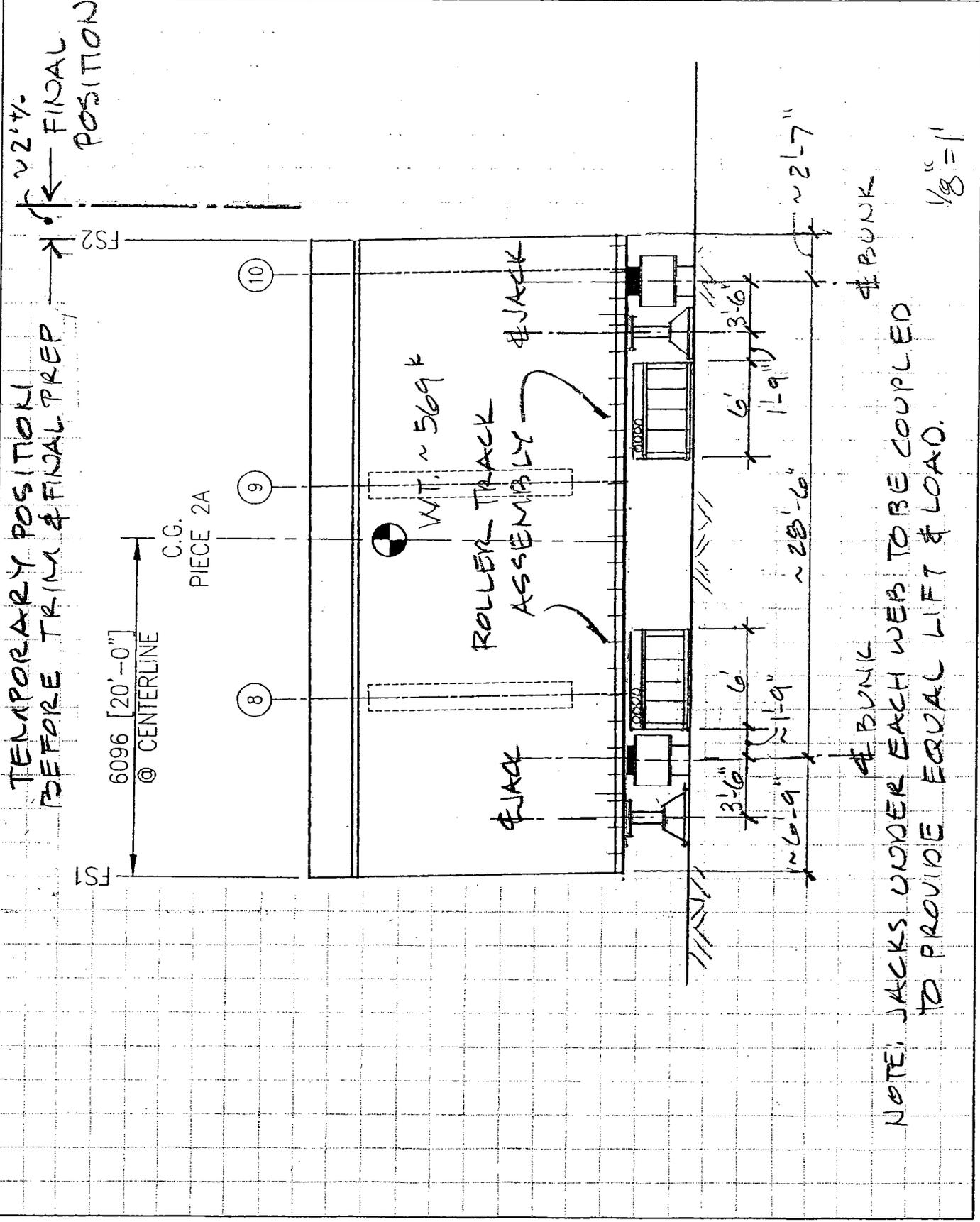


3A

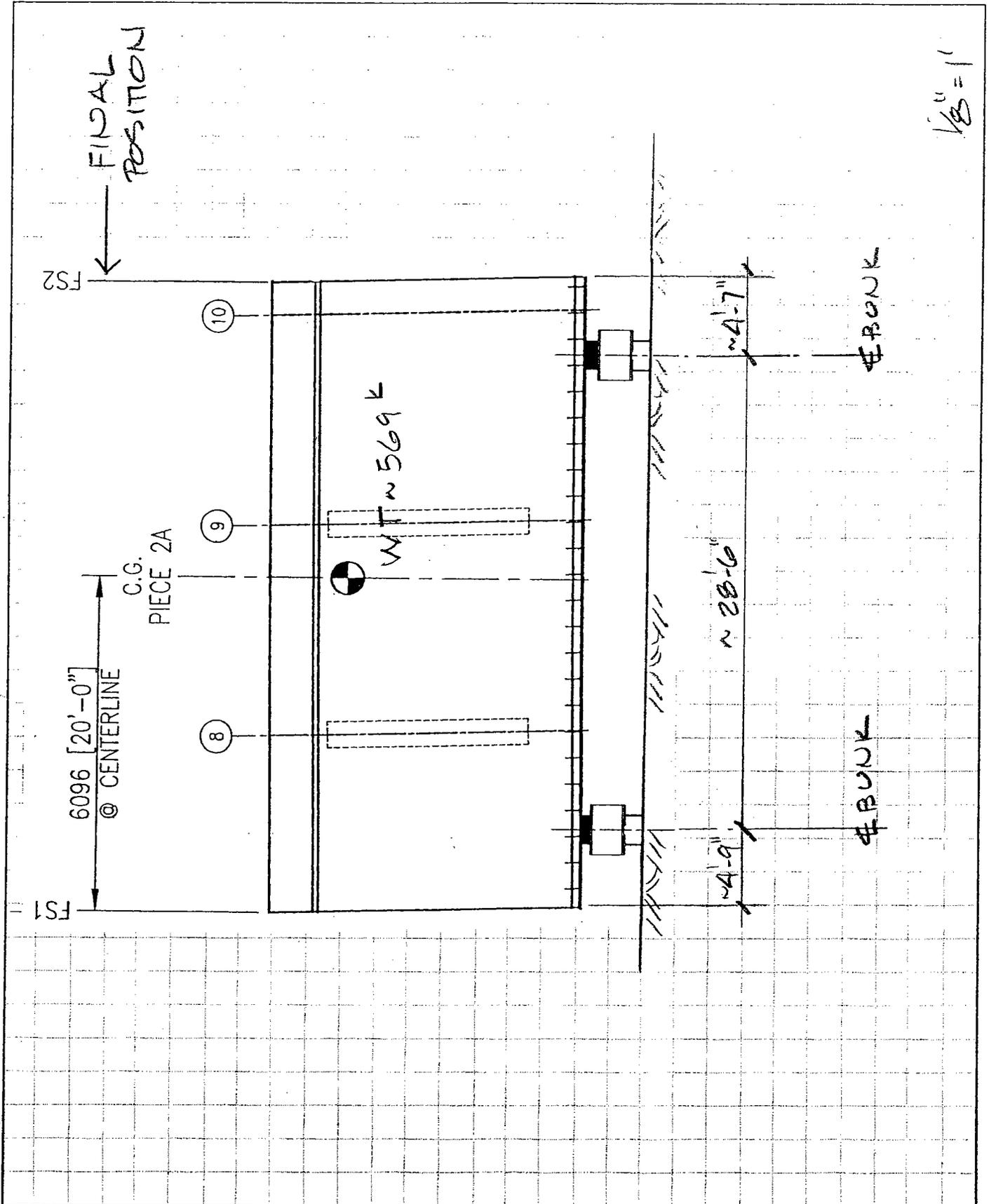
NOTE: PIECE DOES NOT MOVE



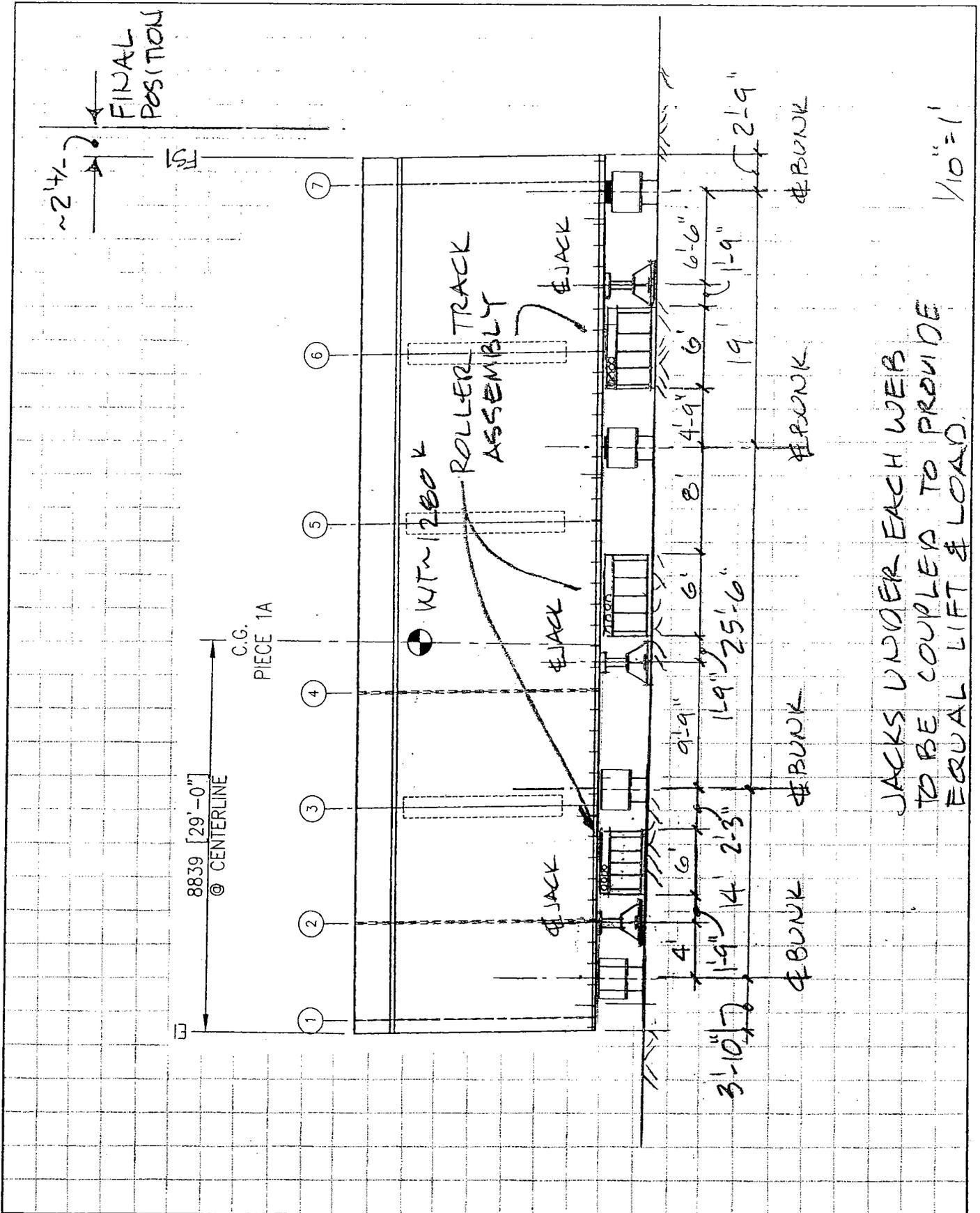
2A / BEFORE MOVE



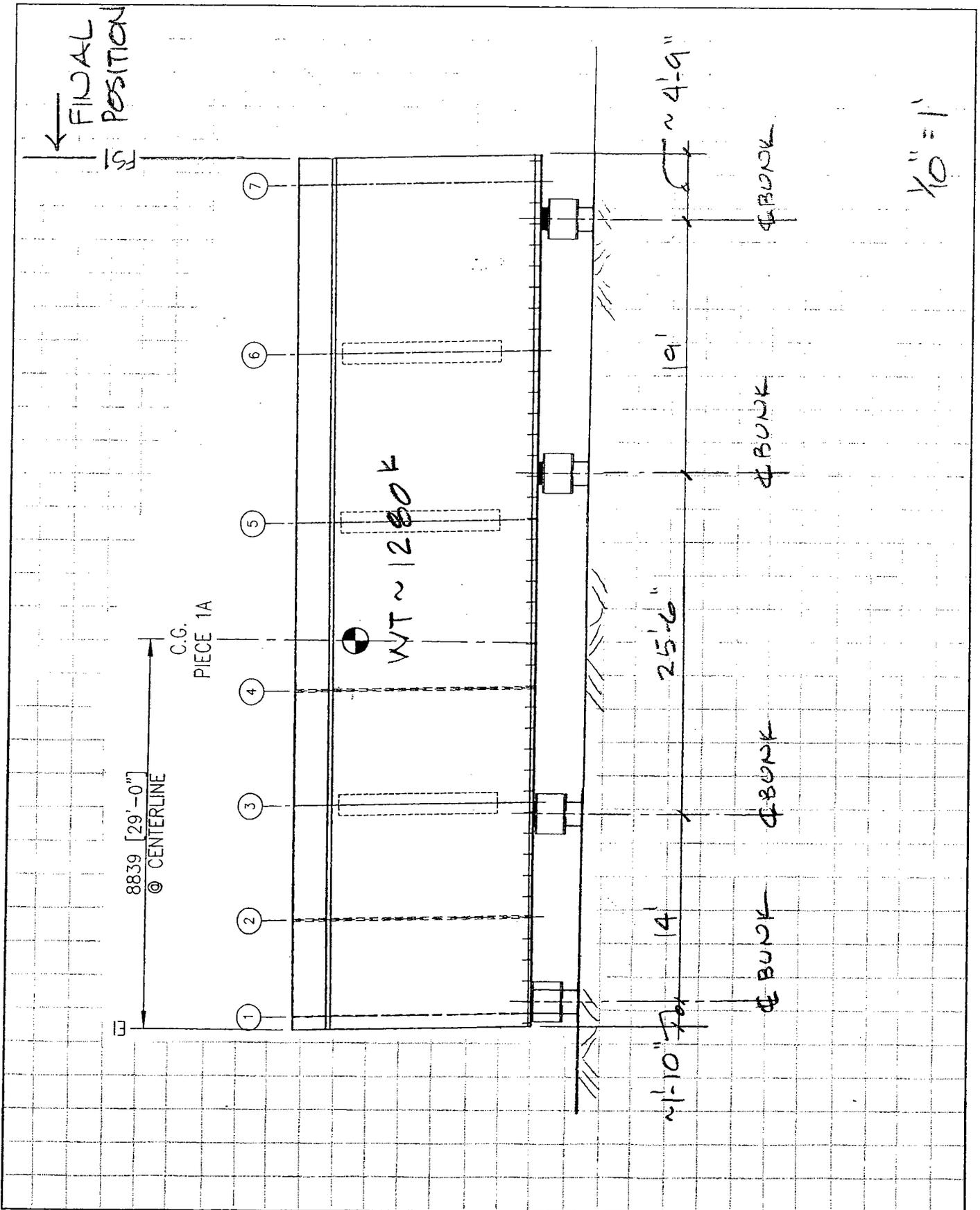
2A/AFTER MOVE



1A / BEFORE MOVE



1A/AFTER MOVE



DEPARTMENT OF TRANSPORTATION

SFOBB – Skyway Project
345 Burma Road
Oakland, CA 94607
Facsimile Number: (510) 622-5165



*Flex Your Power
Be Energy Efficient!*

June 23, 2005

KFM, a JV
220 Burma Road
Oakland, CA 94607

Contract: 04-012024
04-SF, Ala-80-13.9/14.3, 0.0/1.6
SFOBB Skyway Project
State Letter # 5.03.1-008110

Subject: Response to kfm-sub-004291r01, kfm-sub-004410r00, kfm-sub-004412r00, kfm-sub-004492r00, kfm-sub-004493r00, kfm-sub-004494r00, kfm-sub-004495r00, kfm-sub-004496r00, kfm-sub-004497r00, kfm-sub-004498r00, kfm-sub-004499r00, kfm-sub-004528r00

Dear Mr. Skoro,
Attention: Mr. Rich Bienek,

The Engineer has reviewed the following submittals and takes no exceptions:

- kfm-sub-004291r01: USI Closing Documents for NCR 112 (METS 97)
- kfm-sub-004410r00: Close Out Documents for USI NCR 119 (METS 103)
- kfm-sub-004412r00: Close Out Documents for USI NCR 121 (METS 105)
- kfm-sub-004492r00: USI Documents Clearing KFM NCR 115 (METS NCR 100)
- kfm-sub-004493r00: USI Documents Clearing KFM NCR 125 (METS NCR 107)
- kfm-sub-004494r00: USI Documents Clearing KFM NCR 127 (METS NCR 111)
- kfm-sub-004495r00: USI Documents Clearing KFM NCR 129 (METS NCR 116)
- kfm-sub-004496r00: USI Documents Clearing KFM NCR 130 (METS NCR 117)
- kfm-sub-004497r00: USI Documents Clearing KFM NCR 128 (METS NCR 115)
- kfm-sub-004498r00: USI Documents Clearing KFM NCR 117 (METS NCR 102)
- kfm-sub-004499r00: USI Documents Clearing KFM NCR 122 (METS NCR 106)
- kfm-sub-004528r00: USI Documents Clearing KFM NCR 114 (METS NCR 99)

Should you have any questions, please contact David Wu at (510) 622-5104 or Patrick Lowry at (858) 344-2712.

Sincerely,

<<< ORIGINAL SIGNED >>>

David Wu
Senior Bridge Engineer

For: Mr. Douglas Coe
Resident Engineer

cc: D. Coe, I. Khinsann, V. Iyer, D. Wu, S. Abbas, B. Chew, H. El-Natur, P. Lowry, I. Kwong, D. Salladay
file: 5.03.1, 9.06.8