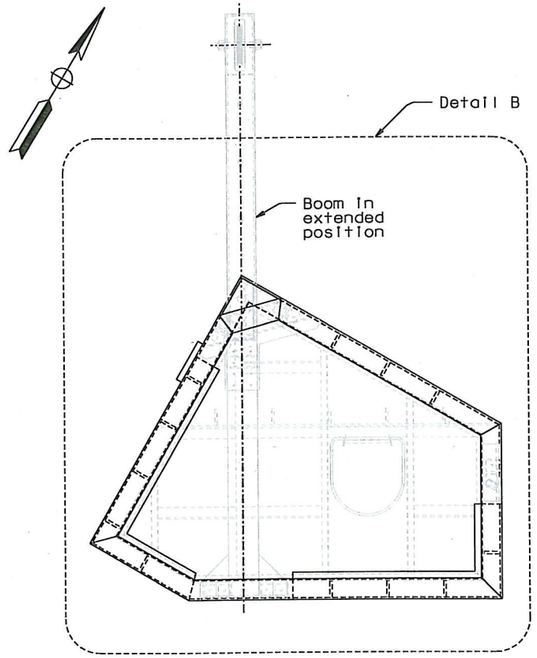
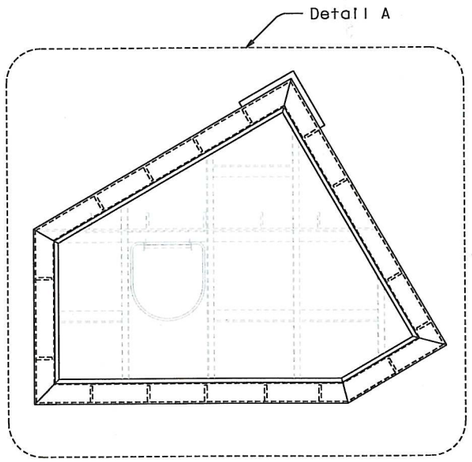
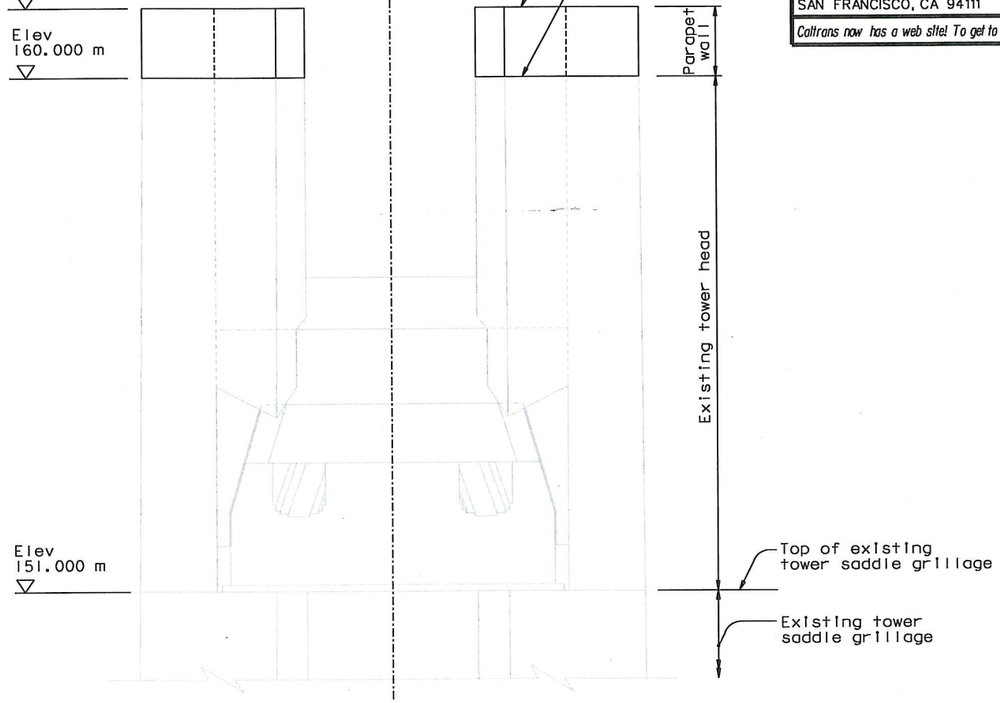
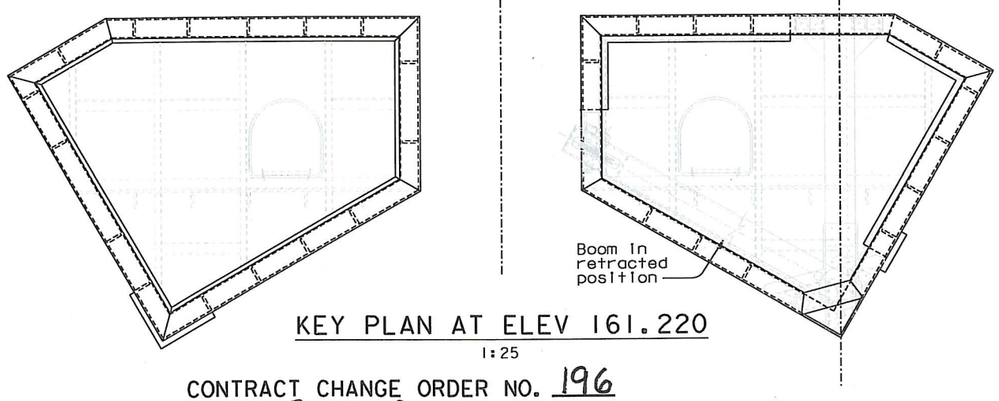






ELEVATION (Outrigger not shown for clarity)
1:50



KEY PLAN AT ELEV 161.220
1:25

NOTES:

1. For Detail A, see "Parapet Wall At Tower Head Details No. 2" sheet.
2. For Detail B, see "Parapet Wall at Tower Head Details No. 4" sheet.
3. The Contractor shall verify all field dimensions before ordering materials or fabrication.
4. All bolts shall be ASTM 325M galvanized UNO.
5. All steel shall be ASTM A709M Grade 345.
6. At the Contractor's option, shop weld may be used in lieu of field weld.

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80	13.2/13.9	800S5	1204

REGISTERED ENGINEER - CIVIL
Marwan N. Nader No. C 054426 Exp. 12/31/11 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA
05-11-11
PLANS APPROVAL DATE

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T.Y. LIN / MOFFATT & NICHOL
825 BATTERY STREET
SAN FRANCISCO, CA 94111

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CONTRACT CHANGE ORDER NO. 196
SHEET 3 OF 8

REQUESTS FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

MARK	DATE	REVISIONS	BY	CH'D	CCO#
0	05/11/11	PARAPET WALL AT TOWER HEAD	NV	MN	196

R. Vallzadeh/V. Toan/Y. L./W. L./F. C.
DESIGN OVERSIGHT
SIGN OFF DATE 05/11/11

DESIGN	BY N. Vo	CHECKED	M. Nader
DETAILS	BY N. Vo	CHECKED	A. Baumberger
QUANTITIES	BY N. Vo	CHECKED	J. Duxbury

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

CU 04
EA 0120F1

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

PARAPET WALL AT TOWER HEAD DETAILS NO. 1

DISREGARD PRINTS BEARING EARLIER REVISION DATES →
REVISION DATES (PRELIMINARY STAGE ONLY): 05/11/11
SHEET 383S5 OF

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

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DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80	13.2/13.9	800S6	1204

REGISTERED ENGINEER - CIVIL

05-11-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Marwan N. Nader
No. C 054426
Exp. 12/31/11
CIVIL
STATE OF CALIFORNIA

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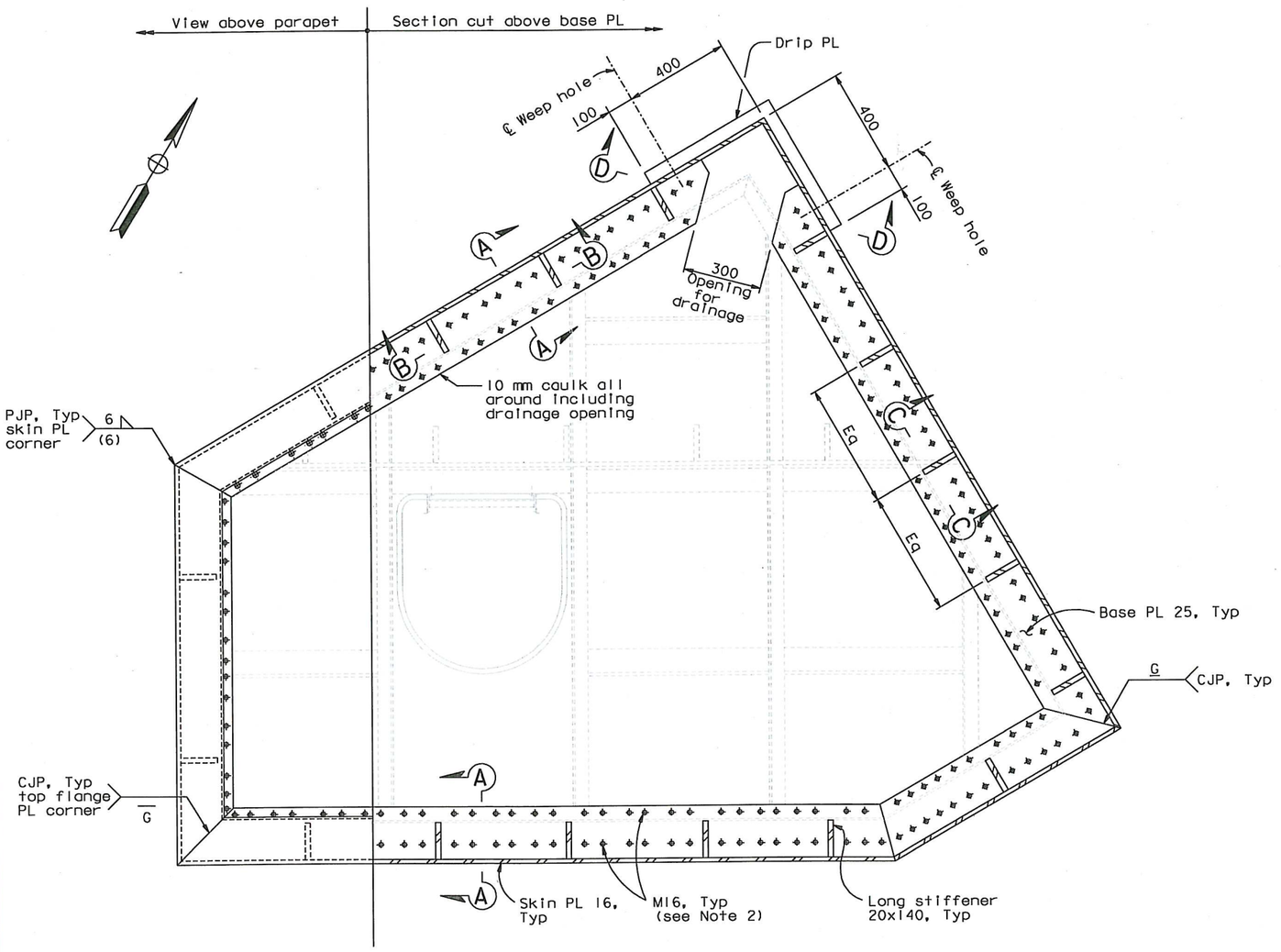

DETAIL A
1:10

NOTES:

1. For Sections A-A, B-B, C-C and D-D, see "Parapet Wall At Tower Head Details No.3" sheet.
2. At the Contractor's option, 5/8 Inch Dia A325 HS bolts may be used In lieu of MI6 A325M bolts.

CONTRACT CHANGE ORDER NO. 196
SHEET 4 OF 8

REQUESTS FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

MARK	DATE	REVISIONS	BY	CH'D	CCO#
0	05/11/11	PARAPET WALL AT TOWER HEAD	NV	MN	196

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
Ryan Valizadeh / Vong P. Toan / Y. Liu
SIGN OFF DATE 05/11/11

Rev. Date: 5-18-98

	BY	CHECKED
DESIGN	N. Vo	M. Nader
DETAILS	N. Vo	A. Baumberger
QUANTITIES	N. Vo	J. Duxbury

PREPARED FOR THE STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY): 05/11/11

SHEET 383S6 OF

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

PARAPET WALL AT TOWER HEAD DETAILS NO. 2

FILE => I:\bb\04-012001\sas\contract plans and cco\cco\cco#196\2-update 05-11-11\dgn\agtdd02.dgn

100 % PS&E
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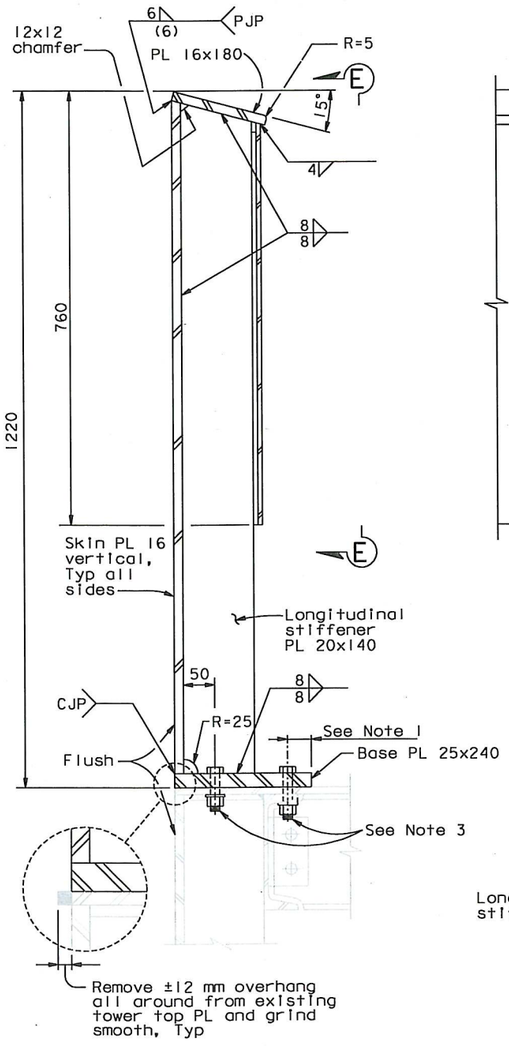
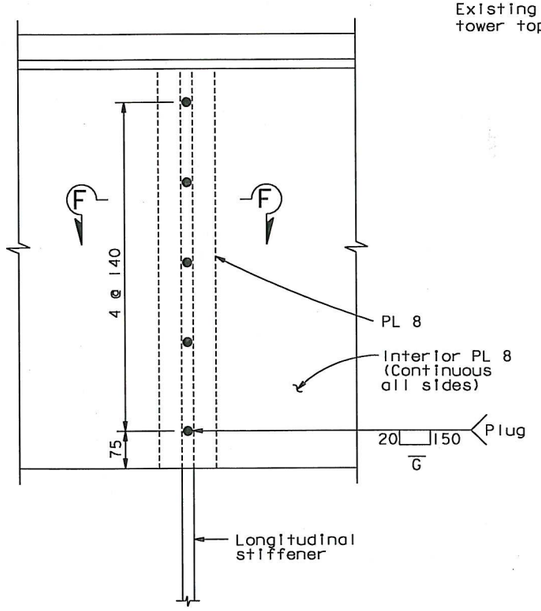
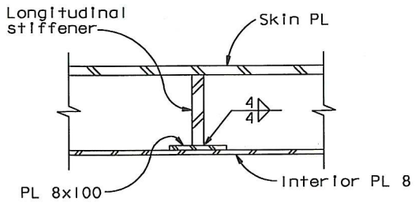


SECTION A-A
1:5



VIEW E-E
1:5



SECTION F-F
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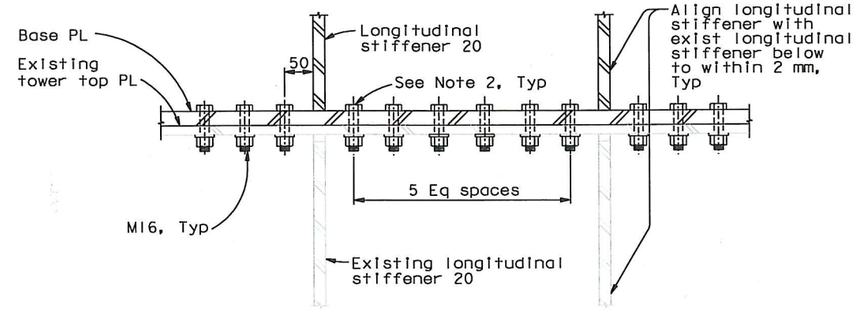
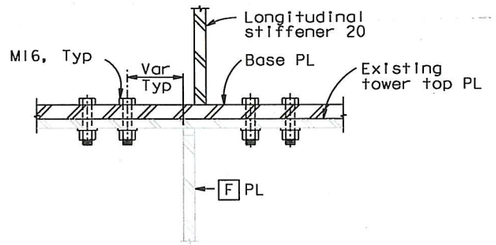
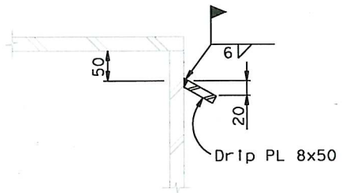


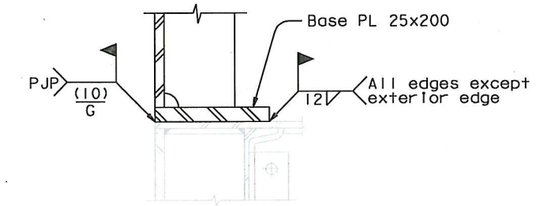
SECTION B-B (Typical at existing longitudinal stiffeners)
1:5



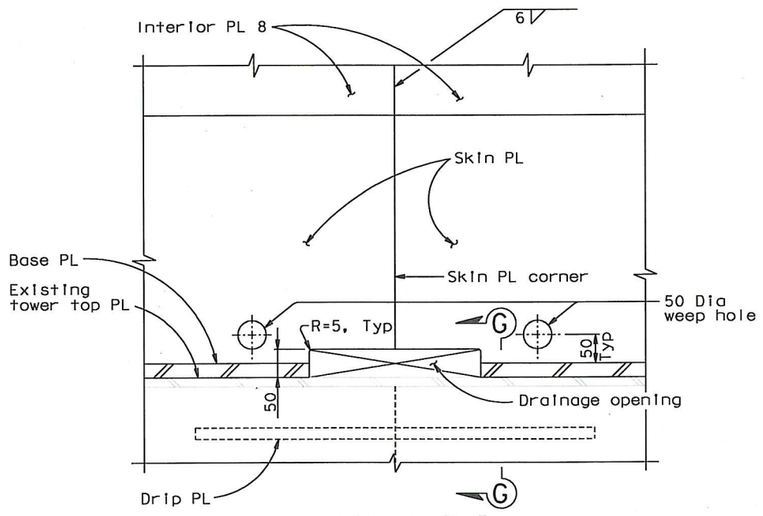
SECTION C-C (Typical at existing F PL)
1:5



SECTION G-G
1:5



WELDED BASE PLATE DETAIL
1:5



SECTION D-D
1:5

NOTES:

1. Field verify location of channel top flange. Holes to be match-drilled through base PL, existing tower top PL and existing channel top flange.
2. Bolts shall be oriented with bolt head at the top for base PL.
3. At the Contractor's option, base PL may be welded in lieu of bolting. See "Welded Base Plate Detail". 10 mm caulk is not required for welded option.

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80	13.2/13.9	800S7	1204

REGISTERED ENGINEER - CIVIL
05-11-11
PLANS APPROVAL DATE
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CONTRACT CHANGE ORDER NO. 196
SHEET 5 OF 8

REQUESTS FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
		REVISIONS			
1	05/11/11	PARAPET WALL AT TOWER HEAD	NV	MN	196

R. Vallzadeh/V. Toan/Y. L. /W. L. /F. C.
DESIGN OVERSIGHT
SIGN OFF DATE 05/11/11

DESIGN BY N. Vo — CHECKED M. Nader
DETAILS BY N. Vo — CHECKED A. Baumberger
QUANTITIES BY N. Vo — CHECKED J. Duxbury

PREPARED FOR THE STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE (SUPERSTRUCTURE & TOWER)
PARAPET WALL AT TOWER HEAD DETAILS NO. 3

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY): 05/11/11

SHEET 383S7 OF

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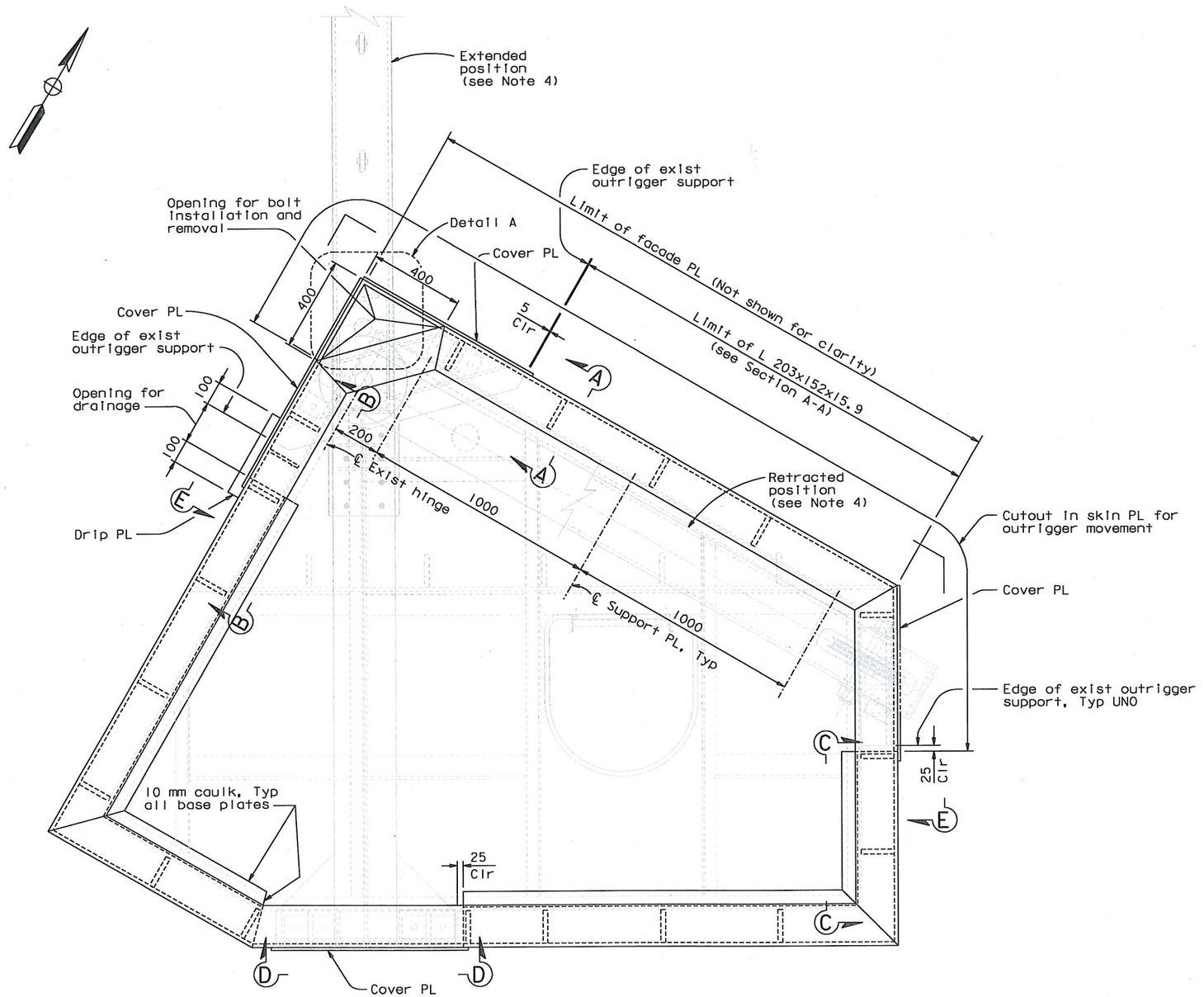

DETAIL B
1:10

NOTES:

1. For typical section and typical connection to existing tower head, see details for observation deck without outrigger on "Parapet Wall At Tower Head Details No. 3" sheet.
2. For Sections A-A, B-B & C-C and Detail A, see "Parapet Wall At Tower Head Details No. 5" sheet.
3. For Views D-D and E-E, see "Parapet Wall At Tower Head Details No. 6" sheet.
4. For outrigger beam details, see "Tower Access Details No. 16A" thru "Tower Access Details No. 16D" sheets.

CONTRACT CHANGE ORDER NO. 196
SHEET 6 OF 8

REQUESTS FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE

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DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80	13.2/13.9	800S8	1204

REGISTERED ENGINEER - CIVIL
Marwan N. Nader No. C 054426 Exp. 12/31/11 CIVIL
REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA
05-11-11
PLANS APPROVAL DATE

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0	05/11/11	PARAPET WALL AT TOWER HEAD	NV	MN	196

DESIGN OVERSIGHT: R. Vallzadeh/V. Toan/Y.L./W.L./F.C.
SIGN OFF DATE 05/11/11

DESIGN BY N. Vo — CHECKED M. Nader
DETAILS BY N. Vo — CHECKED A. Baumberger
QUANTITIES BY N. Vo — CHECKED J. Duxbury

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)
PARAPET WALL AT TOWER HEAD DETAILS NO. 4

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY): 05/11/11

SHEET 383S8 OF

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DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80	13.2/13.9	800S9	1204

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05-11-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Marwan N. Nader — No. C 054426 — Exp. 12/31/11 — CIVIL — STATE OF CALIFORNIA

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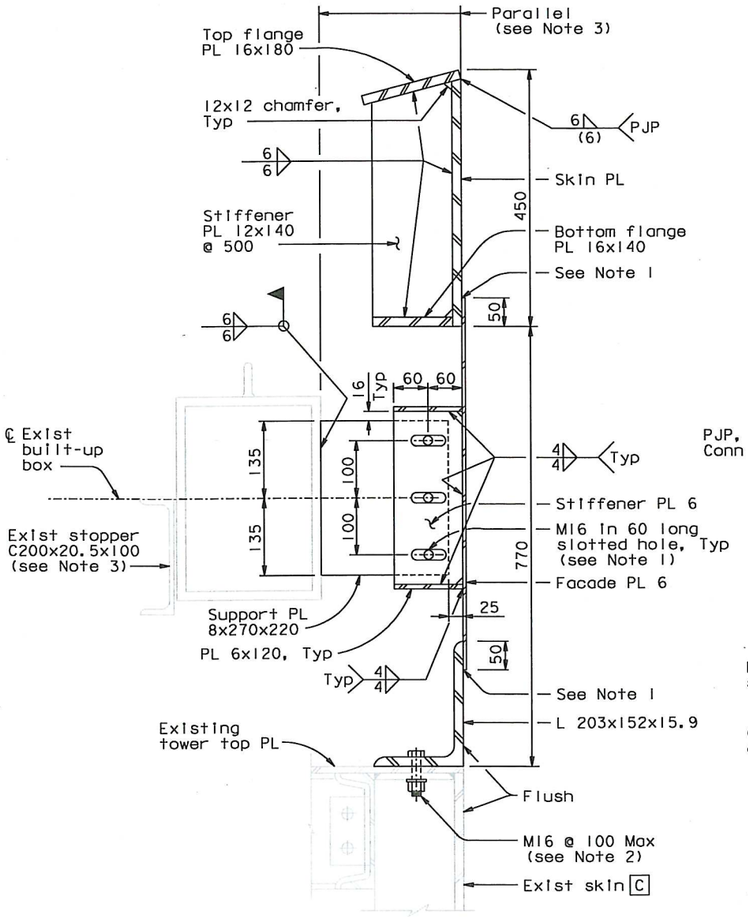
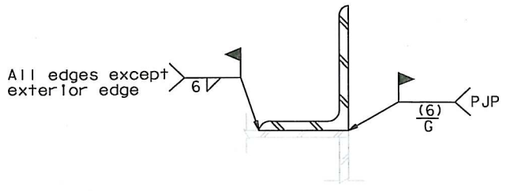
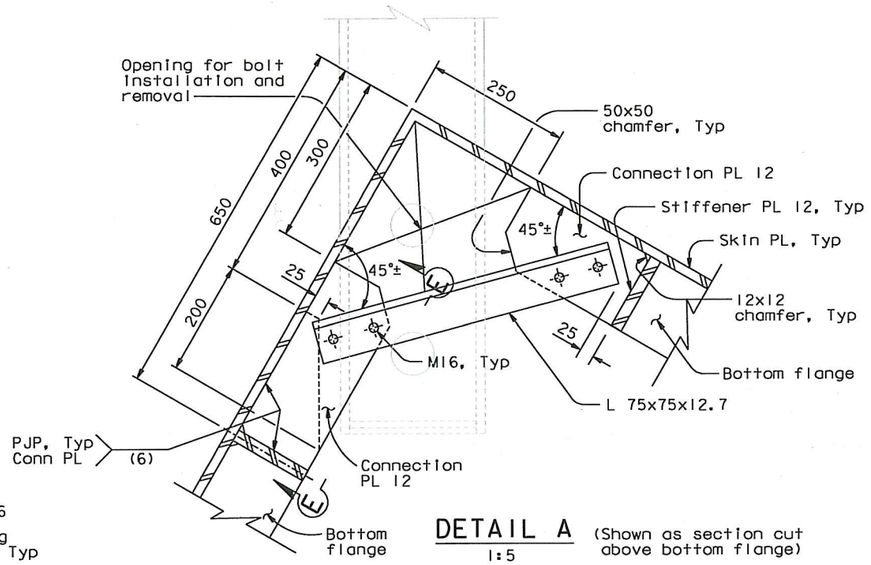


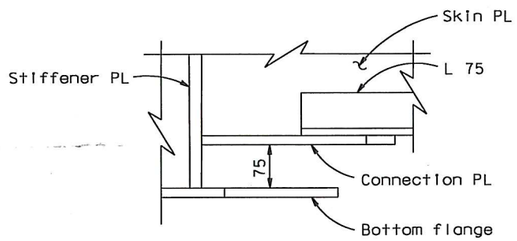
SECTION A-A
1:5



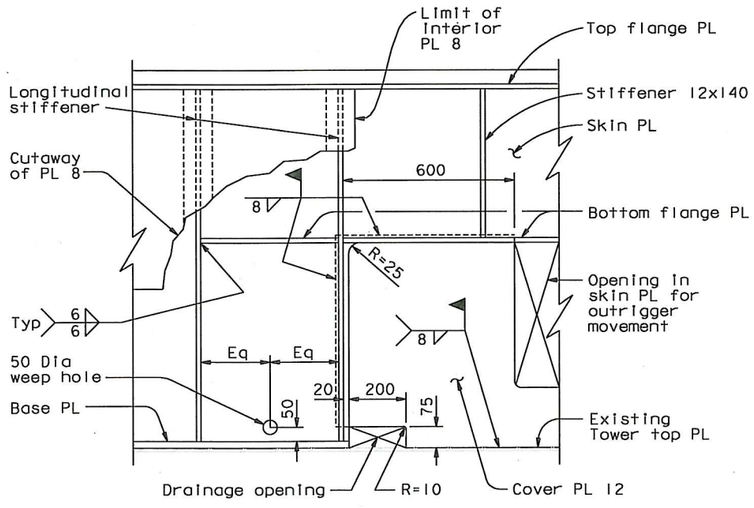
WELDED ANGLE DETAIL
1:5



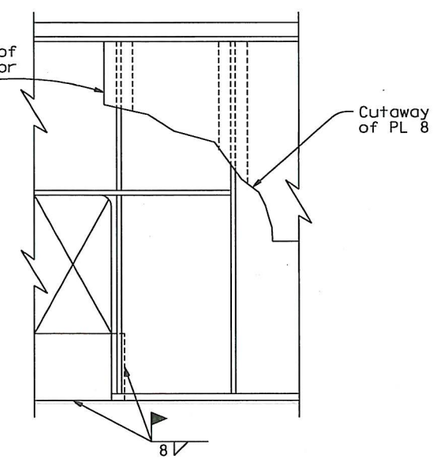
DETAIL A
1:5 (Shown as section cut above bottom flange)



SECTION E-E
1:5



SECTION B-B
1:10



SECTION C-C
1:10 (For details not shown, see Section B-B)

NOTES:

1. Adjust to achieve tight-fit of facade plate in retracted position.
2. At the Contractor's option, angle may be welded in lieu of bolting. See "Welded Angle Detail".
3. Reposition stopper as required such that outrigger beam in the retracted position is parallel to the skin PL.

CONTRACT CHANGE ORDER NO. 196
SHEET 7 OF 8

REQUESTS FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
6	05/11/11	PARAPET WALL AT TOWER HEAD	NV	MN	196

REVISIONS

R. Vallzadeh/V. Toan/Y. L./W. L./F. C.
DESIGN OVERSIGHT
SIGN OFF DATE 05/11/11

DESIGN	BY N. Vo	CHECKED M. Nader
DETAILS	BY N. Vo	CHECKED A. Baumberger
QUANTITIES	BY N. Vo	CHECKED J. Duxbury

PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

PARAPET WALL AT TOWER HEAD DETAILS NO. 5

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY): 05/11/11

SHEET 383S9 OF

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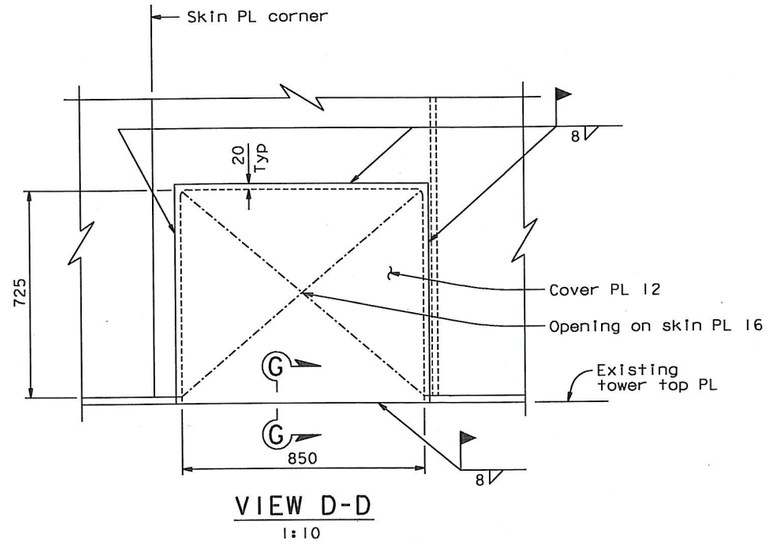
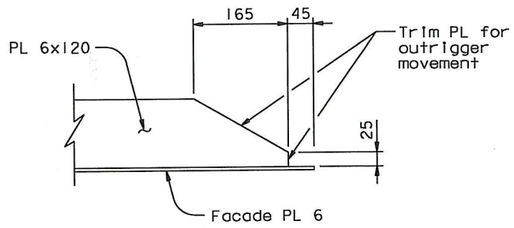
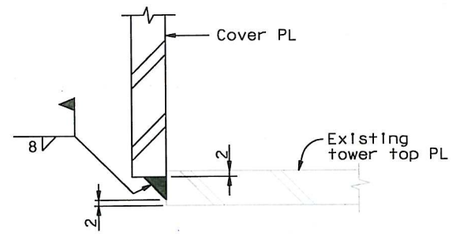


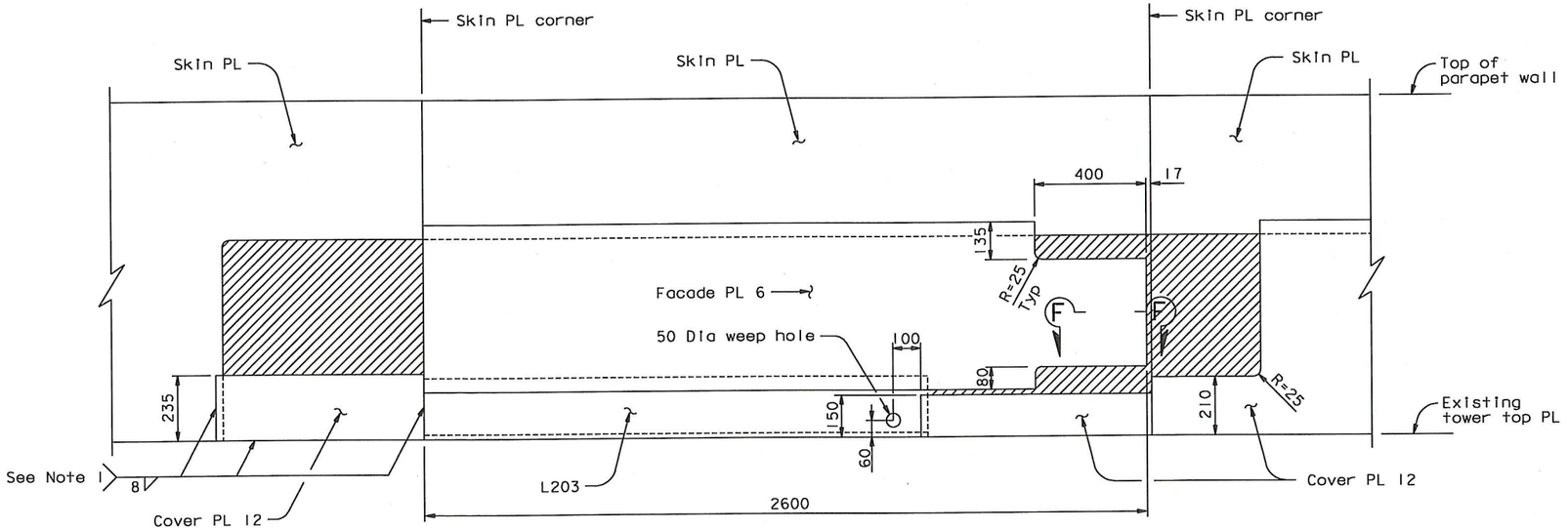
VIEW D-D
1:10



SECTION F-F
1:5



SECTION G-G (Typical for all cover plates)
1:1



VIEW E-E (DEVELOPED) (Not all plates shown for clarity)
1:10

LEGEND:

- Opening for outrigger movement

NOTES:

1. For cover plates, any edge that is in contact with another steel element shall be fillet welded.

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80	13.2/13.9	800S10	1204

REGISTERED ENGINEER - CIVIL

05-11-11
PLANS APPROVAL DATE

Marwan N. Nader
No. C 054426
Exp. 12/31/11
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

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CONTRACT CHANGE ORDER NO. 196
SHEET 8 OF 8

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MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
0	05/11/11	PARAPET WALL AT TOWER HEAD	NV	MN	196

REVISIONS

R. Vallzadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 05/11/11

	BY	CHECKED
DESIGN	N. Vo	M. Nader
DETAILS	N. Vo	A. Baumberger
QUANTITIES	N. Vo	J. Duxbury

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

PARAPET WALL AT TOWER HEAD DETAILS NO. 6

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY)										SHEET	OF
05/11/11										383S10	

Rev. Date: 5-18-98

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