

**GENERAL DEMOLITION NOTES**



- Design Specifications:  
AASHTO " THE MANUAL FOR BRIDGE EVALUATION, 2011" and these General Demolition Notes. The analysis and demolition sequence of the existing bridge shall be based on Allowable Stress Design (ASD) and operating level only.
- Adequate strength and stability of the structure or partially demolished structure shall be maintained throughout the demolition process. Depending on demolition sequence and equipment used, existing structure members and connections may require strengthening and/or supplemental bracing.

**INDEX TO PLANS  
SHEET NO. TITLE**

- General Plan
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- Deck Contours (East Bound)
- Deck Contours (West Bound)
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- Span Layout No. 2
- Span Layout No. 3
- Span Layout No. 4
- Span Layout No. 5
- Typical Section
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- Span Details No. 2
- Bent Details No. 1
- Bent Details No. 2
- Bent Details No. 3
- Erection Tower Details (Type A)
- Erection Tower Details (Type B)

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	12.6/13.9	508	821

*M. J. Cullen*  
REGISTERED CIVIL ENGINEER DATE 11-09-11

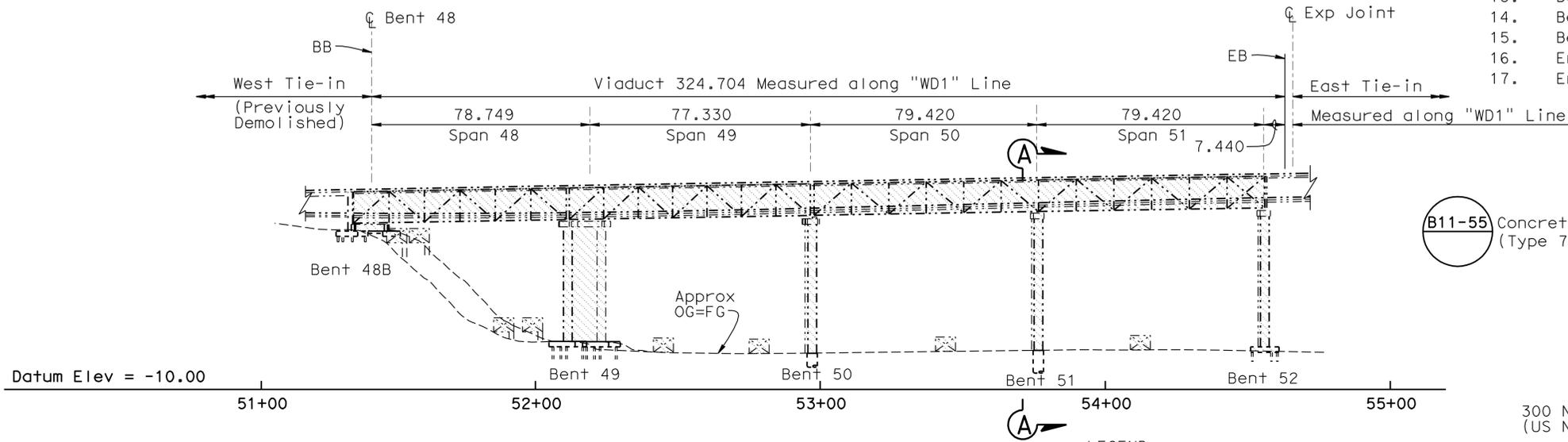
2-21-12  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
M. J. CULLEN  
No. C 40620  
Exp. 03-31-13  
CIVIL  
STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

**QUANTITIES**

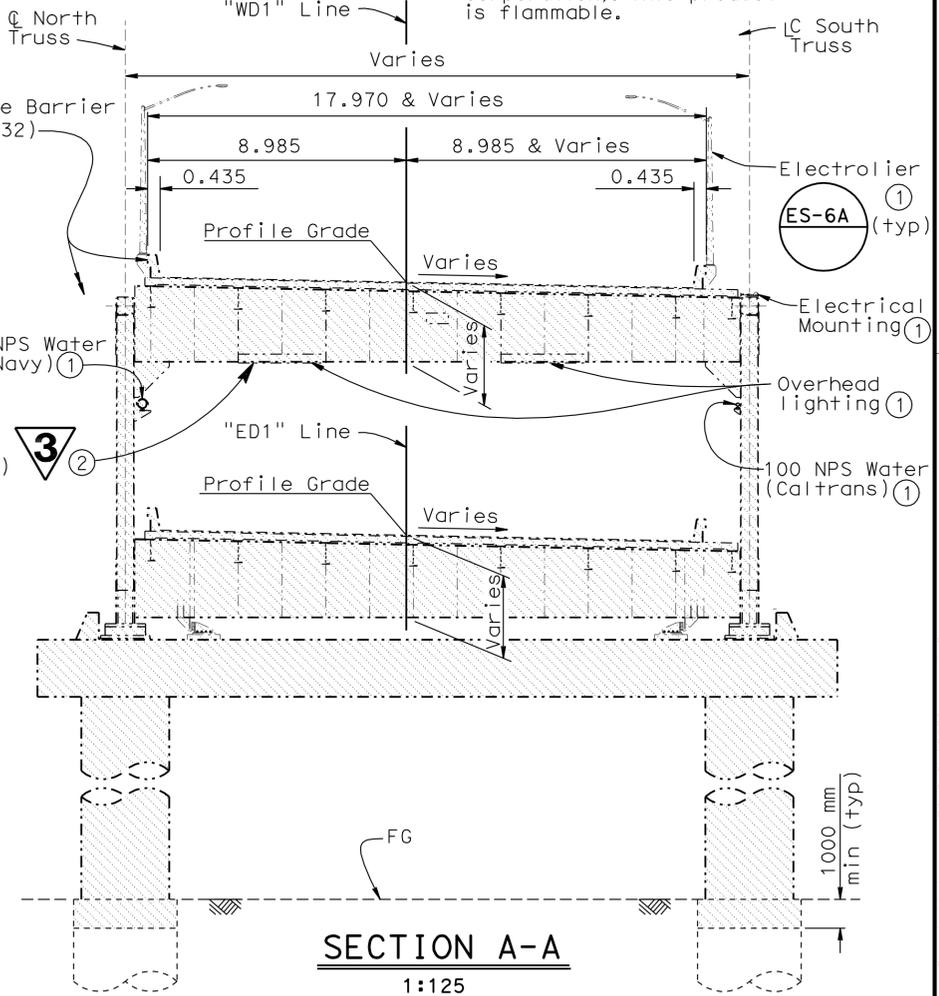
BRIDGE REMOVAL (PORTION), LOCATION C LUMP SUM



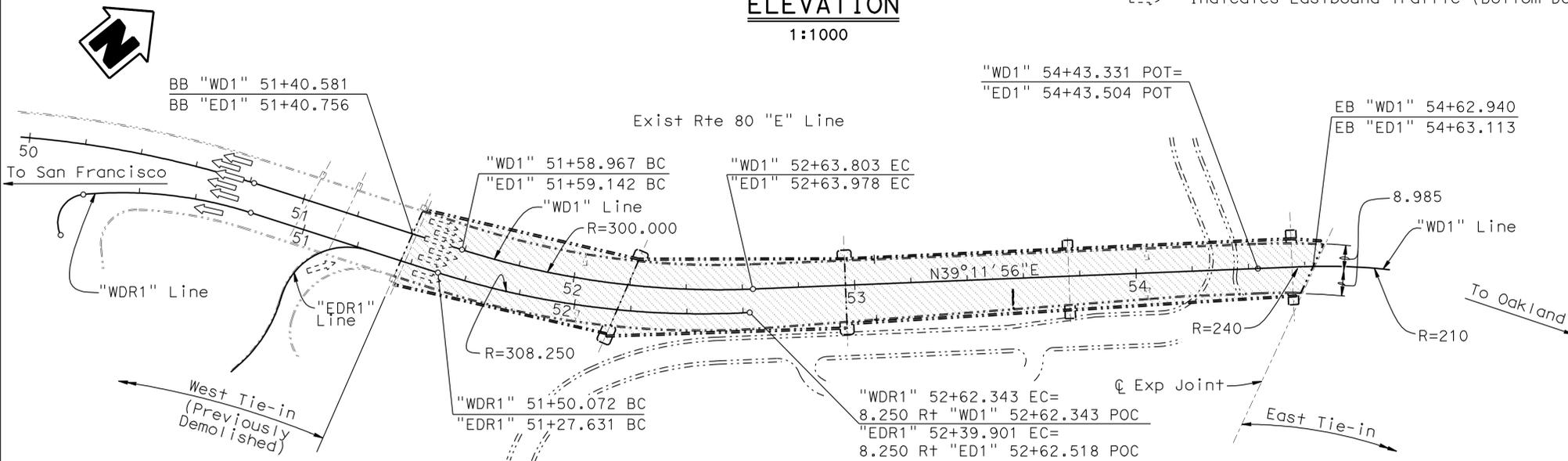
**LEGEND:**

- ← Indicates Westbound Traffic (Top Deck)
- ⇄ Indicates Eastbound Traffic (Bottom Deck)

**ELEVATION  
1:1000**



**SECTION A-A  
1:125**



**PLAN  
1:1000**

NOTE:  
ALL DIMENSIONS AND ELEVATIONS ARE APPROXIMATE, THE CONTRACTOR SHALL VERIFY ALL RELATED AS-BUILT FIELD DIMENSIONS.

**3 REVISED PER ADDENDUM No. 3 DATED JUNE 6, 2012**  
**5 REVISED PER ADDENDUM No. 5 DATED AUGUST 13, 2012**

	DESIGN	BY Pyo Hong	CHECKED M. J. Cullen	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/ "LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO.	34-0006	SOUTH, SOUTH DETOUR VIADUCT DEMOLITION GENERAL PLAN	
	DETAILS	BY G. M. Souza/T. Cotton	CHECKED M. J. Cullen	LAYOUT	BY Pyo Hong		CHECKED M. J. Cullen	KILOMETER POST		NA
	QUANTITIES	BY Pyo Hong	CHECKED M. J. Cullen	SPECIFICATIONS	BY S. Margaritis		CHECKED M. J. Cullen	PLANS AND SPECS COMPARED		M. J. Cullen

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS

CU 04251  
EA 012011

DISREGARD PRINTS BEARING EARLIER REVISION DATES

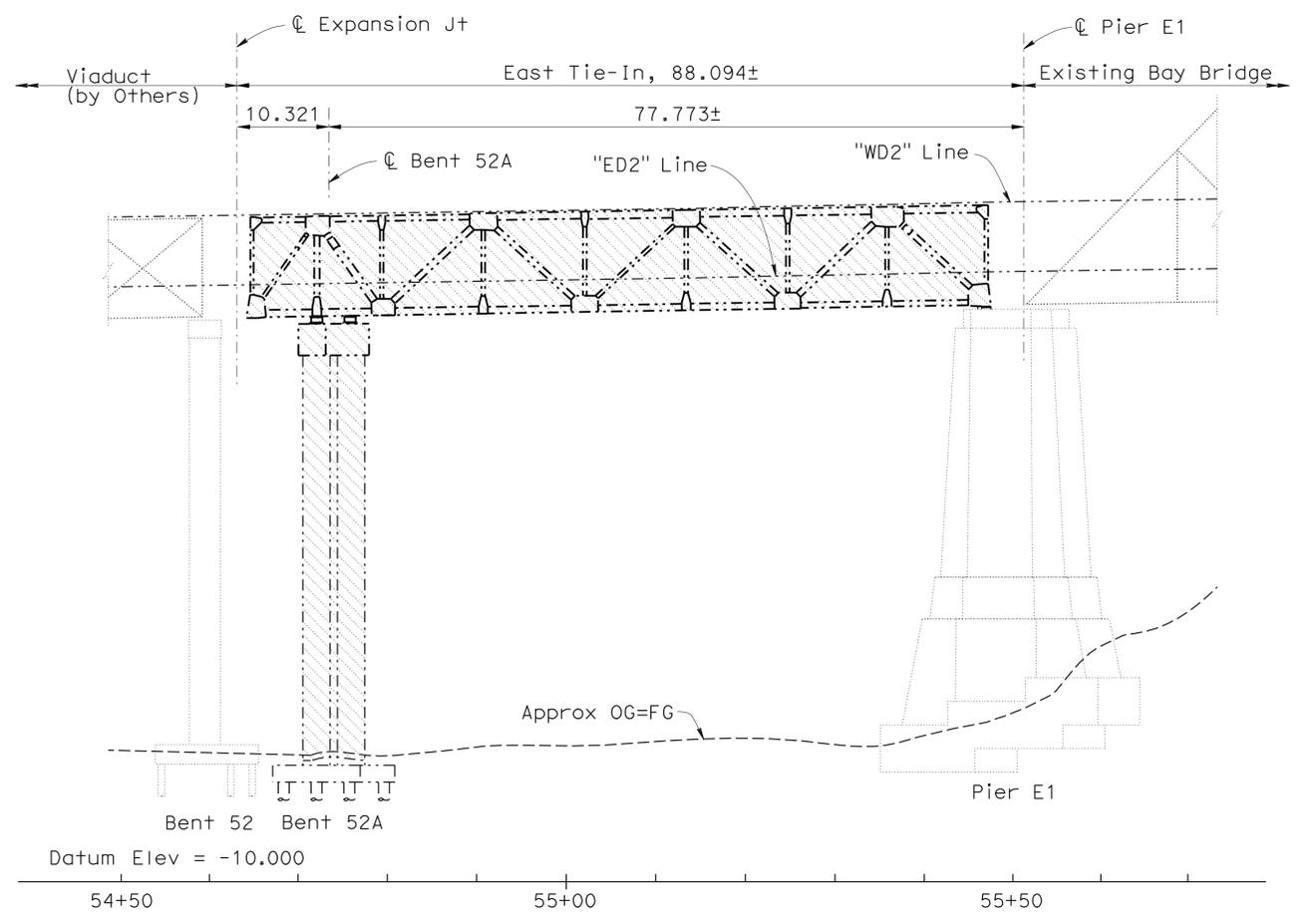
09-28-10	10-01-10	10-14-10	10-21-10	11-05-10	01-26-11	01-24-11	01-26-11	10-25-11	11-08-11
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STRUCTURES DESIGN GENERAL PLAN SHEET (METRIC) (REV.07-24-06)

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	12.6/13.9	525	821

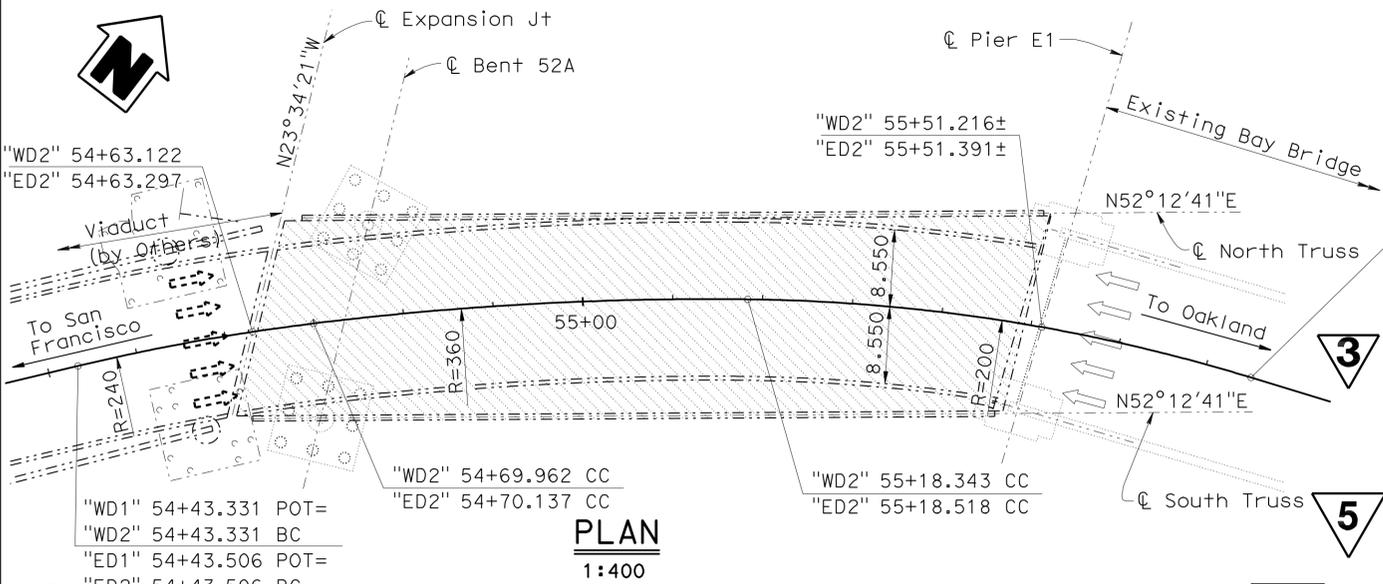
M.J. Cullen  
 REGISTERED CIVIL ENGINEER DATE 11-09-11  
 2-21-12  
 PLANS APPROVAL DATE  
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**PROJECTED ELEVATION**

1:400

Note: Longitudinal dimensions measured along "WD2" or "ED2" line.



**PLAN**

1:400

NOTE: ALL DIMENSIONS AND ELEVATIONS ARE APPROXIMATE, THE CONTRACTOR SHALL VERIFY ALL RELATED AS-BUILT FIELD DIMENSIONS.

**QUANTITIES**

BRIDGE REMOVAL (PORTION), LOCATION D LUMP SUM

**GENERAL DEMOLITION NOTES**

- Design Specifications: AASHTO "THE MANUAL FOR BRIDGE EVALUATION, 2011" and these General Demolition Notes. The analysis and demolition sequence of the existing bridge shall be based on Allowable Stress Design (ASD) and operating level only.
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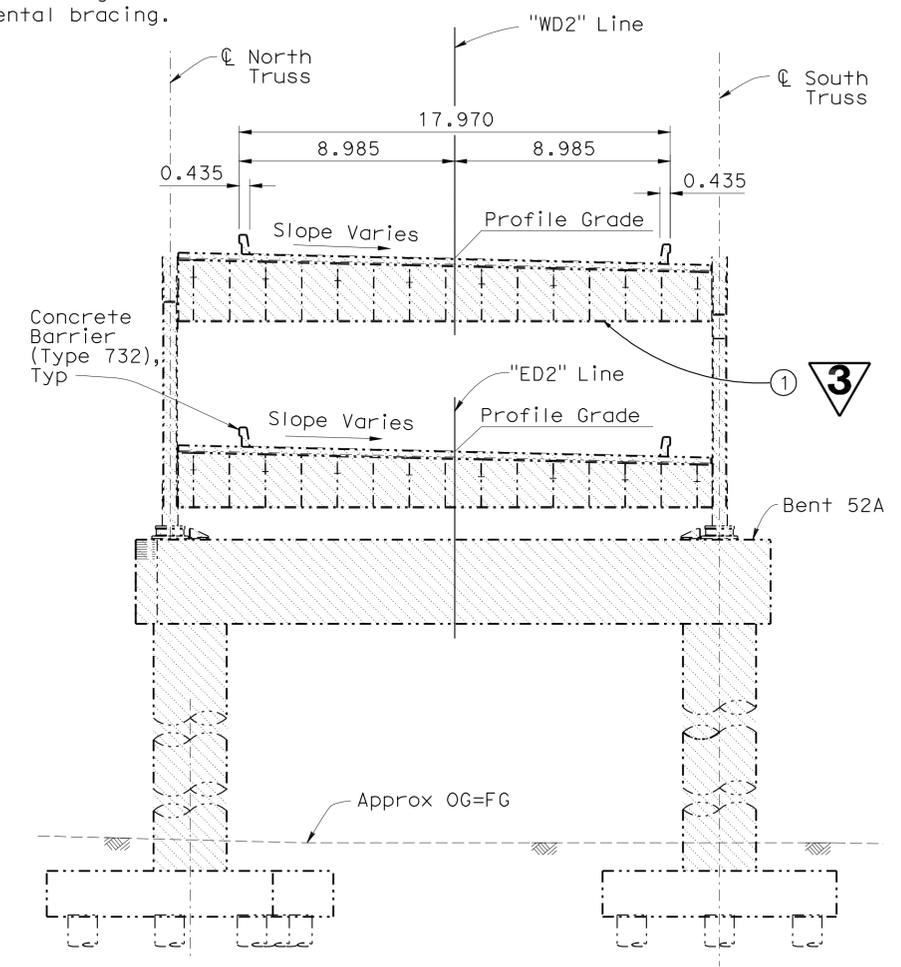
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| 3.        | Deck Contours (East Bound) |
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| 9.        | Span Layout No. 5          |
| 10.       | Typical Section            |
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| 13.       | Bent Details No. 1         |
| 14.       | Bent Details No. 2         |
| 15.       | Bent Details No. 3         |

**LEGEND:**

- Indicates Existing Structure
- ▨ Indicates Bridge Removal
- ← Indicates Westbound Traffic
- ⇄ Indicates Eastbound Traffic

**NOTE:**

- The soffit of the upper deck is coated with 32 mm of K-13 sparyed cellulose acoustical insulation (by International Cellulose Corporation). This product is flammable.



**TYPICAL SECTION**

1:150

Note: Dimensions measured perpendicular to "WD2" or "ED2" line. All dimensions are approximate.

**REVISED PER ADDENDUM No. 5 DATED AUGUST 13, 2012**

**REVISED PER ADDENDUM No. 3 DATED JUNE 6, 2012**

	DESIGN	BY M. J. Cullen	CHECKED Pyo Hong	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 5	BRIDGE NO.	34-0006	<b>EAST TIE-IN (DEMOLITION)</b> <b>GENERAL PLAN</b>				
	DETAILS	BY G. M. Souza/T. Cotton	CHECKED M. J. Cullen	LAYOUT	BY M. J. Cullen			CHECKED Pyo Hong	KILOMETER POST		NA			
	QUANTITIES	BY M. J. Cullen	CHECKED Pyo Hong	SPECIFICATIONS	BY S. Margaritis			CHECKED M. J. Cullen	REVISION DATES		<table border="1"> <tr> <td>09-25-10</td> <td>10-01-10</td> <td>10-14-10</td> <td>10-21-10</td> <td>11-09-10</td> <td>01-18-11</td> <td>01-28-11</td> </tr> </table>	09-25-10	10-01-10	10-14-10
09-25-10	10-01-10	10-14-10	10-21-10	11-09-10	01-18-11	01-28-11								
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN						ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100	CU 04251 EA 0120T1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	SHEET 1 OF 10					

# GENERAL DEMOLITION NOTES

## 1. Design Specifications:

AASHTO "The Manual for Bridge Evaluation", 2011 and these General Demolition Notes. When a conflict occurs, these notes shall govern. The analysis and demolition sequence of the existing Cantilever Truss and all attachments and modifications shall be based on Allowable Stress Design (ASD) and operating level only.



## 2. Wind Load:

Windward pressure = 1.86 KN/m<sup>2</sup>  
 Leeward pressure = 0.93 KN/m<sup>2</sup>  
 Caltrans "Bridge Design Specifications (BDS), 2004" shall be followed to determine the wind effect, except the wind pressure shall be used as specified above. The wind pressure acting at skew angles as listed in Section 3.15.2.1.1 of BDS may be scaled down accordingly.

## 3. Existing Structural Steel (MPa):

Steel Type	Nickel	Carbon		Silicon	Heat Treated
		Medium	Mild		
Min. Fu	620	427	379	551	551
Min. Fy	379	255	207	310	345

For eye bars, allowable tension shall not exceed 0.6F<sub>y</sub> on gross section nor 0.5F<sub>u</sub> on net section.

Where the material is not otherwise specifically designated on as-built plans, Medium Carbon Steel was used.



## 4. Existing Connections:



### a. Existing Rivets (Mpa):

Shear:

Carbon Steel Rivet Allowable = 103  
 Manganese Steel Rivet Allowable = 138

Bearing:

Carbon Steel Rivet Allowable = 207  
 Manganese Steel Rivet Allowable:  
 For Carbon Steel = 207  
 For Silicon Steel = 262  
 For Nickel Steel = 310



### b. Existing Bolts: ASTM A325

## 5. Existing Reinforced Concrete (MPa):

Concrete: f'<sub>c</sub> = 21

Reinforcing Steel:

f<sub>y</sub> = 227 (Original light weight upper deck)  
 f<sub>y</sub> = 414 (Reconstructed lower deck)

6. For material not listed, refer to original document "SAN FRANCISCO-OAKLAND BAY BRIDGE, Notice to Contractors, Contract and Specifications, Proposal and Contractors Bonds, Contract No. 7 SUPERSTRUCTURE - EAST BAY CROSSING" and previous reconstruction as-built plans.

7. Adequate strength and stability of the structure or partially demolished structure shall be maintained throughout the demolition process. Depending on demolition sequence and equipment used, existing structure members and connections may require strengthening and/or supplemental bracing.

8. Locked-in forces in members due to previous erection sequence shall be considered in dismantling procedures. Members under stress shall be unloaded to a level that will not result in a sudden redistribution of member forces or excessive displacement.

## 9. Live Load Impact Factors:

Normal construction equipment shall have a 30% impact factor applied, while equipment such as ram hoes that are subject to vibration shall have 50% impact factor. An impact factor of 100% shall be applied to the pick weight of cranes if the pick weight is lowered down to a barge, otherwise an impact factor of 30% shall be used. For any Suspended Span lowering system, apply a 100% impact factor to the weight of the Suspended Span following disconnection from the Cantilever Arms during lowering operations of Alternative B of Cantilever Truss Removal Sequence. For Alternative B, see "REMOVAL SEQUENCE" sheet.



10. For thermal forces, a temperature difference of plus or minus 17 degrees celsius from ambient temperature of 17 degrees celsius shall be considered.

## 11. Load Combinations:

The following load combinations shall be used.

### FACTORS FOR SERVICE LOAD DESIGN

GROUP	GAMMA FACTOR	BETA FACTORS												
		D	L+I	CF	E	B	SF	W	WL	LF	P <sub>s</sub>	R+S+T	ICE	EL
I	1.0	1	1	0	0	0	0	0	0	0	1	0	0	1
II	1.0	1	0	0	0	0	0	1	0	0	1	0	0	1
III	1.0	1	1	0	0	0	0	0.3	1	1	1	0	0	1
IV	1.0	1	1	0	0	0	0	0	0	0	1	1	0	1
V	1.0	1	0	0	0	0	0	1	0	0	1	1	0	1
VI	1.0	1	1	0	0	0	0	0.3	1	1	1	1	0	1

L: Construction live loads consist of two components: 1) actual weights of equipment such as cranes, manlifts, excavators, dump trucks, and 2) a distributed load of 480 N/m<sup>2</sup> on deck surfaces to account for miscellaneous minor items.

EL: locked-in forces due to erection sequence used to construct bridge.

## 12. Datum:

Elevation based on 1929 NGVD Datum.  
 Mean Lower Low Water (MLLW) is at Elevation 0.00.  
 All Elevations shown in Meters.

APPROXIMATE TIDAL SUMMARY	
TIDE LEVEL	ELEVATION (m) (NGVD)
Highest Observed Water Level (EHW)	2.61
Mean Higher High Water (MHHW)	1.87
Mean Sea Level (MSL)	0.87
Mean Lower Low Water (MLLW)	0
Lowest Observed Water Level (ELW)	-0.61

Contractor shall verify tidal elevations prior to beginning work

13. Coordinates, distances, and bearings are based on 1933 as-built plans.



**3 REVISED PER ADDENDUM No. 3 DATED JUNE 6, 2012**



**1 REVISED PER ADDENDUM No. 1 DATED APRIL 25, 2012**



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	12.6/13.9	536	821

Wenyi Long 11-07-11  
 REGISTERED CIVIL ENGINEER DATE

2-21-12  
 PLANS APPROVAL DATE

WENYI LONG  
 No. C57430  
 Exp. 12-31-13  
 CIVIL  
 STATE OF CALIFORNIA

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STANDARD PLANS DATED JULY 2004

A10A ACRONYMS AND ABBREVIATIONS (A-L)  
 A10B ACRONYMS AND ABBREVIATIONS (M-Z)



**4 REVISED PER ADDENDUM No. 4 DATED JULY 16, 2012**



**5 REVISED PER ADDENDUM No. 5 DATED AUGUST 13, 2012**

NOTE:  
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

SAN FRANCISCO-OAKLAND BAY BRIDGE EAST SPAN SEISMIC SAFETY PROJECT	
BRIDGE NO. 33-0025	<b>EXISTING CANTILEVER TRUSS DEMOLITION</b>
KILOMETER POST 13.2/13.9	<b>INDEX TO PLANS</b>