PWA 2013-F
UNIT 3

FED. ROAD DIST. NO.	STATE	ROUTE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
2	CAL				

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
IV	S.F.	56	Unit 3	1	31

Approved April 11 1939
Assistant State Highway Engineer
Civil Engineer - License No. 2084

Approved for Commanding General, 9th Corps Area
Colonel, Corps of Engineers, Engineer

BRIDGE DEPARTMENT

As Built Plans	
Check	
Detail	
Quantities	
Bridge Engineer	6-24-57
Bridge Engineer	6-24-57
R.E. in Charge	6-24-57
Office Engineer	6-24-57

11' Rt. = 60+69.30 B.C.
12.75 Rt. = 60+69.48 P.O.T.

L. 60+69.30 P.O.T.
R. C. 60+80.56 B.C.

R = 763.95'
Δ = 7°58'45"
T = 120.16'
L = 238.36'

R = 800'
Δ = 27°41'45"
T = 197.21'
L = 386.70'

R. C. 67+00.64 P.C.C.
R. C. 67+00.64 P.C.C.

R = 850.52'
Δ = 20°43'59"
T = 151.93'
L = 309.53'

Eucalyptus up to 36" dia.

To Santa Cruz

R = 300'
Δ = 48°12'00"
T = 223.65'
L = 420.63'

R. C. 69+18.64 P.C.C.
R. C. 63+18.64 P.C.C.
Δ 111°52'51" E.C.

M.H.

Signal Corps Conduit

N. 0° 50' 15" E.

Retaining walls included in Funston Tunnel Contract Unit #1

Sta. 1+40

Sta. 1+90

Sta. 2+20

Sta. 4+57.50

M.H.

3" C.I. Drain

Redwood Fence

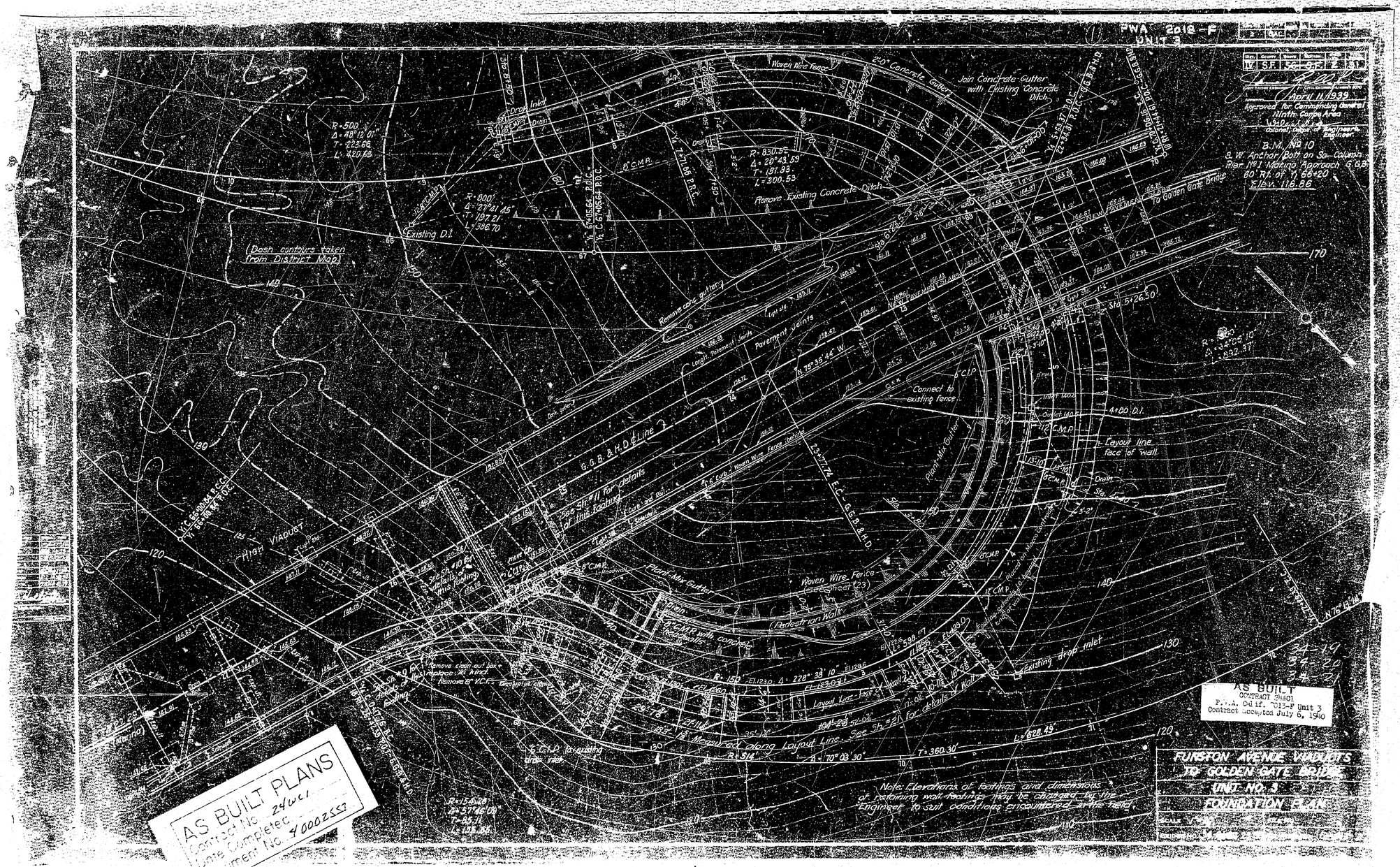
Eucalyptus

Redwood Fence

Eucalyptus

Redwood Fence

Eucalyptus


FWA 2018-F
UNIT 3
Woven Wire Fence
240' Concrete Gutter
Join Concrete Gutter with Existing Concrete Ditch
Remove Existing Concrete Ditch
Existing D.1
(Dash contours taken from District Map)
Remove conc. gutter
Pavement Joints
Connect to existing fence
Plant-Mix Gutter
Pedestrian Walk
Existing drop inlet
Layout line face of wall
To Golden Gate Bridge
B.M. No. 10
S. W. Anchor Bolt on So. Column Pier 19 1 Marina Approach C.B.R.D.
60' Rt. of 1,66+20
Elev. 116.86
AS BUILT
CONTRACT 24401
P.A. Calif. 7015-F Unit 3
Contract accepted July 6, 1940
AS BUILT PLANS
Correct No. 24401
Date Completed
Document No. 40002557
FUREKON AVENUE VIADUCTS
TO GOLDEN GATE BRIDGE
UNIT NO. 3
FOUNDATION PLAN

FWA 20134F

Unit 3

April 11 1939

Approved for Commanding General
Wm. Colpo Jr.
Colonel, Corps of Engineers
Engineer

ELEVATION

PLAN

Note: Underpinning at Golden Gate Bridge Pier is required if excavation is made lower than bottom of footing.

Note: Connect drains to existing drainage system as shown on sheet #1.

Retaining wall with concrete curb and rail between Sta. 1+85.00 and Sta. 3+50.00 is a part of this contract. See Sheet No. 21 for details.

#34-19
34-20
34-23

Calif. 21-F Unit 3
Contract accepted July 6, 1940

AS BUILT PLANS
Contract No 24WC1
Date Completed
Document No 40002552

PWA 2013-F
UNIT 2

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
IV	S.F.	58	5-F	4	31

April 11 1939

Approved for Commanding General, Ninth Corps Area

Colonel, Corps of Engineers
Engineer

BRIDGE DEPARTMENT

Note:
Elevations adjacent to G.G.B. & H.D. viaduct are dependent upon existing structure and shall be verified in the field.

PLAN

℄ Curve Data:
R=154.28'
Δ=57°46'09"
T=85.11'
L=155.55

Note: All stations given on this sheet are ℄ stations.

SECTION E-E
Scale: 3/4" = 1'-0"
For location of this Section see Sheet No 6.

PROFILES

Profile of V.C. ℄ on G.G.B. & H.D. Deck

SUPER-ELEVATION CURVE
Distances and stations shown refer to the ℄ of the viaduct

AS BUILT
Contract No. 24WC1
Cal. 17-513-F Unit 2
Contract accepted July 5, 1940

AS BUILT PLANS
Contract No 24WC1
Date Completed
Document No 400025S1

(34-19
34-20
34-27)

FUNSTON AVENUE VIADUCTS
TO GOLDEN GATE BRIDGE
VIADUCT
DRIVE, ROADS & WALKS

PWA Docket-F
UNIT 2

April 11 1939

Approved for Commanding General
Ninth Corps Area
Colonel, Corps of Engineers
Engineer

Face of Abutment 2
Backwall

Note: Remove existing Catch-basin and Drain and fill opening with Class "A" concrete slab, supported on existing channels. Reinforce with ½"ø bars @ 6" ctrs., both ways, top and bottom.

Remove existing Sidewalk Curb and Railing

Existing 24"x17" Catchbasin and Drain. Move to new position.

Ruby Reflector

14" Conduit

Flasher

Curb Transition.

Existing 27"@91"I

Existing 36"@150"I

New 30"@200"I

New 24"@110"I

1" Expansion Joint

Remove existing 27"x ?" Standard Pull-box

Cutting line

Remove existing Curb, Sidewalk and Railing New 30"@124"I

1½" Expansion Joint in Railing.

"½C" line

Sta. 0+67.55

14"x4" bars top & bottom

4'-6"x2'-8" Pull-box

2½"

12.38

14.29

0+00

B.C. E. of Railing

B.C. Face of Wall

B.C. Top of Curb

Sta. 0+171.76 B.C. of Roadway and Bottom of Curb. C.G.Br. 26+42.39

P.O.C. of Roadway and Bottom of Curb.

C.G.Br. 26+10.97

C.G.Br. 25+93.47

C.G.Br. 25+54.19

C.G.Bow 25+80.19

℄ Bent #3

℄ Bent #2

℄ Bent #1

39'-3½"

39'-8"

½" ø bars @ 6" ctrs, top and bottom.

18'-0" to C.G.B. Line

12'-0"

Top Reinforcement ½"ø bars @ 6" ctrs. | ⅝"ø bars @ 16" ctrs. | ⅝"ø bars @ 10" ctrs. | ⅝"ø bars @ 7" ctrs. | ½"ø bars @ 5" ctrs.

Bottom Reinforcement ½"ø bars @ 15" ctrs.

4'-6" | 10'-0" | 7'-0" | 7'-0" | 3'-0"

Standard Pull-box

Remove existing 27"x ?"

2¼" Conduit
1½" ø Conduit
4" ø Conduit

℄ Railing

⅝" Expansion Material under overlapping portion

1" Exp. Jt.

End of Roadway Slab

Lap spacers 2'-0" into deck slab

Illuminated sign on a post 14'-0" from ℄ roadway

1"ø conduit from ℄ flasher & sign

Reset Curb Drain and connect to new

Connect flasher with existing

Water Main

Sidewalk and Curb Slab

½"ø spacers

Top Reinforcement ⅝"ø bars @ 12" ctrs | ⅝"ø bars @ 7" ctrs | ⅝"ø bars @ 5" ctrs.

Bottom " ½"ø bars @ 12" ctrs. | ½"ø bars @ 5" ctrs.

8'-9" | 8'-9" | 12'-6"

½"ø bars @ 6" ctrs, 9'-3" ℄ r = 70'

½"ø bars @ 12" ctrs, 6'-6" to 5½" Bullnose

½" Expansion Joint

Pedestrian Ramp

9" Curb

10½" Curb

10'-0"

1'-0" Curb

Sta. 0+81.35

R=134.28

R=142.28

R=142.00

R=140.45

Sidewalk Slab Reinforcement

6'-1"

Transition Curves Δ=10°-00'-00"

P.C.C. of all Transition Curves

Transition Curve Data
Δ = 10°-00'-00" for all curves

Bottom of Curb	R = 142.28	
	L = 24.93	
	T = 12.45	
Top of Curb	R = 134.28	
	L = 26.94	
	T = 13.50	
Face of Wall	R = 211.76	
	L = 38.98	
	T = 19.53	
℄ of Railing	R = 216.28	216.02
	L = 37.99	
	T = 19.04	

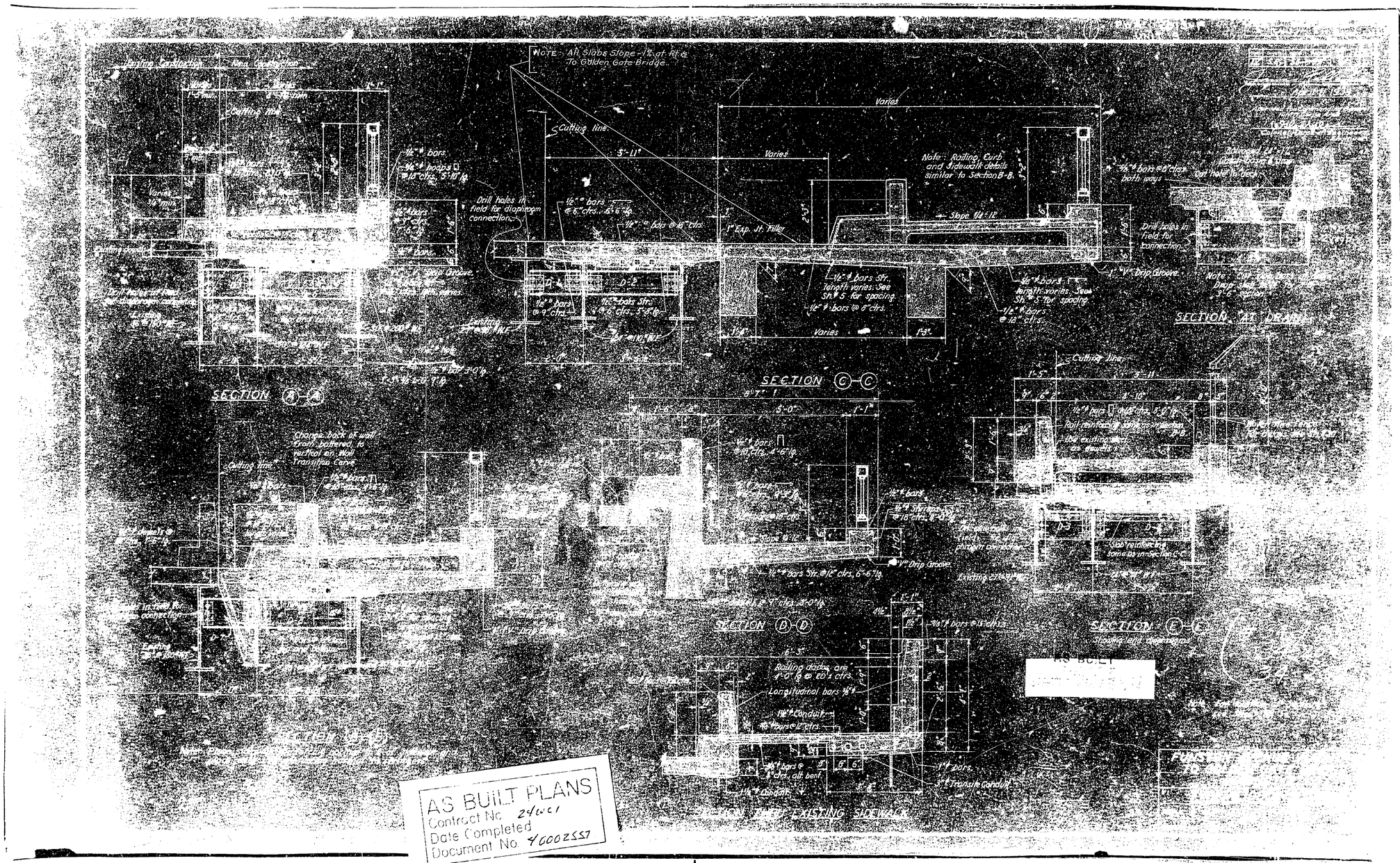
AS BUILT PLANS
Contract No 24WC1
Date Completed
Document No 4000255?

AS BUILT

FULTON AVENUE VIADUCT
TO ACCOMPANY PLANS

PLAN

34-11
34-25

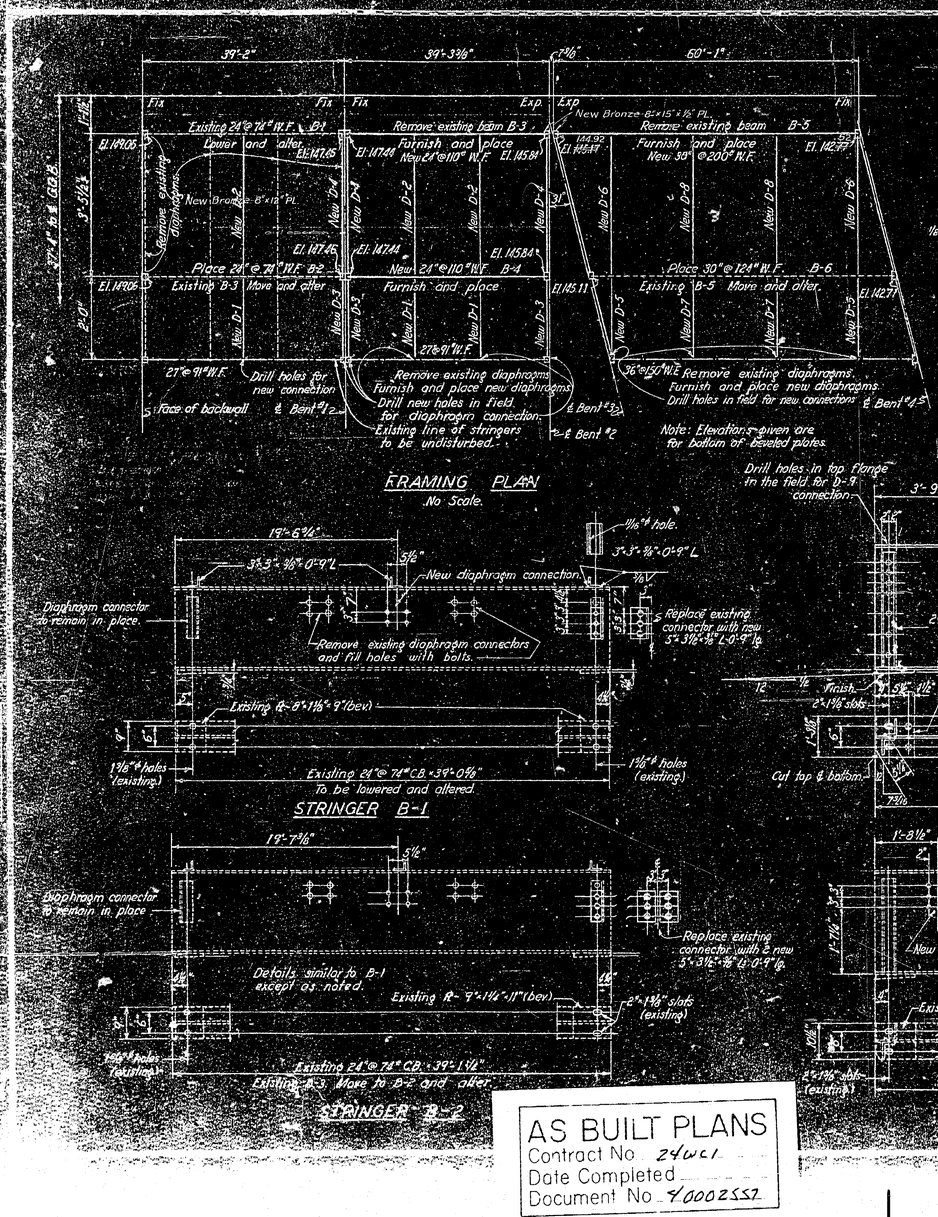

NOTE:- All Slabs Slope -1/2 at Rt.s To Golden Gate Bridge.
Existing Construction
New Construction
Cutting line
Varies
5'-11"
Note: Railing, Curb and Sidewalk details similar to Section B-B.
Drill holes in field for diaphragm connection.
Slope 1/4:1 ft.
1" Exp. Jt. Filler
1" "V" Drip Groove
SECTION A-A
SECTION B-B
SECTION C-C
SECTION D-D
SECTION E-E
SECTION AT DRAIN
Change back of wall from battered to vertical on Non Transitive Curve
Existing Sidewalk
Railing details are similar to Section D-D
Longitudinal bars #4
AS BUILT
AS BUILT PLANS
Contract No. 24WC1
Date Completed
Document No. 4000255?

PWA 2013-F
UNIT 3

Dist.	County	Route	Section	Sheet No.	Total Sheets
12	S.F.	SF	34.19	7	101

April 11, 1939

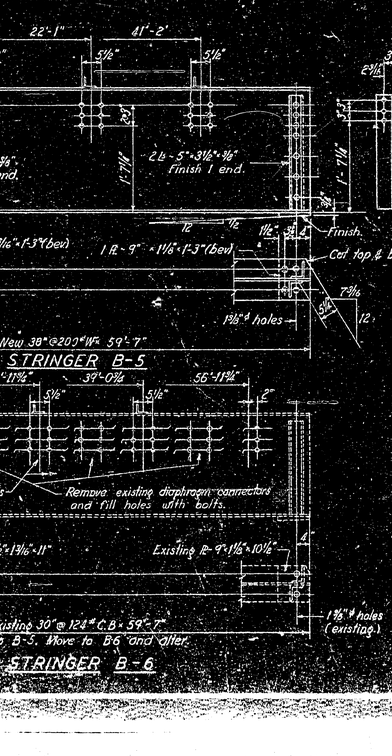
Approved for Commercially Used Concrete
Wm. Sadler
Colonel, Corps of Engineers
Engineer



FRAMING PLAN
No Scale.

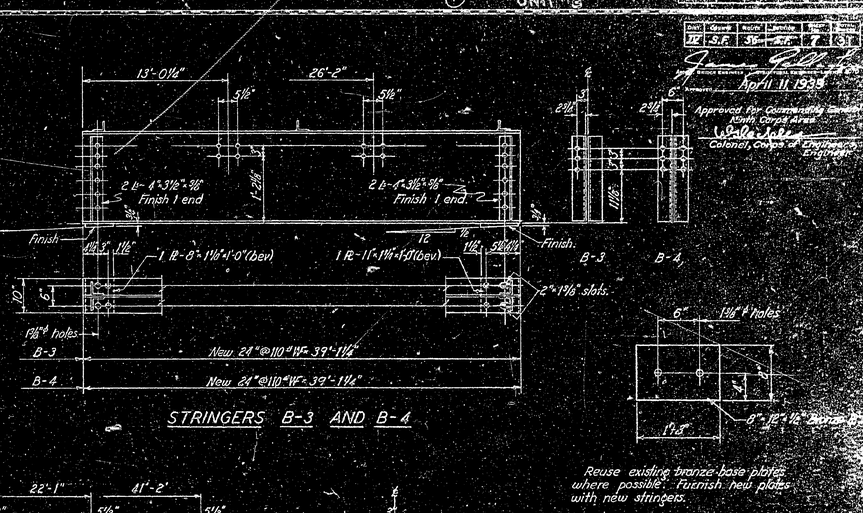
STRINGER B-1

STRINGER B-2



STRINGER B-5

STRINGER B-6



STRINGERS B-3 AND B-4

Reuse existing bronze base plates where possible. Furnish new plates with new stringers.

BRONZE BASE PLATES

Note: For details of diaphragms see Sheet No. 6.
D-1 and D-2 are 10°-1 @ 25.4"
D-3 and D-4 are 12°-6 @ 25" and 3½"×2½"×⅜" L
D-5 and D-6 are 12°-1 @ 25"
D-7 and D-8 are 12°-1 @ 31.0"

AS BUILT
CONTRACT 24WC1
P.W.A. Calif. 2013-F Unit 3
Contract accepted July 6, 1940

Note: Field connections to be bolted with ⅞" ø Dardelet rivet bolts.
All rivets to be ⅞" ø.
All rivet holes to be 15/16" ø.

Details shown are obtained from shop drawings of existing structure. Contractor shall verify dimensions by field measurement before proceeding with fabrication.

(34-19
34-20
34-23)

FUNSTON AVENUE VIADUCTS TO GOLDEN GATE PARK
VIADUCT
STRUCTURAL STEEL DETAILS
PLATE NO. 5

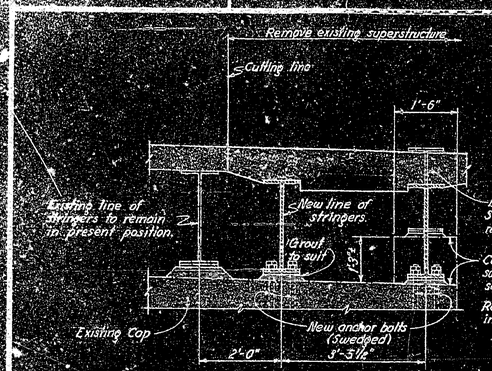
AS BUILT PLANS
Contract No. 24WC1
Date Completed
Document No. 400025S7

FWA 2013-F
UNIT 3

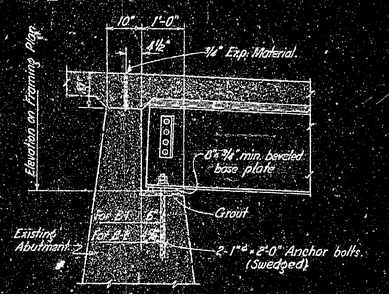
Date	County	Route	Section	Sheet	No.
7/40	S.F.	56	6-A	2	33

April 11, 1939

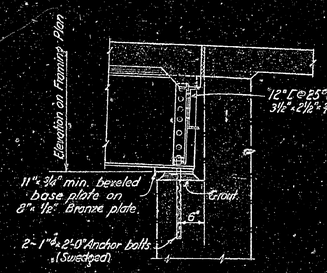
Approved for Commanding General
Ninth Corps Area
L. B. Gerhardt
Colonel, Corps of Engineers,
Engineer.



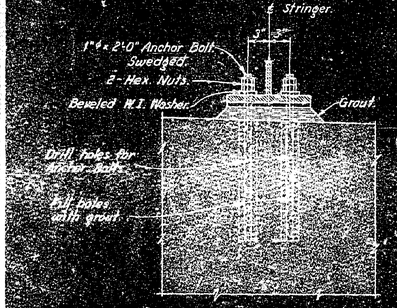
TYPICAL ELEVATION AT BENT CAP
Scale: ¾"=1'-0"



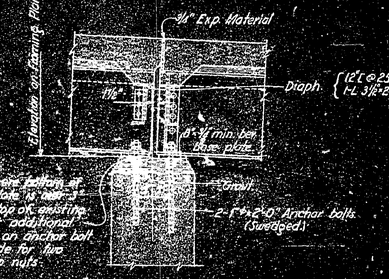
AT ABUTMENT



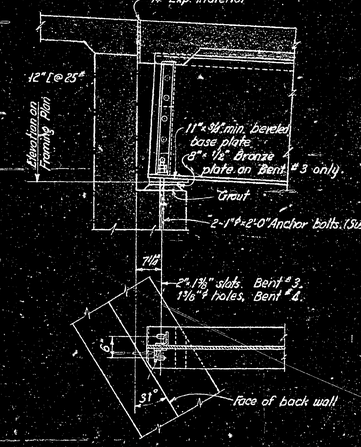
AT BENT No 2



ANCHOR BOLT DETAIL
Scale: 1½"=1'-0"



AT BENT No 1



AT SKEWED BENTS No 3 & No 4

BEARING DETAILS
Scale: ¾"=1'-0"

AS BUILT
Contract No. 24WC1
Fwa. Calif. 213-F Unit 3
Contract accepted July 6, 1940

AS BUILT PLANS
Contract No. 24WC1
Date Completed
Document No. 4000255?

#34-19
34-20
34-23

FUNSTON AVENUE VIADUCT TO GOLDEN GATE BRIDGE
VIADUCT
BEARING DETAILS

EWA 2513-F
UNIT 3

DIST.	COUNTY	ROUTE	SUBMISSION	SHEET NO.	TOTAL SHEETS
7	S.F.			9	31

April 11, 1939

Approved For Commanding General
Ninth Corps Area

Colonel, Corps of Engineers,
Engineer.

30'-0"
8'-9" 2'-4" 19'-4" 1'-0"
1" ⌀ bars 7'-10" lg.
1" Expansion
2-7/8" ⌀ bars 33'-6" lg.
2-7/8" ⌀ bars Str 12'-0" lg.
6'-0"
Extend 5'-0" into slab on cellular structure wall.
2'-6"
1/2" ⌀ bars 7'-5" lg. Total-4
1'-0" 1'-8" 2'-0"
2-1" ⌀ bars 30'-6" lg.
6@12" 5@12" 2@15" 3@16" 2@15" 2@12" 4@10"
1" ⌀ bar 12'-0" lg.
1/2" ⌀ Stirrups
1/2" ⌀ Stirrups

SECTION (A)-(A) INTERIOR GIRDER
Scale-1/2"=1'-0"

7/8" ⌀ bars 33'-6" lg.
1/2" ⌀ Stirrups
1" ⌀ bars Str., 30'-6" lg.
6" 6" 6"
2@5 1/2" 2 1/2"
1'-4"

SECTION (A)-(A)
Scale-1"=1'-0"

1/2" ⌀ bars @12" ctrs., 8'-9" lg.
8-7/8" ⌀ bars 33'-6" lg.
2-1" ⌀ bars 33'-6" lg.
2-1" ⌀ bars Str., 30'-0" lg.
1" ⌀ bars 33'-6" lg., Total-4
1" ⌀ bar Str., 30'-0" lg., Total-2
7/8" ⌀ bars 33'-6" lg., Total-6
1/2" ⌀ bars @12" ctrs., 8'-9" lg.
7/8" ⌀ bars @ 1st ctrs. 3'-0" lg.
1" ⌀ dowels, 6'-8" lg., Total-12
1/2" ⌀ bars @12" ctrs., Str., Total-4
1/2" ⌀ bars @18" ctrs.
4@6 1/2" 5'-6"
2'-0" 4" 3'-6"
Elev. 116
Note: For bottom Steel see Footing Plan.
2@10" 2" 2"
2'-0"

SECTION (Z)-(Z)
Scale-1/2"=1'-0"

SECTION (C)-(C)
Scale-1"=1'-0"

7/8" ⌀ bars Str. 10'-0" lg.
7/8" ⌀ bars 34'-0" lg.
1" ⌀ bars 12'-0" lg.
7/8" ⌀ bars 34'-0" lg.
1/2" ⌀ Stirrups
1" ⌀ bars Str. 31'-0" lg.
2'-6" 8" 6" 6" 6"
El. 14.573
2 1/2" 10 1/2" 2 1/4"
1'-3"
1" ⌀ bar Str. 12'-0" lg.
2 1/2" 10 1/2" 2 1/4"
1'-3"

SECTION (D)-(D)
Scale-1"=1'-0"

SECTION (E)-(E)
Scale-1"=1'-0"

30'-5 1/2"
9'-11 1/2" 7'-9" 19'-2"
2-7/8" ⌀ bars Str. 10'-0" lg. centered over Pier
2-1" ⌀ bars 31'-0" lg.
2-7/8" ⌀ bars 34'-0" lg.
6'-0"
2-1" ⌀ bars Str 12'-0" lg.
Extend 5'-0" into slab on cellular structure wall.
2'-6"
1" ⌀ bar 12'-0" lg.
7@12" 2'-0" 4@12" 2@15" 3@17" 2@15" 2@12" 4@10"
3'-4"
1/2" ⌀ Stirrups
1/2" ⌀ Stirrups

SECTION (Y)-(Y)
Scale-1/2"=1'-0"

Center of Pier = Sta. 26+01.22 G.G.B. & H.D.
9'-9"
37°-5'-6" E G.G.B. & H.D.
20'-3"
3'-3"
5'-3"
Face of Wall
38°-54'-07" G.G.B. & H.D.
Elev. 14.23 at top of deck slab.
1/2" ⌀ bars @ 18" ctrs.
For details of slab and typical cross section see Section C-C Sheet No. 6.

PART PLAN
Scale: 1/2"=1'-0"

11'-0"
2'-9" 5'-6" 2'-9"
3'-6"
2'-0"
1/2" ⌀ bars @ 5" ctrs
Total: 8-12'-3" lg.
40°-7' from G.G.B. & H.D. Sta 26+01.22

PLAN OF FOOTING
Scale-1/2"=1'-0"

AS BUILT
Contract accepted July 8, 1940

(#34-19
34-20
34-21)

FONSTON AVENUE, HARBOR
TO GOLDEN GATE PARK
PIER AND [illegible]

AS BUILT PLANS
Contract No. 24WC1
Date Completed
Document No. 4000255?

UNIT 3

Approved for Commanding General
Ninth Corps Area
Colonel, Corps of Engineers
Engineer

April 11, 1939

Note: Curb and railing omitted in all details on this sheet. See sheet F-4, Section F-F

Provide ½"ϕ x 2'-0"lg. eye hook in bottom of deck slab over doorway landing

For connection of girders and wall to cellular structure see sheets #5 and #9

⅝"ϕ bars @12"ctrs.

½"ϕ bars 28'-8" ea. side

½"ϕ bars @18"ctrs. 2'-10"lg.

½"ϕ iron steps @12"ctrs.

Note: Concrete inside ground to El.127.0 to be cast with 4" slope to floor drain with 6" vertical face at wall. Floor to be finished with 6" cove base. Spacing of ½"ϕ bars varies from 6" to 12" to suit conditions

El.127.5

Slope floors to drain

Outside Face

ELEVATION A-A

Sidewalk ramp

Alternate bars ½"ϕ bars @2'-0"lg.

Spaces @12"

⅝"ϕ bars

Spaces @9"

Spaces @9"

4'-6"

3'-3½"

1'-0"

5"C.I. pipe drain to be paid for as misc. steel. Sidewalk drain (see sh.#25 for details)

El.124.0

6"C.I. pipe drain to Drop Inlet (see sh. #26 & 3)

½"ϕ dowels @12"ctrs. 4'-0"lg.

½"ϕ bars

Inside Face

SECTION B-B

For details of side walk ramp, see sh.#4, #5 and #6.

⅝"ϕ bars

½"ϕ bars @6"ctrs

½"ϕ bars @12"ctrs.

9"

6"

3"

See Sheet 4 Sect. F-F

1'-0"

½"ϕ bars @18"ctrs. 13'-0"lg. (outside face)

El.136.0

El.135.0

½"ϕ bars @18"ctrs. 10'-3"lg. (inside face)

½"ϕ bars

½"ϕ bars @18"ctrs. (both faces)

½"ϕ bars @18"ctrs.

El.127.5

1'-3"

½"ϕ dowels @18"ctrs. 3'-6"lg.

El.118.0

2'-3"

6"

6"

SECTION C-C

SECTION E-E

½"ϕ bars ⅝"ϕ bars

⅝"ϕ bars ½"ϕ bars

1'-0"

Ⓐ bars

½"ϕ bars @12"ctrs.

El.136.0

Ⓓ, Ⓔ or Ⓝ bars

El.136.0

Ⓐ or Ⓜ bars

½"ϕ bars @12"ctrs.

Ⓒ bars

½"ϕ dowels @6"ctrs 3'-11"lg.

2'-0"

1½"ϕ bars

2'-0"

1'-9"

3'-6"

½"ϕ bars @12"ctrs. 4'-2"lg.

El.124.0

Outside Face

SECTION F-F

Sidewalk Ramp

⅝"ϕ bars @12"ctrs.

½"ϕ bars @12"ctrs.

½"ϕ bars @18"ctrs.

Ⓐ bars @24"ctrs. 21'-0"lg. El.136.0

⅝"ϕ Ⓒ bars @24"ctrs. 18'-0"lg. 15'-6"lg.

½"ϕ bars @12"ctrs. 9'-6"lg. 8'-0"lg

Spaces @12" ½"ϕ bars @12"ctrs.

4'-6"

El.127.5

El.125.0

El.125.5

Inside Face

ELEVATION D-D

AS BUILT
CONTRACT RECD
P.A. Calif. 2013-F Unit 3
Contract accepted July 5, 1940

32'-0"

⅝"ϕ Ⓐ bars @18"ctrs. (Top slab bars)

½"ϕ Ⓑ bars @18"ctrs. (Top)

½"ϕ Ⓒ bars @9"ctrs. (bottom)

Sta. 0+96.00
El. 149.57

Step South wall footing with 4 equal steps

3'-1⅞"

El.150.29

Sta. Y.C.I.+10.31
Paving Notch
El. 149.91

El.148.55

Step North wall footing with 4 equal steps

Expansion Joint

Cellular Structure

Spaces @12"

Spaces @9"

Spaces @12"

Spaces @9"

Spaces @12"

Spaces @9"

P.W.A. 2013-F
UNIT 3

Dr.	Const.	Mch.	Approved	Sht.	Sheets
TT	S.F.	32	Apr.	11	31

Approved April 11, 1939

Approved for Commanding General
Ninth Corps Area
Colonel, Corps of Engineers,
Engineer.

Cellular Structure

Retaining Wall
For details see sheet # 21

Curtain Wall

West Abutment G.G.B. & H.D.

Elev. 150.29 G.G.B. & H.D. 25'-11.97

Elev. 151.32

Elev. 151.65 G.G.B. & H.D. 25'-11.65

Edge line of slab of existing bridge

Paving Notch

Approximate fill line

½" Expansion joint

½" ϕ bar - both faces

½" expansion joint. Fill with expansion joint material.

½" ϕ bars - 12" ctrs. both faces

½" ϕ bars - 18" ctrs. both faces

Batter 1:1

1'-0" 6"

1'-0"

6'-0"

SECTION B-B.

6'-0" 6'-0" 6'-0" 6'-0" 7'-11"

20' wall 18' wall 16' wall 12' wall

Dimensions & Reinforcement for

½" Expansion joint. Fill with Premolded expansion joint filler

1'-0"

Elev. 138.00

Elev. 135.00

Elev. 133.00

Elev. 131.00

Elev. 129.00

Elev. 127.00

ELEVATION

Existing ground line

Construction joint

2'-0"

2'-0"

1'-0"

Batter ⅜ in 12"

Vertical

1'-6"

1'-9"

1'-8"

½" ϕ dowels L 5'-0" long @ 12" ctrs.

½" ϕ bars

5'-0"

SECTION A'-A

1" expansion joint.

Edge of existing bridge

Layout line

Paving Notch

PLAN OF TOP

Note. This construction placed along north side of G.G.B.H.D. east of West Abutment.

37'-4" to G.G.B. & H.D.

AS BUILT
CONTRACT 24WC1
U.S.N.A. Calif. 2013-F Unit 3
Contract accepted July 6, 1940

AS BUILT PLANS
Contract No. 24WC1
Date Completed
Document No. 4'0002557

34-19
34-20
34-21

FUNSTON AVENUE
TO GOLDEN GATE

UNIT 3

Approved for Commanding General
Ninth Corps Area
[illegible]
Colonel, Corps of Engineers,
Engineer

April 11, 1939

49'-8" on Layout Line of Wall.

Edge of Roadway.

Top of Sidewalk.

Slope = 10.22% ±

El. 146.88

Cellular Structure
see Sht. #10 for details.
274.83' on layout line of Wall

13'-0"

13'-0"

26'-1"

1/2" Exp. Jt. Fill with Exp. Mat'l.

Note: For details of this wall see Sht. No. 11

Bond Wall Section Thru Cells

E-El. 130

E-El. 127

E-El. 124

E-El. 122

E-El. 120

E-El. 118.

V Groove

See Sht. #13 for details of railing.

See Sht. #6 Section D-D for details of walk.

Slope 1:12

Layout Line

1" Drains @ 6' ctrs. at height of outside ground surface. Provide suitable stone backing.

ELEVATION

AS BUILT

Note: For details of wall not shown see Sheet No. 21.
Elevation of footings and location of steps given for estimating purposes only. Exact elevations may be varied by the Engineer to suit conditions encountered in the field.
For plans, and legends, see Sheet No. 1.

AS BUILT PLANS
Contract No. 24WC1
Date Completed
Document No. 40002557

FUNSTON AVENUE
TO GOLDEN GATE

PWA 2013-F
UNIT 3

2-2½"ℓ @ 2.57# ℓ's welded together with continuous butt weld.

⅝" rivet countersunk on inside face of rail.

⅝" hole in ℓ

⅝" Steel tube post

⅜ × 2⅛ × 3/16" Pl. weld inside rail with 3-½" × 3/16" fillet welds.

½" bar 0'-2" long, weld to L with ¼" continuous fillet weld.

2" × 2" × 3/16" L, 0'-2" long, weld to post with ¼" continuous fillet welds at ends.

⅜" Steel tube rail

⅜ × 3⅝ × 3/16" Pl. weld inside rail with 3-½" × 3/16" fillet welds.

SECTION Ⓐ Ⓐ
Scale: 3"=1'-0"

4" × 4" × 3/16" Steel tube rail

½" bar 0'-2" long, weld to L with ¼" continuous fillet weld.

½" F.H. screws

2" × 2" × 3/16" ℓ @ 1.76#

Ends of balusters crimped

1" o.d. #16 Ga. steel tube balusters

2" × 3/16" flat

Punch 1⅛" holes in channel to receive balusters.

4½" sq.

2½ × 4½ × 7/16" steel tube

Cut out bottom of tube

SECTION Ⓑ Ⓑ
Scale: 3"=1'-0"

Weld cap to post with 3/16" Fillet Weld. Grind exposed corners to same radius as rail.

2" × 2" × 3/16" L, 0'-2" long, weld to post with ¼" continuous fillet welds at ends.

½" Stove bolts

Cut out bottom of tube 2⅜ sq.

Weld 2"ℓ to rail with 1½" fillet welds @ 6" ctrs. alternate sides of ℓ.

SECTION © ©
Scale: 3"=1'-0"

PLAN

Face of Concrete Retaining Wall

2½ × 4½ × 3/16" Post

6'-6" 6'-6" 6'-6"

ELEVATION
Scale: 1"=1'-0"

⅛" cap

4½ × ½" steel tube rail

2½ × 2½ × ⅜ℓ @ 1.76#

1" o.d. 16 ga. steel tube baluster

7/8" hole

2½ × 2½ × ⅜ℓ @ 1.76#

2½ × 4½ × ⅜ steel tube

2" grout

Rammed sand

3" grout

2-½" ø bars

⅝" bars ℄ ground each post.

TYPICAL SECTION

AS BUILT
CONTRACT NO. WC-1
P.W.A. Calif. 2013-F Unit 3
Contract accepted July 6, 1940

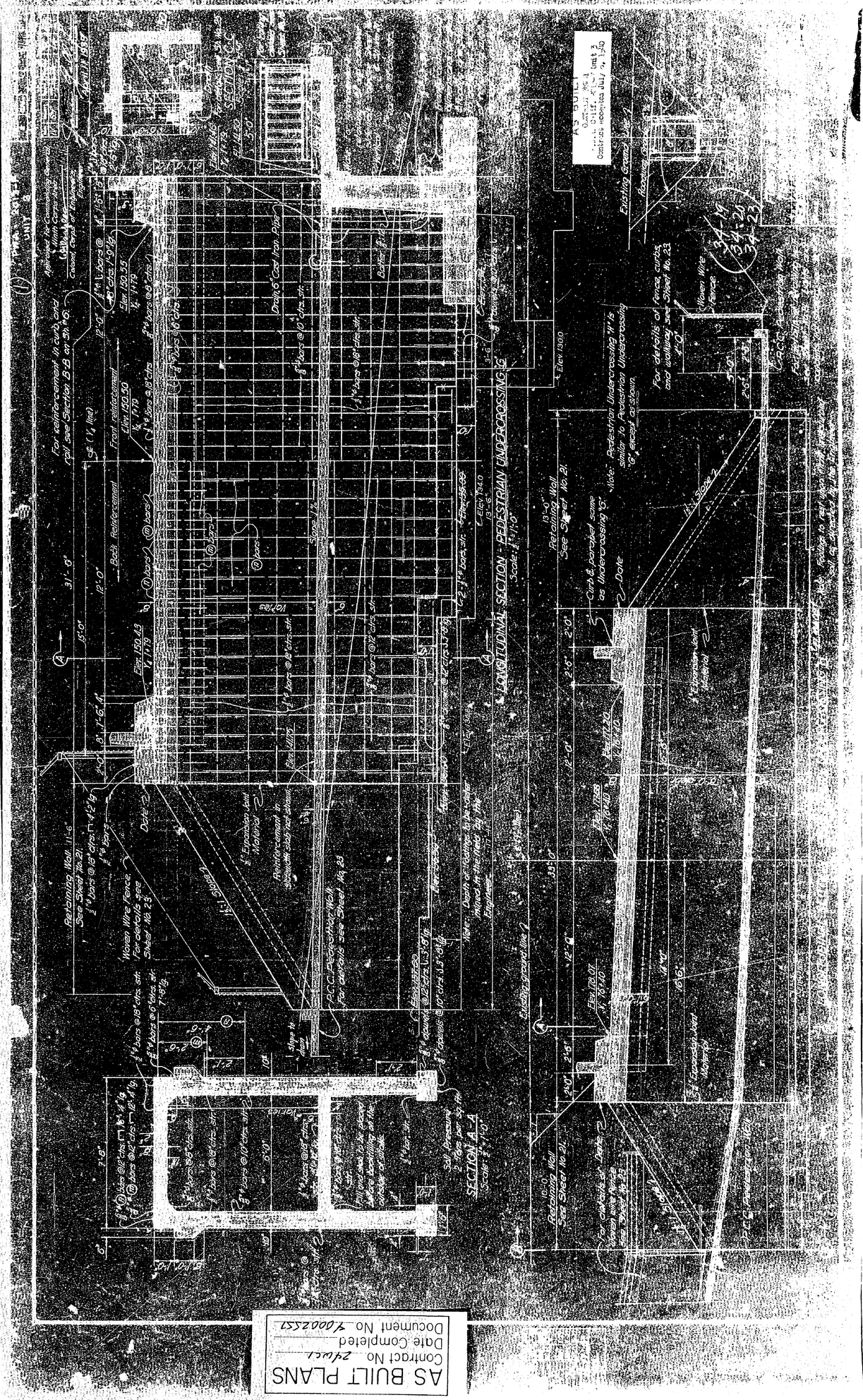
Note: For layout of panels and length and number of panels see ...

RAILING NOTES

Railing to be galvanized after fabrication.
Railing posts and balusters to be set vertical.
All welds to be shop welds.
Tubing may be manufactured in halves, welded continuously at seams, and finished flush with surface. When fabricated in this manner the seams in the posts shall be placed in faces normal to the railing, seams in top and bottom rails shall be in side faces.
Railing panels shall be straight and true to dimension.
In crimping, balusters must be left loose enough to permit the panel to be adjusted to grade, but not loose enough to permit balusters to rattle when panel is in final position.
One complete panel shall be shop fabricated in the presence of the Engineer.

FURNISHED TO SCALE

AS BUILT PLANS
Contract No. 24WC1
Date Completed
Document No. 400025527



AS BUILT PLANS
Contract No 24wcl
Date Completed
Document No 7000251

PWA 2013-F
UNIT 3

12	S.F.	30	1400	Y6	F

April 11, 1939

Approved for Commanding General
Ninth Corps Area
Colonel, Corps of Engineers
U.S. Engineer Officer

Grade -4%

Existing wire mesh fencing. Remove where necessary for construction and replace upon completion.

For elevations of footings see sheet no. 19

Datum Elev. 130.00'

ELEVATION

Note: End structure at stations indicated. Join retaining walls with standard expansion joint and water tight copper seal.

Existing woven wire fence to be reinstalled in new location

TO SANTA CRUZ

Sta. 8+22.58

Sta. 6+01.00

R=830.52'
Δ=20°-43'-59"
L=300.53'

Curb Line G.G.B. & H.D. ℄

R=150'
Δ=228° 38' 10"
L=598.57'

℄ Sta. 5+90.83
℄ Sta. 69+08.50

℄ Y6 Line

℄ Sta. 5+63.31 P.O.C.
G.G.B. & H.D. Sta. 22+34.81 P.O.C. Elev. 163.41

Sta. 22+65.02

TO MARINA BLVD.

10" CURB & GUTTER | 24'-0" CLEAR ROADWAY | 1'-10" CURB & GUTTER

Sta. 22+04.95

TO TOLL PLAZA

Remove existing pavement in this area. To be replaced with reinforced slab (see sheet "I" for details)

Existing drop inlet to be reinstalled

Electrolier to be removed and replaced in present position by others.

Base to be demolished and replaced in kind as part of this contract.

Sta. 3+22.54

Sta. 6+26.30

Existing woven wire fence to be removed during construction and replaced upon completion

Stations indicated are beginning of retaining walls.

℄ Underpass "D"

(Y6 Line)

R=1500'
Δ=34° 05' 10"
T=459.84'
L=892.37'

Sta. 70+06.16 P.C.C.
G.G.B. & H.D. Sta. 21+46.01 P.O.C.

AS BUILT
CONTRACT 24WC1
P.W.A. Calif. 2013-F Unit 3
Contract accepted July 5, 1940

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
FUNSTON AVENUE & MARINA BLVD.
TO GOLDEN GATE BRIDGE
IN SAN FRANCISCO
GRADING OF H.D. OF

#34-19
34-20
34-27

AS BUILT PLANS
Contract No. 24WC1
Date Completed
Document No. 4000257

PWA 2013-F UNIT 3

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
IV	S.F.	56		18	21

April 11, 1939

Approved for Commanding General, 9th Corps Area
Colonel, Corps of Engineers, Engineer

Excavate for and construct completely portion of structure shown dotted, in first stage

Concrete curb to be removed from GGB&HD Sta. 23+32.48 to 21+44.61 and to be replaced as shown in Stage 2

Construct curb return at GGB&HD Sta 23+32.48 See Sheet No. 23

See Sheet No. 17 for section of sidewalk

1'0" face 10'-0" 10½" face 42'0" Transition Section 9" face

Concrete paving between GGB&HD Sta. 22+65.02 & 21+04.95 to be removed and replaced as approach paving, as indicated in Stage 2 and according to Typical Section shown on Sheet No. 17. Remove and replace south half in 1st stage and north half in second

Y4 Sta. 5+90.83
Y2 Sta. 6+08.50

Construction joint at Y4 Sta. 5+65.37 P.O.C.

Construction Barricades not shown. See Sheet No. 22 for details

Expansion Joint GGB&HD Sta. 22+65.02

Expansion Joint GGB&HD Sta. 22+04.95

GGB&HD 22+34.81 Y4 5+63.37

Bend up longitudinal bars where necessary

Concrete curb & walk to be removed from GGB&HD. Sta. 22+65.02 to 22+04.95 and replaced as indicated in Stage 2

Expansion Joint

Place additional paving from GGB&HD sta 21+44.61 This Slab in Place

GGB&HD curb

Approach Paving to be placed in order shown in first stage, and according to Typical Section on Sheet No. 17

Expansion Joints

Construction Joints

Excavate for and complete structure in second stage

See Sheet No. 17 for sidewalk section

GGB&HD sidewalk

Y2 170+06.6 ℄ GGB&HD 24+44.61

GGB&HD section

Second step
First step
End of transition section

STEP SECTIONS
Scale: ½"=1'0"

NOTES:
Allow 7 days, or as determined by the Engineer, after completion of south portion of structure and approach paving before opening to traffic and commencing second stage.
Allow 7 days, or as determined by the Engineer, after completion of north portion of structure and approach paving before opening to traffic.
Approach paving and deck slab to be poured with high early strength cement according to Special Provisions

FIRST STAGE
Scale: 1"=10'

SECOND STAGE
Scale: 1"=10'

½"ϕ stirrups @ 18" ctrs
½"ϕ hoops @ 18" ctrs
½"ϕ bars

SECTION A-A
Scale ½"=1'0"

AS BUILT
CONTRACT 34-01
U.S.A. Calif. 2013-F Unit 3
Contract accepted July 6, 1940

½"ϕ bars @ 18" ctrs
½"ϕ stirrups @ 18" ctrs
½"ϕ bars @ 12" ctrs
½"ϕ hoops @ 18" ctrs
½"ϕ bars

SECTION B B
Scale: ½"=1'0"
Note: Conduits not shown

½" Expansion Joint Fill with expansion material and provide copper water stop
Sta 6+01.00
Sta 6+23.50

S.W. COLUMN Retaining Walls S.E. COLUMN
COLUMN FOOTINGS
Scale: ½"=1'0"

Note: 22 Ft pavement not a part of the contract

For curb and gutter details see sh. # 19

ELEVATION OF SOUTH END PARALLEL TO CURBS
Scale: ½"=1'0"

End of columns

½"ϕ hoops @ 12" ctrs

½"ϕ Expansion Joint Fill with expan. mat'l & provide copper water stop
Sta 5+22.50
Sta 5+26.50

Retaining Walls

NE COLUMN FOOTING N.W. COLUMN FOOTING
Scale: ½"=1'0"

⅝"ϕ 9'0" bars

½"ϕ bars
⅝"ϕ 4'-4" dowels
½"ϕ 3'-2" bars

SECTION OF NE COLUMN
Scale: ½"=1'0"

34-19
34-20
34-23

FUNSTON AVENUE VIADUCTS TO GOLDEN GATE PARK

AS BUILT PLANS
Contract No. 34-01
Date Completed
Document No. 1-1000255?

Approved for Commanding General
Ninth Corps Area
Colonel, Corps of Engineers
Engineer

April 11, 1939

31'-0"

Reinforcement is symmetrical about ℄

9'-0"

⅞"ϕ shear bars @ 18" ctrs. radially and 20"± longitudinally

⅞"ϕ 20'-9" Ⓓ bars @ 10" ctrs.

¾"ϕ 25'-4" Ⓒ bars @ 10" ctrs.

1'-3"

1'-3"

1'-8"

1'-8"

For deck elevations see Sheet No. 15

1¼"ϕ bars @ 18" ctrs.

Parabola

½"ϕ distribution bars @ 9" ctrs.

¾"ϕ 31'-6" Ⓔ bars @ 10" ctrs.

¾"ϕ 22'-0" Ⓑ bars @ 10" ctrs.

12 @ 9" = 9'-0"

½"ϕ @ 15"ϕ

2'-10"

22'-0"

2'-10"

2'-6"

1'-10"

For details of electric outlet (on ℄ G.G.B. and in easterly face of Underpass D) see Sheet No. 27

⅞"ϕ Ⓒ bars @ 12" ctrs. Length varies

27'-8"

⅞"ϕ Ⓔ bars @ 12" ctrs.

⅞"ϕ, 14'-0" Ⓕ bars @ 12" ctrs.

Vertical

1 lap ϕ 14

6"±

Top slab steel

⅜"ϕ deformed bar

4 laps ϕ 14

1 lap ϕ 14

14" soft wire ties

Bottom slab steel

6"±

90°

⅜"ϕ deformed bar. Bend in shop or field

90°

6"±

℄ main steel to ℄ spacer

SHEAR BARS FOR SLAB STEEL

No scale.

⅝"ϕ shear bars @ 18" ctrs. vertically and 20" ctrs. longitudinally

5/8"ϕ bars @ 18" ctrs.

5/8"ϕ 9'-0" bars @ 20" ctrs.

½"ϕ bars @ 18" ctrs.

See sh.# 19 for curb and gutter reinforcement

See sh.# 19 for curb and gutter reinforcement

24'-0" Roadway

12'-0"

12'-0"

4" ϕ Weep holes @ 6'-4" centers. Provide suitable rock backing for weep holes

1'-6"

4"

Superelevation .064 ft/ft

2'-0"

2'-0"

2'-0"

2'-0"

11'-0" standard lane

Ground Line as excavated

11'-0" standard lane

8" P.M.P. Underdrain

8" P.M.P. Underdrain

℄ structure

NOTE: 22 ft. pavement not a part of this contract

1'-6"

2'-0"

1'-6"

TYPICAL SECTION NORMAL TO Y4 LINE

Construction Joint Expansion Joint G.G.B. Sta. 22+65.02

Remove all existing dowels along joint

½"ϕ bars @ 30" ctrs. top

½" bars @ 30" ctrs. bottom

¾"ϕ bars top & bottom

2'-6"

6"

SECTION D-D

℄ Highway G.G.B.

½"ϕ bars @ 6" ctrs. top and bottom

Face of Paving Notch

NOTE: Transverse steel does not go through joints.

Place ¼" Deflection Joint in wall, stem at center of span

1'-4"

5'-0"

2"

6'-9"

¾"

½"ϕ stirrups @ 18" ctrs. placed parallel to ℄ of fence post

Slope = ¼"/1ft. Down

½"ϕ bars

½"ϕ stirrups @ 18" ctrs.

2"x6" opening

Varies

½"ϕ stirrups @ 18" ctrs. placed parallel to Y4 ℄

NOTE: See Sheet No. 18 for location of Sections A-A and B-B

SECTION A-A

2"

1'-5"

8"

10"

½"ϕ bars

½"ϕ stirrups @ 12" ctrs. placed parallel to Y4 ℄

SECTION B-B

SIDEWALK CROSS SECTION

Scale: ¾"=1'0"

Cover Finish to follow with ℄ of Y4

Varies

Varies

Cold joint perfectly clean

Construction Joint

SECTION C-C

CONSTRUCTION JOINT IN DECK SLAB AT STATION 5+65.37 POS. Y4

Y4 Sta. 6+28.50

¾"ϕ dowels @ 12" ctrs. 60°-0"

½"ϕ bars @ 9" ctrs.

½"ϕ bars @ 12" ctrs.

⅞"ϕ Ⓕ bars

12'-0" to Y4 ℄

½"ϕ hoops @ 12" ctrs.

⅞"ϕ, 19'-0" Ⓖ bars @ 12" ctrs.

¼"ϕ, 23'-0" Ⓩ bars @ 5" ctrs.

S.E.

1'-2" at

CROSS SECTION OF SOUTH END COLUMN

Scale: ¾"=1'-0"

See Sheet No. 17

AS BUILT
Work not done
As per C.E. Letter dated
Contract modified July 6, 1940

AS BUILT PLANS
Contract No. 24WC1
Date Completed
Document No. 40002557

#34-19
34-20
34-23

FURSTON
FOR GUIDE

AS BUILT PLANS
Contract No. 24 W.C.1
Date Completed
Document No. 40002557

April 11, 1939

Approved for Commanding General
Ninth Corps Area
Colonel, Corps of Engineers
Engineer

NOTE:
Longitudinal bars are to be long enough to allow for splicing at or near construction joint at Y4 sta 5+65.37. See Sheet No. 16 for sequence of operations.

⅞"ø - 28'-9" Ⓒ bars in top of curb. 9'-0"

½"ø stirrups @ 12" ctrs.

⅞"ø Ⓓ bars Length varies

¾"ø Ⓒ bars Length varies

¾"ø - 20'-9" Ⓓ bars @ 10" ctrs. on Y4 ℄

½"ø bars @ 18" ctrs.

½ Y2 C ℄

⅞"ø Ⓕ bars 34'-9" bars in top of curb.

½"ø bars Length varies

2 - 1⅛"ø - 34'-0" Ⓕ bars

1¼"ø - 34'-0" Ⓕ bars.

1¼"ø - 28'-9" Ⓟ bars.

½"ø stirrups @ 18" ctrs.

9'-0"

¾"ø - 25'-4" Ⓒ bars @ 10" ctrs. on Y4 ℄

½"ø @ 18" ctrs.

Y4 5+90.83
Y2 59+08.50

⅞"ø - 20'-9" Ⓓ bars @ 10" ctrs. on Y4 ℄

TOP REINFORCEMENT, SOUTH END

½"ø bars Length varies No. 17 per spacing

½"ø bars @ 9" ctrs.

½"ø stirrups @ 12" ctrs.

¾"ø - 31'-6" Ⓔ bars @ 10" ctrs. on Y4 ℄

½"ø stirrups @ 18" ctrs.

1¼"ø - 24'-0" Ⓧ bars

1¼"ø - 40'-0" Ⓘ bars

¾"ø Ⓐ bars @ 10" ctrs. on Y4 ℄ Length varies

Ⓓ bars @ 10" ctrs.

⅞"ø - 20'-9" Ⓓ bars @ 10" ctrs. on Y4 ℄

¾"ø - 25'-4" Ⓒ bars @ 10" ctrs. on Y4 ℄

⅞"ø Ⓓ bars @ 18" ctrs.

⅞"ø - 21'-3" Ⓓ bars @ 10" ctrs. normal to curb, in top of sidewalk.

¾"ø - 27'-0" Ⓔ bars @ 10" ctrs. normal to curb, top of sidewalk.

½"ø stirrups @ 18" ctrs.

TOP REINFORCEMENT, NORTH END

¾"ø - 22'-0" Ⓓ bars @ 10" ctrs. on Y4 ℄

½"ø bars @ 9" ctrs.

Ⓓ bars @ 10" ctrs.

Ⓓ bars

AS BUILT
Contract No. 24
Ft. M. Calif. 3013-F Unit 2
Contract terminated July 5, 1940

BOTTOM REINFORCEMENT, NORTH END

FUNSTON AVE

AS BUILT PLANS
Contract No. 24WC1
Date Completed
Document No. 40002557

PWA 2013-F
UNIT 3

DIST.	COUNTY	ROUTE	SECTION	SHEET	TOTAL SHEETS
4	SF	5C		19	31

April 11, 1939

Approved for Commanding General
Ninth Corps Area
Colonel, Corps of Engineers,
Engineer

DEPARTMENT OF PUBLIC WORKS
BRIDGE DEPARTMENT

DETAILS OF ELECTROLIER BASE
At Sta. 7+30.00
Scale 1"=1'-0"

SECTION A-A

PLAN

ELEVATION OF RIGHT WALL

ELEVATION OF LEFT WALL
Scale: 1"=20'

DETAIL OF CURB AND GUTTER ALONG WALLS
Scale 1"=1'-0"

TYPICAL SECTION

END VIEW

PLAN

LONGITUDINAL VIEW

DETAILS OF GUTTER, DRAINS AND WALL RETURN
Scale 1"=1'-0"

TYPICAL SECTION THROUGH ROADWAY
STA. 6+80 TO 8+50
Scale 1"=10'

TYPICAL SECTION AT UNDERPASS
Scale: 1"=20'

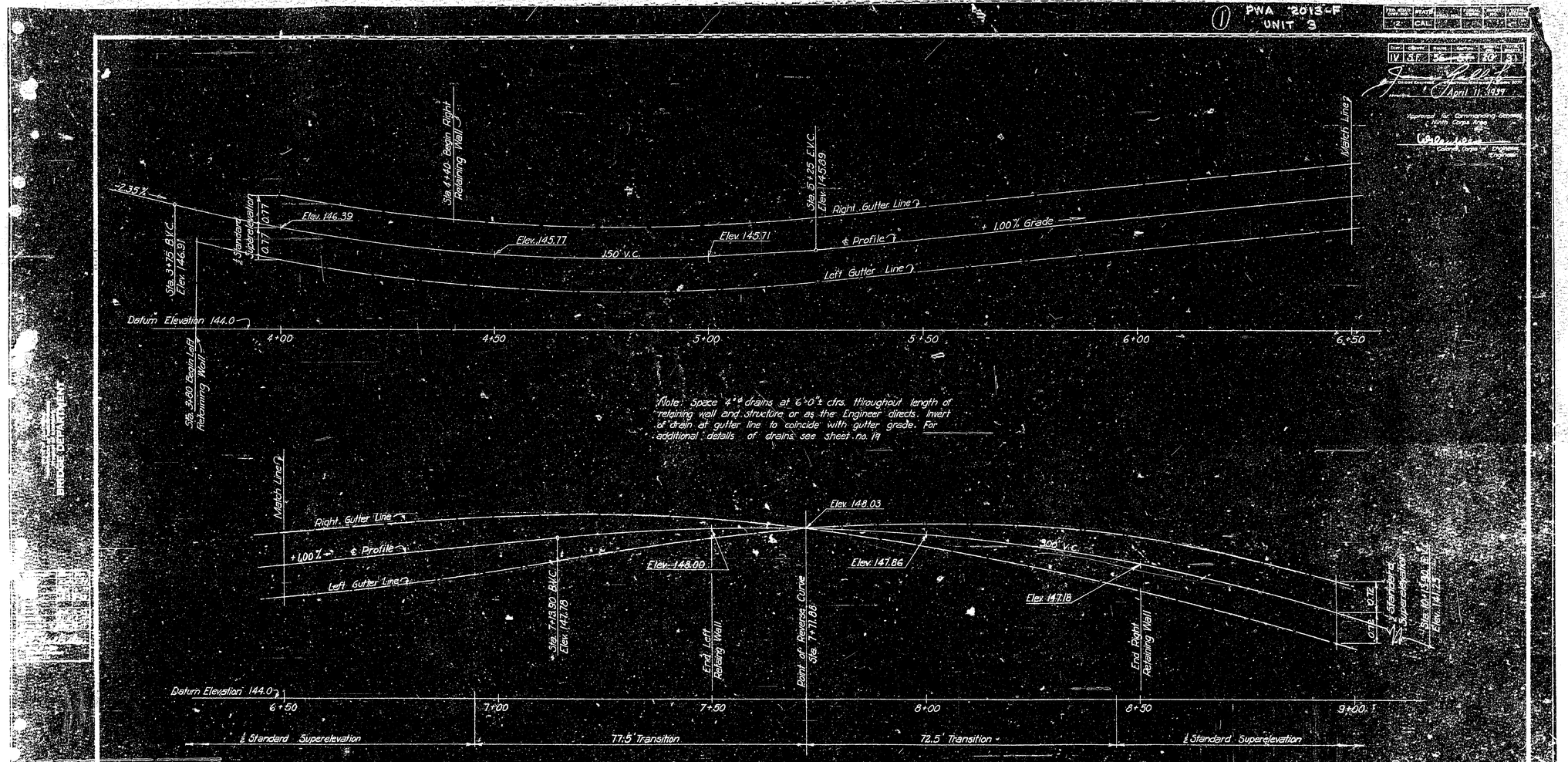
Note: For dimensions and reinforcing of walls see Sh. #21. Expansion joints in wall to be provided with copper water stop.
Elevations of footings and tops of walls may be changed by the Engineer to suit conditions encountered in the field.
4" ø Drains @ 6 ctrs. set so that invert gutter coincides with gutter grade. For gutter grades see Sh. #20

#34-19 #37-20 #342

FUNSTON AVENUE VIADUCTS TO GOLDEN GATE BRIDGE
UNDERPASS
RETAINING WALL LAYOUT

Scale	As Shown	Drawn		Traced		Checked	
Bridge No.	34-22	Designed		Quantities		Approved	

PWA 2013-F
UNIT 3



April 11, 1939

Approved for Commanding General
Ninth Corps Area

Colonel Corps of Engineers
District Engineer

AS BUILT PLANS
Contract No 24WC1
Date Completed
Document No 40002552

AS BUILT
CONTRACT 24WC1
P.W.A. Calif. 2013-F Unit 3
Contract accepted July 6, 1940

34-19
34-20
34-23

FUNSTON AVE. WHERE IT CROSSES
TO GOLDEN GATE

SCALE

PWA 2012-F
UNIT 3

FED. ROAD DIST. NO.	STATE	ROUTE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
2	CAL.				

24	1	1	5	1	31

April 11, 1939

Approved for Commanding General, Ninth Corps Area

Colonel, Corps of Engineers, Engineer

U.S. ROUTE
CONTRACT 24W1
Calif. 2012-F Unit 3
Contract Accepted July 29, 1939

BRIDGE DEPARTMENT

4"ϕ Drains @ 6'± ctrs. Outlet invert grade to be at Roadway gutter grade. For gutter grades see Sheet No. 20. Place drains below level of walk for wall section shown on Sheet No. 14. Place drains at ground line for other locations.

1'-0" Layout Line 1'-0" ½"ϕ bars along top of wall. 2 Dia., 1½" Min. 18" ½"ϕ bars @ 18" ctrs. Vertical 2 Batter ⅛:12 H ⓒ bars ⓔ bars Provide suitable stone backing. W C B Construction Joint 2" ½"ϕ dowels @ 18" ctrs. ½"ϕ bars ½"ϕ bars 1'0" 2 Dia., 2" Min. Stop ⓔ bars. S ½ W Omit key when founded on rock or when so directed by the Engineer.

TYPICAL SECTION "H" = 20' OR LESS

H=26'-0" H=24'-0" H=22'-0" H=20'-0" H=18'-0" H=16'-0" H=14'-0" H=12'-0" H=10'-0" H=8'-0" H=6'-0" ½"ϕ spacer bars @ 18" ctrs. ⓒ bars str. with dowels bent into footing. ⓔ bars bent into footing. ⓒ bar dowels ⓔ bars ⓒ bars 40 Dia. 23'-6" lg. 21'-0" lg. 18'-6" lg. 16'-6" lg. 12'-6" lg. 11'-0" lg. 9'-7" lg. 8'-0" lg. 6'-0" lg. 5' 5' 5' 7'0 7'0 7'0 7'0 6'0 6'0 8'0 10'0

Note: ⓒ bars not shown. ELEVATION

TABLE OF REINFORCING STEEL DIMENSIONS AND DATA

H	26'	24'	22'	20'	18'	16'	14'	12'	10'	8'	6'
W	16'-0"	14'-0"	13'-5"	12'-3"	11'-0"	9'-11"	8'-10"	7'-9"	6'-8"	5'-7"	4'-6"
C	5'-0"	5'-1"	4'-8"	4'-3"	3'-10"	3'-5"	3'-0"	2'-7"	2'-2"	1'-9"	1'-4"
B	10'-5"	9'-8"	8'-10"	8'-0"	7'-2"	6'-5"	5'-10"	5'-2"	4'-6"	3'-10"	3'-2"
F	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	1'-8"	1'-6"	1'-5"	1'-3"	1'-2"	1'-2"
S	3'-0½"	3'-0½"	2'-6½"	2'-0½"	1'-7½"	1'-3½"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
ⓐ bars	1"ϕ @ 15"	1"ϕ @ 15"	1"ϕ @ 15"	1"ϕ @ 14"	1"ϕ @ 14"	1"ϕ @ 14"	1"ϕ @ 14"	⅞"ϕ @ 13"	⅞"ϕ @ 16"	⅞"ϕ @ 16"	⅞"ϕ @ 16"
ⓑ bars	1"ϕ @ 15"	1"ϕ @ 15"	1"ϕ @ 15"	1"ϕ @ 14"	1"ϕ @ 14"	1"ϕ @ 14"	1"ϕ @ 14"	⅞"ϕ @ 13"	⅞"ϕ @ 16"	⅞"ϕ @ 16"	⅞"ϕ @ 16"
ⓒ bars	1"ϕ @ 15"	1"ϕ @ 15"	1"ϕ @ 13"								
ⓓ bars	⅛"ϕ @ 7½"	⅛"ϕ @ 7½"	⅛"ϕ @ 7½"	1"ϕ @ 7"	1"ϕ @ 7"	1"ϕ @ 7"	1"ϕ @ 7"	1"ϕ @ 9"	1"ϕ @ 8"	1"ϕ @ 8"	1"ϕ @ 10"
ⓔ bars	1¼"ϕ @ 7½"	1¼"ϕ @ 7½"	1⅛"ϕ @ 7½"								

Typical retaining wall to be used for all walls included in this contract.

1'-0" Layout Lines 8" 1'-6" 4" 1'-0" 1'-6" H 1'3" 10" ½"ϕ bars ½"ϕ Bars @ 12" ctrs. "V" Groove 2 Vertical 2 3" ½"ϕ hoops @ 12" ctrs. 6'-6" lg. Batter ⅛:12 ½"ϕ dowels @ 9" ctrs 1'-0" lg. ½"ϕ dowels @ 18" ctrs. str. 2'-5" lg. Retaining wall reinforcing not shown.

CURB SECTION
Scale: ½"=1'-0"
Use this section between Sta ¼+18.49 & Sta 3+50.00.

2'-0" 1'0" 1'0" Chamfer ½" 2'-0" Batter 1:1 Batter ⅛:12

COPING
Scale: ½"=1'-0"
Use this section between Sta 3+80.00 & Sta 8+50.00.

1'-0" 5" Layout Lines 1'-0" Vertical 2 Batter 1:1 Batter ⅛:12 ⓐ dowels 2 Dia.

PAVING NOTCH SECTION
Scale: ½"=1'-0"
Use this section where required on Sheet No. 11.

1'-0" Layout Line 1'-0" ½"ϕ bars along top of wall. 2 Dia. 18" ½"ϕ bars @ 18" ctrs. Vertical 2 Batter ⅛:12 20'-0" Stop ⓔ bars ⓐ bars ⓐ & ⓔ bars 2'-0½" 4"ϕ Drains @ 6'± ctrs. for elevation see note on section for H less than 20'. Provide suitable stone backing. Batter 1:4 (22'-6" lg. for H=26' 19'-6" lg. for H=24' 16'-6" lg. for H=22') ⓒ bars S W ½"ϕ Swivels @ 18" ctrs. C B Construction Joint ⓔ bars ½"ϕ bars ⓔ bars 1'0" 1'0" Stop ⓒ & ⓔ bars Omit key when founded on rock or when so directed by the Engineer. 1'-0" 1'-0" ½ W

TYPICAL SECTION "H" GREATER THAN 20'

(34-19 34-20)

W B S ½"ϕ Spacer bars Copper Seal ½" Expansion joint, fill with premolded expansion joint filler. Joint to extend throughout height of wall only. Locate joints @ 30'± ctrs. or as directed by the Engineer.

PLAN OF EXPANSION JOINT.

Sheet Copper #22 Stubs Gauge 1"×4" Holes @ 8" ctrs. ½" Sheet of Exp. Jt. Filler

COPPER SEAL
Use Seal Only When Watertight Joint is Required.
Scale: 1½"=1'-0"

Sheet Copper #22 Stubs Gauge 4" Dia. 1½" 1½"

Scale: Full Size

AS BUILT PLANS
Contract No. 24W1
Date Completed
Document No. 4/0002557

PWA 2013-F
UNIT 3

Approved for Commanding General
9th Corps Area
April 11, 1939
Colonel, Corps of Engineers
Engineer

Special portable guard rail unit, to fit 30° bevel.
Provide steps over existing wall
Temporary Pedestrian Walk during construction
Portable Guard Rail during and stage to be left in place
Portable Guard Rail during First & Second Stages
Underpass & Retaining Wall "D"
Movable Guard Rail during First and Second Stages
Portable Guard Rail during First Stage
Portable Guard Rail to be left in place
High Viaduct Connection "E"
Portable Guard Rail during Second Stage
Detour for North bound traffic during construction
Portable Guard Rail to be left in place

PLAN OF WALKWAYS & GUARD RAILS
Scale: 1"=50'-0"

Black Paint
8"x8"x3'0" post @ 5'-5" ctrs.
3"x8"x12'0"
45°
White Paint
8"x8" brace
6 sacks of sand, total 12 per unit
2-3"x8"x2'0" scabs
Flares as directed by Engineer
2"x12"x12'0"
2"x10"x12'0"
2-3"x8"x3'7½"
2"x4"
¾" bolt countersunk
8"x10"x12'0" wheelguard
3"x8"x2'0" scabs
2- sacks of sand
⅝" bolt, countersunk
3"x8"x3'7½"
7"
5'-5"
5'-5"
12'0"

END ELEVATION
FRONT ELEVATION
PORTABLE GUARD RAILS
Scale ¾"=1'0"

5'0"
4"x4" posts on 6'-0" ctrs.
2" flooring
Flares as directed by the Engineer
8"x10" wheelguard
⅝" bolt, countersunk
2"x4" blocks
2-2"x12" floorbeams at each post

TYPICAL SECTION OF WALKWAY
Scale ¾"=1'0"

NOTES
Portable & Movable Guard Rails to be placed as directed by the Resident Engineer to allow for maximum clearance of traffic.
Sacks of sand on Guard Rails to be weighted as directed by the Resident Engineer.
Paint whole face of rail of both Portable and Movable Guard Rails with alternate stripes of black and white paint.
Guard rails and walkways may be constructed of used lumber in good condition.
Used cement sacks, or equal, in good condition shall be used for sand bags.

AS BUILT PLANS
Contract No. 24 WC1
Date Completed
Document No. 4000255?

Paint whole front face of rail as shown for Portable Guard Rail
44'-0"
1'-0"
6'-0"
6 spa @ 6'-0" = 36'-0"
1'-0"
3"x8" Rail
8"x8"x3'0" Post
Chip holes in existing concrete for expansion shields @ 3'0" ctrs.
¾" bolts
⅝" bolts
10"
First Stage: ¾" machine bolts with expansion shields @ 3'0" ctrs.
Second Stage: ¾" machine bolts imbedded in concrete @ 3'0" ctrs.
⅝" bolts
Countersunk
8"x10" wheelguard
Construction Joint
During First stage, imbed ¾" machine bolts in fresh concrete @ 3'0" ctrs.

SECTION A-A FIRST STAGE
SECTION A-A SECOND STAGE
FRONT ELEVATION
MOVABLE GUARD RAIL
Scale ¾"=1'0"

AS BUILT PLANS
Contract No. 24 WC1
Date Completed July 6, 1940
Document No. 4000255?

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34-20
34-23

FUNSTON ... TO 6[illegible]
WALK ... GUARD RAILS
SCALE AS SHOWN
Bridge No. 34

PWA 2012-F
UNIT 3

FED. ROAD DIST. NO.	STATE	PROJECT	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
2	CAL.				

Dist.	County	Route	Section	Type	Total Sheets
1	SF	76	C	23	31

April 11, 1939

Approved for Commanding General, 9th Corps Area
W. D. Crawford
Colonel, Corps of Engineers, Engineer

DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
STATE OF CALIFORNIA

DETAIL OF PLANT MIX GUTTER
Scale: ½"=1'-0"

PIPE BARRICADE
Scale: 3/16"=1'-0"

FENCE RETURN
Scale: ½"=1'-0"

SECTION (A)—(A)
Scale: ½"=1'-0"

TYPICAL SECTION THRU WALK
Scale: ½"=1'-0"

PLAN OF FENCE AND WALKWAYS
Scale: 1"=30'-0"

CURB TRANSITION DETAILS

CURB DETAILS
Scale: ½"=1'-0"

AS BUILT PLANS
Contract No. 24WC1
Date Completed
Document No. 4000257

AS BUILT
Contract No. 24-WC-1
Contract Completed July 14, 1941

(34-19
34-20
34-23)

PWA 2013-F
UNIT 3

FED. ROAD DIST. NO.	STATE	DIST.	COUNTY	ROUTE NO.	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
2	CAL	IV	S.F.	56	S-F		24	31

BRIDGE ENGINEER STRUCTURAL ENGINEER - LICENSE #6618

APPROVED April 11 1939

"Approved For Commanding General Ninth Corps Area"
Colonel, Corps of Engineers, Engineer

PANEL SECTION E-E

PANEL SECTION L-L

SECTION F-F

TYPE "A"

SECTION M-M

TYPE "D"

OPEN ROADWAY
TYPICAL INSTALLATIONS
Scale: 1"-10'-0"

AS BUILT PLANS
Contract No. 24WCA
Date Completed
Document No. 400025557

AS BUILT DATA
Contract Specifications Dwg. No. 2013-F Sht. 2
Contract Accepted July 8, 1940

Note: Recesses shown on this sheet are to be used only on Full 1'-0" curbs: Omit from transition curbs adjacent to Golden Gate Bridge Curbs.

34-19
34-20
34-23

FUNSTON AVENUE VIADUCTS TO GOLDEN GATE BRIDGE
UNIT NO. 3
RECESSED CURB FACES

SCALE 1" = 0'-3" | LOCATION

BRIDGE NO. 34-21, 34-22 | DRAWING NO. C-918-24

BRIDGE DEPARTMENT

PWA 2013-F
UNIT 3

4 Dia backing for all bars except those in bottom of girders which shall be 2 dia.

Overall

Retaining Wall

HOOKED BAR DATA						
4 DIA BACKING		ALL HOOKS		2 DIA BACKING		
	A	B	D	A		
					in.	#
3	2'-1"	1'-6"	3½	3¼	6½	¾
4	2'-6½"	1'-9"	3½	3¾	7½	⅞
5	2'-11½"	2'-0"	3½	4¼	8½	1
6	3'-4½"	2'-3"	4	4¾	9½	1⅛
7	3'-9½"	2'-6"	5	5¼	10½	1¼
8	4'-2½"	2'-9"	5½	5¾	11½	1½
9	4'-7½"	3'-0"	6	6¼	12½	1¾
10	5'-0½"	3'-3"	6½	6¾	13½	2
11	5'-5½"	3'-6"	7	7¼	14½	2¼

* Amount to be added to overall dimension of concrete member to give the length of the hooked reinforcing bars, hooked at each end.

1'-6" 4"

For details of Grating Frame see this sheet

1'-0"

2'-0"

12" Dia

6"

Note space for Drop Inlets if called for on plans where necessary

See Sheet No. 1 for FL. elevs.

All bars ½" @ 6" ctrs

TYPICAL SECTION OF DROP INLETS
Scale: 1"=1'-0"

13 - ½" ø bars, 1'-6" lg.

All bars ½"x½" weld

To be galvanized after fabrication

1'-6"

1" ø x 1'-6" bars

GRATING DETAILS
Scale: 1"=1'-0"

5'-0"

Varies

2'-0"

1'-6"

9"

3"

4"

PLAN
UNDERPASS "D" RETAINING WALL END DRAINS
Scale 1"=1'-0"

DATE
Scale: 3"=1'-0"

For details of grating see this sheet

1'-6½"

1'-6"

8" C.M.P.

NOTE For locations see Sheet No. 19

1'-6½"

1'-6"

1'-2½"

All bars ½" ø @ 6" ctrs

NOTE For locations see Sheet No. 1

PLAN
DRAINS AT PEDESTRIAN UNDERCROSSING
Scale 1"=1'-0"

SECTION A A

3'-0"

2'-0"

6"

2'-0"

6"

6"

See this sheet for details of Grating

Top of curb

Bottom of curb

All bars ½" ø @ 6" ± ctrs

2'-6½"

3'-9½"

6"

PLAN OF DROP INLETS AT ℄ STA. 4+80 AND 18+50
Scale: 1"=1'-0"

AS BUILT

GENERAL NOTES

Materials and workmanship shall conform to the Standard Specifications of the State of California, Department of Public Works, Division of Highways, dated January, 1935, and to the Special Provisions accompanying this set of plans.

Design Data:
H 15 loading f_s = 18,000 #/sq in. f_c = 1,000 #/sq in.
All concrete to be Class A
Reinforcing steel to be Structural Steel grade, embedded at least 2 diameters and lapped 40 diameters where spliced.

⅜"ø - 1¾" bolt Weld head to under side of frame

1¼"x1¼"x⅛" ∠ 1'-3¼" lg.

Miter and weld angles at all corners

11¾"

10"

5/16"

½"ø - 8¼" bar

GRATING FRAME

¼" fillet welds

7/16" ø hole

¾"x¾" bar weld all joints

Weld all ½" ø bars to 1"x2"

GRATING SIDEWALK DRAIN
Scale 3"=1'-0"
to be Galvanized after fabrication

NOTE For location see Sheet No. 1

SECTION
SIDEWALK DRAIN

Cast Steel Frame

Joints

Frame to be cast in two sections.

2'-11¾"

1'

2'-11¾"

CURB INLETS FRAME DETAIL
Scale: 1"=1'-0"

15/16"

1/16"

1"

1¼"

½"

1½"

3"

½"ø x 4" bars or rivets cast or welded into frame, @ 18" ctrs.

FRAME SECTION
Scale: 1"=1"

AS BUILT PLANS
Contract No. 24WC1
Date Completed
Document No. 40002557

Gutter of plant mix

6"

5'-0"

6"

6"

6"

6"

Gutter of plant mix

8"ø C.M.P.

SIDE VIEW

12'-6"

2'-6"

1'-6"

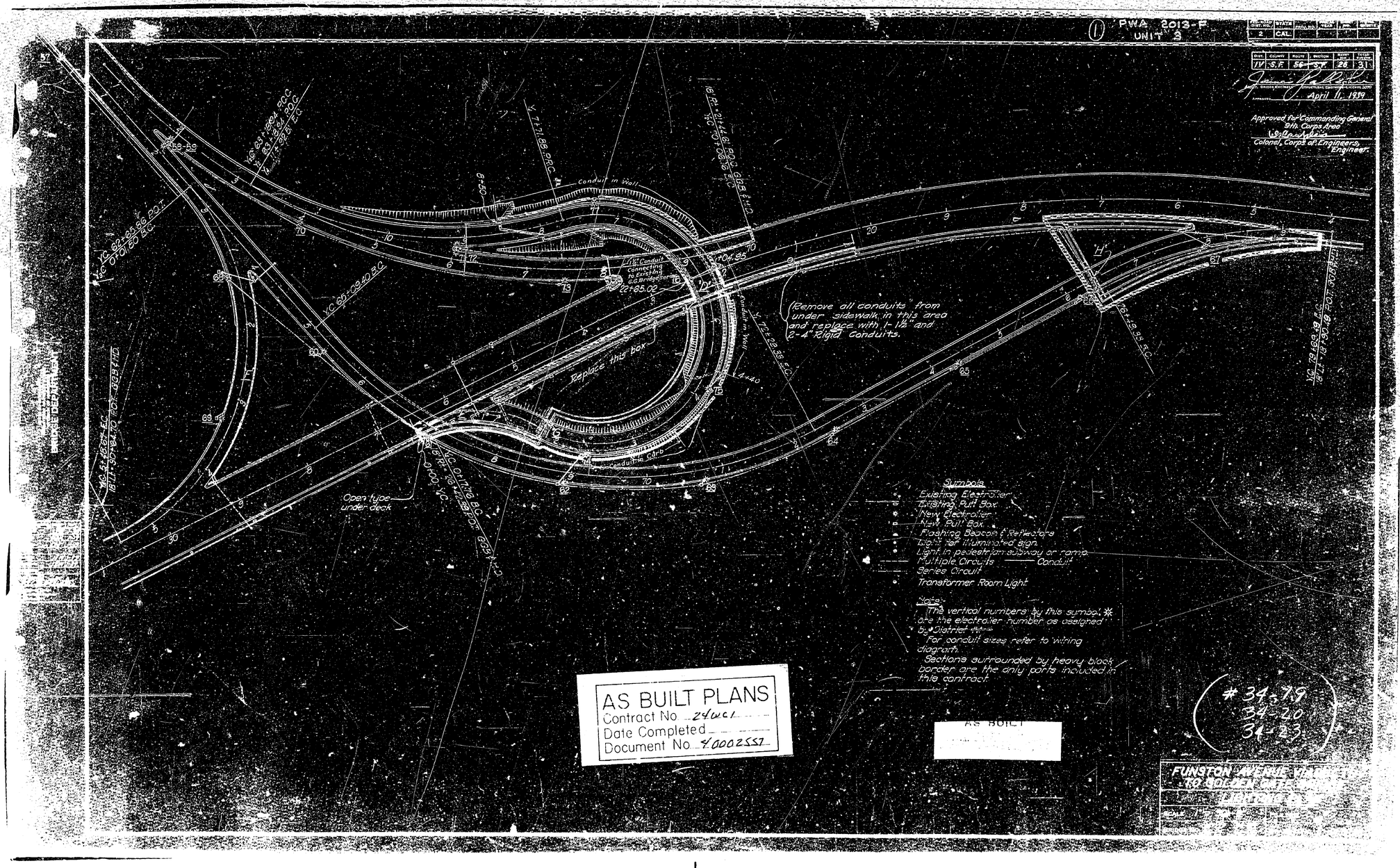
1'-6"

Gutter of plant mix surfacing

FRONT ELEVATION

CONCRETE HEADWALLS

FUNCTIONAL
TO
UNI


PWA 2013-F
UNIT 3
April 11, 1939
Approved for Commanding General
9th Corps Area
Colonel, Corps of Engineers
Engineer
Remove all conduits from under sidewalk in this area and replace with 1-1½" and 2-4" Rigid Conduits.
Replace this box
Conduit in Wall
1½" Conduit Connecting to Existing C.C. Bridgeseat
Open type under deck
Symbols
Existing Electrolier
Existing Pull Box
New Electrolier
New Pull Box
Flashing Beacon & Reflectors
Light for illuminated sign
Light in pedestrian subway or ramp
Multiple Circuits
Conduit
Series Circuit
Transformer Room Light
Note:
The vertical numbers by this symbol ✳ are the electrolier number as assigned by District
For conduit sizes refer to wiring diagram.
Sections surrounded by heavy black border are the only parts included in this contract.
AS BUILT PLANS
Contract No. 24WC1
Date Completed
Document No. 40002557
AS BUILT
#34-19
34-20
34-23

P.W.A. 2613-F
UNIT 3

PULL BOX 'A' DETAIL
Scale 3/8"=1'-0"

SECTION (A)

Note:
Pull Box 'A' is similar to Pull Box 'B' except as noted. For details of barriers, ect. see Sheet 26

V or VC Conduit, or equal

TRANSFORMER ROOM LIGHT
Scale: 1/2"=1'-0"

Expansion Joint, Crouse Hinds, Type XJ, or equal

RIGID CONDUIT EXPANSION JOINT
Scale 1/2"=1'-0"

Approved for Commanding General
9th Corps Area
(Signed)
Colonel, Corps of Engineers
Engr.

Connect to every conduit

Pull Box Locate as directed by the Engineer

Greenfield Duct

Rigid A.C.

New 4" C (Rigid)

3" Drain

1-3" Conduit to Substation at South end of Viaduct 'B'
2-2" Conduits to Substation - spares
1-2" Conduit from Substation, 2300 volt Feeder

These conduits to be underground along the 'A' Line

4" Conduit for Multiple Circuit No. 6
2-Sign Light Circuits
1-Flasher Circuit

4" C. Semi-tangent

4" Rigid Conduit, Greenfield Duct or equal

2-4" Rigid

Sign Light

4" Conduit for Multiple Circuit No. 3

4 Conduits Encased in Concrete to Back of Roadway Curb

3" Amber Flashing Beacon & 2 Ruby Reflectors

4" Metal Conduit

Pull Box 'A'
4'x6'x24" Pull Box, Locate in wall as directed by Engineer

Oscillating Electrolier

Sign Light

Pull Box 'B'
Final location to be determined in the field. See Sheet 28 for detail.

3 Trans. Pole Conduits
1 Pigtail Conduit
} Existing

Transformer

4" Conduit for Multiple Circuit No. 5

4" Conduit for Multiple Circuit No. 1
2-Sign Light Circuits
1-Flasher Circuit
1-Undercrossing 11 Light Circuit
This conduit to leave transformer room at approximate level of existing ground

Circuit No. 1 Transformer Room Light

4 of Electrolier

Note:
To be level in both directions

Bring conduit out front of wall 3'-0" above top of footing

Pedestrian Undercrossing 6'-0" Min. 12.00

4 of Electrolier
Sta 4+18.4 (125), Sta. 11+24 (67)
11" Anchor Bolts (Furnished by others)

Expansion joint

2-1" Conduits

Transformer Vault

Conduit Routing TRANSFORMER ROOM

Contractor
P.W.A. Calif. 2613-F Unit 3
Contract accepted July 6, 1940

6"x12"x8" Surface mounted Pull Box @ ceiling Elev.

1" Conduit circuit #5 from Transformer Room above

1" Conduit - circuit #6 from under Dock along Pier

1" Conduit-Circuit #5 to Street Light on Dock

1" Conduit Stubbed out 1'-0" above Floor

4 INCH EXPANSION JOINT
Scale 3"=1'-0"

3" Conduits - Stubbed into Room 1'-0" below Ceiling

24"x24"x8" Pull Box - 4'-0" from Floor

3" Conduit to Substation from Pull Box

3" Conduit to Service from Pull Box 'A' (Spare Conduit)

1" Conduit fastened to wall above ground

1" Expansion Fitting through ceiling

Location of future Transformers

Note: Transformers and Switching equipment owned and maintained by P.G.& E.

Transformer Room Plan
Scale 1/4"=1'-0"

AS BUILT PLANS
Contract No 24WC1
Date Completed
Document No 400025527

UNIT 3

11	S.P.	36		6	36
17	S.P.	36		6	36

April 17, 1941

Approved for Commanding General
9th Corps Area
Colonel, Corps of Engineers
District Engineer

This location does not apply between Sta. 193+93 & 171+93

8"℄

3" Conduit (Transite)

1½" Conduit (Greenfield Duct)

1" Conduit (Greenfield Duct)

SECTION SHOWING PRESENT LOCATION OF CONDUITS
Scale 1"=1'-0"

This is location of conduits on north side of bridge, between pull boxes at Sta. 193+93 and 171+93 G.G.B.&H.D.

Note — 3" Transite to be replaced with 4" Rigid Conduit where 3" Transite is removed.

5-⅝" ϕ bars, str. 2'-3" long

⅝" ϕ bars, 2'-10" lg.

3'-6" 6" 9"

4" Steel Barrier
4-⅝" ϕ bars, ⌐⌐ 3'-0" lg.
⅝" ϕ bars, — 3'-9" lg.
⅝" ϕ bars, ⌐⌐ 3'-0" lg.
⅝" ϕ bars, — 2'-9" lg.
(Total 6)

3-½"x1¼" Straps welded to Anchor Plate

1" Anchor Plate

1" Barrier Plate

Copper Bearing Steel

2'-3"

2'-6"

3'-0"

Semi-Steel Frame, 1" thick

⅝" Bolts Diecur or equal

3" Drain Hole

PULL BOX DETAIL-B
Scale ½"=1'-0"

BARRIER DETAIL
Scale ½"=1'-0"

Concrete to be 6½" cut around lifting eye as shown

¾" ϕ steel lifting ⅝" eye, galvanized

¾" Rod

LIFTING EYE DETAILS FOR PULL BOX COVER
Scale 6"=1'-0"

CONTRACT 4001
P.W.A. Grade Separation
Contract completed Jan. 31, 1942

Y-BRIDGE CONNECTION
Scale 1"=20'

Conduit in 3" cover of Class "B" Concrete

Conduit

L.X.G. Line

Series Circuit

Sign Illumination circuit. Run along back of curb except at underpass. Run under curb at underpass.

Cut back existing ½" conduit to clear roof. When replaced in final position the conduit shall be under the curb.

Existing Electrolier

6'x10'x8'6" C.I. Pull Box (Type M)

Conduit

Conduit

Conduit

Existing Electrolier

Existing Electrolier

Reconstruct clear space for relocation of wind. Electrolier will be removed and reset by others.

CONDUIT CROSSING AT UNDERPASS

AS BUILT PLANS
Contract No 24WC1
Date Completed
Document No 400027557

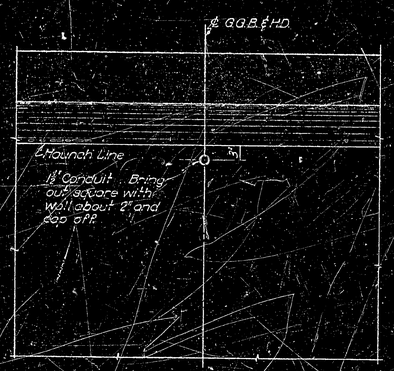
PWA 2018-F
UNIT 3

DIST.	COUNTY	ROUTE	SHEETS	SHEET NO.	TOTAL SHEETS
IV	S.F.	30	34	20	31

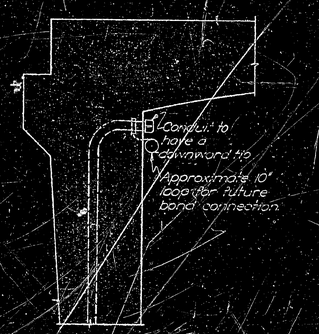
April 11, 1939

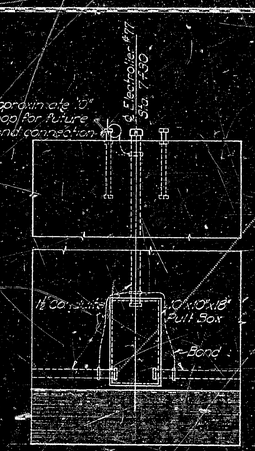
Approved for Commanding Gen'l. 9th. Corps Area

Colonel, Corps of Engineers, Engineer.

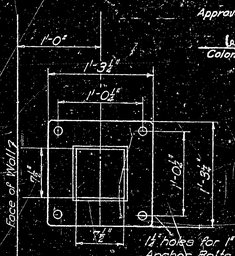


CONDUIT INSTALLATION FOR ELECTROLIER 76
Scale 1"=1'-0"

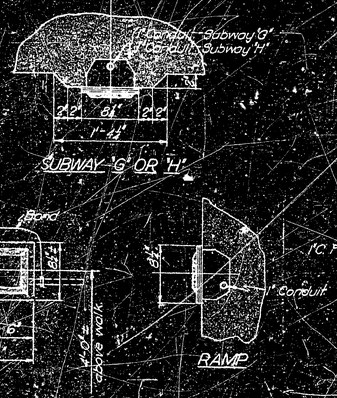




CONDUITS FOR ELECTROLIER 77
Scale 1"=1'-0"



TEMPLATE FOR BASE PLATE ELECTROLIER 77
Scale 1½"=1'-0"

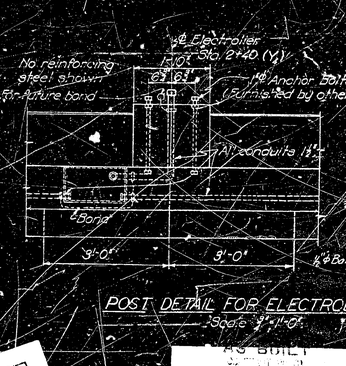


SUBWAY "G" OR "H"

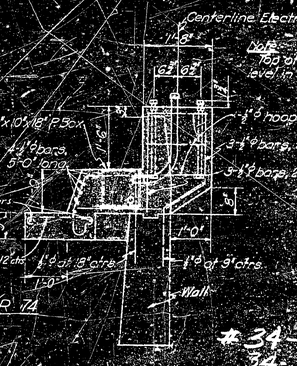
RAMP

PEDESTRIAN RAMP & SUBWAY LIGHTS
Scale ½"=1'-0"

LIGHT LAYOUT
SUBWAY "H"
Scale 1"=10'



POST DETAIL FOR ELECTROLIER 74
Scale ½"=1'-0"



AS BUILT PLANS
Contract No. 24WC1
Date Completed
Document No. Y0002557

#34-19
34-20
34-21