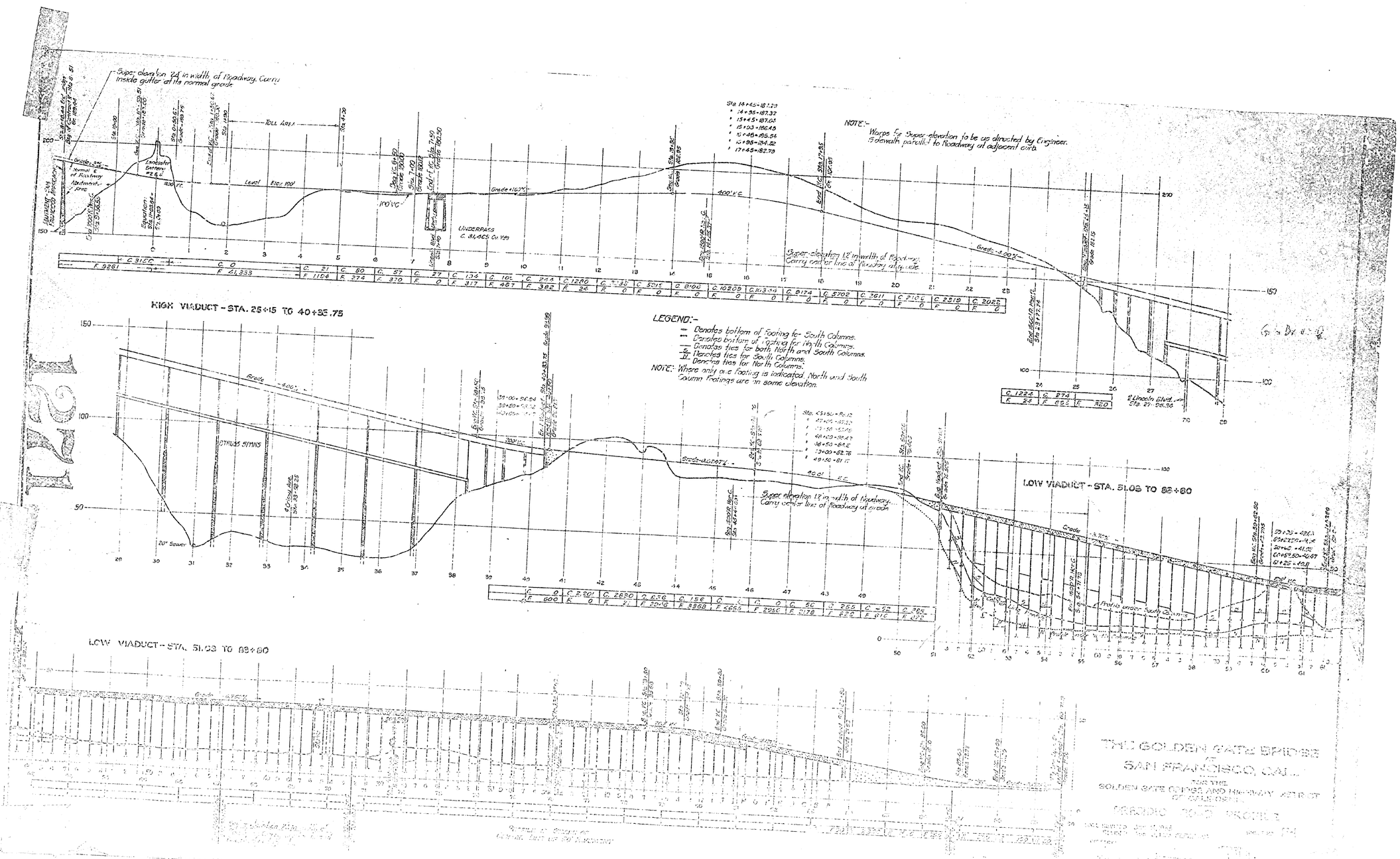
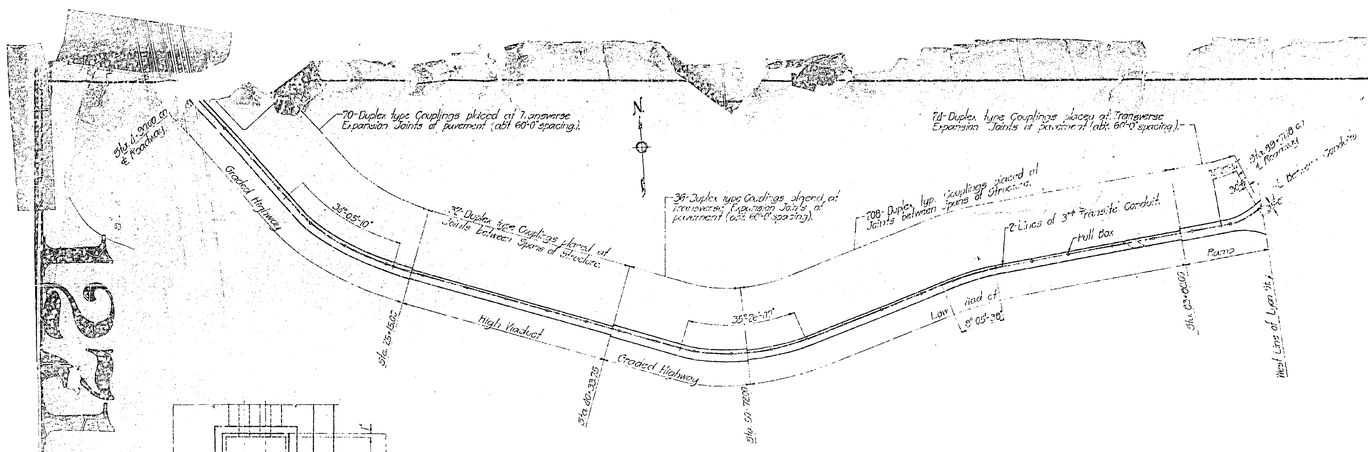
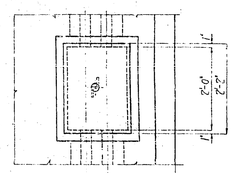


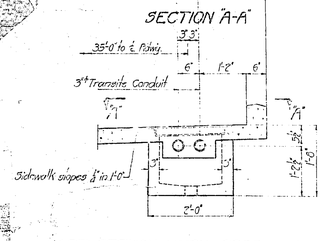
THE GOLDEN GATE BRIDGE
AT
SAN FRANCISCO, CAL.
FOR THE
GOLDEN GATE BRIDGE AND HIGHWAY DISTRICT
OF CALIFORNIA
GRADE LINE PROFILE



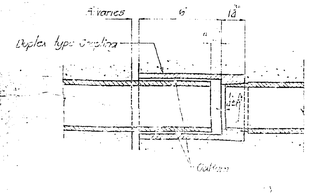
PLAN OF PRESIDIO ROAD
Showing Pull Boxes & 3" Transite Conduit



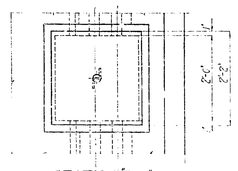
SECTION "A-A"



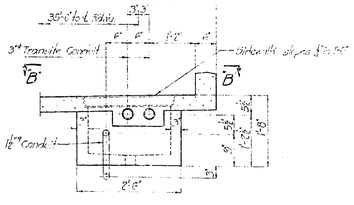
PART SECTION THRU GRADED PORTION OF PRESIDIO ROAD
Showing Pull Box for 2-3" Transite Conduit



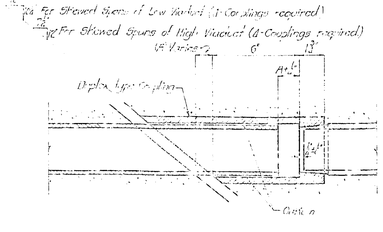
EXPANSION JOINT DETAIL
For 3" Transite Conduit
(Scale 3"=1'-0")



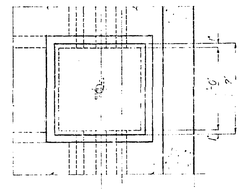
SECTION "B-B"



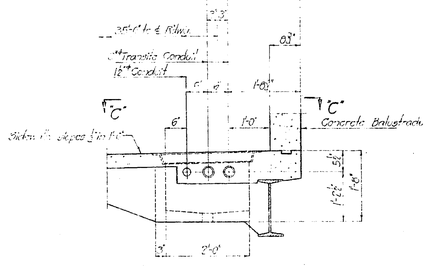
PART SECTION THRU GRADED PORTION OF PRESIDIO ROAD
Showing Pull Box where 12" Square Conduit is used.



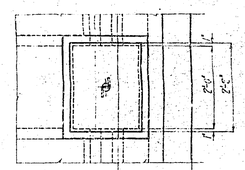
EXPANSION JOINT DETAIL
For 3" Transite Conduit (Skewed Spans)
(Scale 3"=1'-0")



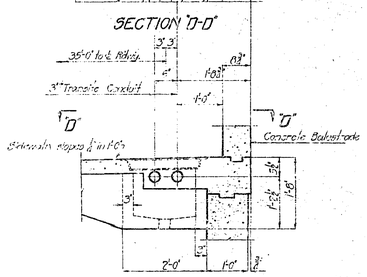
SECTION "C-C"



PART SECTION THRU HIGH VIADUCT
Showing Pull Box



SECTION "D-D"



PART SECTION THRU LOW VIADUCT
Showing Pull Box

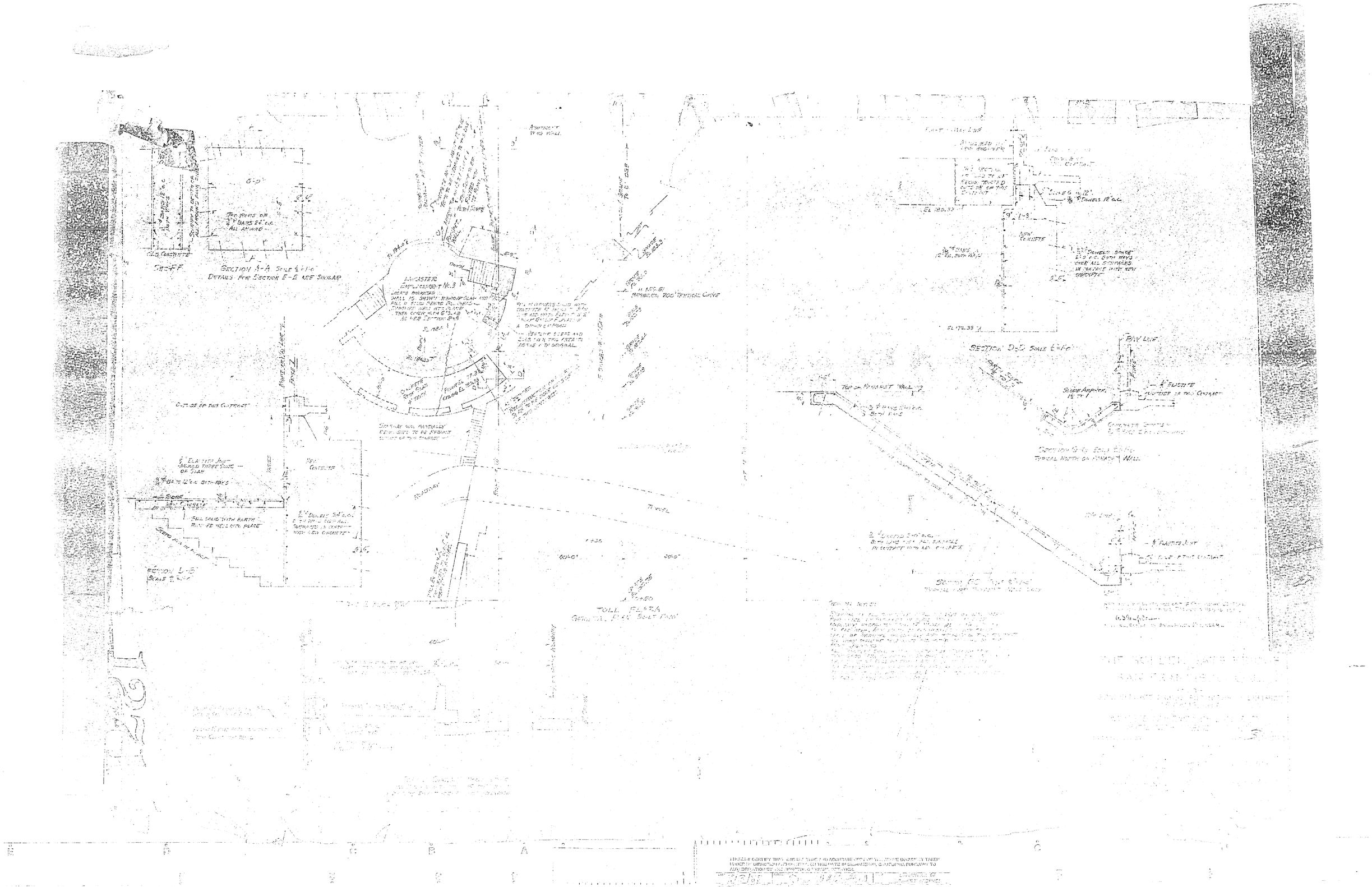
GENERAL NOTES:- All Concrete Encasement, Pull Boxes, Frames and Covers furnished under Contract No 5.
Standard Tapered Sleeve Couplings to be used except at Expansion Joints where Duplex type as shown should be used.

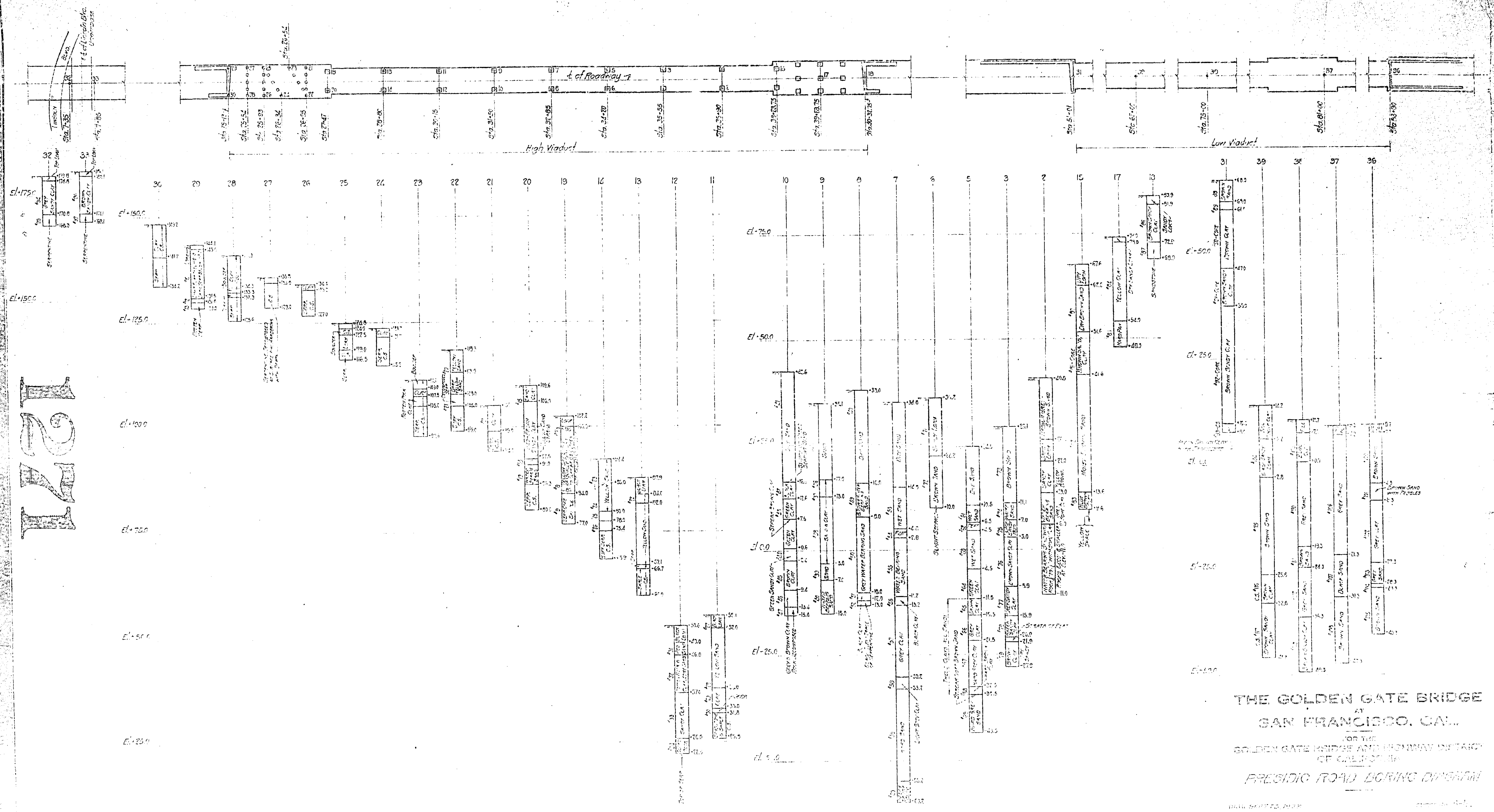
THE GOLDEN GATE BRIDGE
IN
SAN FRANCISCO, CAL.
FOR THE
GOLDEN GATE BRIDGE AND HIGHWAY DISTRICT
OF CALIFORNIA

TRANSITE CONDUIT FOR PRESIDIO ROAD

DATE JUNE 1930 — SCALE AS NOTED

DIVISION ENGINEER — CHIEF ENGINEER


SECTION A-A
DETAILS FOR SECTION E-E ARE SIMILAR
SECTION D-D
TOLL PLAZA
ROADWAY
TUNNEL
OUTLINE OF THIS CONTRACT
NEW CONCRETE
FILL SOLID WITH EARTH RAMMED WELL INTO PLACE
TOP OF PARAPET WALL
SLOPE APPROX. 1½ TO 1
EL 180.33
EL 172.33
EL 184.07
EL 183.3
EL 172.33
BEGINNING 200' VERTICAL CURVE
ABUTMENT WING WALL
SECTION G-G
TYPICAL NORTH OF PARAPET WALL
THE GOLDEN GATE BRIDGE
SAN FRANCISCO, CALIF.

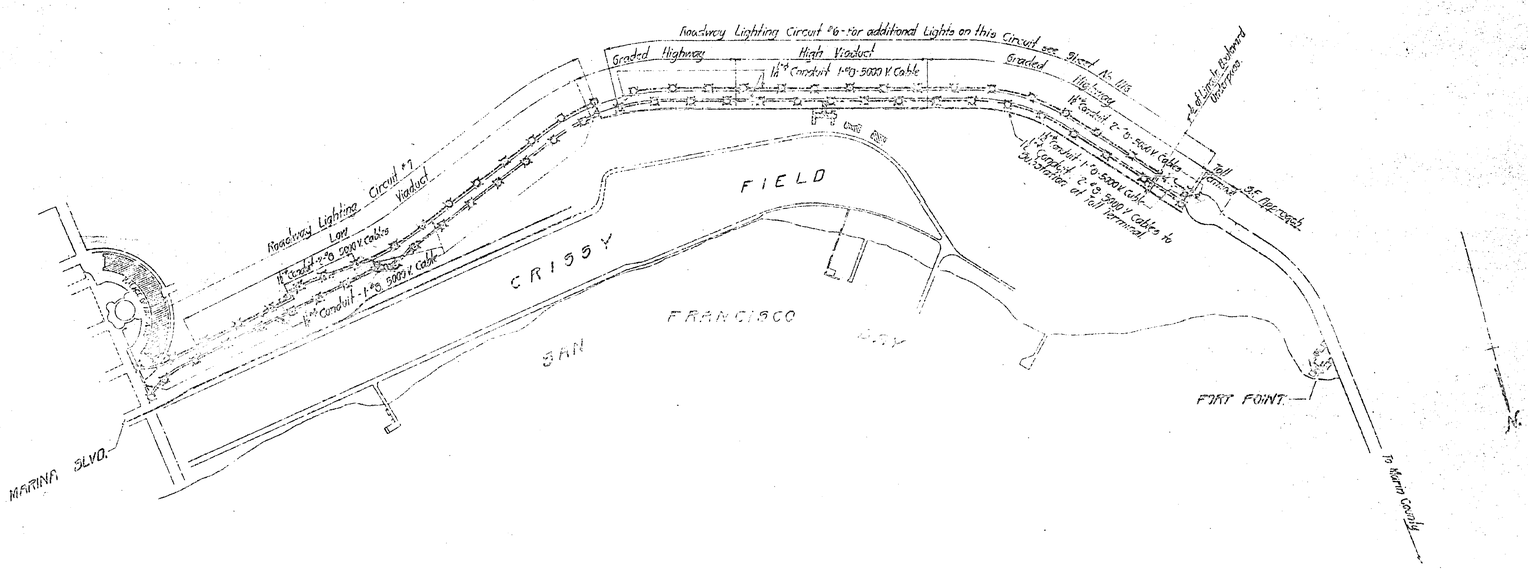


THE GOLDEN GATE BRIDGE
AT
SAN FRANCISCO, CAL.

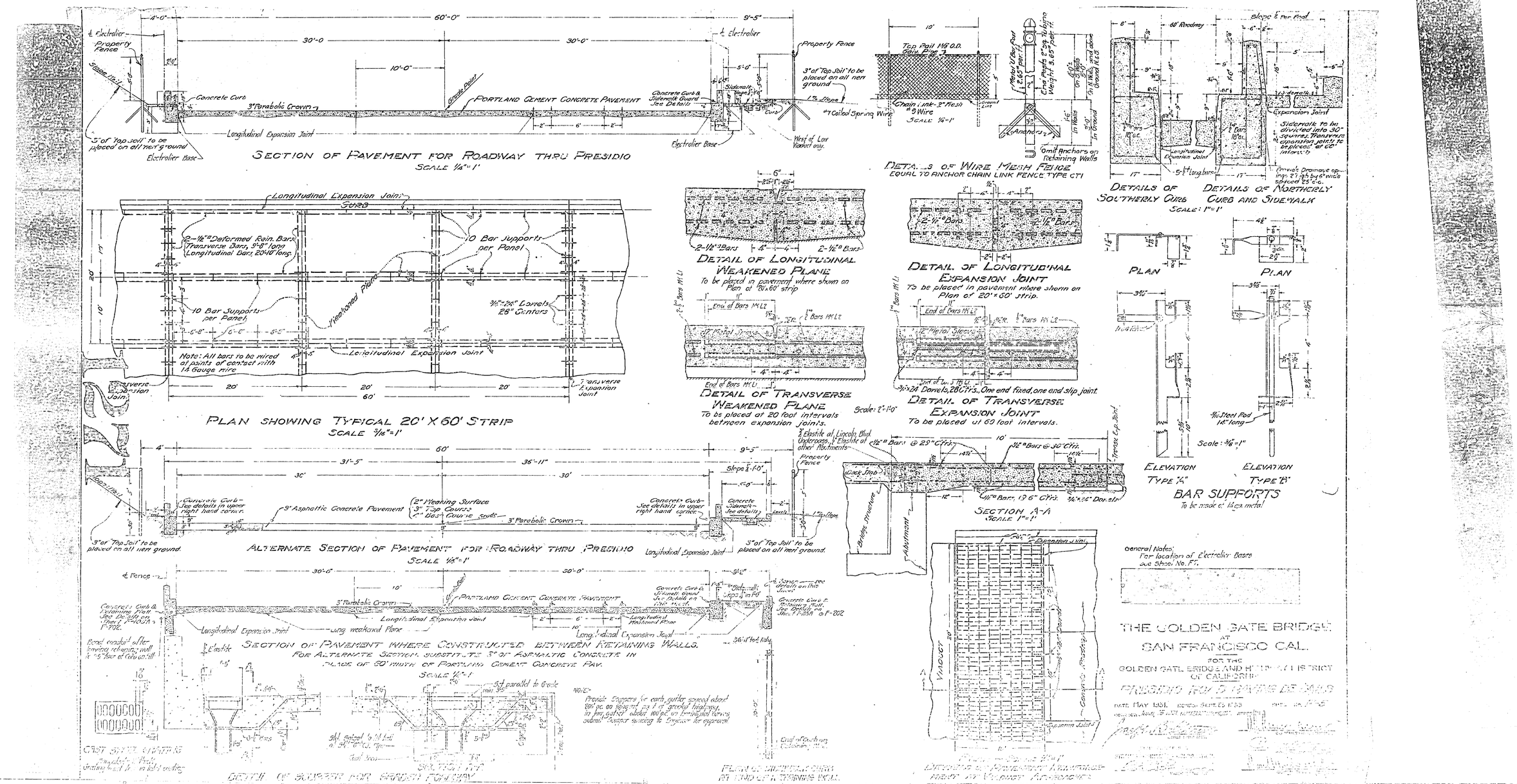
FOR THE
GOLDEN GATE BRIDGE AND HIGHWAY DISTRICT
OF CALIFORNIA

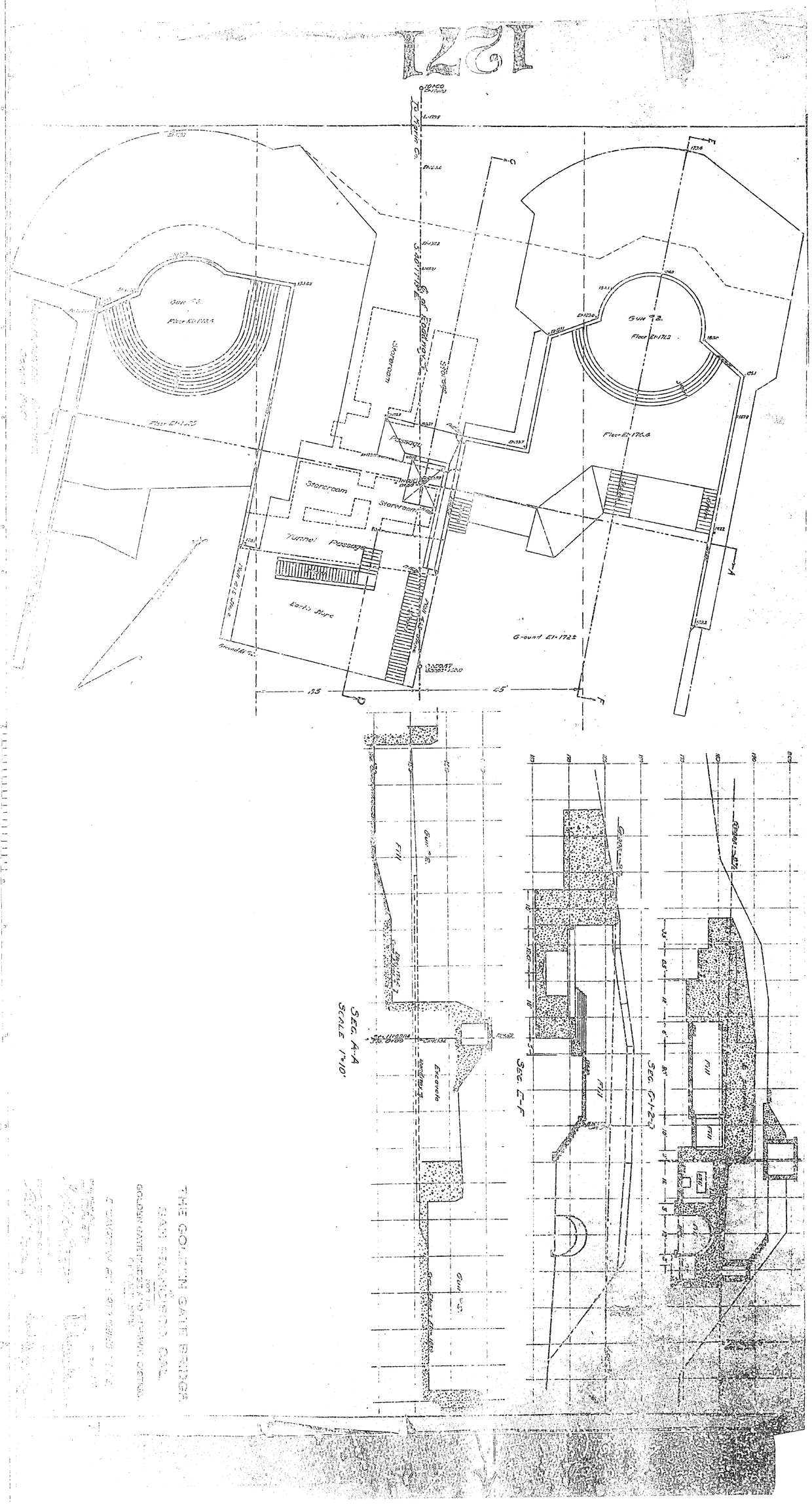
PRESIDIO ROAD BORING DIAGRAM

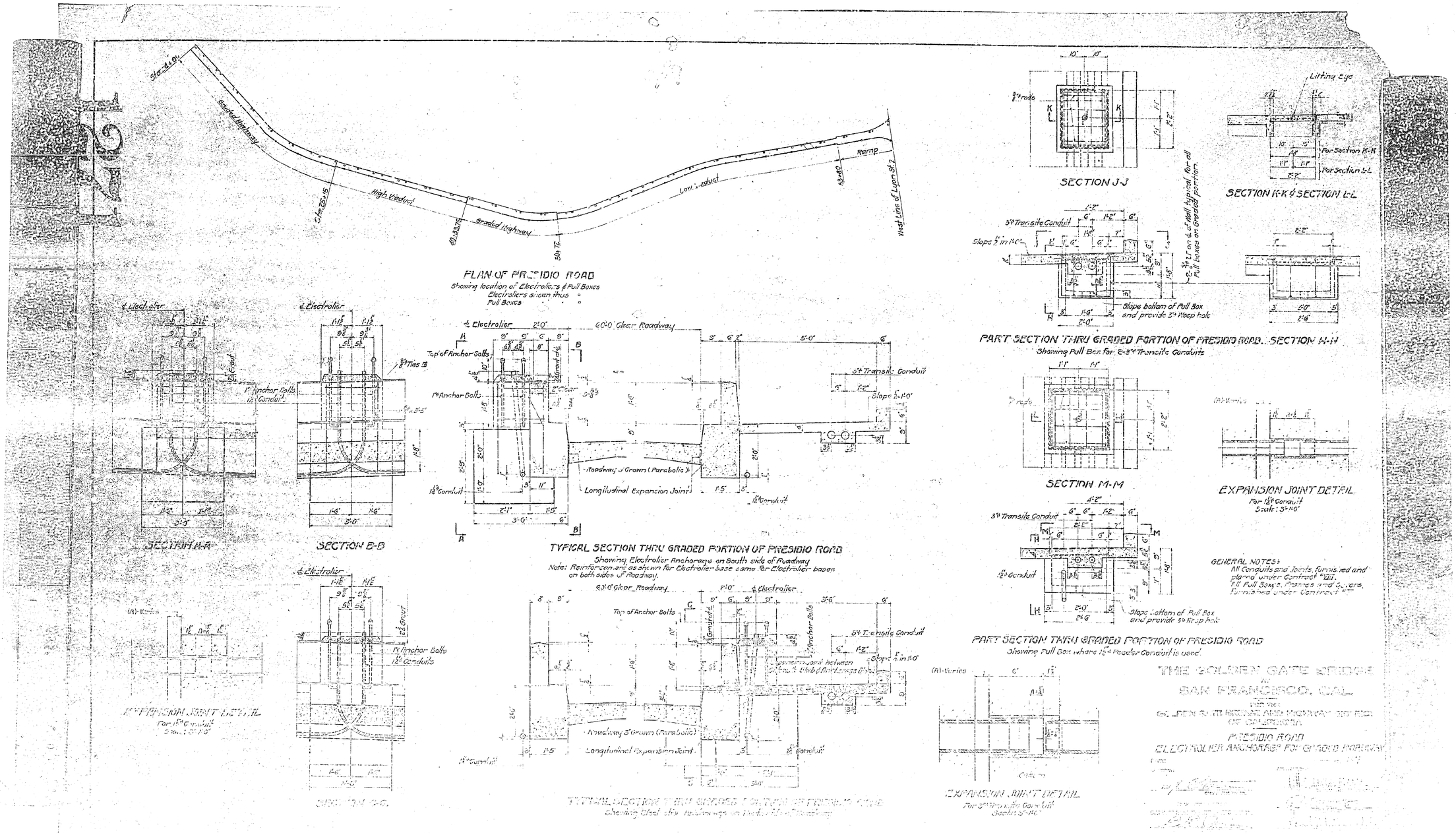
GENERAL NOTES:-
• - Indicates location of boring. All stations given are for location of bridge.
"C.S" Indicates core sample.
Number to left of hole indicates sample number.
Number to right of hole indicates elevation.


Roadway Lighting Circuit #6 - for additional Lights on this Circuit see Sheet No. 118
Graded Highway
High Viaduct
1½" Conduit 1-#0-5000 V. Cable
Graded Highway
1½" Conduit 2-#0-5000 V. Cables
1½" Conduit 1-#0-5000 V. Cable
1½" Conduit 2-#0-5000 V. Cables to Substation at Toll Terminal
Toll Terminal
S.F. Approach
Roadway Lighting Circuit #7
Low Viaduct
1½" Conduit 2-#0-5000 V. Cables
1½" Conduit 1-#0-5000 V. Cable
CRISSY FIELD
SAN FRANCISCO BAY
FORT POINT
MARINA BLVD.
To Marin County
N.

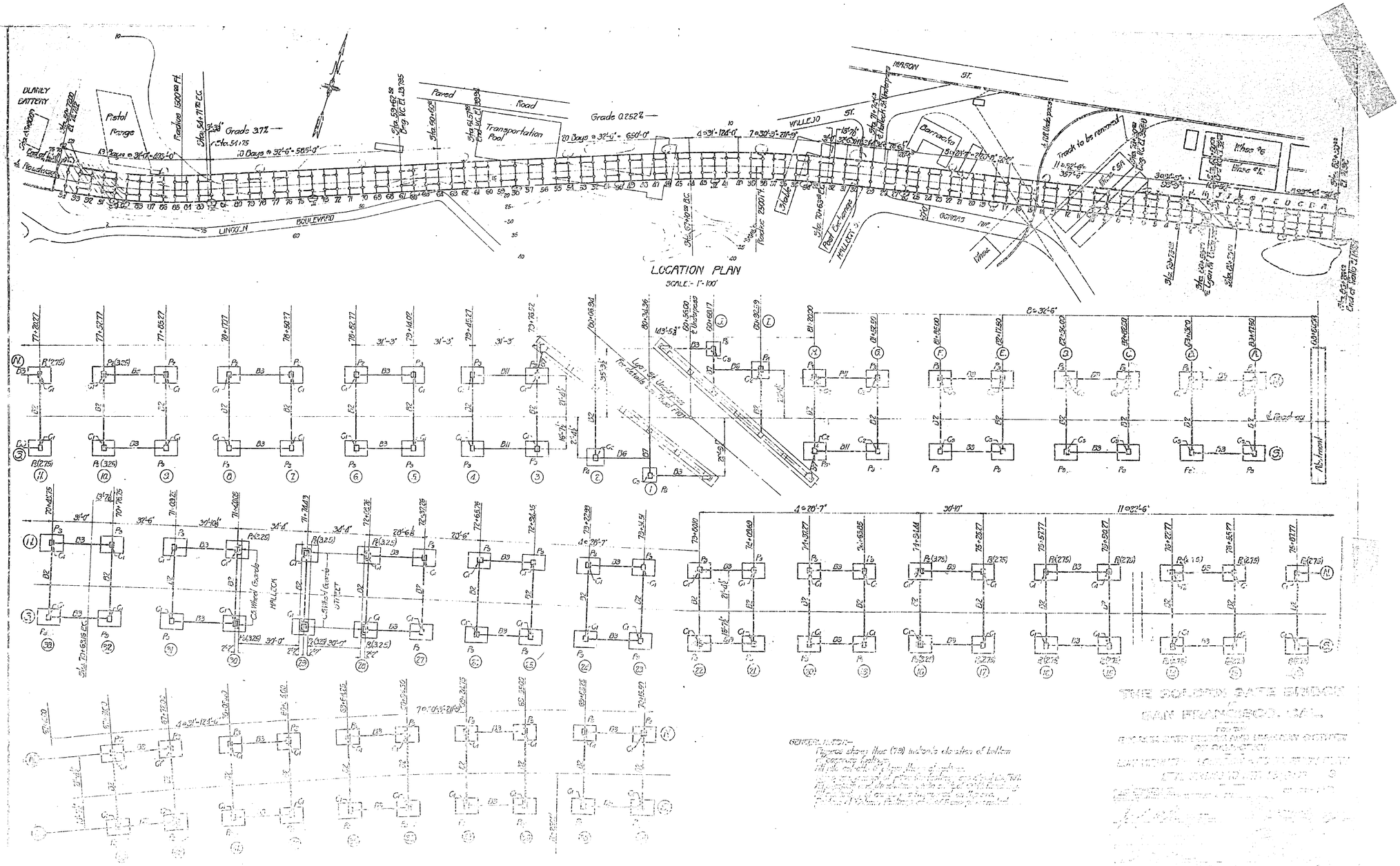
1271


SECTION OF PAVEMENT FOR ROADWAY THRU PRESIDIO
SCALE 1/4" = 1'
Concrete Curb
3" Parabolic Crown
PORTLAND CEMENT CONCRETE PAVEMENT
Longitudinal Expansion Joint
Electrolier Base
Property Fence
3" of Top Soil to be placed on all new ground
5" of Top Soil to be placed on all new ground
Grade Point
Sidewalk
Curb
Concrete Curb & Sidewalk Guard See Details
#7 Coiled Spring Wire
West of Lot Viaduct only
DETAILS OF WIRE MESH FENCE
EQUAL TO ANCHOR CHAIN LINK FENCE TYPE CT1
Chain Link - 2" Mesh #9 Wire
SCALE 1/4" = 1'
Anchors
Omit Anchors on Retaining Walls
DETAILS OF SOUTHERLY CURB
DETAILS OF NORTHERLY CURB AND SIDEWALK
SCALE: 1" = 1'
Expansion Joint
Sidewalk to be divided into 30" squares. Transverse expansion joints to be placed at 60' intervals
Longitudinal Expansion Joint
Longitudinal Expansion Joint
Curb
10 Bar Supports per Panel
Weakened Plane
3/8"x24" Dowels 28" Centers
Note: All bars to be wired at points of contact with 14 Gauge wire
Transverse Expansion Joint
PLAN SHOWING TYPICAL 20' X 60' STRIP
SCALE 3/16" = 1'
DETAIL OF LONGITUDINAL WEAKENED PLANE
To be placed in pavement where shown on Plan of 20' x 60' strip
DETAIL OF LONGITUDINAL EXPANSION JOINT
To be placed in pavement where shown on Plan of 20' x 60' strip.
End of Bars M.L.
2" Metal Sleeve
3/8"x24" Dowels, 28" Ctrs., One end fixed, one end slip joint.
DETAIL OF TRANSVERSE WEAKENED PLANE
To be placed at 20 foot intervals between expansion joints.
DETAIL OF TRANSVERSE EXPANSION JOINT
To be placed at 60 foot intervals.
Scale: 2"=1'-0"
PLAN
ELEVATION TYPE "A"
ELEVATION TYPE "B"
BAR SUPPORTS
To be made of black metal
Scale: 3/8" = 1'
ALTERNATE SECTION OF PAVEMENT FOR ROADWAY THRU PRESIDIO
SCALE 1/4" = 1'
2" Wearing Surface
3" Top Course
2" Base Course
3" Asphaltic Concrete Pavement
3" Parabolic Crown
Concrete Curb - See details in upper right hand corner
Concrete Sidewalk See details
3" of Top Soil to be placed on all new ground.
Longitudinal Expansion Joint
SECTION A-A
SCALE 1" = 1'
Deck Slab
Bridge Structure
Abutment
Expansion Joint
SECTION OF PAVEMENT WHERE CONSTRUCTED BETWEEN RETAINING WALLS.
FOR ALTERNATE SECTION SUBSTITUTE 3" OF ASPHALTIC CONCRETE IN PLACE OF 30" WIDTH OF PORTLAND CEMENT CONCRETE PAV.
SCALE 1/4" = 1'
Long weakened Plane
Longitudinal Weakened Plane
Concrete Curb & Sidewalk Guard See Details on Sheet F-202
Concrete Curb & Sidewalk See Details on Sheet F-185A of F-202
Elastic
Viaduct
Expansion Joint
DETAIL OF GUTTER FOR GREEN COVE
PLAN OF GUTTER AT END OF RETAINING WALL
DETAILS OF PAVEMENT REINFORCEMENT AT VIADUCT APPROACHES
General Notes:
For location of Electrolier Bases see Sheet No. F1.
THE GOLDEN GATE BRIDGE
AT
SAN FRANCISCO CAL.
FOR THE
GOLDEN GATE BRIDGE AND HIGHWAY DISTRICT
OF CALIFORNIA
PRESIDIO ROAD PAVING DETAILS
DATE MAY 1931


1271
To Marin Co.
Gun #2.
Floor El. 171.3
Floor El. 176.4
Storeroom
Passage
Tunnel Passage
Earth Store
Ground El. 172±
Fill
Excavate
SEC. A-A
SCALE 1"=10'
SEC. E-F
SEC. C-1-2-3
THE GOLDEN GATE BRIDGE
SAN FRANCISCO, CAL.

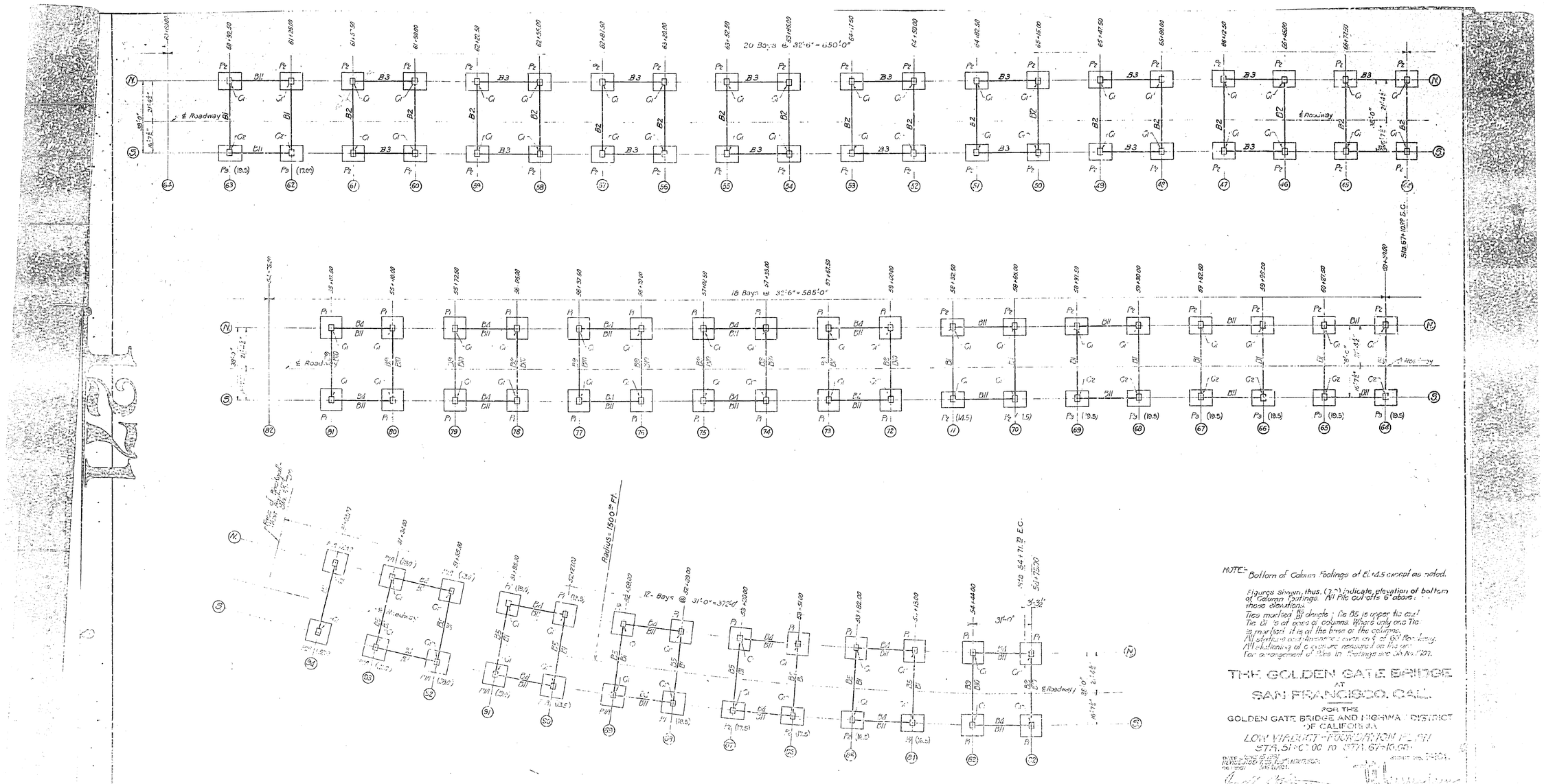


PLAN OF PRESIDIO ROAD
Showing location of Electroliers & Pull Boxes
Electroliers shown thus
Pull Boxes
Graded Highway
High Viaduct
Low Viaduct
Ramp
West Line of Lyon St.
SECTION J-J
SECTION K-K & SECTION L-L
Lifting Eye
For Section K-K
For Section L-L
PART SECTION THRU GRADED PORTION OF PRESIDIO ROAD. SECTION H-H
Showing Pull Box for 2-3" Transite Conduits
Slope bottom of Pull Box and provide 3" Weep hole
SECTION M-M
EXPANSION JOINT DETAIL
For 1½" Conduit
Scale: 3"=1'-0"
SECTION A-A
SECTION B-B
TYPICAL SECTION THRU GRADED PORTION OF PRESIDIO ROAD
Showing Electrolier Anchorage on South side of Roadway
Note: Reinforcement as shown for Electrolier base same for Electrolier bases on both sides of Roadway.
60'-0" Clear Roadway
Top of Anchor Bolts
Roadway 3" Crown (Parabolic)
Longitudinal Expansion Joint
PART SECTION THRU GRADED PORTION OF PRESIDIO ROAD
Showing Pull Box where 1½" Feeder Conduit is used.
GENERAL NOTES:
All Conduits and Joints, furnished and placed under Contract #101.
All Pull Boxes, Frames and Covers, furnished under Contract #
EXPANSION JOINT DETAIL
For 1½" Conduit
SECTION C-C
EXPANSION JOINT DETAIL
For 3" Transite Conduit
Scale: 3"=1'-0"
THE GOLDEN GATE BRIDGE
IN
SAN FRANCISCO, CAL.
FOR THE
GOLDEN GATE BRIDGE AND HIGHWAY DISTRICT
OF CALIFORNIA
PRESIDIO ROAD
ELECTROLIER ANCHORAGE FOR GRADED ROADWAY



THE GOLDEN GATE BRIDGE
SAN FRANCISCO, CAL.

GENERAL NOTE:-
Figures shown thus (7.8) indicate depths of bottom



NOTE:- Bottom of Column Footings at El. +4.5 except as noted.

Figures shown thus. (7.0) indicate elevation of bottom of Column Footings. All Pile cut-offs 6" above these elevations.
Ties marked B5/B1 denote; Tie B5 is upper tie and Tie B1 is at base of columns. Where only one Tie is marked it is at the base of the columns.
All stations and dimensions given on ℄ of 60' Roadway.
All stationing of curves are measured on the arc.
For arrangement of Piles in Footings see Sh. No. F107.

THE GOLDEN GATE BRIDGE
AT
SAN FRANCISCO, CAL.

FOR THE
GOLDEN GATE BRIDGE AND HIGHWAY DISTRICT
OF CALIFORNIA

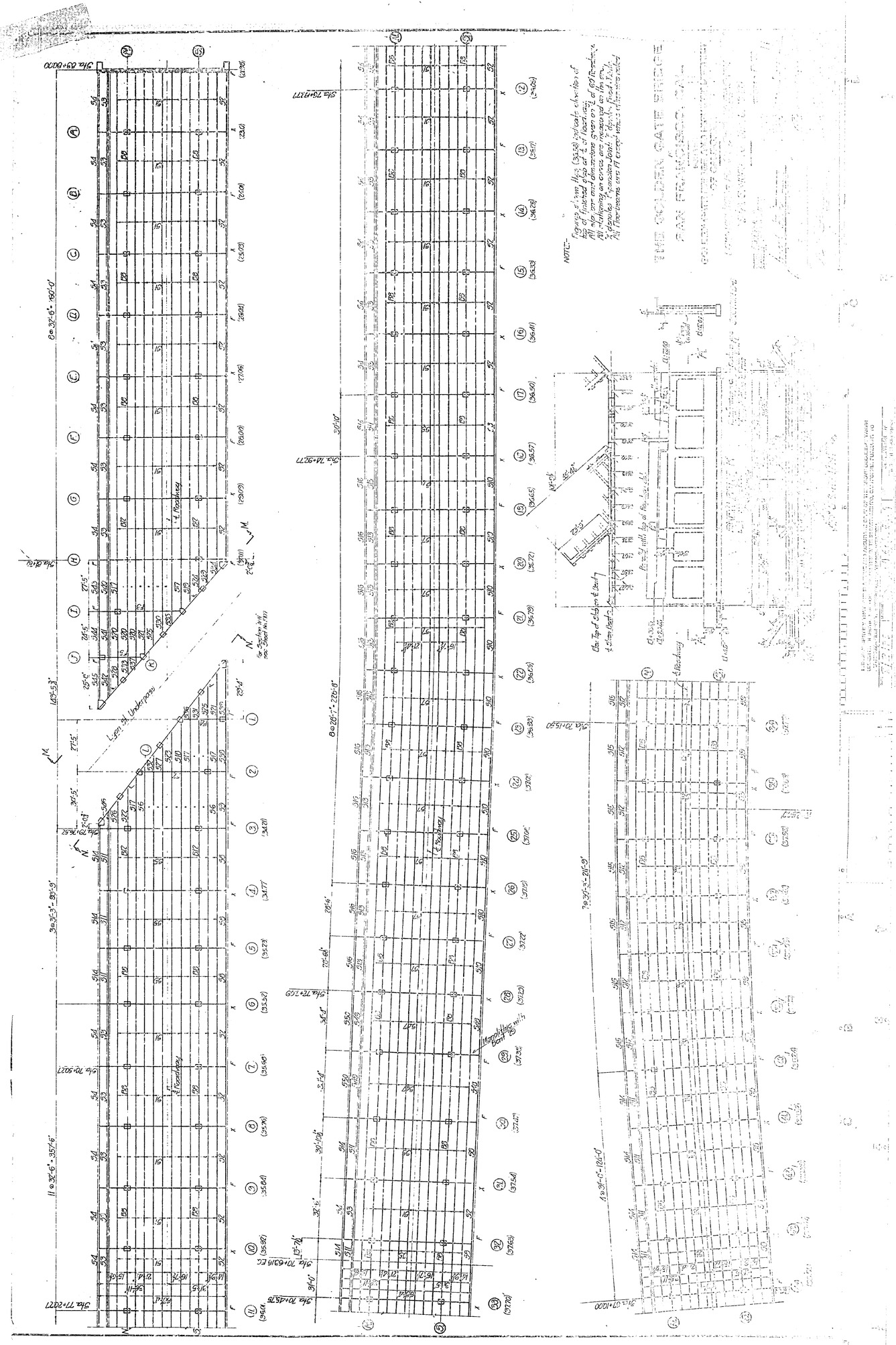
LOW VIADUCT - FOUNDATION PLAN
STA. 51+00.00 TO STA. 67+10.00

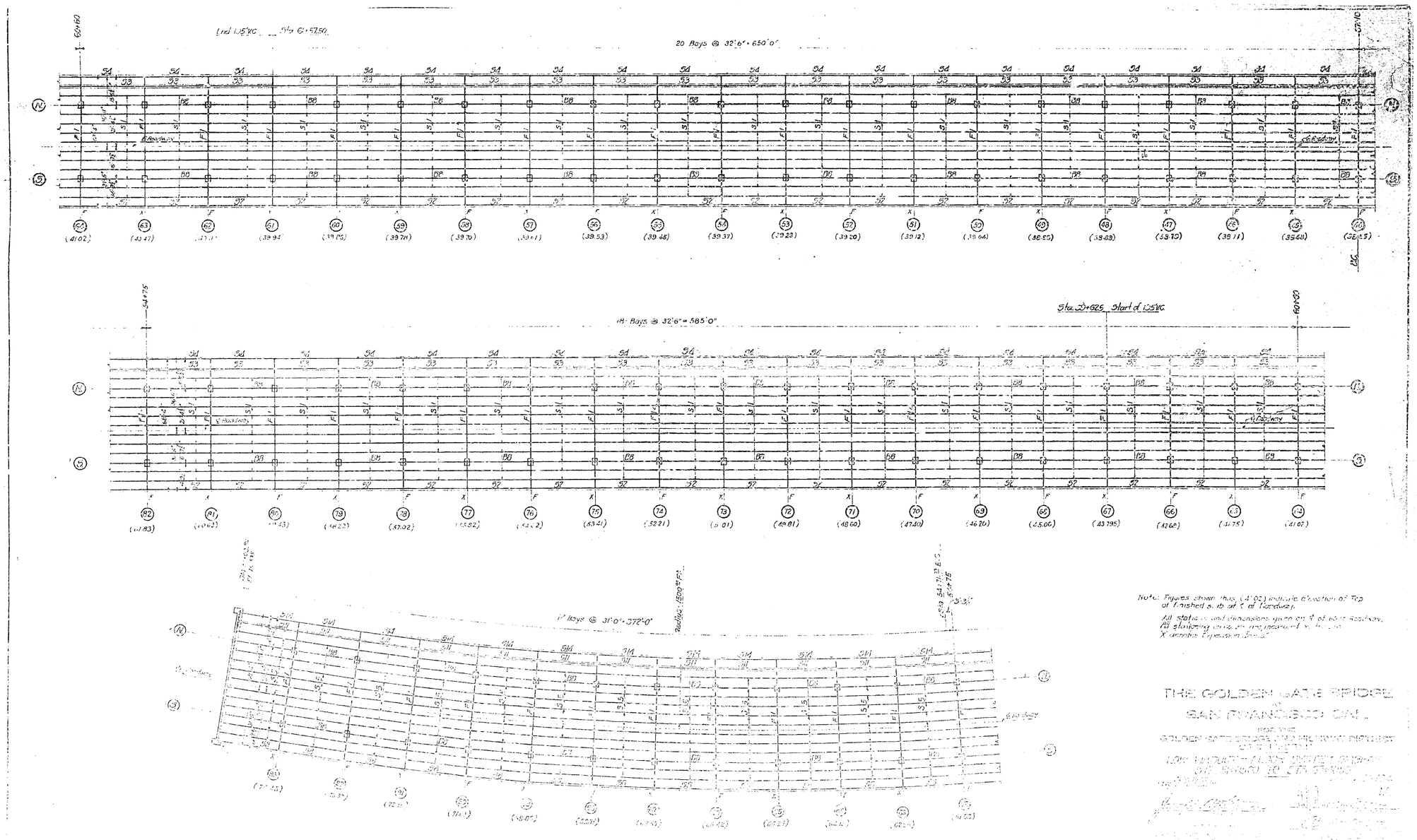
DATE: JUNE 15, 1931
REVISED JULY 1, 1931 FOR PLANS NOTIFICATION
DO NOT USE SHEET

SHEET NO. F101.

CHIEF ENGINEER

PRINCIPAL ENGINEER

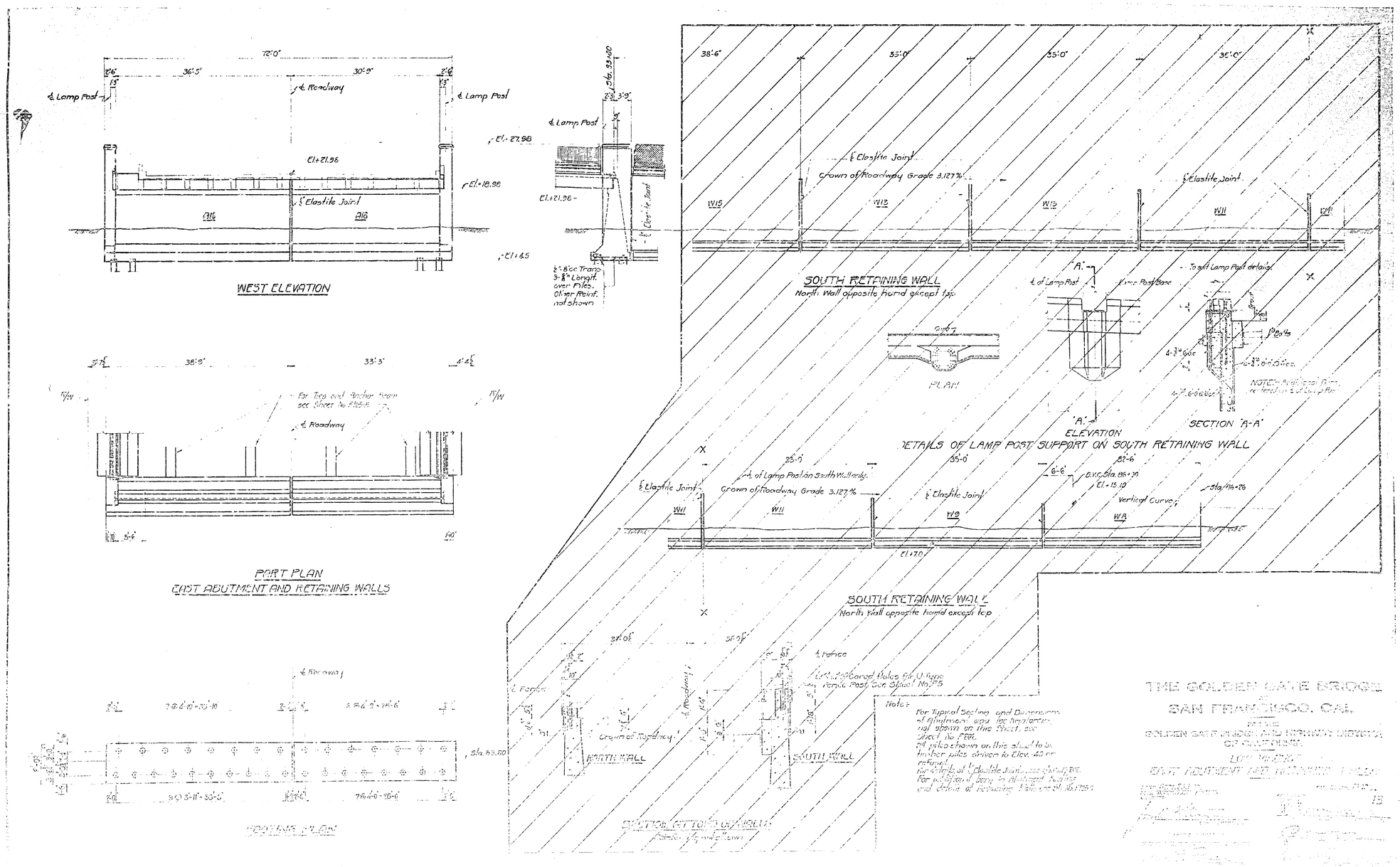

THE GOLDEN GATE BRIDGE
SAN FRANCISCO, CAL.
NOTE:-
Lyon St. Underpass
Roadway
Mapolithic with Bent 29



Note: Figures shown thus (41.02) indicate elevation of Top of finished slab at ℄ of Roadway.
All stations and dimensions given on ℄ of 60 ft Roadway.
All stationing [illegible] are measured [illegible]
X denotes Expansion Joints.

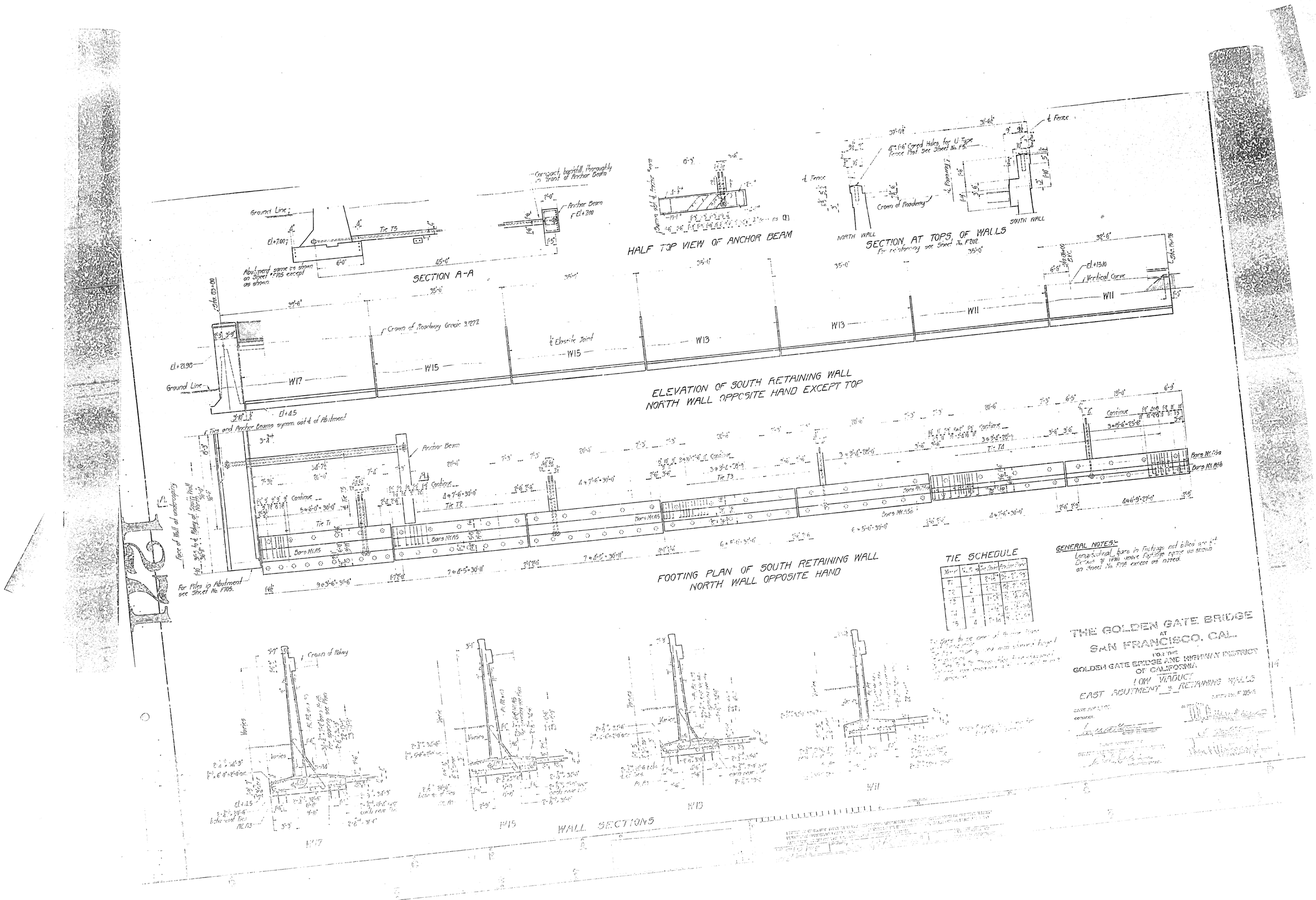
THE GOLDEN GATE BRIDGE
AT
SAN FRANCISCO CAL.
FOR THE
GOLDEN GATE BRIDGE AND HIGHWAY DISTRICT
OF CALIFORNIA
LOW VIADUCT - FLOOR SYSTEM [illegible]
[illegible] TO [illegible]

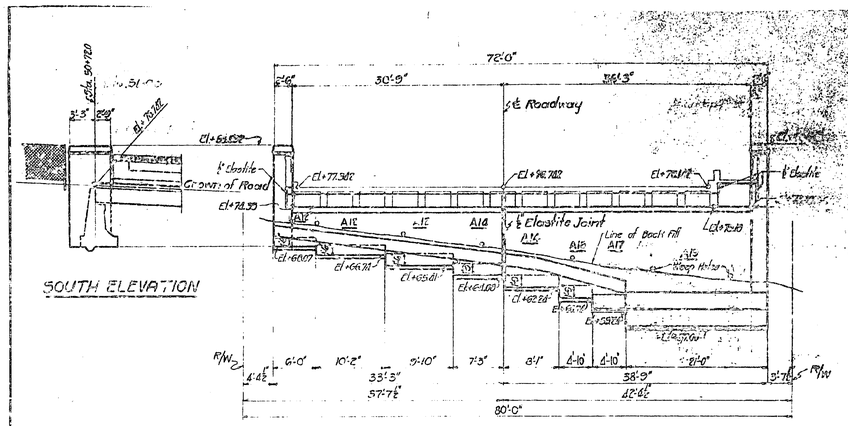
1271

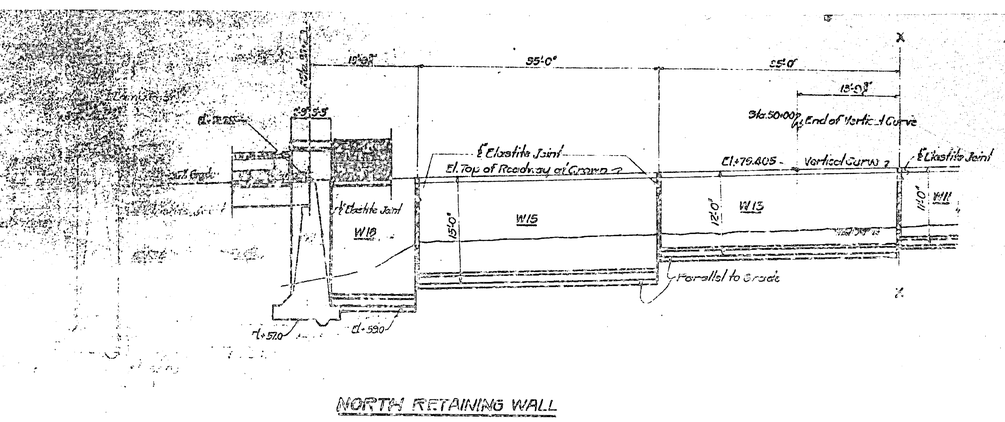


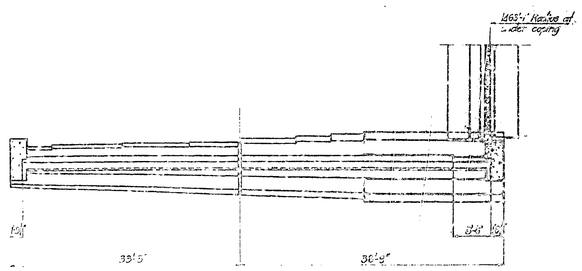
WEST ELEVATION
PART PLAN
EAST ABUTMENT AND RETAINING WALLS
FOOTING PLAN
SOUTH RETAINING WALL
North Wall opposite hand except top
PLAN
ELEVATION
SECTION 'A-A'
DETAILS OF LAMP POST SUPPORT ON SOUTH RETAINING WALL
SOUTH RETAINING WALL
North Wall opposite hand except top
NORTH WALL
SOUTH WALL
SECTION AT TOP OF WALL
Note:
For Typical Section and Dimensions of Abutment and for Reinforcing not shown on this Sheet, see Sheet No. F202.
All piles shown on this sheet to be timber piles driven to Elev. -40 or refused.
THE GOLDEN GATE BRIDGE
SAN FRANCISCO, CAL.
GOLDEN GATE BRIDGE AND HIGHWAY DISTRICT OF CALIFORNIA
EAST ABUTMENT AND RETAINING WALLS

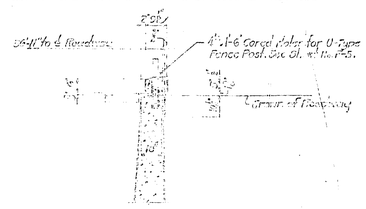
1271

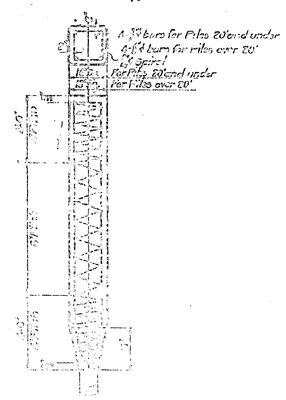

SECTION A-A
HALF TOP VIEW OF ANCHOR BEAM
SECTION AT TOPS OF WALLS
ELEVATION OF SOUTH RETAINING WALL
NORTH WALL OPPOSITE HAND EXCEPT TOP
FOOTING PLAN OF SOUTH RETAINING WALL
NORTH WALL OPPOSITE HAND
WALL SECTIONS
Ground Line
Anchor Beam
Crown of Roadway
Vertical Curve
Tie T5
Tie T1
Tie T2
Tie T3
Tie T4
Bars M1A5
Bars M1A5a
Bars M1A5b
Face of Wall at undercoping
For Piles in Abutment see Sheet No. F105.
Abutment same as shown on Sheet #F105 except as shown.
Compact backfill thoroughly in front of Anchor Beam
Crown of Roadway Grade 3.127%
½" Elastite Joint
Ties and Anchor Beams symm. abt ℄ of Abutment
W17
W15
W13
W11
NORTH WALL
SOUTH WALL
℄ Fence
℄ Roadway
GENERAL NOTES:-
Longitudinal bars in Footings not billed are 1½" Details of Wall above Footings same as shown on Sheet No. F105 except as noted.
TIE SCHEDULE
THE GOLDEN GATE BRIDGE
AT
SAN FRANCISCO, CAL.
FOR THE
GOLDEN GATE BRIDGE AND HIGHWAY DISTRICT
OF CALIFORNIA
LOW VIADUCT
EAST ABUTMENT & RETAINING WALLS







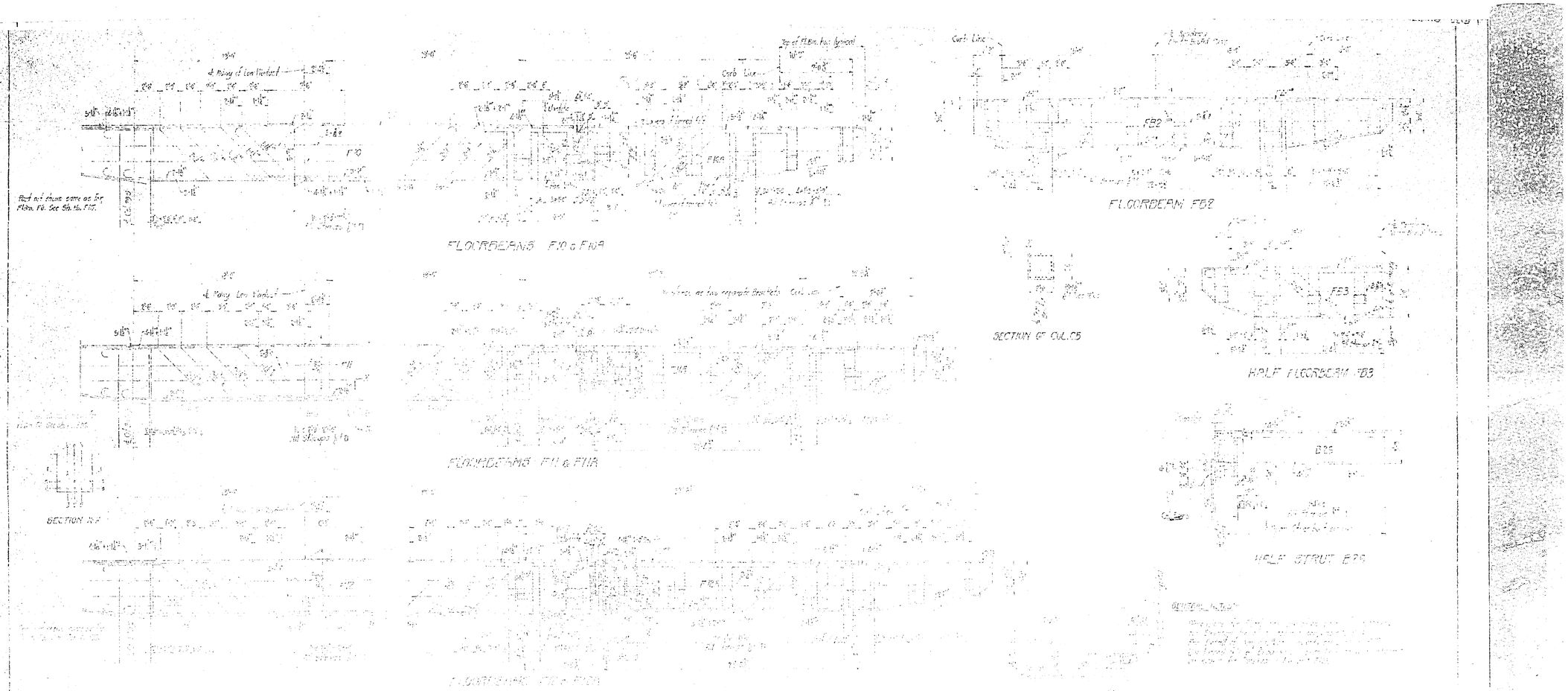


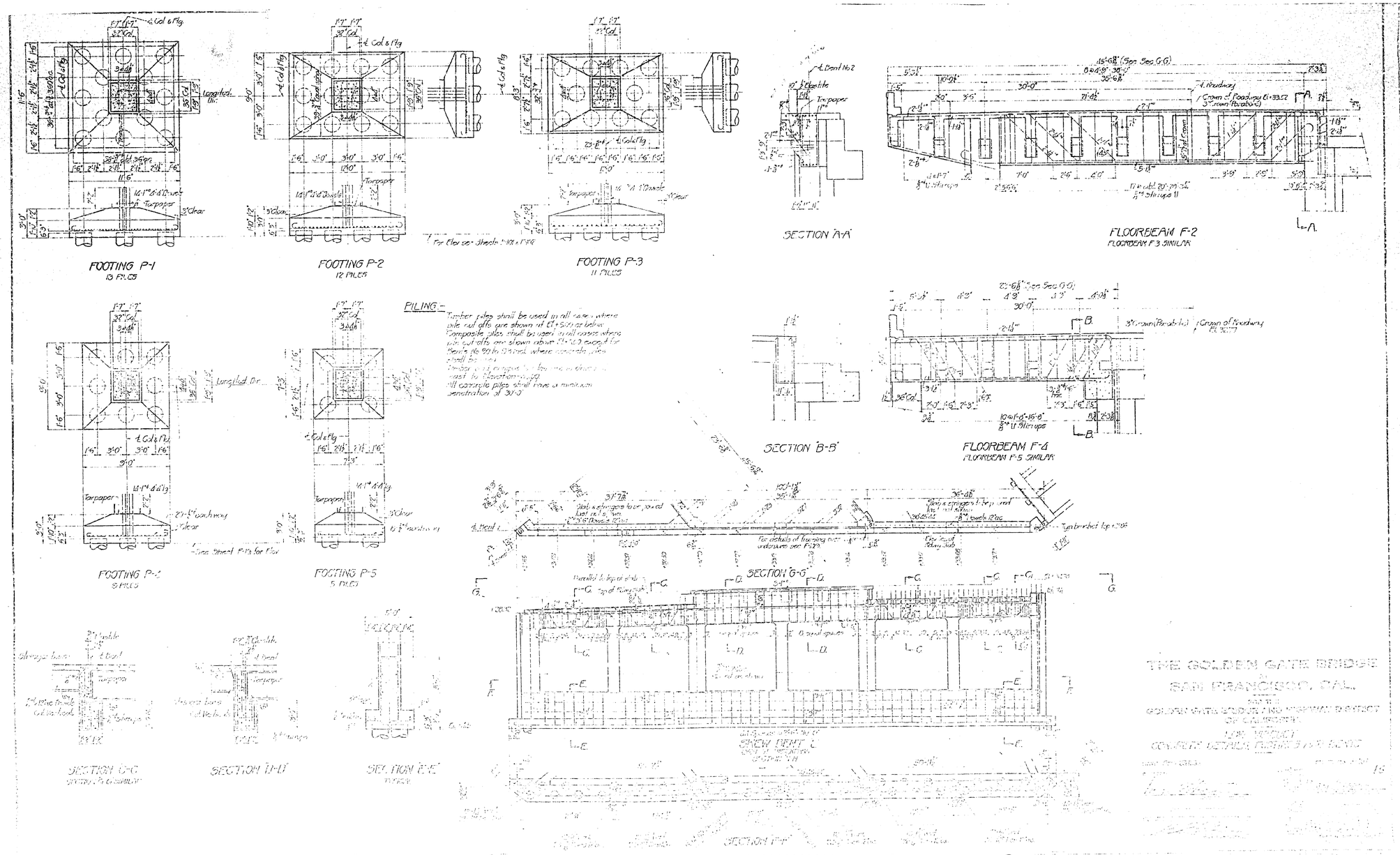


Note:
For Typical Sections of Abutments and Retaining Walls and for Reinforcing Details, See Sh. No. P-202
For details of ℄ Elastite Joints, see Sheet No. P-202.

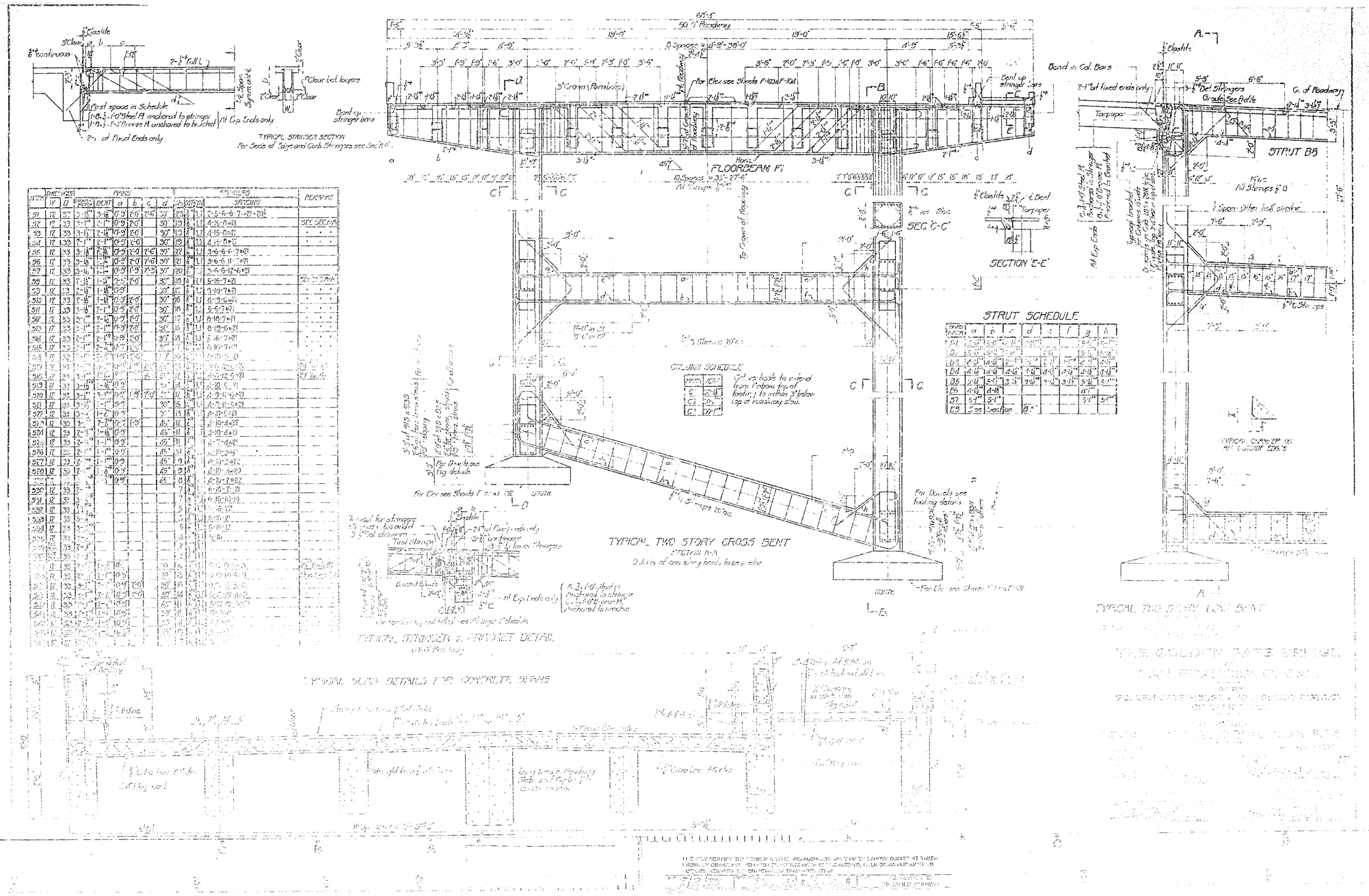
THE GOLDEN GATE BRIDGE
AT
SAN FRANCISCO, CAL.
FOR THE
GOLDEN GATE BRIDGE AND HIGHWAY DISTRICT
OF CALIFORNIA
LOW VIADUCT
WEST ABUTMENT AND RETAINING WALLS

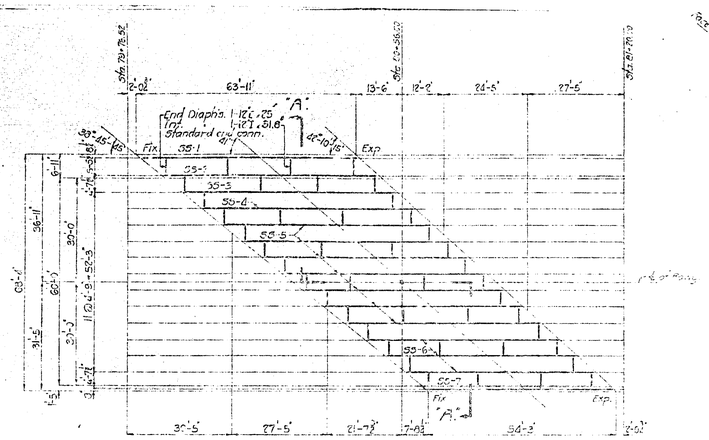
1271


FLOORBEAMS F10 & F10A
FLOORBEAM FB2
SECTION OF COL.C5
HALF FLOORBEAM FB3
FLOORBEAMS F11 & F11A
HALF STRUT B25
SECTION A-A
Curb Line
Top of Fl.Bm. has typical
Part not shown same as for Fl.Bm. F6. See Sh. No. F15.

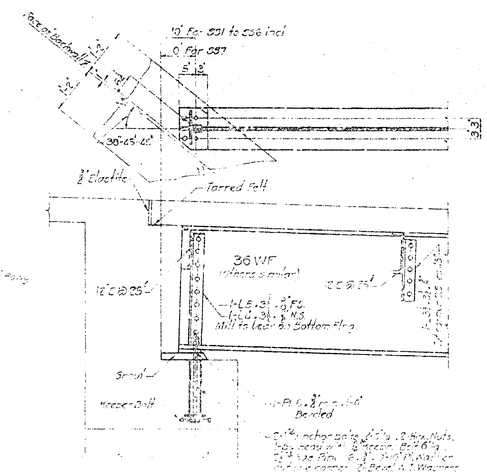

FOOTING P-1
13 PILES
FOOTING P-2
12 PILES
FOOTING P-3
11 PILES
SECTION A-A
FLOORBEAM F-2
FLOORBEAM F-3 SIMILAR
PILING -
Timber piles shall be used in all cases where pile cut offs are shown at El +5.00 or below.
Composite piles shall be used in all cases where pile cut offs are shown above El +5.00 except for Bents No 90 to 93 incl. where concrete piles shall be used.
All concrete piles shall have a minimum penetration of 30'-0"
SECTION B-B
FLOORBEAM F-4
FLOORBEAM F-5 SIMILAR
FOOTING P-4
6 PILES
FOOTING P-5
5 PILES
SECTION G-G
SKEW BENT L
SECTION C-C
SECTION D-D
SECTION E-E
SECTION F-F
THE GOLDEN GATE BRIDGE
SAN FRANCISCO, CAL.
GOLDEN GATE BRIDGE AND HIGHWAY DISTRICT
OF CALIFORNIA
LOW VIADUCT
CONCRETE DETAILS, FOOTINGS AND BENTS

1271


TYPICAL STRINGER SECTION
FLOORBEAM F1
SEC. C-C
SECTION E-E
STRUT SCHEDULE
COLUMN SCHEDULE
TYPICAL TWO STORY CROSS BENT
TYPICAL STRINGER & FLOORBEAM DETAIL
TYPICAL SLAB DETAILS FOR CONCRETE SPANS
STRUT B8
TYPICAL TWO STORY LONG BENT
THE GOLDEN GATE BRIDGE
SAN FRANCISCO, CAL.

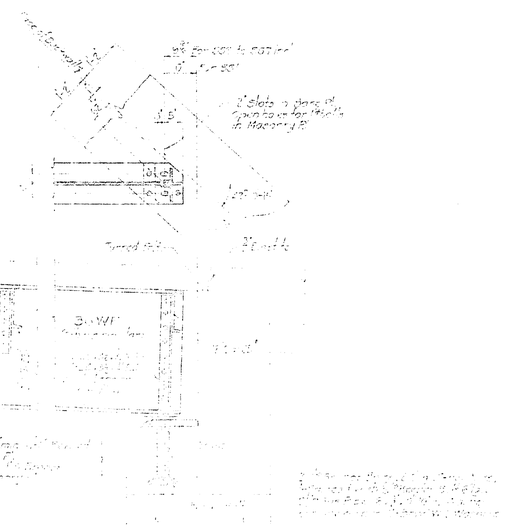


PLAN



DETAIL AT FIXED END

MOMENTS & SHEARS - STEEL STRINGERS													
Mark	Shear - Kips				Moment - Ft. Kips				I/c		Section	Mark
	D	L	I	D+2L	D	L	I	D+2L	Min I	Used		
SS-1	17.4	[illegible]	[illegible]	52.4	275	125	0	[illegible]	816	592	33 WF 125 #	SS-1
SS-2	26.0	16.5	[illegible]	61.8	435	254	13	[illegible]	1311	960	36 " 167 "	SS-2
SS-3	17.8	22.7	[illegible]	65.2	275	294	79	86	830	900	36 " 135 "	SS-3
SS-4	17.0	23.6	[illegible]	65.4	264	287	77	851	816	535	36 " 135 "	SS-4
SS-5	17.2	23.5	[illegible]	64.7	259	276	77	831	[illegible]	900	36 " 150 "	SS-5
SS-6	15.6	22.7	[illegible]	61.0	215	161	73	717	[illegible]	226	33 " 121 "	SS-6
SS-7	[illegible]	[illegible]	[illegible]	[illegible]	277	96	25	263	15	226	30 " 115 "	SS-7



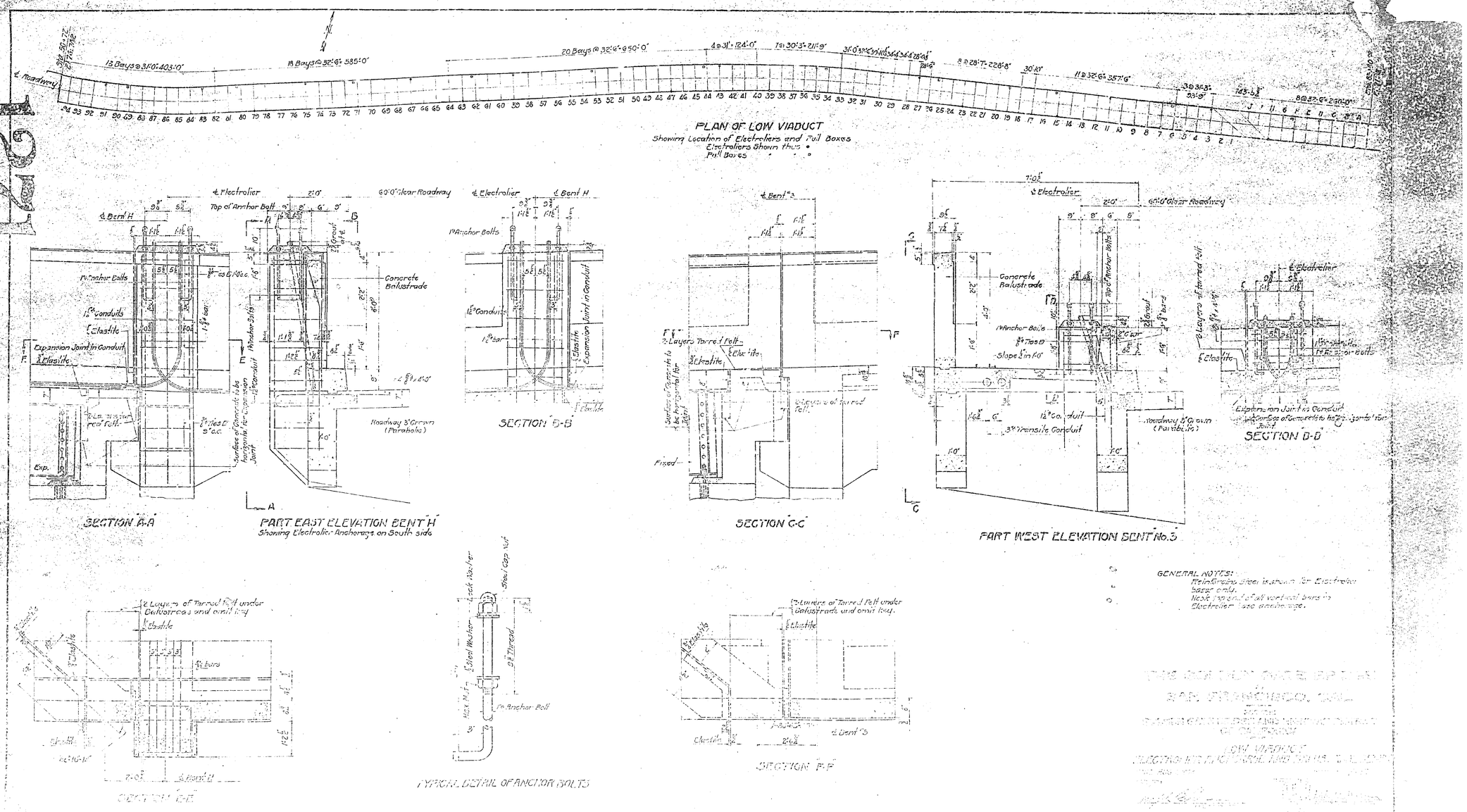
DETAIL AT EXPANSION END

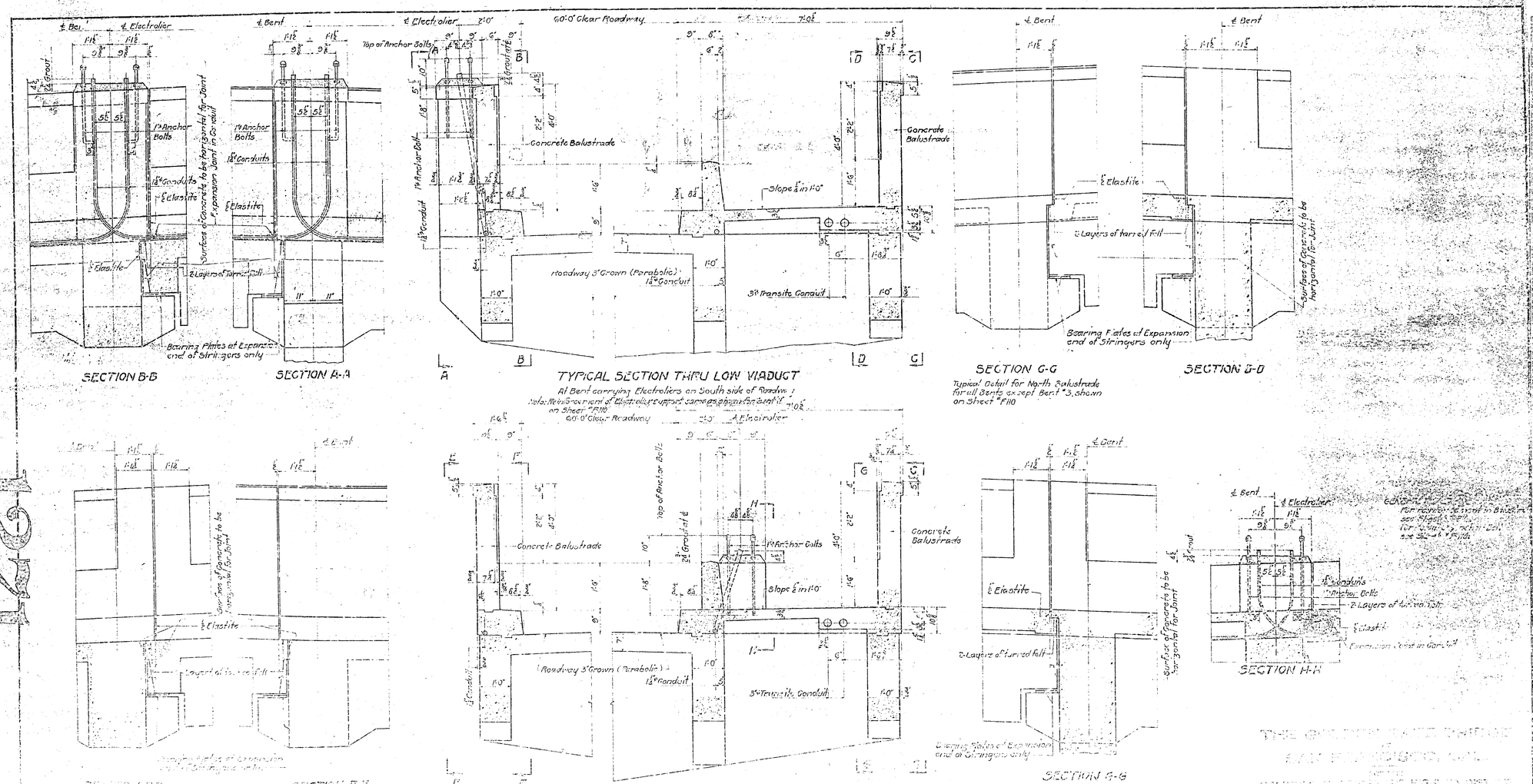
SECTION "A-A"

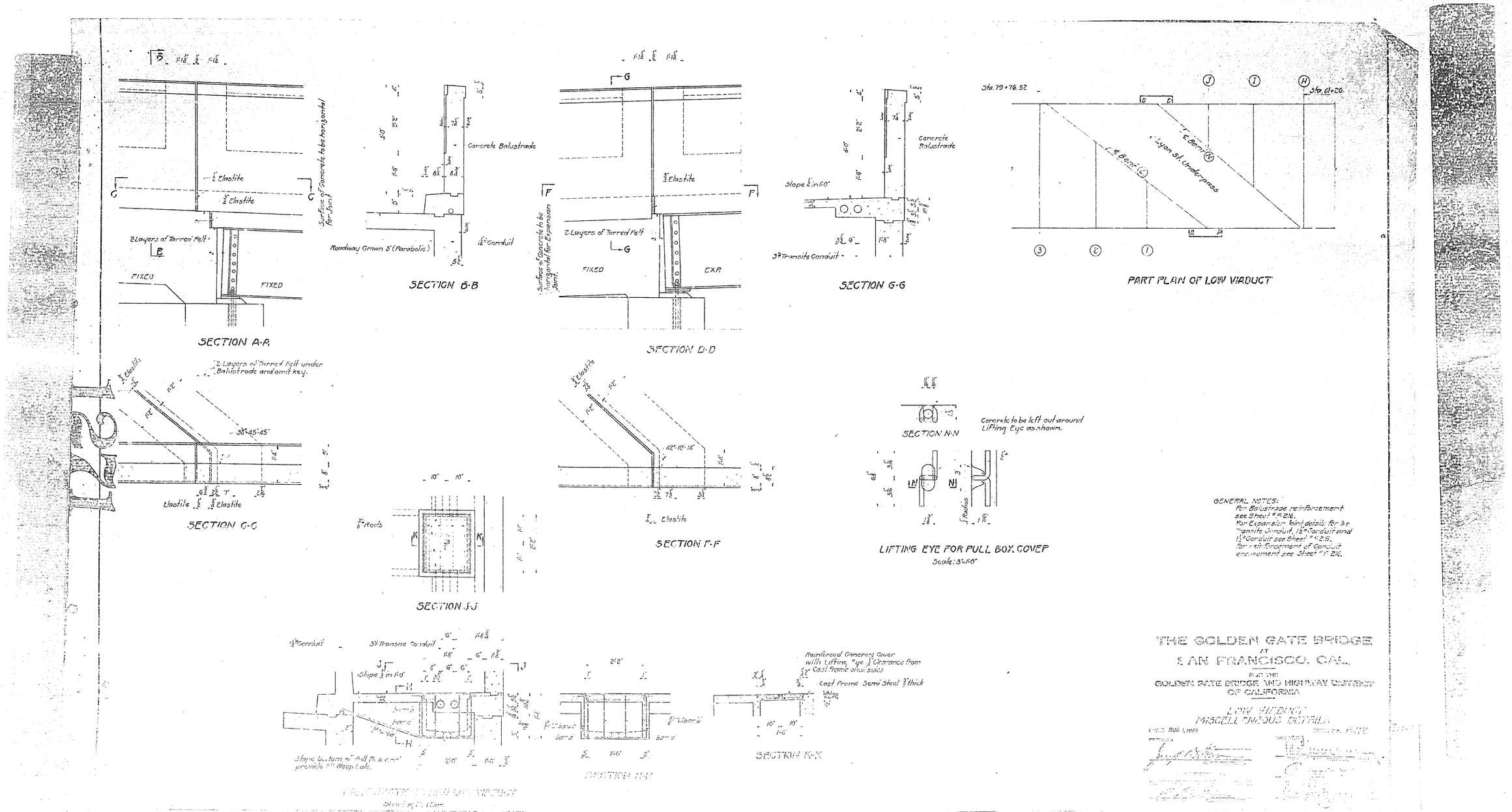
GENERAL NOTES:-

Material structural carbon steel [illegible]

127


PLAN OF LOW VIADUCT
Showing Location of Electroliers and Pull Boxes
Electroliers Shown thus •
Pull Boxes
SECTION A-A
PART EAST ELEVATION BENT H
Showing Electrolier Anchorage on South side
SECTION B-B
SECTION C-C
PART WEST ELEVATION BENT No. 3
SECTION D-D
SECTION E-E
TYPICAL DETAIL OF ANCHOR BOLTS
SECTION F-F
GENERAL NOTES:
Reinforcing Steel is shown for Electrolier base only.
Hook top end of all vertical bars in Electrolier base anchorage.
LOW VIADUCT


SECTION B-B
SECTION A-A
TYPICAL SECTION THRU LOW VIADUCT
At Bent carrying Electroliers on South side of Roadway
Note: Reinforcement of Electolier support same as shown for Bent 1 on Sheet "F110"
SECTION G-G
Typical Detail for North Balustrade for all Bents except Bent "3, shown on Sheet "F110
SECTION D-D
SECTION E-E
SECTION F-F
TYPICAL SECTION THRU LOW VIADUCT
At Bent carrying Electroliers on North side of Roadway
Note: Reinforcement of Electolier support same as shown for Bent "3 on Sheet "F110
SECTION G-G
Typical Detail of North Balustrade for all Bents except those where Electroliers are located on South side of Roadway and except Bent "3, shown on Sheet "F110
SECTION H-H



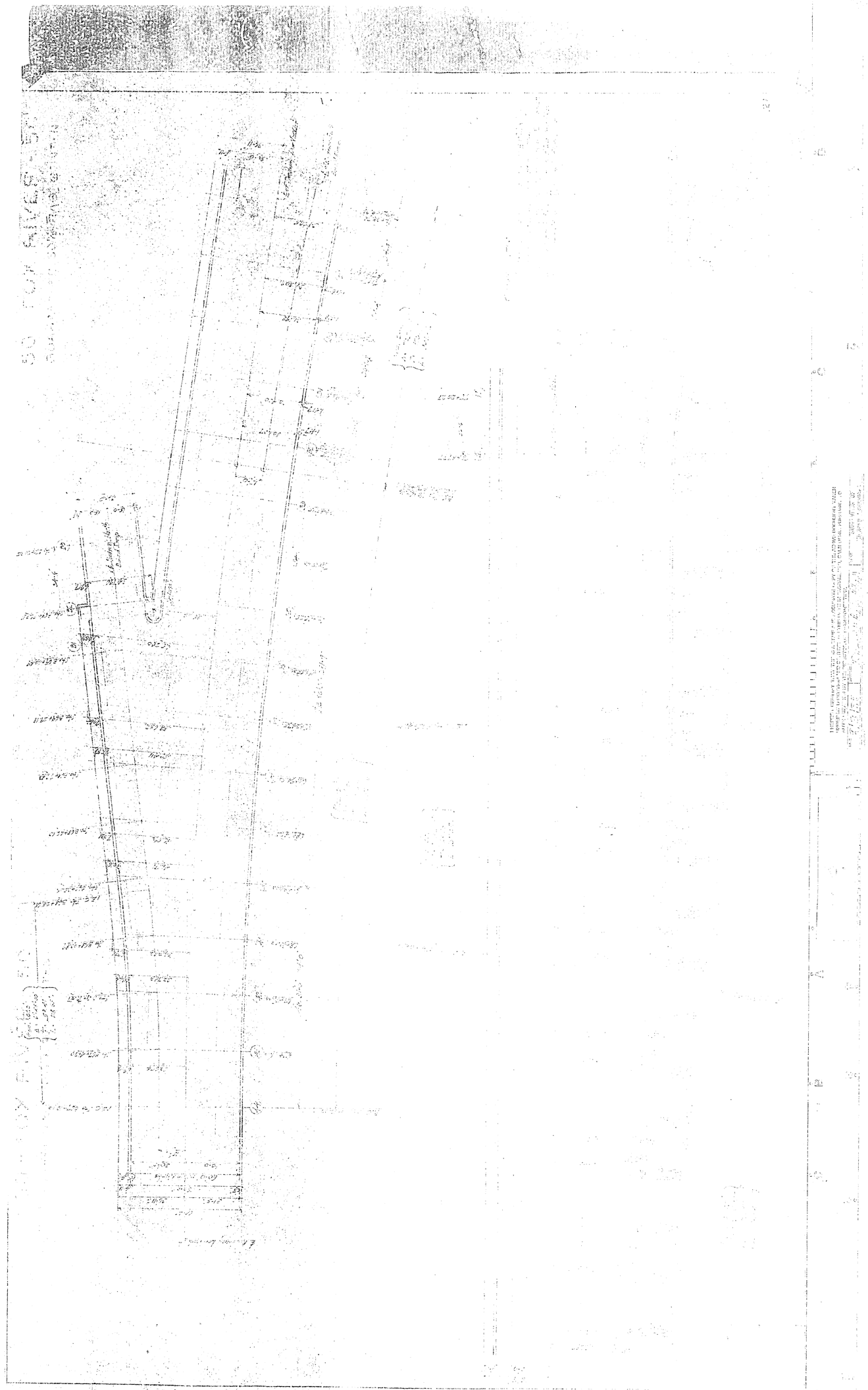
GENERAL NOTES:
For Balustrade reinforcement see Sheet # F-216.
For Expansion Joint details for 3" Transite Conduit, 1½" Conduit and 1½" Conduit see Sheet # F-215.
For reinforcement of Conduit encasement see Sheet # F-216.

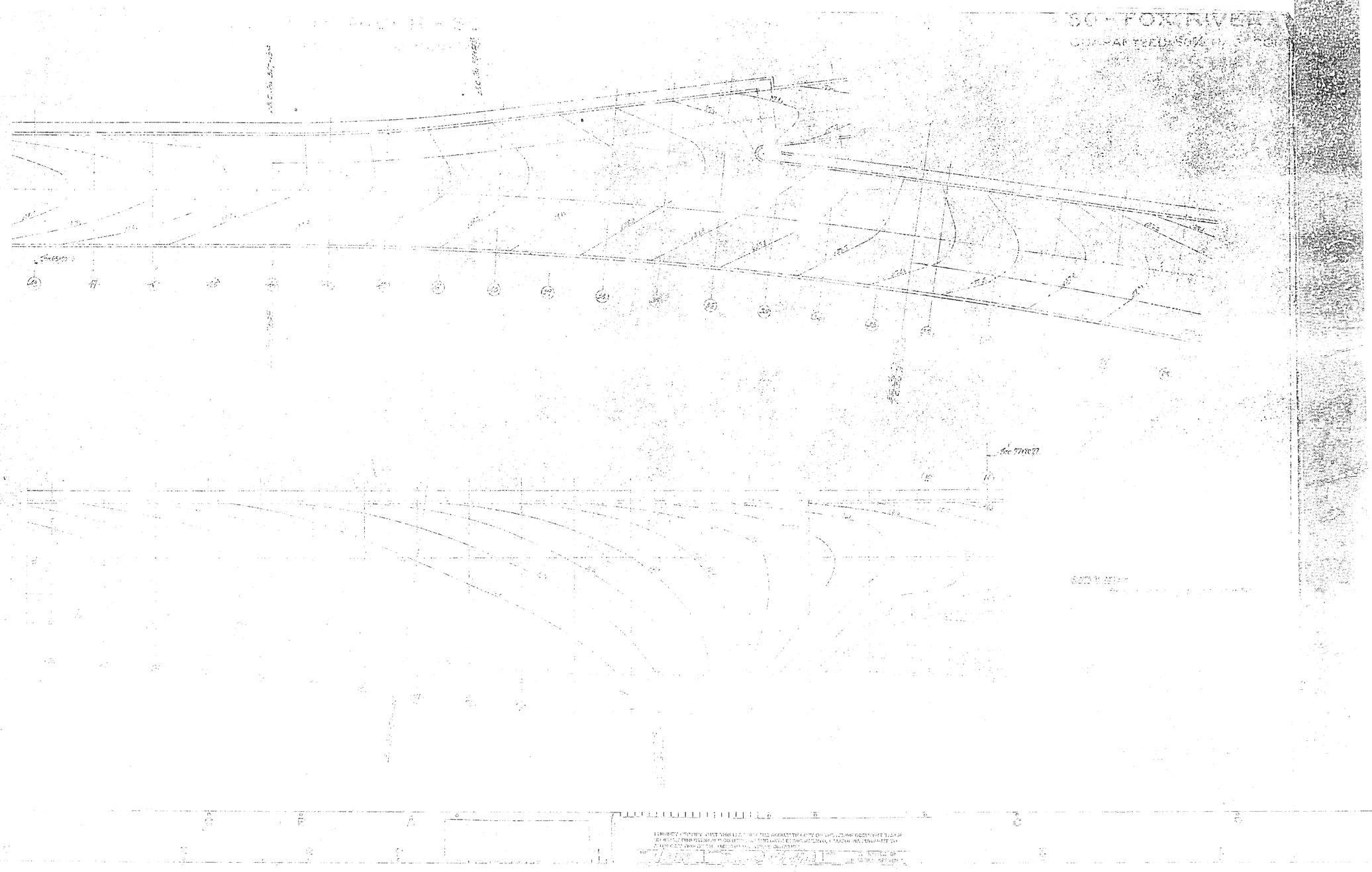
THE GOLDEN GATE BRIDGE
AT
SAN FRANCISCO, CAL.

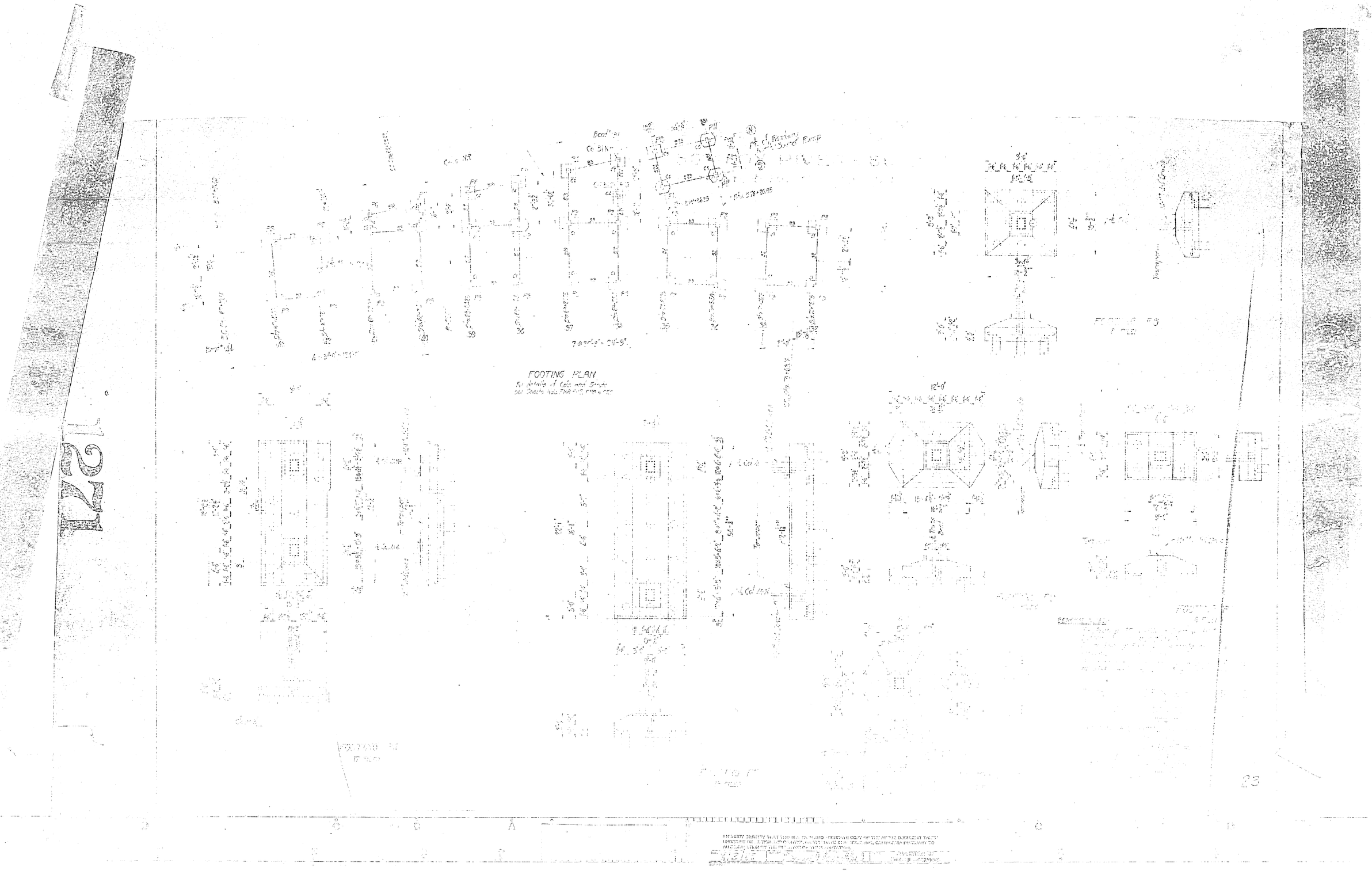
FOR THE
GOLDEN GATE BRIDGE AND HIGHWAY DISTRICT
OF CALIFORNIA

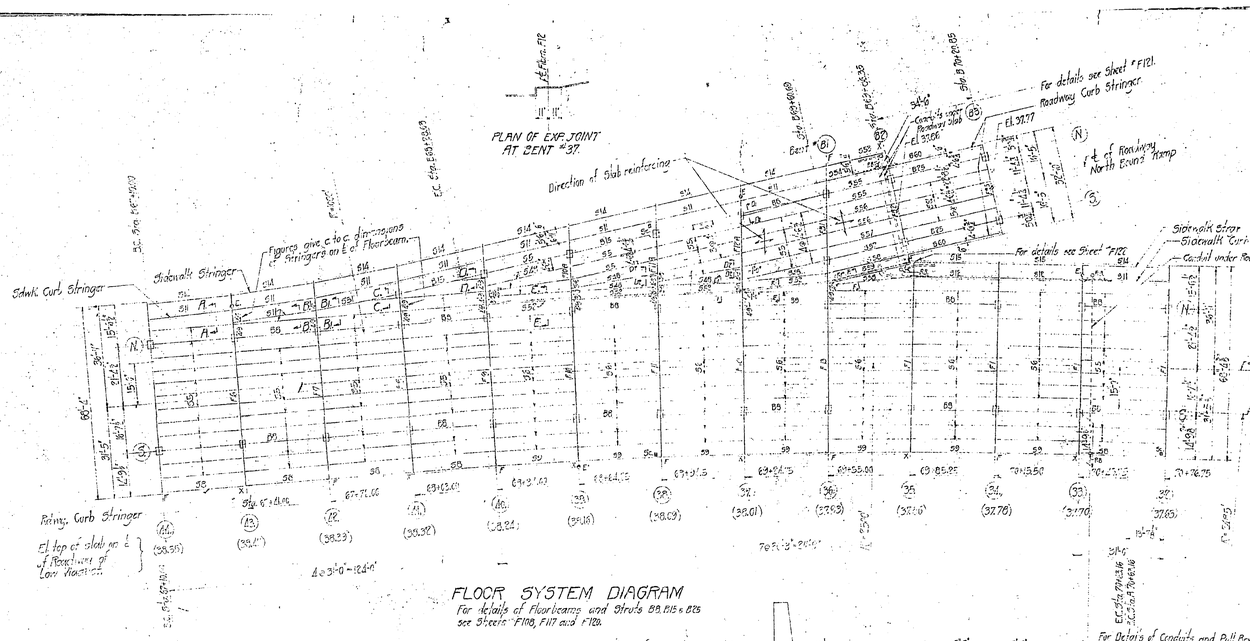
LOW VIADUCT
MISCELLANEOUS DETAILS

DATE AUG 1, 1934



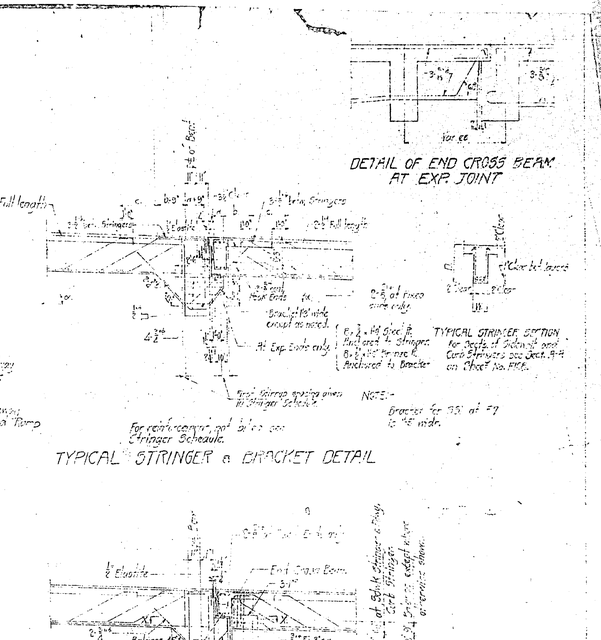

FOX RIVER

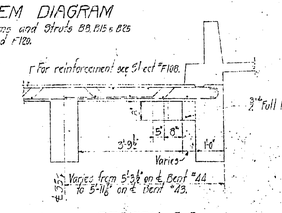

FOOTING PLAN
23



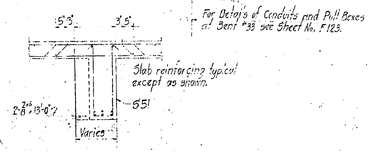
FLOOR SYSTEM DIAGRAM

For details of Floorbeams and Struts 88, 115 & 126 see Sheets F100, F117 and F120.

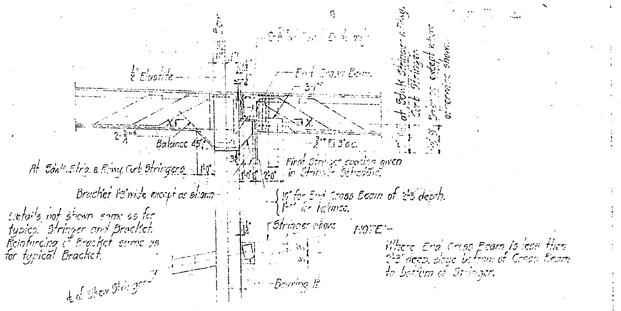




SECTION A-A



SECTION C-C



SECTION X-X

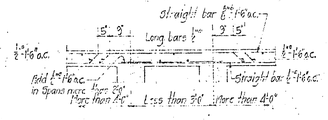
Typical for all stringers & brackets except where otherwise shown.

STRINGER & BRACKET DETAIL AT FLOORBEAM OF LESS THAN 4'-9" DEPTH

STRINGER SCHEDULE.

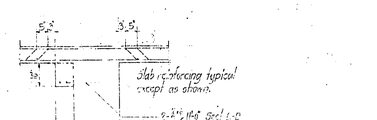
MARK	DIMENSIONS W	D	THICKNESS	BARS BENT	a.	b.	c.	d.	STIRRUPS NO.	SIZE	TYPE	SPACING FROM EACH END	REMARKS
551	16	33	3-1/4"	3/4"	9"	1'-6"	1'-5"	30"	11	1/2"	U	4-0-8-8@18" at W. end only	See Detail
552	16	33	2-1/4"	3/4	9"	1'-6"	1'-6"	30"	36	1/2"	U	2-4-4-5-5-6-6-8@18"	See Detail
553	12	33	2-1/4"						13	1/2"	U	4-0-1'-0"-4@1'-0"	
554	12	33	2-1/4"	1-1/4"	9			45"	13	1/2"	U	4-0-1'-0"-4@1'-0"	
555	12	33	3-1/4"	2-1/4"	9	1'-6"		30"	16	1/2"	U	3-6-6-9-4@1'-0"	
556	12	33	3-1/4"	2-1/4"	9	1'-6"		30"	17	1/2"	U	3-6-6-5-5@1'-0"	
557	12	33	3-1/4"	3-1/4"	9	1'-6"	1'-6"	45"	19	1/2"	U	3-6-6-9-6@1'-0"	
558	12	33	3-1/4"	3-1/4"	9	1'-6"	1'-6"	45"	18	1/2"	U	3-6-6-9-6@1'-0"	
559	16	33	3-1/4"	3-1/4"	9	1'-6"	1'-6"	30"	32	1/2"	U	3-5-6-7-9-11@1'-0"	See Detail
560	12	33	3-1/4"	2-1/4"	9	1'-6"	1'-6"	30"	23	1/2"	U	4-0-0-8-8-8@1'-0"	
561	12	33	3-1/4"	2-1/4"	9	1'-6"	1'-6"	30"	13	1/2"	U	2-4-4-5-5-6-6-8@1'-0"	
562	12	33	3-1/4"	2-1/4"	9	1'-6"		45"	13	1/2"	U	4-0-1'-0"-7@1'-0"	
563	12	33	3	2-1/4"	9	1'-6"		45"	10	1/2"	U	0-1'-0"-8@1'-0"-7@1'-0" at E. end only	Bent up at E. end only
564	16	33	3-1/4"	2-1/4"	9	1'-6"	1'-6"	30"	29	1/2"	U	2-3-6-6-8-8@1'-0"	See Detail
565	12	33	3-1/4"	2-1/4"	9	1'-6"		45"	19	1/2"	U	4-0-8-7@1'-0"	
566	12	33	3-1/4"	2-1/4"	9	1'-6"		45"	10	1/2"	U	4-0-0-7@1'-0"	
567	12	33	2-1/4"	1-1/4"	9			45"	5	1/2"	U	1-6'-0"-5@1'-0" at E. end only	Bent up at E. end only
568	12	33	3-1/4"	2-1/4"	9	1'-6"		30"	23	1/2"	U	3-3-7-10-7@1'-0"	
569	12	33	3-1/4"	3-1/4"	9	1'-6"	1'-6"	30"	25	1/2"	U	3-3-6-9-8-6@1'-0"	
570	12	33	3-1/4"	2-1/4"	9	1'-6"		30"	12	1/2"	U	5-0-1'-0"-9@1'-0" at E. end only	Bent up at E. end only
571	12	33	3-1/4"	3-1/4"	9	1'-6"	1'-6"	30"	21	1/2"	U	5-0-1'-7-7-8-6@1'-0"	
572	12	33	3-1/4"	3-1/4"	9	1'-6"	1'-6"	30"	25	1/2"	U	3-3-6-11-8-7@1'-0"	
573	12	33	3-1/4"	3-1/4"	9	1'-6"	1'-6"	30"	25	1/2"	U	3-3-6-8-8-8-7@1'-0"	See Detail
574	16	33	3-1/4"	3-1/4"	9	1'-6"	1'-6"	45"	21	1/2"	U	3-3-6-10-7-8@1'-0"	
[illegible]	16	33	3-1/4"	3-1/4"	9	1'-6"	1'-6"	30"	25	1/2"	U	3-3-6-8-8-8-6@1'-0"	
576	16	33	3-1/4"	3-1/4"	9	1'-6"	1'-6"	30"	25	1/2"	U	3-3-6-8-8-8-7@1'-0"	
577	16	33	3-1/4"	3-1/4"	9	1'-6"	1'-6"	30"	26	1/2"	U	3-3-6-5-8-8-7@1'-0"	
578A	16	33	3-1/4"	3-1/4"	9	1'-6"		30"	27	1/2"	U	0-4-6-7-8-8-8@1'-0"	

For additional Stringer Schedule see Sheet No. F103.



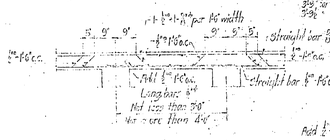
SECTION B-B

Typical for continuous slab of less than 3'-0" span.



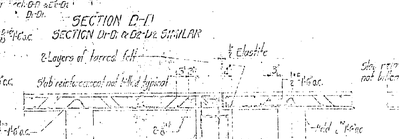
SECTION D-D

SECTION D1-D1 & D2-D2 SIMILAR



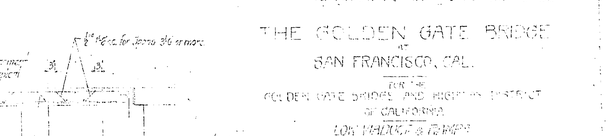
SECTION E1-B1

Typical for continuous slab with X spans between 3'-9" and 4'-6"



SECTION E-E

SECTION E1-E1 SIMILAR



SECTION F-F

NOTE:- For Stringer schedule see Sheet No. F103. Slab bars as shown unless otherwise specified.

Bend typical for all Stringers.

NOTE:- Haunche Bars to be used for all edge stringers.

GENERAL NOTES:-

Concrete: Class A

Reinforcing Steel: Grade 33, deformed bar

Structural Steel: Grade 33

Concrete protection: Cover of reinforcement shall be not less than 1" unless otherwise specified.

Expansion joints: Expansion joints shall be provided in accordance with Sheet No. F103.

THE GOLDEN GATE BRIDGE

AT

SAN FRANCISCO, CAL.

FOR THE

GOLDEN GATE BRIDGE AND HIGHWAY DISTRICT

OF CALIFORNIA

LOW VIADUCT & TOWER

FLOOR SYSTEM DIAGRAM & DETAILS

FROM STRUCTURAL TO STRUCTURAL

STRAUSS & ENGE, INC

ENGINEERS

PARTS OF THIS DRAWING WERE PREPARED BY THE FOLLOWING ORGANIZATIONS:

[illegible]

PARTS OF THIS DRAWING WERE PREPARED BY THE FOLLOWING INDIVIDUALS:

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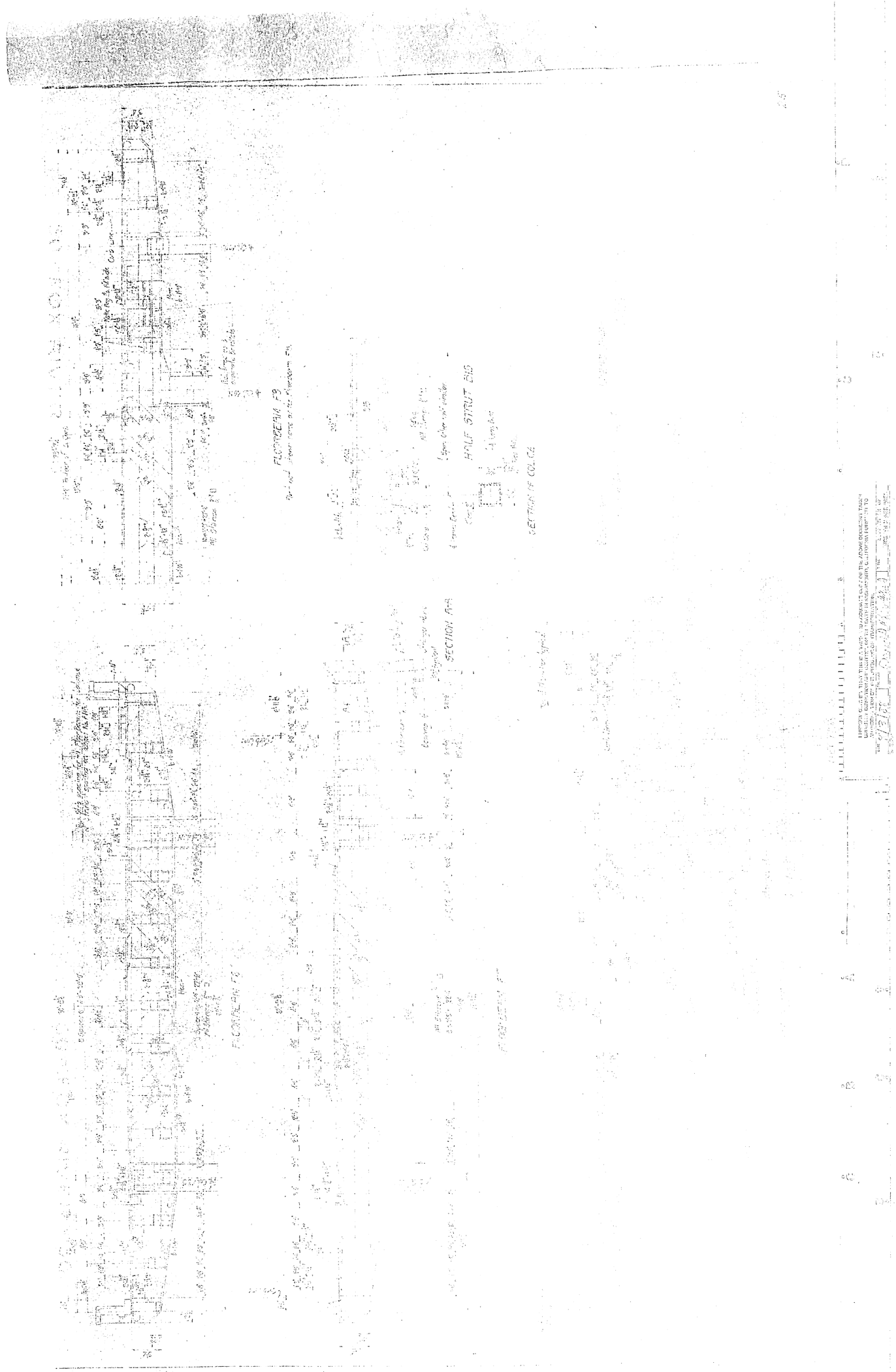
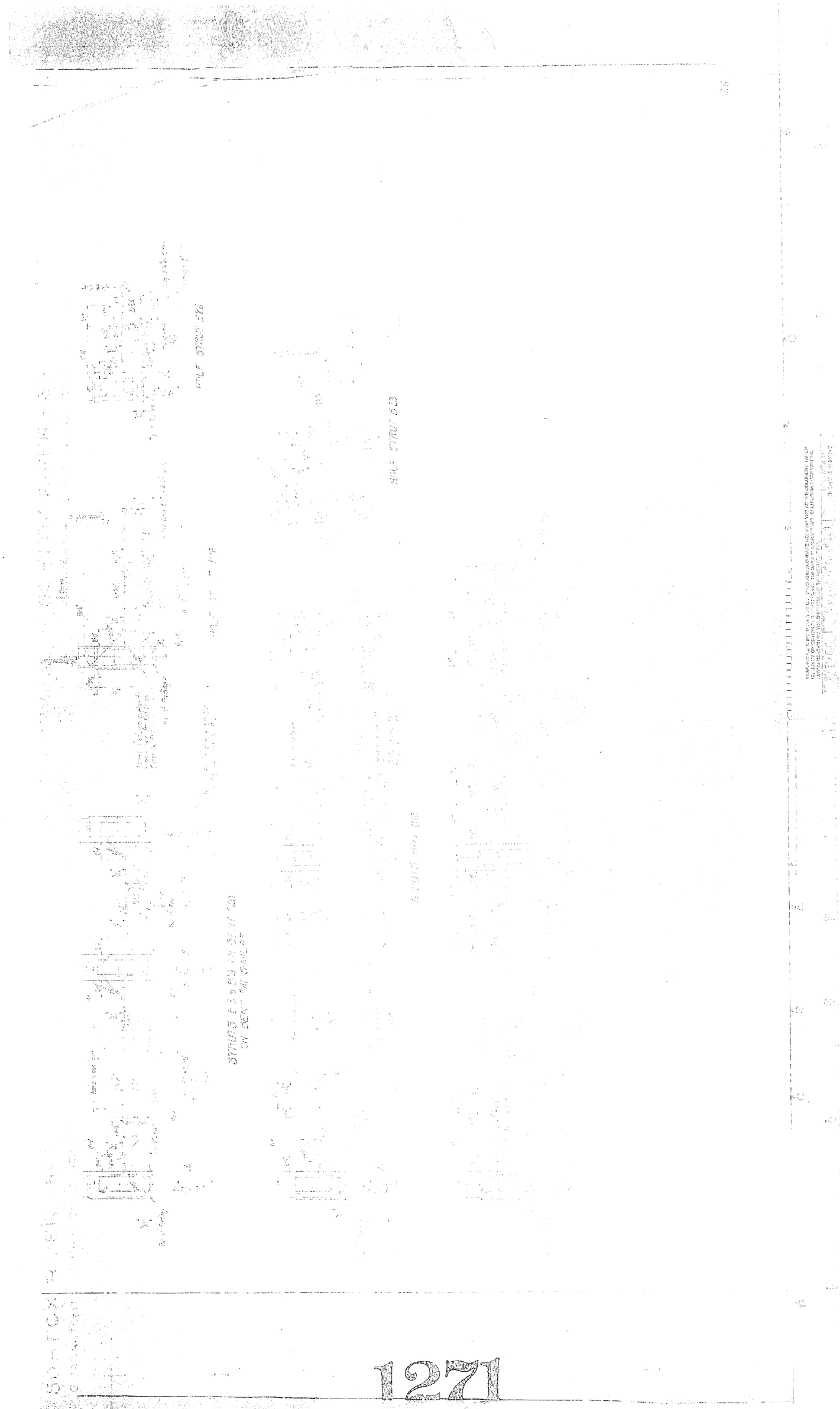
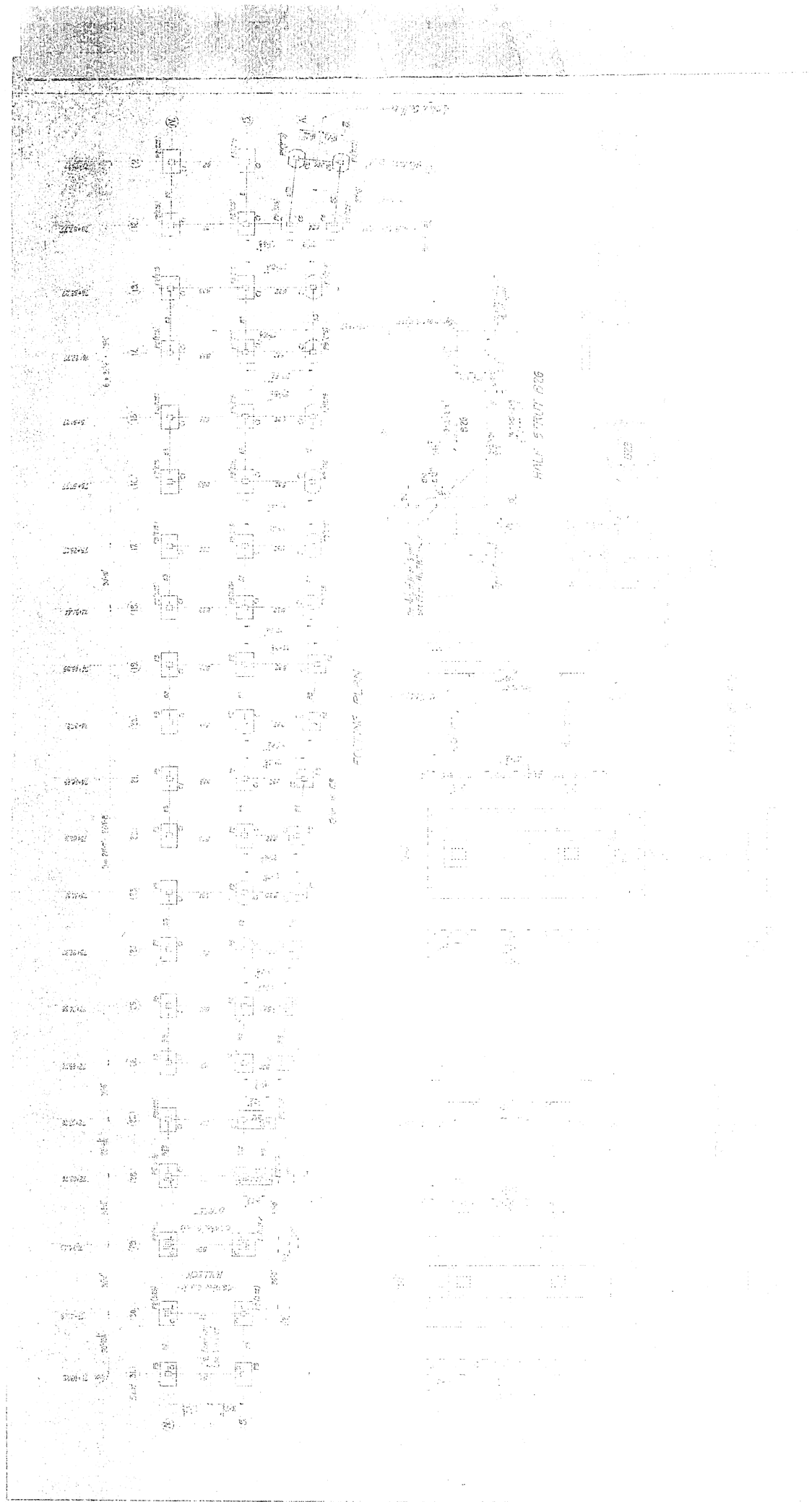
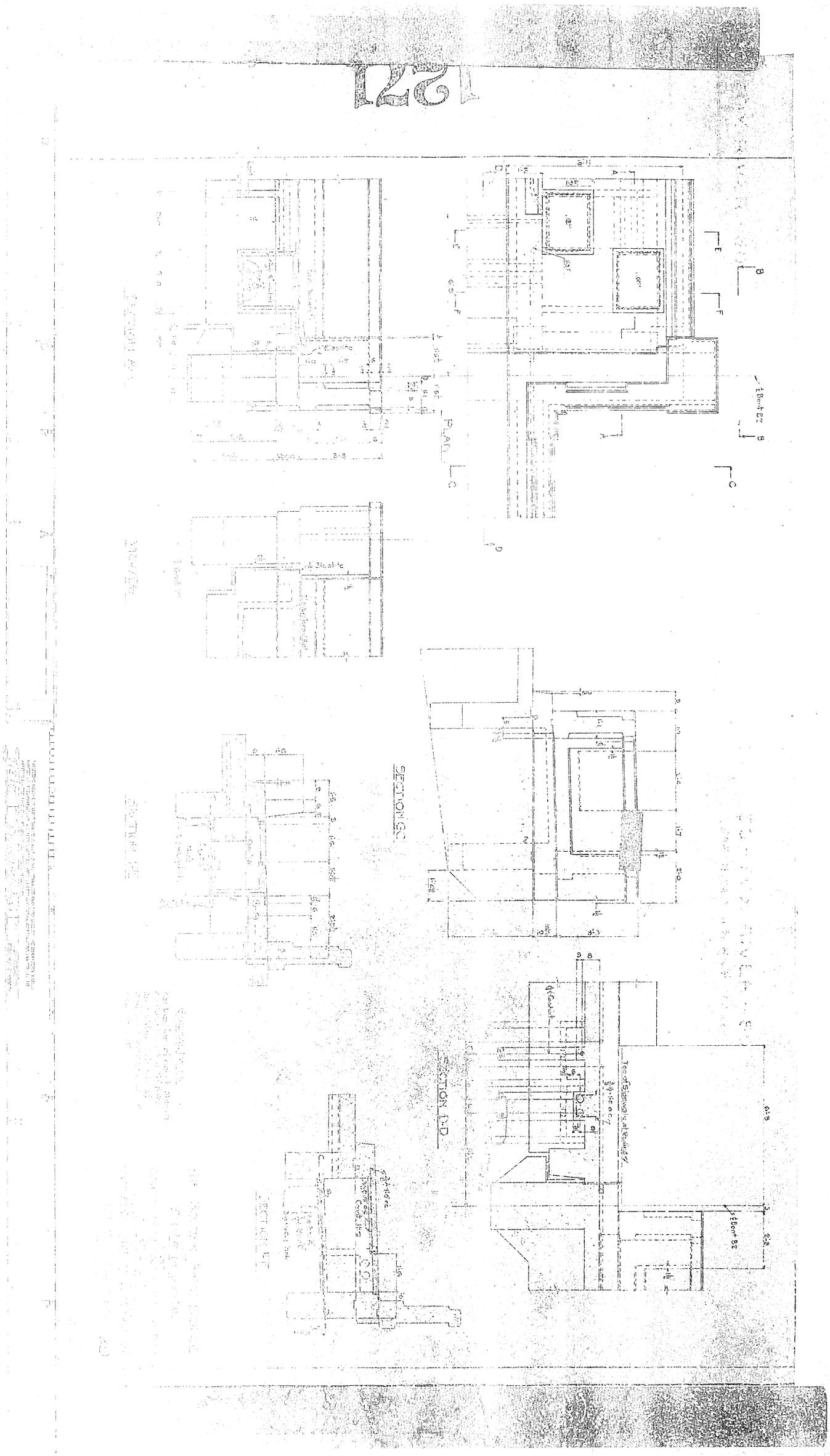
[illegible]



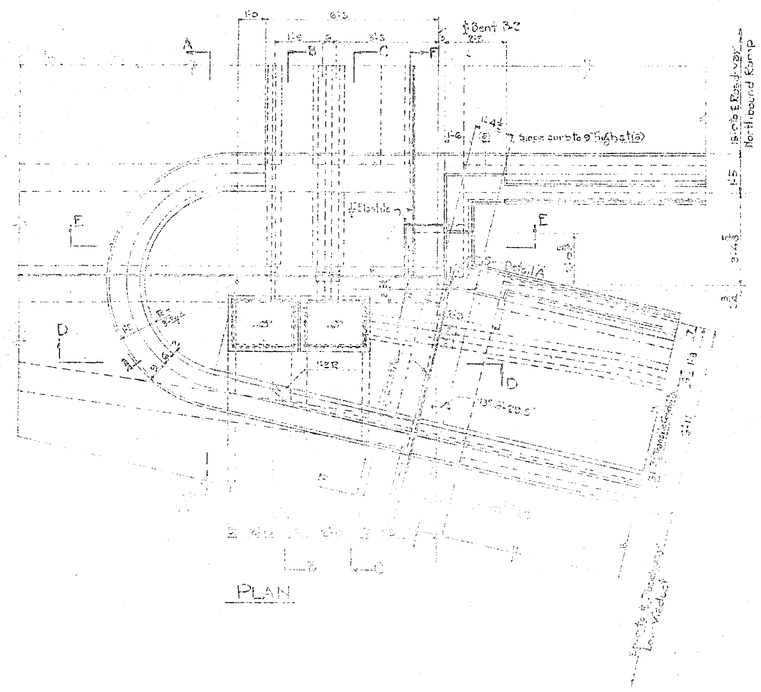
1271

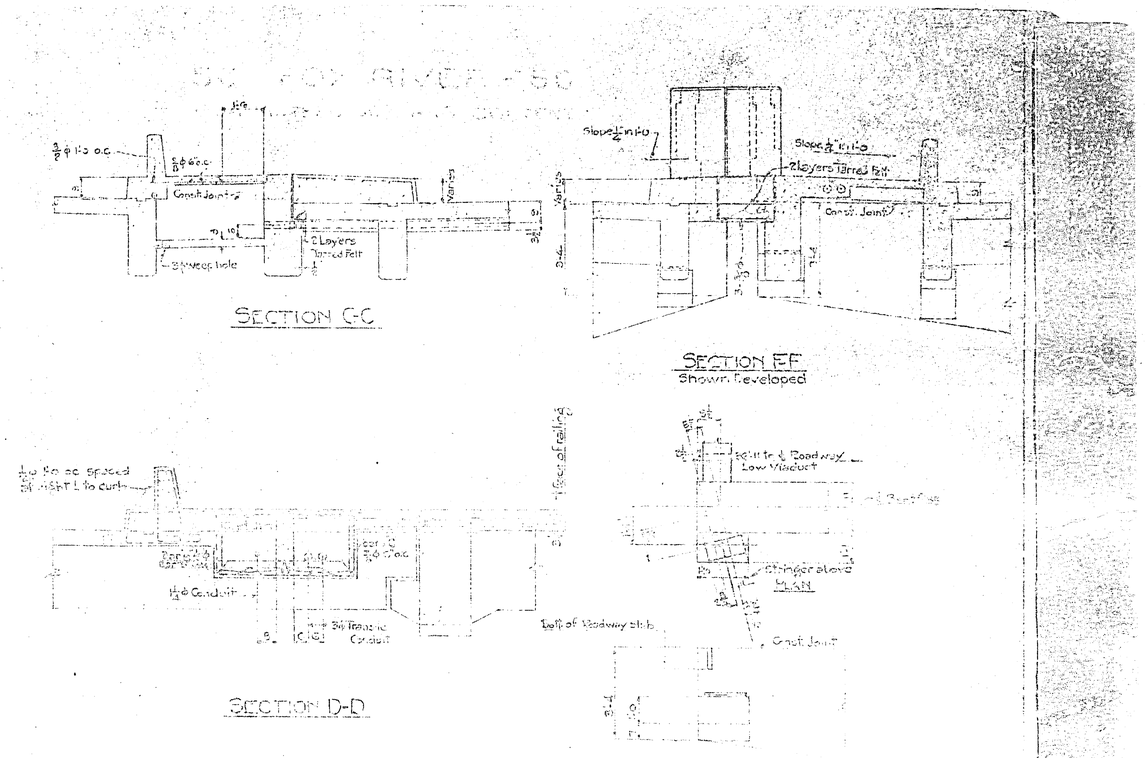

HALF STRUT B23
STRUTS B3 & B4 ON BENT 120
ON BENT 141 SIMILAR



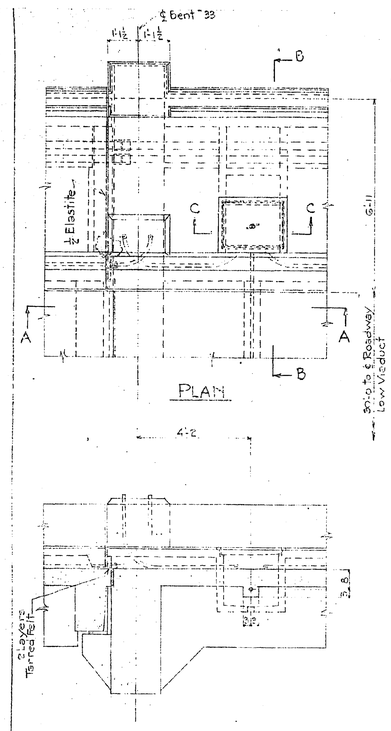


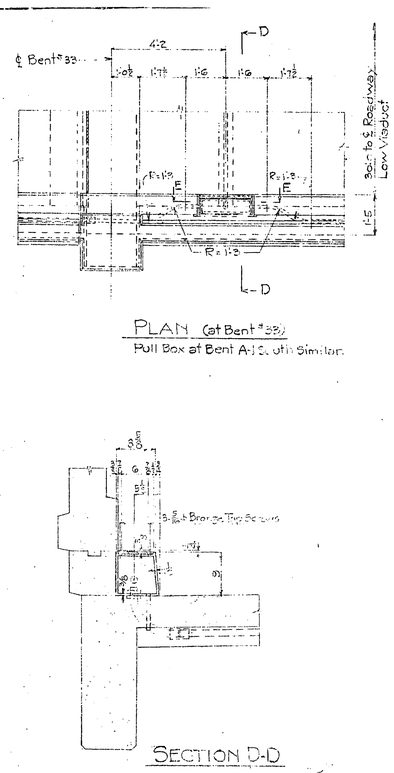
PLAN
SECTION GC
SECTION D-D
SECTION EF

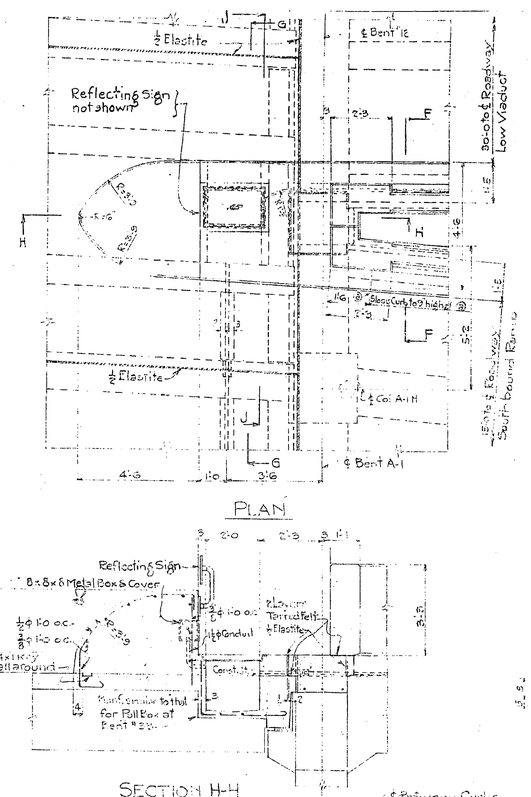

PLAN
Bent B-2
Northbound Ramp
Slope curb to 9" high at (a)
Detail A
Slope to ℄ Roadway Low Viaduct

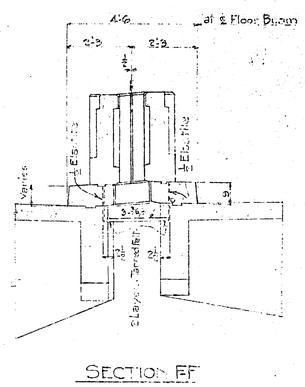

SECTION C-C
Const. Joint
2 Layers Tarred Felt
3 Weep hole
Varies
SECTION E-E
Shown Developed
Slope 1/4 in 1-0
2 Layers Tarred Felt
Const. Joint
SECTION D-D
Conduit
Transmission Conduit
Bott. of Roadway Slab
Stringer above
PLAN
Const. Joint

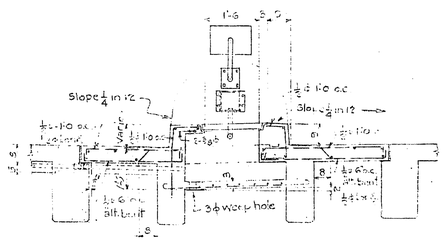
1271

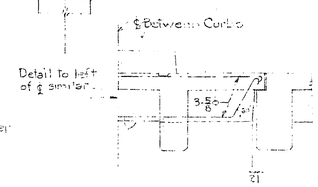


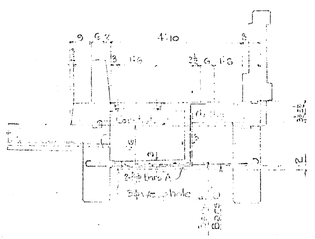


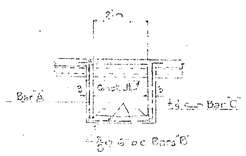


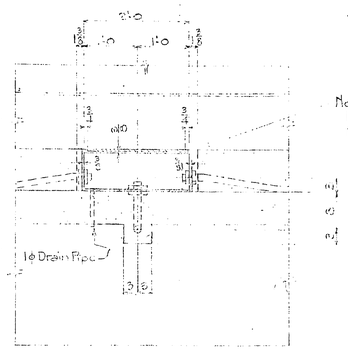












GENERAL NOTES

For location of [illegible] see on this sheet [illegible] Details not shown [illegible]

Contractor to submit details of reflecting sign and of [illegible] metal box & cover for approval of engineer.

THE CONCRETE ARCH BRIDGE AT SAN FRANCISCO, CAL. [illegible]

LOW VIADUCT [illegible]

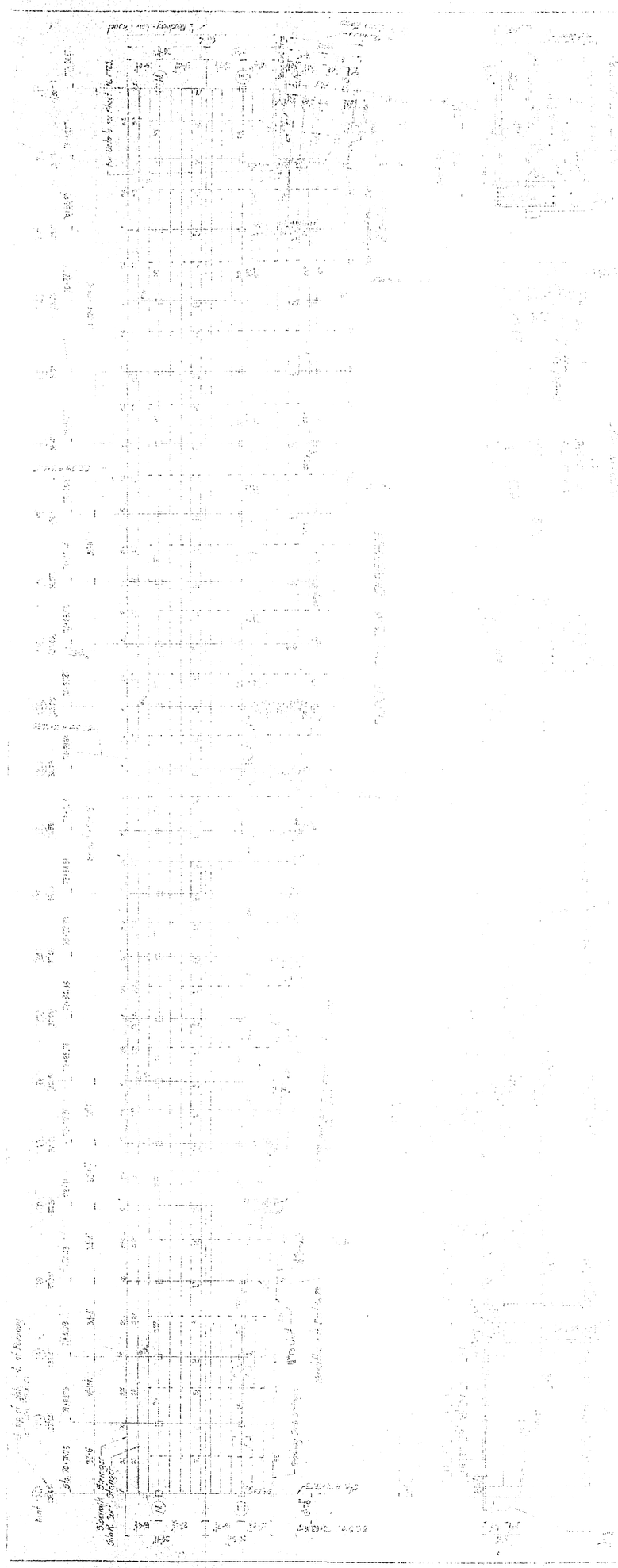
RAILROAD COMMISSION OF CALIFORNIA

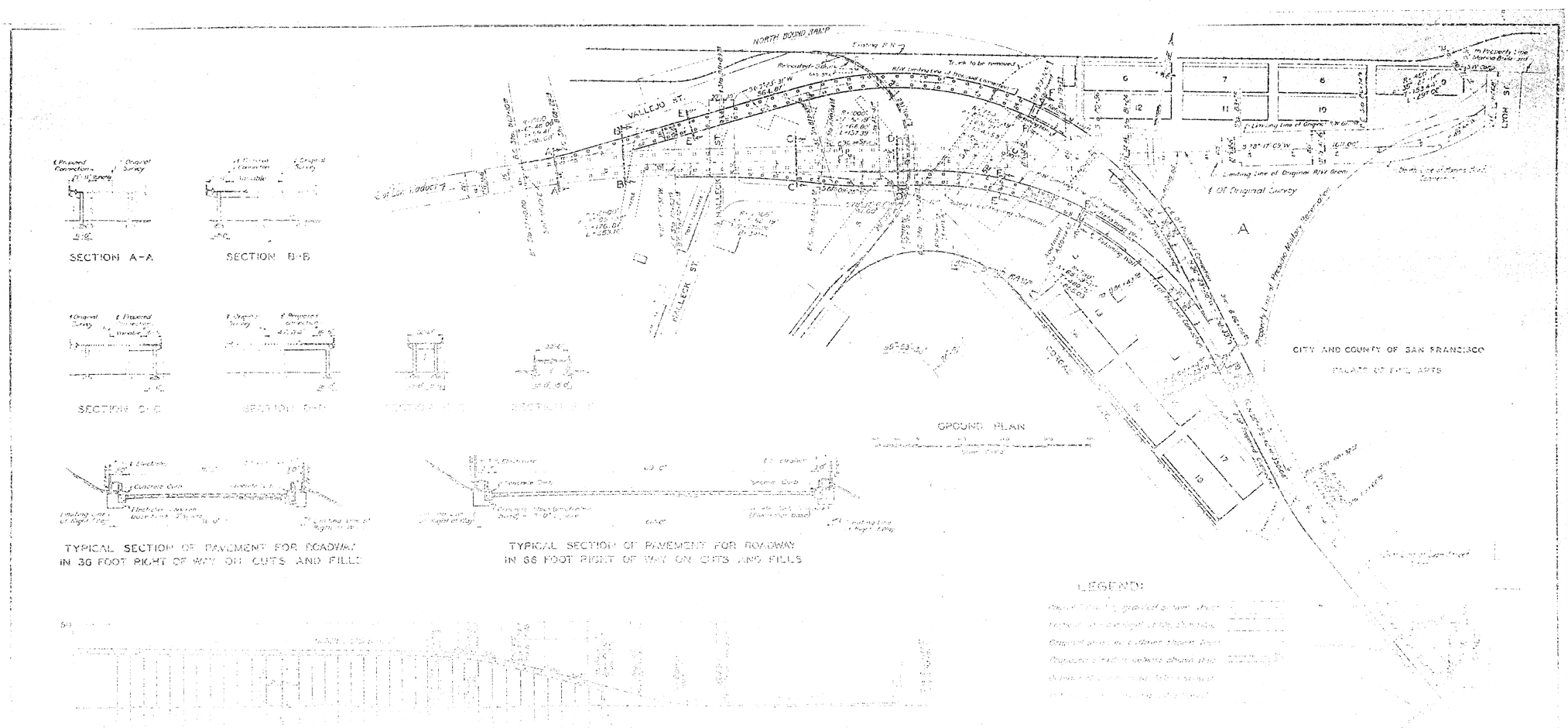
DATE [illegible]

SCALE [illegible]

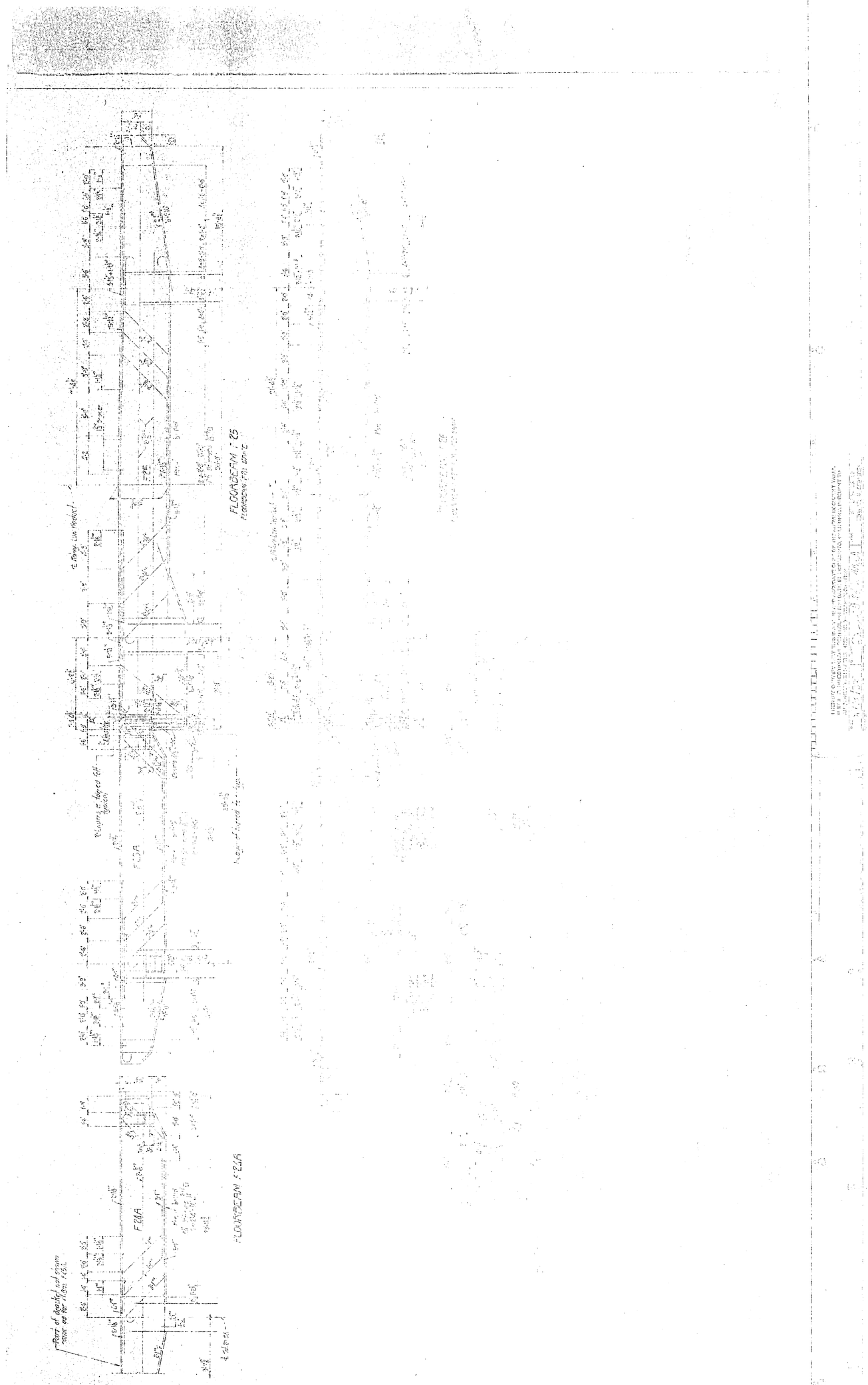
SHEET [illegible]

121

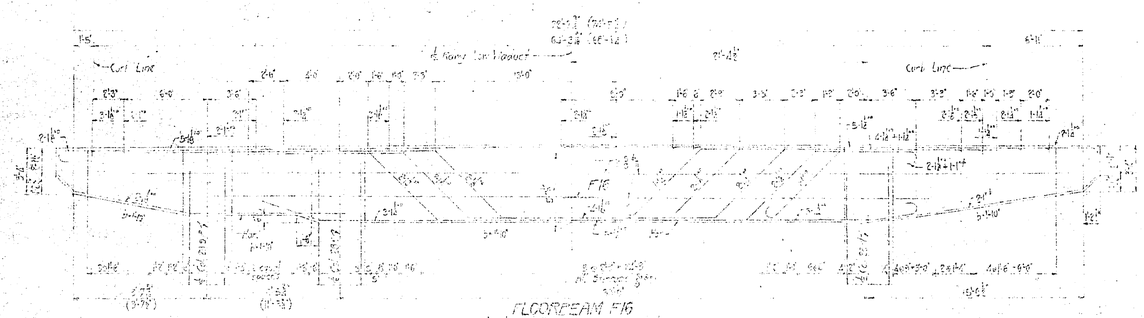



NORTH BOUND RAMP
VALLEJO ST.
HALLECK ST.
LYON ST.
SECTION A-A
SECTION B-B
SECTION C-C
GROUND PLAN
TYPICAL SECTION OF PAVEMENT FOR ROADWAY IN 36 FOOT RIGHT OF WAY ON CUTS AND FILLS
TYPICAL SECTION OF PAVEMENT FOR ROADWAY IN 66 FOOT RIGHT OF WAY ON CUTS AND FILLS
CITY AND COUNTY OF SAN FRANCISCO
PALACE OF FINE ARTS
LEGEND:

127

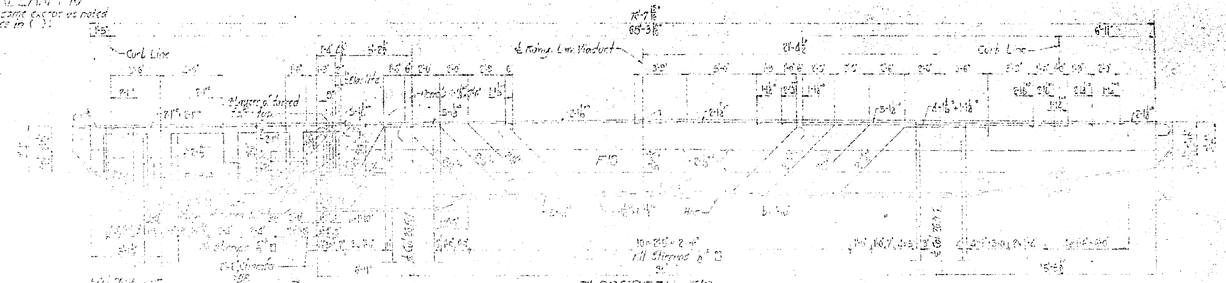


1271

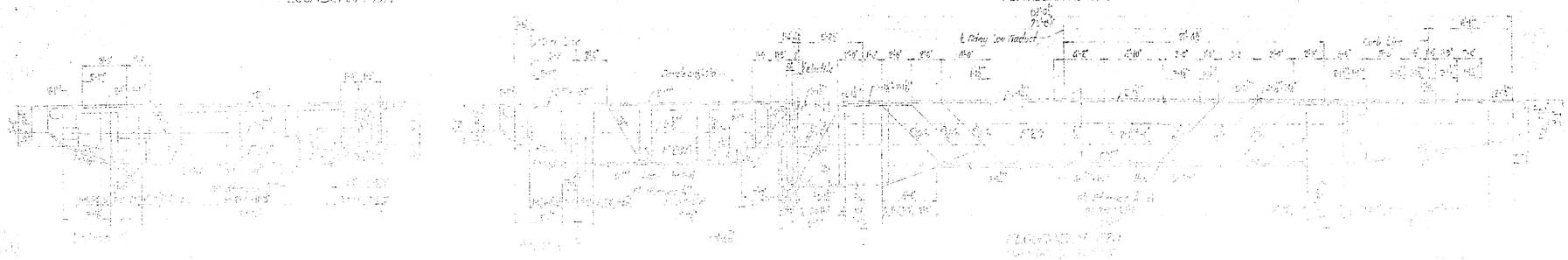


FLOORBEAM F16
Floorbeam F16 same except as noted by figures in ( ).

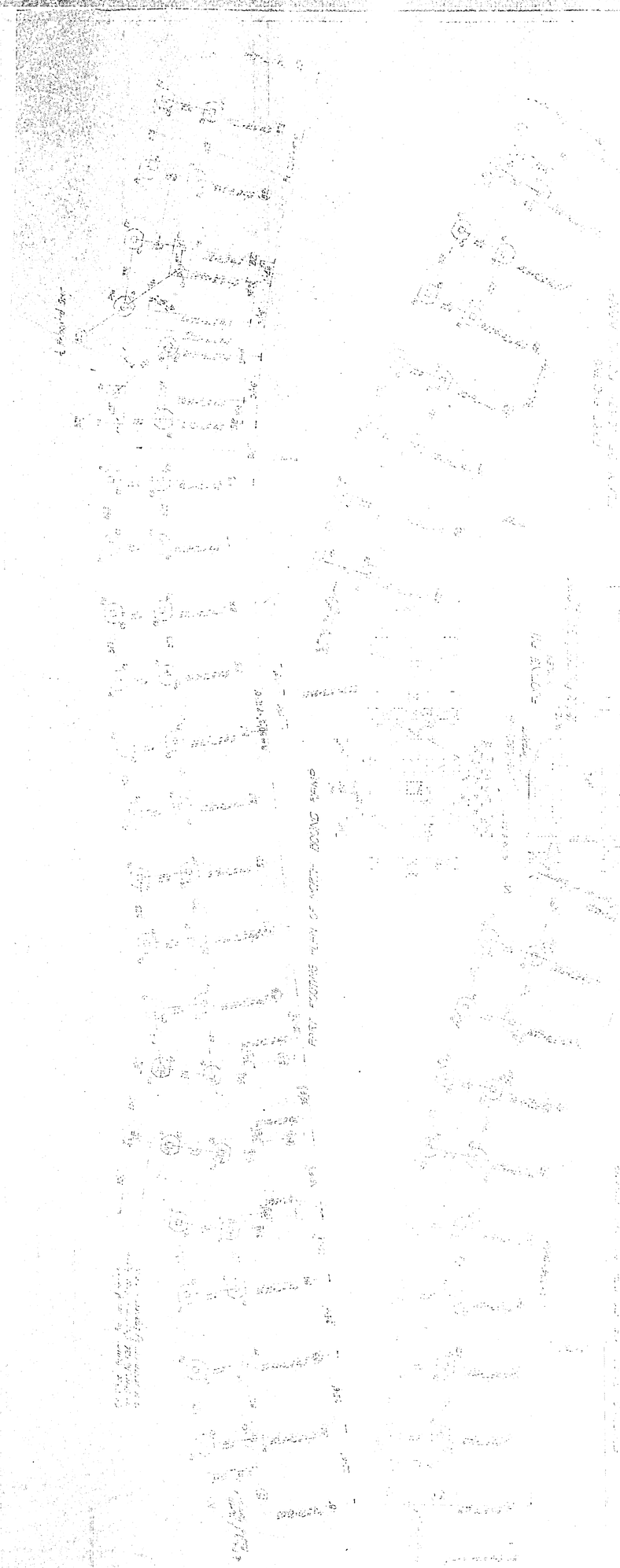
FLOORBEAM F18A

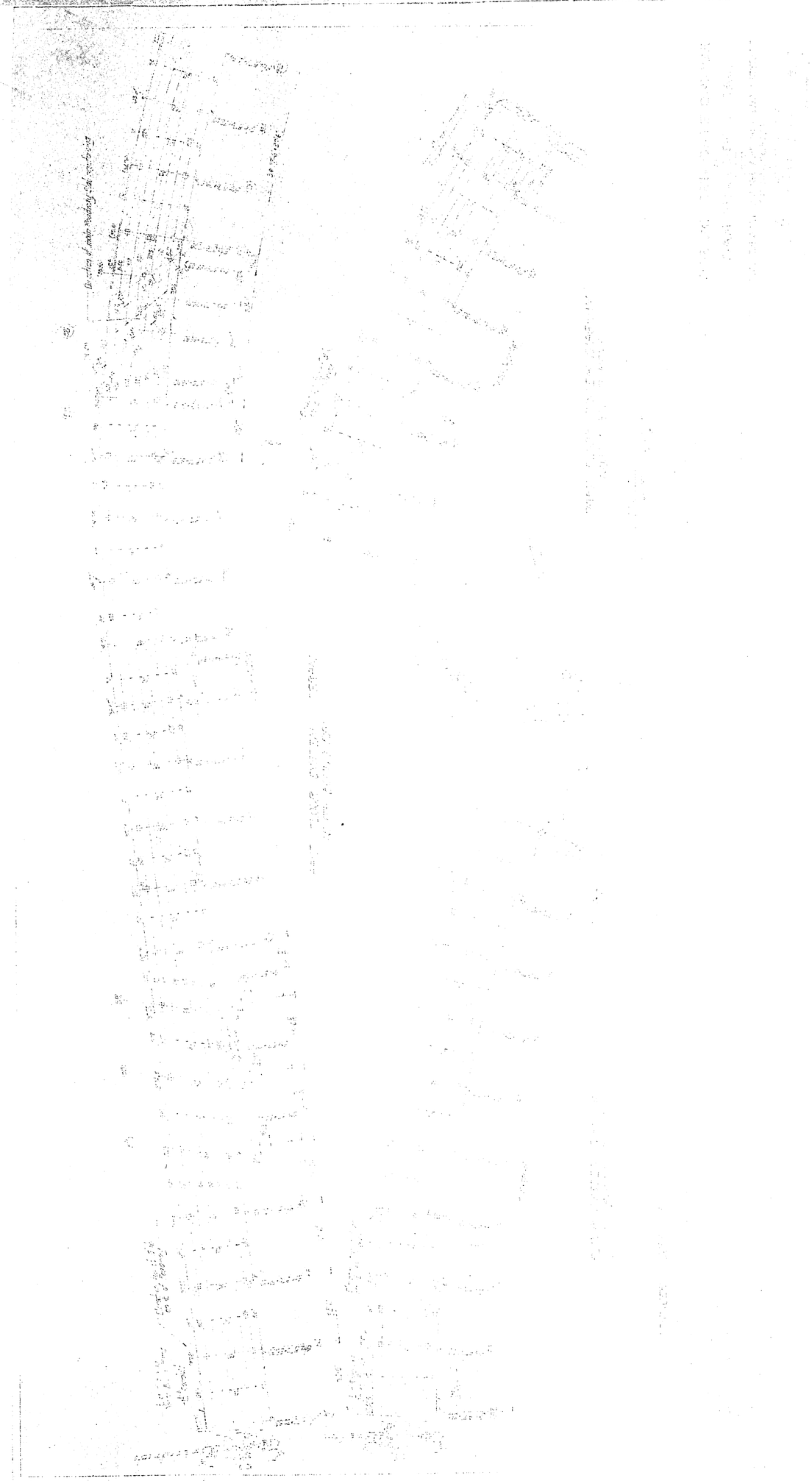


FLOORBEAM F18
FLOORBEAM F18 same



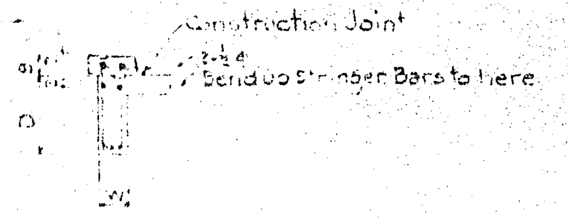
FLOORBEAM F20



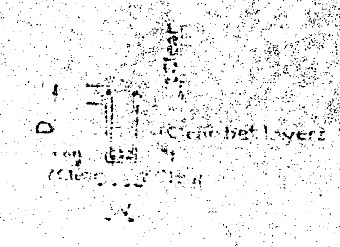


Stringer Schedule

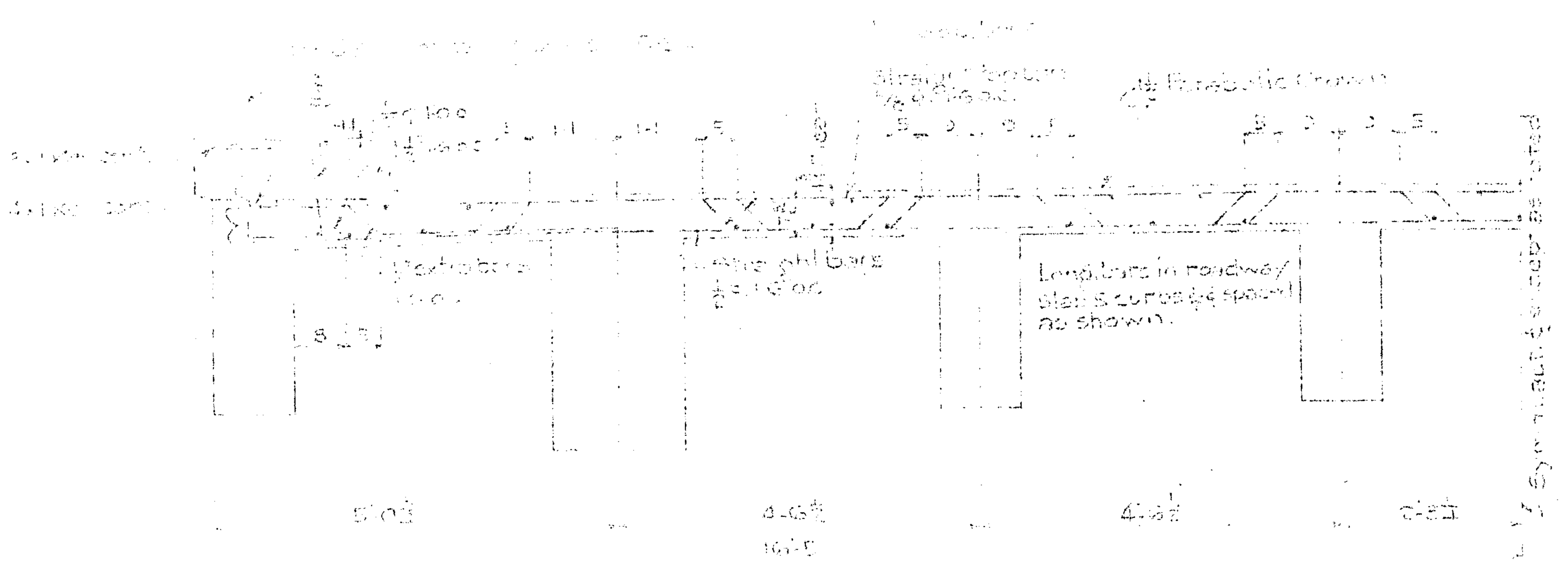
Mark	Dimensions W	Dimensions D	Bars: Straight Bottom	Bars: Bent	a	b	c	α	Stirrups: No	Size	Type	Spacing from each end	Remarks
S1	12	33	3-1⅛φ	3-1⅛φ	0-9	2-0	2-6	30°	[illegible]	⅞φ	⊔	2-5-6-6-7@21-20½	
S2	12	33	3-1φ	2-1φ	0-9	2-0		30°	19	⅞φ	⊔	4-15-5@21	
S5	12	33	[illegible]	[illegible]	0-9	2-0	2-6	30°	22	⅞φ	⊔	3-6-6-6-7@21	
[illegible]	12	33	[illegible]	[illegible]	0-9	2-0	2-6	30°	21	⅞φ	⊔	3-6-6-11-7@21	
S7	12	33	[illegible]	[illegible]	0-9	1-9	2-3	30°	20	⅞φ	⊔	3-6-6-12-6@21	
S9	12	33	[illegible]	1-1⅛φ	0-9			30°	17	⅞φ	⊔	8-10-7@21	
[illegible]	12	33	2-1⅛φ	1-1⅛φ	0-9			30°	16	⅞φ	⊔	3-10-6@21	
[illegible]	12	33	3-1φ	2-1φ	0-9	1-9	2-0	45°	18	⅞φ	⊔	2-6-10-6@21	
[illegible]	12	33	3-1φ	3-1φ	0-9	1-9	2-0	45°	17	⅞φ	⊔	4-8-11-6@21	
S21	12	33	3-1⅛φ	1-1φ	0-9			30°	15	⅞φ	⊔	4-8-11-5@21	
S23	12	33	3-1φ	2-⅞φ	0-9	1-9		45°	12	⅞φ	⊔	4-10-4@21	
S24	12	33	2-1⅛φ	1-1⅛φ	0-9			45°	11	⅞φ	⊔	4-10-4@21	
[illegible]	12	33	2-1φ	[illegible]	0-9			45°	10	⅞φ	⊔	4-10-3@21	
[illegible]	12	33	2-1φ	2-1φ	0-9	2-0		30°	17	⅞φ	⊔	3-6-6-9-5@20	
S60	12	33	3-1⅛φ	[illegible]	[illegible]	2-0	[illegible]	30°	23	⅞φ	⊔	4-8-9-12-5@20	
S61	12	33	[illegible]	[illegible]	[illegible]	2-0	2-6	30°	23	⅞φ	⊔	2-4-4-5-5-6-6-8@20	



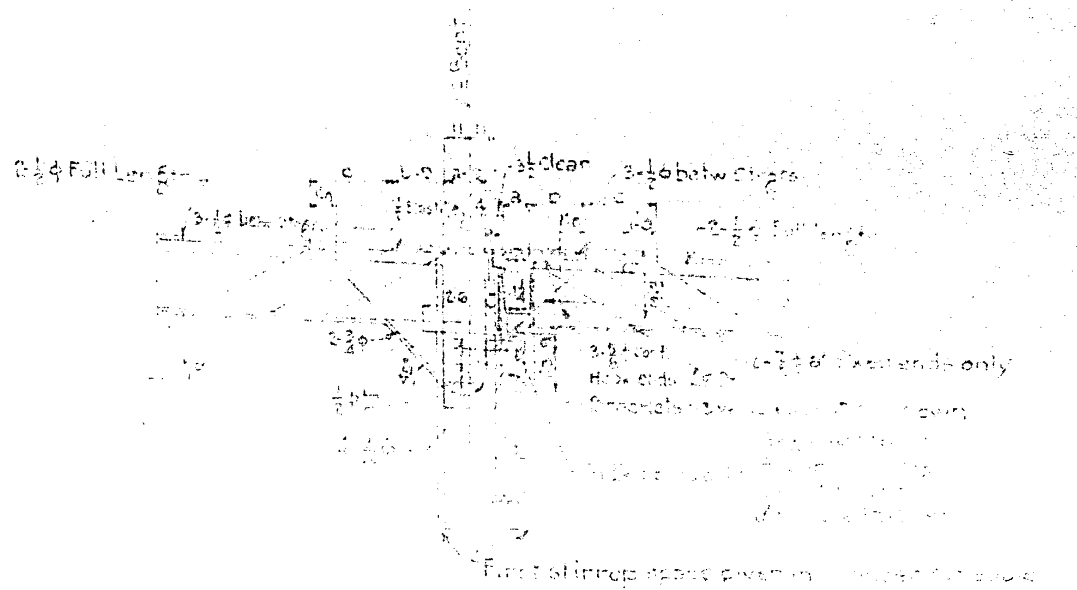
Section of Curb Stringer
Details not shown same as for Roadway Stringer



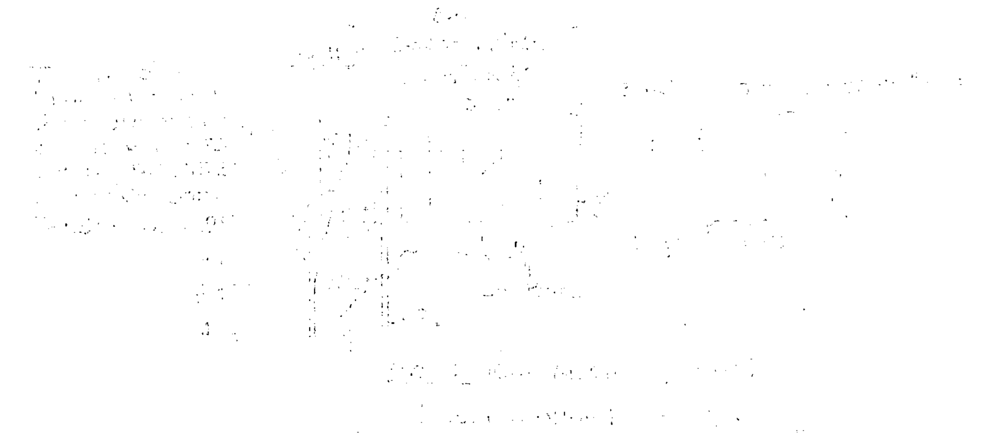
Section of Roadway Stringer

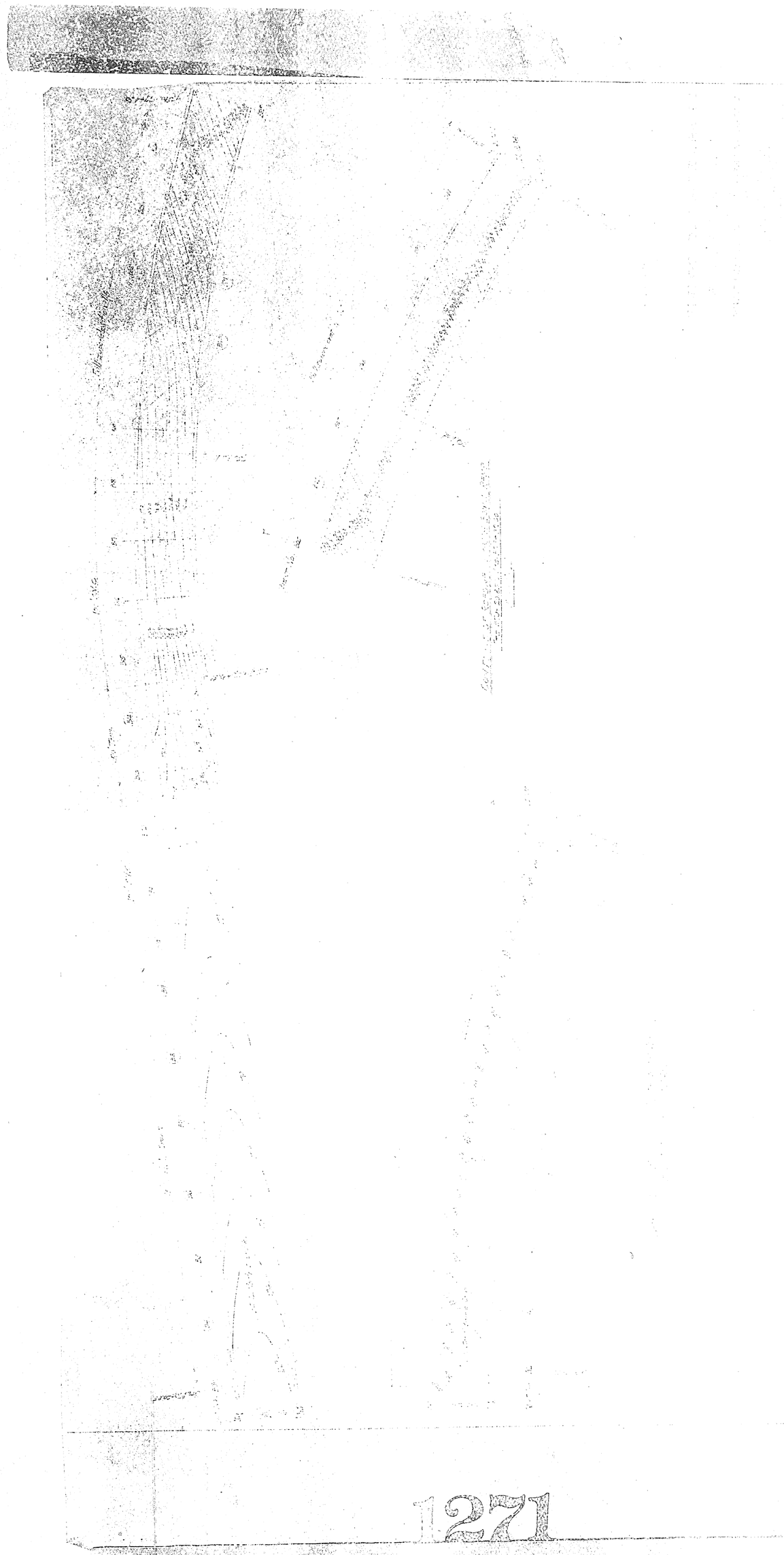


Details of Roadway Slab & Curb

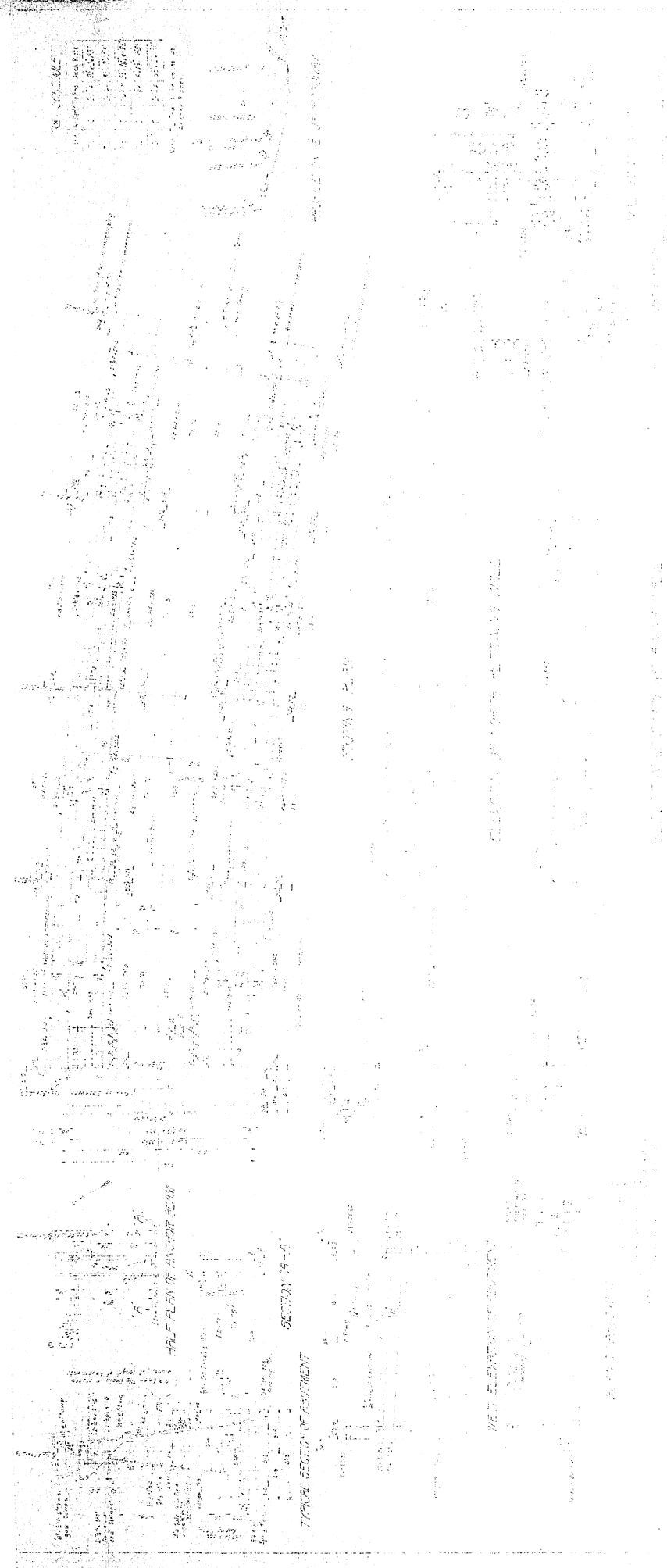


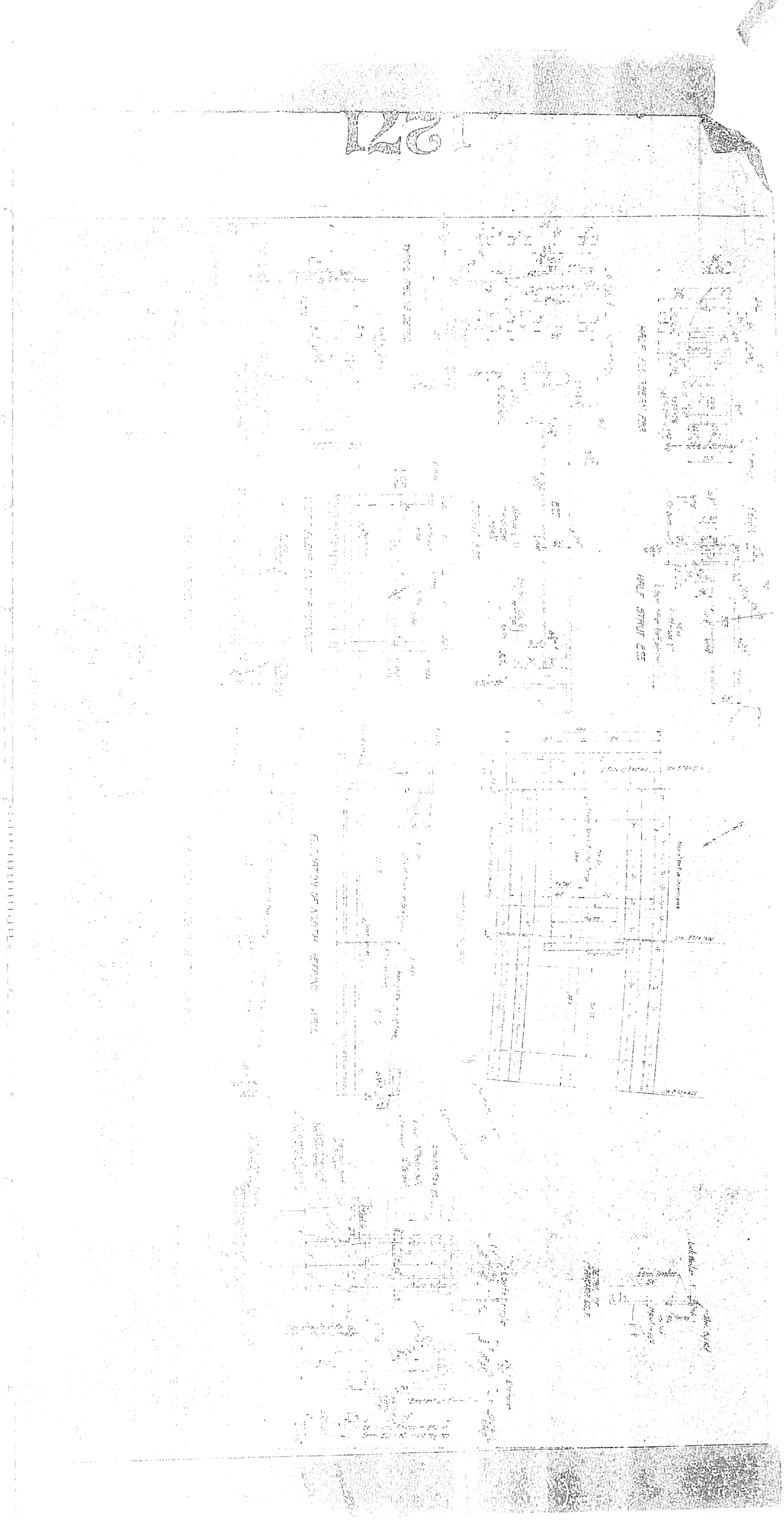
Typical Stringer & Bracket Detail

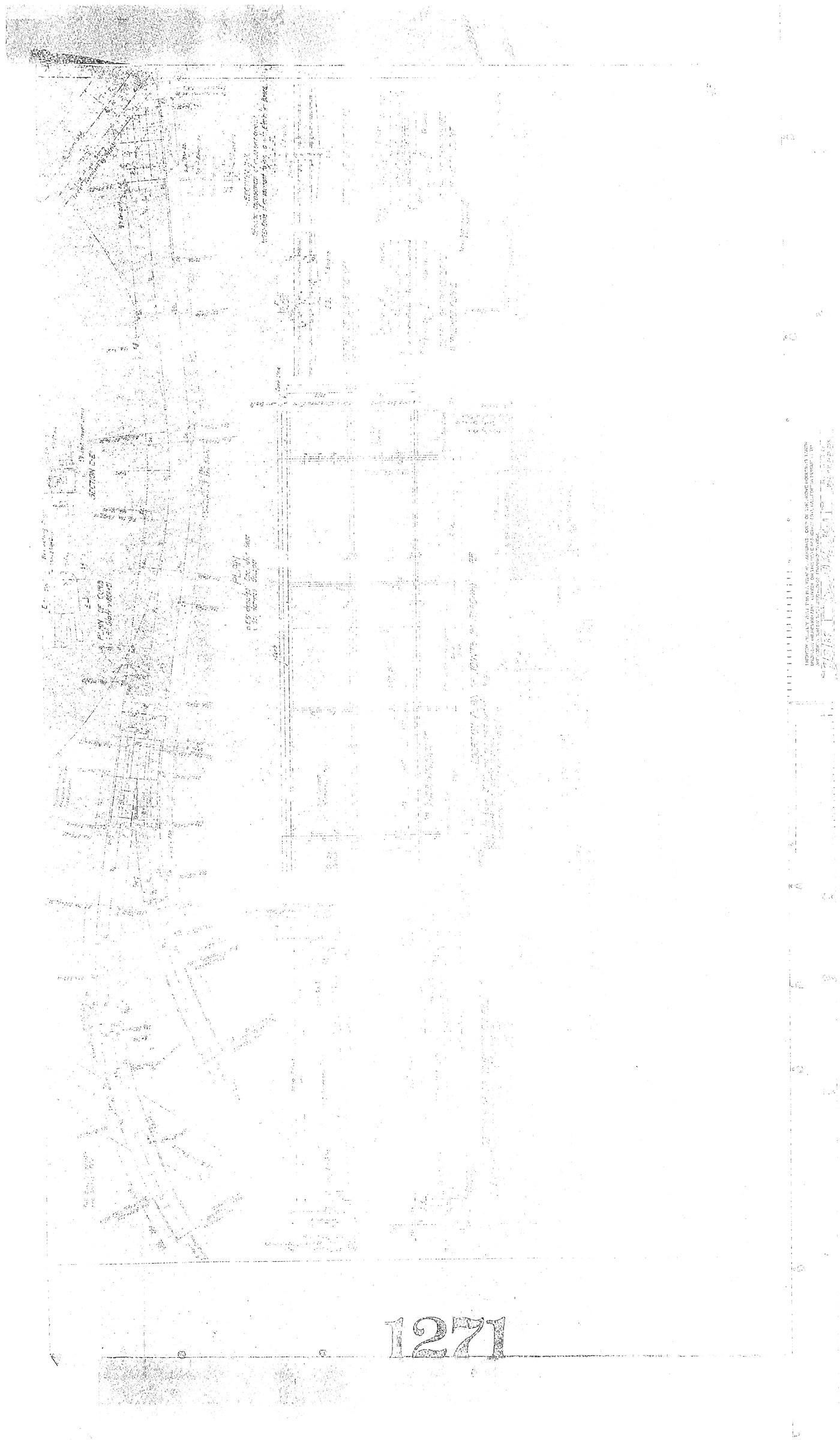




1271


SECTION 19-A
TYPICAL SECTION OF PAVEMENT





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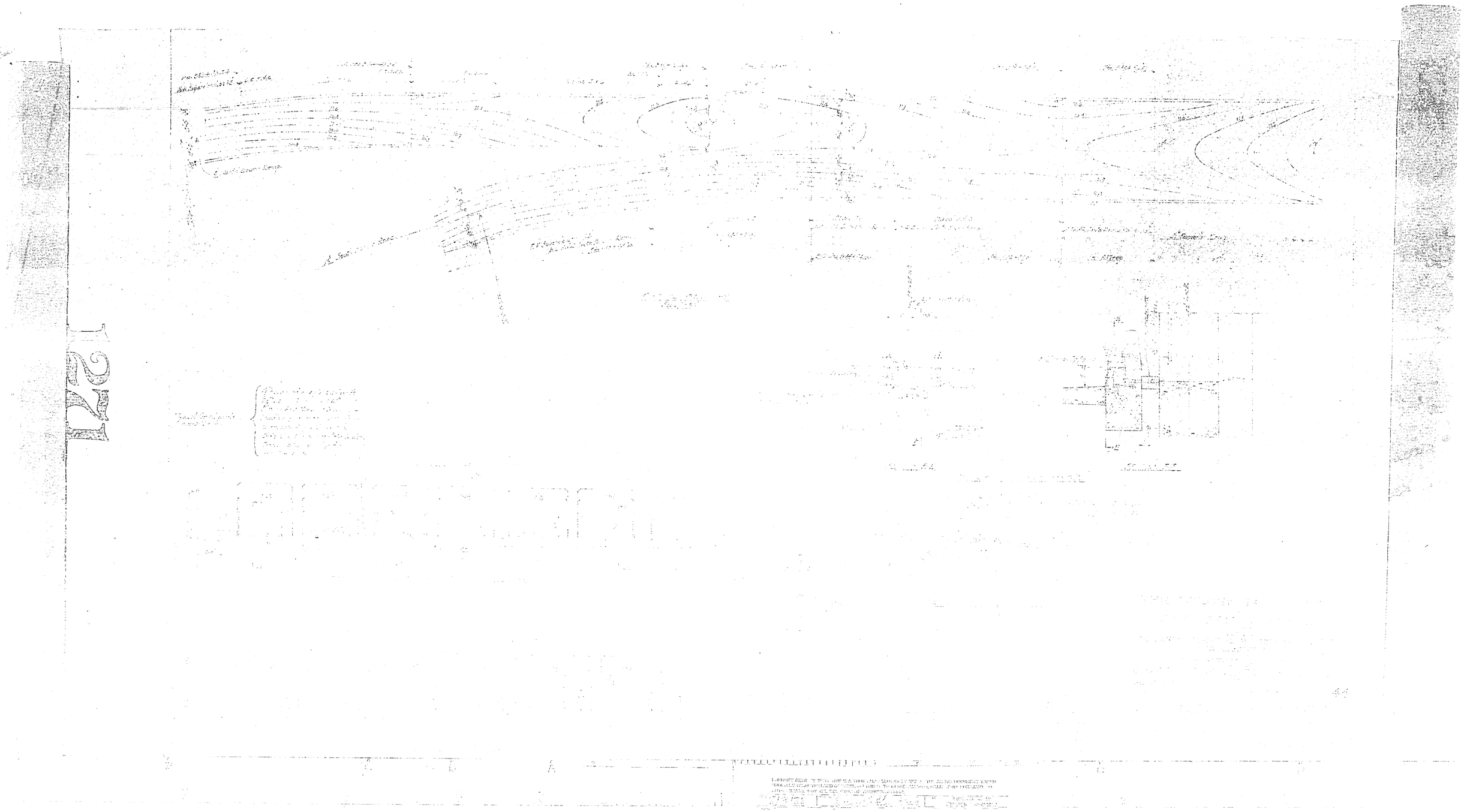

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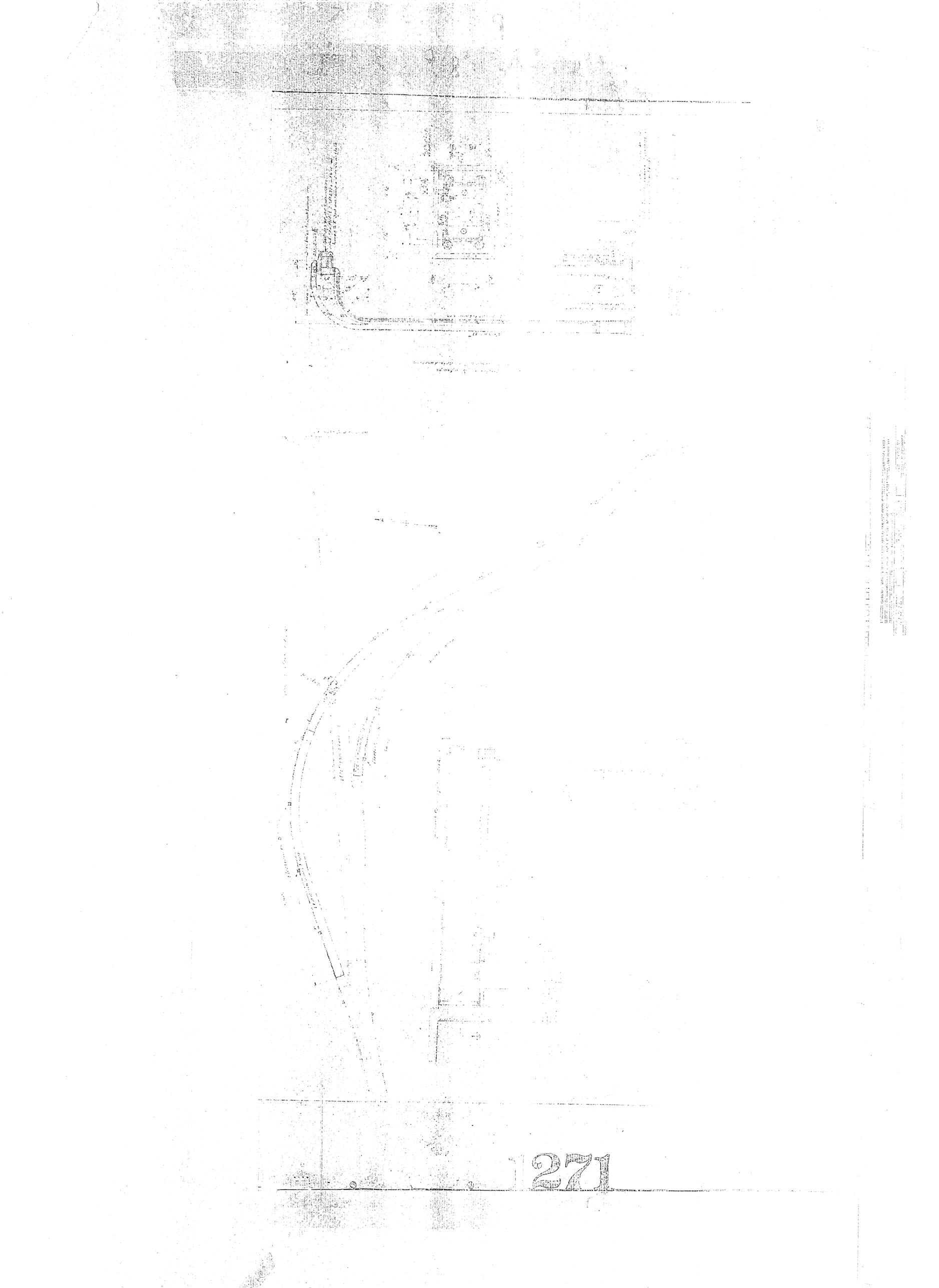
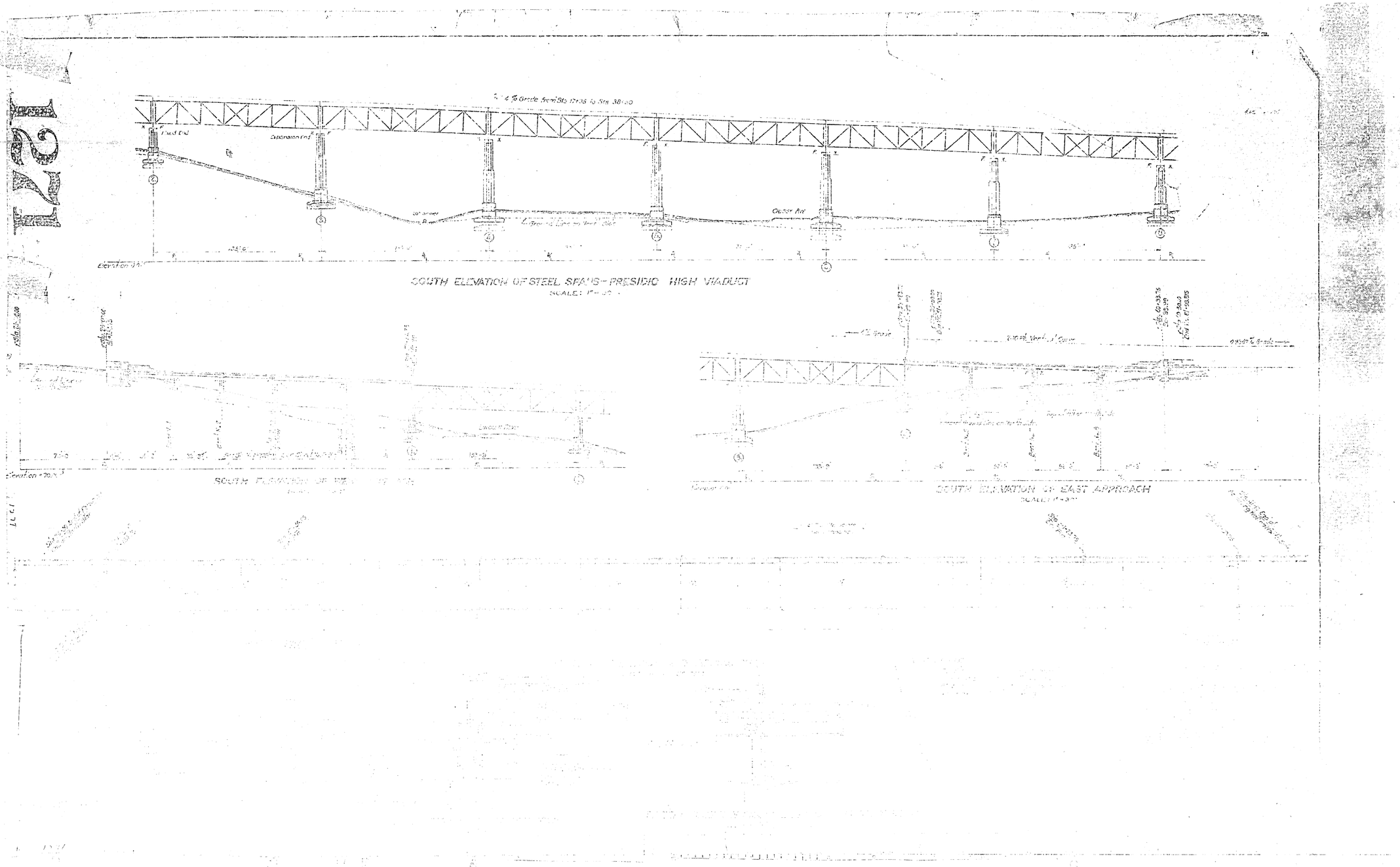
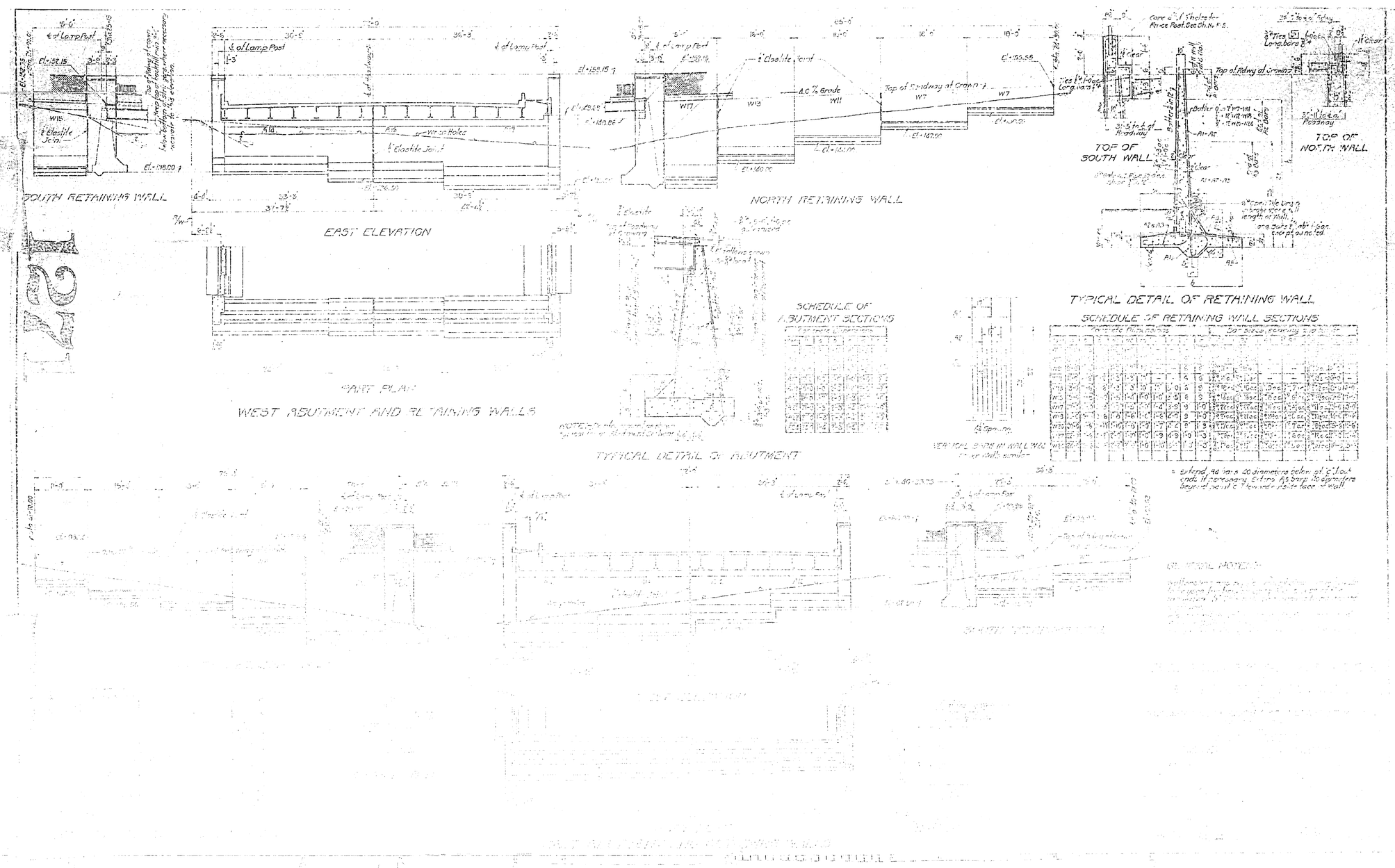



Fixed End
Expansion End
Outer Rail
SOUTH ELEVATION OF STEEL SPANS - PRESIDIO HIGH VIADUCT
SOUTH ELEVATION OF EAST APPROACH


SOUTH RETAINING WALL
EAST ELEVATION
NORTH RETAINING WALL
TOP OF SOUTH WALL
TOP OF NORTH WALL
TYPICAL DETAIL OF RETAINING WALL
SCHEDULE OF RETAINING WALL SECTIONS
SCHEDULE OF ABUTMENT SECTIONS
PART PLAN
WEST ABUTMENT AND RETAINING WALLS
TYPICAL DETAIL OF ABUTMENT
GENERAL NOTES

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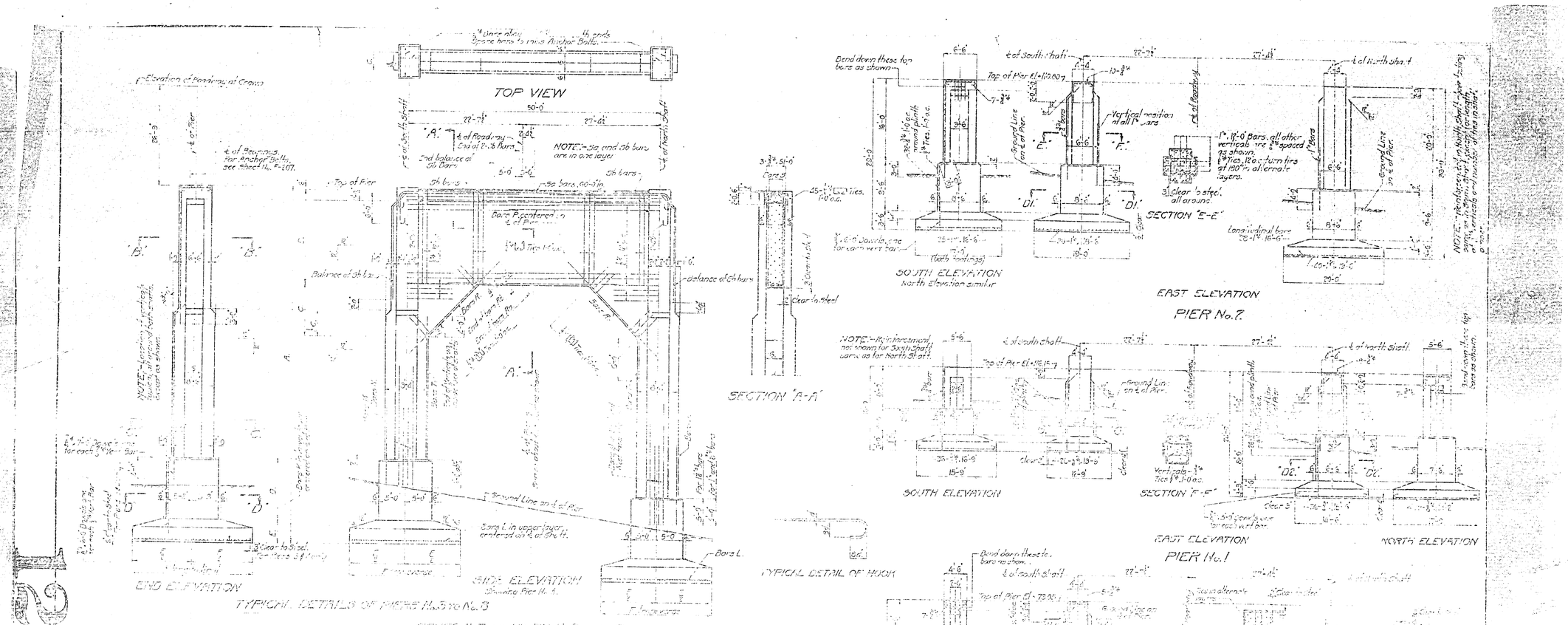
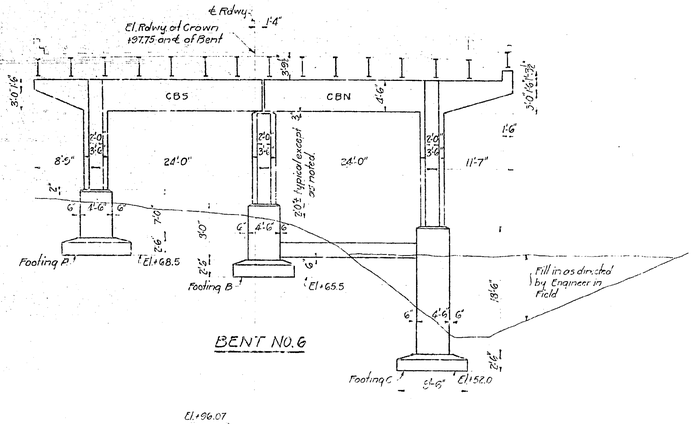
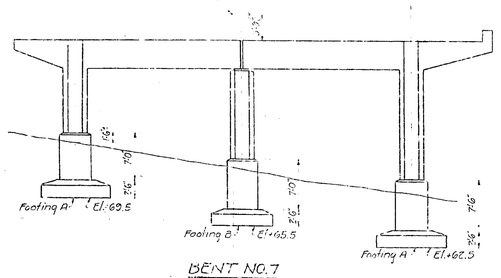
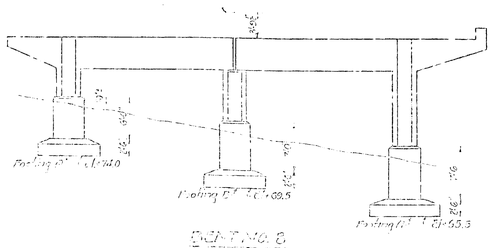
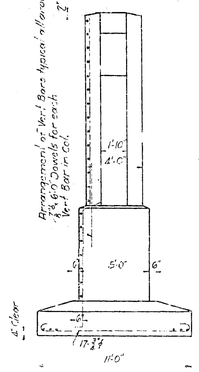

TOP VIEW
SOUTH ELEVATION
North Elevation similar
EAST ELEVATION
PIER No. 2
SECTION 'E-E'
SECTION 'A-A'
SOUTH ELEVATION
SECTION 'F-F'
EAST ELEVATION
NORTH ELEVATION
PIER No. 1
END ELEVATION
SIDE ELEVATION
TYPICAL DETAIL OF HOOK
TYPICAL DETAILS OF PIERS No. 3 to No. 8
SCHEDULE OF PIERS No. 3 to No. 8



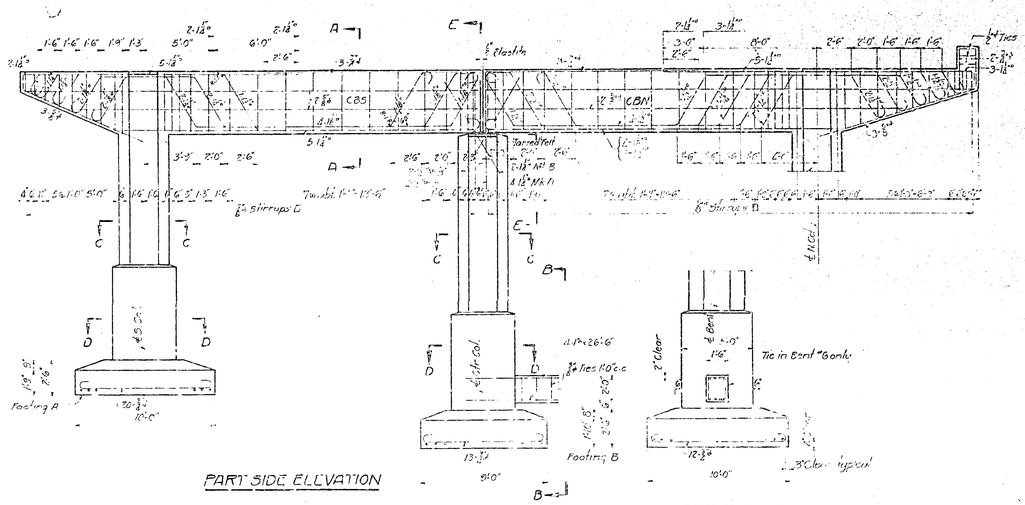




Note:
Diagonal reinforcement for [illegible]

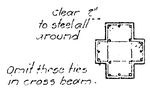


END ELEVATION



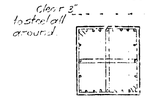
PART SIDE ELEVATION

SECTION B-B



Vert. Bars: [illegible]
Ties: [illegible]
Extend all vertical Bars to top of cross Beam in N. and S. Cols.
In Cols. [illegible] all but [illegible] bars 8' below top of Column.

SECTION C-C
Same for all Cols.

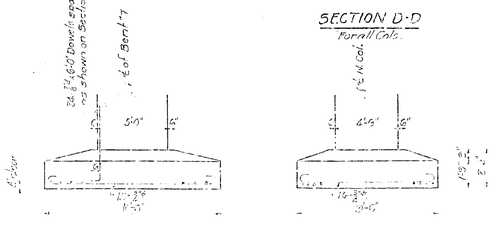


Additional [illegible] Bars in E. and W. Face of N. Col. in Bent No. 6 only.
These [illegible] to extend 10'-0" above top of Footing.
Vert. Bars: [illegible]
Ties: [illegible] o.c. [illegible]

SECTION D-D
For all Cols.

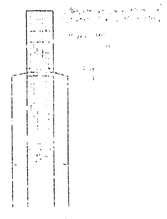
TYPICAL DETAIL OF HOOK

GENERAL NOTES:
For location of Bents see Sheet No. [illegible]



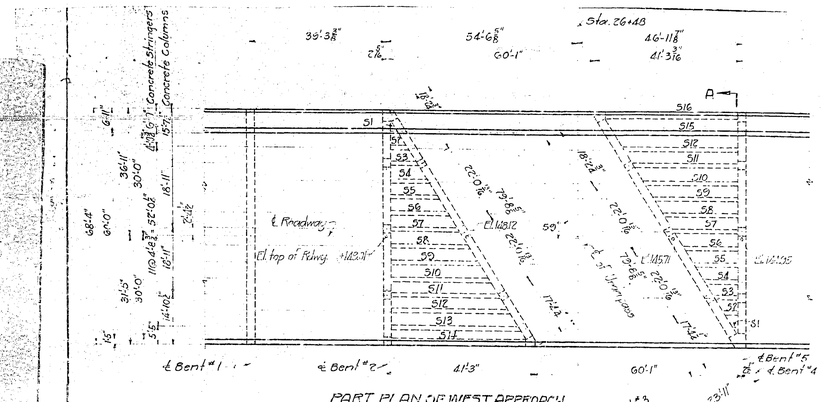
FOOTING "C"

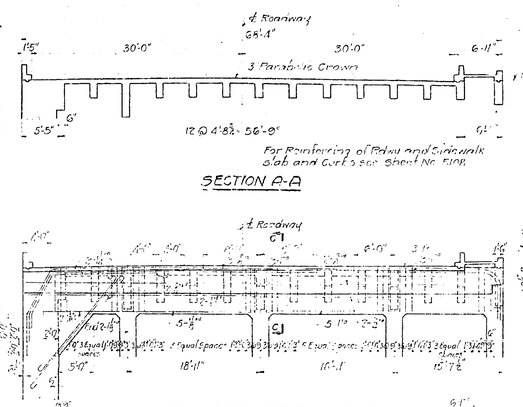
SECTION "A-A"

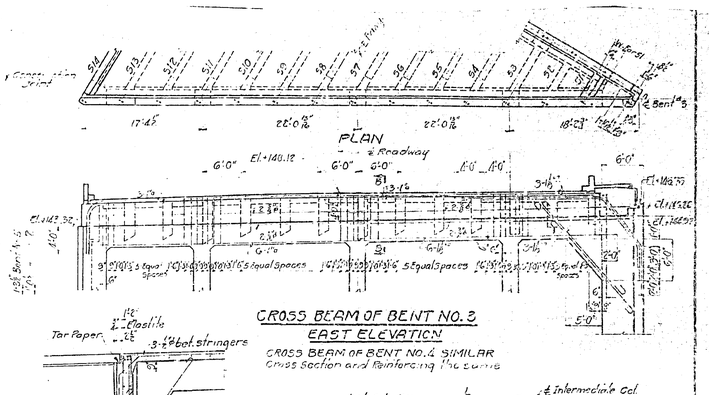


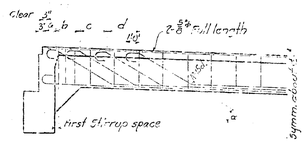
SECTION "C-C"

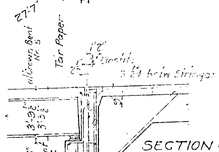
THE GOLDEN GATE BRIDGE
SAN FRANCISCO, CAL.
GOLDEN GATE BRIDGE AND TRANSPORTATION DISTRICT
PIER DETAILS
EAST APPROACH - CONCRETE ALTERNATE









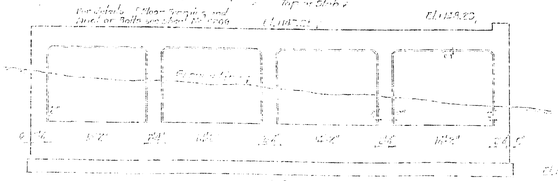


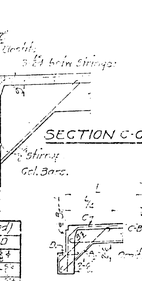
TYPICAL STRINGER DETAILS

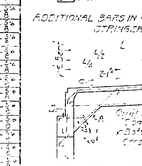
STRINGER SCHEDULE

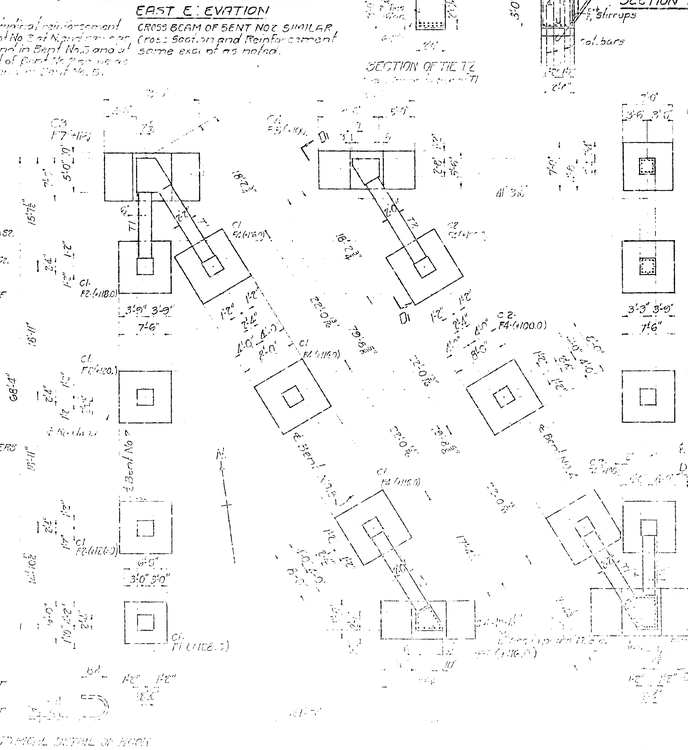
Mark	Dimensions W	Dimensions D	Stringers Nos.	Bars Bent	a	b	c	d	α	Stirrups No.	Size	Type	Spacing from each end	Special Bars (at each end) F	S	D
S1	See Sch. A-A	54	3-7/8							3	4	1	4-10			
S2	12	32	3-7/8							5	4	1	4-6-18		2-1/2	
S3	12	72	3-7/8							7	4		2-3 @ 12			
S4	12	33	3-7/8							7	4		6-16-20-30			
S5	12	33	2-1/8	7-1/8	3/8				30°	7	4		4-15-18-21-21			
S6	12	33	1-1/8	1-1/8					30°	7	4		4-10-42-21			
S7	14	33	2-1/2	2-1/2						4	4		6-9 @ 16			
S8	12	33	3-1/8	2-7/8	0-3/4	1/8			30°	14	4		4-10-52-21			
S9	12	50	3-1/8	3-1/8	2-1/8	1-3/4			45°	17	4		4-9-12-6-21			
S10	12	33	3-1/8	3-1/8	0-3/4	1-3/4	1/8		45°	19	4		4-8-17-7 @ 20			
S11	14	33	3-1/8	3-1/8	0-3/4	2-1/4	2-3		30°	21	4		4-7-10-3-2-2-2-6-21			
S12	12	33	3-1/8	1-1/8	1-1/8	2-1/8			30°	23	4		3-6-13-12-8 @ 21			
S13	12	53	3-1/8	1-1/8	0-3/8	1-1/8			30°	25	4		3-6-8-10-9 @ 21			
S14	14	45	3-1/8	1-1/8	1-3/8	2-1/2	2-3		30°	27	4		5-10-16-9-21			
S15	12	33	3-1/8	3-1/8	0-3/4	1-1/8			30°	29	4		3-6-8-10-9 @ 21			
S16	14	33	3-1/8	3-1/8	0-3/4	2-1/2			30°	31	4		6-12-16-9-21			

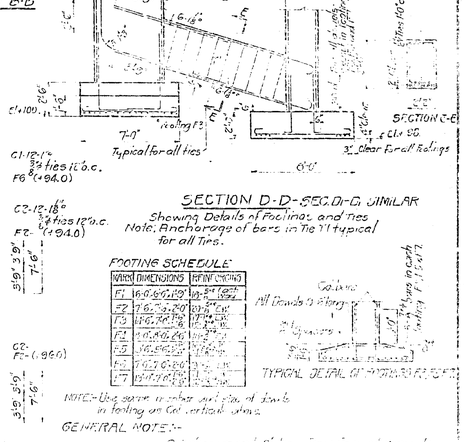
Bars shown thus ⊥ Continuous. Specify Lengths of full length & Lengths of Splices of Stringers.

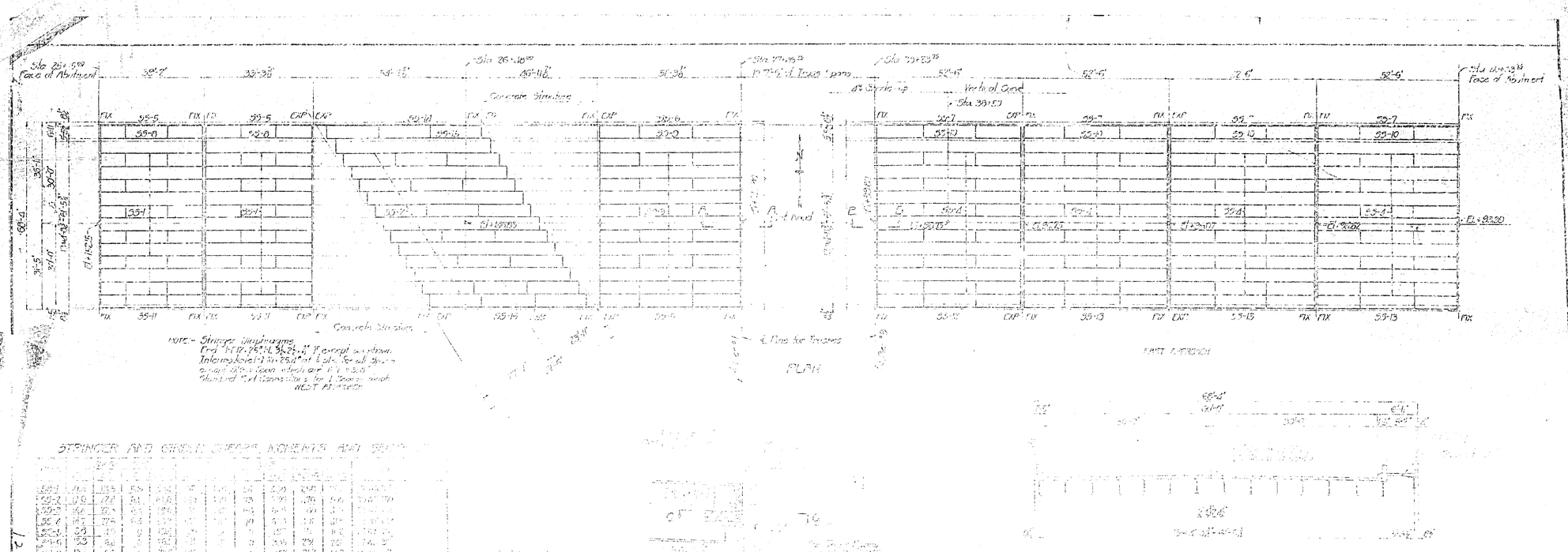




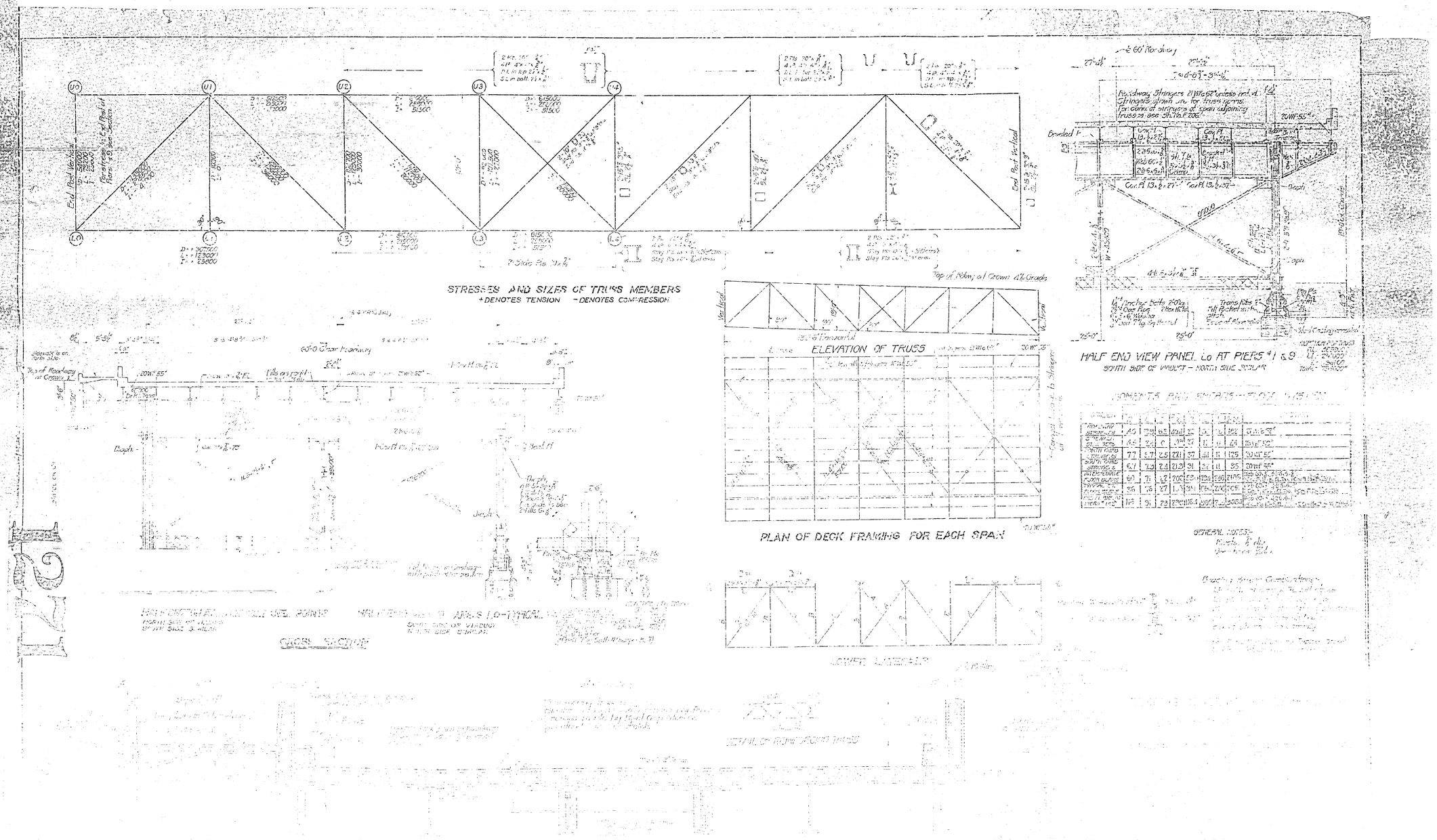


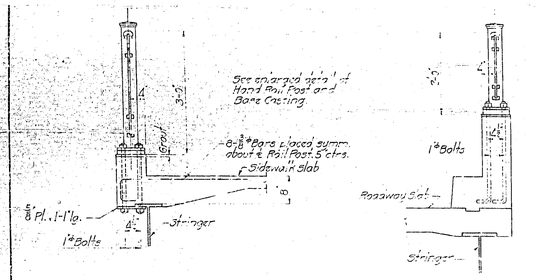




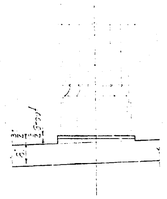


STRINGER AND GIRDER CHECKS MOMENTS AND SHEARS

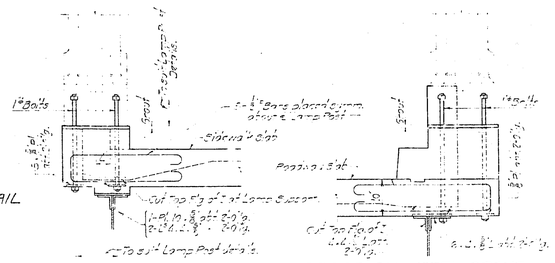

STRESSES AND SIZES OF TRUSS MEMBERS
+DENOTES TENSION -DENOTES COMPRESSION
ELEVATION OF TRUSS
PLAN OF DECK FRAMING FOR EACH SPAN
LOWER LATERALS
HALF END VIEW PANEL Lo AT PIERS #1 & 9
SOUTH SIDE OF VIADUCT - NORTH SIDE SIMILAR
GENERAL NOTES:-
CROSS SECTION
HALF END VIEW PANELS L0-TYPICAL
SOUTH SIDE OF VIADUCT
NORTH SIDE SIMILAR
Top of Rdwy at Crown 4% Grade
60'-0 Clear Roadway
Top of Roadway at Crown
Bevelled
Depth
Top of Rdwy at Crown
Vertical
Horizontal
Compact Lateral to Stringers
Bracing Stringer Combinations



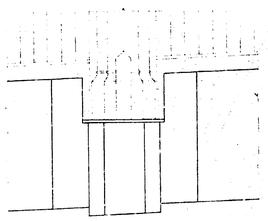
TYPICAL RAIL POST ANCHORAGE ON STEEL SPANS



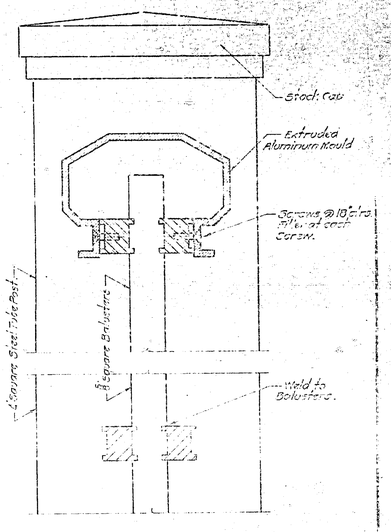
TYPICAL CURB DETAIL AT LAMP POSTS

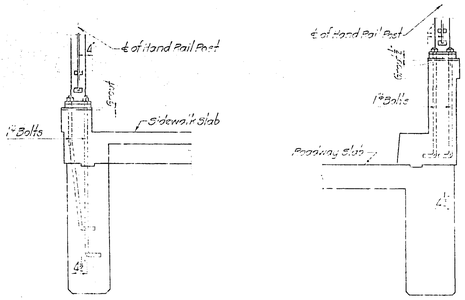


TYPICAL LAMP POST ANCHORAGE ON STEEL SPANS

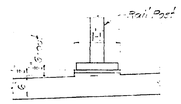


OUTSIDE ELEVATION

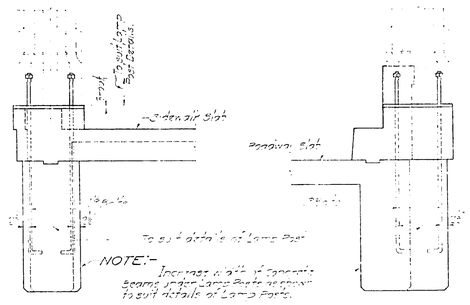




TYPICAL RAIL POST ANCHORAGE ON CONCRETE SPANS

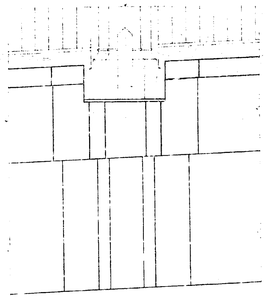


TYPICAL CURB DETAIL AT HAND RAIL POSTS



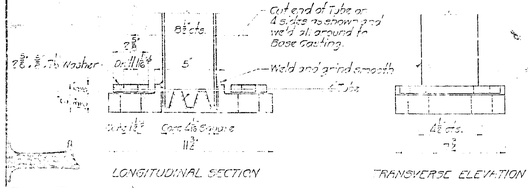
TYPICAL LAMP POST ANCHORAGE ON CONCRETE SPANS

Lamp Post anchorage on Concrete Pavements same as above for Concrete Spans.



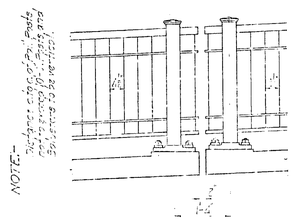
OUTSIDE ELEVATION

FULL SIZE DETAIL OF RAILING

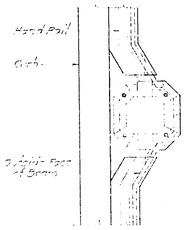


C.I. BASE FOR RAIL POST

Annealed



RAIL POSTS AT EXPANSION JOINTS



CURB AND HAND RAIL

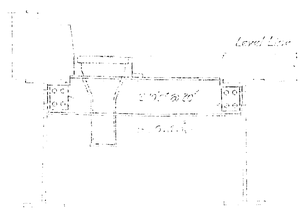
CAST STEEL GRATING

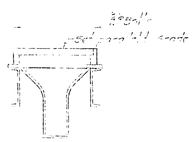
GENERAL NOTES:-

Lamp Posts for Lamp Posts to be furnished by Contractor for Contract No. V and set to templet furnished by Contractor for electric work.

Railing Base called for on this sheet are in addition to those called for elsewhere.

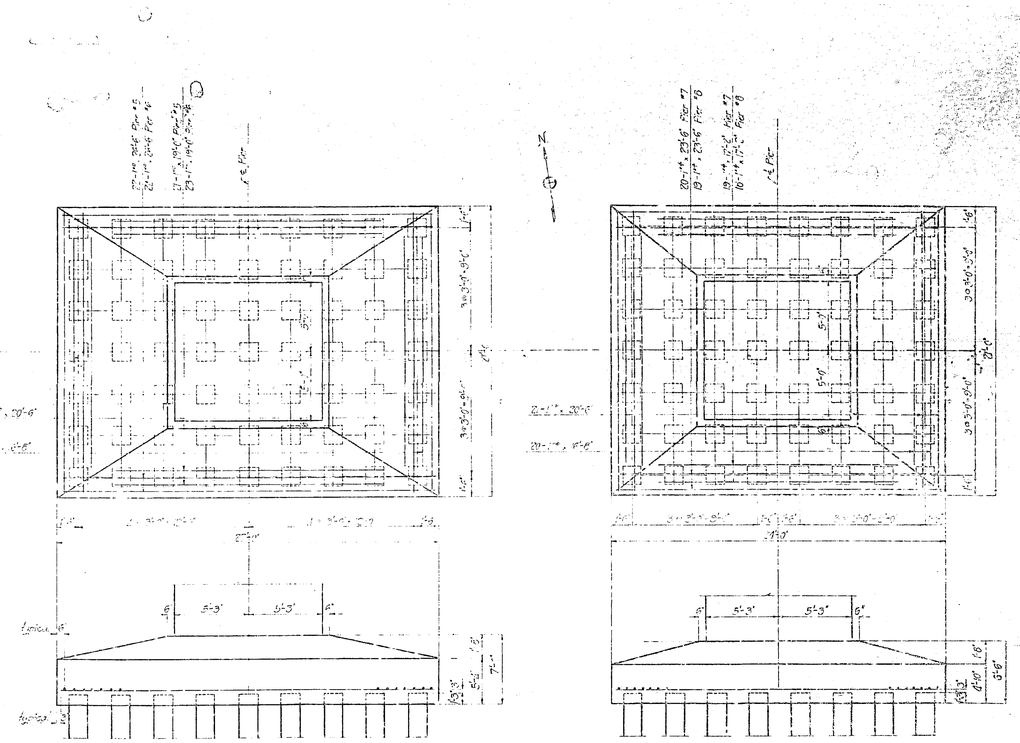
Provide one scupper for each gutter station and of such type and of such height. Scuppers for each gutter for remainder of this contract, to be equal and same. On longitudinal scuppers shall be placed inner Bend Pipes, Nipples and Sock Connection carried down to connect to pipe in a direction by Engineer. All joints to be caulked with lead and oakum.





DETAIL OF SCUPPER IN CURB ON CONCRETE SPANS

THE GOLDEN GATE BRIDGE
SAN FRANCISCO, CAL.
GOLDEN GATE BRIDGE AND HIGHWAY DISTRICT
JOHN ALLEN, CHIEF ENGINEER



FOOTING OF PIER Nº 5

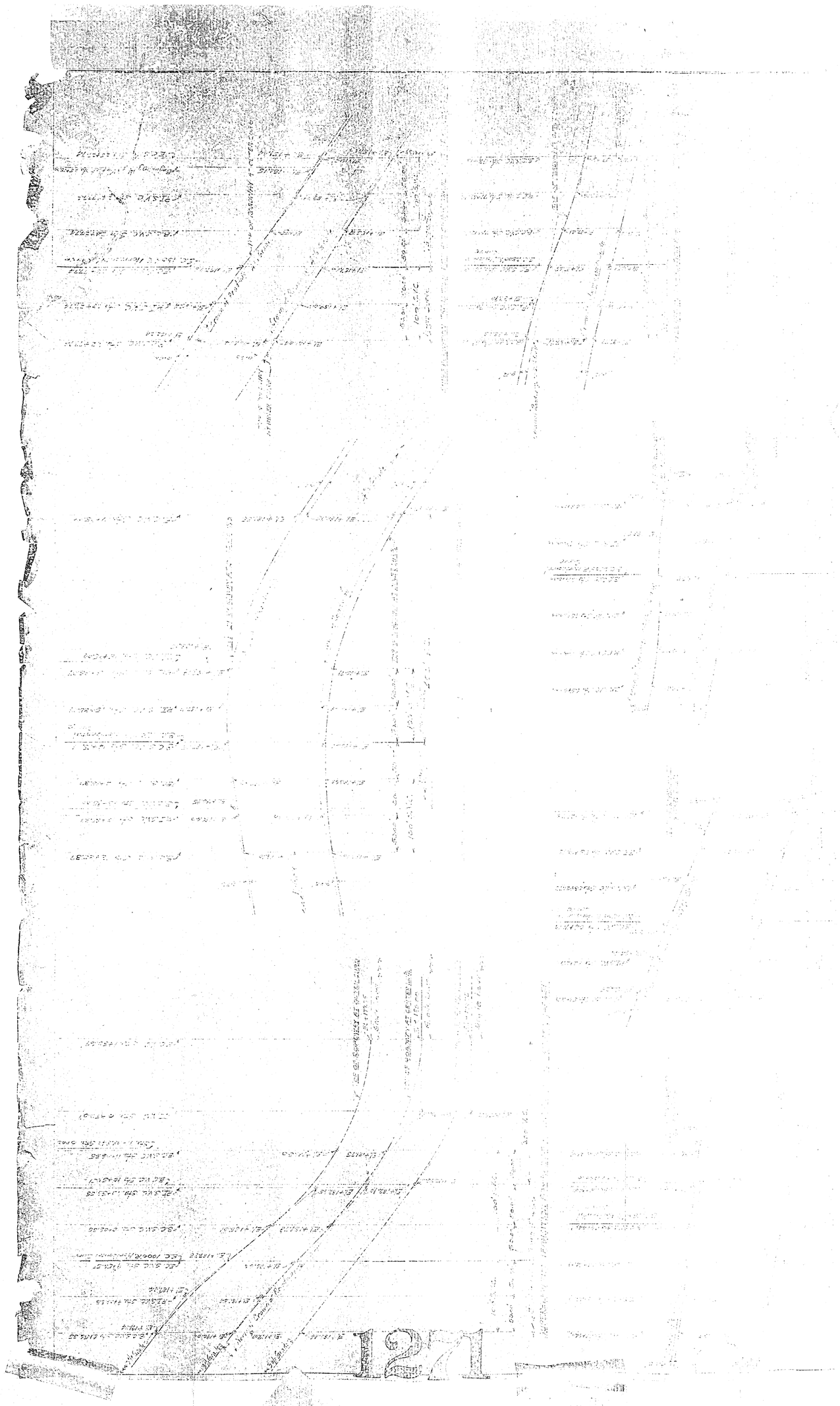
FOOTING OF PIER Nº 7

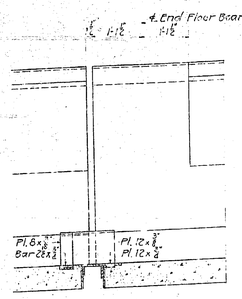
NOTE:—

THE GOLDEN GATE BRIDGE

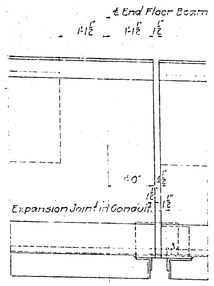
SAN FRANCISCO, CAL.

1271

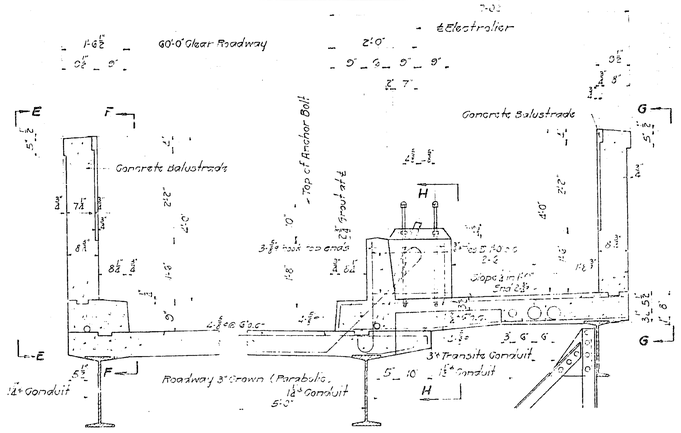




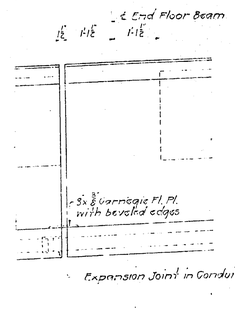
SECTION F-F
For Piers 3,5 & 7



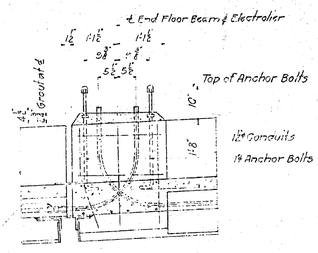
SECTION E-E
For Piers 3,5 & 7



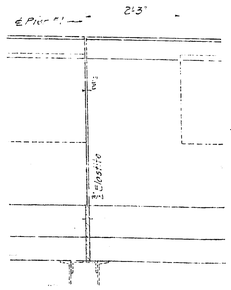
TYPICAL SECTION THRU HIGH VIADUCT AT PIERS 1,3,5,7 & 9
Showing Electrolier Anchorage on North side of Roadway



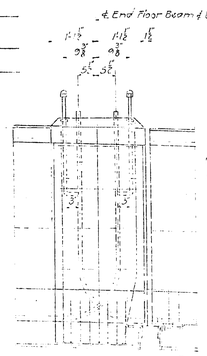
SECTION G-G
For Piers 3,5 & 7



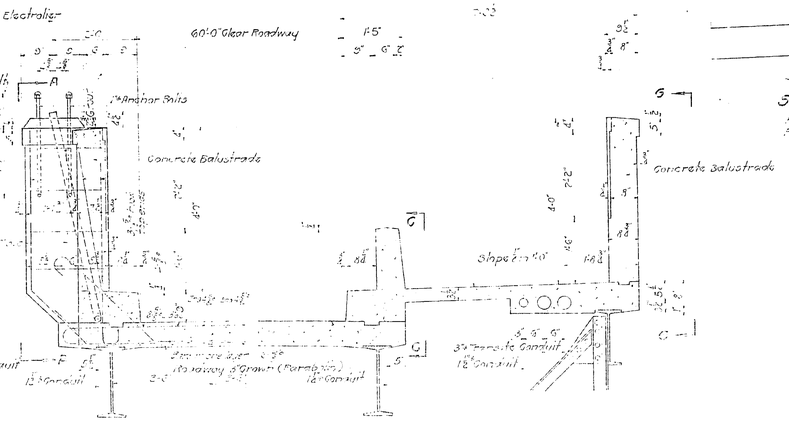
SECTION H-H
For - Piers 3,5 & 7



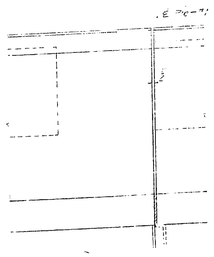
SECTION E-E
For Pier #1
For 2 & 4 similar



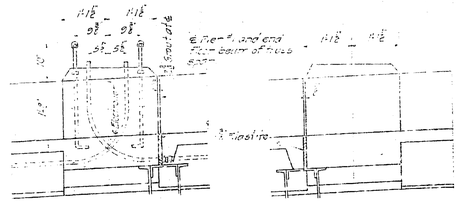
SECTION A-A



TYPICAL SECTION THRU HIGH VIADUCT AT PIERS 2 & 6 & 8
Showing Electrolier Anchorage on South side of Roadway

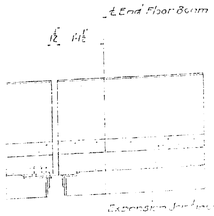


SECTION G-G
For - Pier #1
Pier #3 Similar



SECTION H-H
For Pier #1

SECTION H-H
For Pier #3

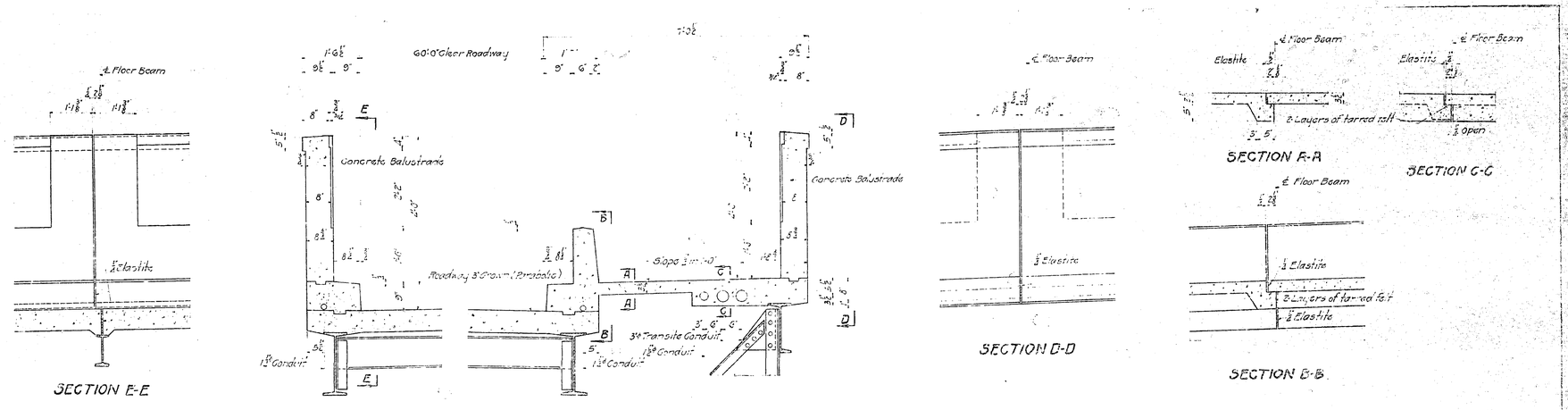


SECTION G-G

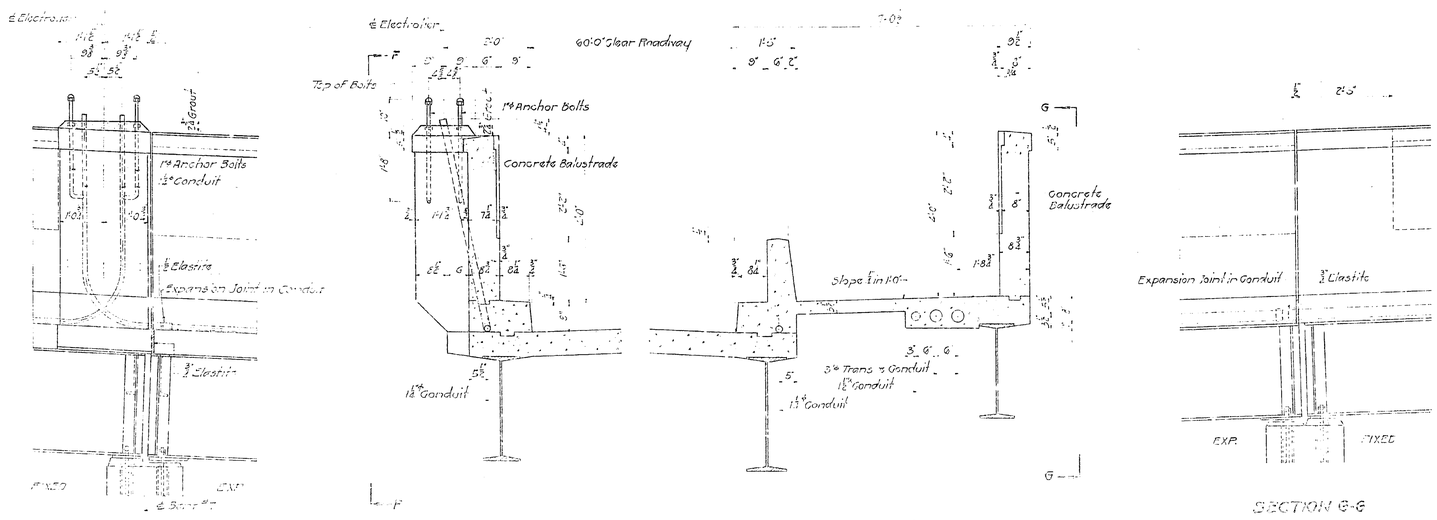
GENERAL NOTES:
Reinforcing Steel shall be Billet Steel Bars of N.S.
For Structural Steel see Sheet 2 of 2
For detail of Anchor Bolts see Sheet 2 of 10

THE GOLDEN GATE BRIDGE
SAN FRANCISCO, CAL.
OF THE
GOLDEN GATE FERRY AND HIGHWAY DISTRICT
OF CALIFORNIA

HIGH VIADUCT
ELECTROLIER ANCHORAGE



TYPICAL SECTION THRU HIGH VIADUCT AT INTERMEDIATE FLOOR BEAMS



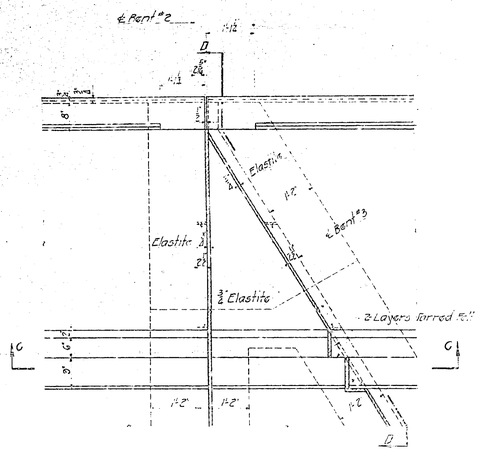
GENERAL NOTES:
For detail of Anchor bolts see Sheet #F.2.
For Balustrade reinforcing Sheet
see Sheet #F.2.6.
For Electrolier base reinforcing Sheet
see Sheet #F.2.1

THE GOLDEN GATE BRIDGE
AT
SAN FRANCISCO, CAL.

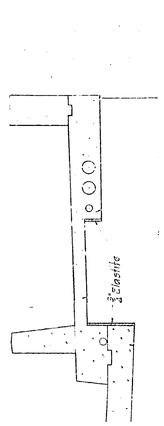
FOR THE
GOLDEN GATE BRIDGE AND HIGHWAY DISTRICT
OF CALIFORNIA

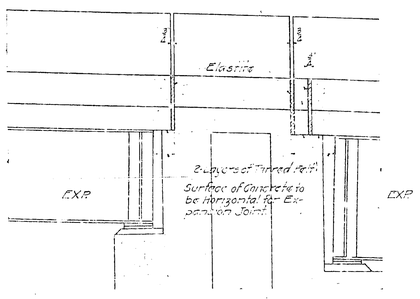
HIGH VIADUCT
ELECTROLIER ANCHORAGE AND DIAGONAL ANCHORAGE

1271

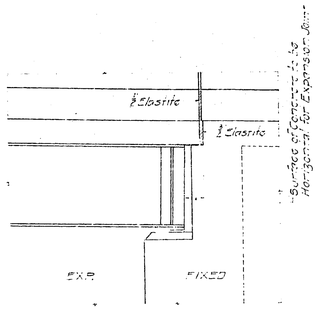


PLAN AT INTERSECTION OF BENTS 2 & 3

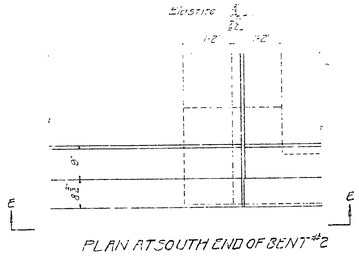




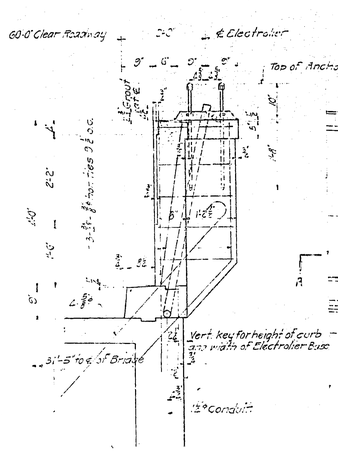
SECTION G-G



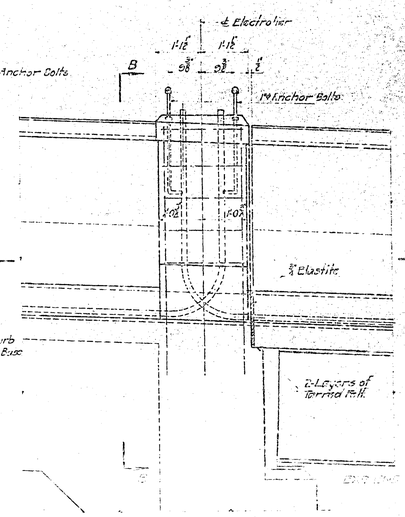
SECTION E-E



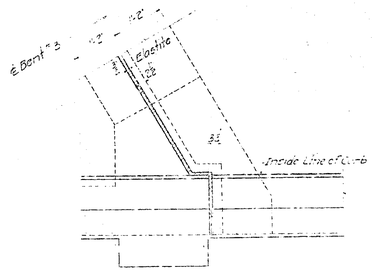
PLAN AT SOUTH END OF BENT #2



SECTION B-B



ELEVATION AT SOUTH END OF BENT #3

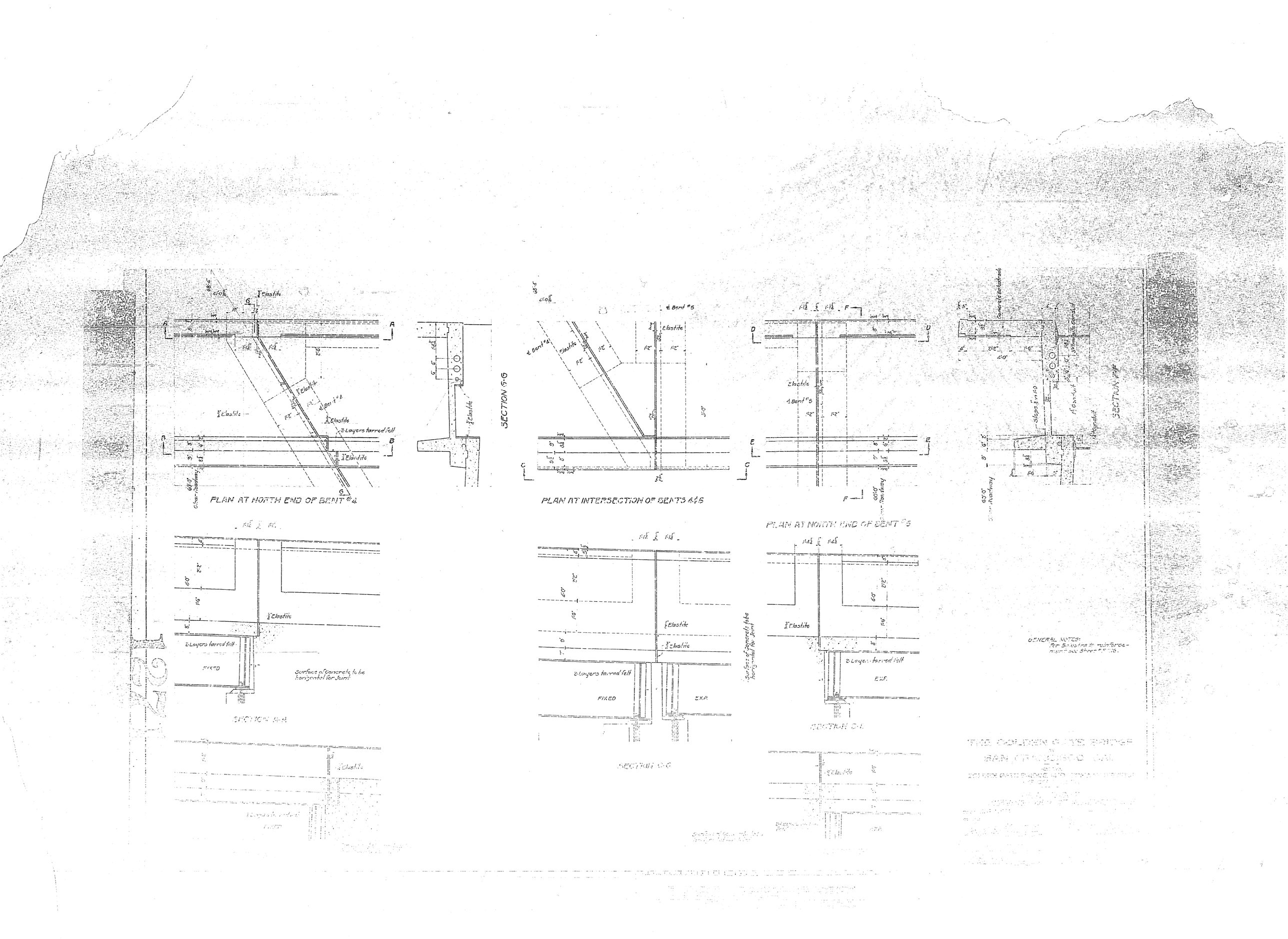


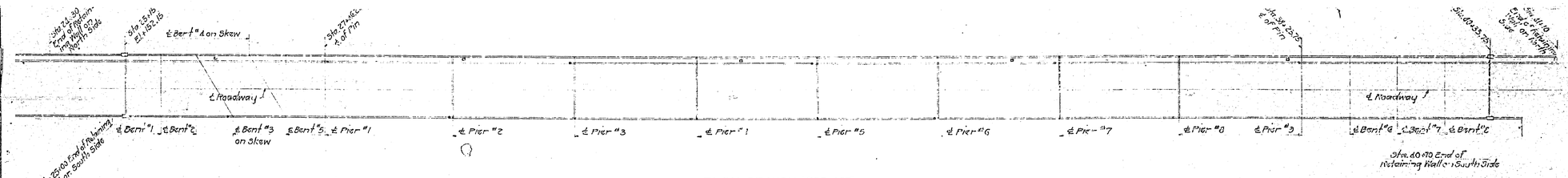
SECTION A-A

THE GOLDEN GATE BRIDGE
SAN FRANCISCO, CAL.

GENERAL NOTES:

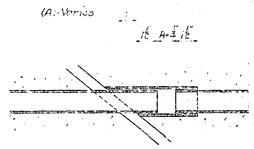
ELEVATION AT INSIDE OF BENT #3


PLAN AT NORTH END OF BENT #4
SECTION G-G
PLAN AT INTERSECTION OF BENTS 4 & 5
PLAN AT NORTH END OF BENT #5
SECTION F-F
SECTION A-A
SECTION C-C
SECTION D-D
Elastite
2-Layers tarred felt
FIXED
EXP.
Surface of Concrete to be horizontal for Joint
Concrete Balustrade
Slope 1/8" in 1'-0"
Clear Roadway
GENERAL NOTES:
THE GOLDEN GATE BRIDGE
SAN FRANCISCO CAL.



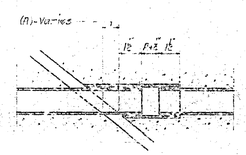
PLAN OF HIGH VIADUCT

Showing Location of Electroliers and Pull Boxes
Electroliers shown thus
Pull Boxes



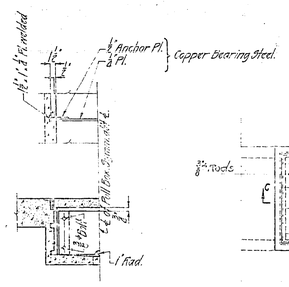
EXPANSION JOINT DETAIL

For 15" Conduit
Scale: 3"=1'0"

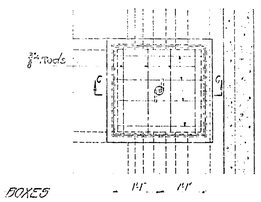


EXPANSION JOINT DETAIL

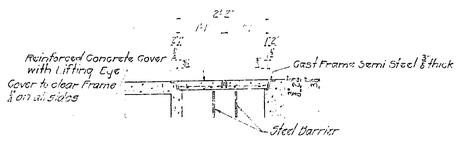
For 15" Conduit
Scale: 3"=1'0"



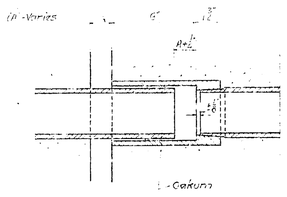
DETAIL OF BARRIER FOR PULL BOXES



SECTION B-B

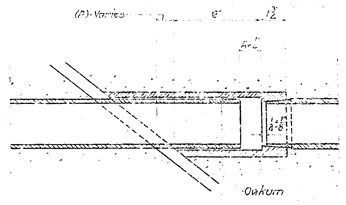


SECTION C-C



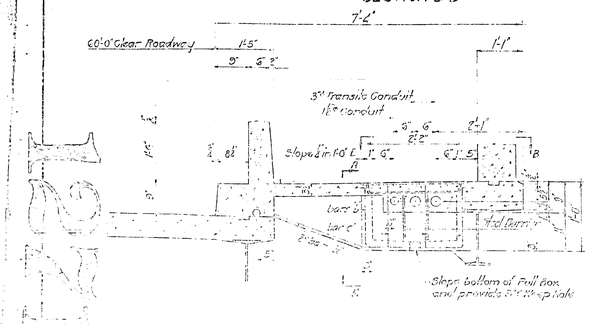
EXPANSION JOINT DETAIL

For 3" Transite Conduit
Scale: 3"=1'0"



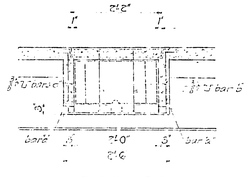
EXPANSION JOINT DETAIL

For 3" Transite Conduit (Skewed Spans)
Scale: 3"=1'0"

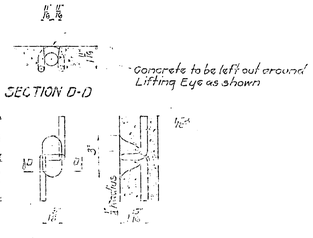


FOOT SECTION TYPICAL HIGH VIADUCT

Showing Pull Box



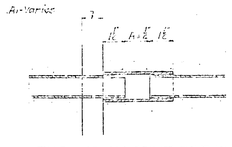
SECTION A-A



SECTION D-D

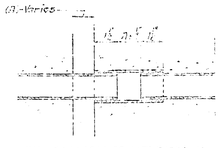
LIFTING EYE FOR PULL BOX COVER

Scale: 3"=1'0"



EXPANSION JOINT DETAIL

For 15" Conduit
Scale: 3"=1'0"

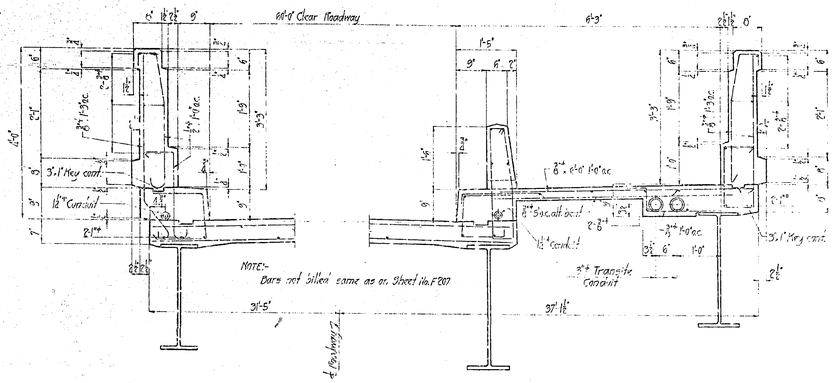


EXPANSION JOINT DETAIL

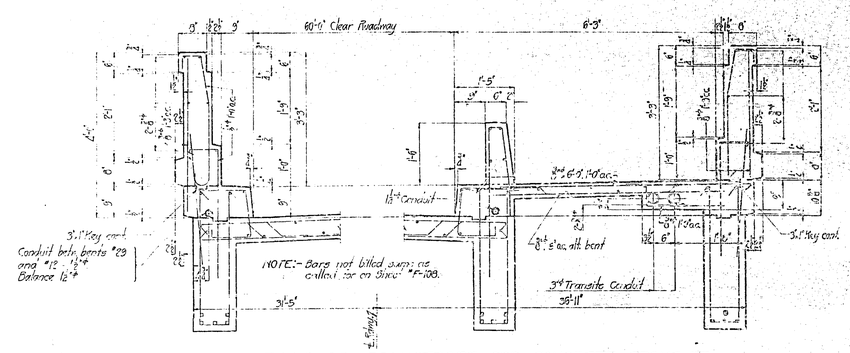
For 15" Conduit
Scale: 3"=1'0"

THE ENGINEER OF THE BRIDGE OF SAN FRANCISCO, CAL.

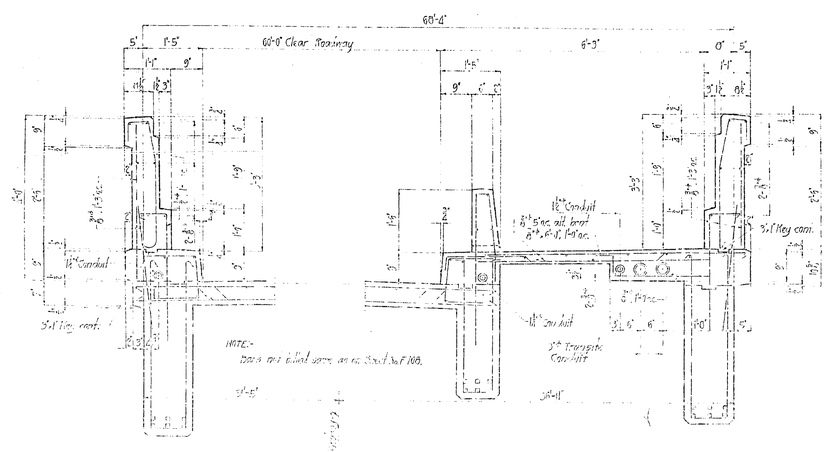
GENERAL NOTES:



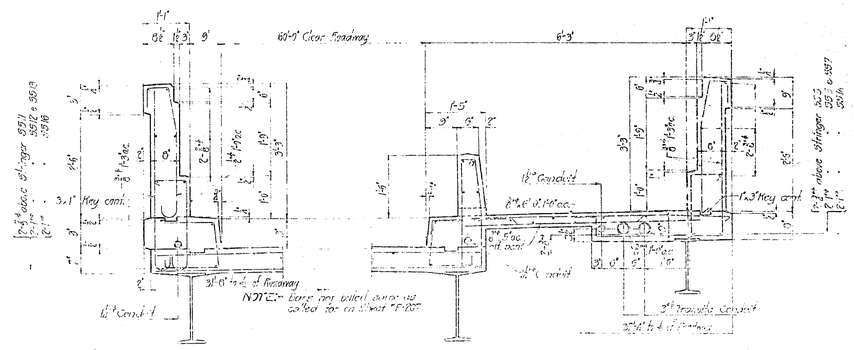
DETAILS OF BALUSTRADE FOR STEEL SPAN OF LOW VIADUCT



DETAILS OF BALUSTRADE FOR CONCRETE SPANS OF LOW VIADUCT



DETAILS OF BALUSTRADE FOR CONCRETE SPANS OF HIGH VIADUCT

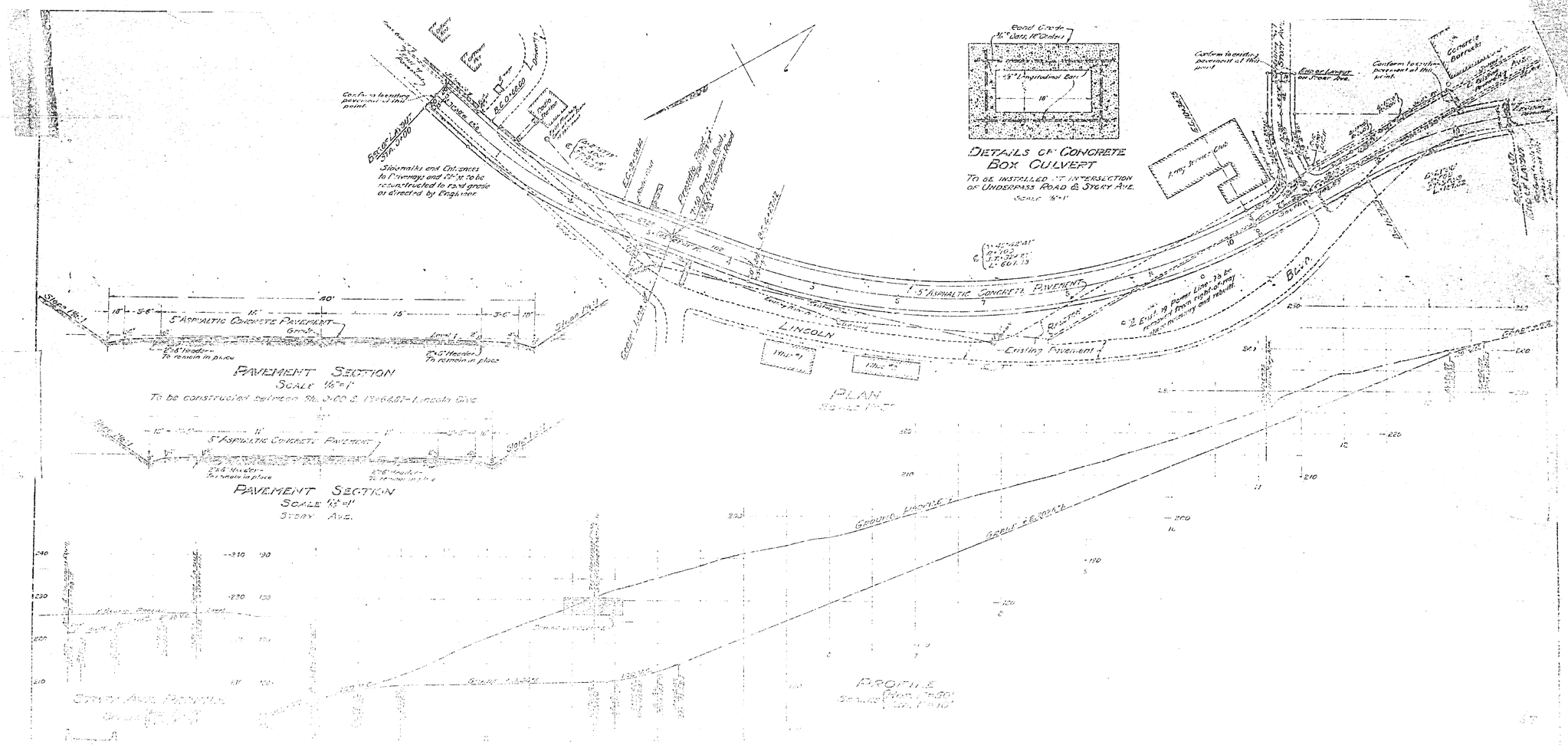


DETAILS OF BALUSTRADE FOR STEEL SPANS OF HIGH VIADUCT

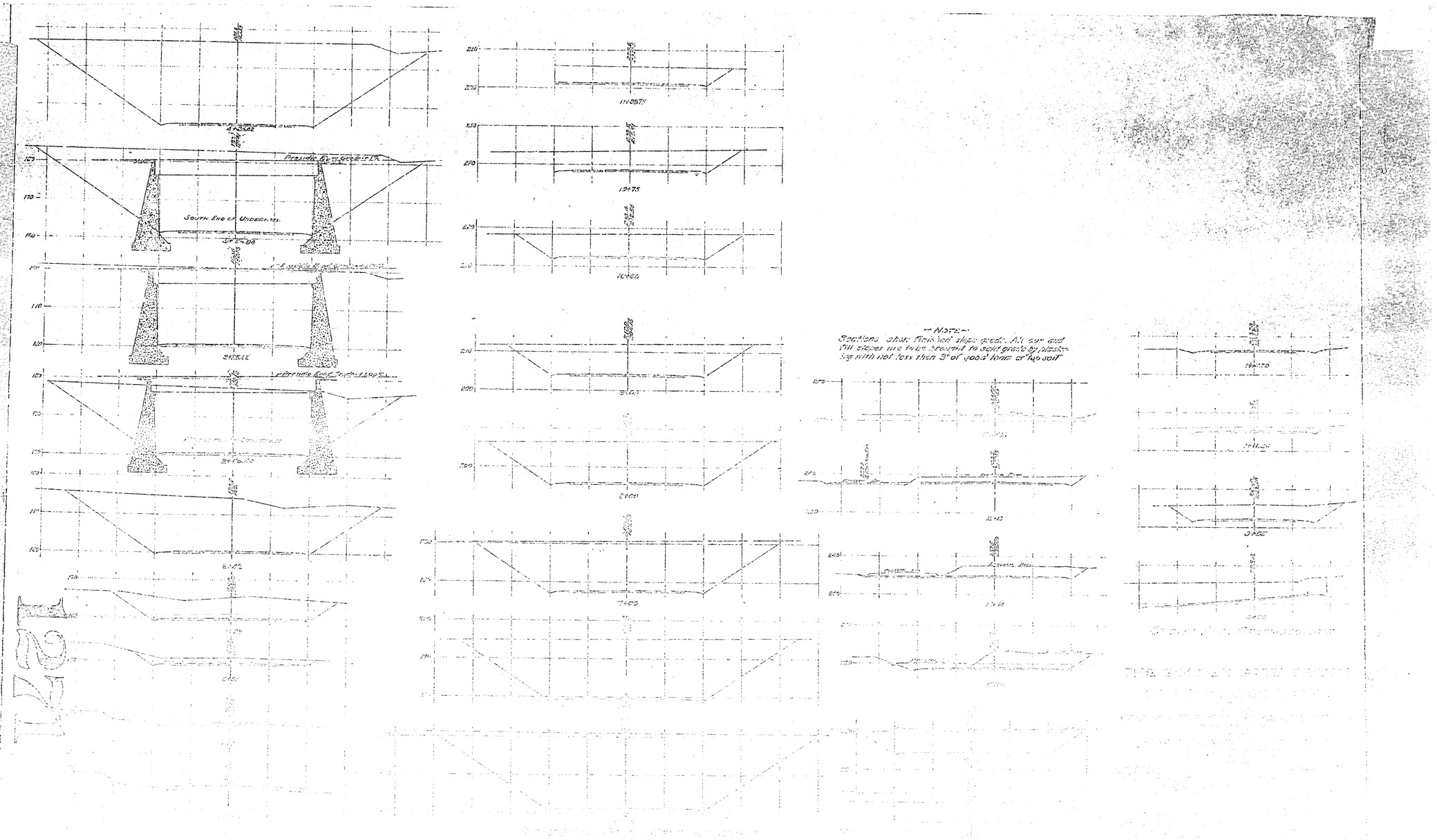
GENERAL NOTES:-

Bars in Balustrade and Curb Clear from Face of Concrete.

THE GOLDEN GATE BRIDGE
AT
SAN FRANCISCO, CAL.
FOR THE
GOLDEN GATE BRIDGE AND HIGHWAY DISTRICT
OF CALIFORNIA
HIGH AND LOW VIADUCTS
BALUSTRADE REINFORCING

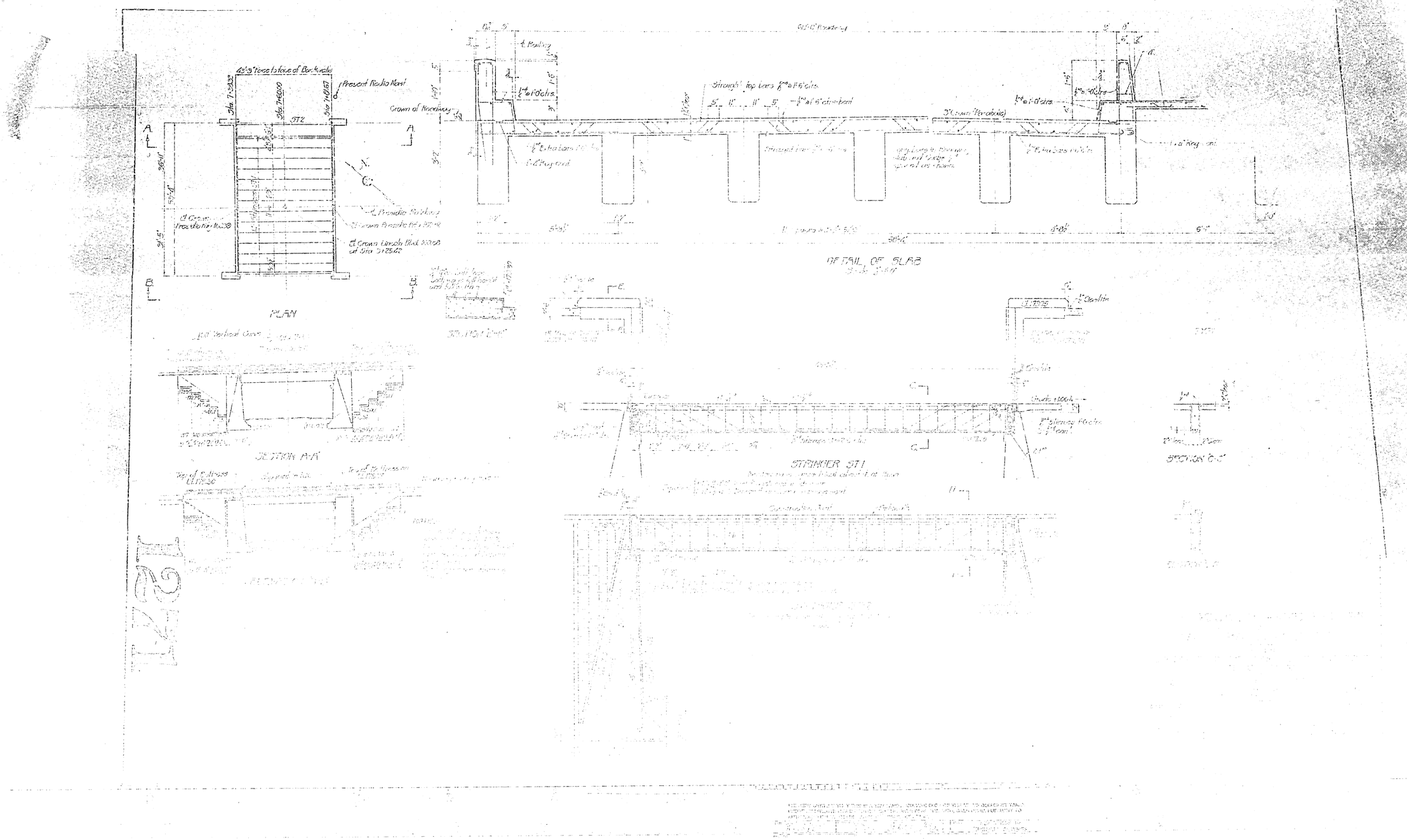


DETAILS OF CONCRETE BOX CULVERT
TO BE INSTALLED AT INTERSECTION OF UNDERPASS ROAD & STORY AVE.
PAVEMENT SECTION
SCALE 1/4"=1'
PAVEMENT SECTION
SCALE 1/4"=1'
STORY AVE.
PLAN
PROFILE
5" ASPHALTIC CONCRETE PAVEMENT
LINCOLN
Existing Pavement
Army Service Club
Concrete Barrier
Sidewalks and Entrances to Driveways and Bldgs. to be reconstructed to road grade as directed by Engineer.

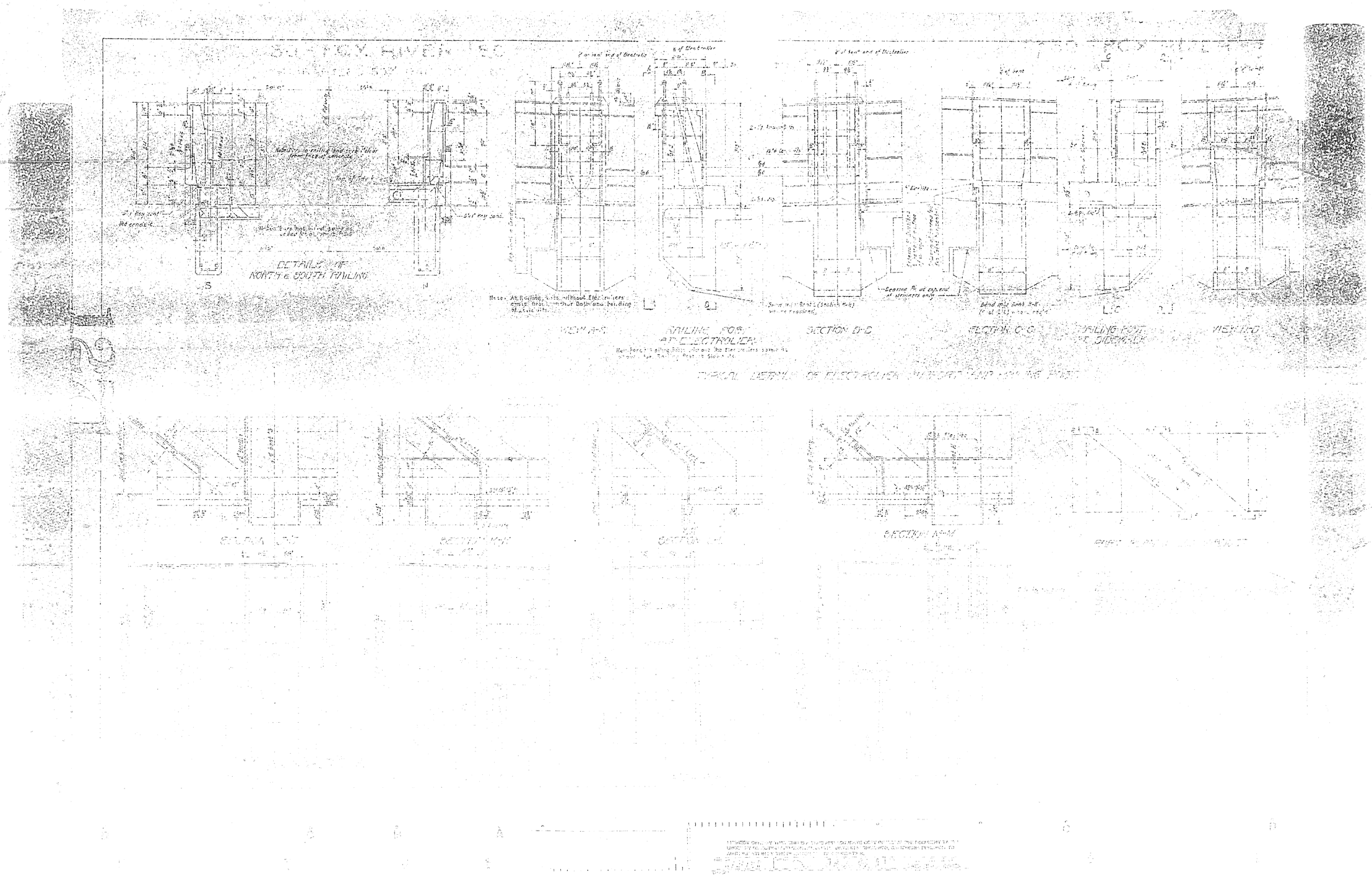


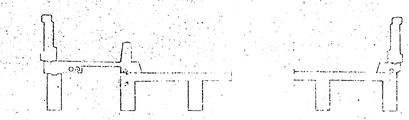
Presidio End Grade 1.0%
South End of Underpass
Presidio End Grade 1.00%
Presidio End Grade 1.00%
— NOTE —
Sections show finished slope grade. All cut and fill slopes are to be brought to said grade by plastering with not less than 3" of good loam or top soil

1271

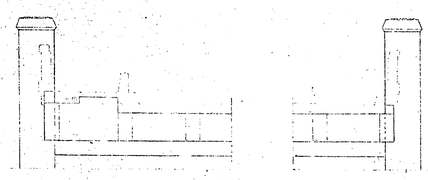


PLAN
SECTION A-A
DETAIL OF SLAB
STRINGER ST1
SECTION C-C
Present Radio Mast
Crown of Roadway
Straight top bars
3" Crown (Parabolic)

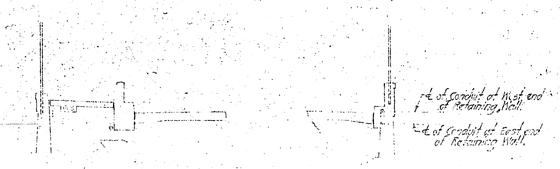

DETAILS OF
NORTH & SOUTH RAILING
VIEW A-A
RAILING POST
AT ELECTROLIER
SECTION B-B
ELECTROL. C-C
RAILING POST
OF SIDEWALK
VIEW D-D
TYPICAL DETAILS OF ELECTROLIER SUPPORT AND RAILING POST
SECTION A-A



SECTION A-A

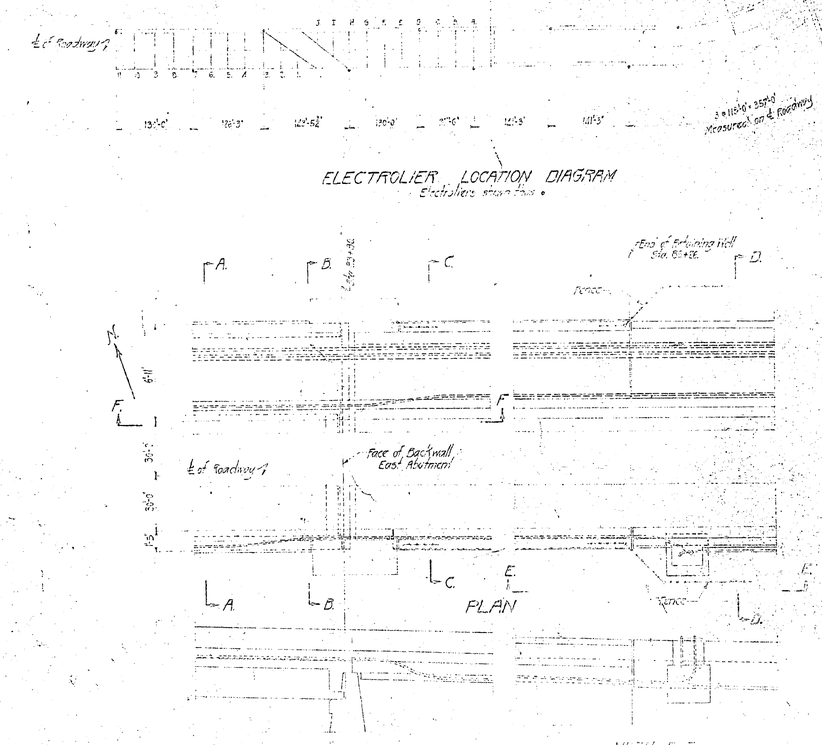


SECTION B-B

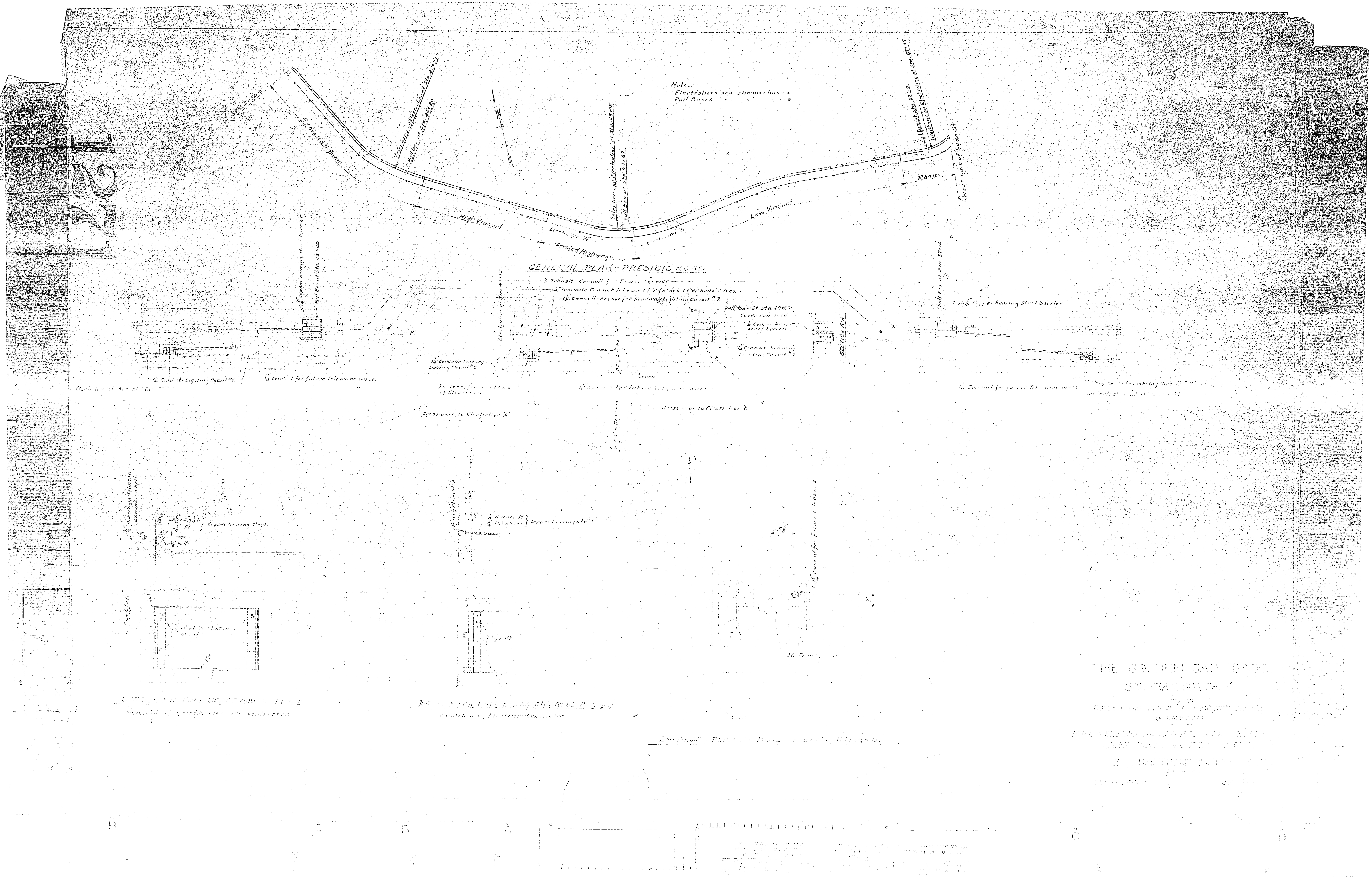


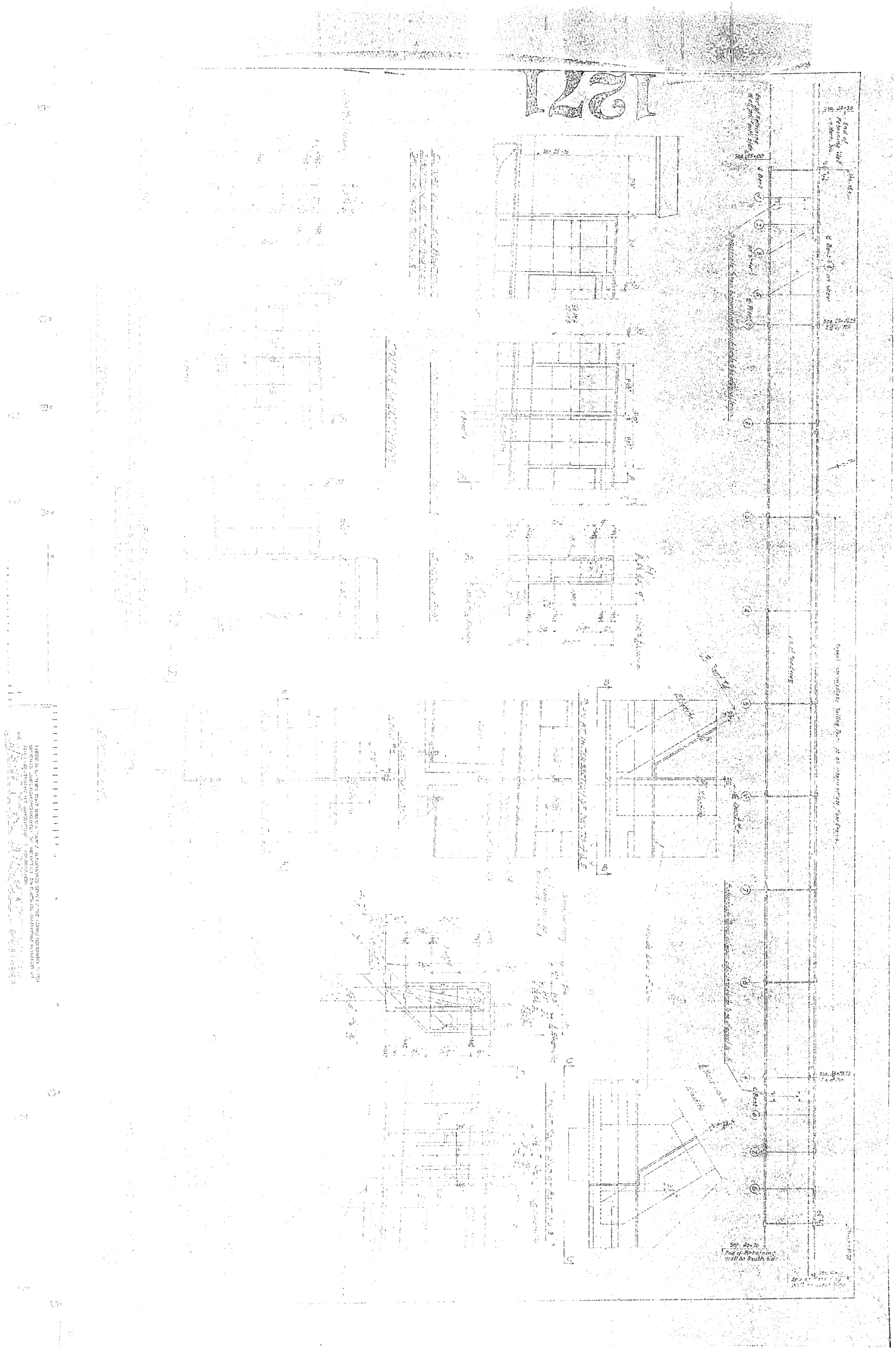
SECTION C-C

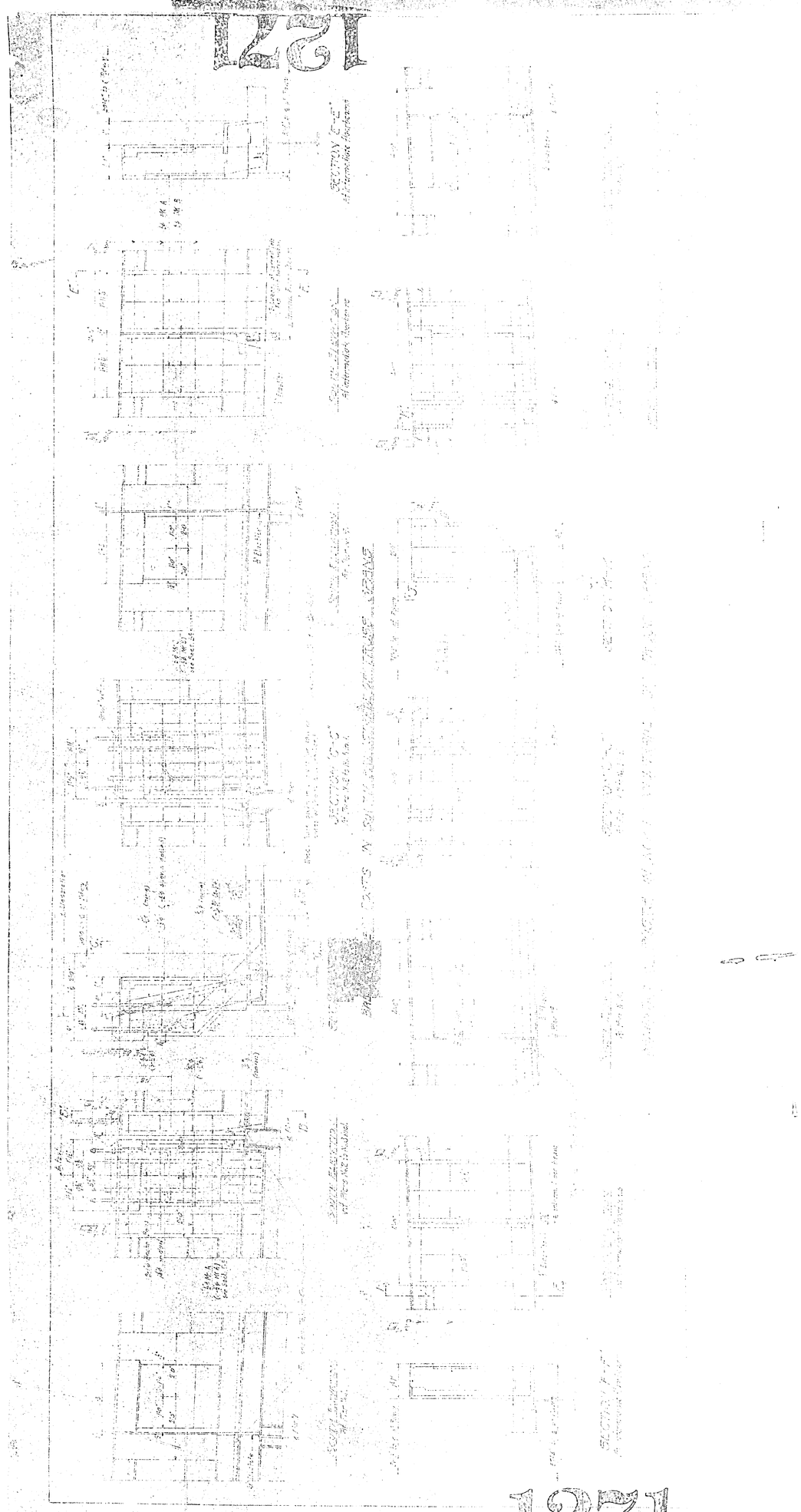
SECTION D-D



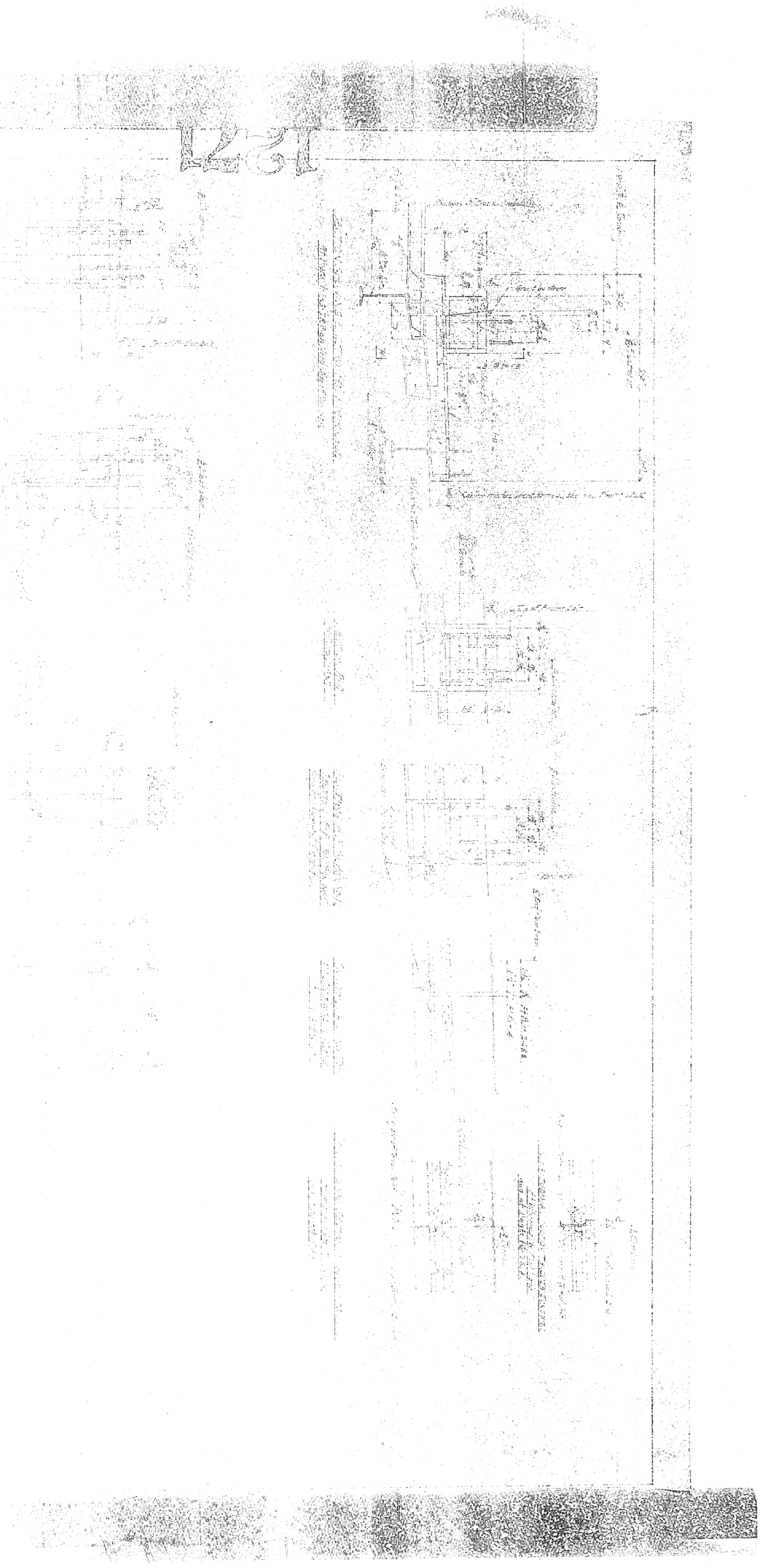
THE GOLDEN GATE BRIDGE
SAN FRANCISCO, CAL.

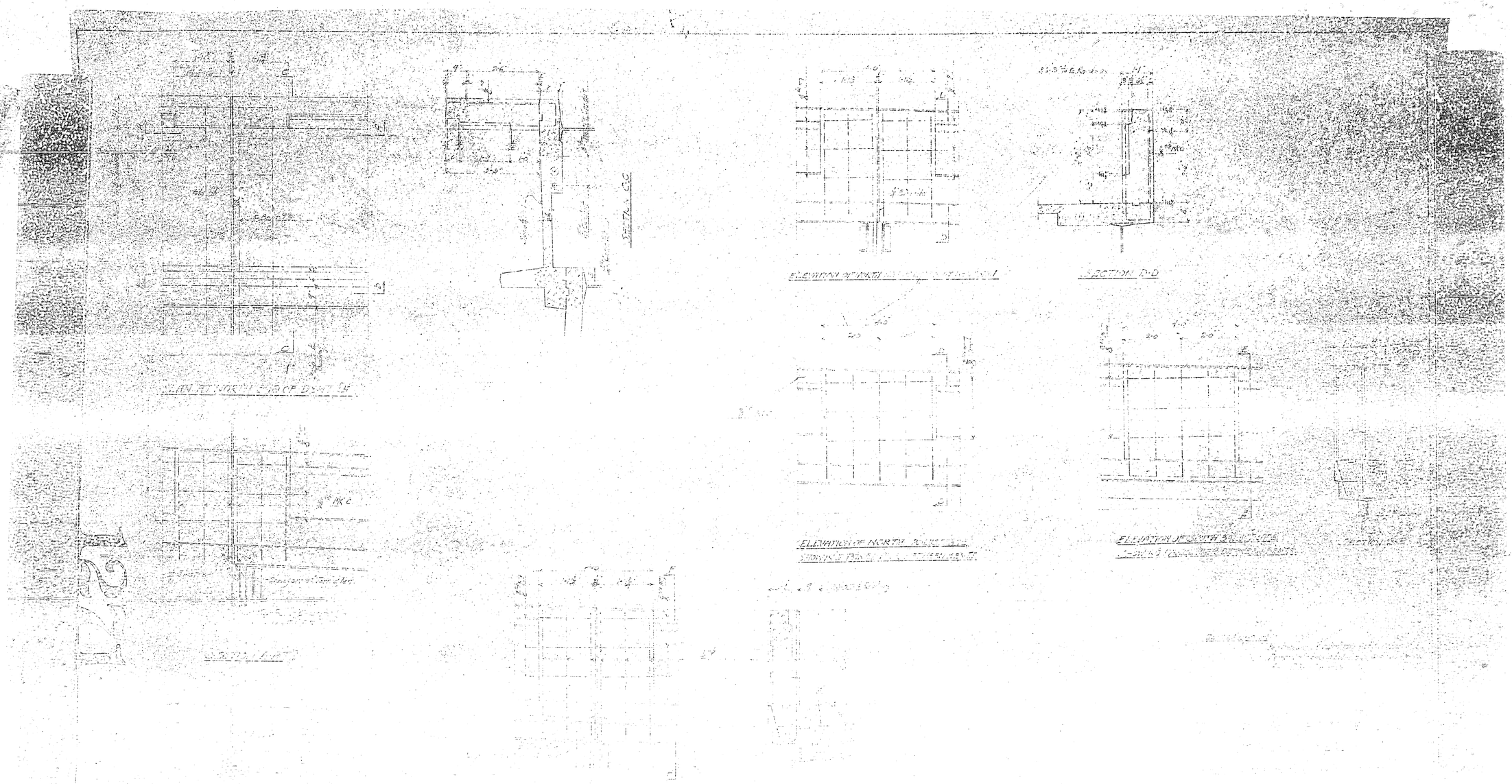

Sta. 35+50.7
Graded Highway
Telephone on Electrolier at Sta. 22+31
Pull Box at Sta. 23+20
High Viaduct
Electrolier "A"
Graded Highway
Telephone on Electrolier at Sta. 47+15
Pull Box at Sta. 47+67
Electrolier "B"
Low Viaduct
Note:
Electroliers are shown thus
Pull Boxes
Pull Box at Sta. 87+10
Telephone on Electrolier at Sta. 87+17
Ramp
West Line of Lyon St.
GENERAL PLAN - PRESIDIO ROAD
3" Transite Conduit for Power Service
3" Transite Conduit to be used for future Telephone wires.
1½" Conduit-Feeder for Roadway Lighting Circuit #7.
¼" Copper bearing steel barrier
Pull Box at Sta. 23+20
1¼" Conduit-Lighting Circuit #6
1¼" Conduit for future telephone wires.
1¼" Conduit-Roadway Lighting Circuit #6
Electrolier at Sta. 47+15
Pull Box at Sta. 47+67
Cover removed
¼" Copper bearing steel barrier
1½" Conduit-Roadway Lighting Circuit #7
SECTION A-A
Curb
Crossover to Electrolier "A"
Cross over to Electrolier B
Pull Box at Sta. 87+10
¼" Copper bearing Steel barrier
1½" Conduit for future Telephone wires
1¼" Conduit-Lighting Circuit #7
Copper bearing Steel
Copper bearing steel
1¼" Conduit for future telephone
THE GOLDEN GATE BRIDGE
SAN FRANCISCO, CAL.
GOLDEN GATE BRIDGE AND HIGHWAY DISTRICT
OF CALIFORNIA

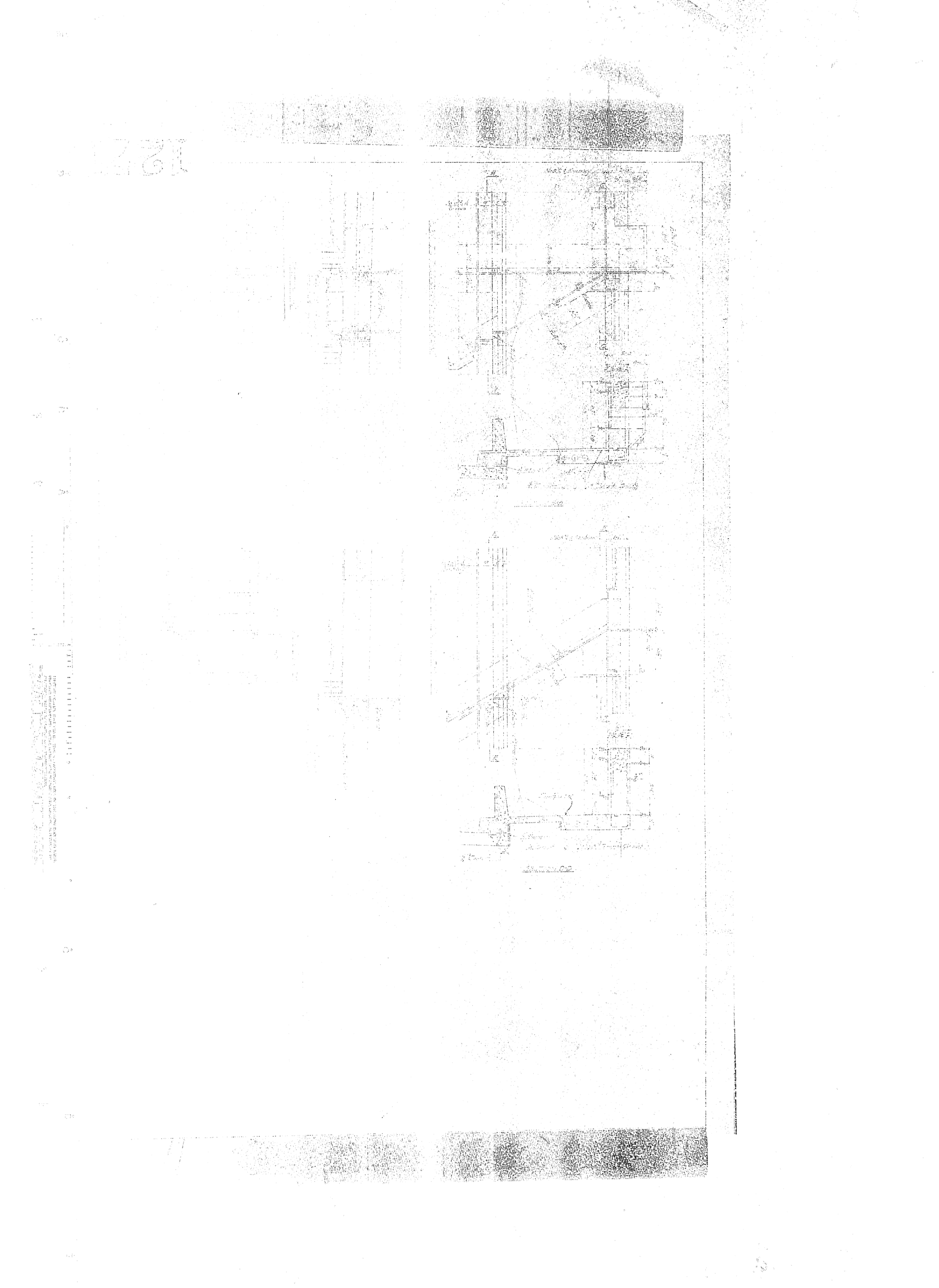


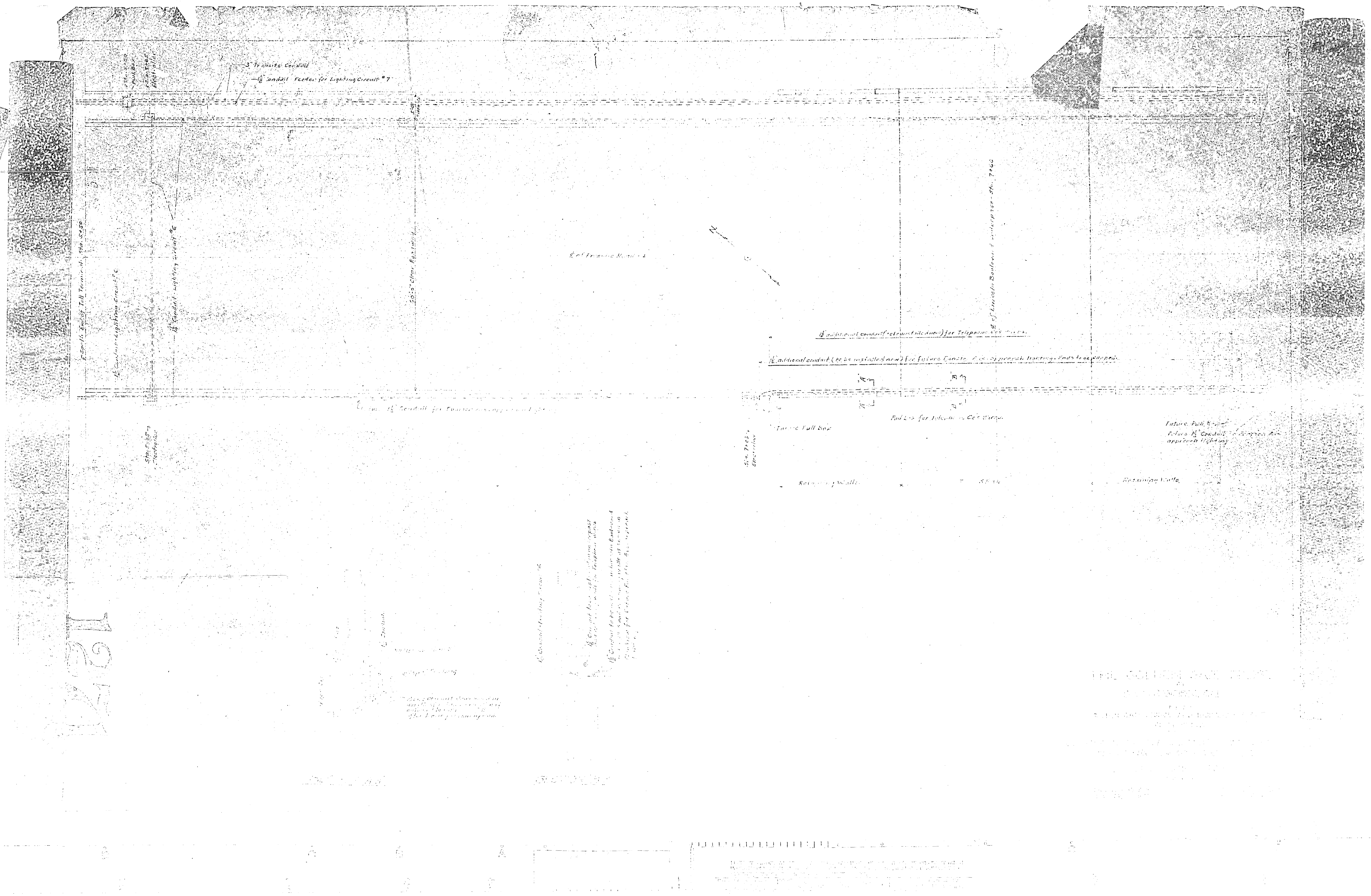


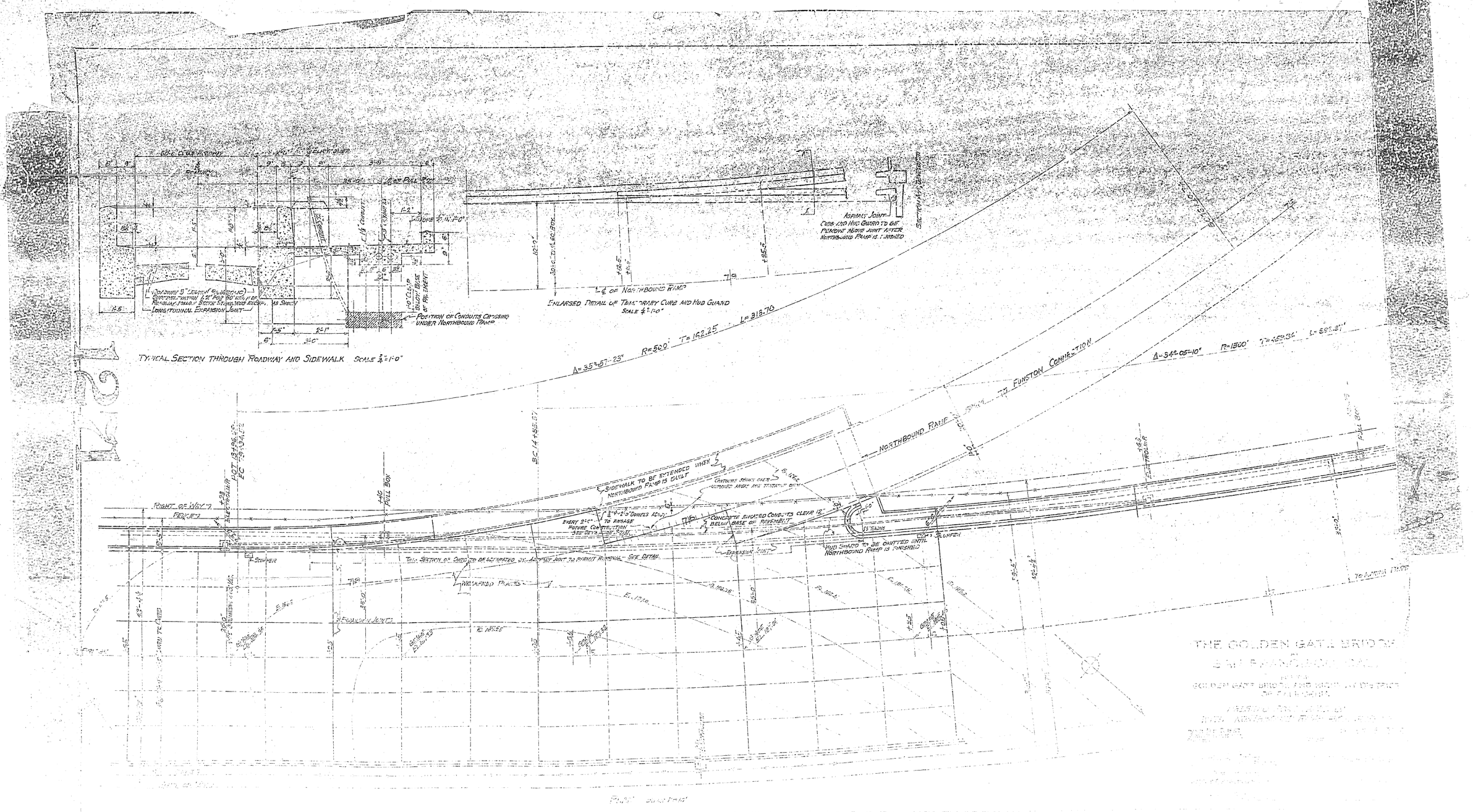
1271

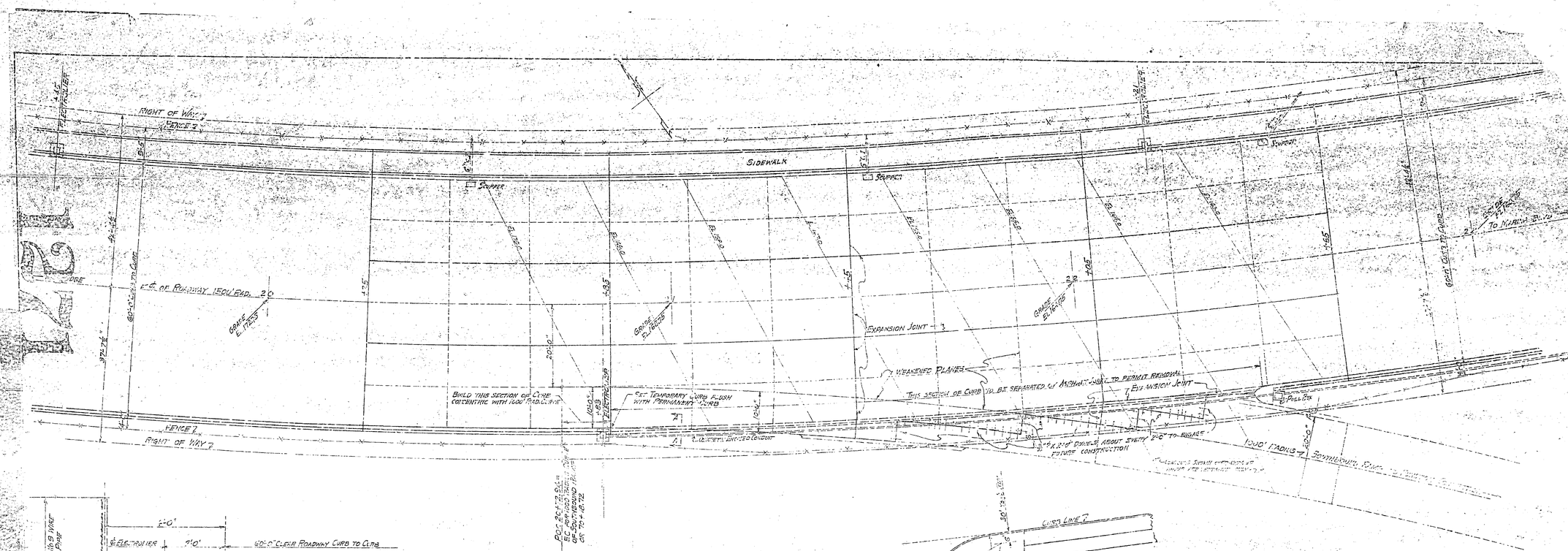


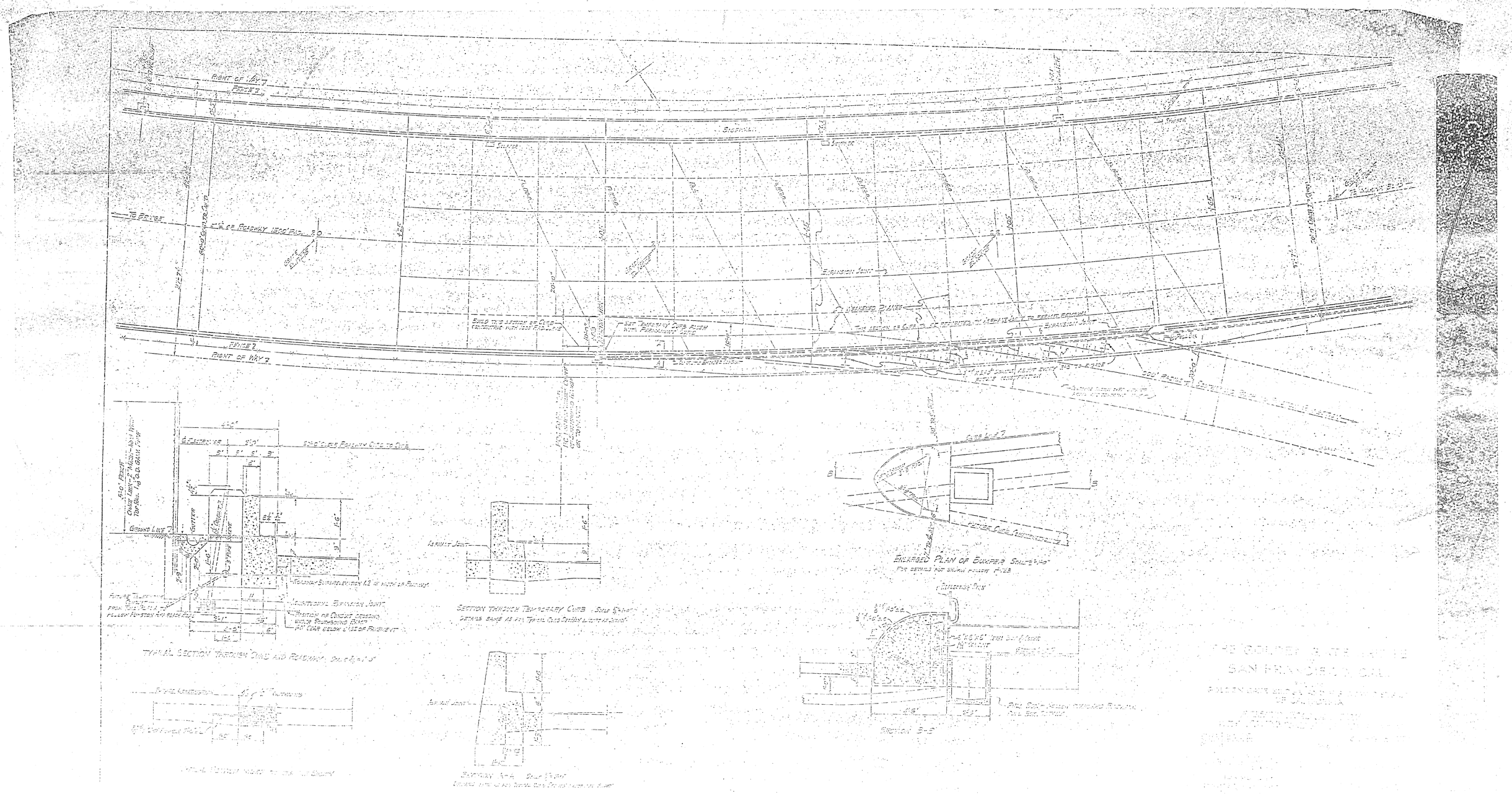

SECTION C-C
SECTION D-D
ELEVATION OF NORTH

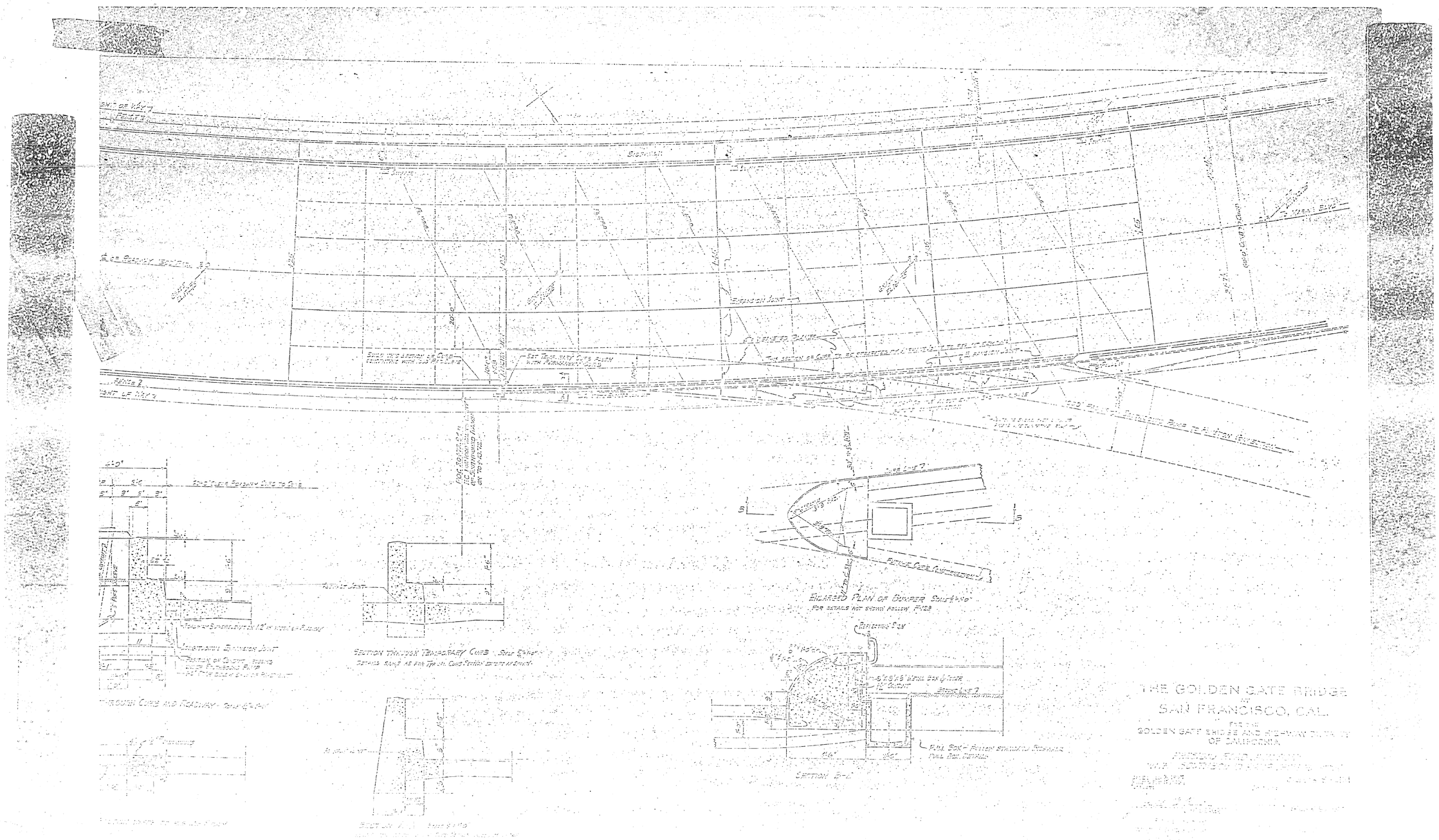



3" Transite Conduit
1½" Conduit Feeder for Lighting Circuit #7
South End of Toll Terminal Sta. 5+50
1½" Conduit Lighting Circuit #6
50'-0" Clear Roadway
of Lincoln Boulevard Underpass Sta. 7+60
1½" additional conduit (to be installed new) for Telephone Co's Wires.
1½" additional conduit (to be installed new) for future Const. of approach lighting. Ends to be capped.
Future Pull Box
Retaining Walls
Future Pull Box
Retaining Walls

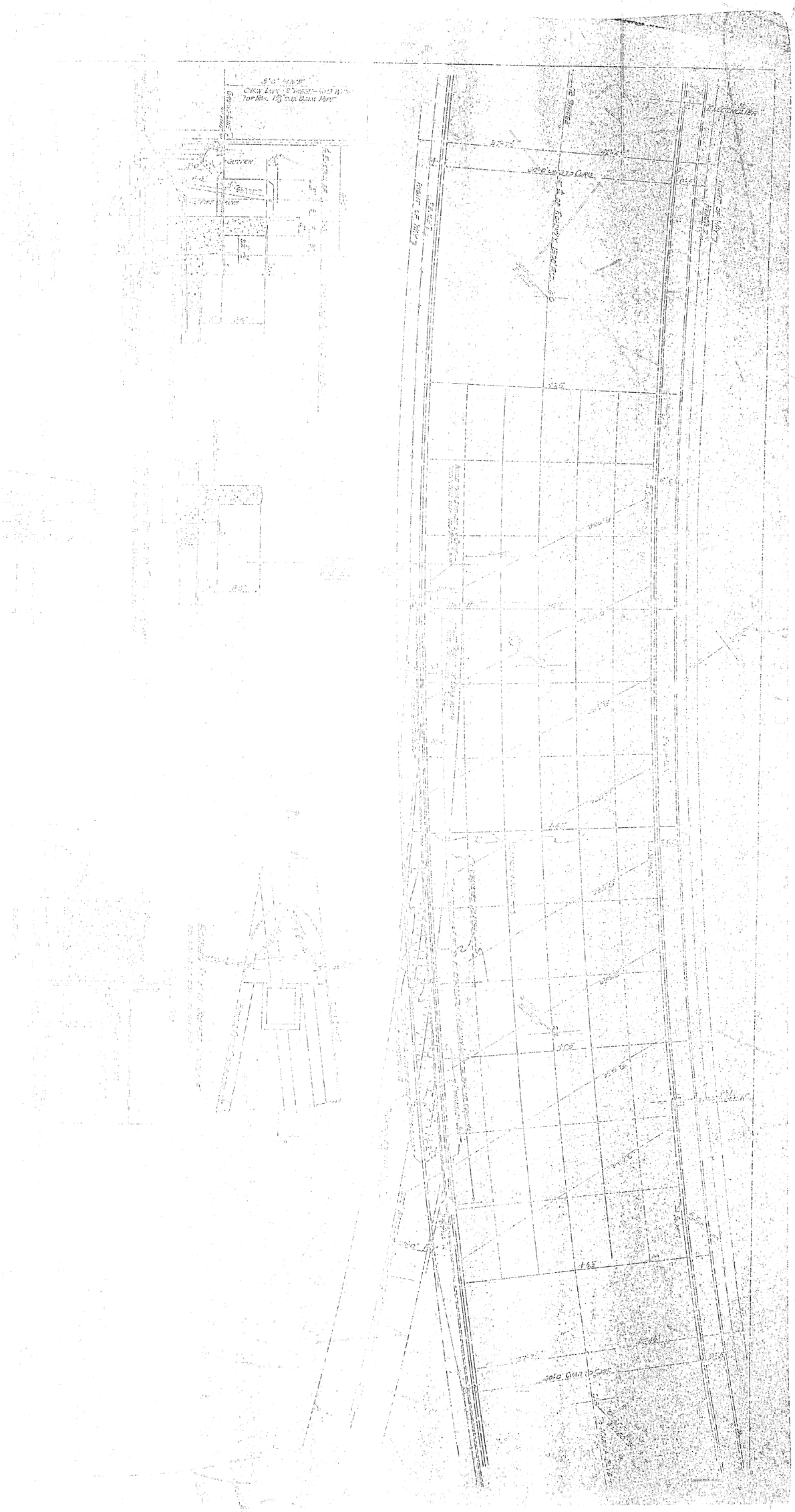

TYPICAL SECTION THROUGH ROADWAY AND SIDEWALK SCALE 3/4"=1'-0"
ENLARGED DETAIL OF TEMPORARY CURB AND HUB GUARD SCALE 3/4"=1'-0"
POSITION OF CONDUITS CROSSING UNDER NORTHBOUND RAMP
LONGITUDINAL EXPANSION JOINT
ASPHALT JOINT
CURB AND HUB GUARD TO BE REMOVED ABOVE JOINT AFTER NORTHBOUND RAMP IS FINISHED
℄ OF NORTHBOUND RAMP
Δ=35°-57'-25" R=500' T=162.25 L=313.70
Δ=34°-05'-10" R=1500'
NORTHBOUND RAMP
FUNSTON CONNECTION
SIDEWALK TO BE EXTENDED WHEN NORTHBOUND RAMP IS BUILT
CONCRETE SHOULDER CONDUITS CLEAR 12" BELOW BASE OF PAVEMENT
HUB GUARD TO BE OMITTED UNTIL NORTHBOUND RAMP IS FINISHED
EXPANSION JOINT
WEAKENED PLANES
RIGHT OF WAY
FENCE
SCUPPER
PULL BOX
THE GOLDEN GATE BRIDGE

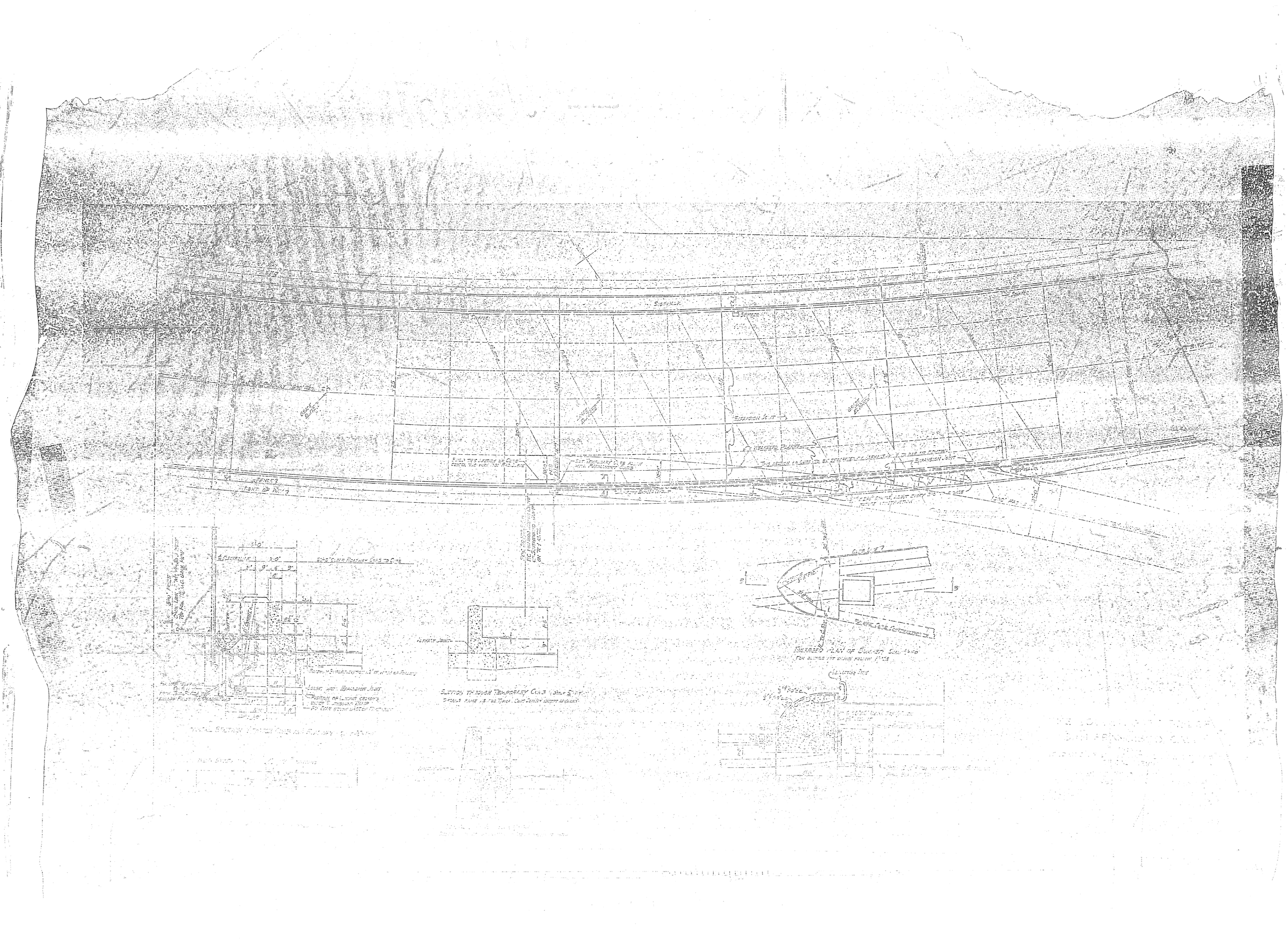

RIGHT OF WAY
FENCE
SIDEWALK
SCUPPER
EXPANSION JOINT
WEAKENED PLANES
THIS SECTION OF CURB TO BE SEPARATED w/ ASPHALT JOINT TO PERMIT REMOVAL
EXPANSION JOINT
BUILD THIS SECTION OF CURB CONCENTRIC WITH 1000' RADIUS
SEE TEMPORARY CURB FLUSH WITH PERMANENT CURB
1000' RADIUS
SOUTHBOUND
TO MARINA BLVD.
POLE BOX
FUTURE CONSTRUCTION
GRADE ELEVATIONS
CURB LINE
FUTURE CURB CONSTRUCTION
ENLARGED PLAN OF BUMPER
FOR DETAILS SEE SHEET F-123
ASPHALT JOINT
SECTION THROUGH TEMPORARY CURB
GROUND LINE
REFLECTOR STUD
THE GOLDEN GATE BRIDGE
SAN FRANCISCO, CAL.


RIGHT OF WAY
FENCE
SIDEWALK
TO BRIDGE
EXPANSION JOINT
WEAKENED PLANES
TYPICAL SECTION THROUGH CURB AND ROADWAY
SECTION THROUGH TEMPORARY CURB
ENLARGED PLAN OF BUMPER
SECTION B-B
SECTION A-A
GROUND LINE
GUTTER
ASPHALT JOINT
THE GOLDEN GATE BRIDGE
SAN FRANCISCO, CAL.



THE GOLDEN GATE BRIDGE
AT
SAN FRANCISCO, CAL.
FOR THE
GOLDEN GATE BRIDGE AND HIGHWAY DISTRICT
OF CALIFORNIA
ENLARGED PLAN OF BUMPER
SECTION THROUGH TEMPORARY CURB
SECTION B-B





SIDEWALK
EXPANSION JOINT
WEAKENED PLANES
FENCE
RIGHT OF WAY
ALPHALT JOINT
SECTION THROUGH TEMPORARY CURB
ENLARGED PLAN OF BUNKER