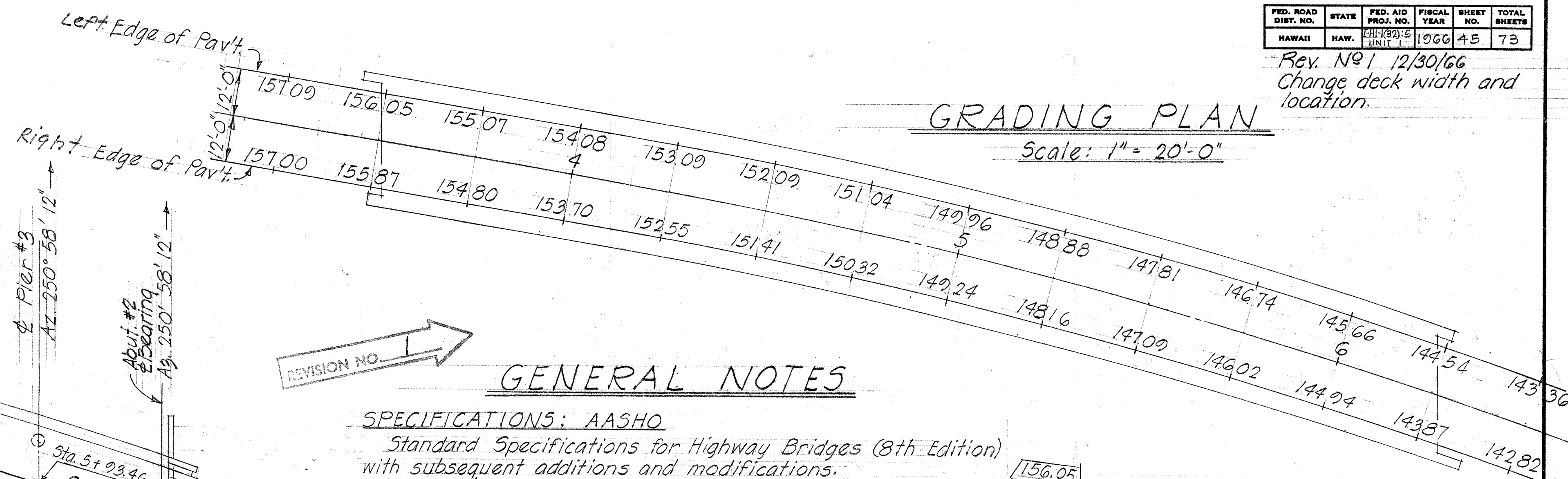


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HI-1(32)-5	1966	45	73

Rev. No. 12/30/66
Change deck width and location.

GRADING PLAN

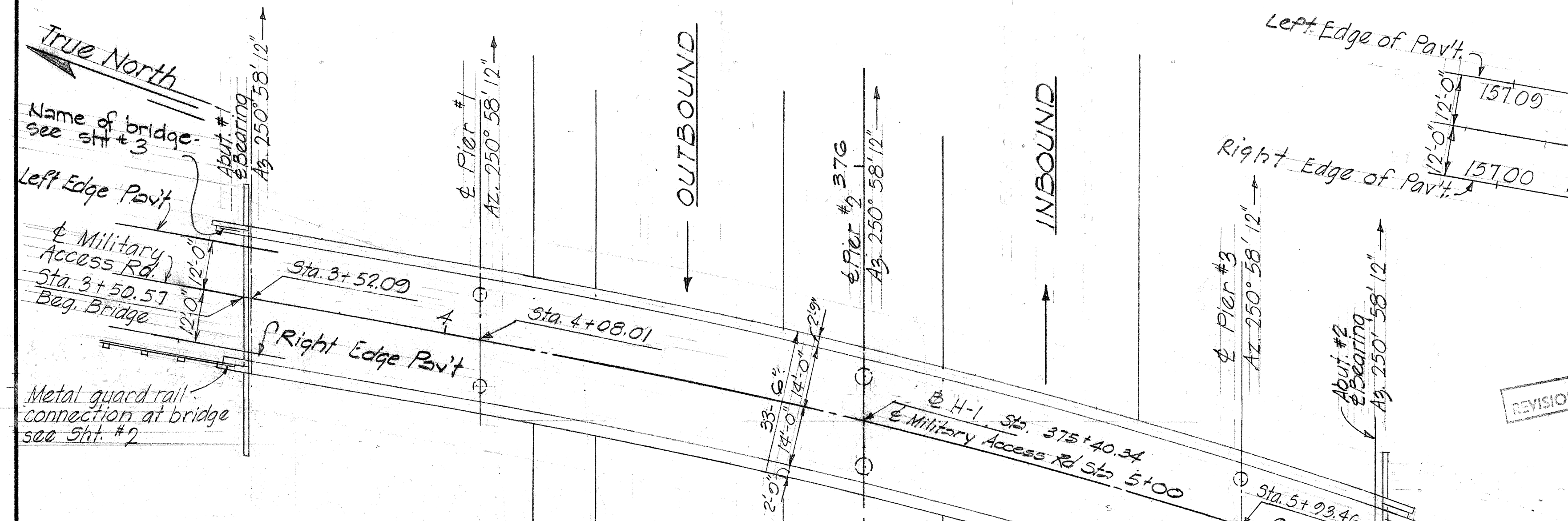
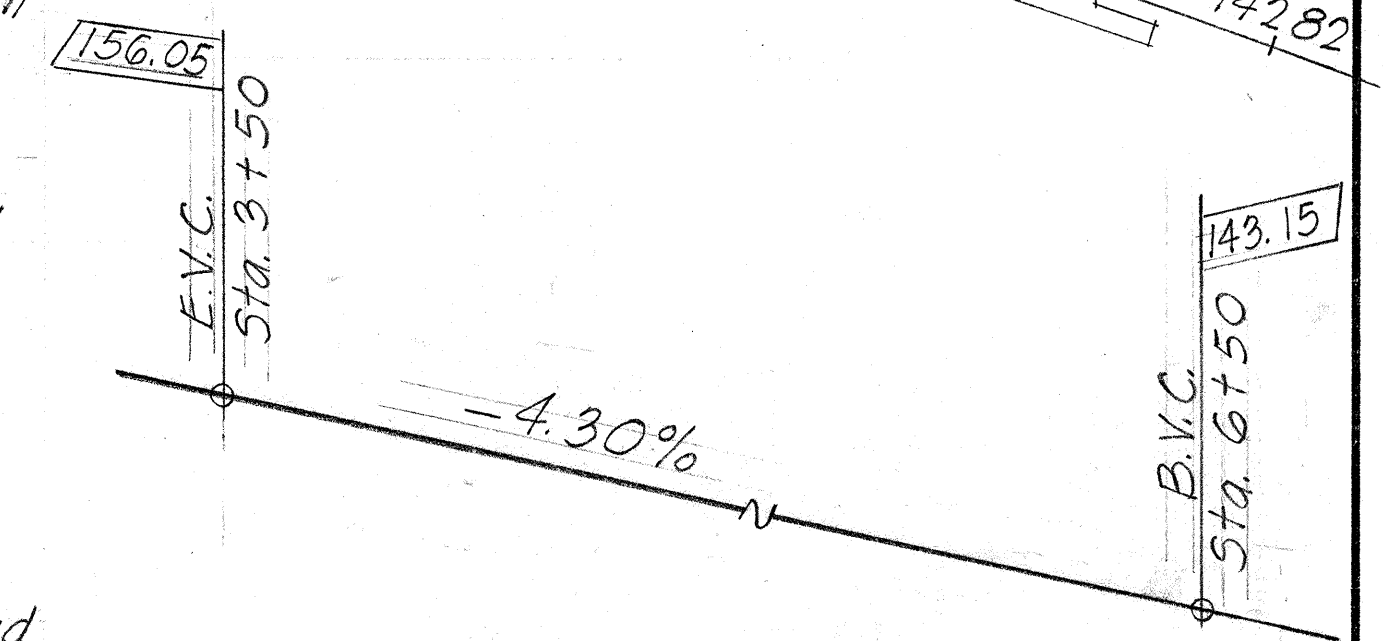
Scale: 1" = 20'-0"



GENERAL NOTES

- SPECIFICATIONS: AASHO**
Standard Specifications for Highway Bridges (8th Edition) with subsequent additions and modifications.
- DESIGN STRESSES:**
1. R.C. Beams & Slabs
See AASHO specifications except as otherwise noted and see special provisions.
 $f_c = 3000$ psi
 $f_c = 1,200$ psi
 $n = 10$
 $f_s = 20,000$ psi tension
- MATERIALS:**
1. All concrete shall be Class A-1 except as otherwise noted on plans.
2. Neoprene pads are incidental to concrete girders and will not be paid for separately.
3. See Special Provisions for admixture in concrete.
- CONSTRUCTION METHODS:**
1. See Standard Specifications and Special Provisions.
2. All footings shall be excavated and poured to neat lines. In case of over excavation, space between footing and ground shall be filled with concrete at the Contractors expense. The fill shall have a minimum quality of Class D-1.
3. The Contractor shall verify the location of all existing utility lines and notify the respective owners before commencing work of excavation.
4. All fill behind abutments and wingwalls shall be complete in place before placing superstructure.
5. For concrete finish see Special Provisions. Concrete seats & creep blocks to be poured monolithically with pier or abutment sections. Seats shall receive a hard trowel finish, level & true elevations.
6. Neoprene pads shall be secured against displacement by adhesives, which shall be approved by the Engineer.

PROFILE

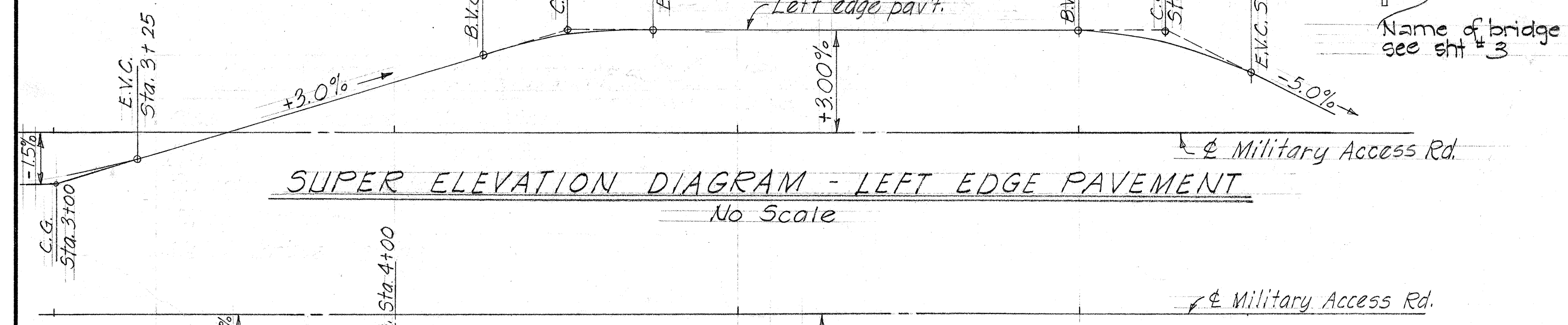


LAYOUT PLAN

Scale: 1" = 20'-0"

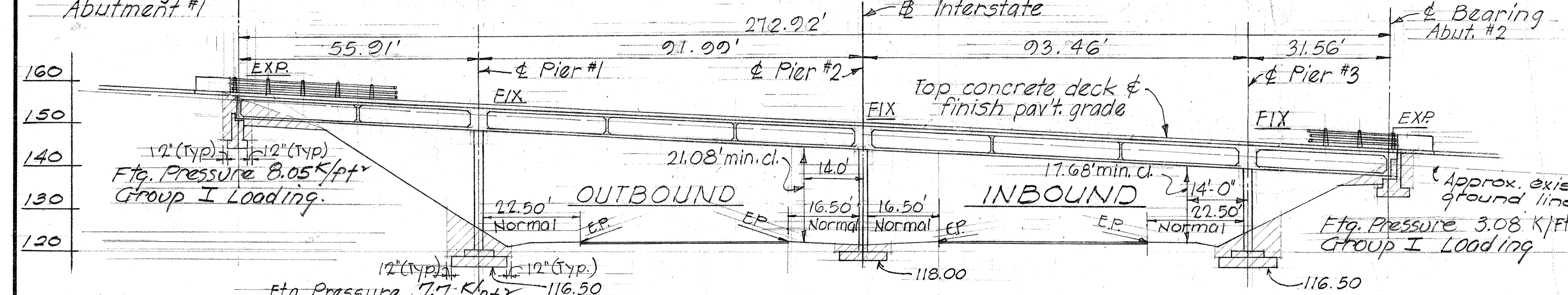
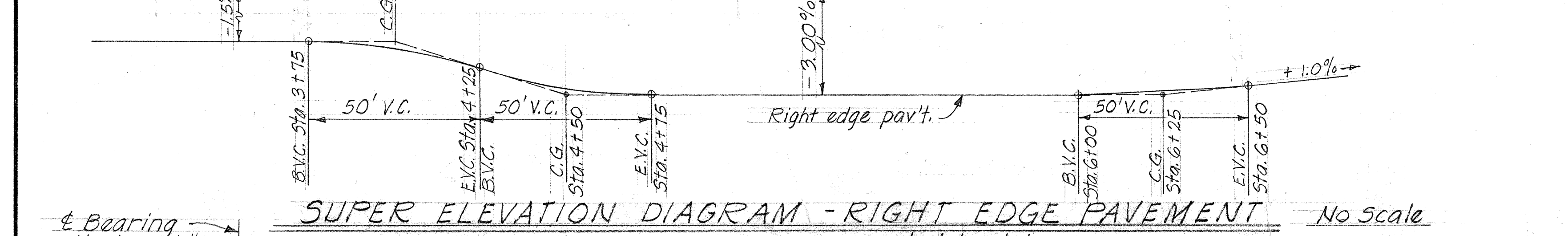
SUPER ELEVATION DIAGRAM - LEFT EDGE PAVEMENT

No Scale



SUPER ELEVATION DIAGRAM - RIGHT EDGE PAVEMENT

No Scale



LONGITUDINAL SECTION ALONG MILITARY ACCESS ROAD

Scale: 1" = 20'-0"

ESTIMATED QUANTITIES

Class A-1 Concrete	Lump Sum	(933 cy)
Reinforcing Steel	Lump Sum	(281,600 LBS)
Structural Excavation	656 1/2	636 c.y.
Filter Material		30 25 c.y.
Metal Bridge Railing		551 548 L.F.
(Three Rail Combination Type)		

THIS SHEET SUPERSEDES SHEET NO.80

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

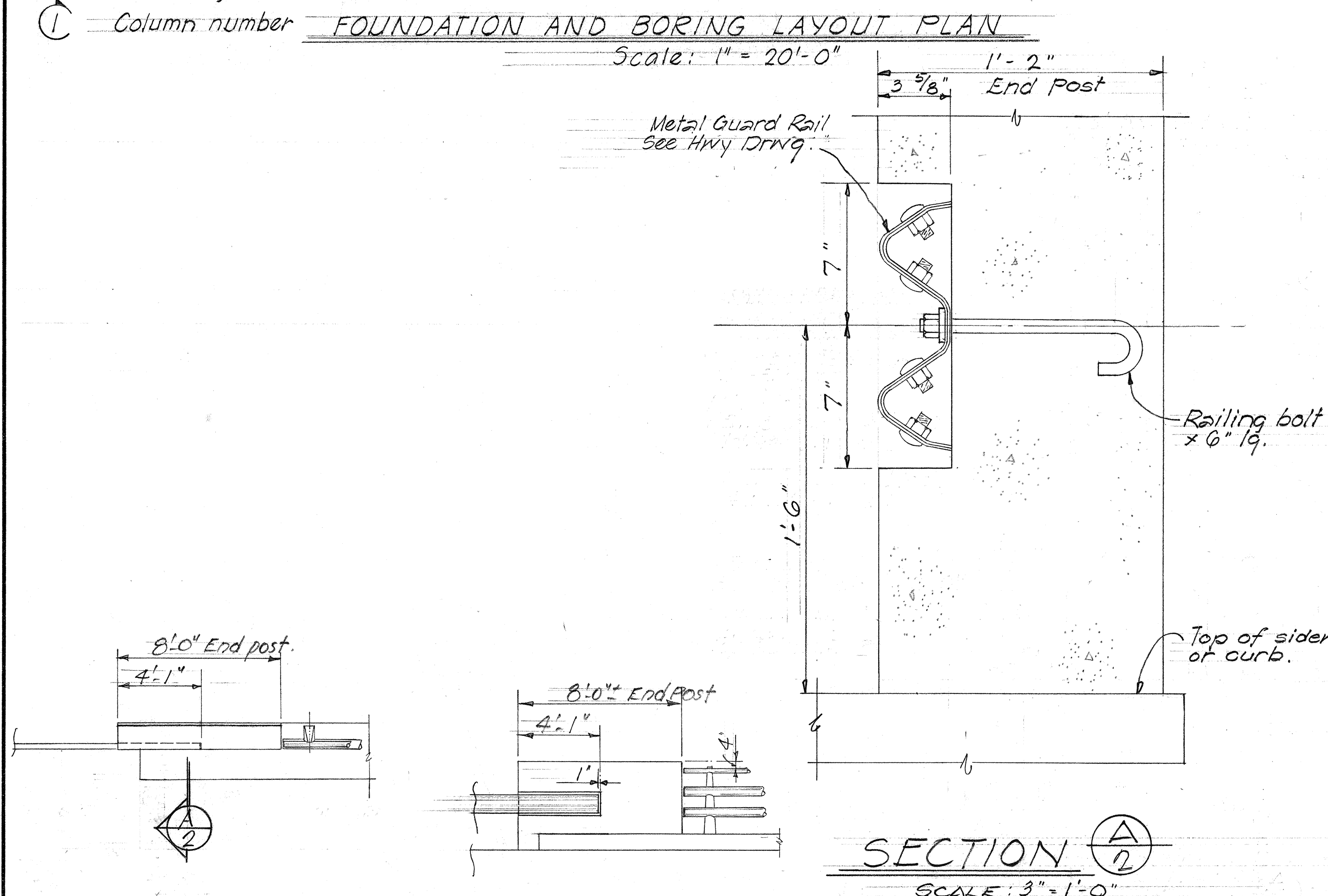
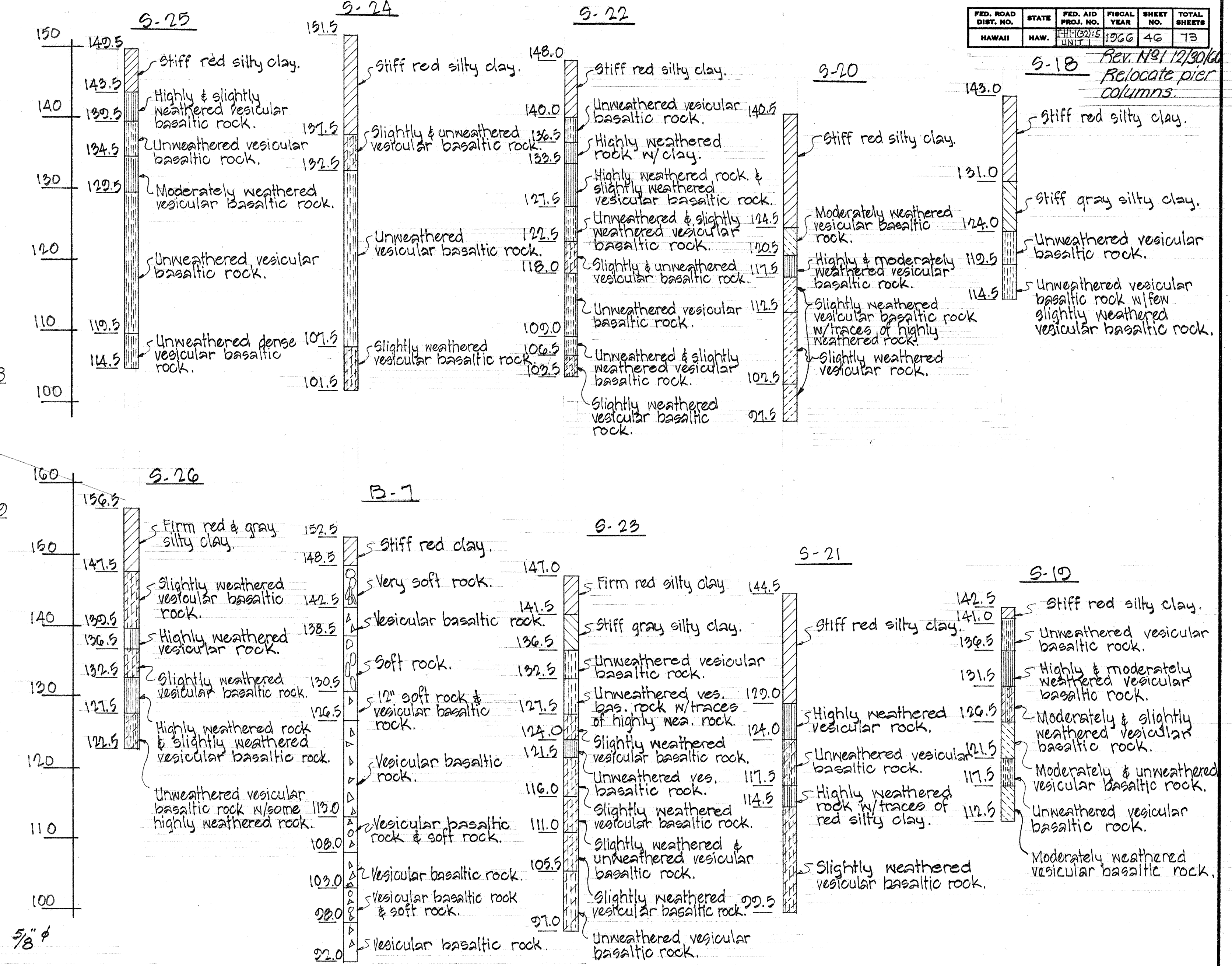
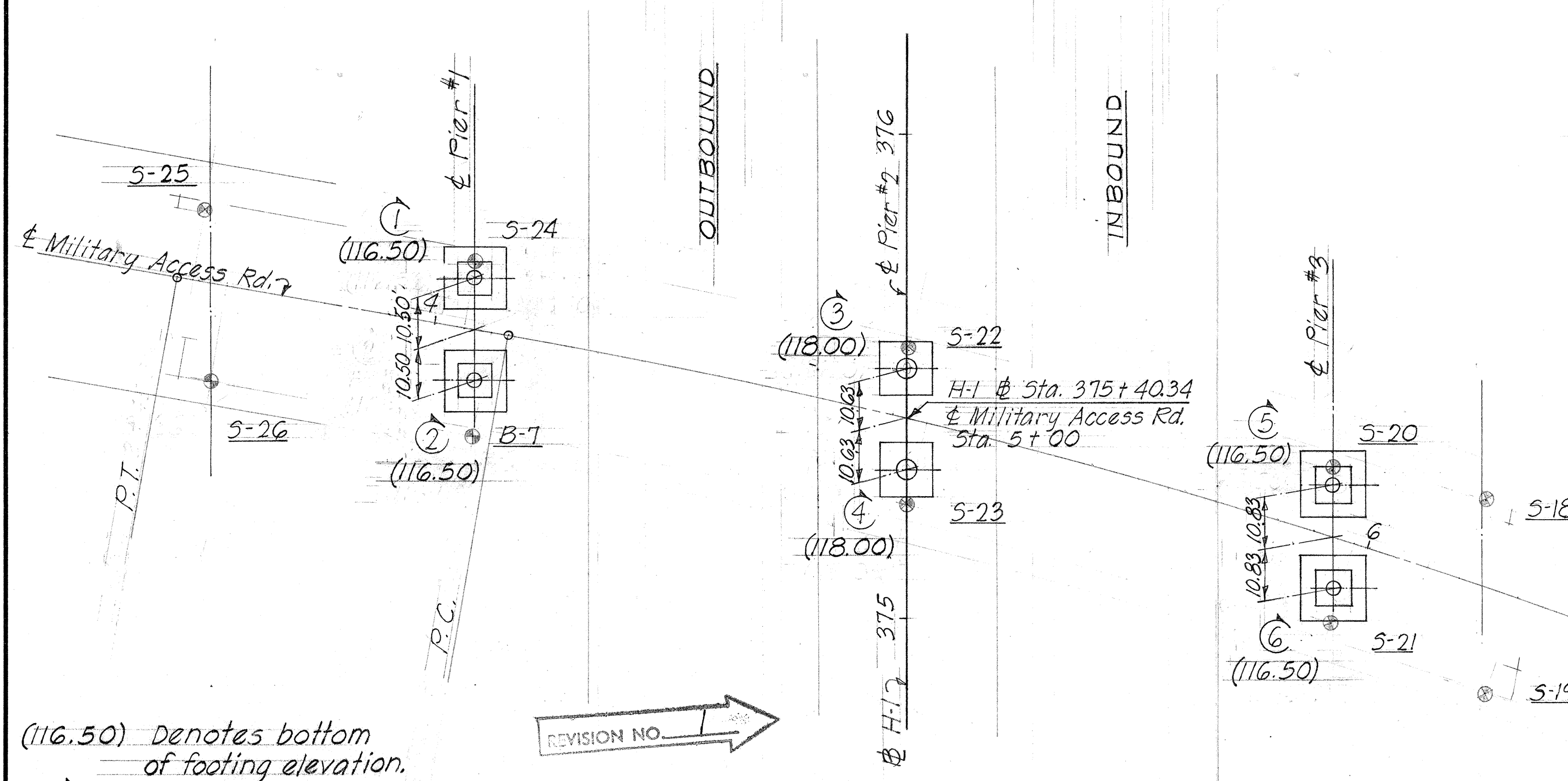
MILITARY ACCESS ROAD
GRADE SEPARATION

PROJ. NO. I-HI-1(32)-5, UNIT 1
SEPT. 1966

SHEET No. 1 OF 11 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HI-1(32) 5	1966	46	73



② TYPICAL GUARD RAIL CONNECTION
DETAIL AT BRIDGE SCALE: 1/4" = 1'-0"

NOTE: All structural steel rolled sections, its nuts & bolts shall be incidental to metal guard rail and will not be paid for separately.
All angles & bolts, except the portions buried in conc. shall be galvanized.

THIS SHEET SUPERSEDES SHEET NO. 81

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

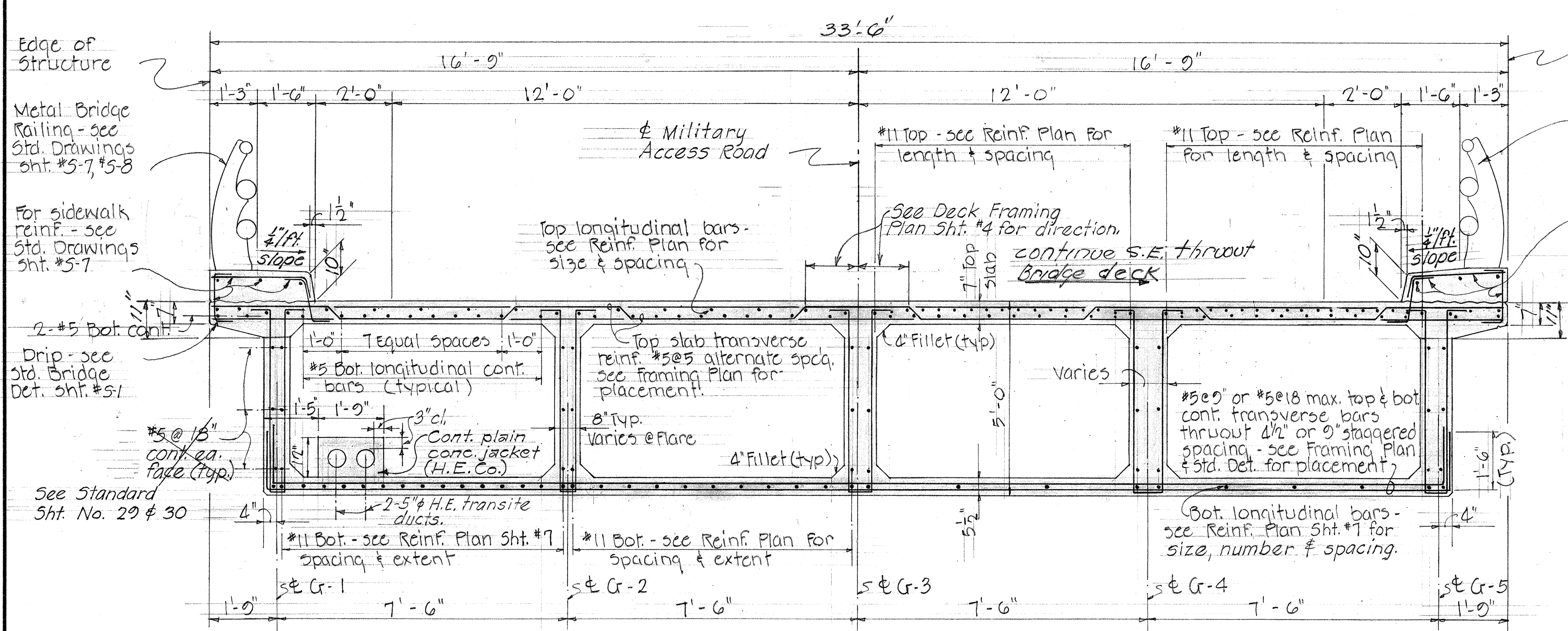
MILITARY ACCESS ROAD
GRADE SEPARATION

PROJ. NO. HI-1(32) 5, UNIT 1 SEPT. 1966

SHEET No. 2 OF 11 SHEETS

C O 4 G

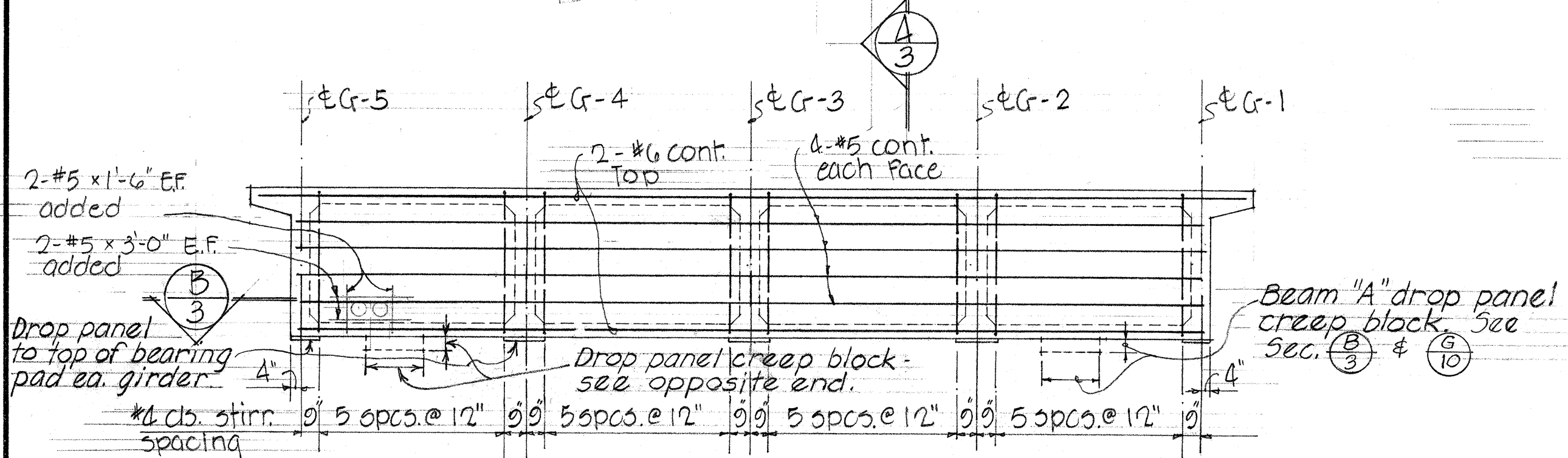
C O S 1



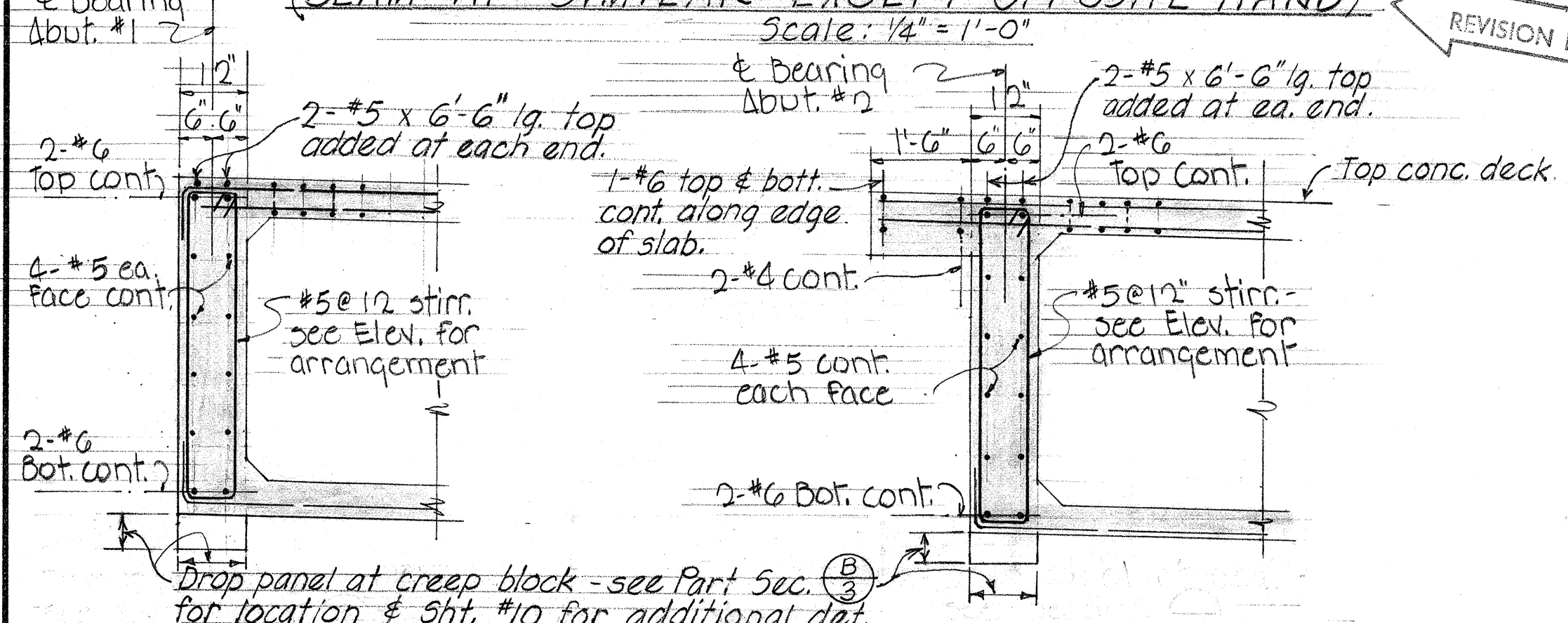
HALF SECTION NEAR MID-SPAN

HALF SECTION NEAR PIER

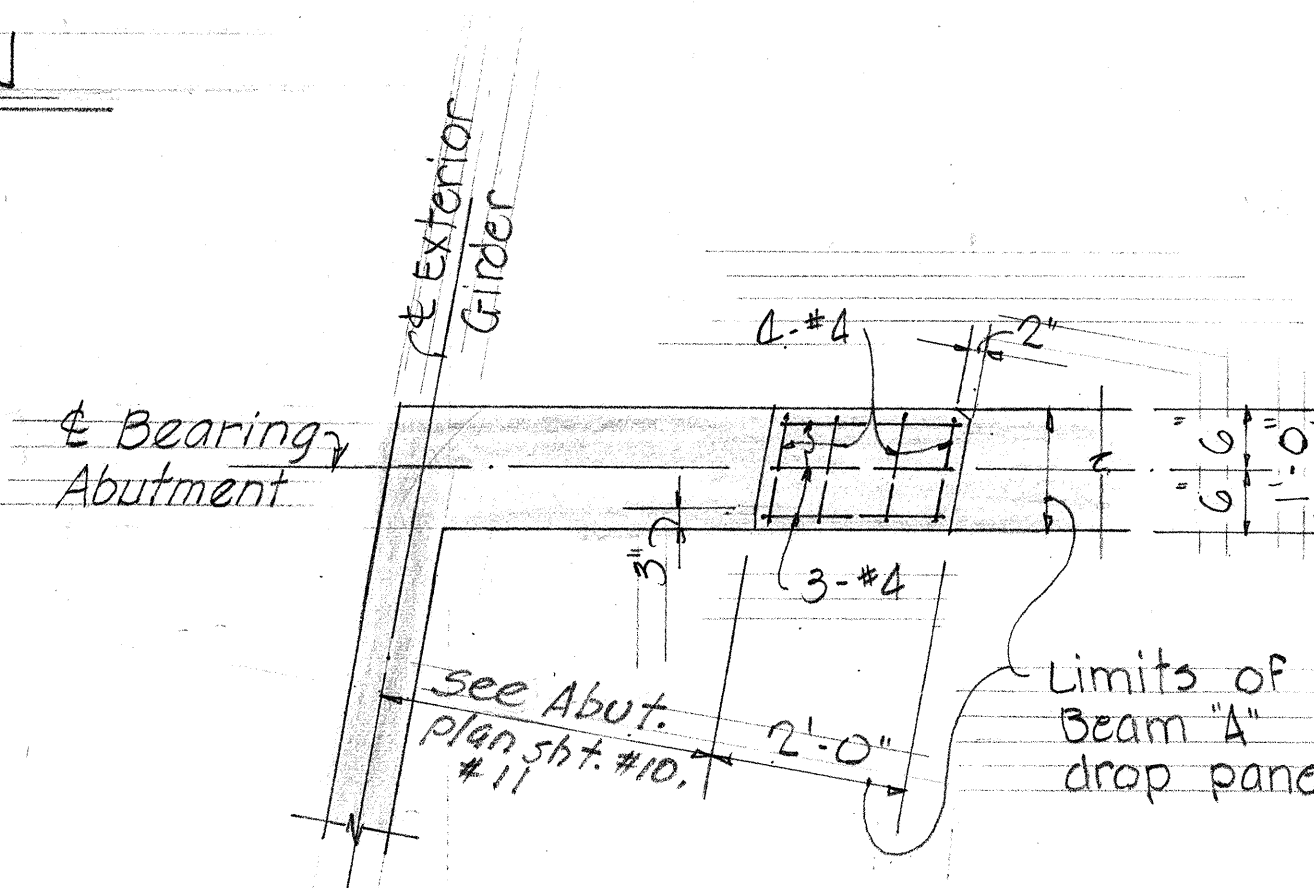
NORMAL DECK SECTION
Scale: 1/2" = 1'-0"



ELEVATION BEAM "A" - AS SHOWN
(BEAM "A1" SIMILAR EXCEPT OPPOSITE HAND)
Scale: 1/4" = 1'-0"



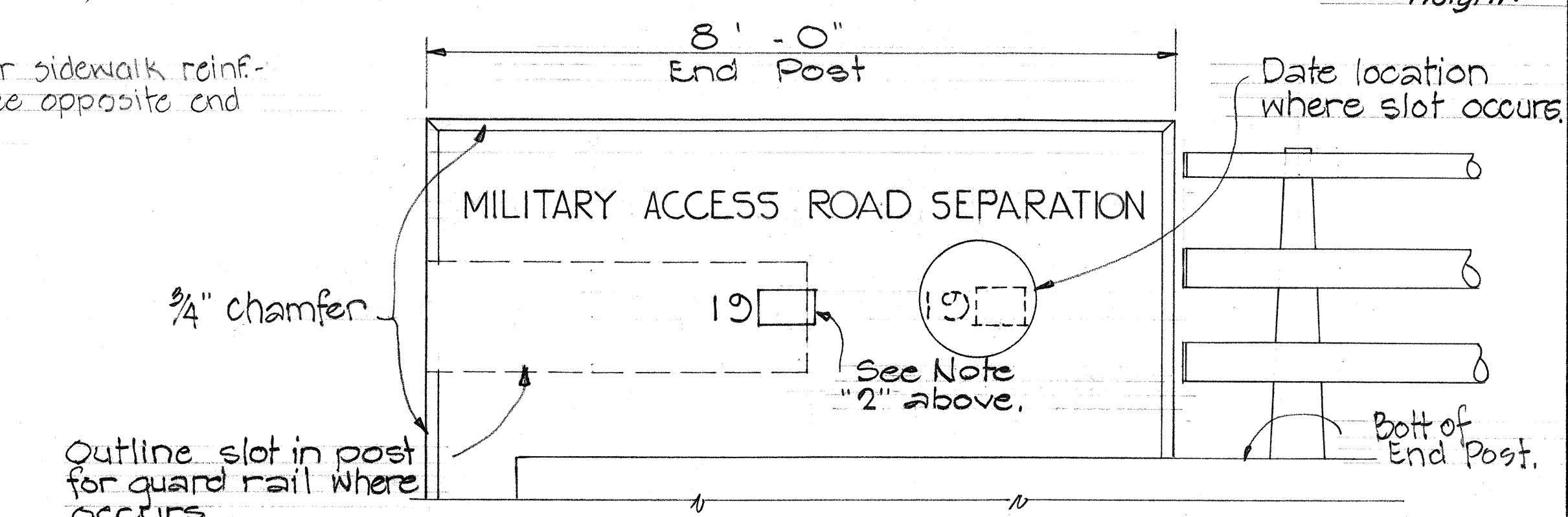
SECTION A3
Scale: 1/2" = 1'-0"



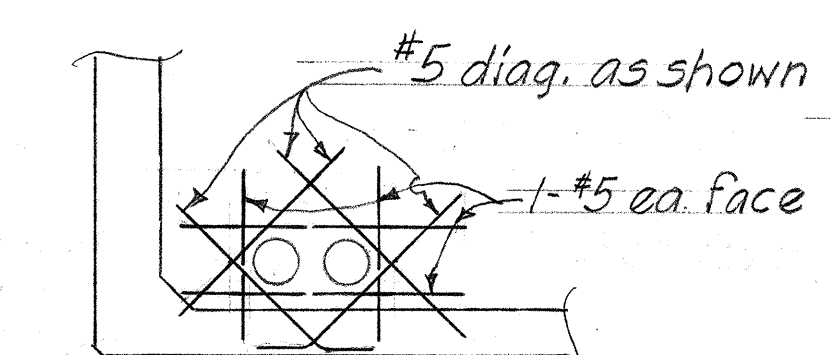
PART SECTION B3

Note:
1. Place name of structure as shown - For location see layout plan.
2. Year shown, will be year structure is completed.
3. Letter size & detail - see Standard Bridge Drawing sht. # 5-1

Rev. No. 12/30/66
Change deck width, location and curb height.



TYPICAL BRIDGE NAME & YEAR LOCATIONS
AT END POST
Scale: 3/4" = 1'-0"



TYPICAL ADDED REINFORCEMENT
IN BEAM "B" AT H.E. TRANSITE DUCTS

NOTE:
For Beam "B" details - see Std. Det. Sht. #5.

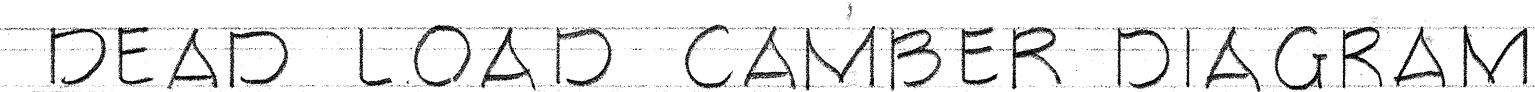
APPROVED:
HAWAIIAN ELECTRIC CO., INC. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
MILITARY ACCESS ROAD
GRADE SEPARATION
PROJ. NO. I-HI-1(32):5, UNIT 1 SEPT. 1966
SHEET No. 3 OF 11 SHEETS

THIS SHEET SUPERSEDES SHEET NO. 82

DATE
DESIGNED BY
CHECKED BY
NOTED BY
ORIGINAL PLAN
NOTED BY

Rev. No 1 12/30/66
Change deck width,
girder and location



Refer to Standard Details Shfts. #5-2, #5-3, #5-4
for additional box girder details.

MILITARY ACCESS ROAD
GRADE SEPARATION

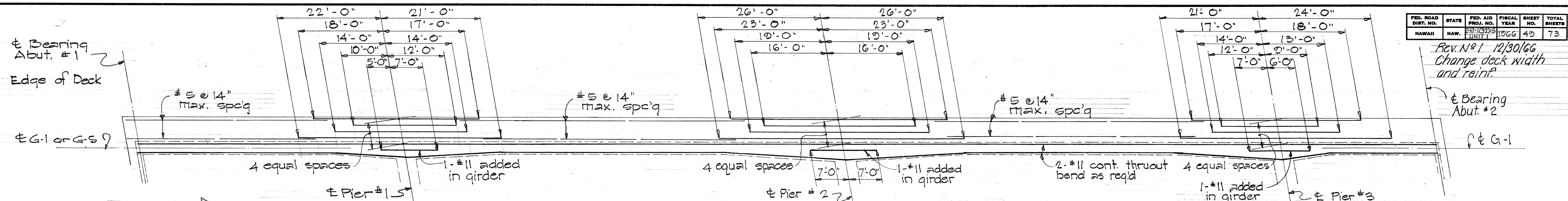
SHEET No. 4 OF 11 SHEETS

CO 4S

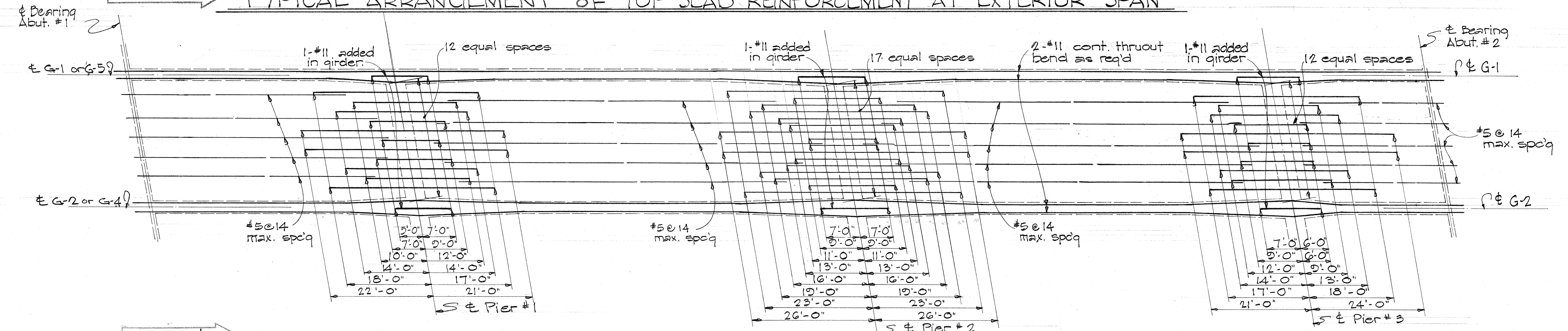
C O S S

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1066	1966	49	73

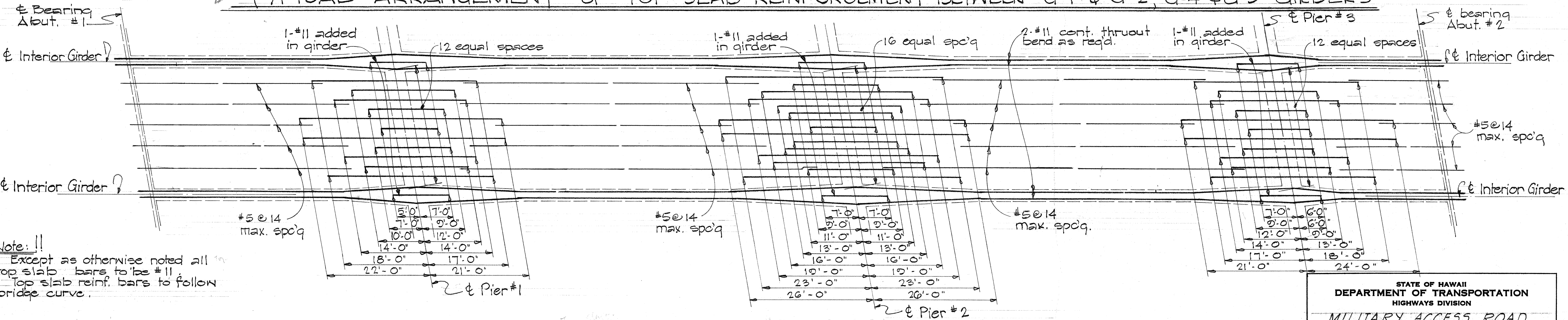
Rev. N^o 1 12/30/66
Change deck width and reinf.



REVISION NO. 1
TYPICAL ARRANGEMENT OF TOP SLAB REINFORCEMENT AT EXTERIOR SPAN



REVISION NO. 1
TYPICAL ARRANGEMENT OF TOP SLAB REINFORCEMENT BETWEEN G-1 & G-2, G-4 & G-5 GIRDERS



TYPICAL ARRANGEMENT OF TOP SLAB REINFORCEMENT BETWEEN G-2 & G-3, G-3 & G-4 GIRDERS

Note: !!
Except as otherwise noted all top slab bars to be #11
Top slab reinf. bars to follow bridge curve.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**MILITARY ACCESS ROAD
GRADE SEPARATION**

PROJ. NO. I-HI-1(32) 5, UNIT 1 SEPT. 1966
SHEET No. 5 OF 11 SHEETS

THIS SHEET SUPERSEDES SHEET NOS. 84 & 85,
AND DELETES SHEET NO. 85

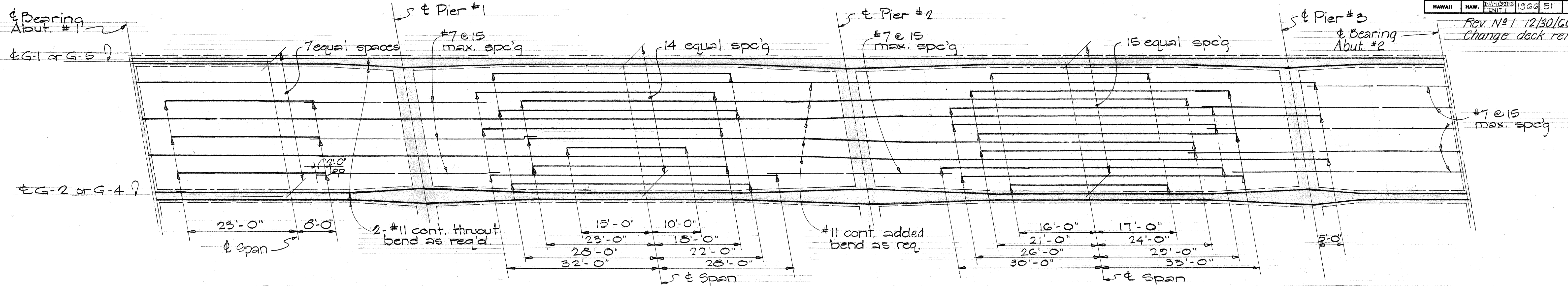
DATE	SY
SURVEY PLOTTED BY	SY
DRAWN BY	SY
CHECKED BY	SY
NOTED BY	SY
NO.	SY

C O 4 9

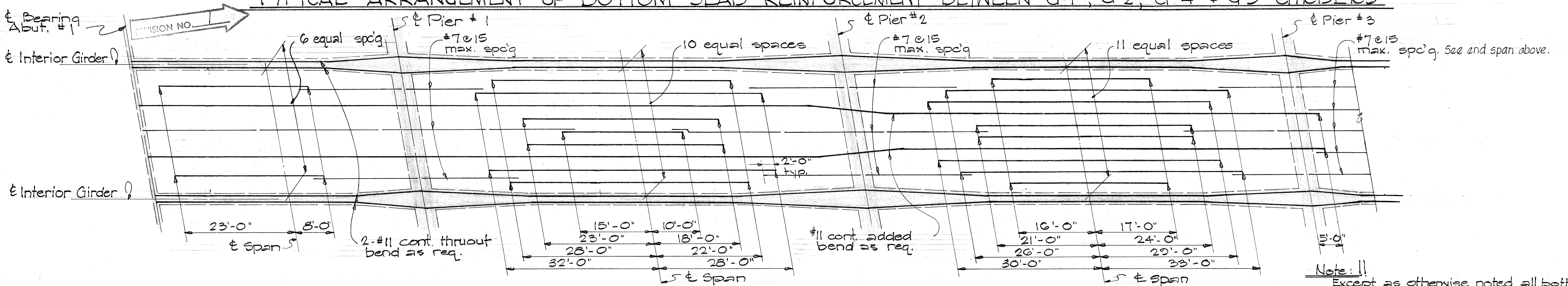
C O S 4

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CH-102-5 UNIT 1	1966	51	73

Rev. N^o 1: 12/30/66
Change deck reinf.



TYPICAL ARRANGEMENT OF BOTTOM SLAB REINFORCEMENT BETWEEN G-1, G-2, G-4 & G-5 GIRDERS



TYPICAL ARRANGEMENT OF BOTTOM REINFORCEMENT BETWEEN G-2 & G-3; G-3 & G-4 GIRDERS

Note: 11
Except as otherwise noted all bottom slab bars to be #11.
Bottom slab reinf. bars to follow bridge curve.

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
CHECKED BY	
NOTE BOOK	
No.	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MILITARY ACCESS ROAD
GRADE SEPARATION

PROJ. NO. I-HI-1(32) 5, UNIT 1 SEPT. 1966

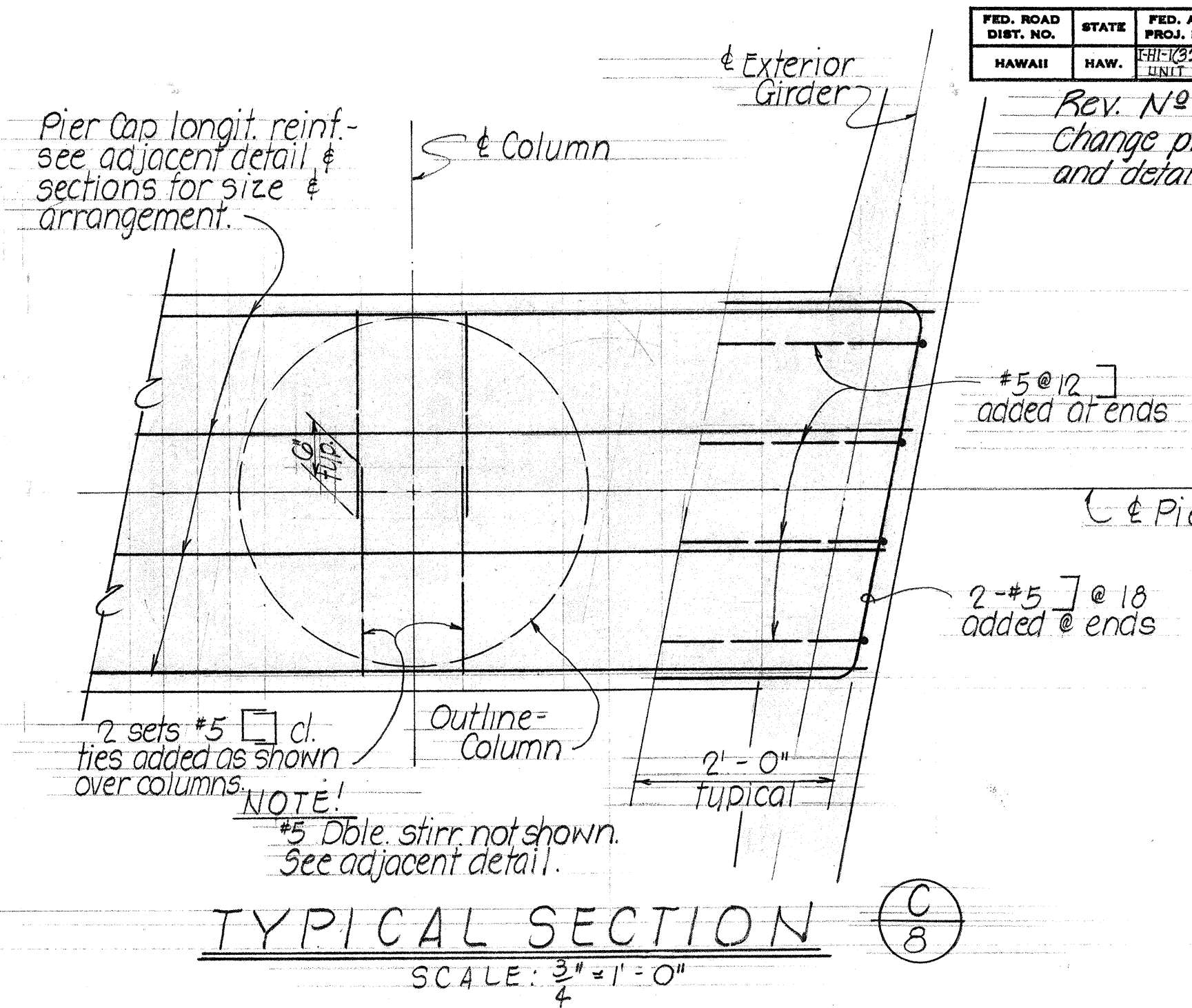
SHEET No. 7 OF 11 SHEETS

THIS SHEET SUPERSEDES SHEET NO. 86.
PRECEDING SHEET NO. 85 HAS BEEN DE-
LETED FROM CONTRACT PLANS.

C O 5 1

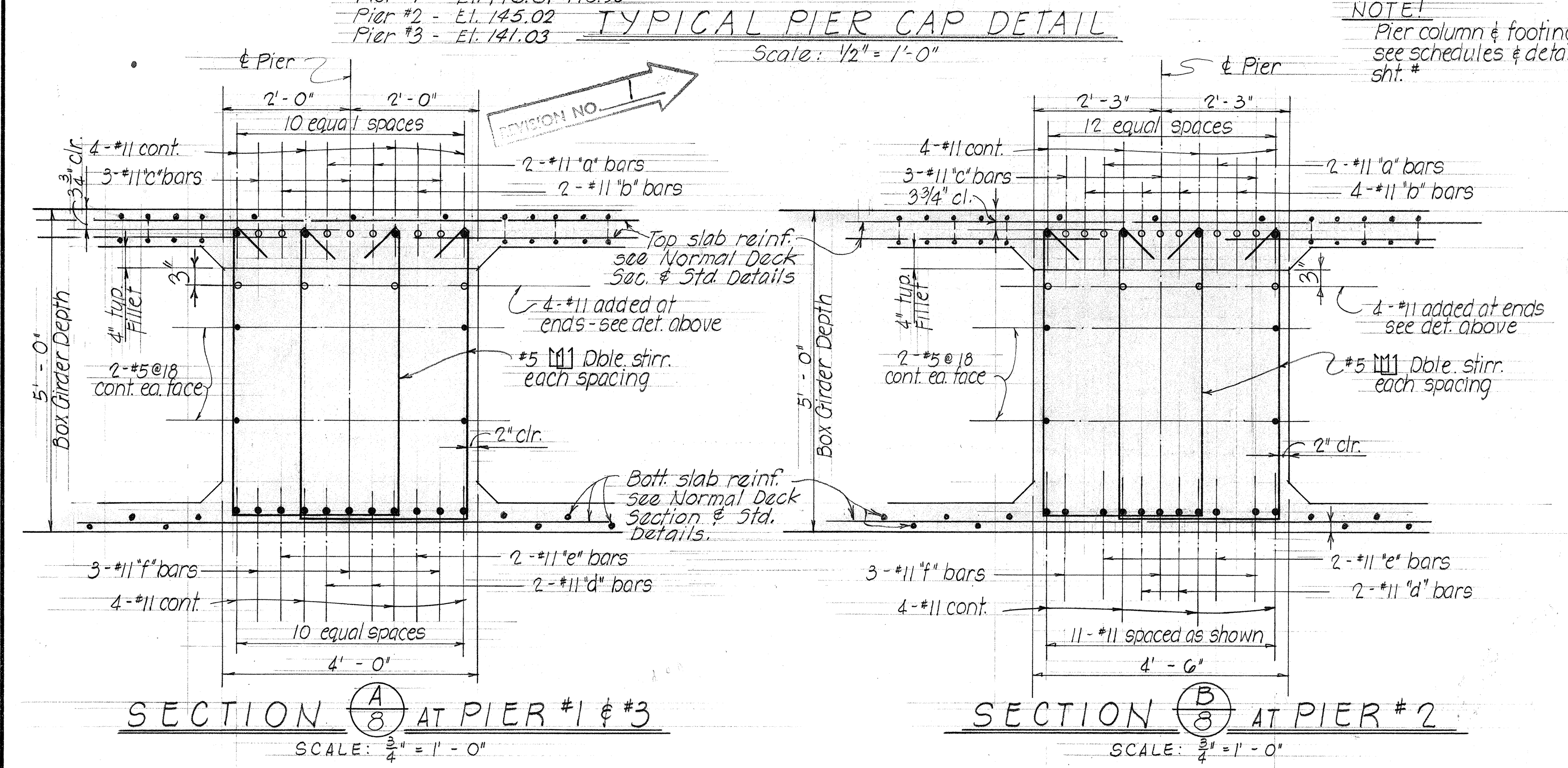
C O S G

Rev. No 1 12/30/66
Change pier location
and details.



TYPICAL SECTION

SCALE: $\frac{3}{4}'' = 1' = 0''$



SECTION $\frac{A}{8}$ AT PIER #1 & #3
SCALE: $\frac{3}{4}" = 1' - 0"$

SECTION $\frac{B}{8}$ AT PIER #2

SCALE: $\frac{3}{4}" = 1' - 0"$

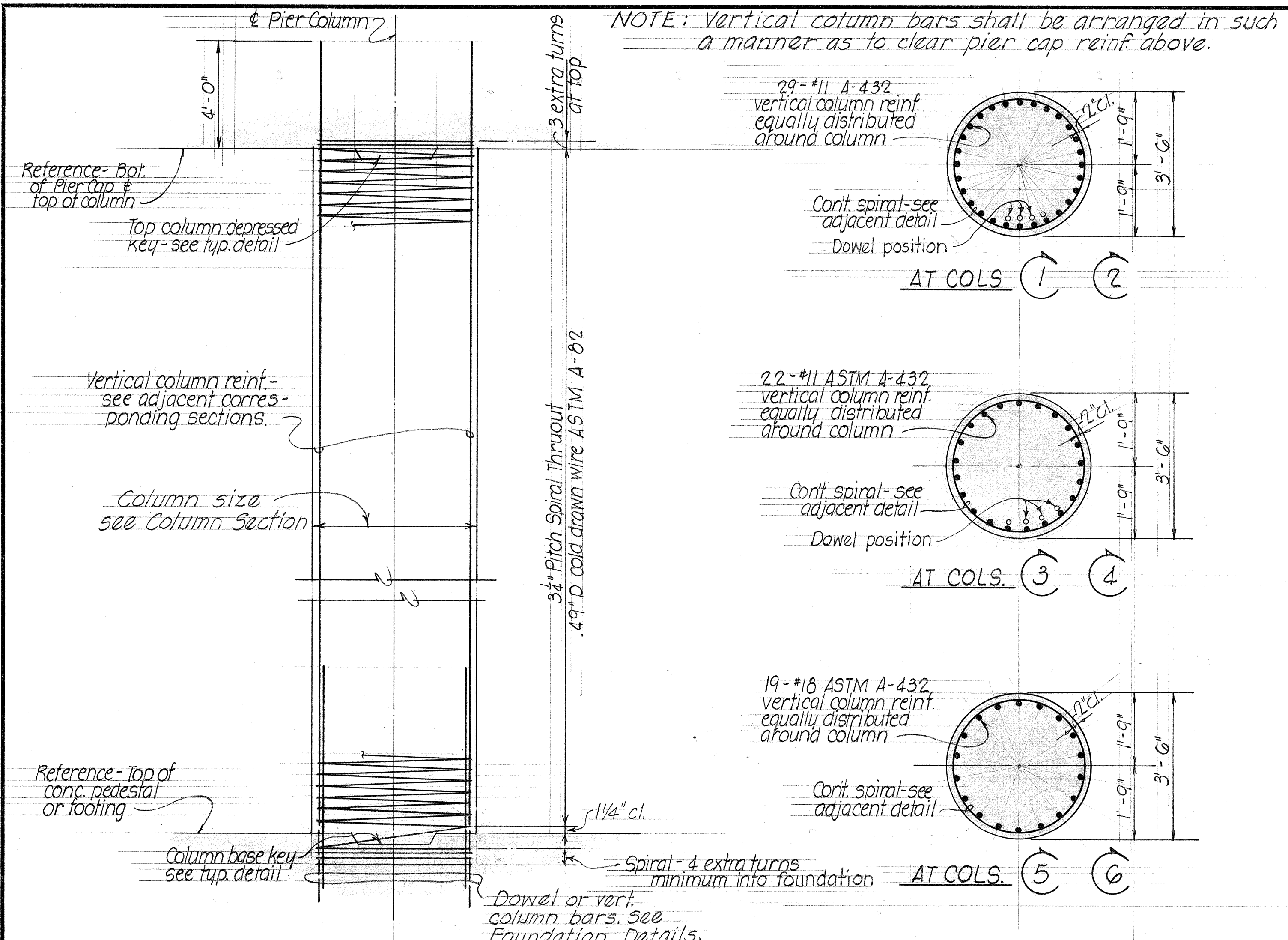
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MILITARY ACCESS ROAD
GRADE SEPARATION

PROJ. NO. I-H-1(32):5, UNIT 1 SEPT. 1966

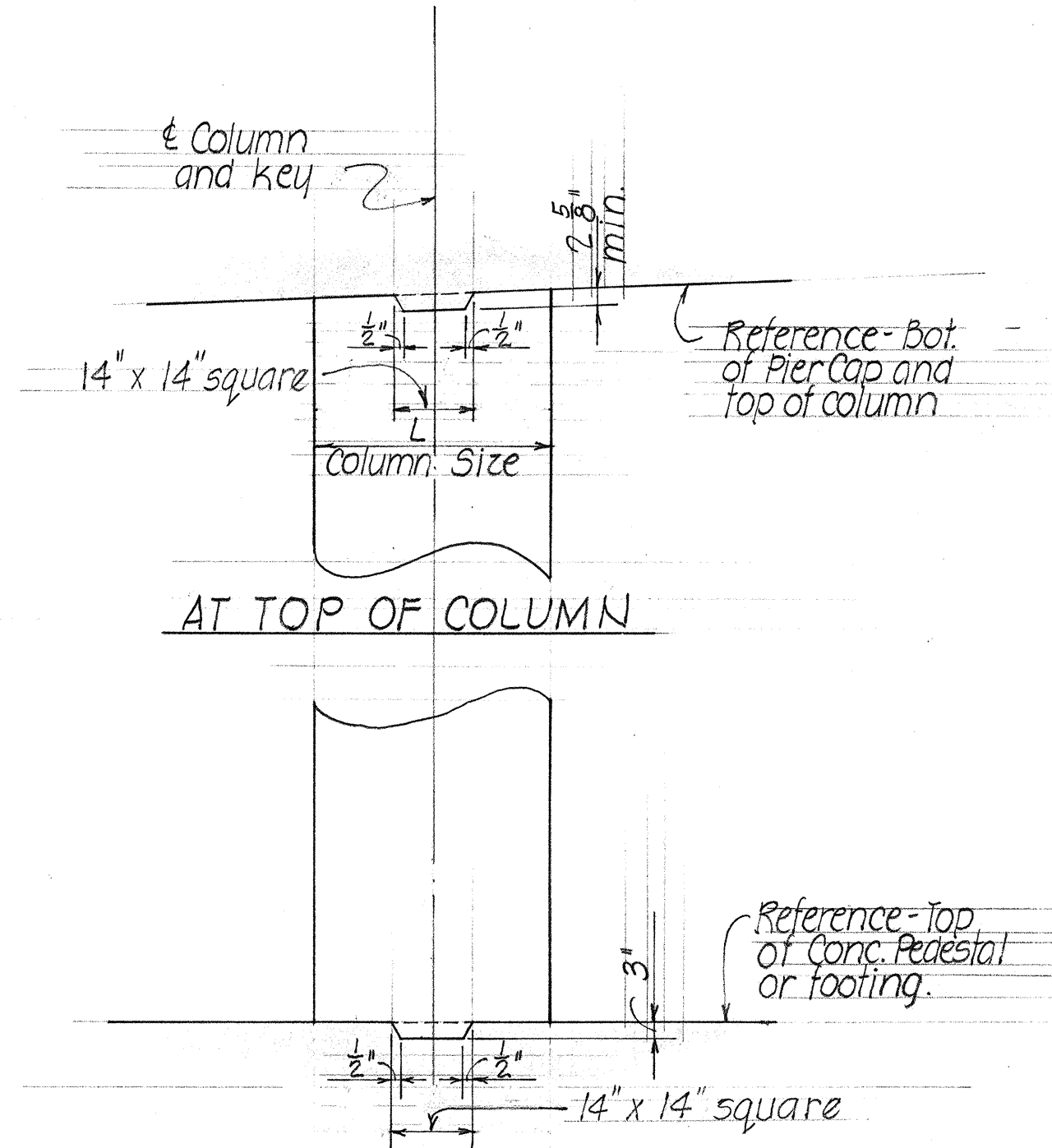
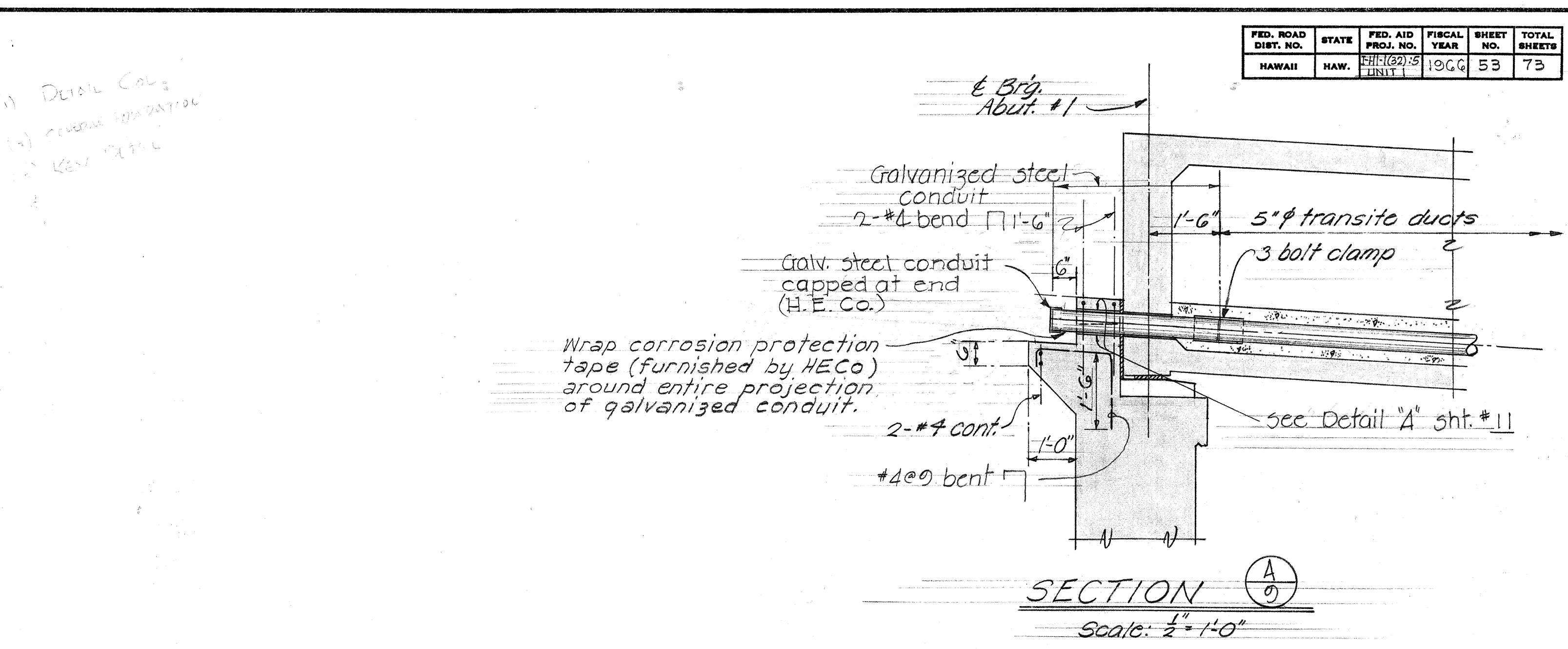
SHEET No. 8 OF 11 SHEETS

C O S 7

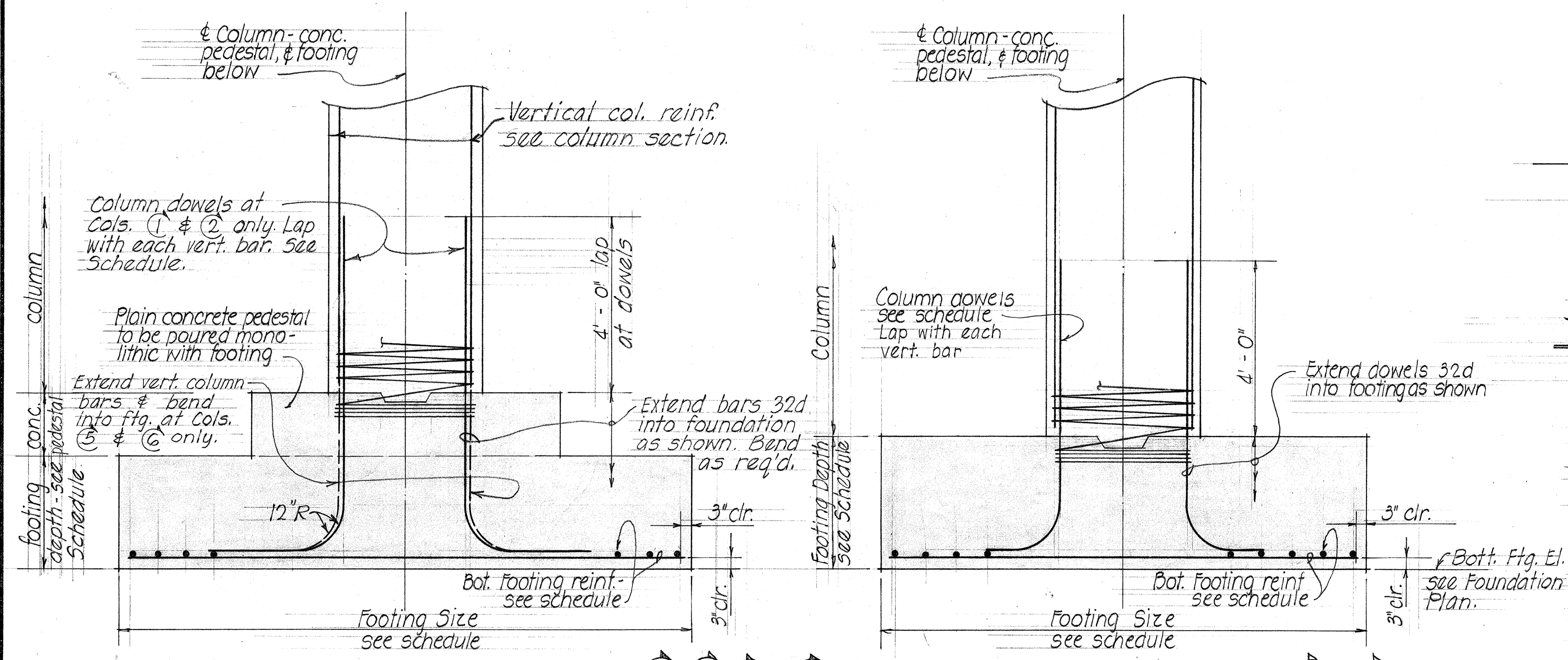


TYPICAL PIER COLUMN DETAIL
NOT TO SCALE

TYPICAL COLUMN SECTIONS
SCALE: 1/2" = 1'-0"



TYPICAL COLUMN KEY DETAIL
NOT TO SCALE



SPREAD FOOTING & CONCRETE PEDESTAL COLUMNS 1, 2, 5 & 6 AT SPREAD FOOTING - COLUMNS 3 & 4
TYPICAL PIER COLUMN FOUNDATION DETAILS

PIER COLUMN FOUNDATION SCHEDULE						
COLUMN	FOOTING SIZE			BOTTOM REINF. EACH WAY	PEDESTAL SIZE	
	LENGTH X WIDTH	DEPTH			LENGTH X WIDTH	DEPTH
1	13'-0" X 13'-0"	2'-6"	21 - #10	7'-0" X 7'-0"	1'-6"	29 - #11
2	13'-0" X 13'-0"	2'-6"	21 - #10	7'-0" X 7'-0"	1'-6"	29 - #11
3	11'-0" X 11'-0"	3'-0"	16 - #10	---	---	22 - #11
4	11'-0" X 11'-0"	3'-0"	16 - #10	---	---	22 - #11
5	13'-0" X 13'-0"	2'-6"	23 - #10	7'-0" X 7'-0"	1'-6"	EXTEND VERT. COL. REINF.
6	13'-0" X 13'-0"	2'-6"	23 - #10	7'-0" X 7'-0"	1'-6"	EXTEND VERT. COL. REINF.

APPROVED:
HAWAIIAN ELECTRIC CO., INC. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MILITARY ACCESS ROAD
GRADE SEPARATION

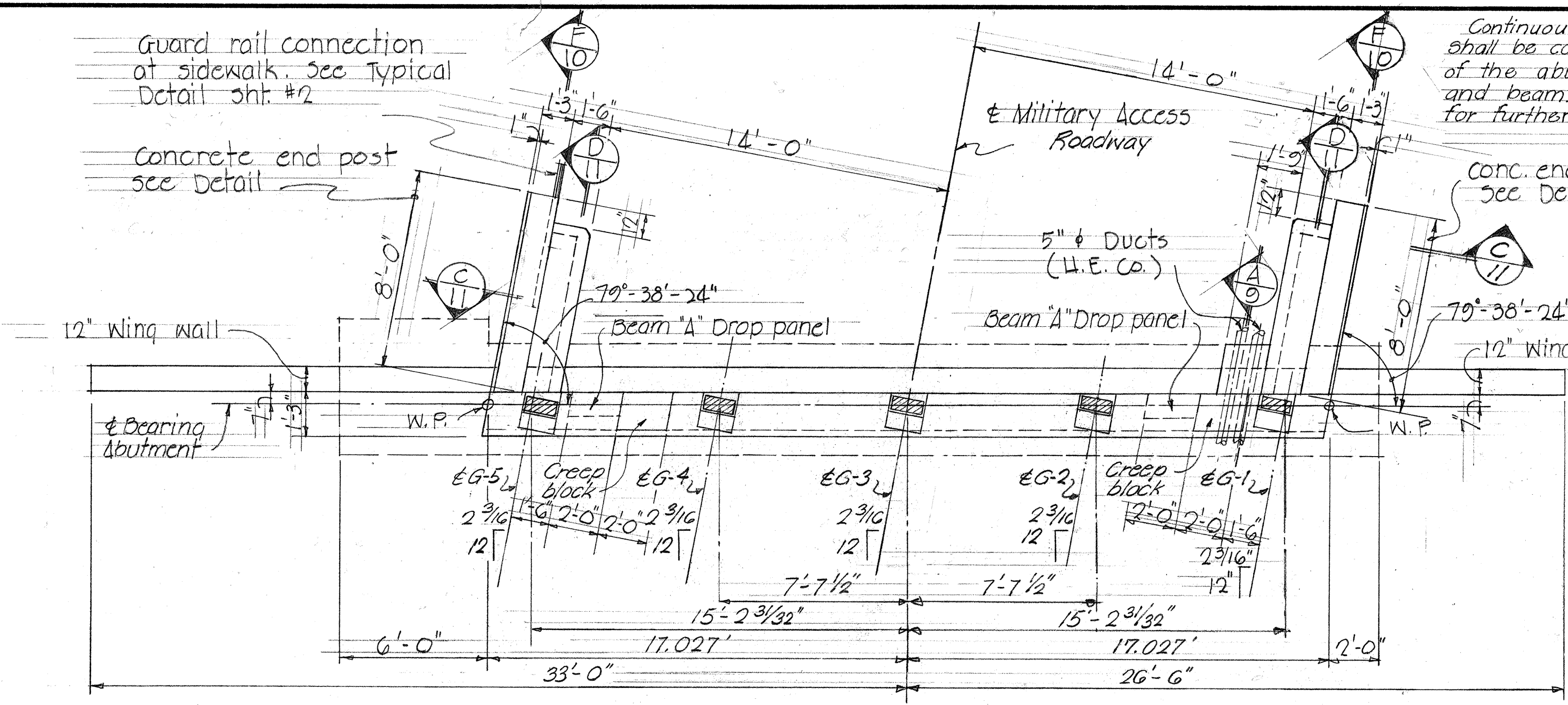
PROJ. NO. I-HI-1(32):5, UNIT 1 SEPT. 1966
SHEET No. 9 OF 11 SHEETS

DATE
DRAWN BY
DESIGNED BY
CHECKED BY
NO.

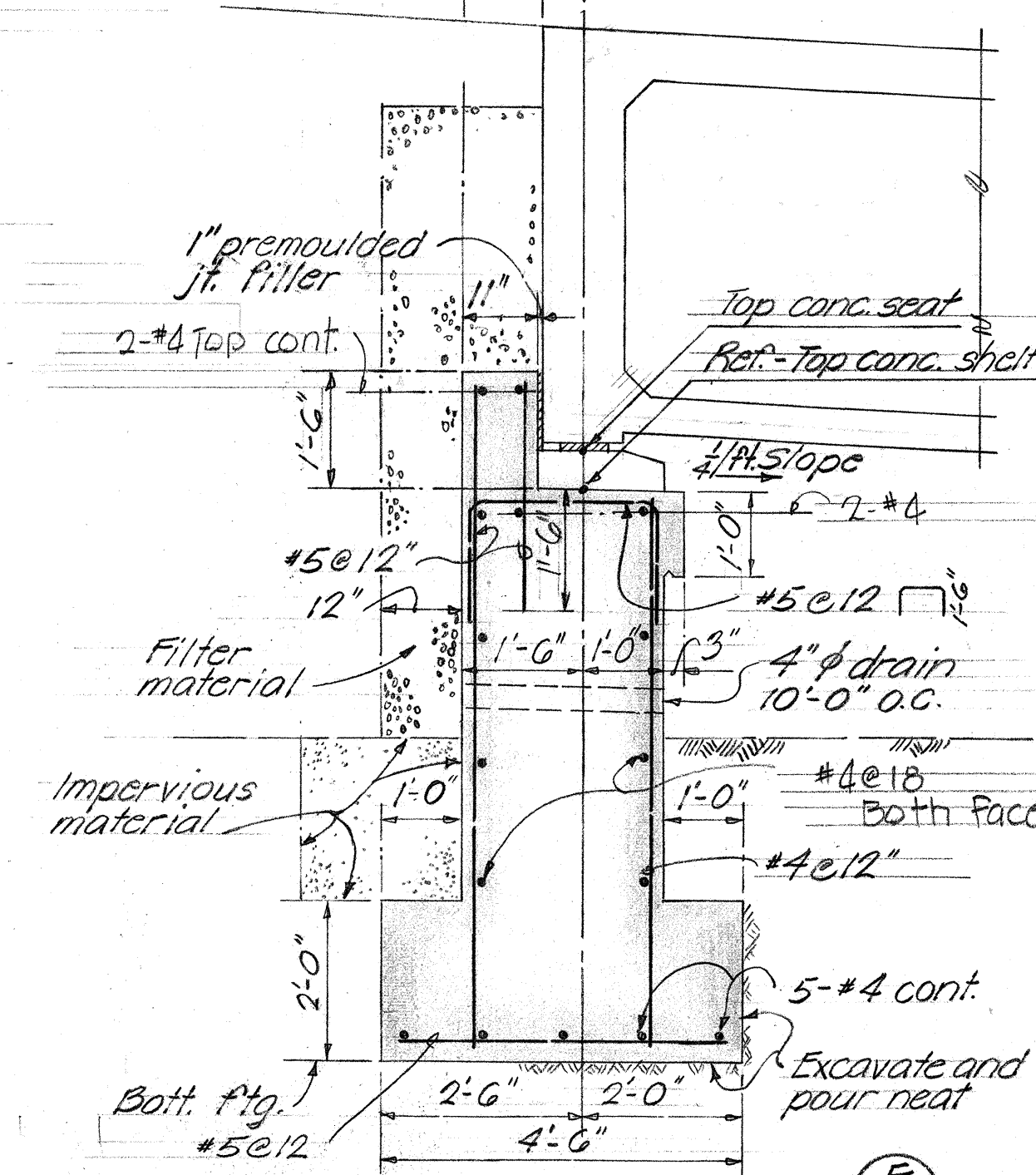
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	100-1-1(32)	1966	54	73

Rev. No. 1 12/30/66 Change Abut. location and details.

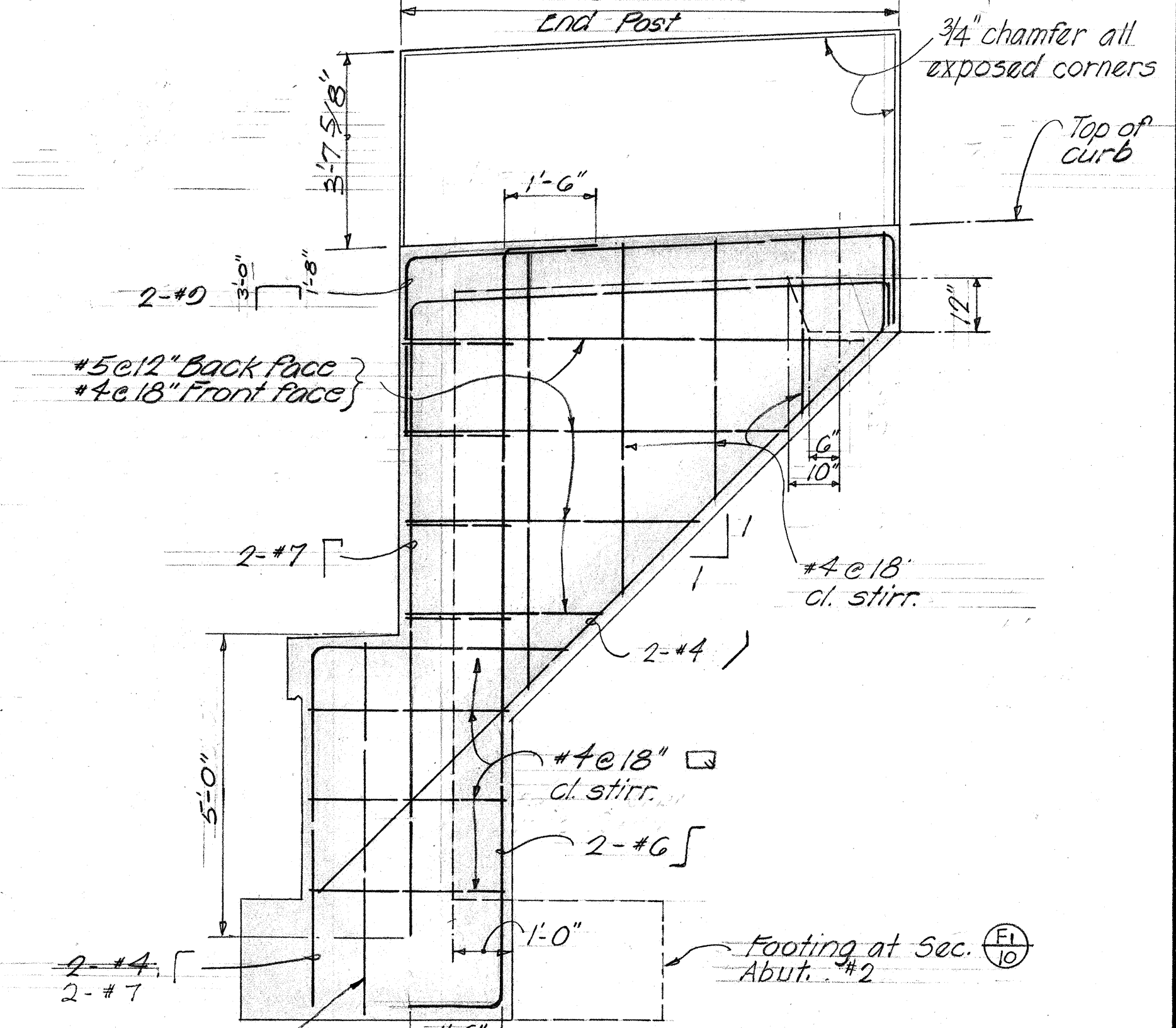
Continuous waterproofing 18" wide for Abutment #1 shall be constructed at the joint of the top of the abutment stem and the box girder and beam. See Sec. 46 of the Special Provisions for further details on waterproofing.



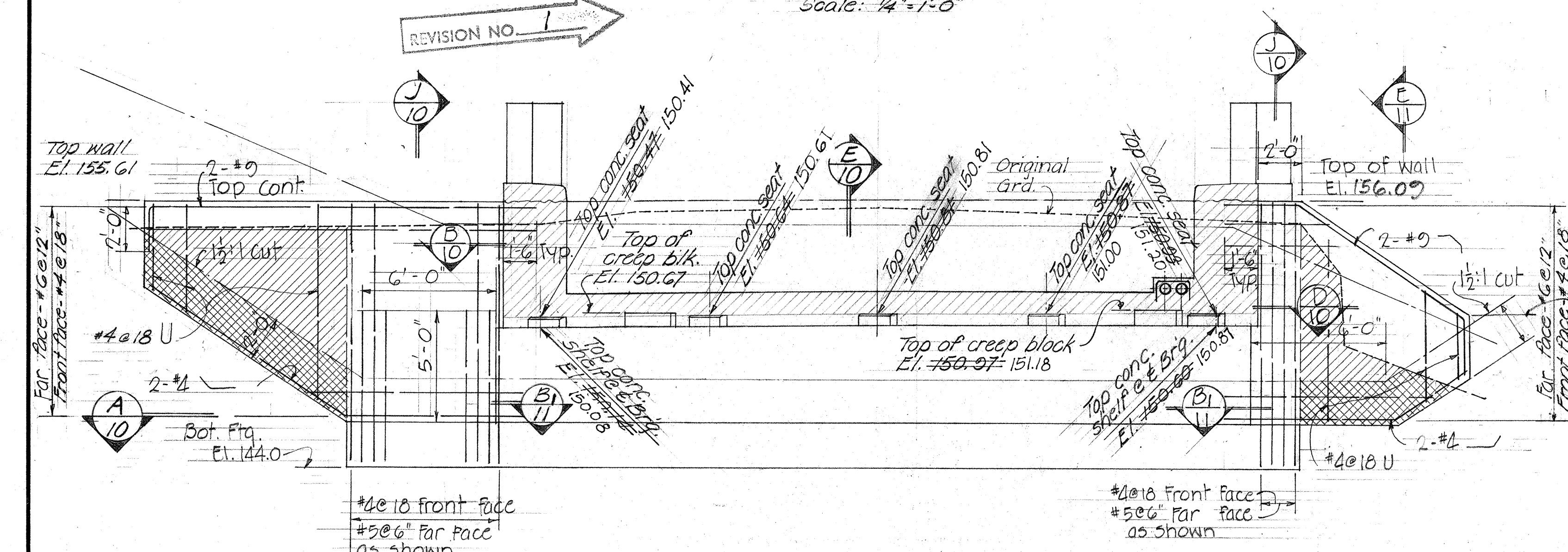
PLAN - ABUTMENT NO. 1
Scale: 1/4" = 1'-0"



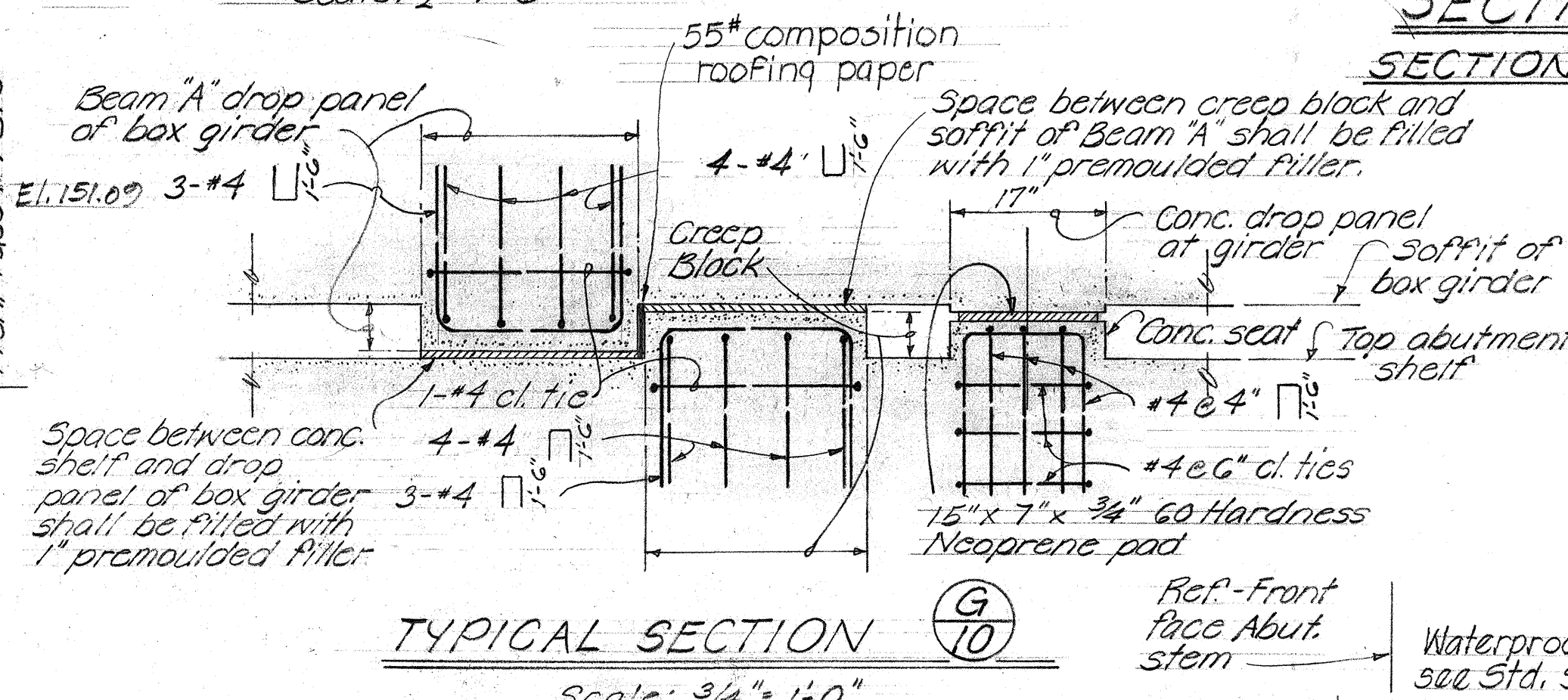
TYPICAL SECTION (E) 10
Scale: 1/2" = 1'-0"



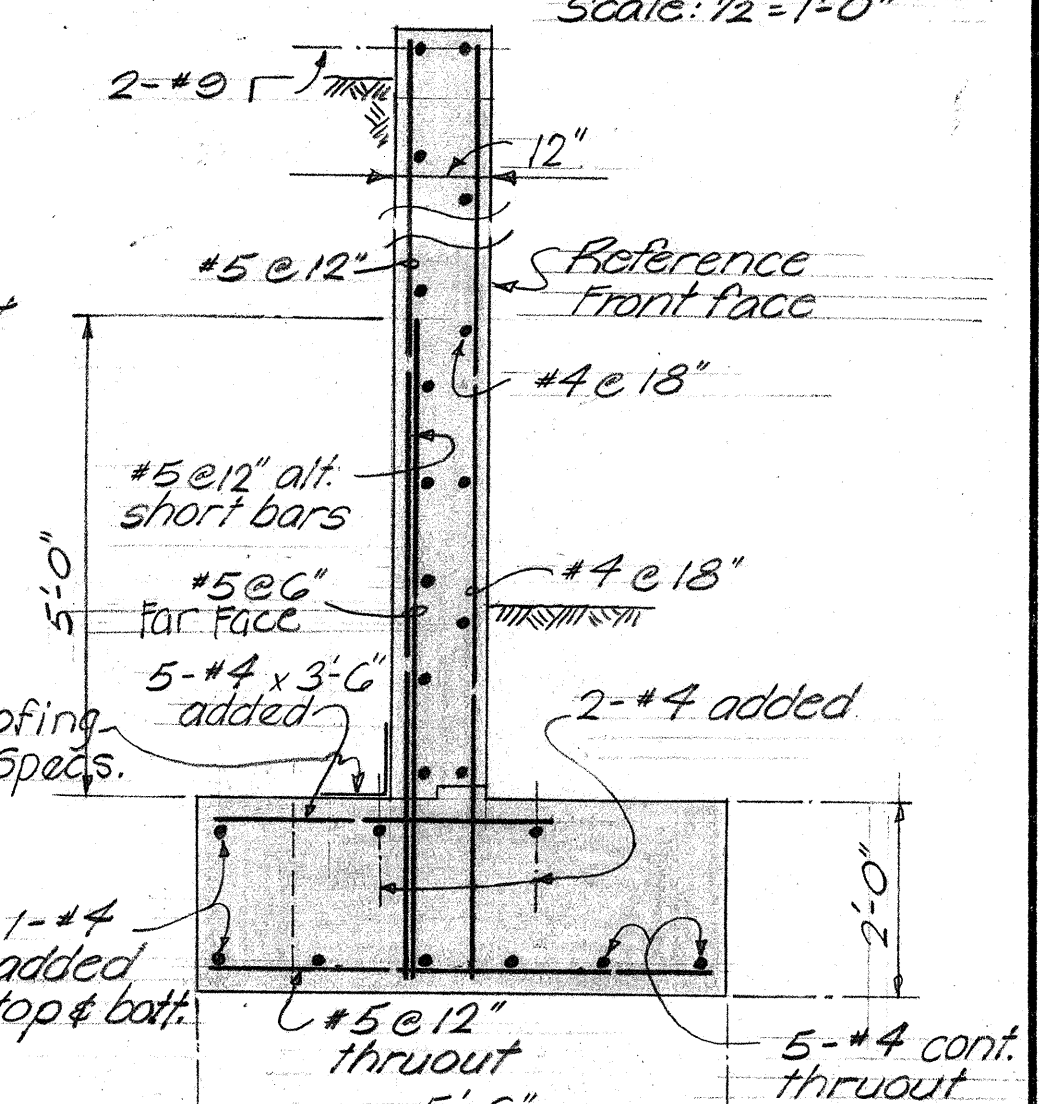
SECTION (F) 10 AS SHOWN
SECTION (F) 10 SIMILAR EXCEPT AS NOTED
Scale: 1/2" = 1'-0"



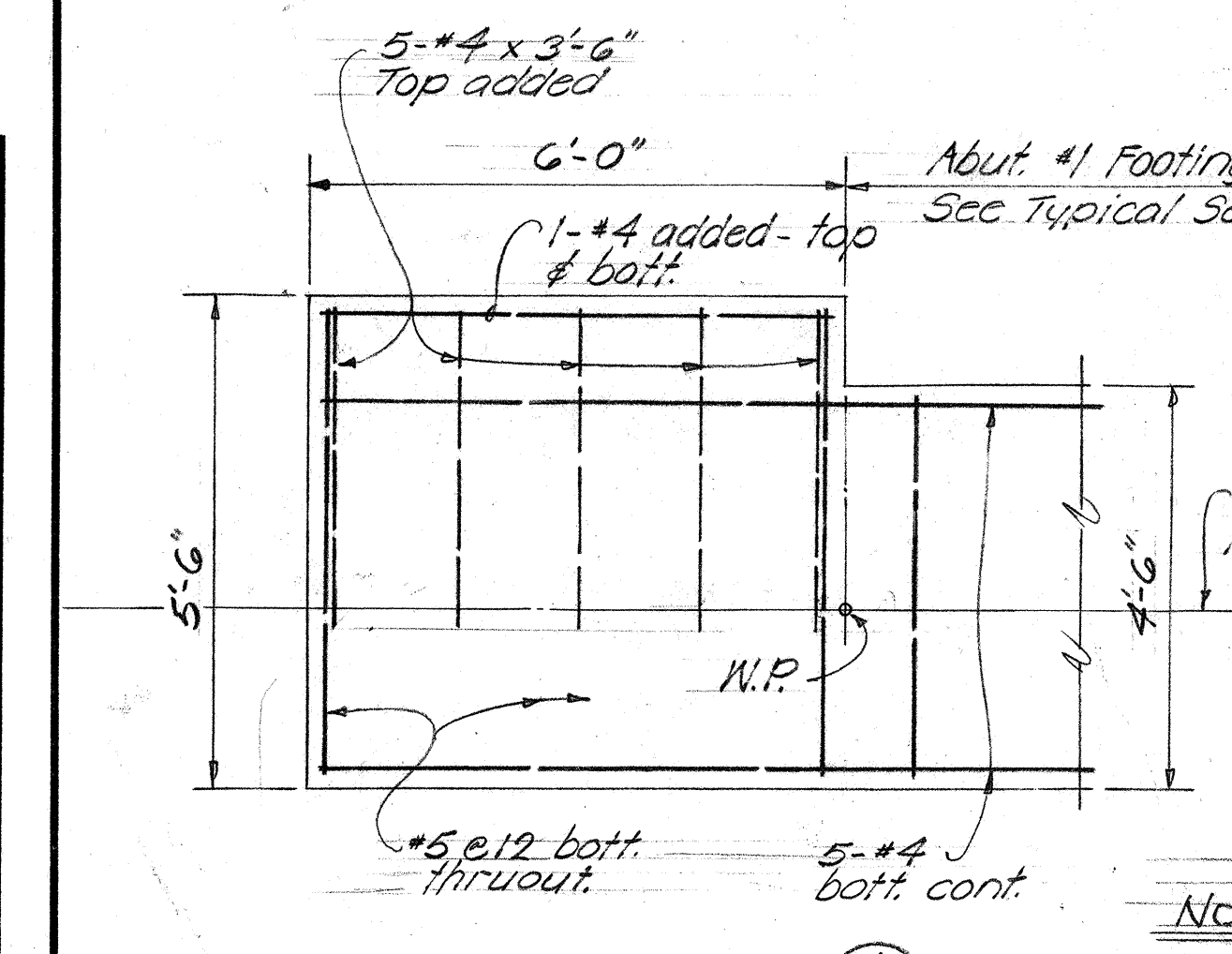
ELEVATION - ABUTMENT NO. 1
Scale: 1/4" = 1'-0"



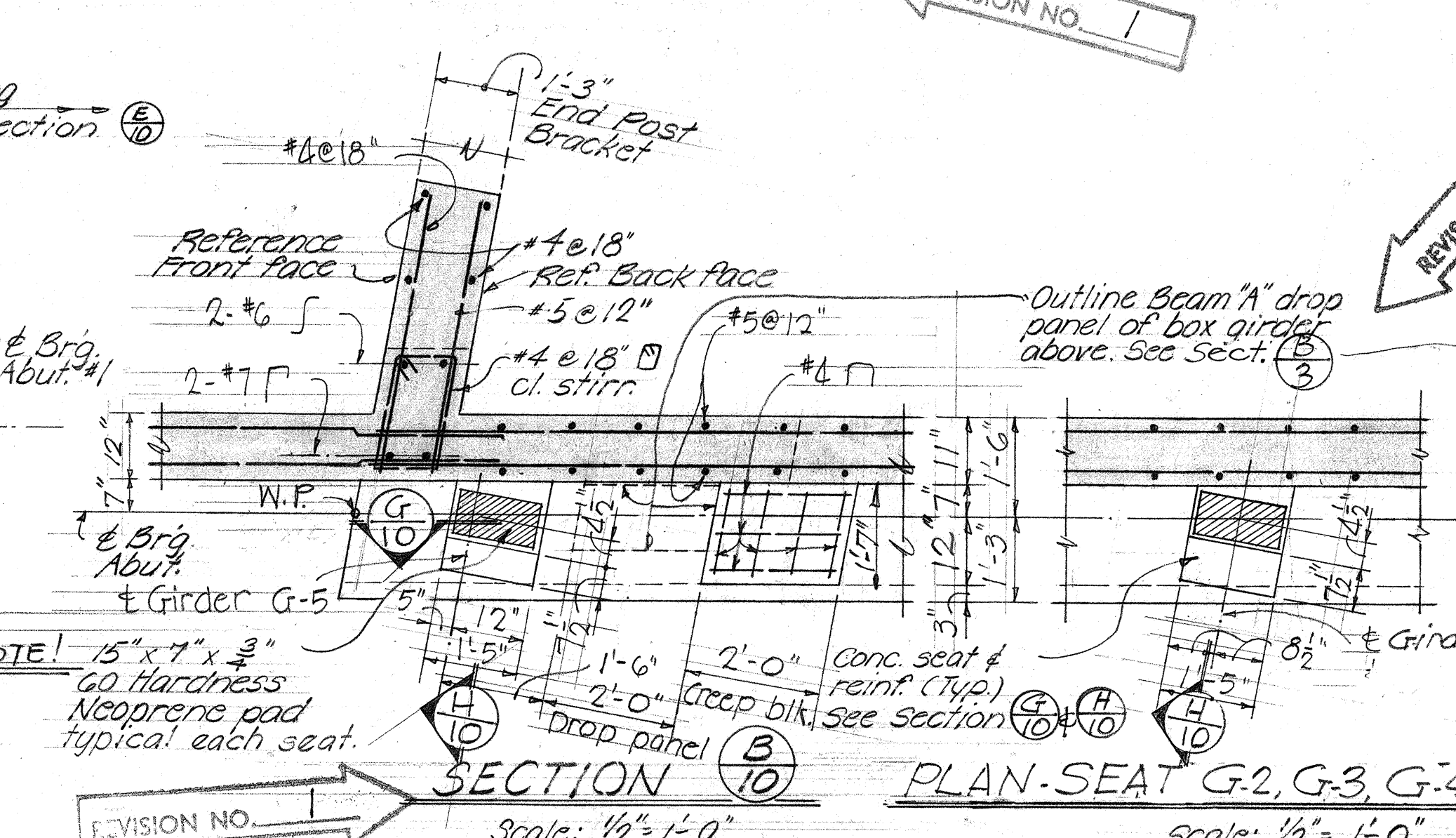
TYPICAL SECTION (G) 10
Scale: 3/4" = 1'-0"



SECTION (H) 10
Scale: 1/2" = 1'-0"

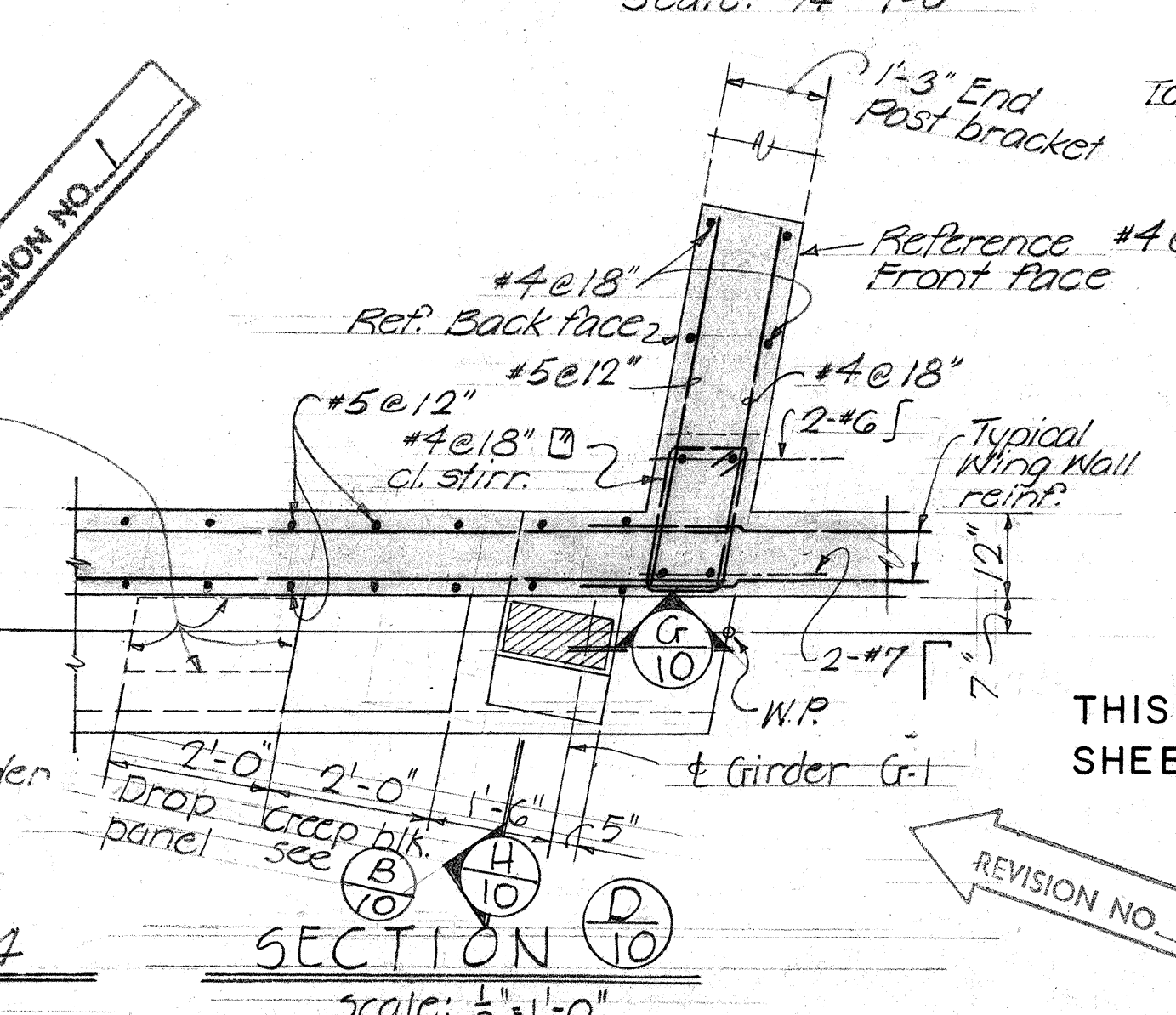


PLAN (A) 10
Scale: 1/2" = 1'-0"

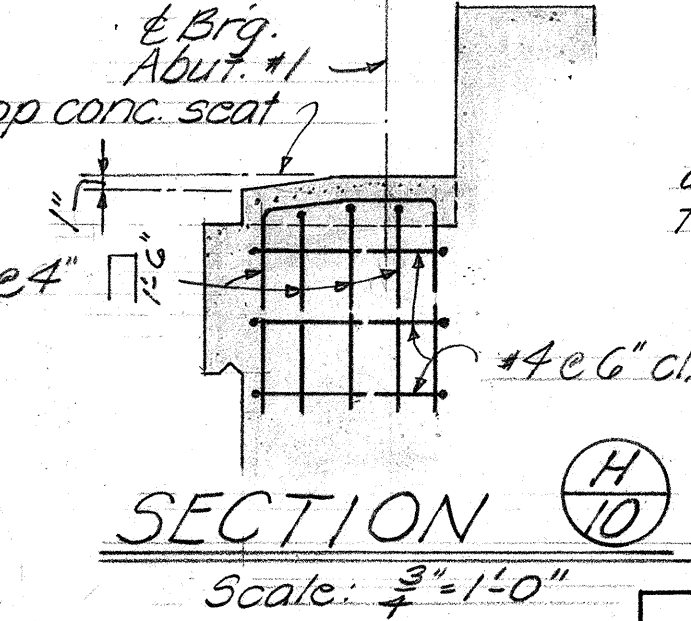


SECTION (B) 10
Scale: 1/2" = 1'-0"

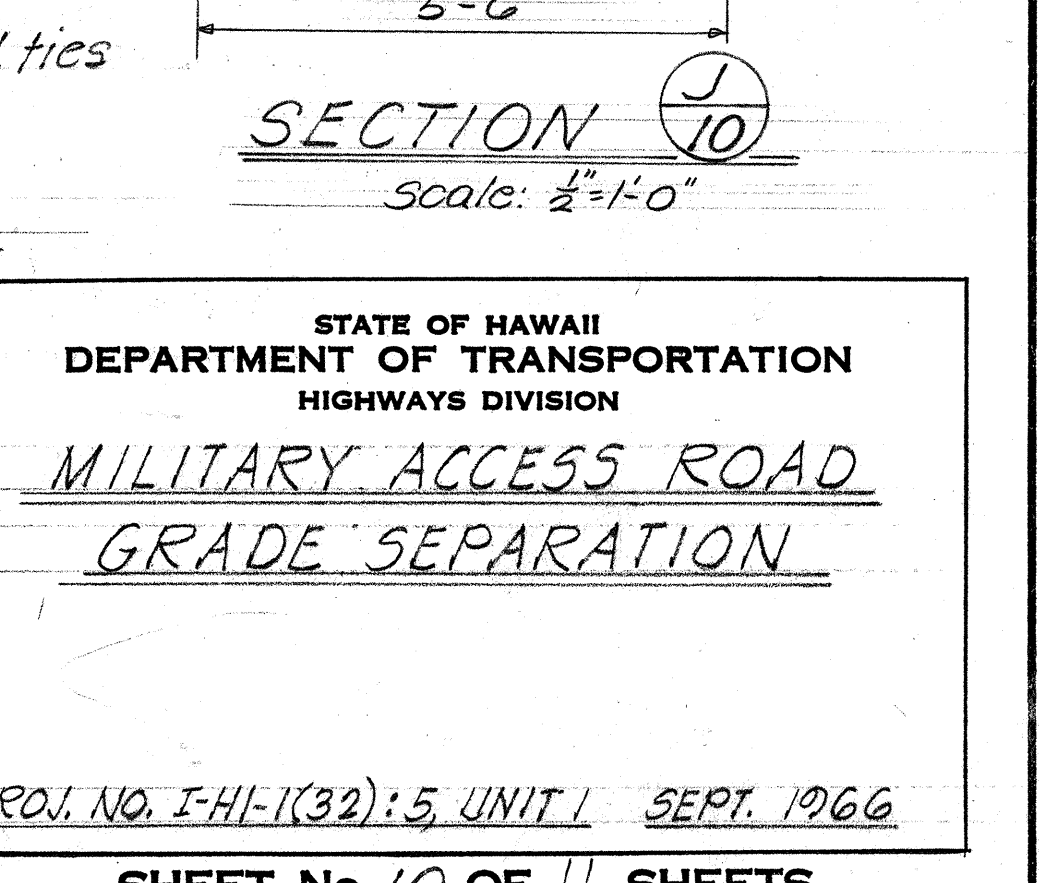
PLAN - SEAT G-2, G-3, G-4
Scale: 1/2" = 1'-0"



SECTION (D) 10
Scale: 1/2" = 1'-0"



SECTION (I) 10
Scale: 3/4" = 1'-0"



SECTION (J) 10
Scale: 1/2" = 1'-0"

THIS SHEET SUPERSEDES SHEET NO. 89

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

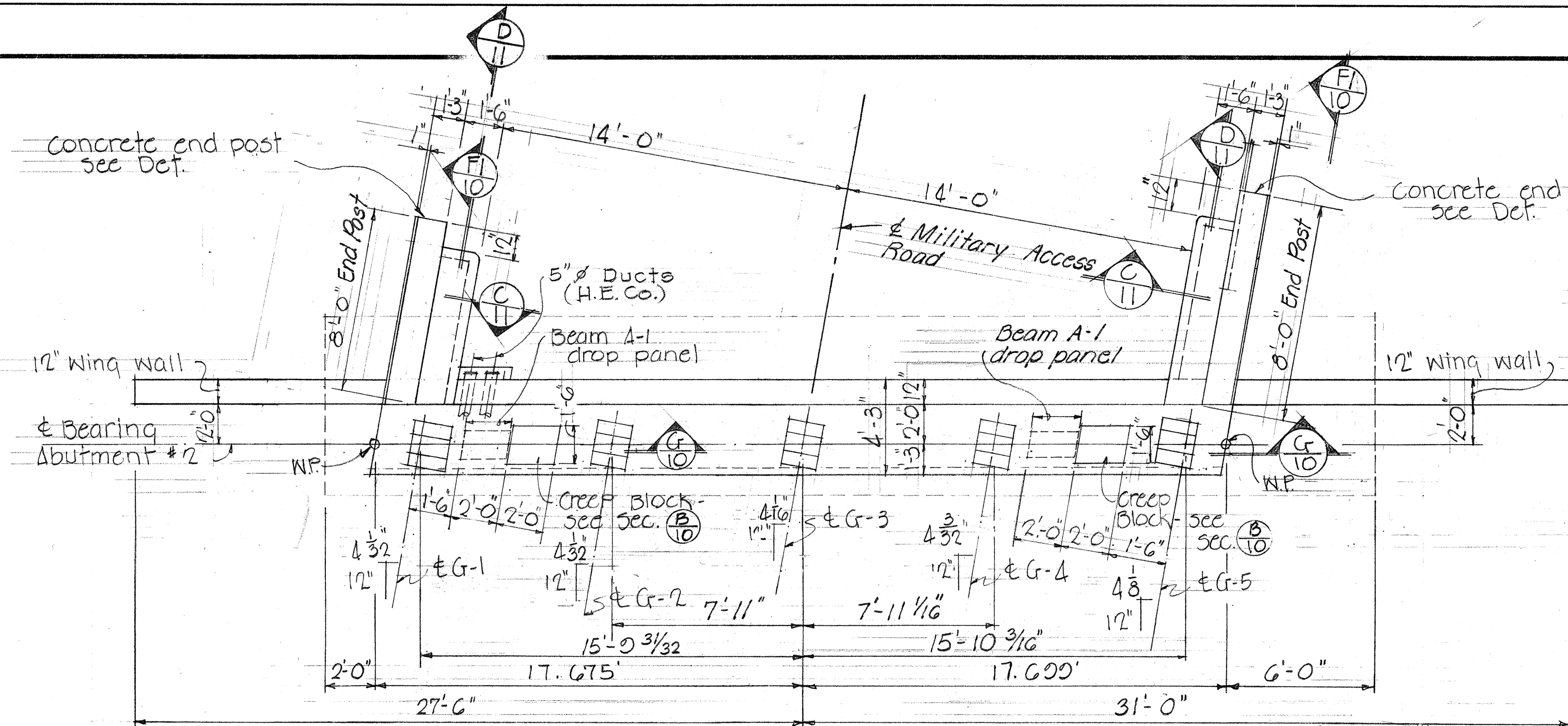
**MILITARY ACCESS ROAD
GRADE SEPARATION**

PROJ. NO. I-HI-1(32):5, UNIT 1 SEPT. 1966

SHEET No. 10 OF 11 SHEETS

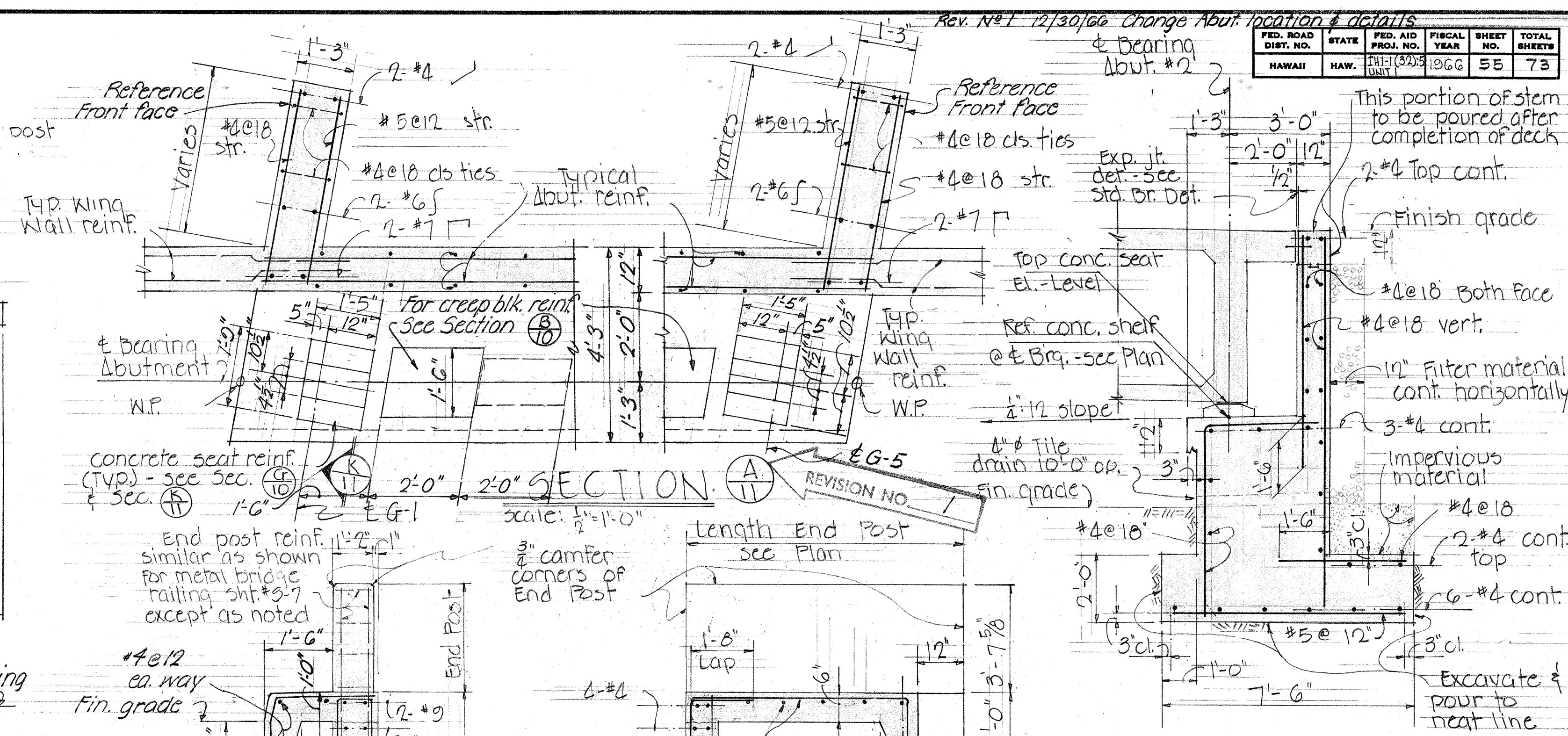
DATE	DESIGNED BY	CHECKED BY
12/30/66	W. J. M.	W. J. M.
ORIGINAL PLAN	DESIGNED BY	CHECKED BY
12/30/66	W. J. M.	W. J. M.
NOTE BOOK	DESIGNED BY	CHECKED BY
12/30/66	W. J. M.	W. J. M.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TH-1 (32) 5 UNIT	1966	55	73



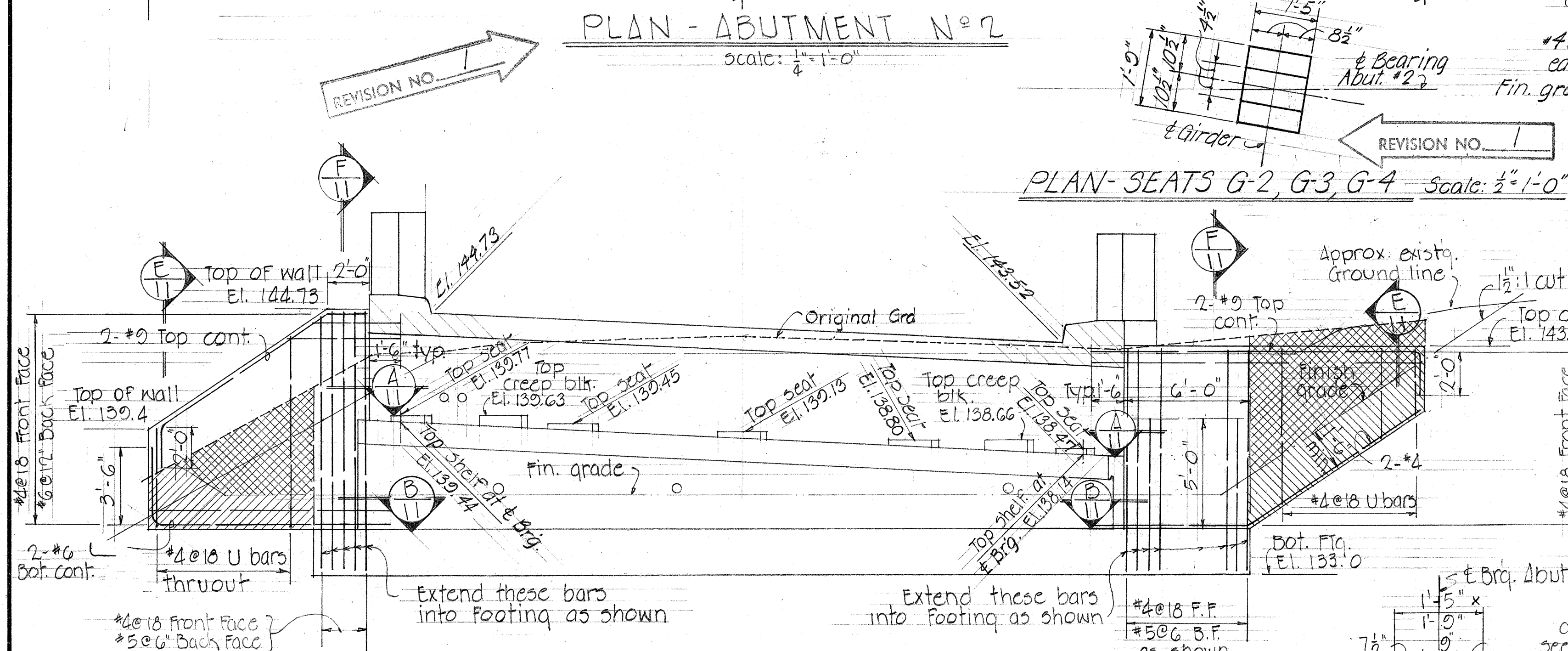
PLAN - ABUTMENT No 2

scale: $\frac{1}{4}'' = 1'-0''$

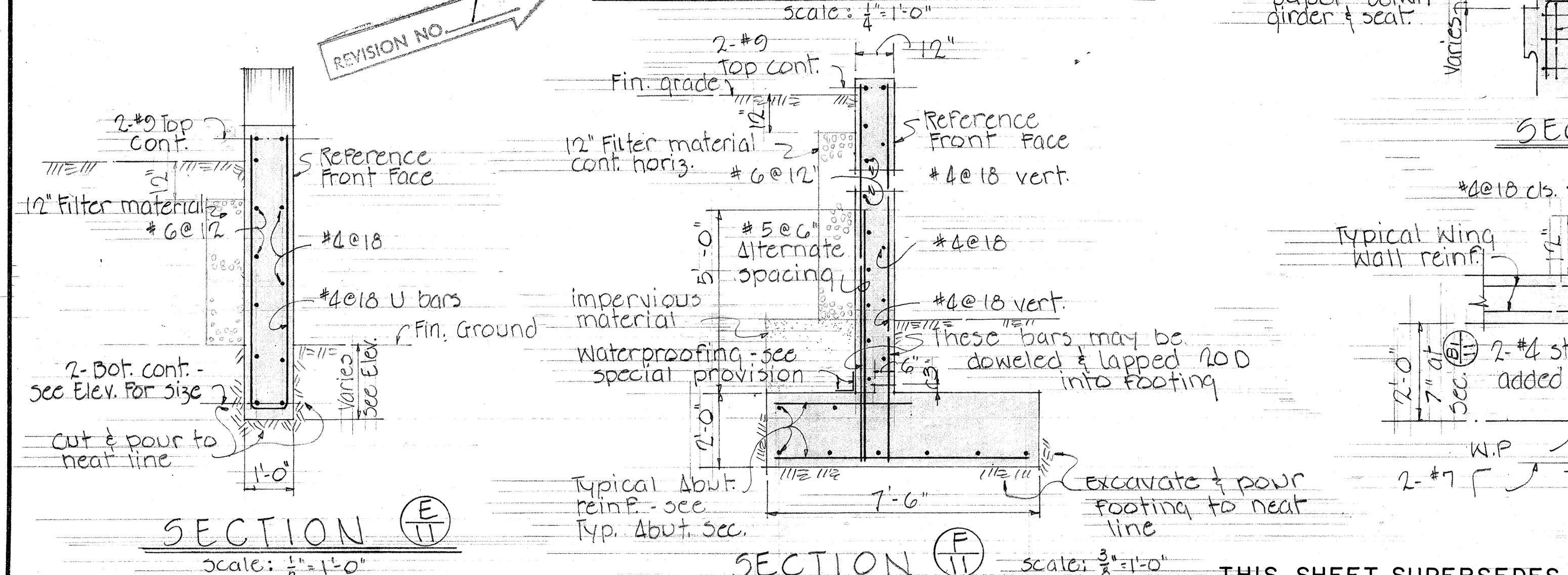


TYPICAL ABUTMENT SECTION

NOTE: coat top of concrete seat with bond breaking agent.

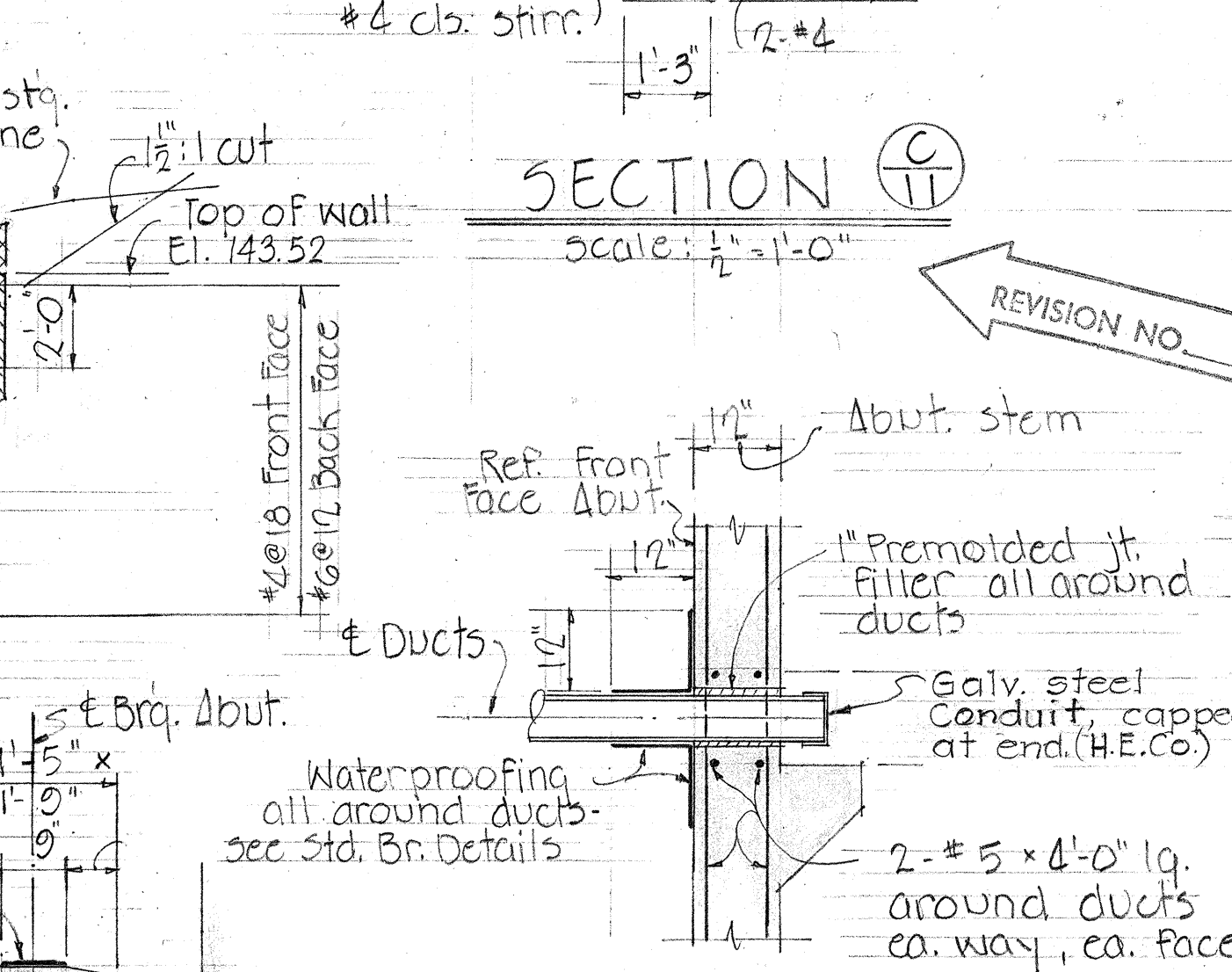


ELEVATION - ABUTMENT N° 2

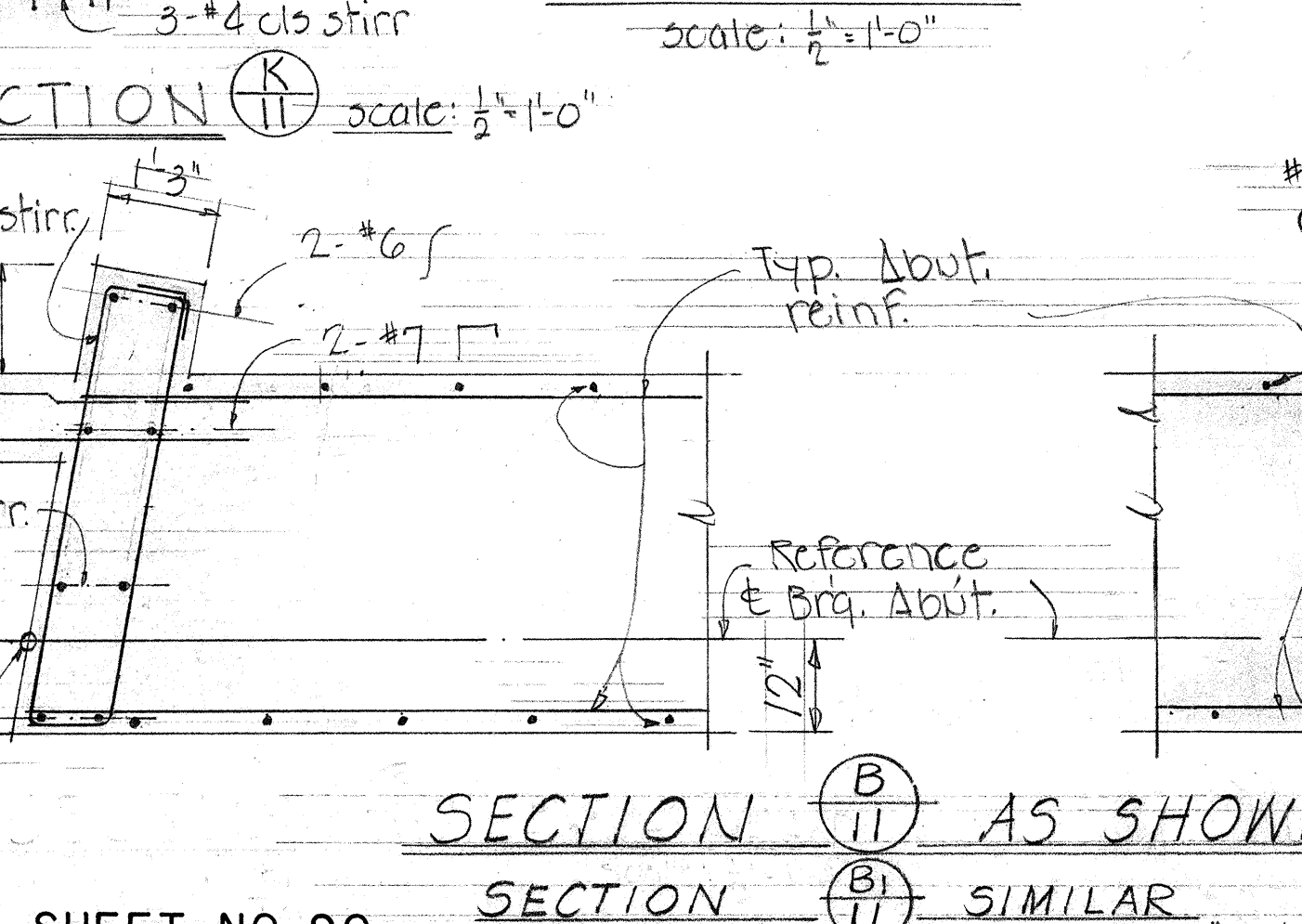


SECTION $\left(\frac{E}{11}\right)$
scale: $\frac{1''}{2'} = 1'-0''$

SECTION  scale: $\frac{3}{8}'' = 1'-0''$

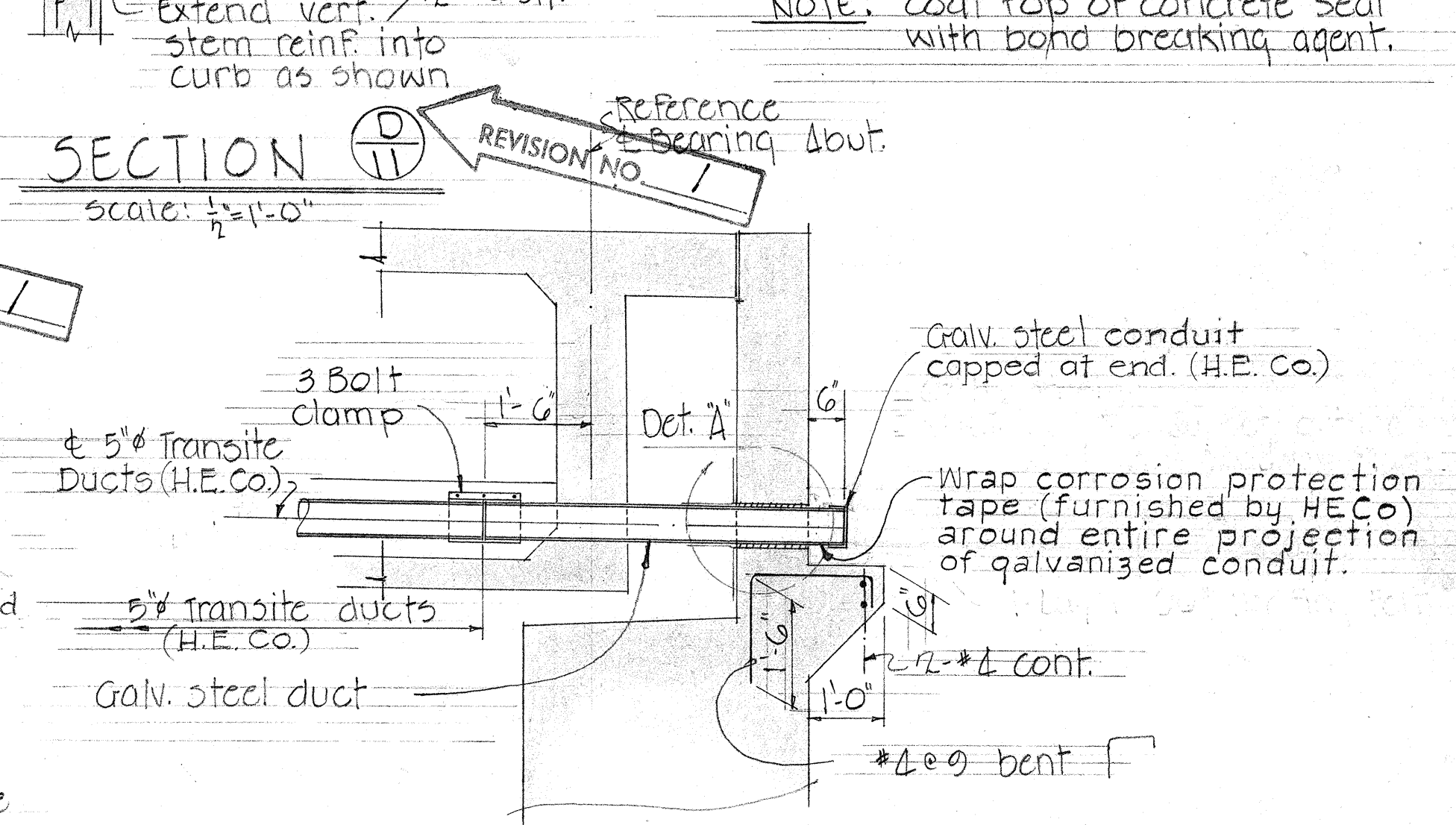


DETAIL "A"



SECTION  AS SHOWN

SECTION (B) SIMILAR
Scale: $\frac{1}{2}'' = 1' - 0$



SECTION (H)

APPROVED:

HAWAIIAN ELECTRIC CO, INC. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MILITARY ACCESS ROAD
GRADE SEPARATION

PROJ. NO. I-HI-1(32):5, UNIT 1 SEPT. 1966

SHEET No. 11 OF 11 SHEETS