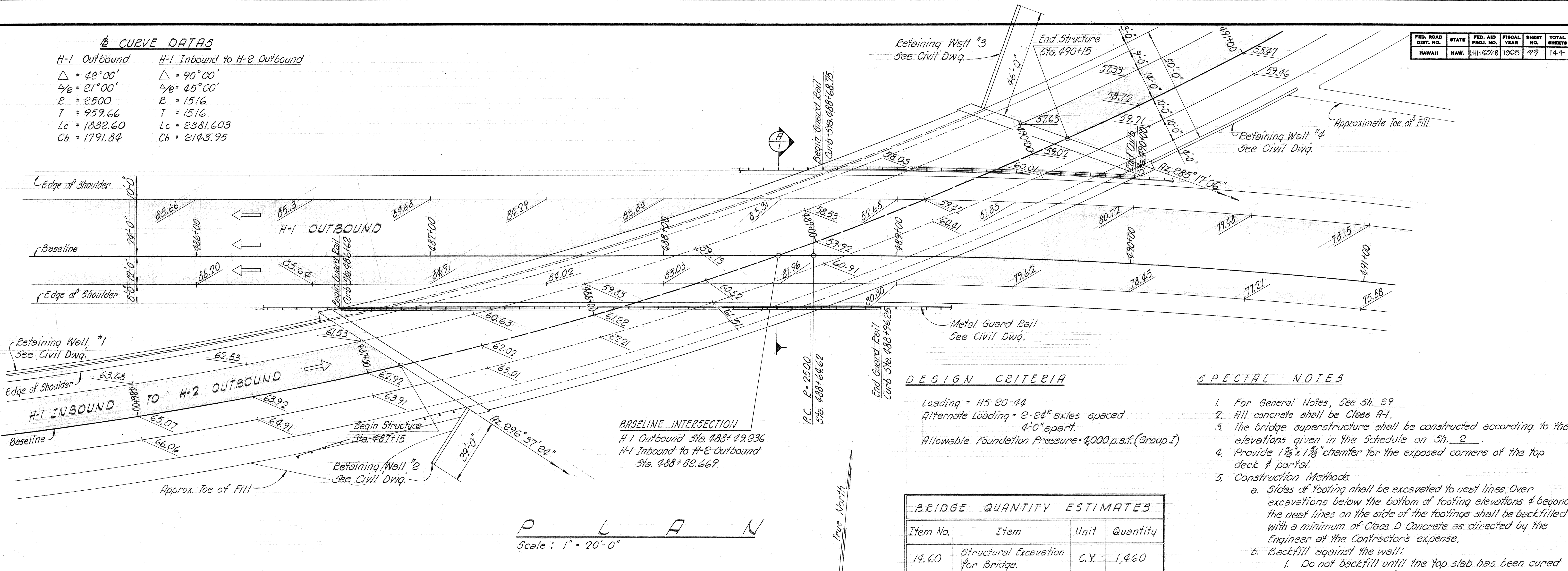


CURVE DATA

H-1 Outbound	H-1 Inbound to H-2 Outbound
$\Delta = 48^{\circ}00'$	$\Delta = 90^{\circ}00'$
$\Delta p = 21^{\circ}00'$	$\Delta p = 45^{\circ}00'$
$E = 2500$	$E = 1516$
$T = 959.66$	$T = 1516$
$Lc = 1832.60$	$Lc = 2381.603$
$Ch = 1791.84$	$Ch = 2143.95$



DESIGN CRITERIA

Loading = HS 20-44
 Alternate Loading = 2-24' axles spaced 4'-0" apart.
 Allowable Foundation Pressure = 4,000 p.s.f. (Group I)

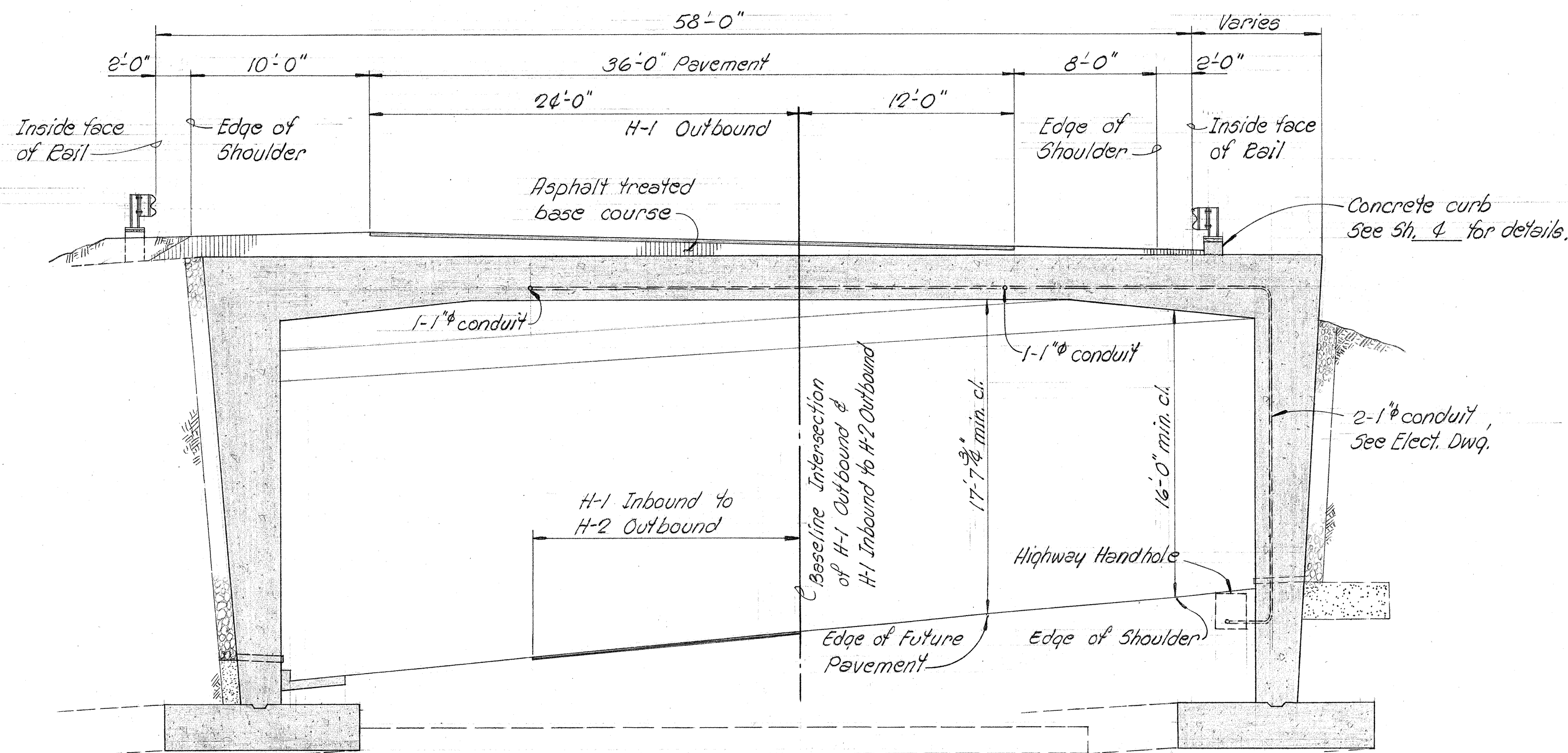
SPECIAL NOTES

- For General Notes, See Sh. 39
- All concrete shall be Class A-1.
- The bridge superstructure shall be constructed according to the elevations given in the Schedule on Sh. 2.
- Provide $1\frac{1}{8} \times 1\frac{1}{8}$ " chamfer for the exposed corners of the top deck & portal.
- Construction Methods
 - Sides of footing shall be excavated to neat lines. Over excavations below the bottom of footing elevations & beyond the neat lines on the side of the footings shall be backfilled with a minimum of Class D Concrete as directed by the Engineer at the Contractor's expense.
 - Backfill against the wall:
 - Do not backfill until the top slab has been cured for a minimum of 7 days.
 - Fill on both sides of structure shall be placed in such a manner that the difference in height of fill shall not exceed three feet at any time.
 - Fill in such a way on both sides to keep earth pressure torsional couple to a minimum. (See Engineer for clarification)
 - Shores for wall shall remain undisturbed until the top deck has been cured.
- See Civil & Electrical sheets, also, for items not shown.

BRIDGE QUANTITY ESTIMATES			
Item No.	Item	Unit	Quantity
19.60	Structural Excavation for Bridge	C.Y.	1,460
46.060	Concrete in Bridge	L.S.	3,260 C.Y.
46.061	Concrete in Bridge Footings	L.S.	600 C.Y.
48.60	Reinforcing Steel in Bridge	L.S.	818,800 lbs.
52.01	Filter Material for Structure	C.Y.	445
70.001	Cast-In-Place Concrete Curb	L.F.	366
80.05	Metal Guard Rail with Steel Posts	L.F.	366

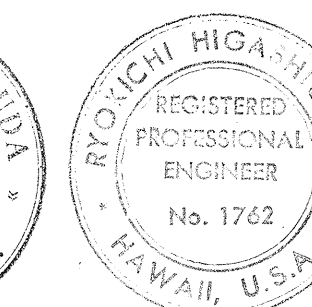
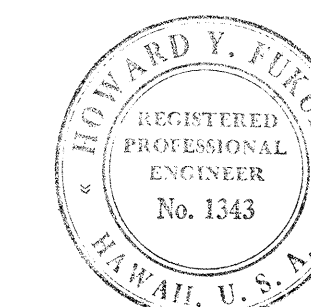
SEQUENCE OF CONSTRUCTION

- Pour footing
- Pour walls in alternate panels. See Foundation Plan, Sh. 2.
- Pour slab in alternate panels. See Deck Plan, Sh. 2.



SECTION A-A

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 1210 Ward Ave. Honolulu, Hawaii 96814



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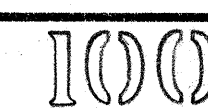
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STRUCTURE No. 8
 LAYOUT PLAN
 SECTION & NOTES

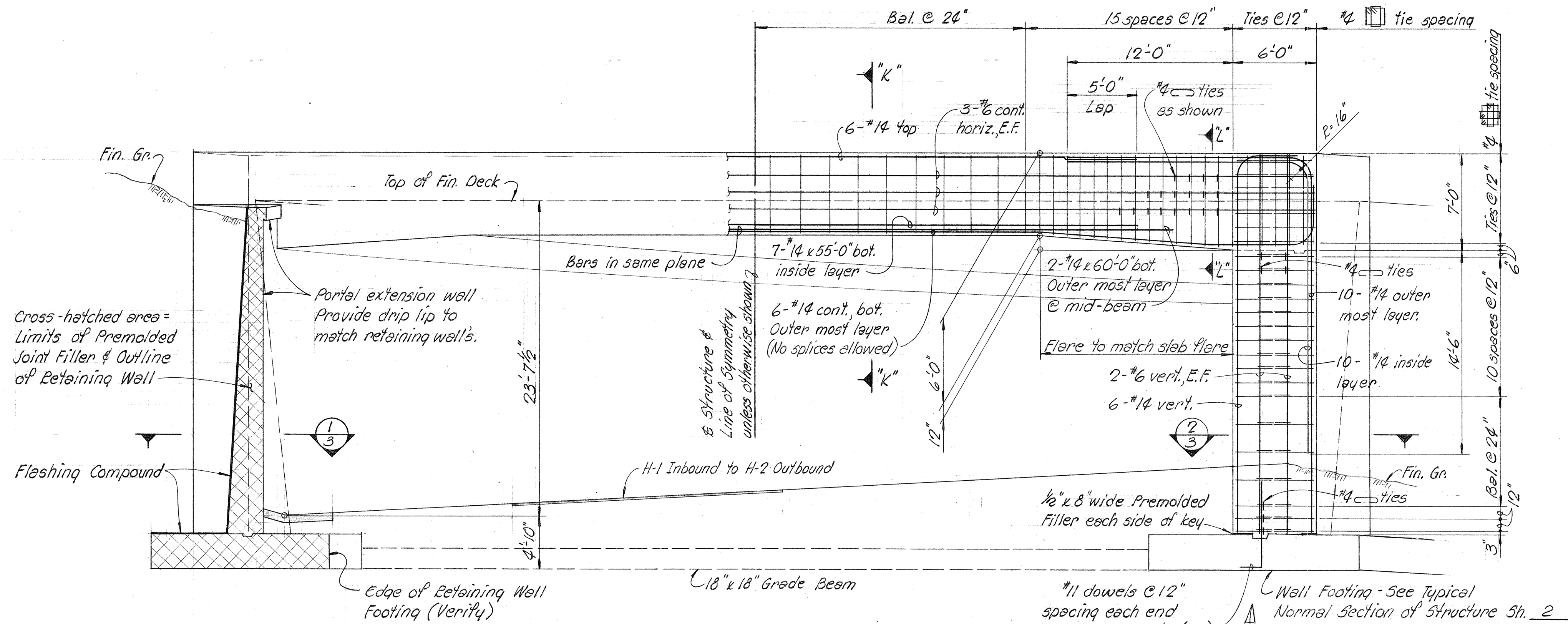
WAIKAWA INTERCHANGE
 F.A.I. Proj. No. I-HI-1 (60)-8

Scale: As shown Date: Oct. 1968

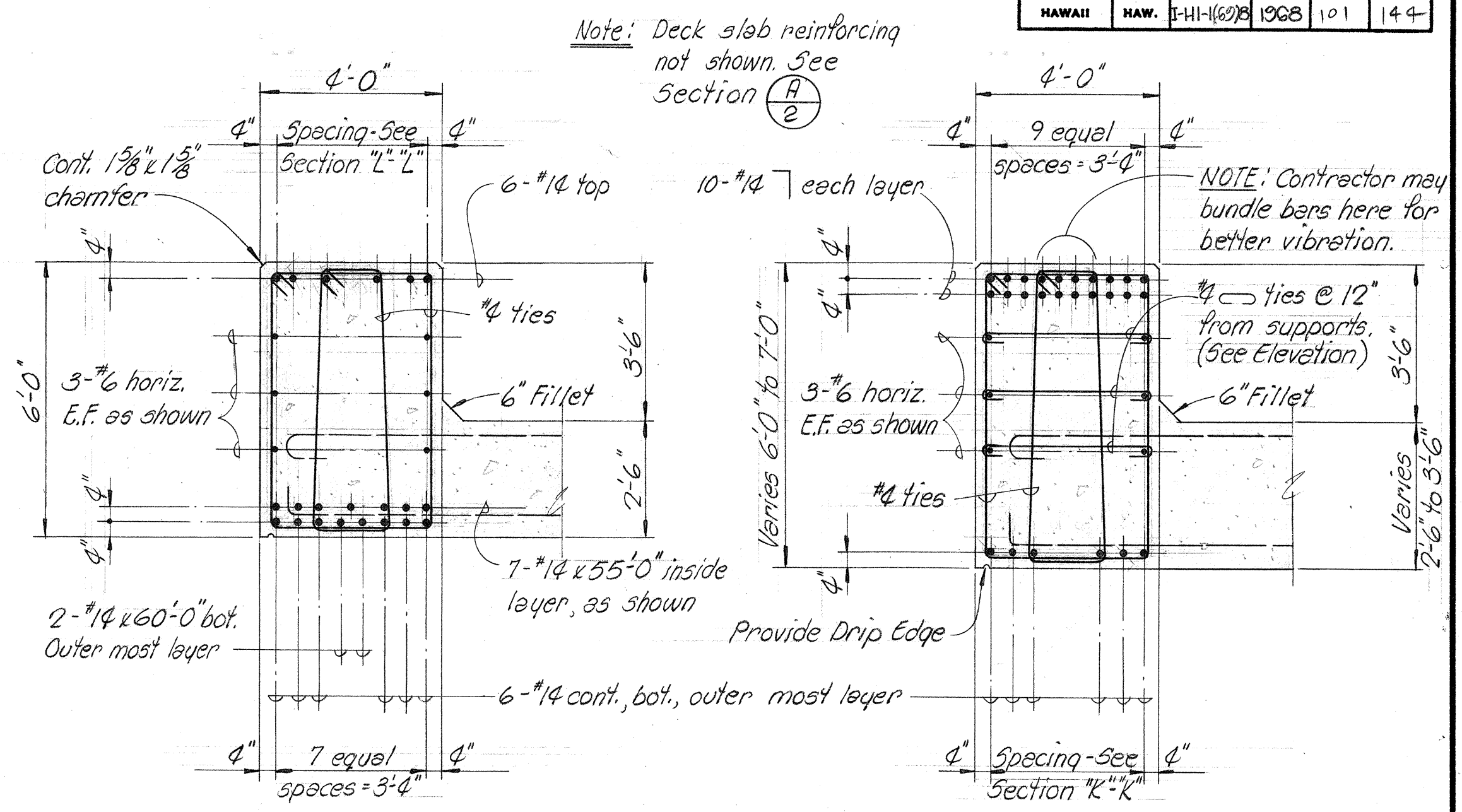
SHEET No. 1 OF 5 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1678	1968	101	144

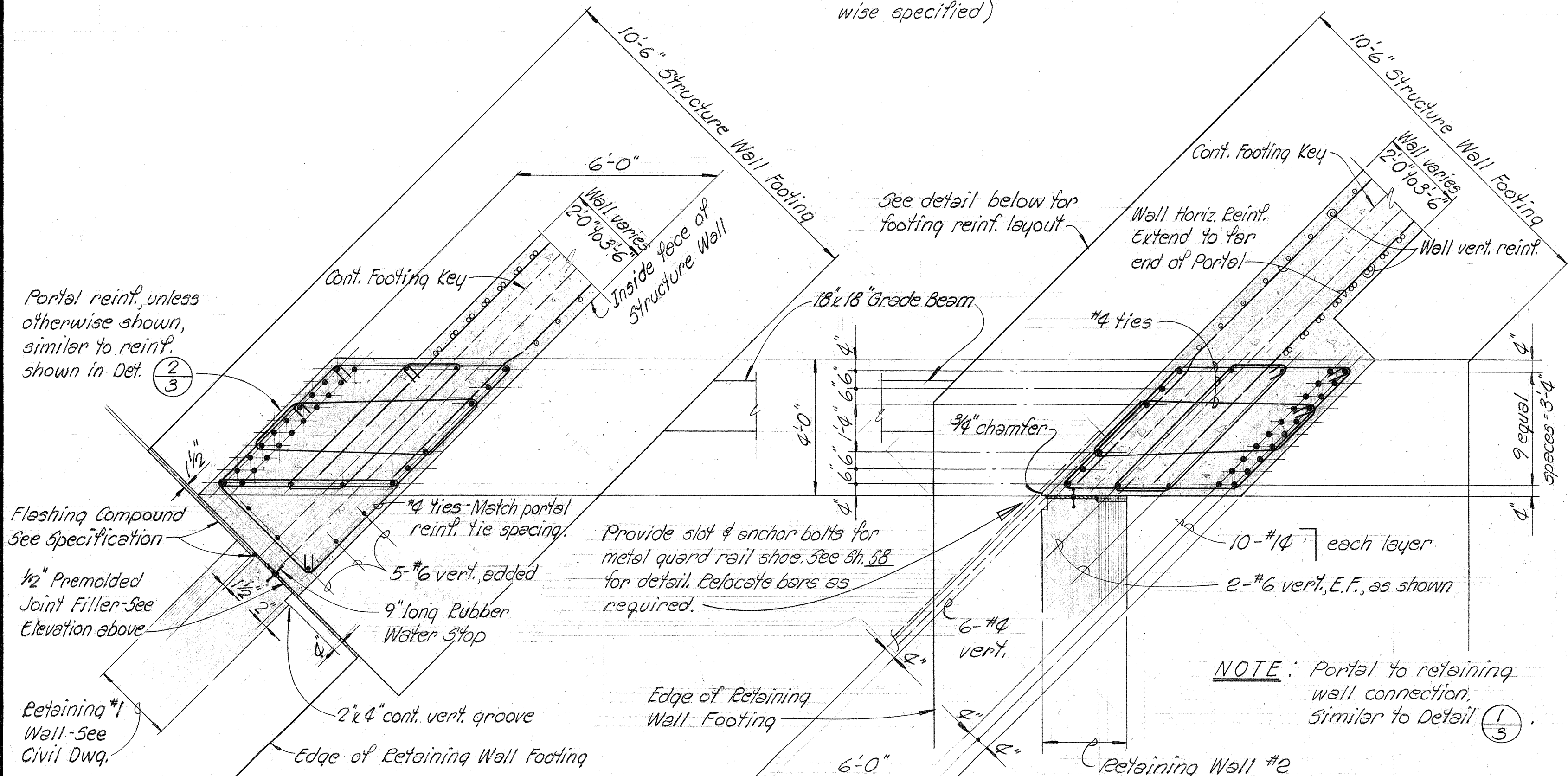


SOUTHWEST ELEVATION
Scale: $\frac{3}{16}'' = 1'-0''$ (Northeast Portal similar unless otherwise specified)

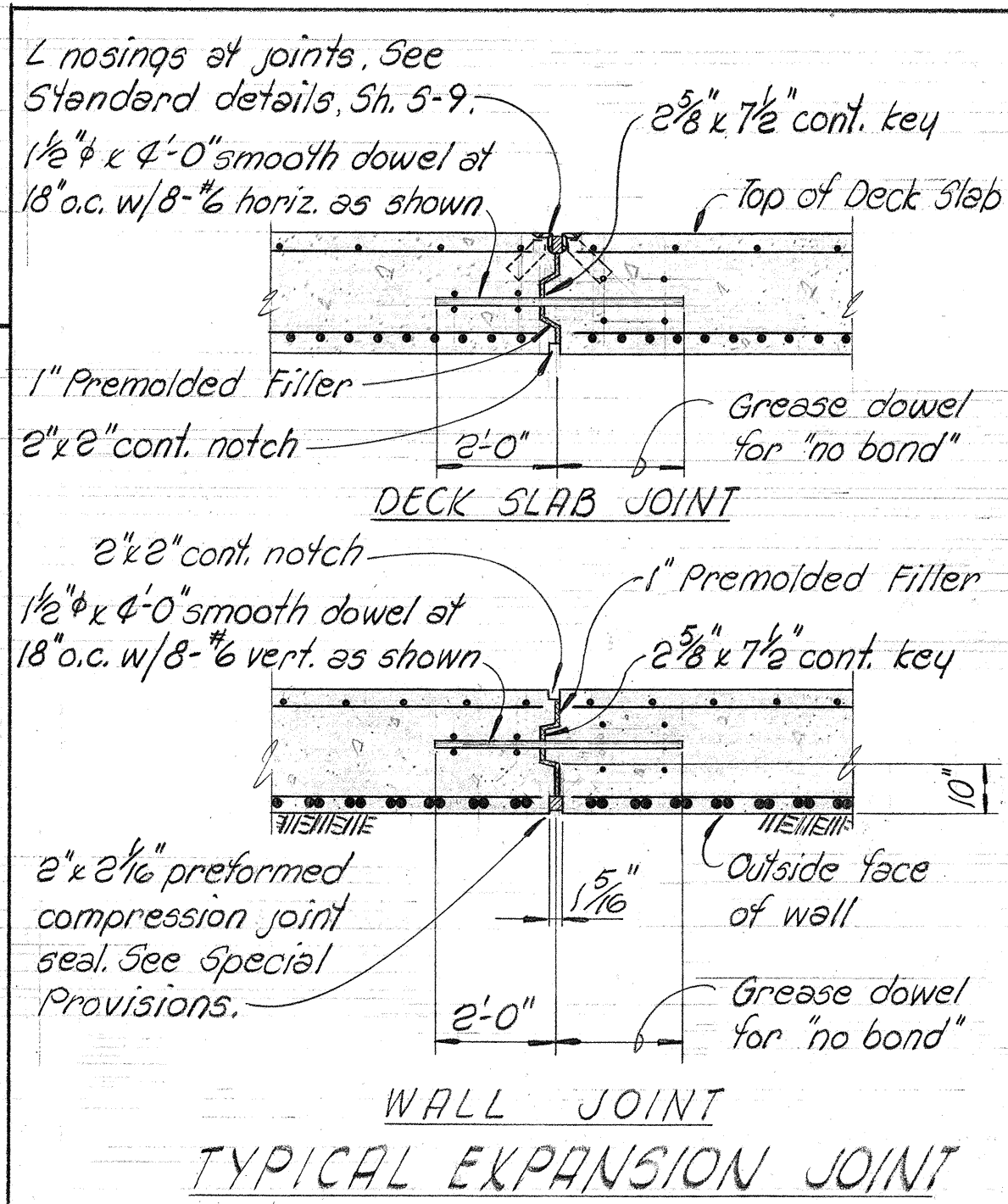


SECTION "K"~"K" AT MIDSPAN
Scale: $\frac{3}{8}'' = 1'-0''$

SECTION "L"~"L" AT SUPPORT
Scale: $\frac{3}{8}'' = 1'-0''$



TYPICAL CONSTRUCTION JOINT
Scale: $\frac{3}{8}'' = 1'-0''$



DETAIL 4
Scale: $\frac{3}{8}'' = 1'-0''$

SECTION TYPICAL 18x18 GRADE BEAM
Scale: $\frac{3}{8}'' = 1'-0''$

PORTAL TO RETAINING WALL CONNECTION
Scale: $\frac{3}{8}'' = 1'-0''$

DETAIL 2
Scale: $\frac{3}{8}'' = 1'-0''$

PLAN - REINF. LAYOUT FOR FOOTINGS ADJACENT TO RETAINING WALLS 2 & 3
Scale: $\frac{1}{4}'' = 1'-0''$

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RYOICHI HIGASHIONA
REGISTERED PROFESSIONAL ENGINEER
No. 1762
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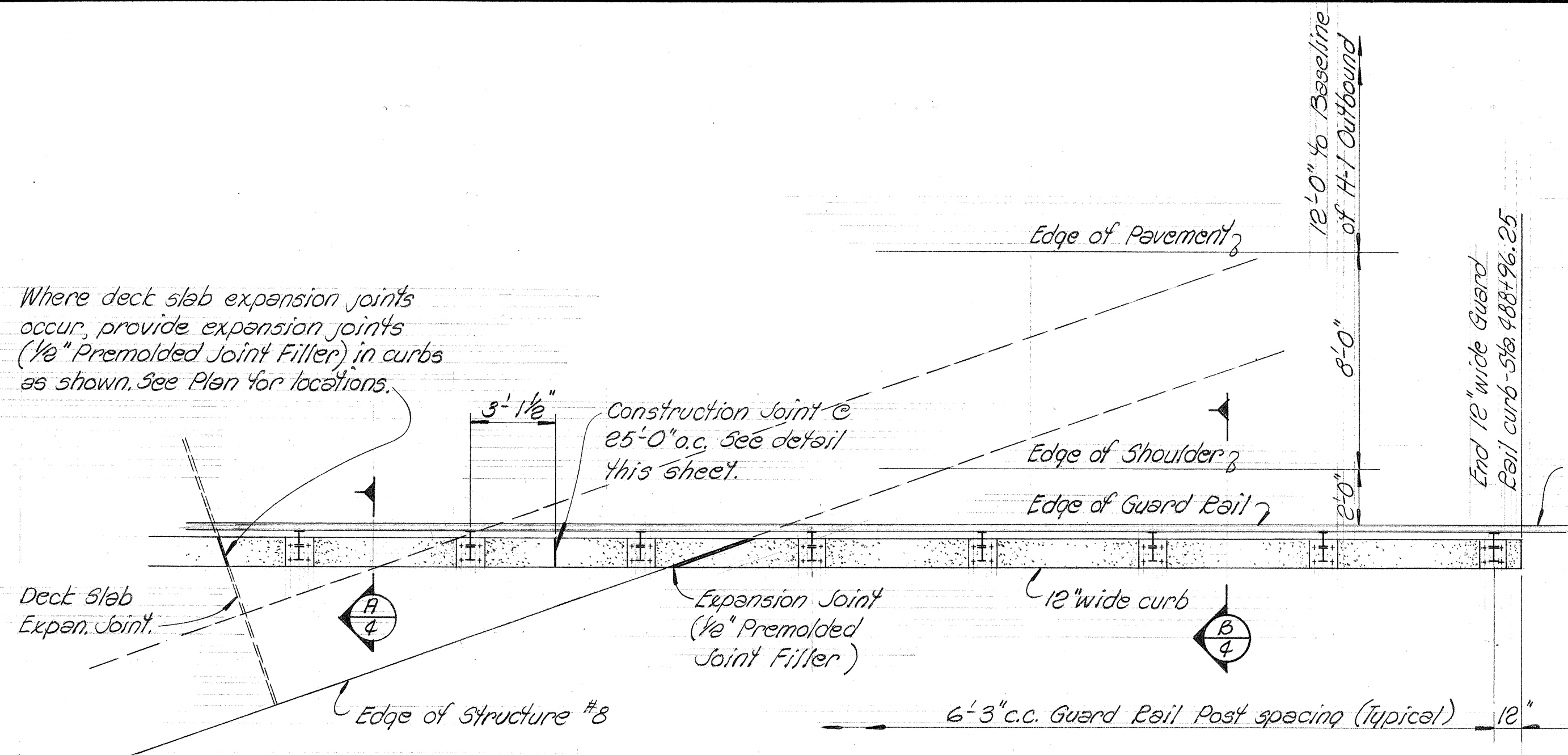
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURE No. 8
PORTAL DETAILS, CONSTRUCTION & EXPANSION JOINTS & GRADE BEAM

WAIKAWA INTERCHANGE
F.A.I. Proj. No. I-HI-1 (62)-8

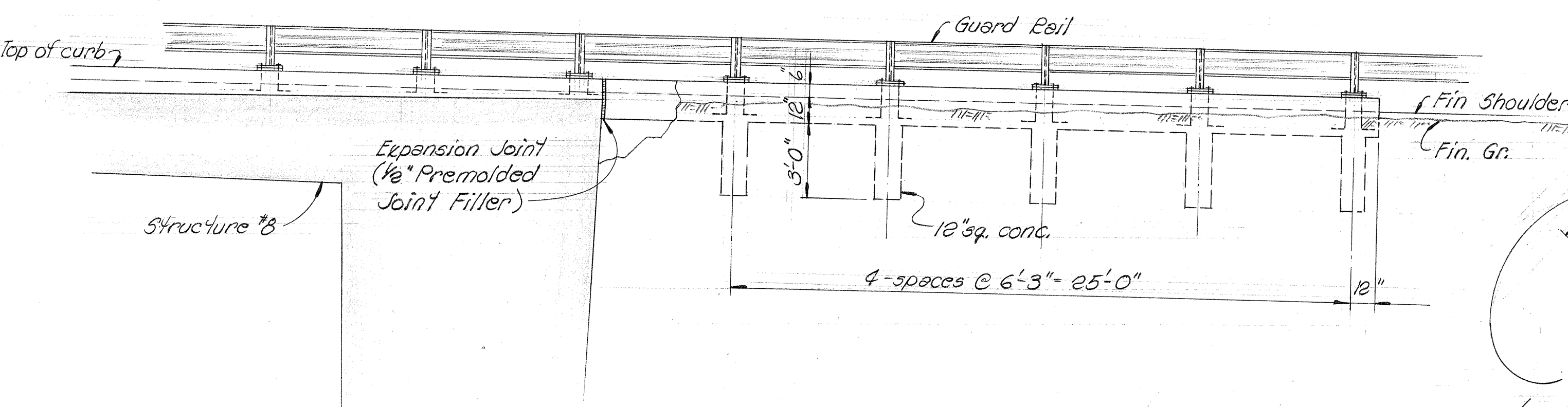
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SHEET No. 3 OF 5 SHEETS

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HAWAII	HAW.	I-HI-1628	1968	102	144



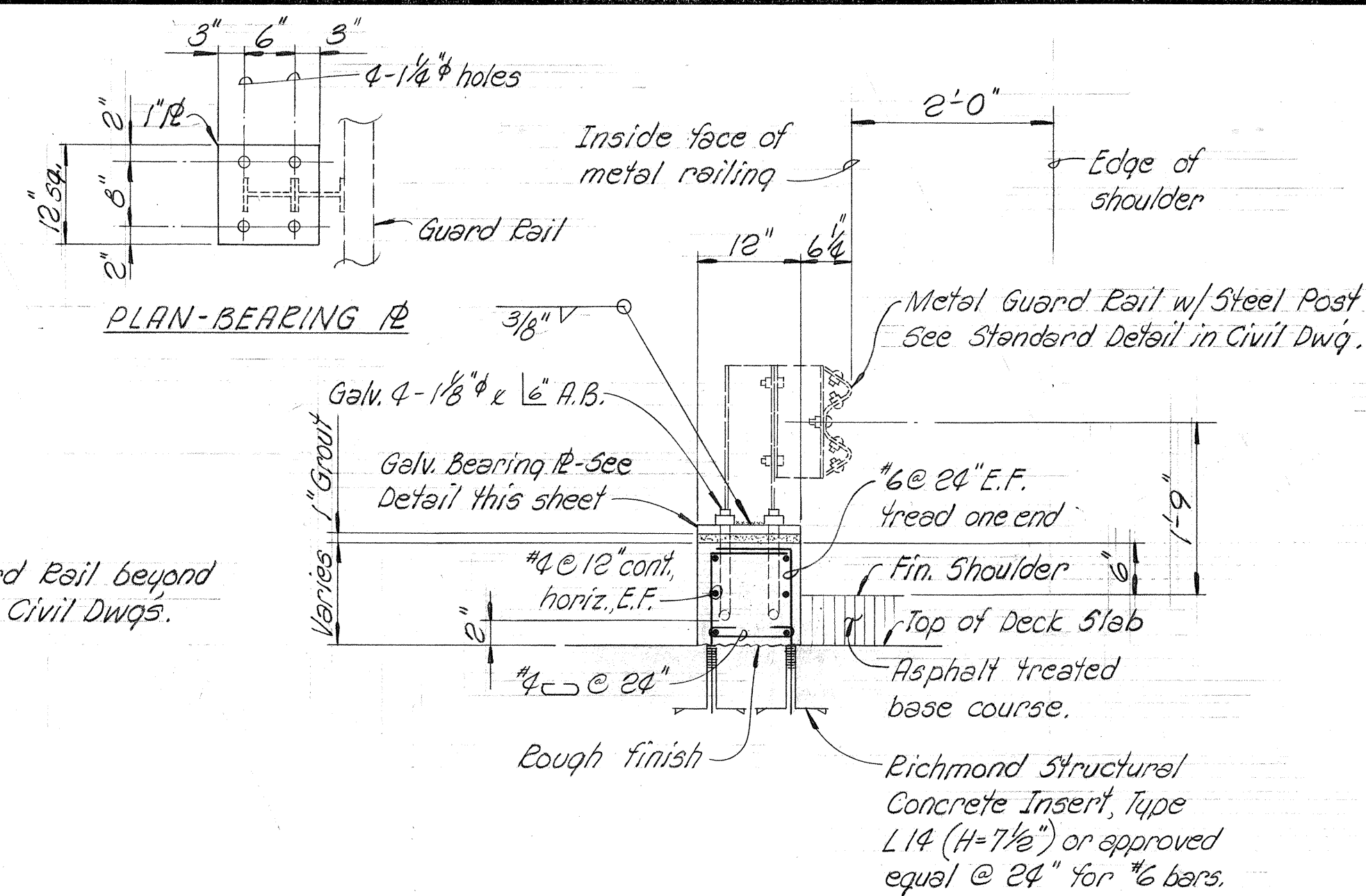
PART PLAN - GUARD RAIL LAYOUT

Scale: 1/4" = 1'-0"



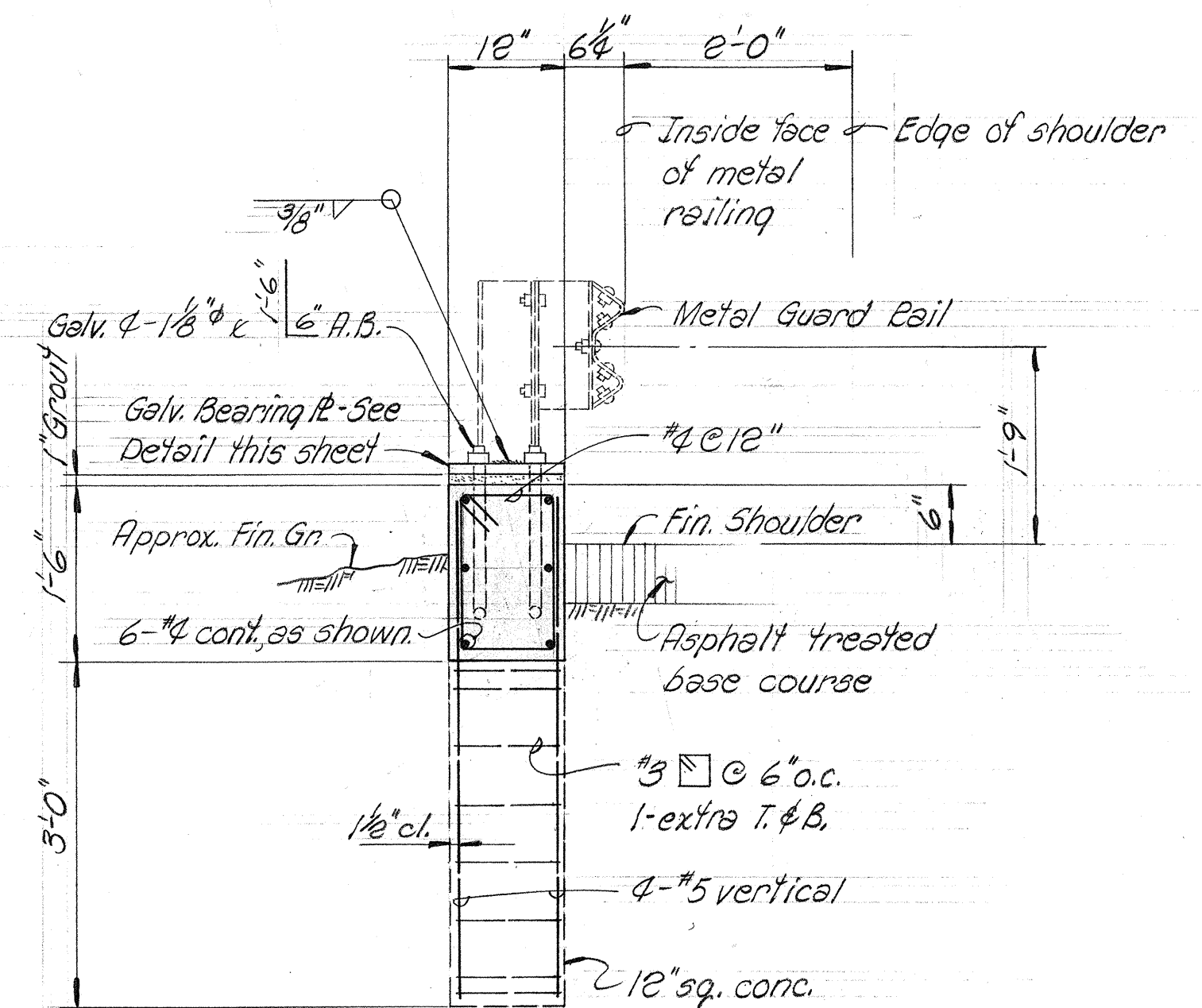
ELEVATION

Scale: 1/4" = 1'-0"



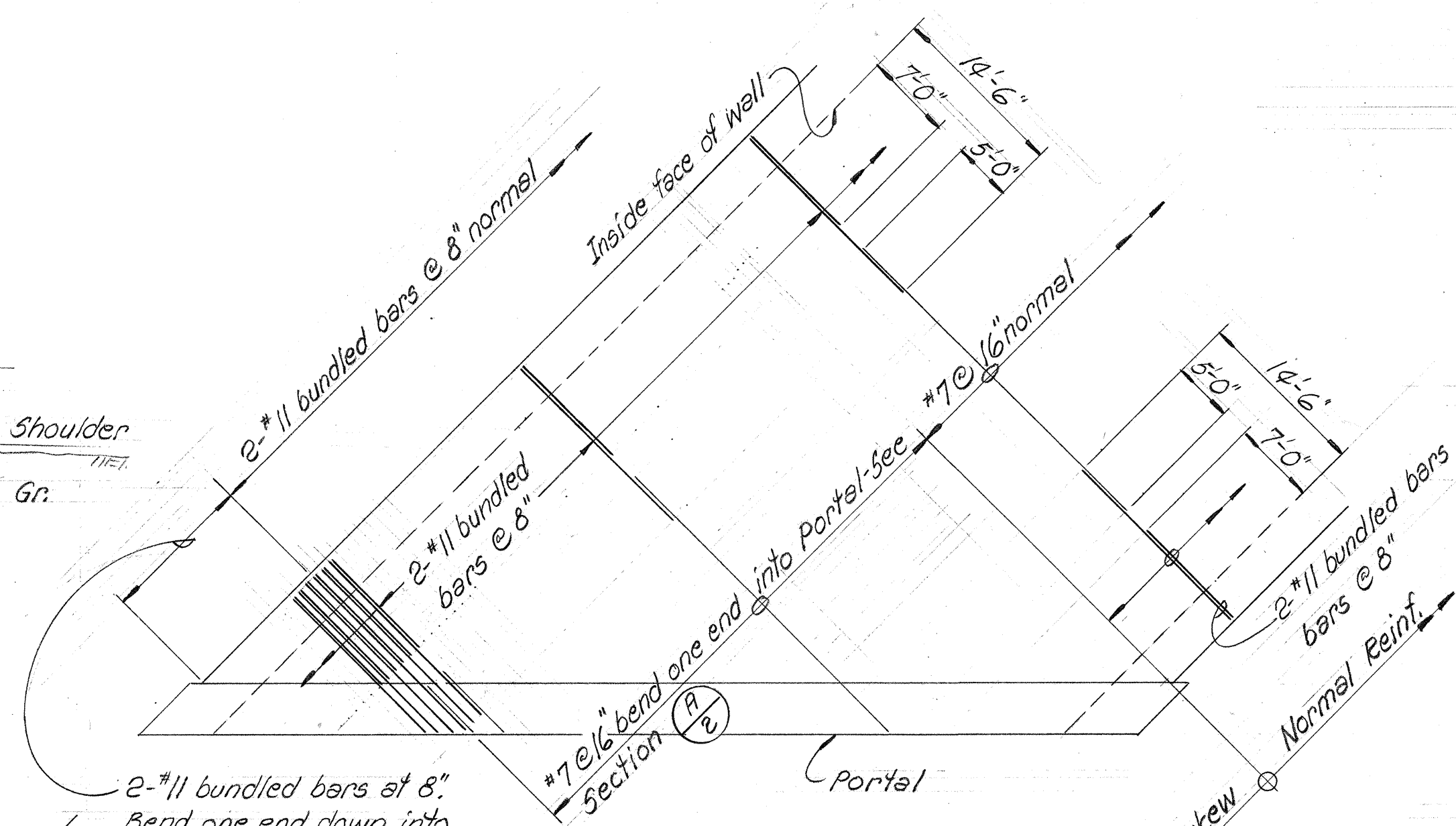
TYPICAL SECTION OVER STRUCTURE

SECTION A
Scale: 3/4" = 1'-0"

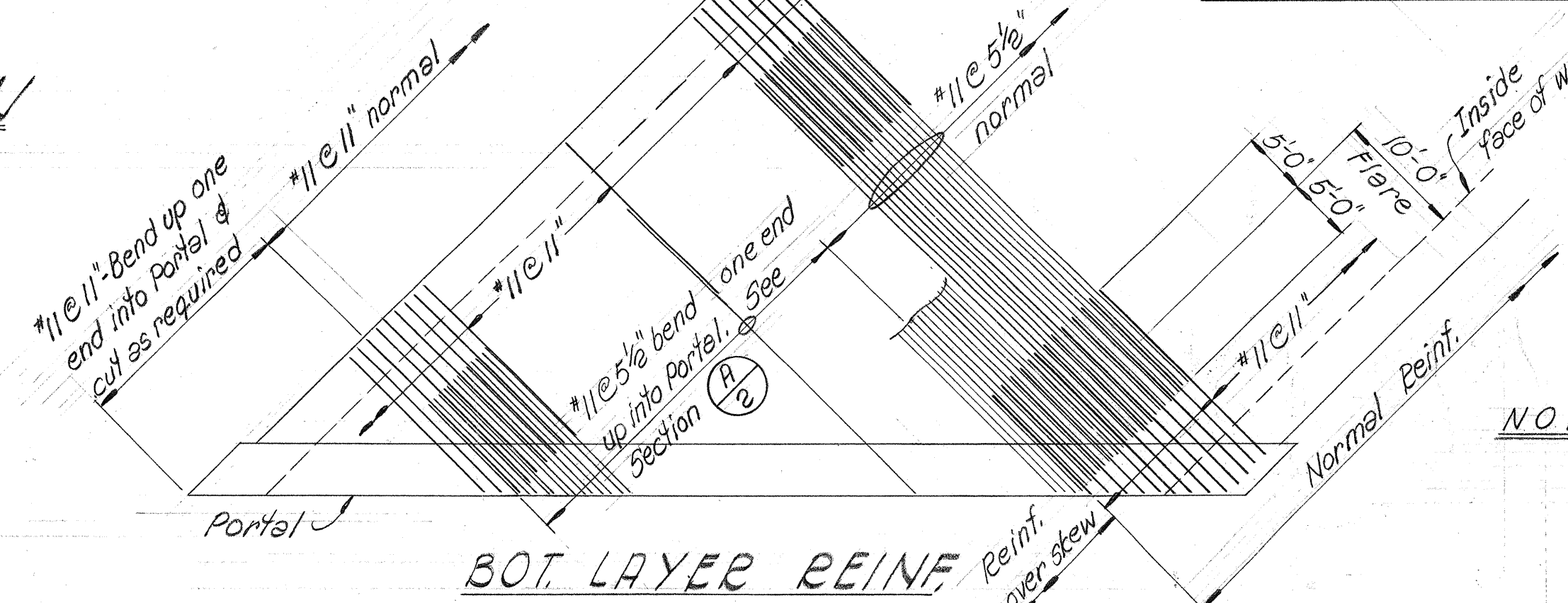


TYPICAL SECTION BEYOND STRUCTURE

SECTION B
Scale: 3/4" = 1'-0"



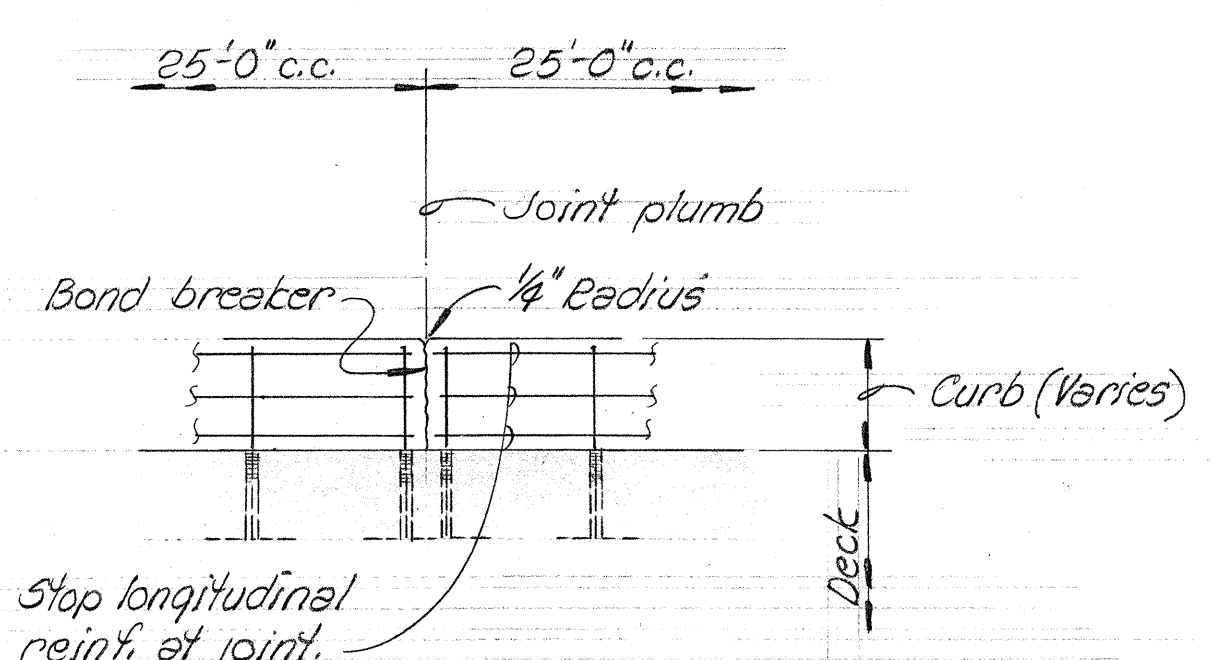
TOP LAYER REINF



BOT. LAYER REINF

DECK SOUTHWEST PLAN SHOWING TRANSVERSE REINF. LAYOUT

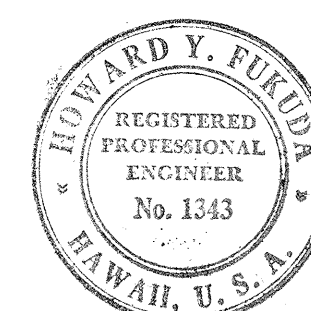
Scale: 3/8" = 1'-0" (Northwest end similar except opposite hand)



ELEVATION CONCRETE CURB CONSTR. DETAIL

N.T.S.

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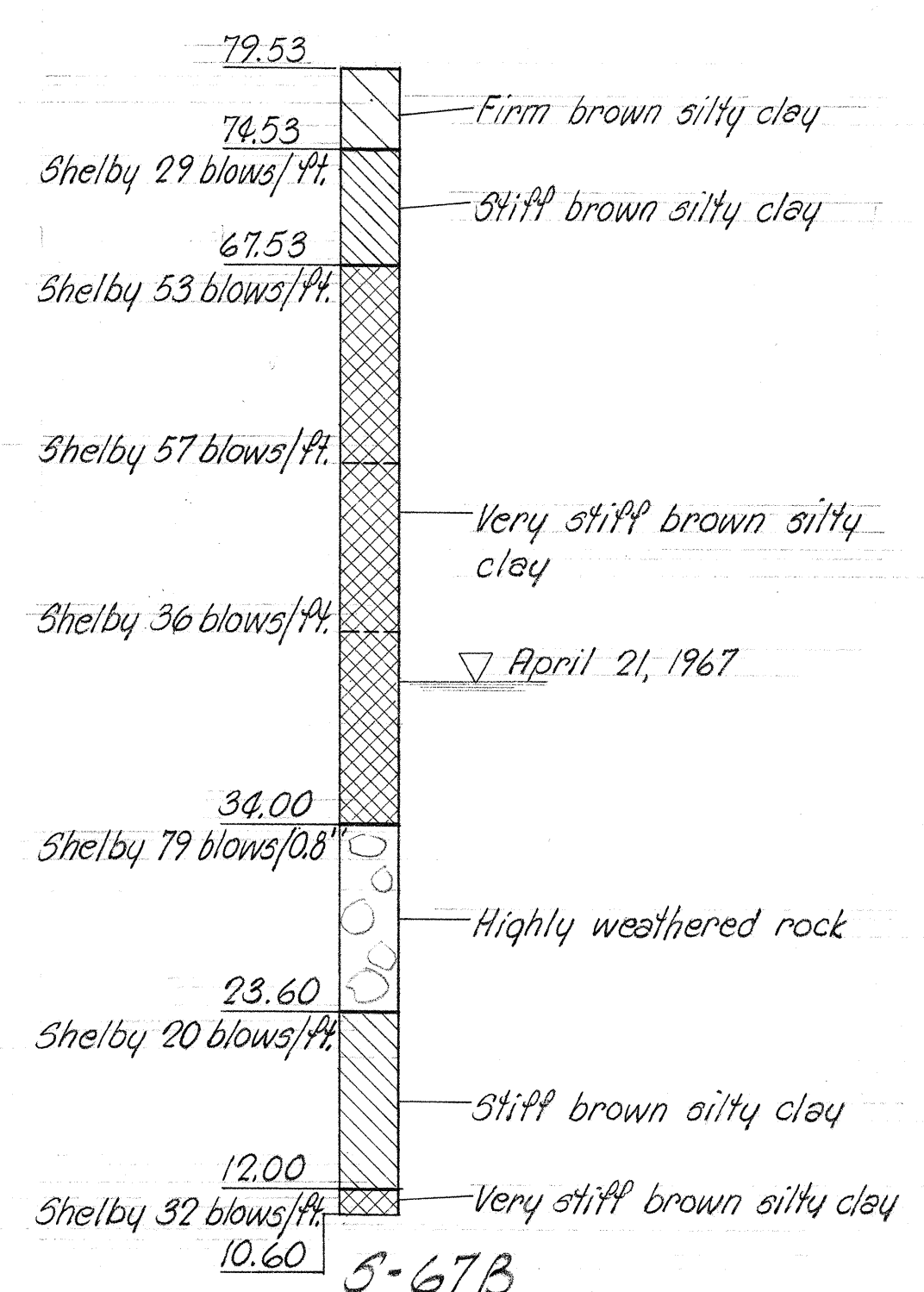
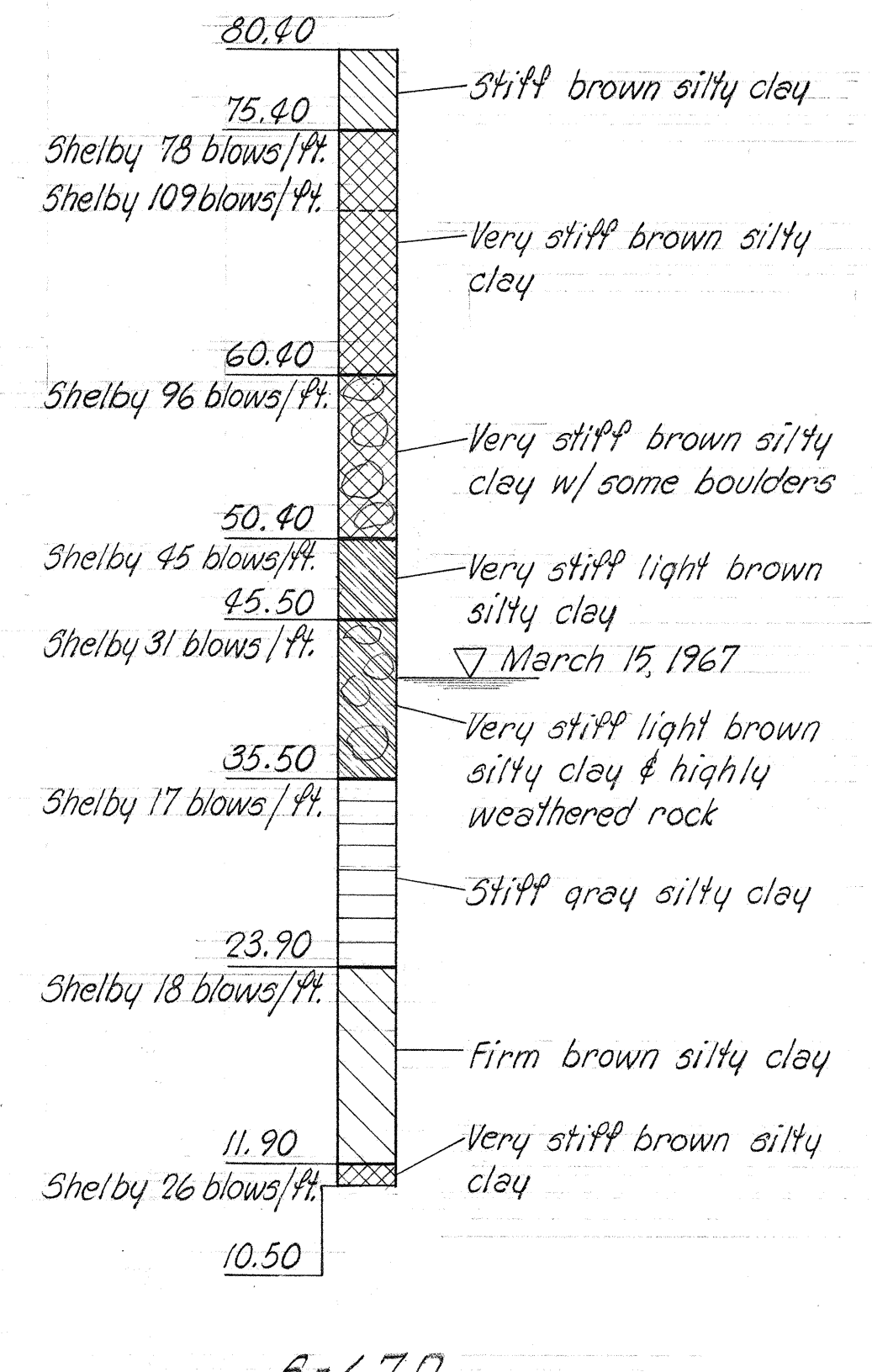
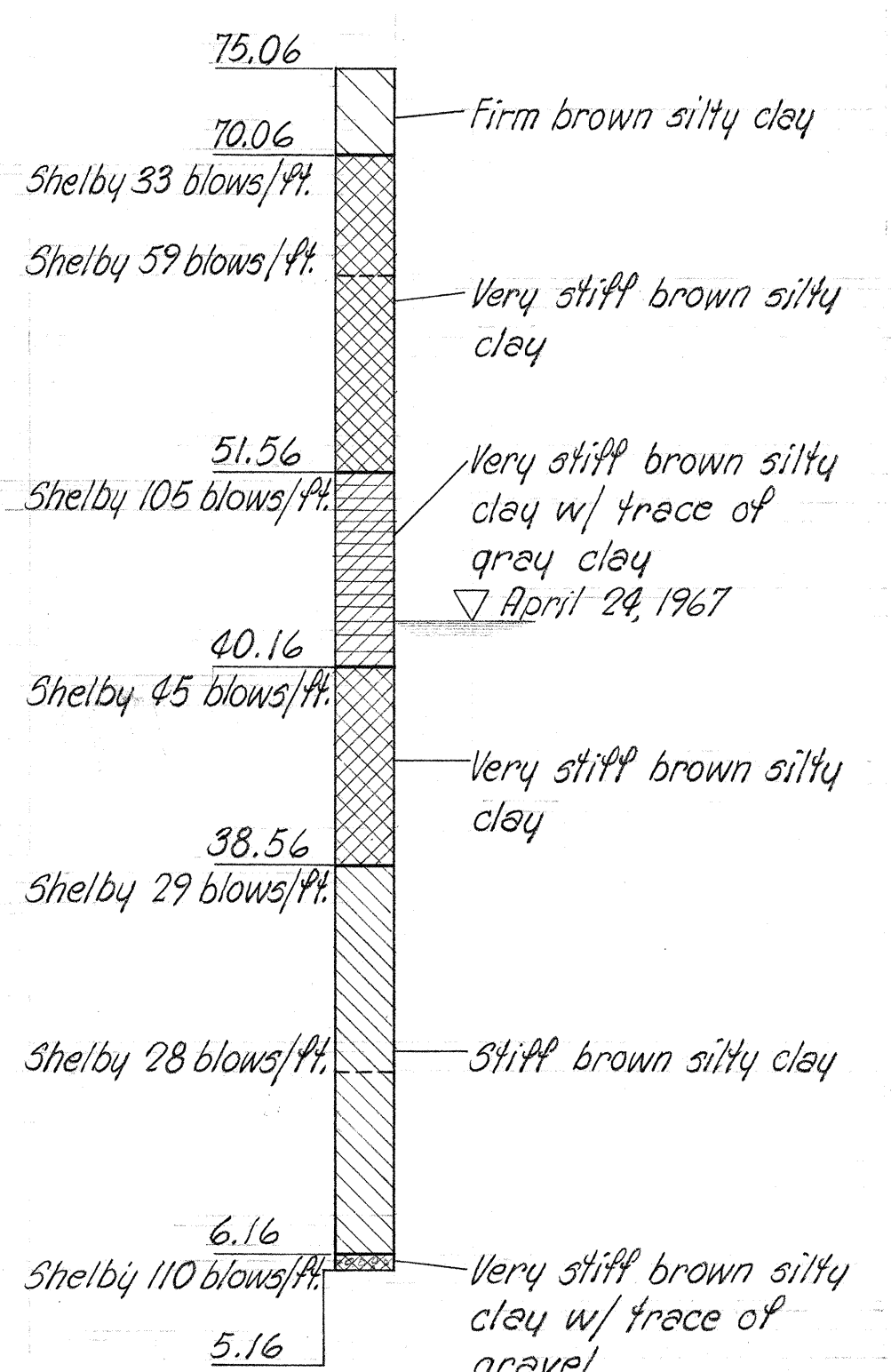
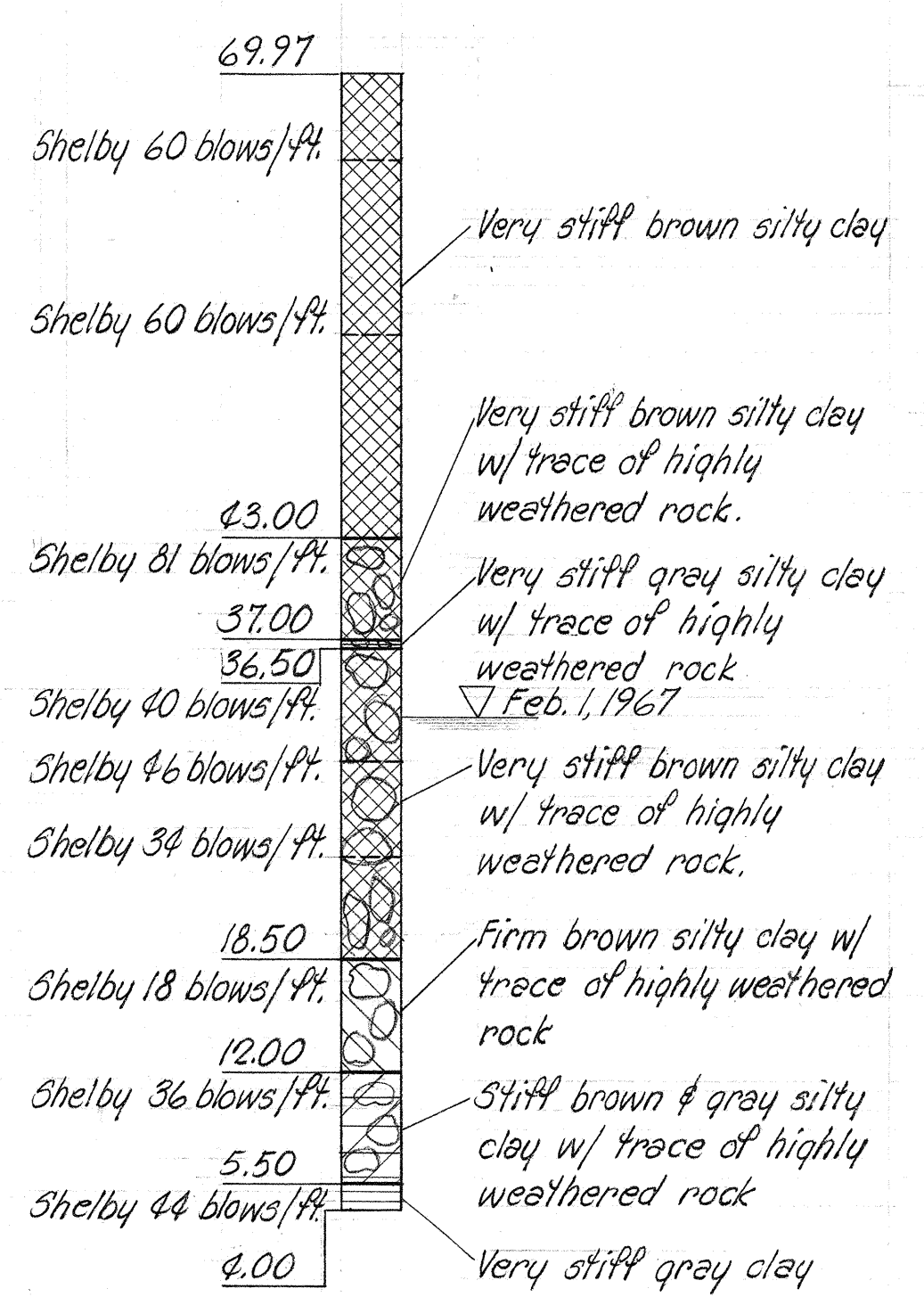
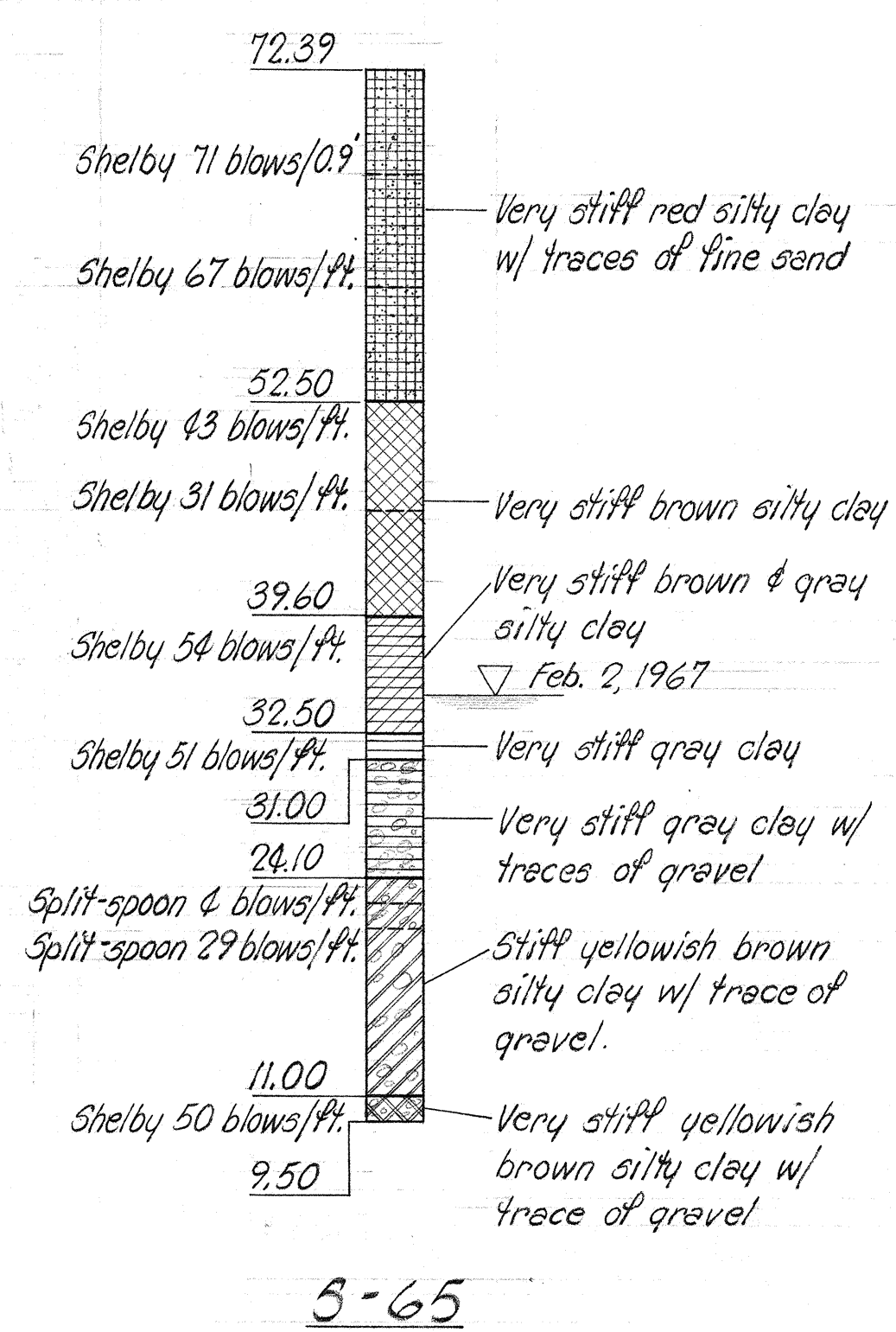
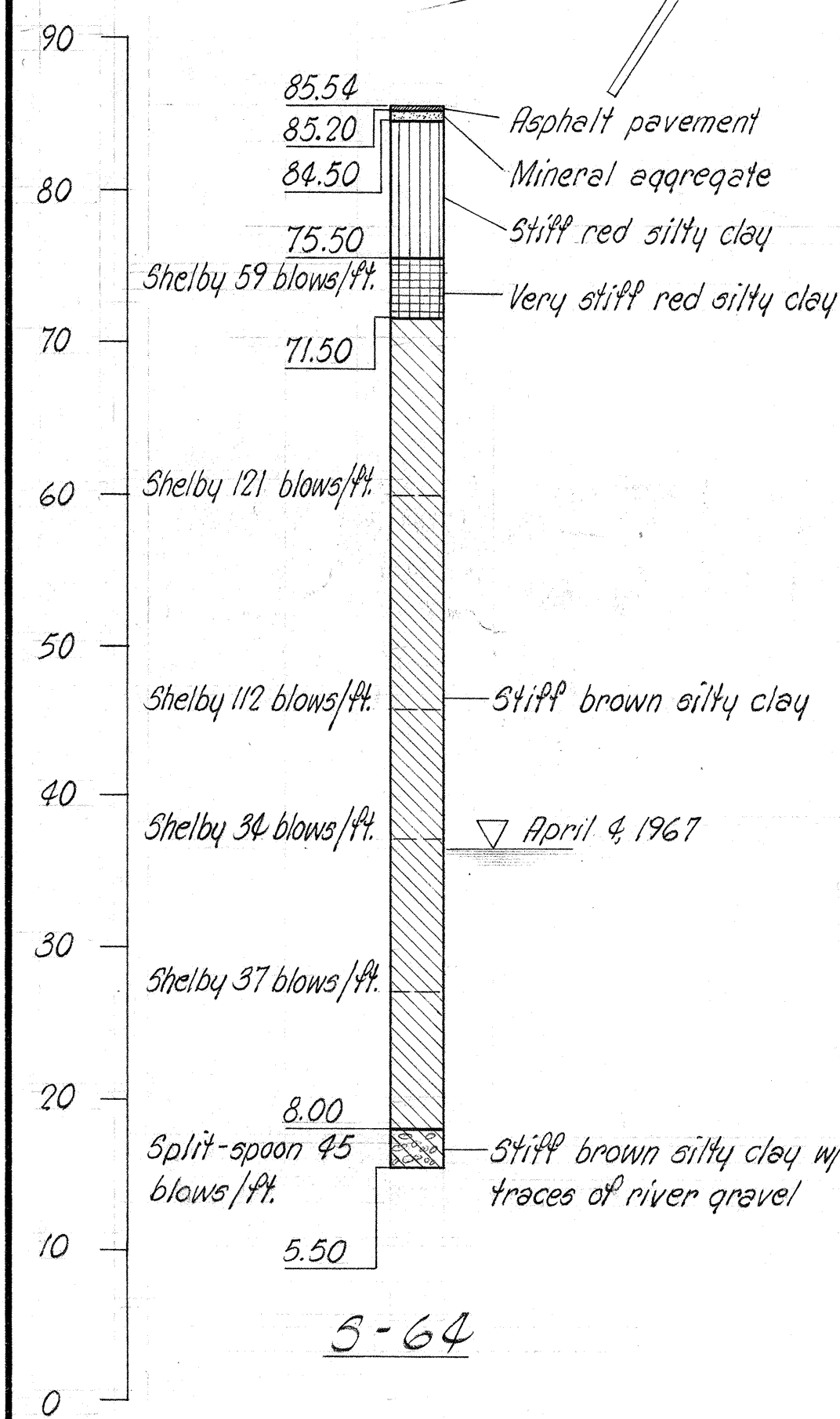
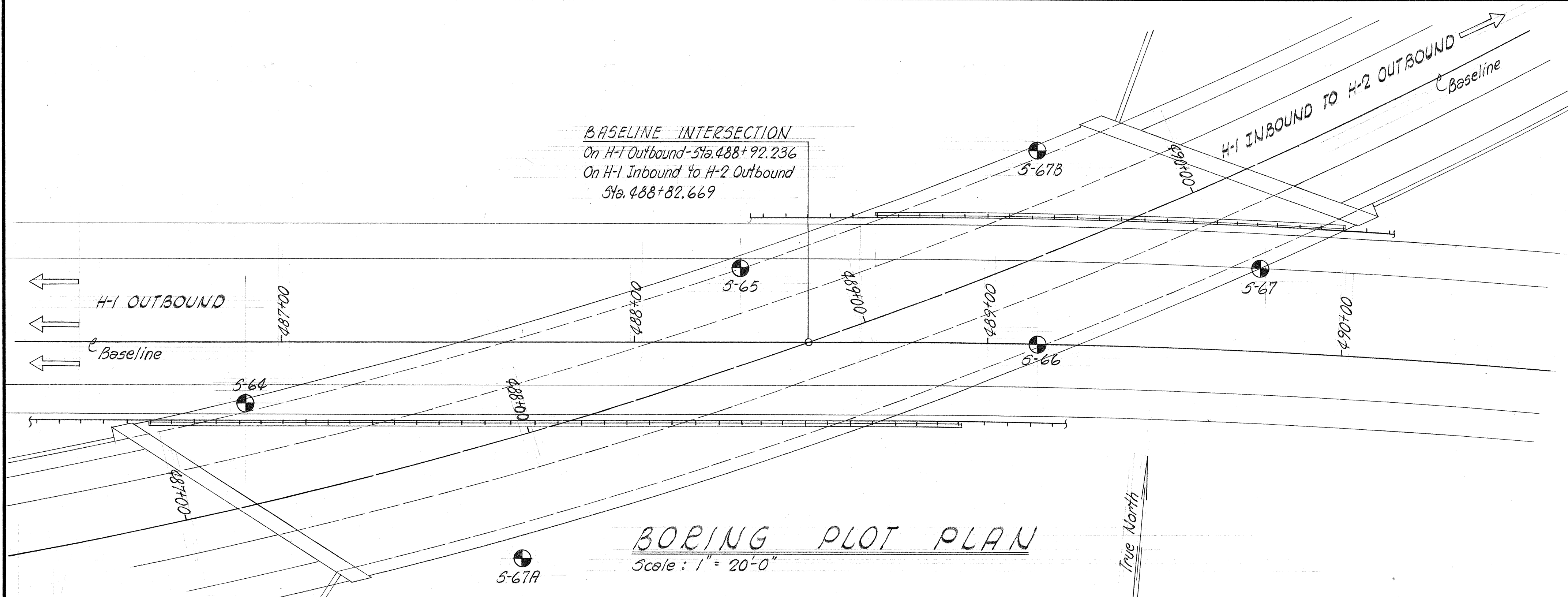
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURE No. 8
DECK PLAN SHOWING REINF. LAYOUT & CONCRETE CURB DETAILS

WAIKAWA INTERCHANGE
F.A.I. Proj. No. I-HI-1 (69)-8

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SHEET No. 4 OF 5 SHEETS



BORING LOGS FOR STRUCTURE 8

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURE No. 8
BORING LOGS

WAIKAWA INTERCHANGE
F.A.I. Proj. No. I-HI-1(62):8

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SHEET No. 5 OF 5 SHEETS