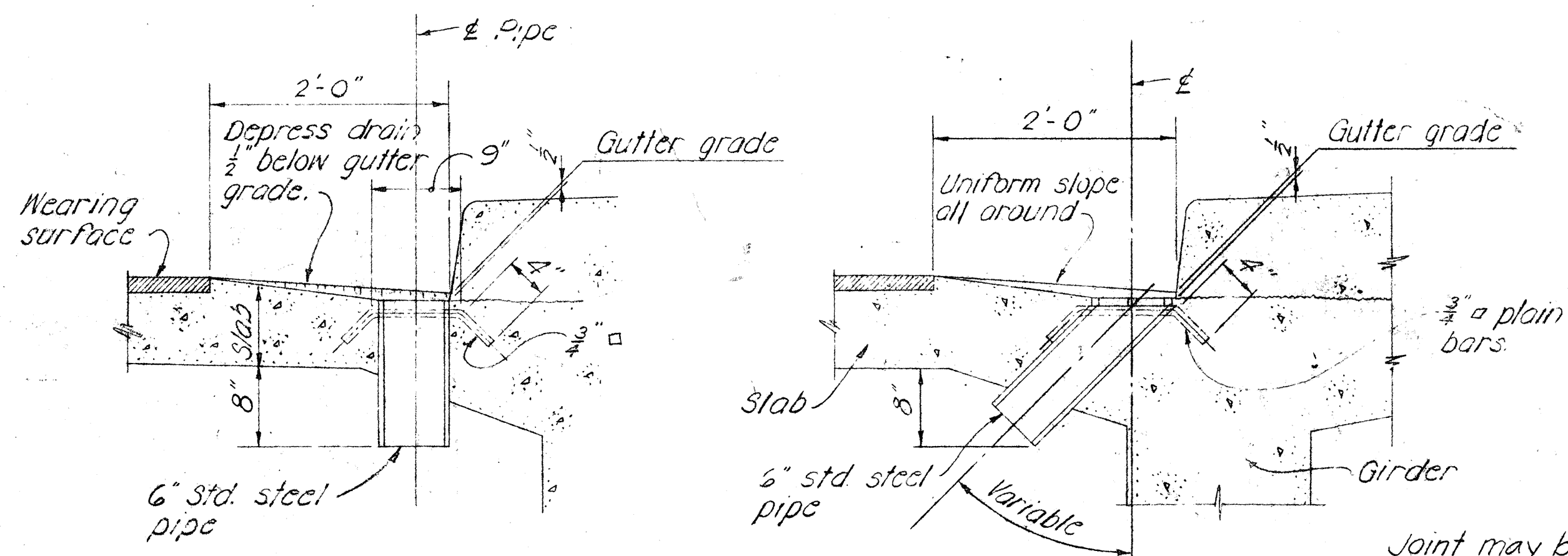
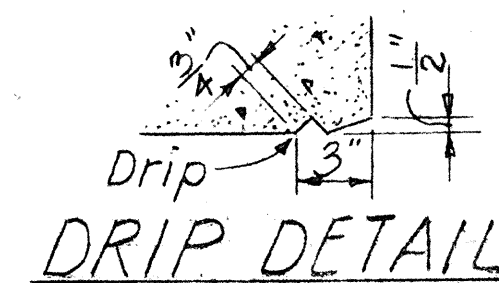
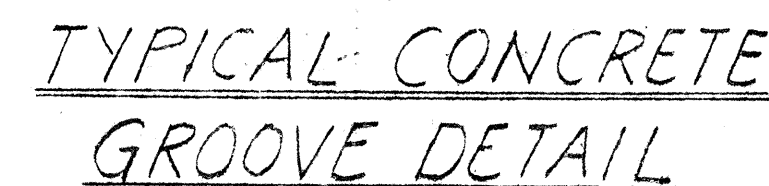
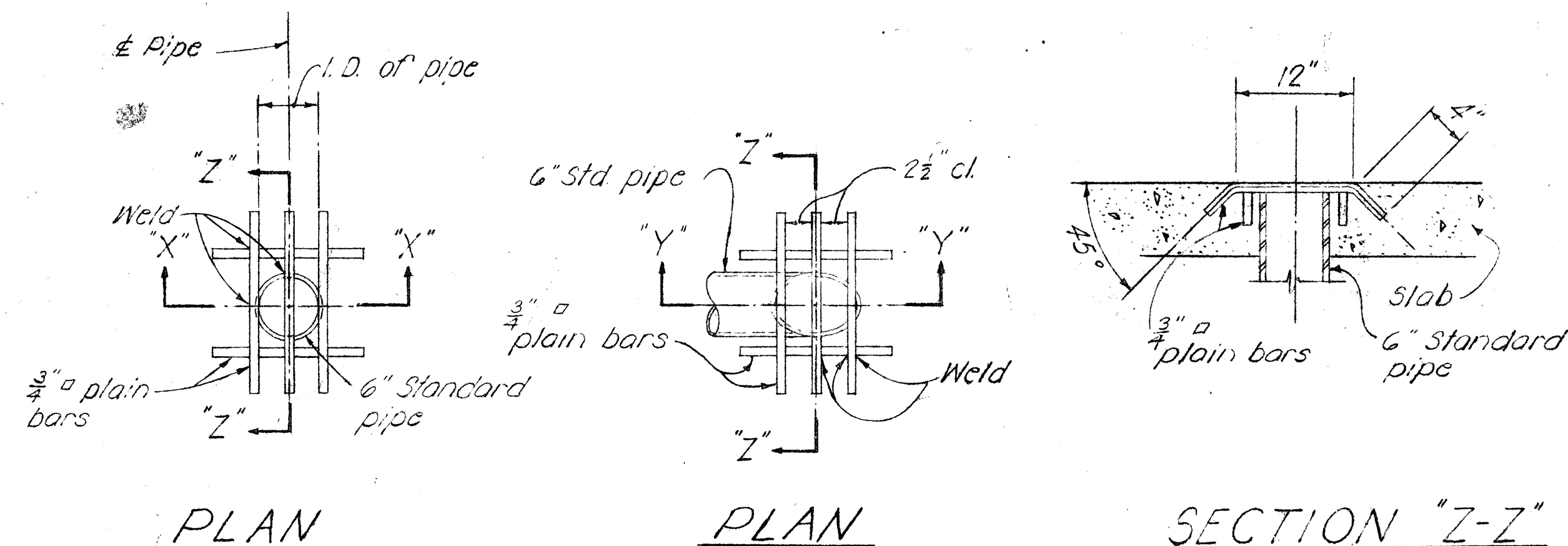


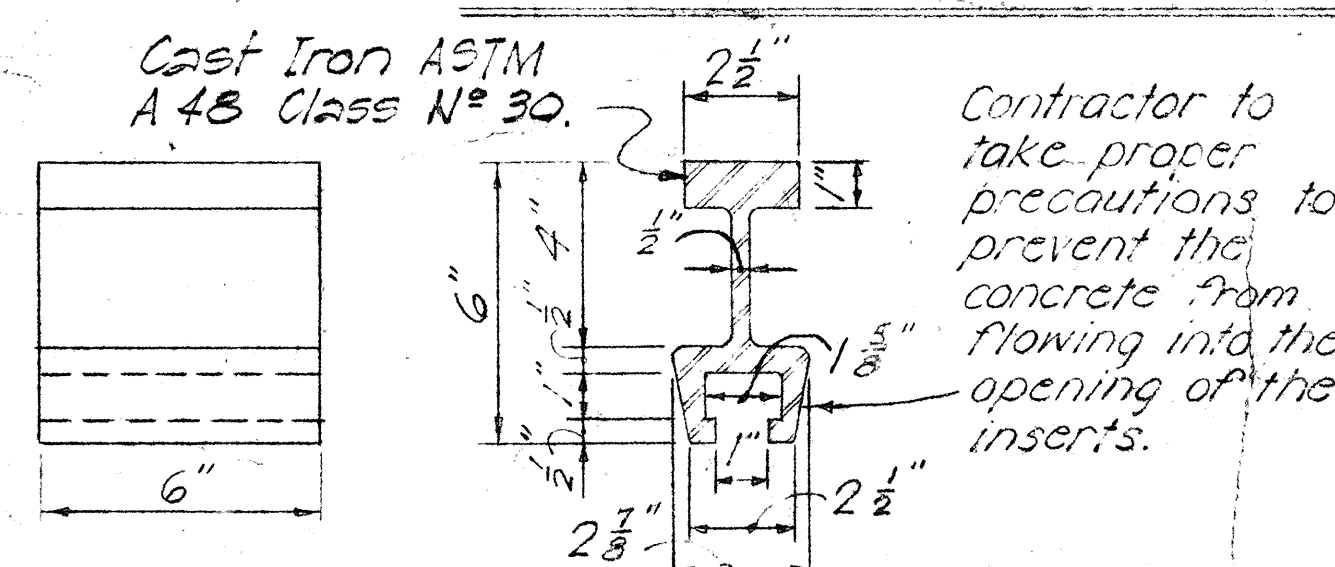
GENERAL NOTES

- 1- All concrete shall be Class A unless otherwise noted.
- 2- Reinforcing shall be detailed in accordance with A.C.I. Manual of Standard Practice for Detailing Reinforced Concrete Highway Structures unless otherwise noted.
- 3- Clearance for reinforcing bars shall be as follows, unless otherwise noted:
 - a - 1 1/2" For stirrups of beams & pier caps.
 - b - 2" for ties of columns
 - c - 2" For formed walls.
 - d - 3" For footings.
- 4- Minimum spacing between parallel bars shall be 2 1/2 times the diameter of bars, but in no case shall the clear distance between the bars be less than 1 1/2 times the maximum size of the coarse aggregate.
- 5- All dimensions relating to reinforcing are to centers of bars unless otherwise noted.
- 6- Reinforcing bars shall be securely tied at all intersections & lap splices & shall be held in place during pouring to maintain their proper locations as shown on plans.
- 7- Vertical column bars shall be arranged in such a manner as to miss pier cap bars above as directed by the Engineer.
- 8- Except as otherwise noted on drawings, all exterior corners & re-entrant angles in concrete work shall be chamfered 3/4" x 3/4".
- 9- Concrete seats receiving steel plates, lead plates or neoprene pads shall be poured monolithically with supporting structures & top of concrete seats shall be finished with a steel trowel to a smooth level surface at the elevation shown on the plans.
- 10- Elastomeric Pads: Bottom of bridge bearing pads shall be secured against displacement with adhesives approved by the Engineer. Pads shall be incidental to concrete and will not be paid for separately.
- 11- Forms for all exposed surfaces of separation structures and surfaces of retaining walls visible from a traveled way or from a populated area shall be plywood except that metal forms may be permitted provided a surface finish satisfactory to the Engineer can be obtained and the use of such forms is approved in writing by the Engineer. Forms for round columns shall be made of materials that will give a smooth finish and true dimensions as given in the plans. Forms for prestressed concrete members shall be either metal or plywood.
- 12- Gothic letters and figures approximating dimensions shown will be acceptable if approved by the Engineer.
- 13- The contractor shall verify the location of all existing utility lines and notify the respective owners before commencing work of excavation or driving of piles.
- 14- Standard Detail Drawings refer to all structures in general, except for modifications as may be required for special conditions. For such modifications refer to the corresponding detailed drawings.

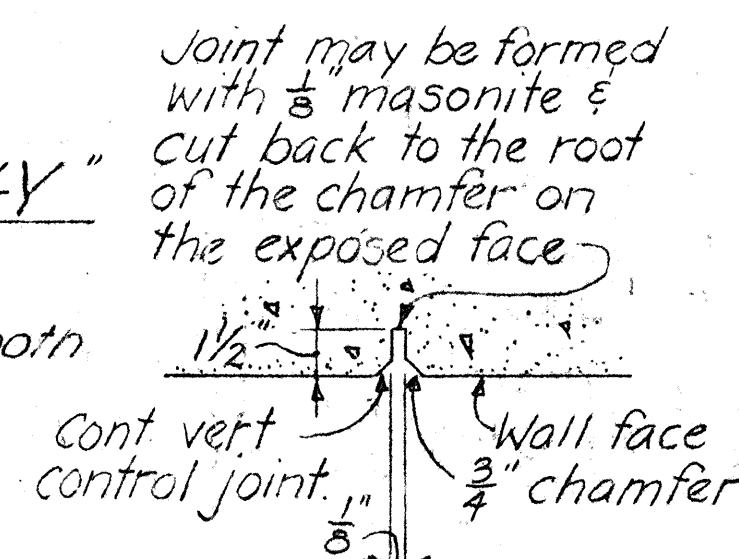


NOTE: Metal drains shall be considered incidental to Class A Concrete in both concrete and steel bridges and will not be paid for separately.
 Assembly of grillage and pipe shall be hot-dip galvanized after all welding is completed.

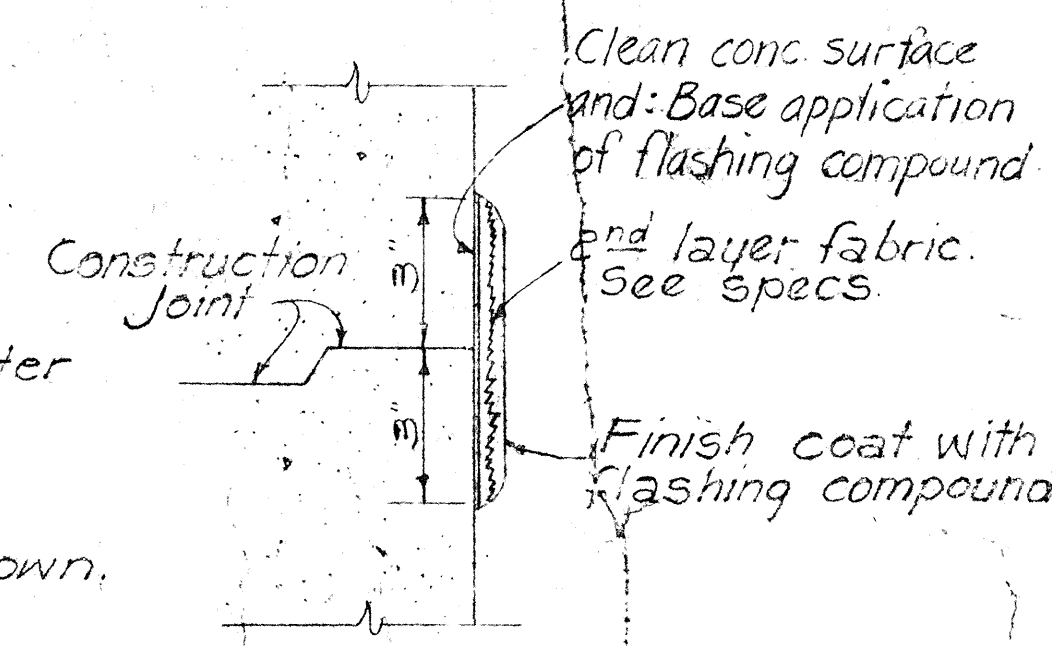
TYPICAL DRAINAGE DETAILS



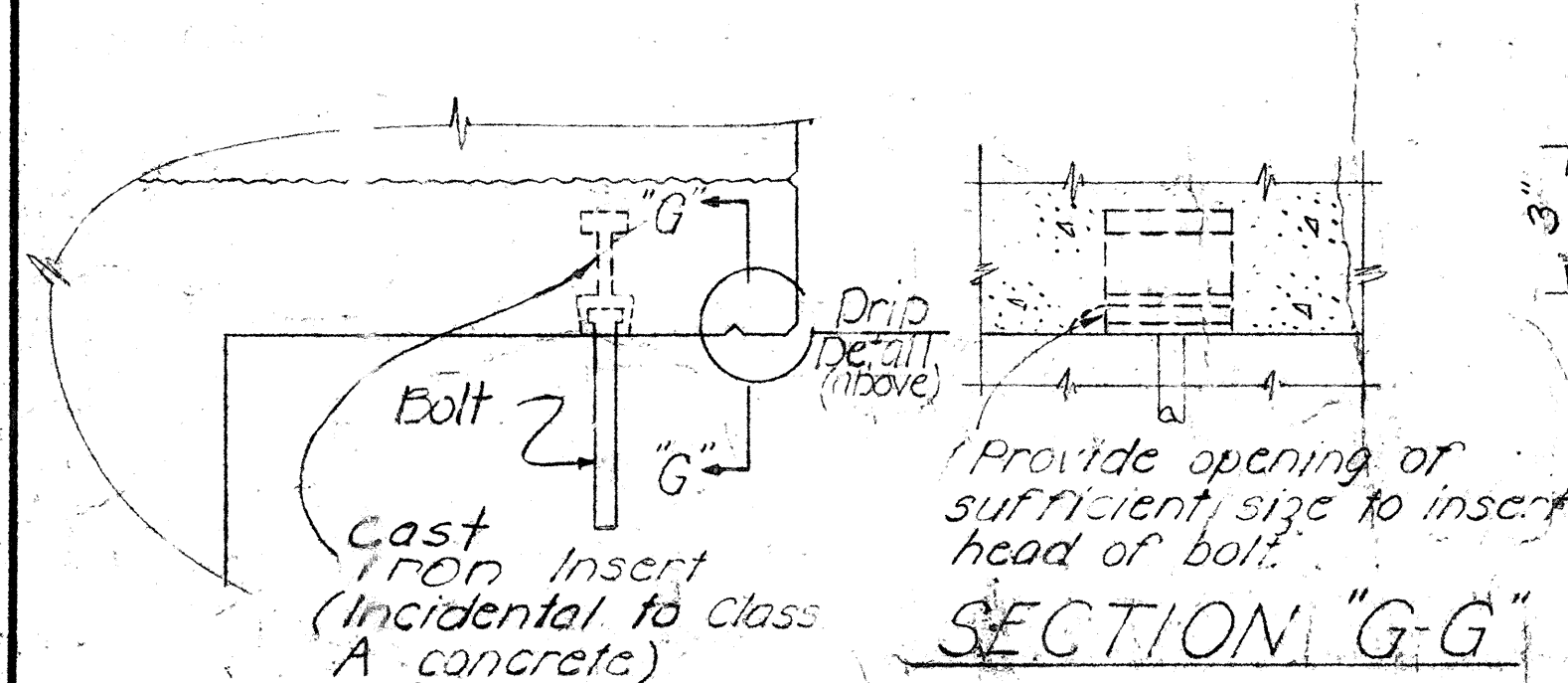
INSERT DETAIL



CONTROL JOINT DETAILS



TYP. FLASHING COMPOUND
WATERPROOFING DETAIL

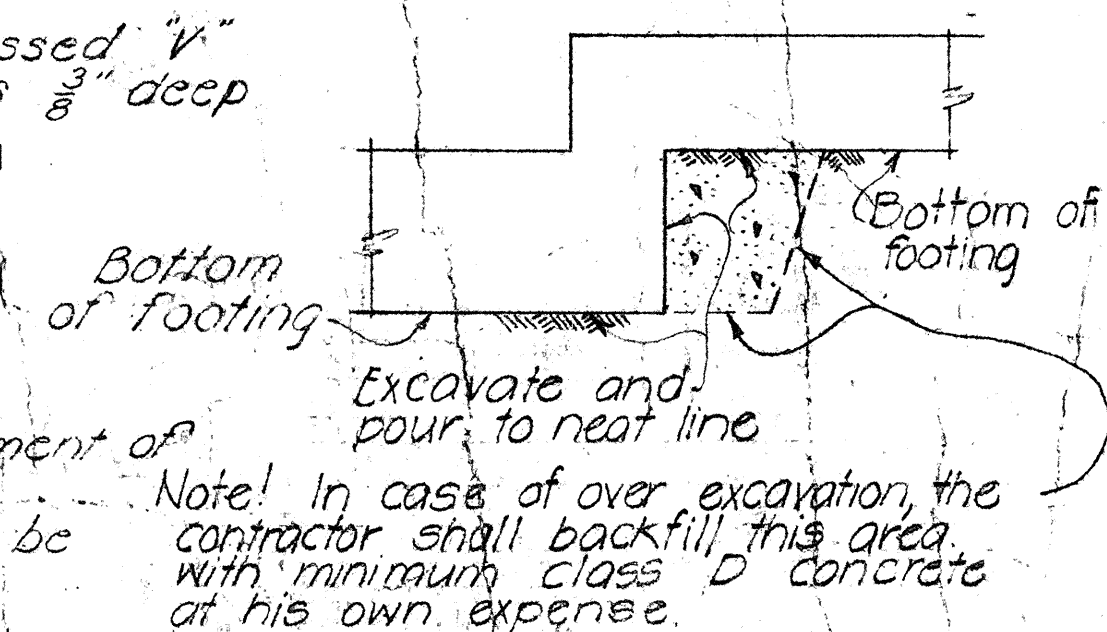


Use correct name of bridge Date of Year built

NOTE: Refer to corresponding detail drawings for placement of such names & dates at end post

Exact details & spacing of letters & figures shall be as directed by the Engineer. See Note #12

TYPICAL DETAIL OF LETTERS & FIGURES AT CONCRETE END POST



TYPICAL EXCAVATION FOR
CONTINUOUS FOOTING STEP-UP

NO.	REVISION	APPROVED BY	DATE

APPROVAL RECOMMENDED:
Paul T. Yamashita
BRIDGE DESIGN ENGINEER

1-23-70
DATE

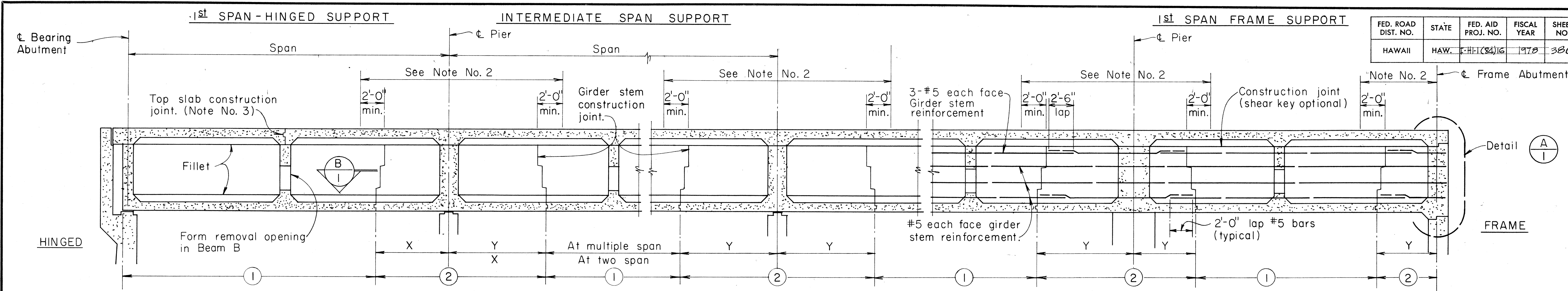
APPROVED Paul T. Yamashita 1-28-78
For ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
NOTES AND MISCELLANEOUS
DETAILS

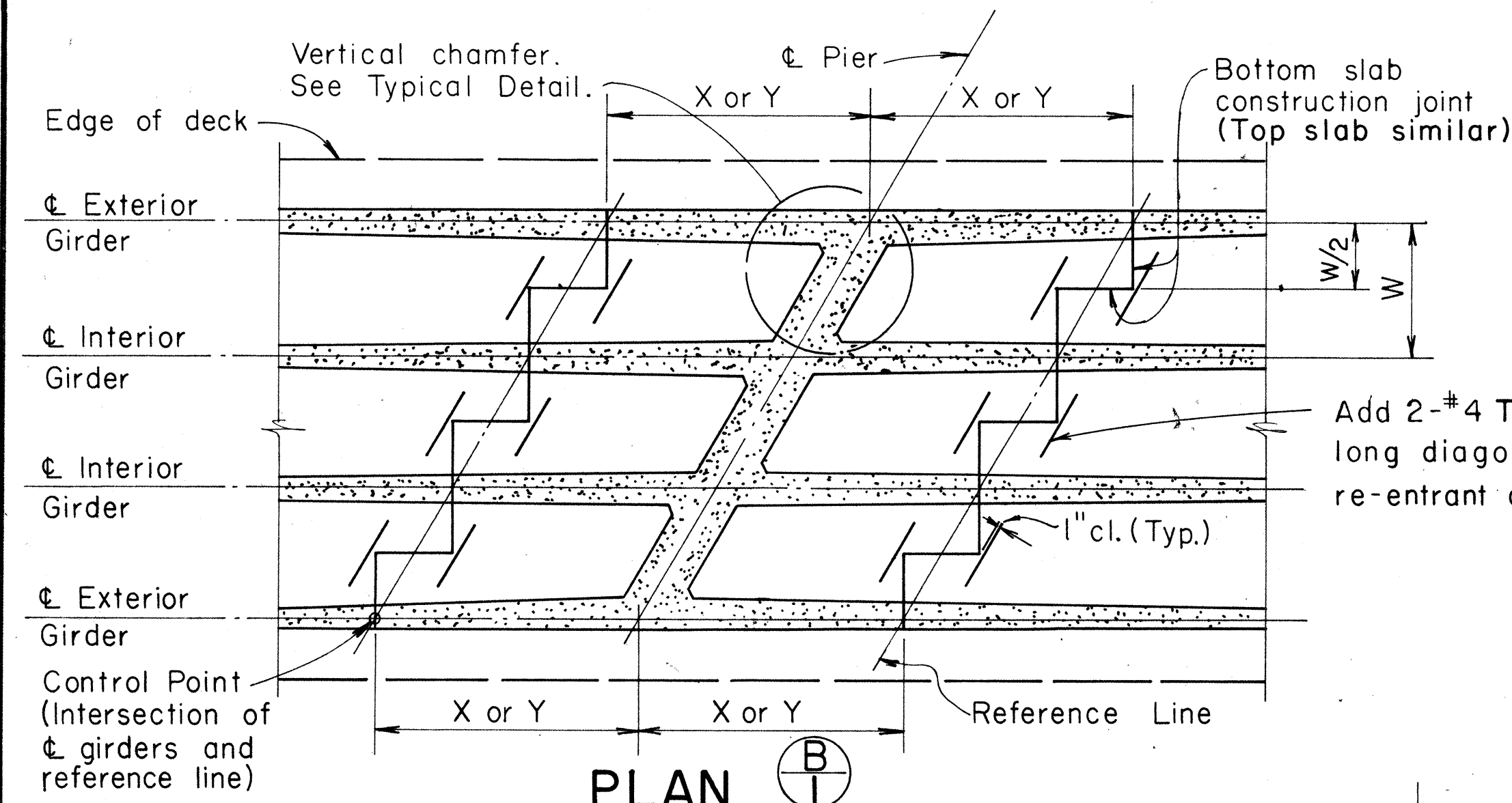
Date: October 1969
SHEET No. 1 OF 4 SHEETS DB-100

DATE: _____
 DRAWN BY: _____
 CHECKED BY: _____
 NO. _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CH-174	1976	386	466

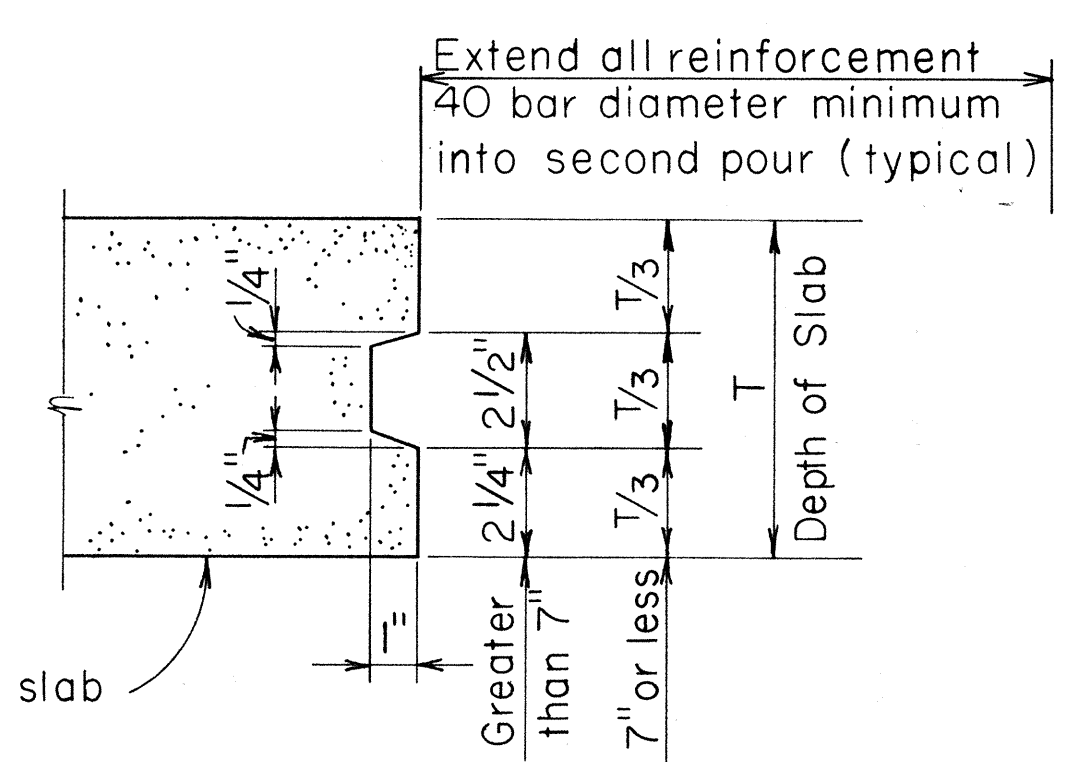


PLACING DIAGRAM

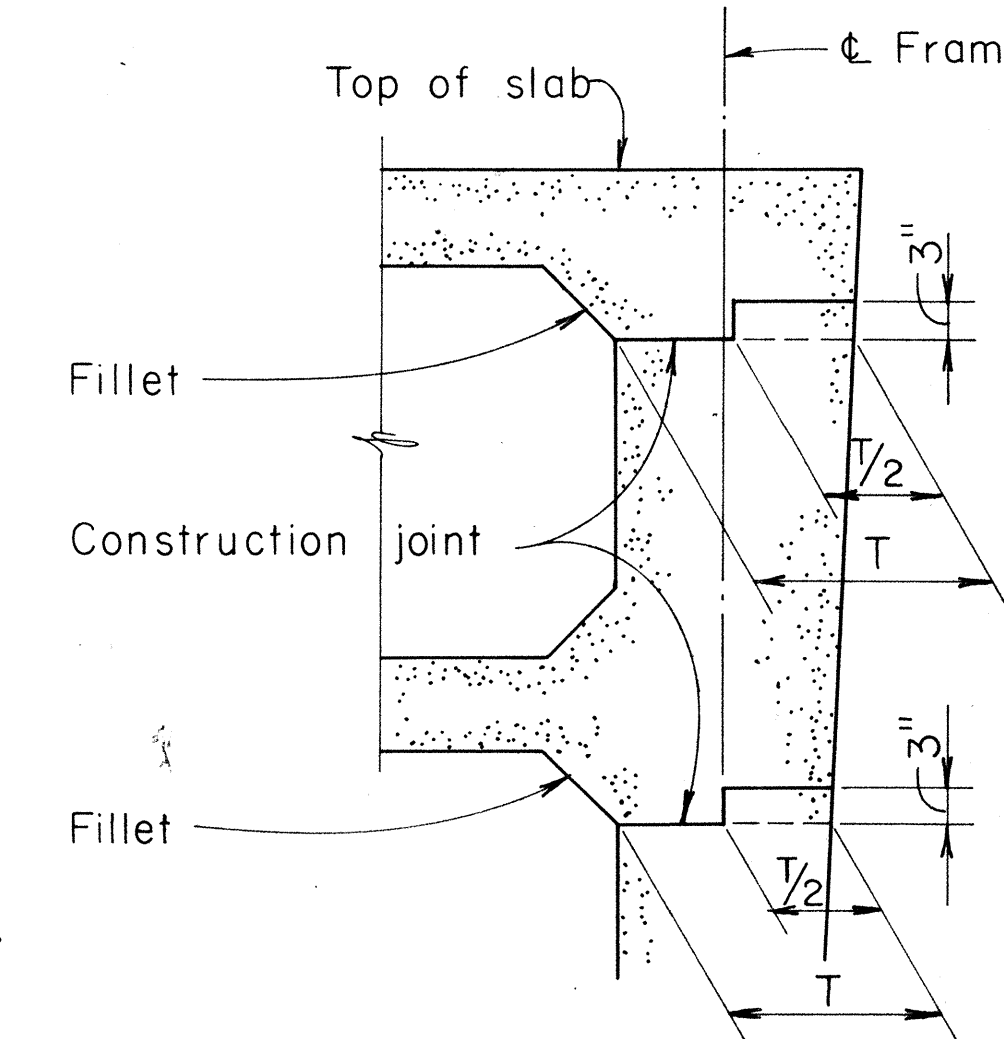


PLAN

CONSTRUCTION JOINT - BRIDGES ON SKEW



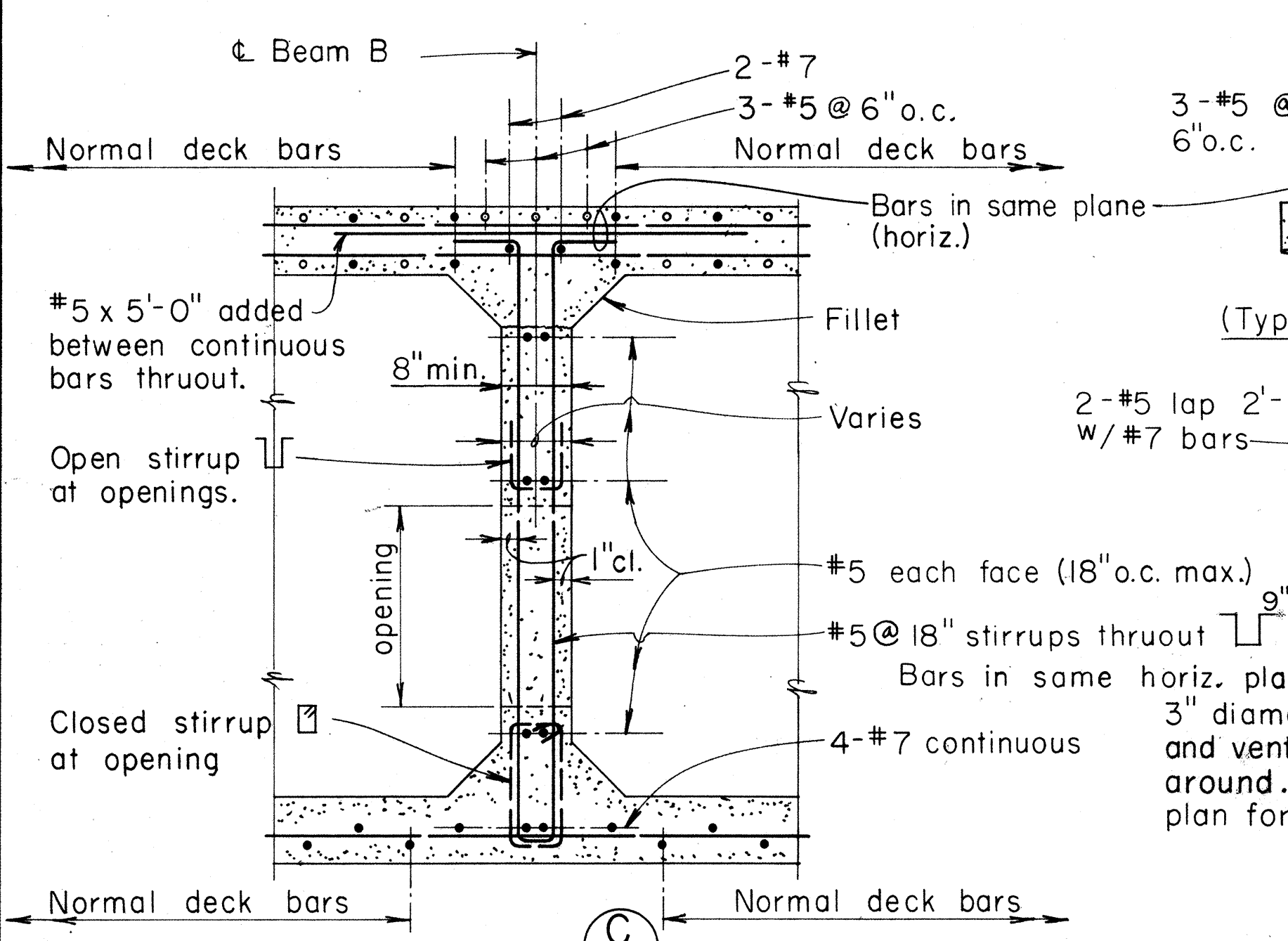
TYPICAL SLAB CONSTRUCTION JOINT DETAIL



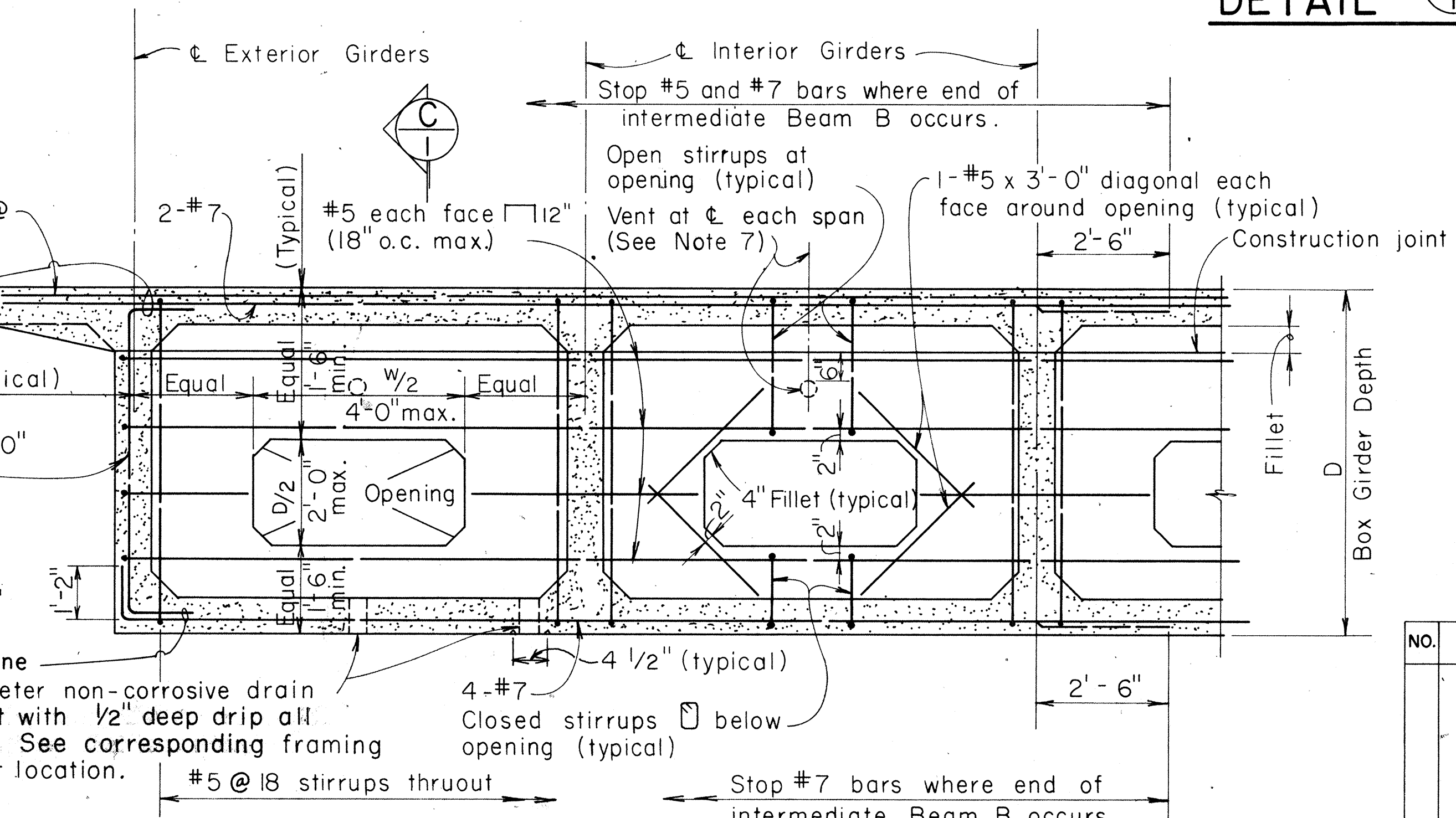
DETAIL A

NOTES:

- Numbers ① and ② indicate sequence of placing bottom slab and girder stem concrete. ② may be placed with ① when approved by the Engineer provided that the ① sections adjoining the ② sections are placed in this pour. For any deviation from the above, the contractor shall submit a diagram to the Engineer for approval.
- No top slab construction joint or form removal opening shall be located in the region over the piers as noted, nor in the supporting section of a hinged span.
- When top slab is not poured continuously, and top slab forms are not removed, construction joint in top slab shall be located over an intermediate diaphragm.
- Top slab concrete shall be placed separately from the stem. Top slab concrete may be placed continuously or in parts as approved by the Engineer, providing pour is not in conflict with the above notes.
- Dimension X = 1/4 span. Y = 1/5 span.
- No lapping of main bars shall be permitted at construction joints.
- If the Contractor elects to leave top slab forms in place, form removal opening shall be omitted and replaced by 3" vent. Vertical shorings left in place for the top slab formwork, shall not be located within the center half of each top slab span.



SECTION



EXTERIOR SPAN INTERIOR SPAN
TYPICAL BEAM B DETAILS

NO.	REVISION	APPROVED BY	DATE

APPROVAL RECOMMENDED:
James K. Hamamoto
 BRIDGE DESIGN ENGINEER
 DATE: 6-1-76

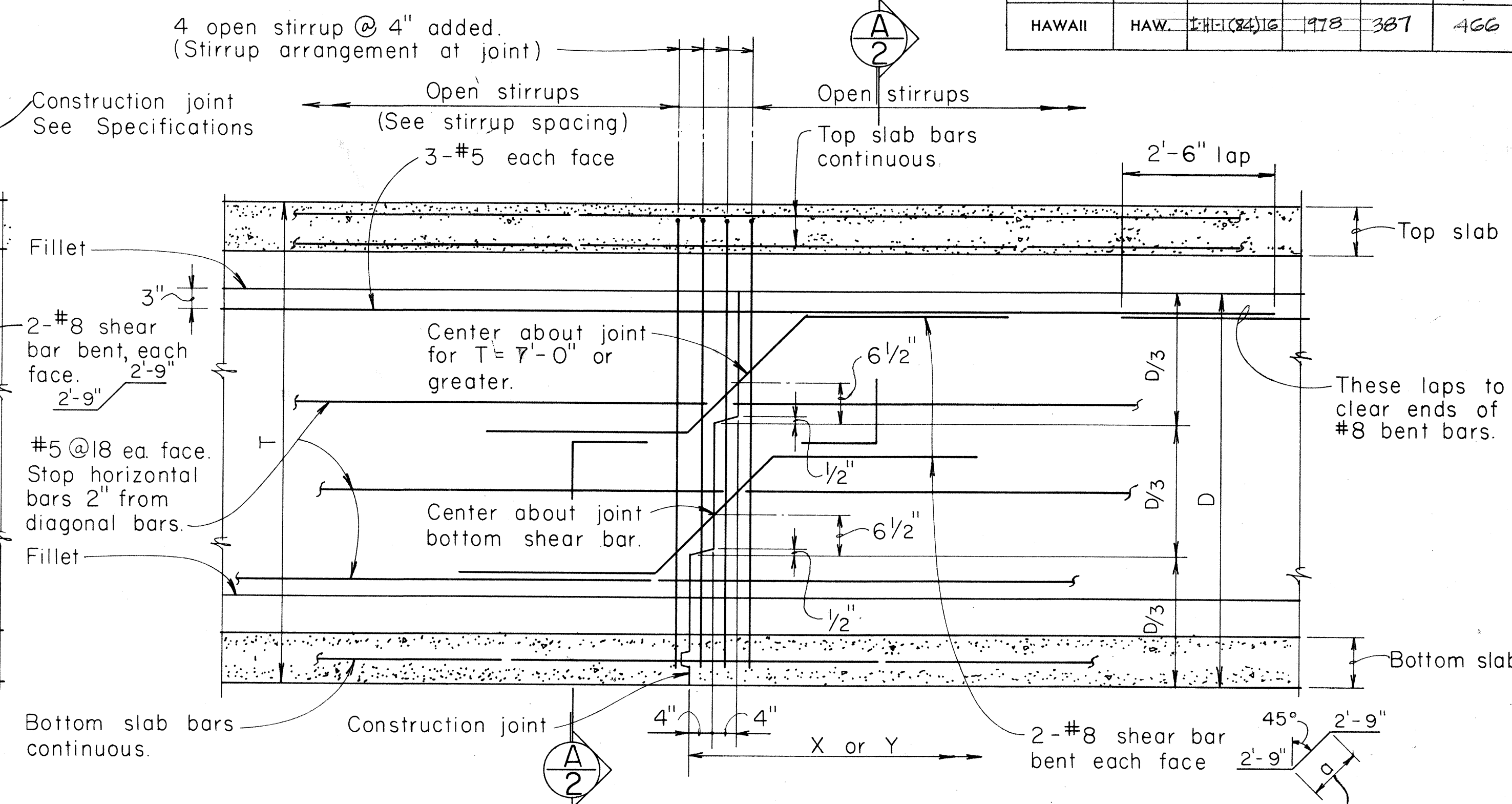
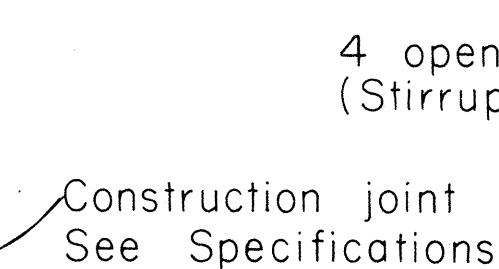
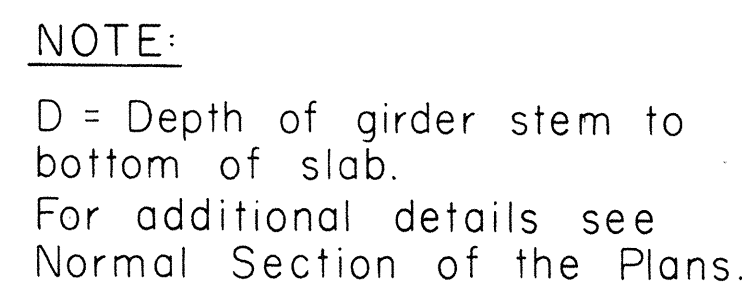
APPROVED
Hubert Saleh
 ASSISTANT CHIEF, ENGINEERING
 DATE: 6-2-76

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
CONCRETE BOX GIRDER

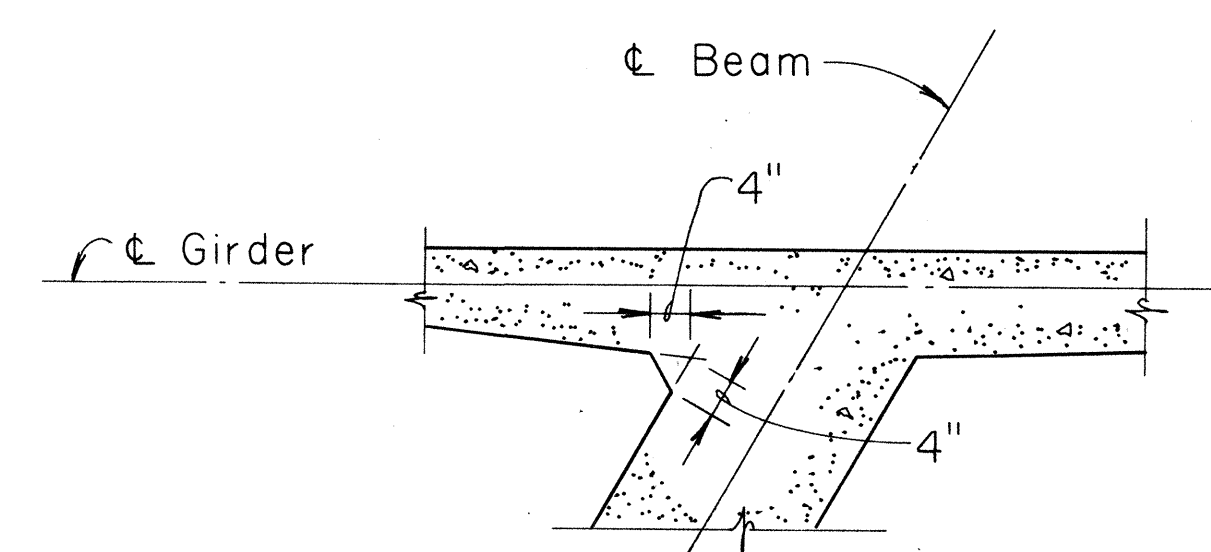
Not To Scale Date: May 1976

NOTE:
For additional
details, see
detailed plans

SECTION 

GIRDER STEM CONSTRUCTION JOINT

Depth T	a
4'-11" and smaller	1'-9"
5'-0" to 5'-11"	2'-0"
6'-0" to 6'-11"	2'-3"
7'-0" and greater	3'-0"



TYPICAL DETAIL OF VERTICAL
CHAMFER AT ACUTE INTERSECTION
OF SKEWED CONCRETE MEMBER



TYPICAL LONGITUDINAL DECK SECTION
ALONG GIRDER AT NORMAL OR RADIAL SUPPORTS

6-2-
DATE

NO.	REVISION	APPROVED BY	DATE

STANDARD DETAILS

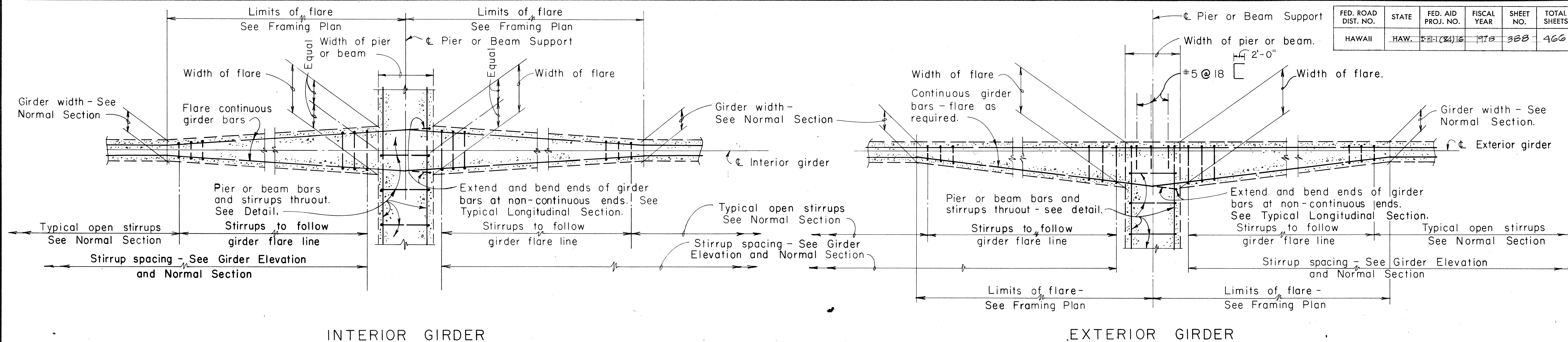
CONCRETE BOX GIRDER

Date: May 1976

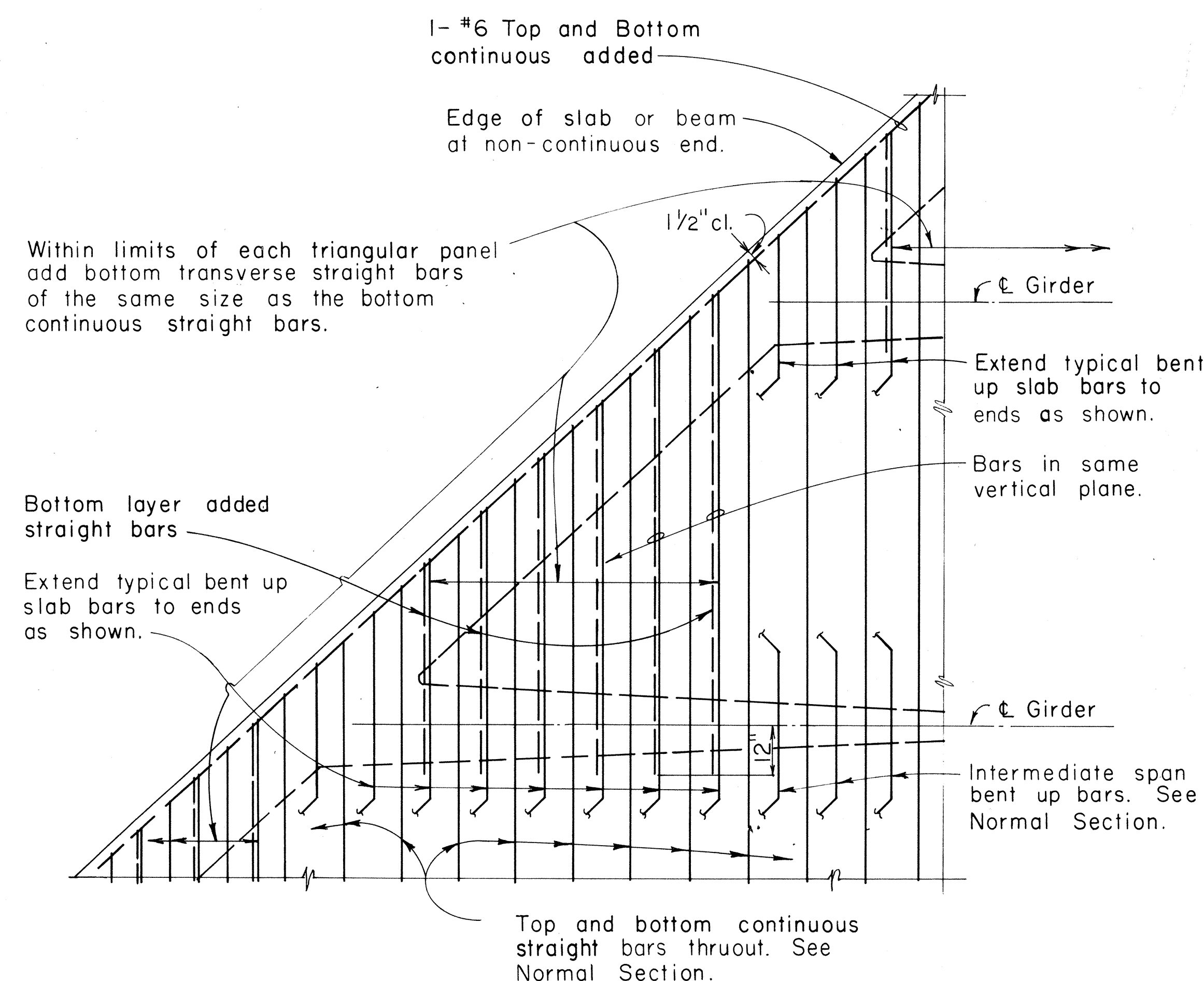
SHEET No. 3 OF 4 SHEETS DB-101-2

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

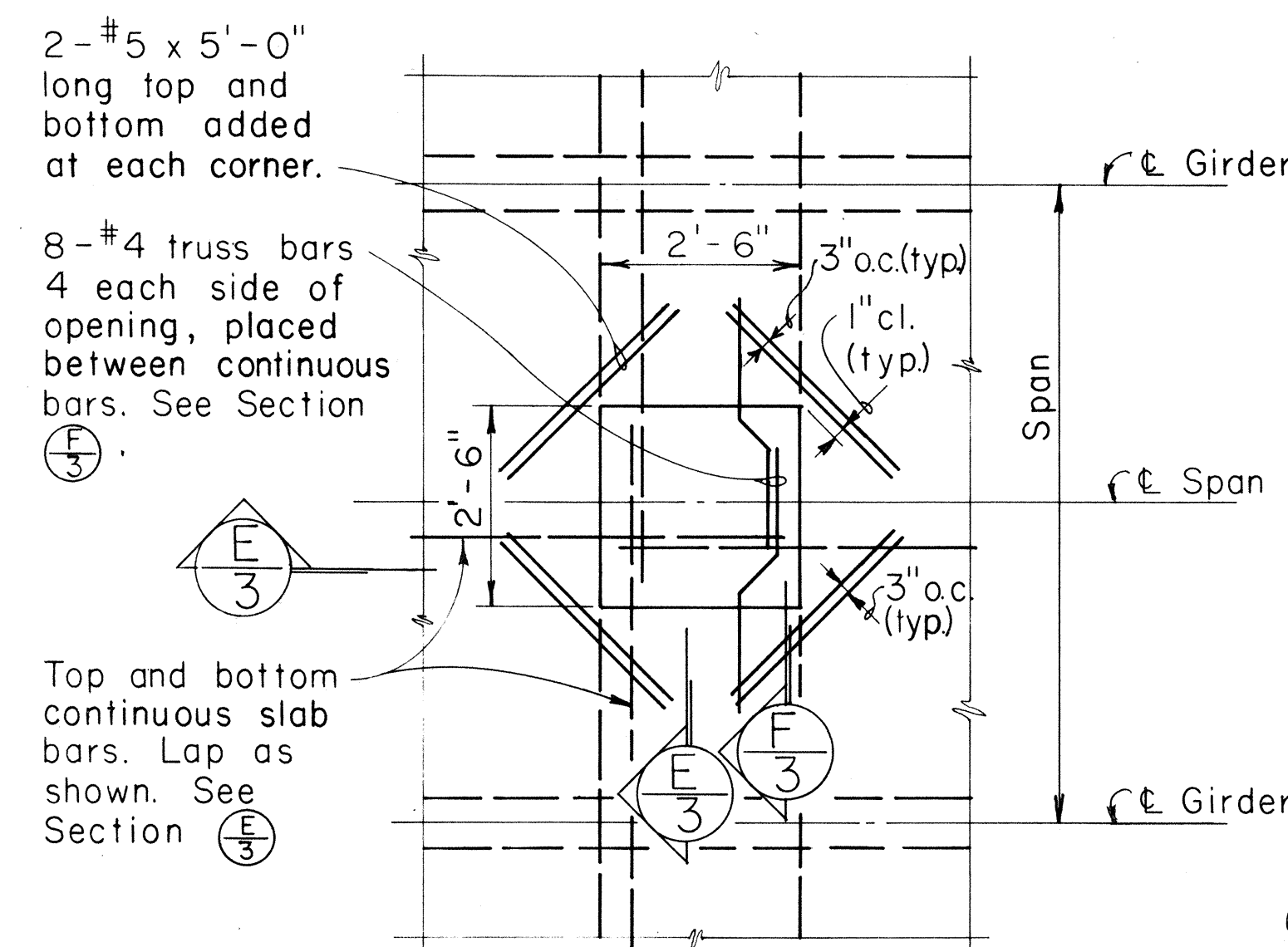
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-1-1 (24) 16	1978	388	466



**TYPICAL DETAILS OF GIRDER FLARE AT NORMAL OR RADIAL SUPPORTS - CONTINUOUS ENDS AS SHOWN
(NON-CONTINUOUS ENDS SIMILAR EXCEPT AS OTHERWISE NOTED)**



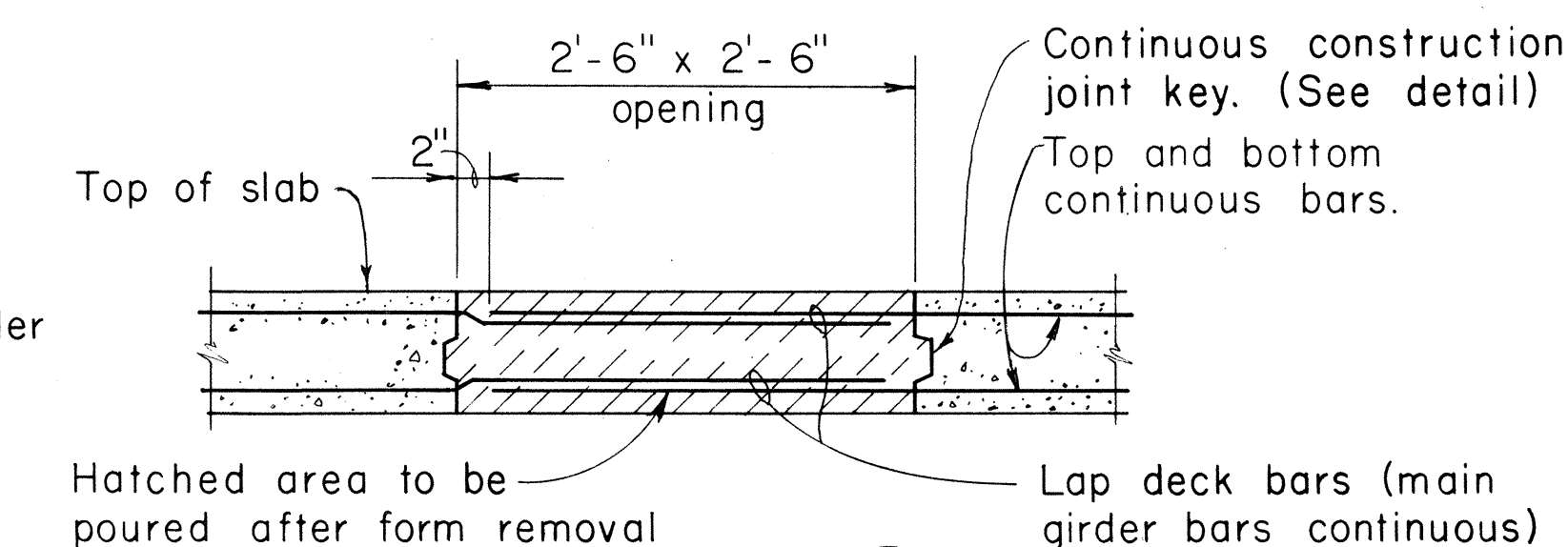
PART PLAN - TYPICAL ARRANGEMENT OF TOP SLAB REINFORCEMENT AT SKEWED ENDS



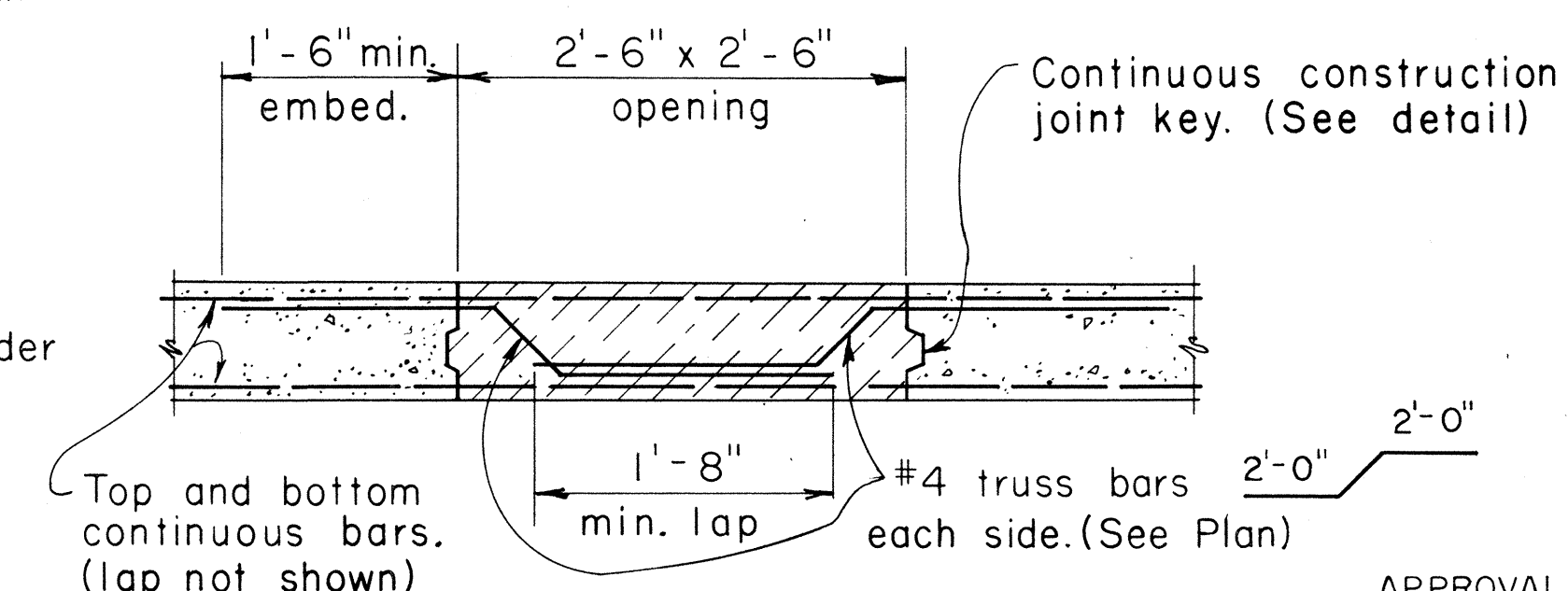
NOTES

1. Final location of opening shall be determined by the Engineer.
2. Form removal opening at top slab shall not be located where main girder bars occur.
3. Form removal opening may extend from edge of deck.

PART PLAN - DECK SHOWING FORM REMOVAL OPENING



SECTION E-3



SECTION F-3

APPROVAL RECOMMENDED
Edmund R. Yamamoto
BRIDGE DESIGN ENGINEER
C-1-76
DATE

APPROVED
Robert J. Kish
ASSISTANT CHIEF, ENGINEERING
C-2-76
DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
CONCRETE BOX GIRDER

Not To Scale: Date: May 1976

SHEET No. 4 OF 4 SHEETS DB-101-3