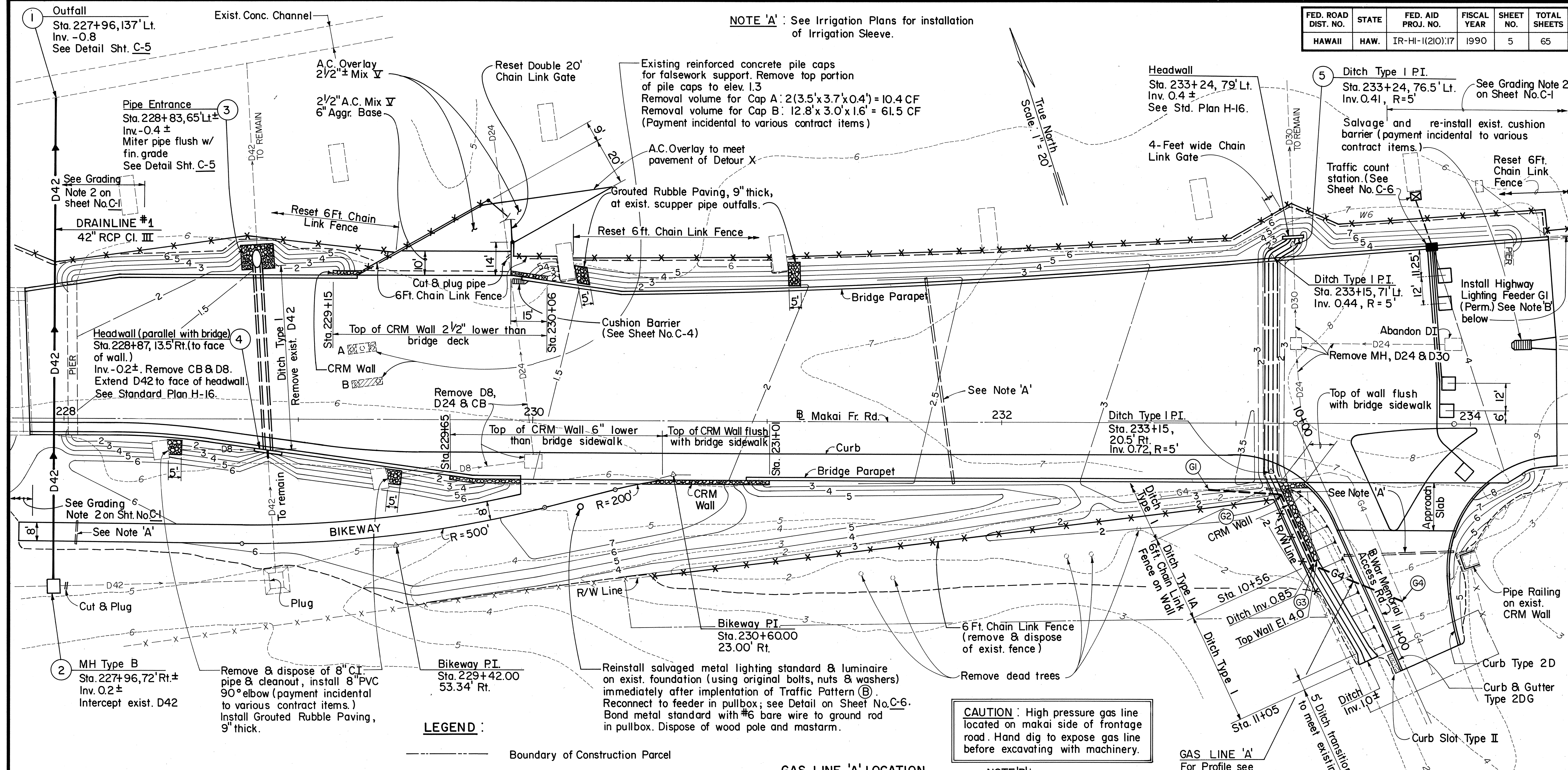


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(210):17	1990	5	65

NOTE 'A': See Irrigation Plans for installation of Irrigation Sleeve.



BIKEWAY PAVT. ELEVATIONS		
MAKAI FR. RD. STATION	SOUTH EDGE OF PAVT.	NORTH EDGE OF PAVT.
228+00	5.70	5.86
228+50	6.05	5.89
229+00	6.40	6.24
229+50	6.75	6.59
230+00	7.10	7.00

LEGEND:

- Boundary of Construction Parcel
- Chain Link Fence (new unless otherwise indicated)
- Limit of Grading
- Gas Line
- Exist. Gas Line
- Drain Culvert (Pipe Size in Inches)
- Exist. Drain Culvert
- Drainage Structure Number
- Traffic Loop Detectors in Bridge Deck (See Sht. No. C-6)
- Contour of Existing Grade
- Contour of Finish Grade

GAS LINE 'A' LOCATION

- G1 Gas Line 'A' Sta. 10+00 = Makai Fr. Rd. Sta. 232+88, 28' Rt. ± Connect to exist. G4.
- G2 Gas Line 'A' Sta. 10+31 = Makai Fr. Rd. Sta. 233+19, 30' Rt.
- G3 Gas Line 'A' Sta. 10+65 = War Memorial Access Rd. Sta. 10+58, 18' Rt.
- G4 Gas Line 'A' Sta. 10+06 = War Memorial Access Rd. Sta. 10+88, 10' Lt. Connect to exist. G4.

NOTE 'B':

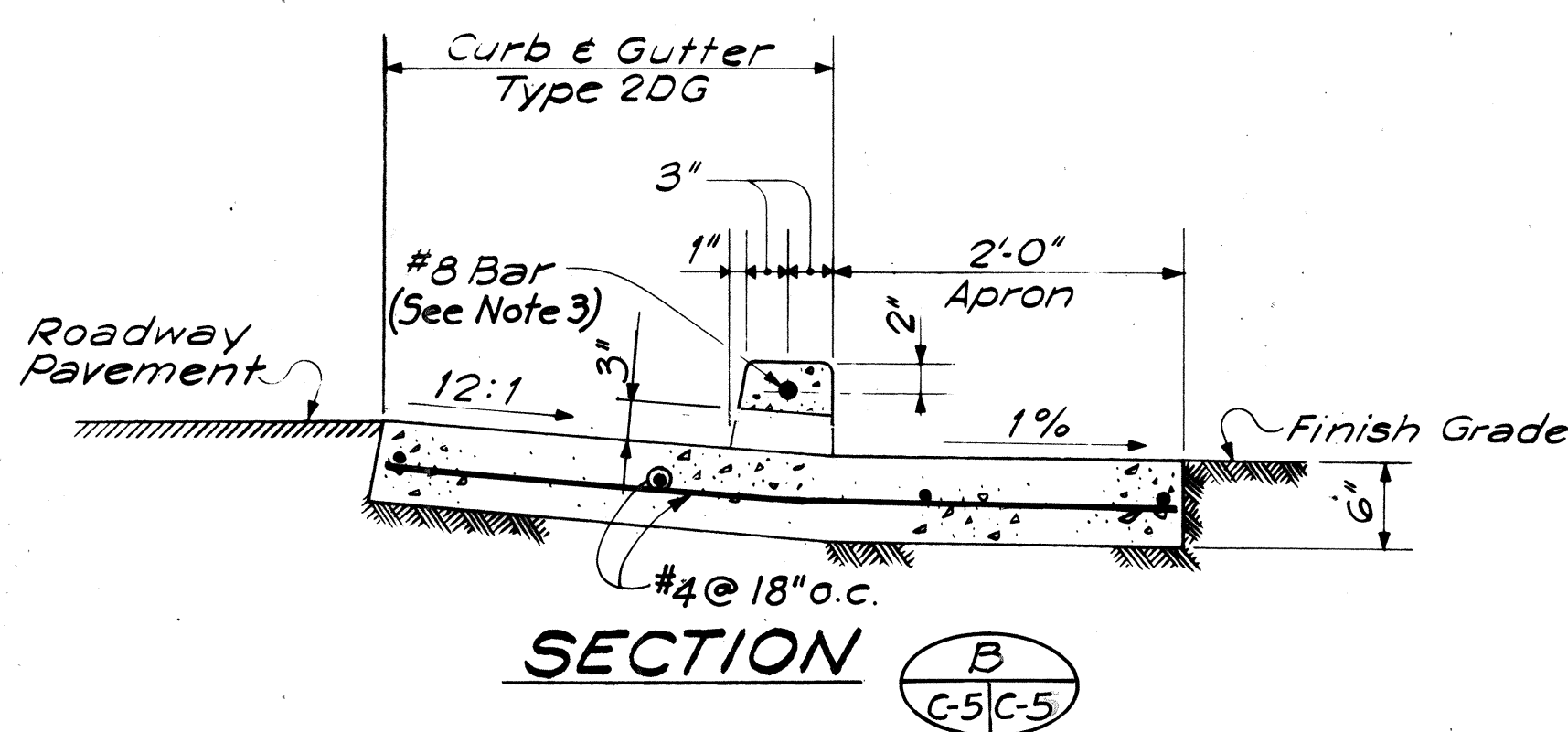
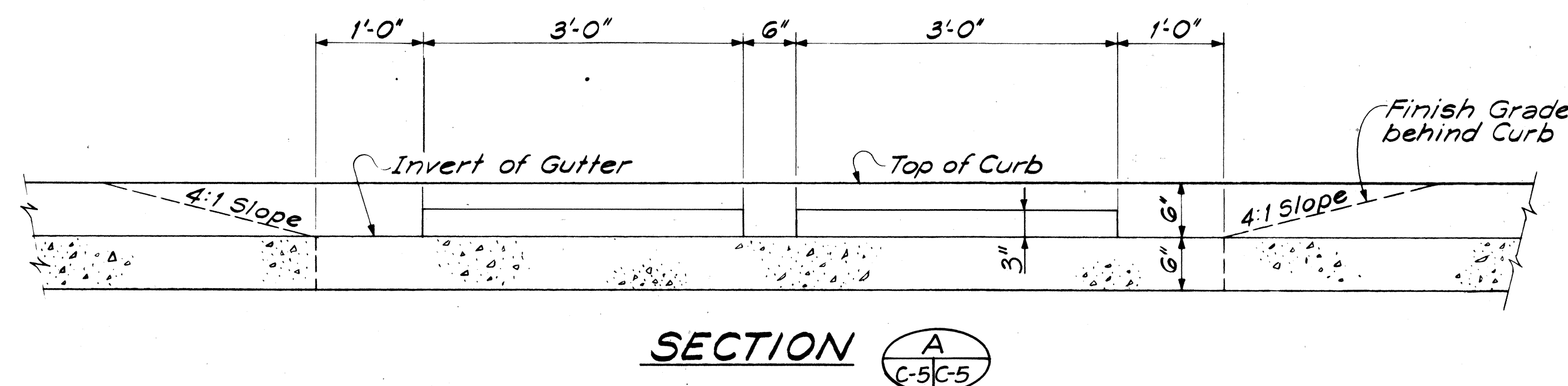
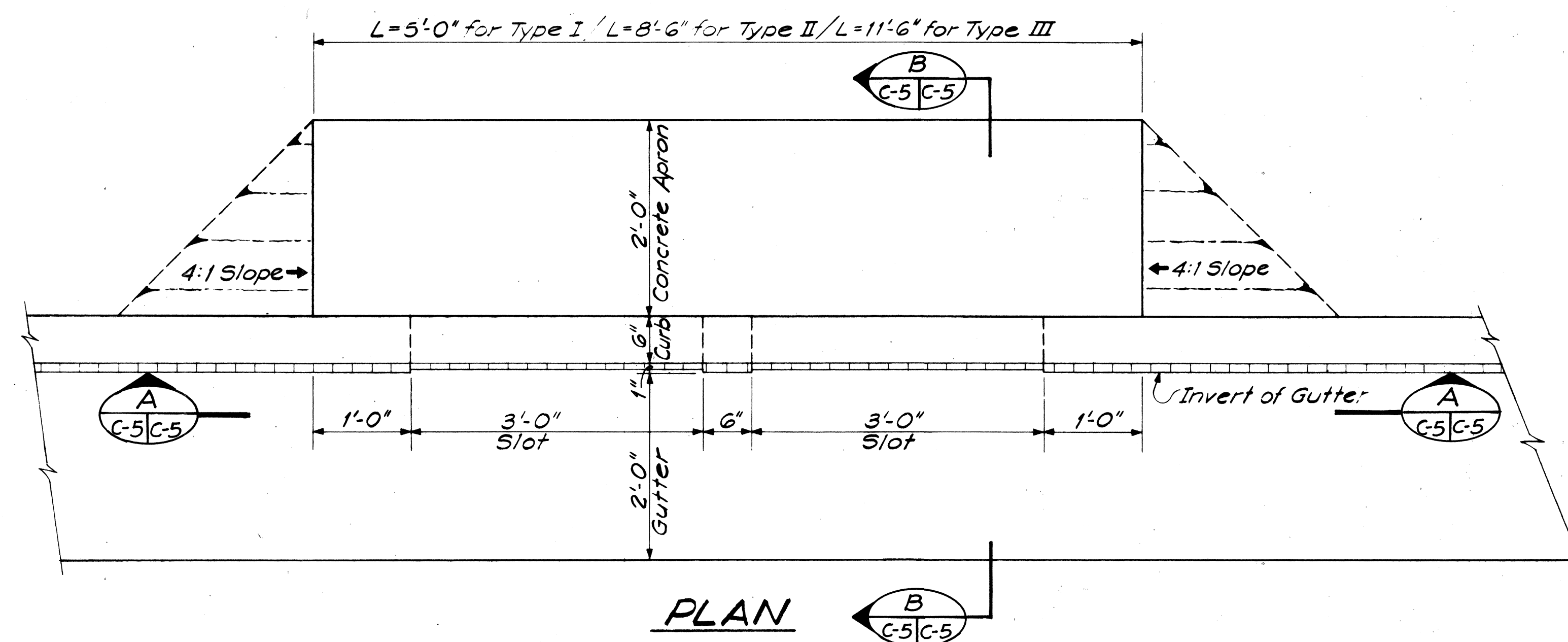
Install permanent Feeder G1 (3-#6, 1C, 600V). Connect to feeder G at exist. handhole (Sta. 234+04 ±, 101' Lt.) and to exist. feeder G1 at pullbox in bridge parapet (Sta. 236+45 ±, 90' Lt.). Provide a #6 bare copper cable & bond with metal raceway segments, metal pullbox, & existing #6 bare copper cable and connect to existing ground rod in handhole. Remove Temp. Feeder G1. Remove exposed temporary conduit at bridge parapet and fill hole in parapet with grout.

APPROVED: *[Signature]* Date 8-24-88
Gasco, Inc.
Dir., Dept. of P & R. Date 8-26-88
C&C of Honolulu



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DRAINAGE, GRADING & MISCELLANEOUS
(CONSTR. PHASES II & III)
KEEHI INTERCHANGE
Trestle Structure at Makai Front Rd.
FAIP NO. IR - HI - 1(210):17
SCALE: 1" = 20' DATE: MAY 1, 1988
SHEET No. C-3 OF 13 SHEETS

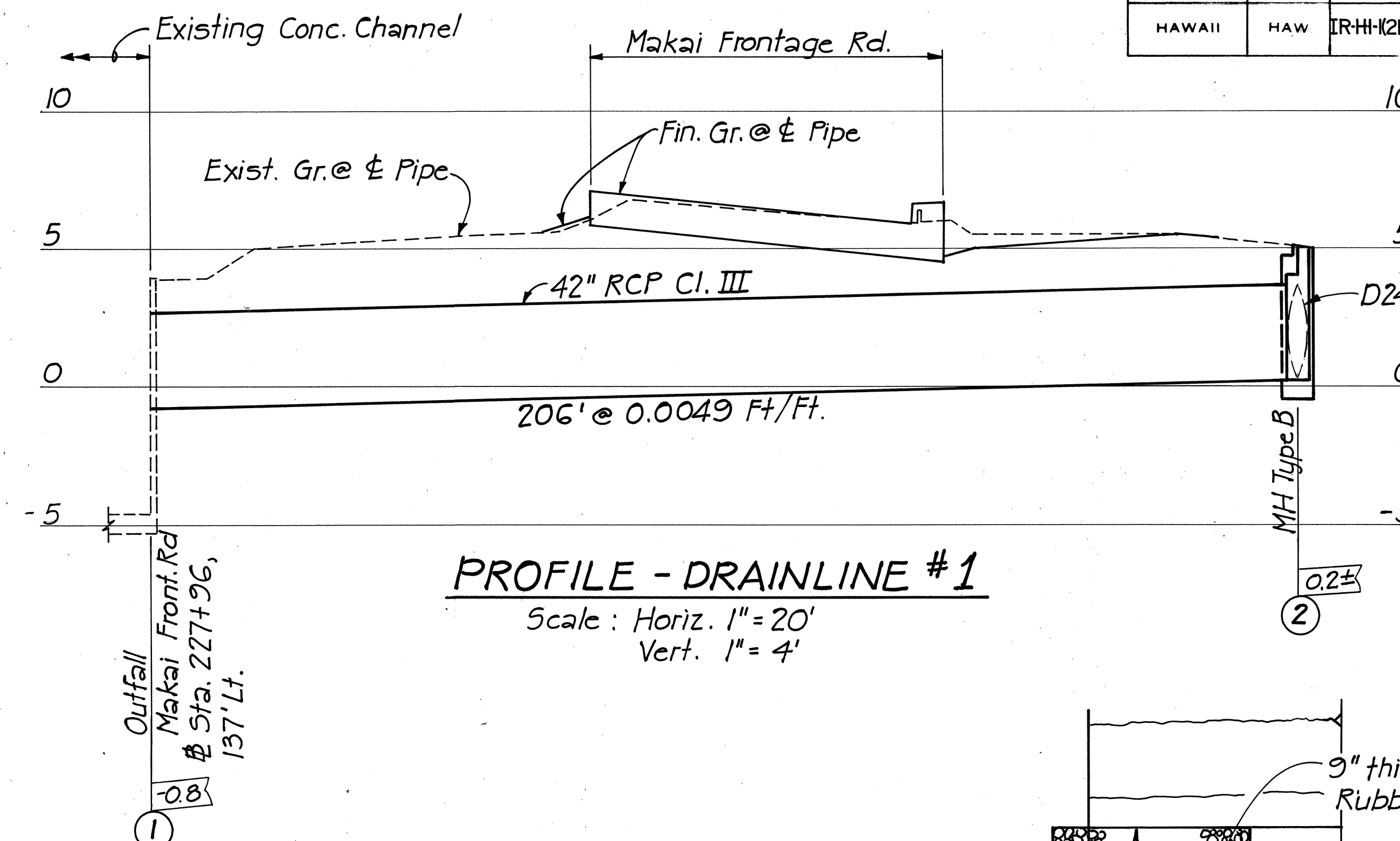
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	IR-HI-1(210):17	1990	7	65



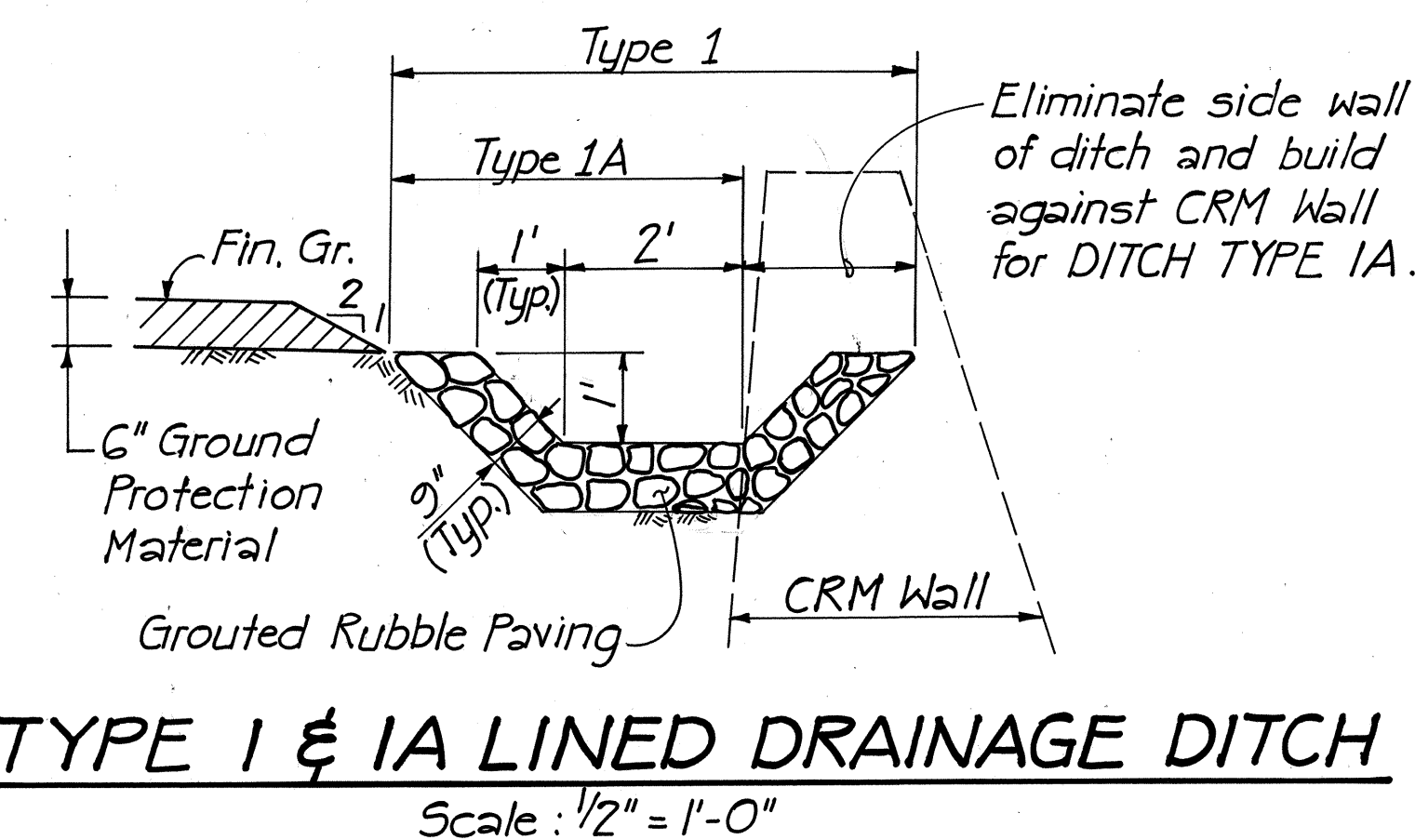
CURB SLOT
SCALE: 1"=1'-0"

NOTES:

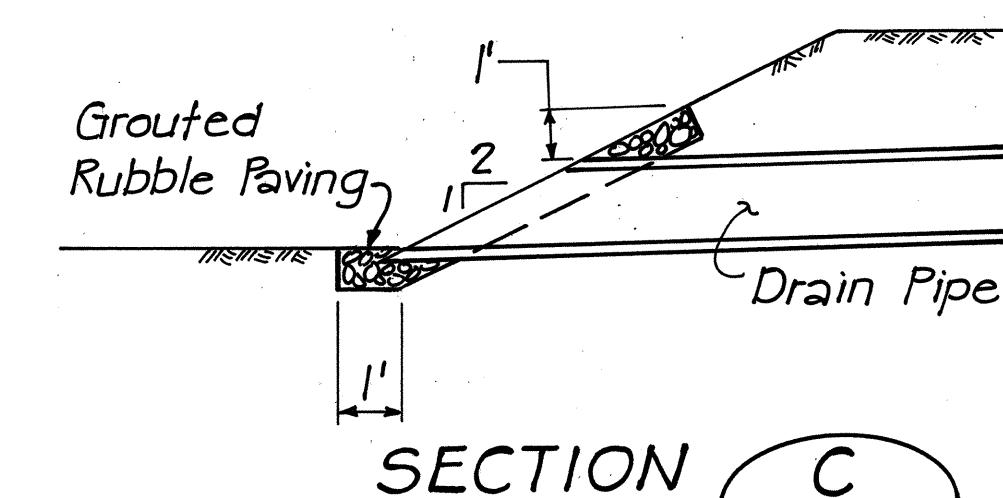
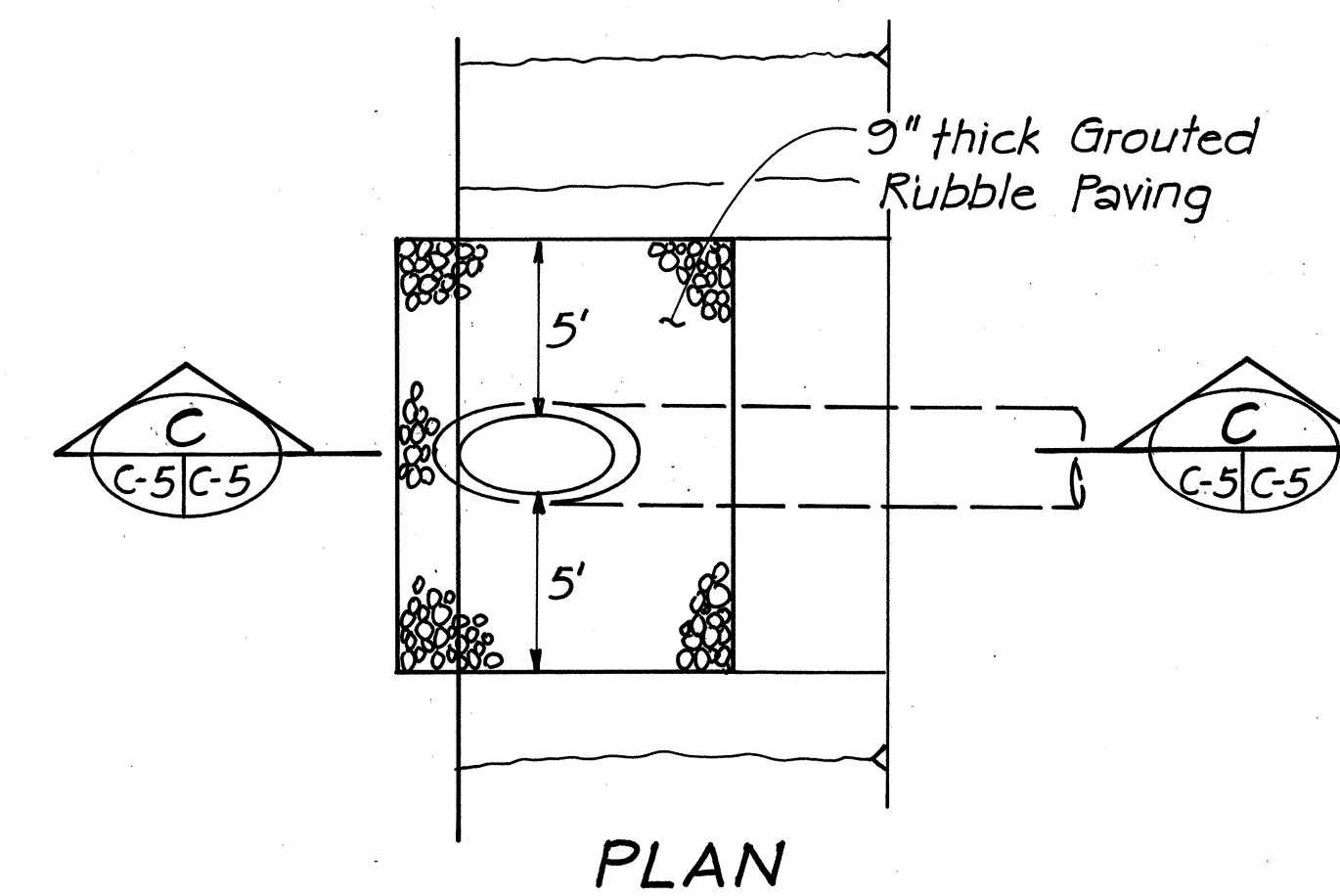
1. Curb Slot Type II is shown. Type I shall have one slot and Type III shall have three slots.
2. Concrete shall be Class A.
3. #8 Bar shall be continuous over all slots. Embedment at each end shall be 2'-0".
4. Payment for curb slot, complete in place, shall be considered incidental to "Curb & Gutter, Type 2DG".



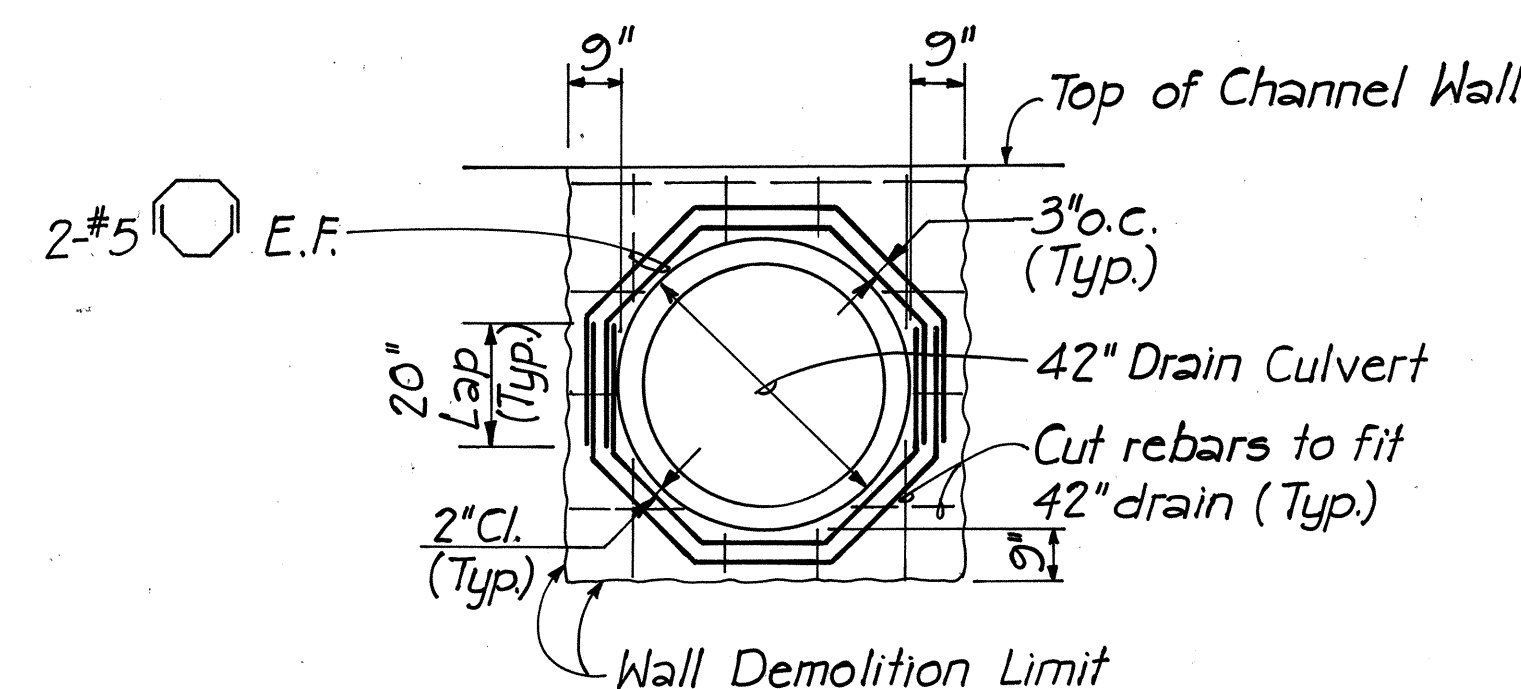
PROFILE - DRAINLINE #1
Scale: Horiz. 1"=20'
Vert. 1"=4'



TYPE I & IA LINED DRAINAGE DITCH
Scale: 1/2"=1'-0"

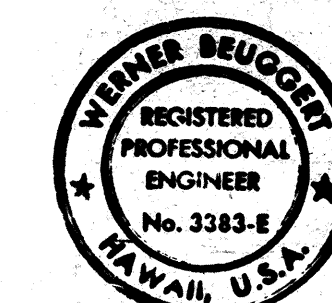


PIPE ENTRANCE - DR. STRUCTURE NO. 3
Not to Scale



OUTFALL - DR. STRUCTURE NO. 1
Scale: 3/8"=1'-0"

Note: Payment for wall demolition is considered incidental to "Class A Concrete for Drainage System".



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Werner Brueggel

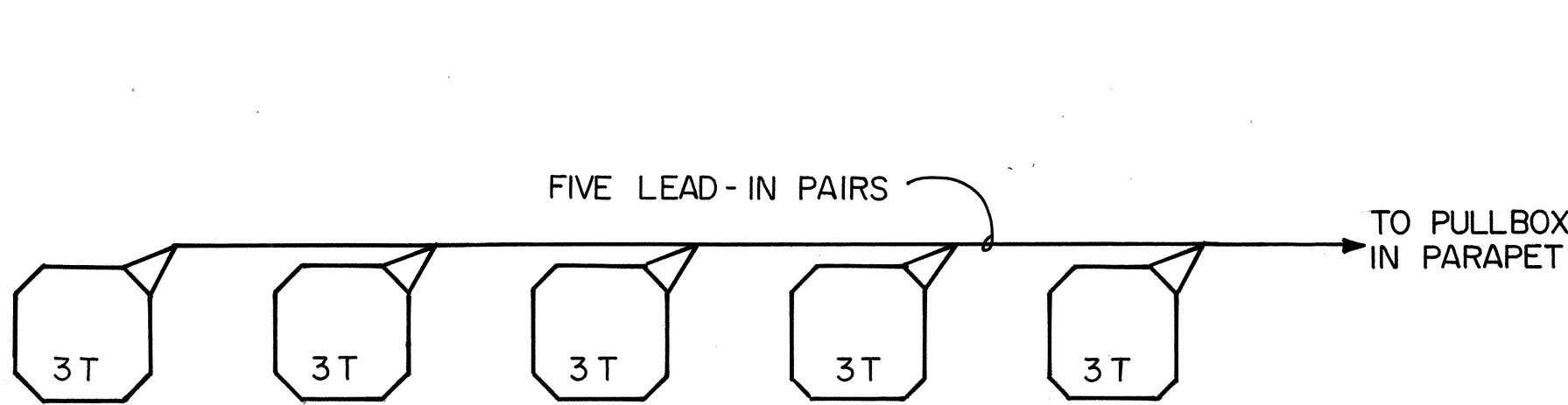
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS

KEEHI INTERCHANGE
Trestle Structure at Makai Front. Rd.
FAIP NO. IR - HI - 1(210):17

SCALE: AS SHOWN DATE: MAY 1, 1988
SHEET NO C-5 OF 13 SHEETS

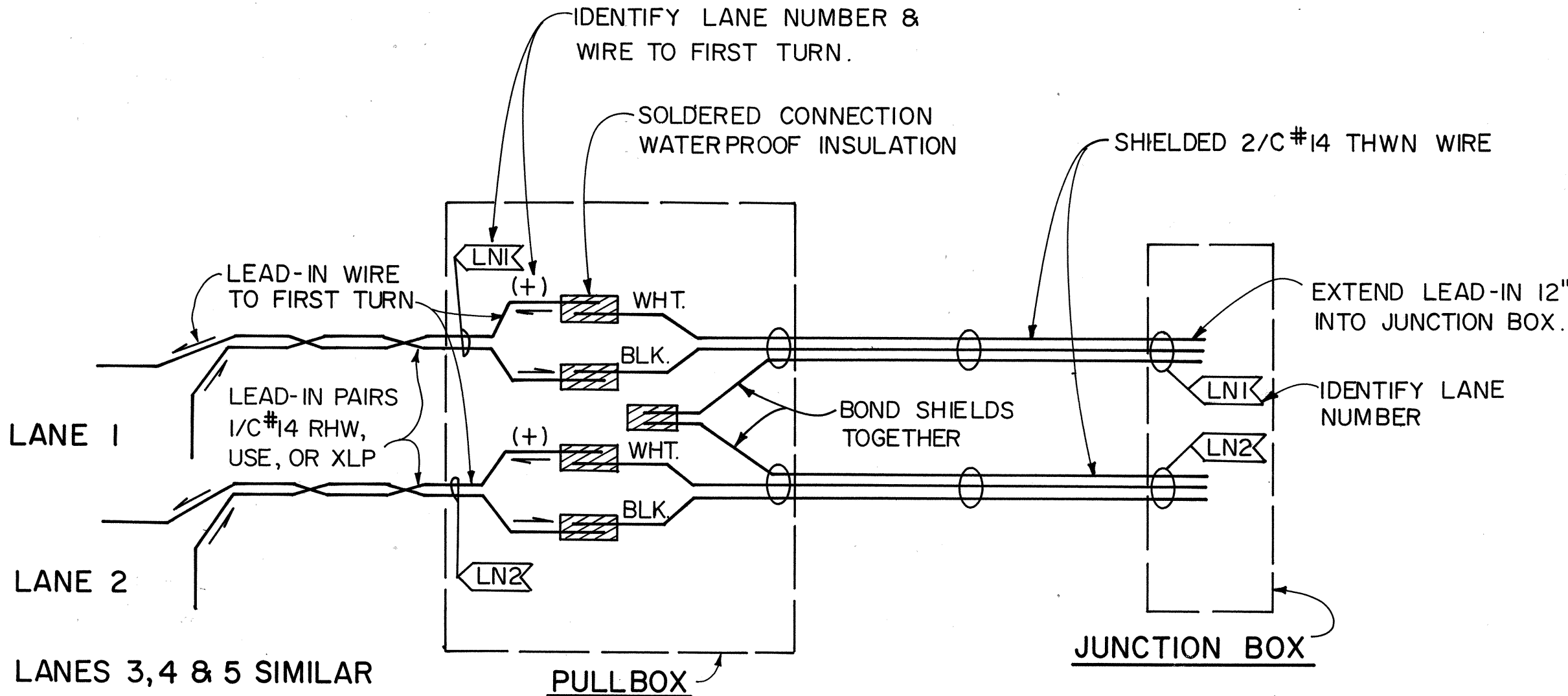
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(210):17	1990	8	65



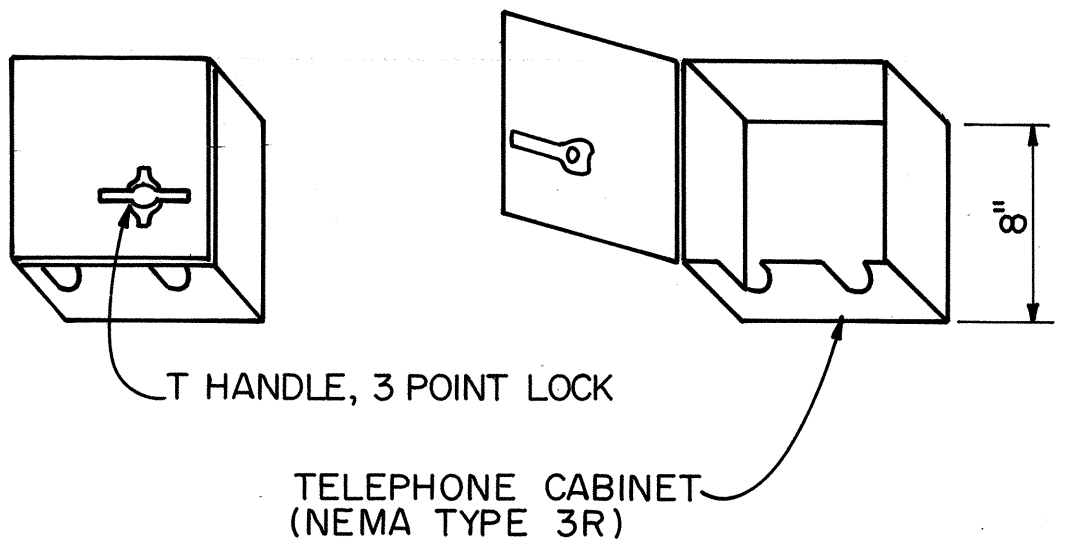
NOTES:

1. PROVIDE LOOP OF THREE TURNS (3T) OF 1/C, #14AWG TYPE RHW, USE, OR XLP WIRE.
2. PROVIDE LOOP AND LEAD-IN WIRES TO PULL BOX IN UNSPLICED LENGTH. TWIST PAIRED LEAD-IN WIRES TWO TURNS PER FOOT. DO NOT TWIST PAIRS TOGETHER.
3. IDENTITY AND TAG LANE LOOP ON LEAD-IN PAIR. IDENTITY AND TAG LEAD-IN WIRE TO FIRST TURN.

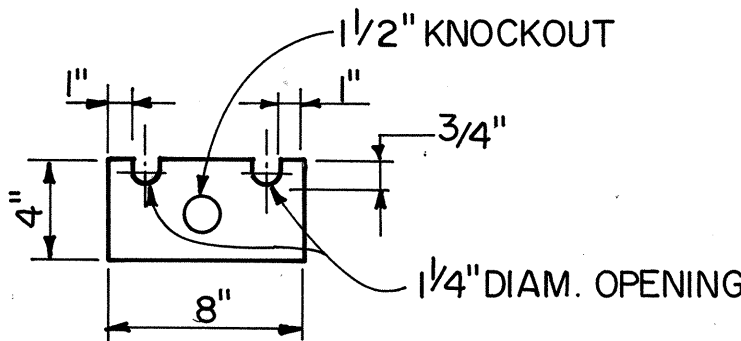
**SCHEMATIC
LOOP DETECTOR LAYOUT**
N.T.S.



JUNCTION BOX, PULLBOX WIRING & IDENTIFICATION
N.T.S.

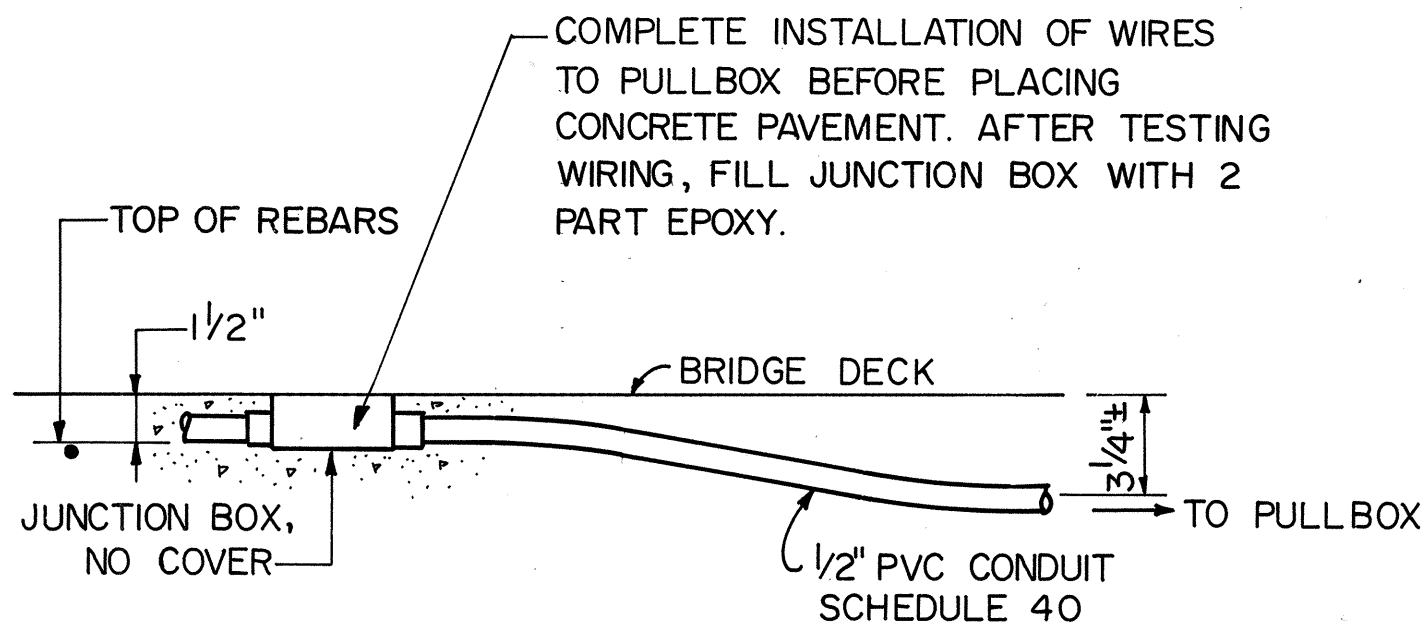


FRONT VIEWS

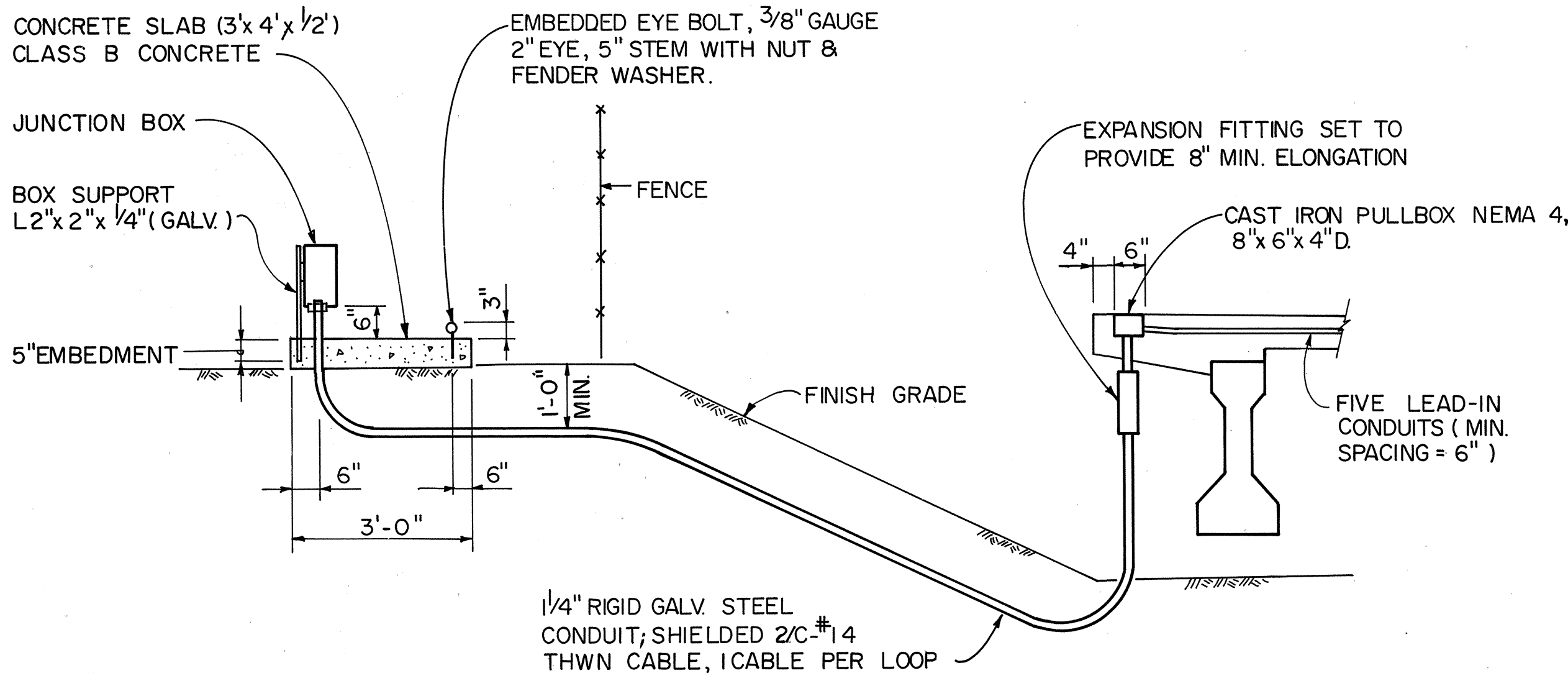


BOTTOM VIEW

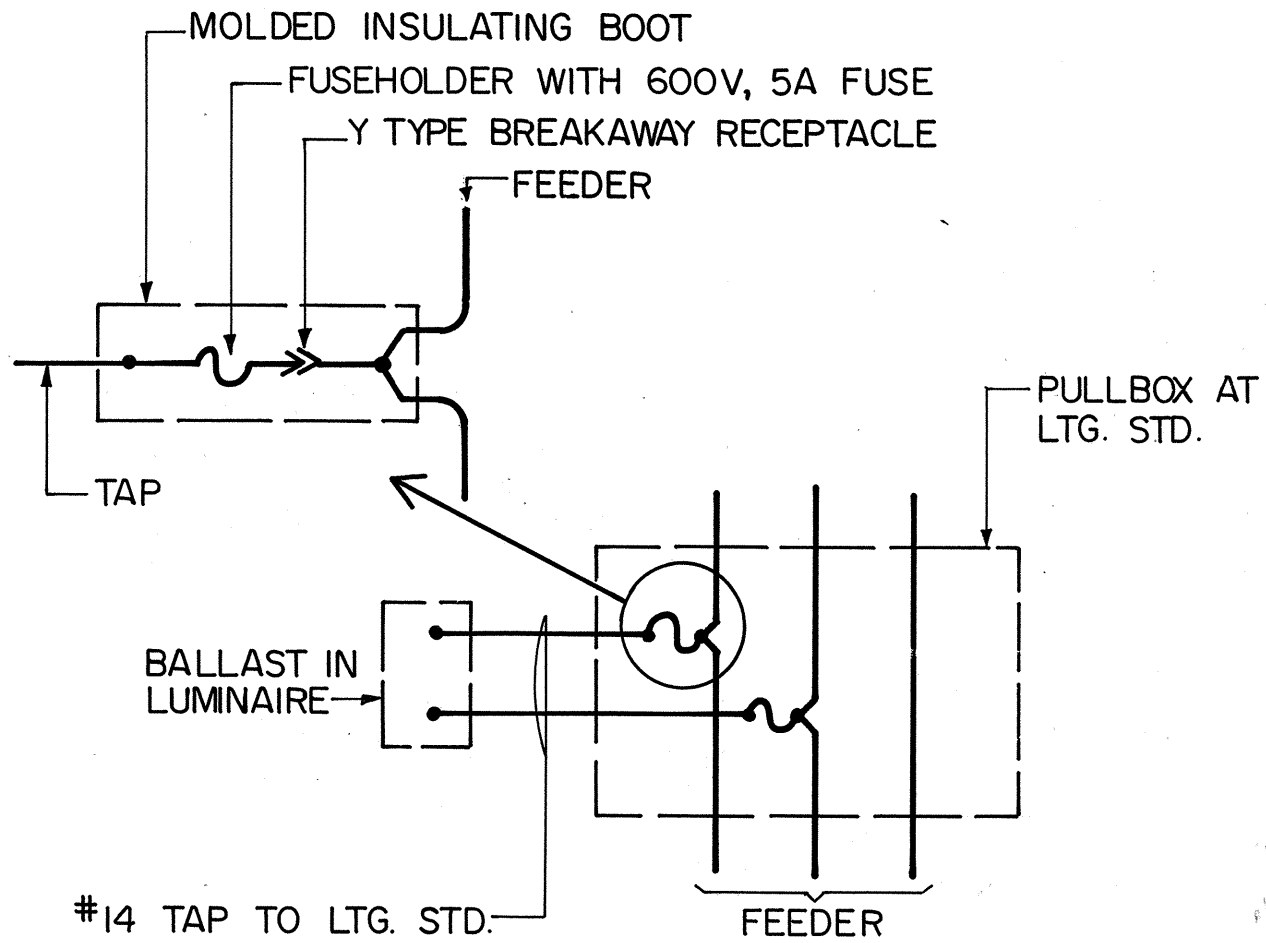
JUNCTION BOX
N.T.S.



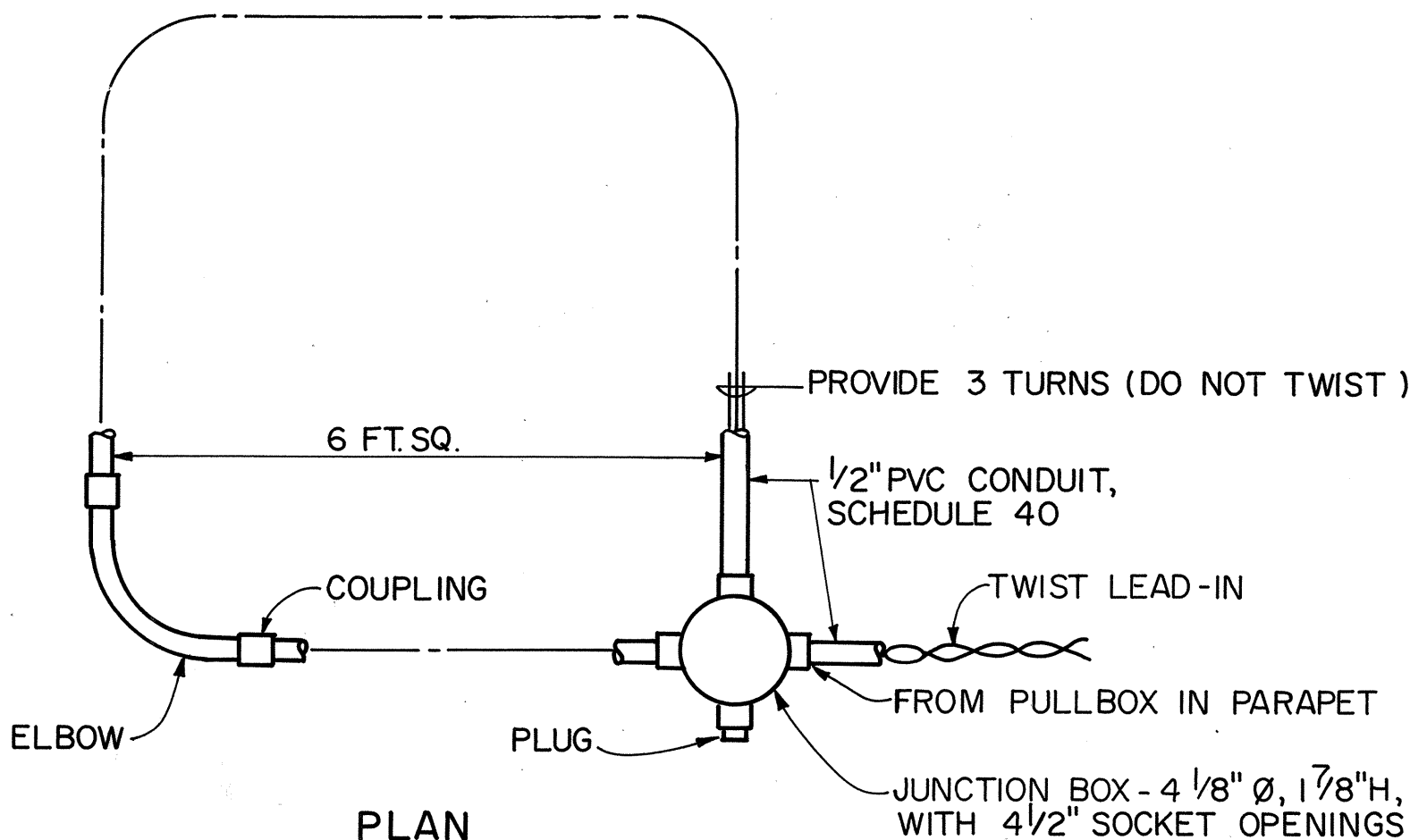
SECTION



SECTION
N.T.S.



TAP TO LIGHTING STANDARD LUMINAIRE

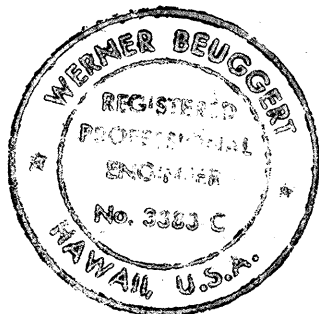


PLAN

LOOP DETECTOR
N.T.S.

TRAFFIC COUNT STATION

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.
Walter H. H. H.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

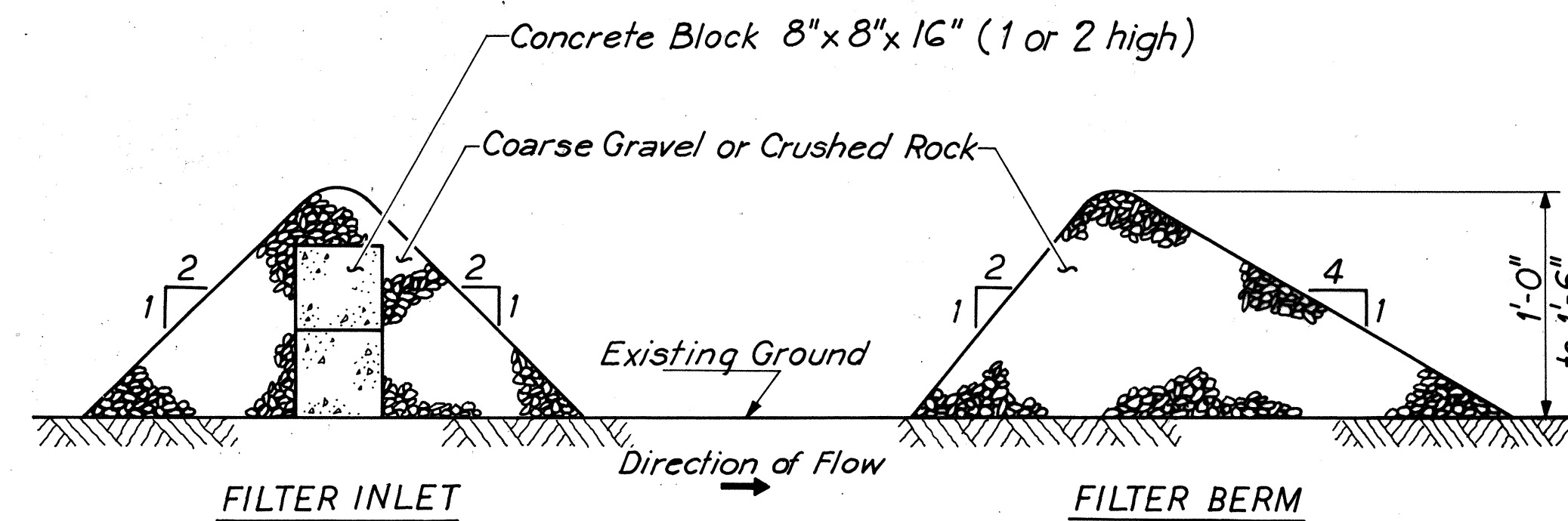
**TRAFFIC COUNT STATION AND
LIGHTING DETAIL**

KEEHI INTERCHANGE
Trestle Structure at Makai Front Rd.
FAIP NO. IR-HI-1(210):17
SCALE: NOT TO SCALE DATE: MAY 1, 1988
SHEET No. C-6 OF 13 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(210)17	1990	9	65

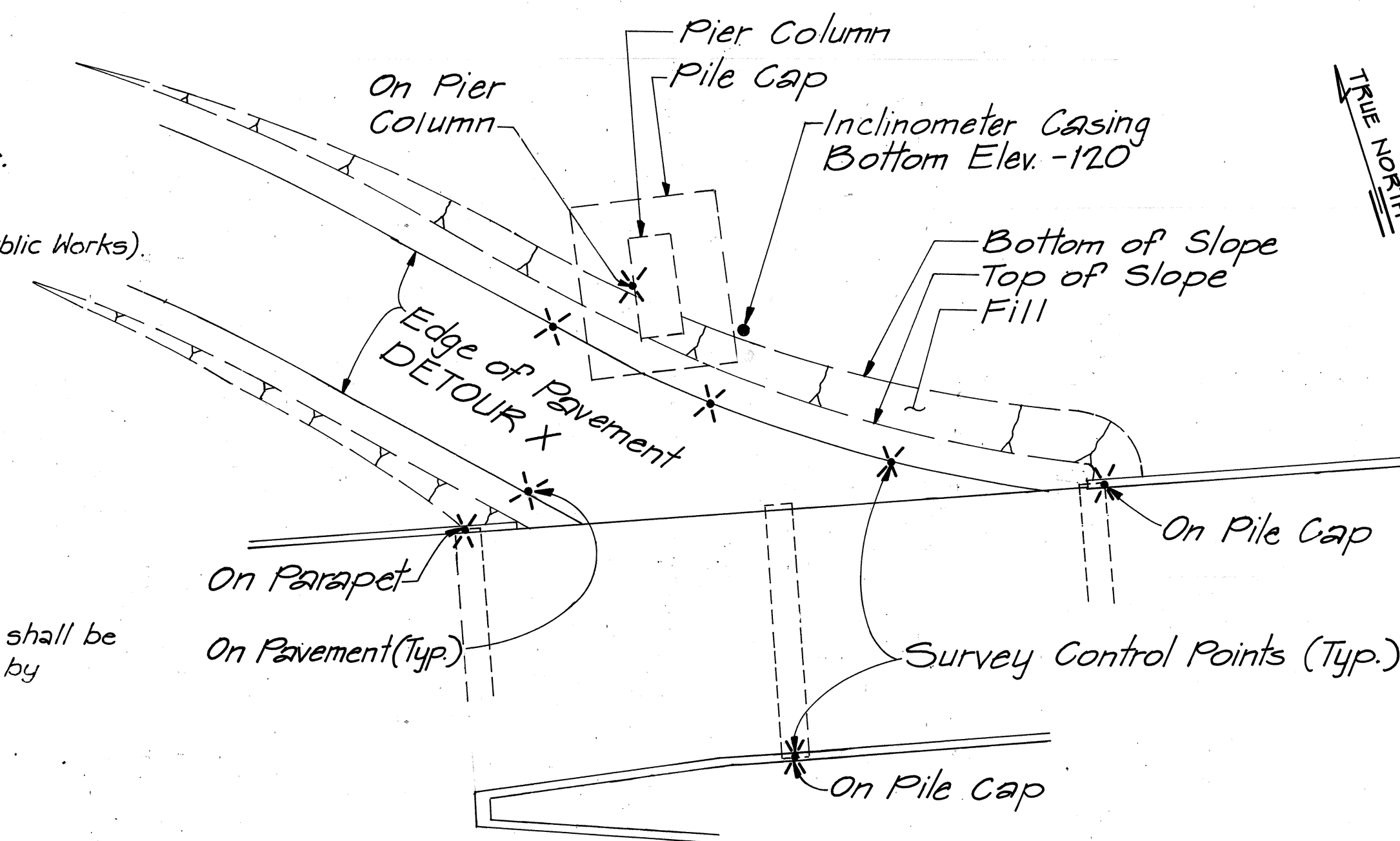
NOTES FOR GRADING

1. All grading work shall be done in accordance with Chapter 23, Grading, Soil Erosion & Sediment Control, of the Revised Ordinances of Honolulu, 1978, as amended (Ordinance No. 81-13)
2. All graded areas shall have "Temporary Ground Cover."
3. The Contractor shall remove all silt and debris resulting from his work and deposited in drainage facilities, roadways & other areas. Payment for any necessary remedial action by the Chief Engineer (C&C, Dept. of Public Works) shall be considered incidental to various contract items.
4. The Contractor, at his own expense, shall keep the project area & surrounding area free from dust nuisance. The work shall be in conformance with the air pollution control standards & regulations of the State Department of Health.
5. The underground pipes, cables or ductlines known to exist by the Engineer from his search of records are indicated on the plans. The Contractor shall verify the location & depth of the facilities & exercise proper care in excavating in the area. Wherever connections of new utilities to existing utilities are shown on the plans, the Contractor shall expose the existing lines at the proposed connections to verify their locations & depths prior to excavation for the new lines.
6. All slopes & exposed areas shall be sodded or planted immediately after the grading work has been completed.
7. Fills on slopes steeper than 5:1 shall be keyed.
8. The City shall be informed of the location of the borrow/disposal site for the project when the application for a grading permit is made.
9. No grading work shall be done on Saturdays, Sundays & holidays at any time without prior notice to the Chief Engineer. (C&C, Dept. of Public Works).
10. The limits of the graded area shall be flagged before the commencement of the grading work.
11. All grading operations shall be performed in conformance with the applicable provisions of the Water Pollution Control & Water Quality Standards contained in the Public Health Regulations, State Department of Health, on Water Pollution Control & Water Quality Standards.
12. Temporary Erosion Control Procedures shall be submitted for approval prior to application for a grading permit.
13. Excavated material on site which will be exposed for more than 7 days shall be covered with plastic sheets within 2 days of placement or as directed by the Engineer.
14. "Filter Berms" shall be installed along the edges of open channels & ditches in order to filter sediment from runoff, before waters enter the channels.
15. "Filter Inlets" shall be installed in swales near catch basins in order to filter sediment from runoff, before waters enter closed drainage system.
16. The borrow/disposal site must fulfill the requirements of the grading ordinance.



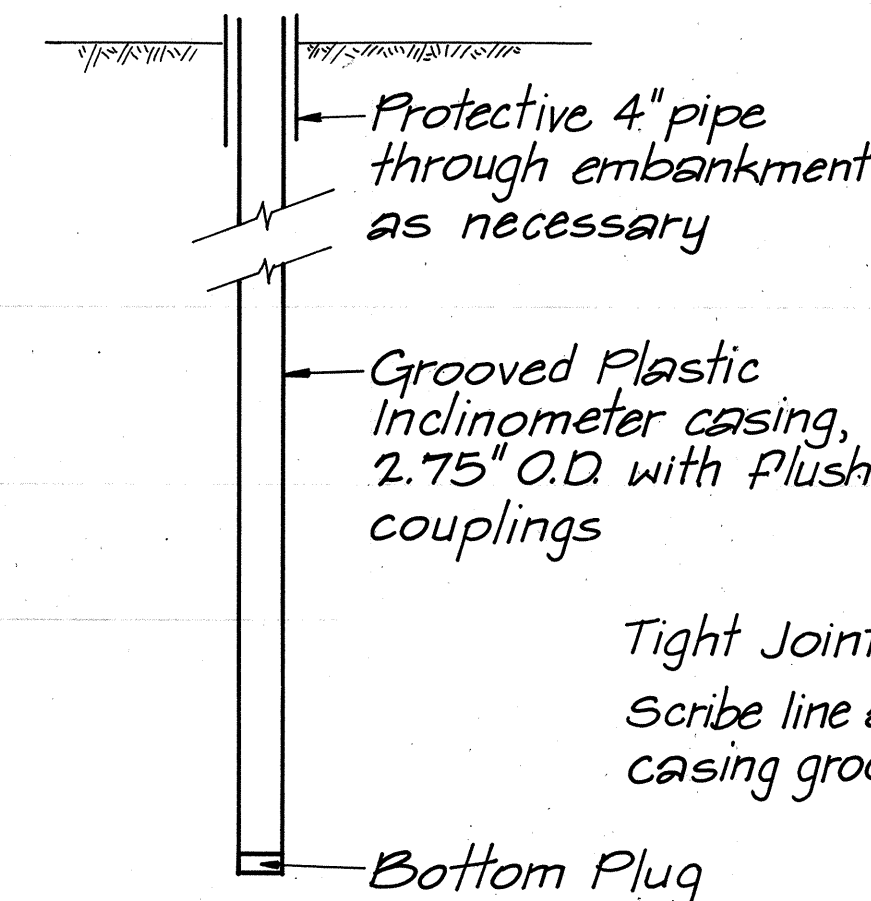
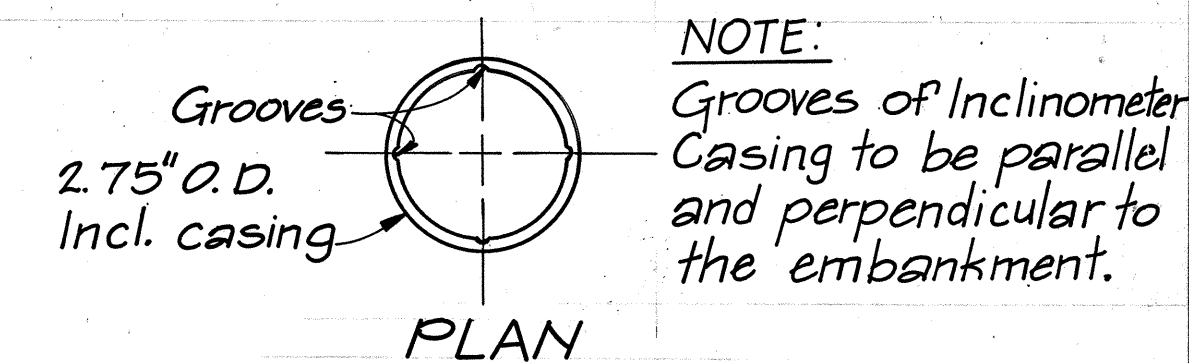
TEMPORARY EROSION CONTROL DETAILS
N.T.S.

NOTE: Contractor may use filter fabric silt fence in lieu of filter berms subject to the approval of the Engineer.

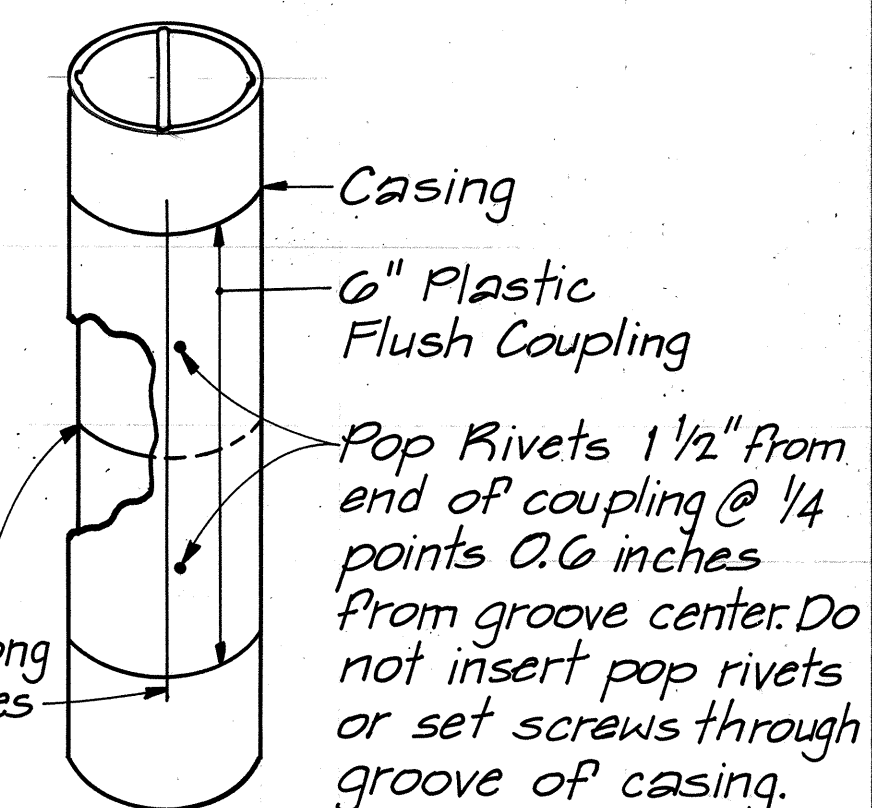


234+00 235+00 Makai Fr. Rd. 236+00

EMBANKMENT AND STRUCTURE MONITORING PLAN
Scale: 1"=20'

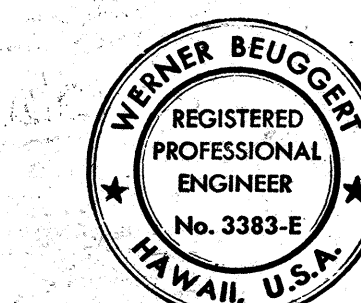


INCLINOMETER CASING
IN SOIL
N.T.S.



PLASTIC INCLINOMETER
CASING WITH 6" COUPLING
Scale: 3/8"=1"

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Werner Beugnot

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EROSION CONTROL AND EMBANKMENT MONITORING

KEEHI INTERCHANGE
Trestle Structure at Makai Front Rd.
FAIP NO. IR - HI - 1(210)17

SCALE: AS SHOWN DATE: MAY 1, 1988
SHEET No. C-7 OF 13 SHEETS