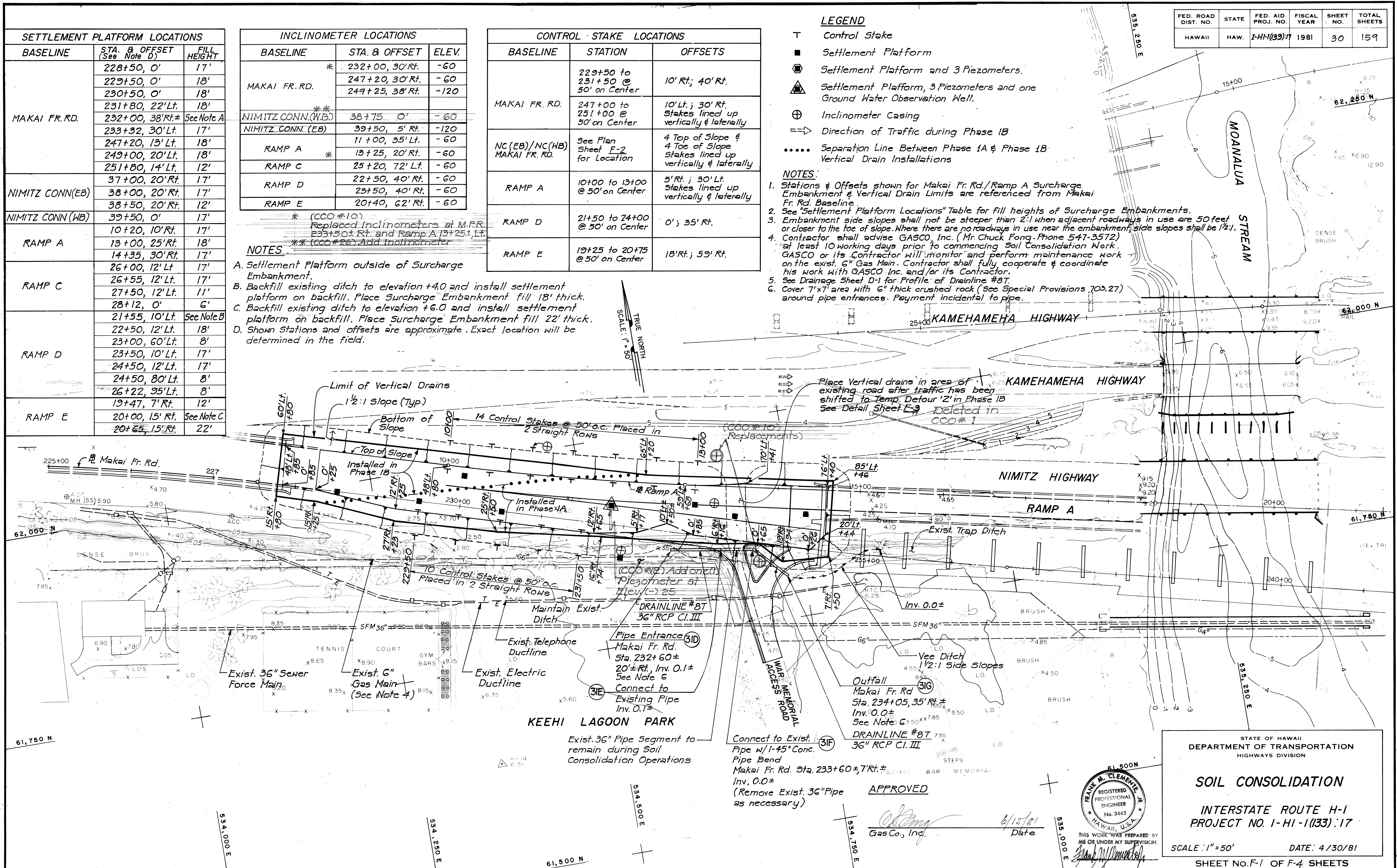




SETTLEMENT PLATFORM LOCATIONS		
BASELINE	STA. & OFFSET (See Note D)	FILL HEIGHT
MAKAI FR. RD.	228+50, 0'	17'
	229+50, 0'	18'
	230+50, 0'	18'
	231+80, 22' Lt.	18'
	232+00, 38' Rt. #	See Note A
	233+32, 30' Lt.	17'
	247+20, 13' Lt.	18'
	249+00, 20' Lt.	18'
NIMITZ CONN (EB)	37+00, 20' Rt.	17'
	38+00, 20' Rt.	17'
	38+50, 20' Rt.	12'
NIMITZ CONN (WB)	39+50, 0'	17'
	10+20, 10' Rt.	17'
RAMP A	13+00, 25' Rt.	18'
	14+35, 30' Rt.	17'
RAMP C	26+00, 12' Lt.	17'
	26+55, 12' Lt.	17'
	27+50, 12' Lt.	11'
RAMP D	28+12, 0'	6'
	21+55, 10' Lt.	See Note B
	22+50, 12' Lt.	18'
	23+00, 60' Lt.	8'
	23+50, 10' Lt.	17'
	24+50, 12' Lt.	17'
RAMP E	26+50, 80' Lt.	8'
	26+22, 25' Lt.	8'
	19+47, 7' Rt.	12'
	20+00, 15' Rt.	See Note C
	20+65, 15' Rt.	22'

INCLINOMETER LOCATIONS		
BASELINE	STA. & OFFSET	ELEV.
MAKAI FR. RD.	* 232+00, 30' Rt.	-60
	247+20, 30' Rt.	-60
	249+25, 38' Rt.	-120
NIMITZ CONN (WB)	** 38+75, 0'	-60
	39+50, 5' Rt.	-120
NIMITZ CONN (EB)	11+00, 35' Lt.	-60
RAMP A	* 13+25, 20' Rt.	-60
RAMP C	25+20, 72' Lt.	-60
RAMP D	22+50, 40' Rt.	-60
RAMP E	23+50, 40' Rt.	-60
	20+40, 62' Rt.	-60

CONTROL STAKE LOCATIONS		
BASELINE	STATION	OFFSETS
MAKAI FR. RD.	229+50 to 231+50 @ 50' on Center	10' Rt.; 40' Rt.
	247+00 to 251+00 @ 50' on Center	10' Lt.; 30' Rt. Stakes lined up vertically & laterally
NC (EB)/NC (WB) MAKAI FR. RD.	See Plan Sheet F-2 for Location	4 Top of Slope & 4 Toe of Slope Stakes lined up vertically & laterally
RAMP A	10+00 to 13+00 @ 50' on Center	5' Rt.; 30' Lt. Stakes lined up vertically & laterally
RAMP D	21+50 to 24+00 @ 50' on Center	0'; 35' Rt.
RAMP E	19+25 to 20+75 @ 50' on Center	18' Rt.; 59' Rt.

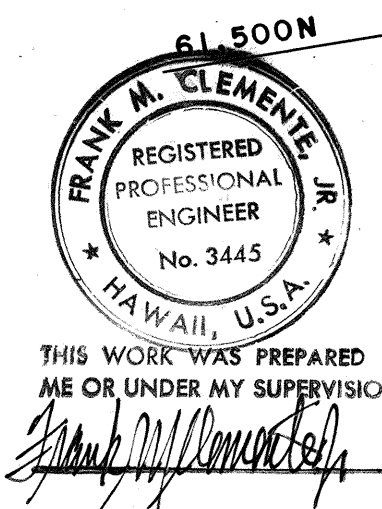
- NOTES:
- A. Settlement Platform outside of Surcharge Embankment.
 - B. Backfill existing ditch to elevation +4.0 and install settlement platform on backfill. Place Surcharge Embankment fill 18' thick.
 - C. Backfill existing ditch to elevation +6.0 and install settlement platform on backfill. Place Surcharge Embankment fill 22' thick.
 - D. Shown Stations and offsets are approximate. Exact location will be determined in the field.

- LEGEND
- T Control Stake
 - Settlement Platform
 - ⊕ Settlement Platform and 3 Piezometers.
 - ⊕ Settlement Platform, 3 Piezometers and one Ground Water Observation Well.
 - ⊕ Inclinator Casing
 - ⇒ Direction of Traffic during Phase 1B
 - Separation Line Between Phase 1A & Phase 1B
 - Vertical Drain Installations

- NOTES:
- 1. Stations & Offsets shown for Makai Fr. Rd./Ramp A Surcharge Embankment & Vertical Drain Limits are referenced from Makai Fr. Rd. Baseline
 - 2. See "Settlement Platform Locations" Table for fill heights of Surcharge Embankments.
 - 3. Embankment side slopes shall not be steeper than 2:1 when adjacent roadways in use are 50 feet or closer to the toe of slope. Where there are no roadways in use near the embankment, side slopes shall be 1 1/2:1.
 - 4. Contractor shall advise GASCO, Inc. (Mr. Chuck Fong, Phone 547-3572) at least 10 working days prior to commencing Soil Consolidation Work. GASCO or its Contractor will monitor and perform maintenance work on the exist. 6" Gas Main. Contractor shall fully cooperate & coordinate his work with GASCO Inc. and/or its Contractor.
 - 5. See Drainage Sheet D-1 for Profile of Drainline #87.
 - 6. Cover 7'x7' area with 6" thick crushed rock (See Special Provisions 703.27) around pipe entrances. Payment incidental to pipe.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(133)-17	1981	30	159

DATE: _____
SURVEY PLOTTED BY: _____
DRAWN BY: _____
DESIGNED BY: _____
CHECKED BY: _____
NO. _____



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SOIL CONSOLIDATION

INTERSTATE ROUTE H-1
PROJECT NO. I-HI-1(133)-17

SCALE: 1"=50' DATE: 4/30/81

SHEET NO. F-1 OF F-4 SHEETS

APPROVED
[Signature]
Gas Co., Inc.
Date: 6/15/81

Connect to Exist. 36" Pipe w/ 1-45° Conc. Pipe Bend Makai Fr. Rd. Sta. 233+60±, 7' Rt.±, Inv. 0.0± (Remove Exist. 36" Pipe as necessary)

KEEHI LAGOON PARK
Exist. 36" Pipe Segment to remain during Soil Consolidation Operations

Exist. 36" Sewer Force Main
Exist. 6" Gas Main (See Note 4)

Exist. Telephone Ductline
Exist. Electric Ductline

Outfall Makai Fr. Rd. Sta. 234+05, 35' Rt.±, Inv. 0.0± See Note 6
DRAINLINE #87 36" RCP CI. III

Vegetation Ditch 1/2:1 Side Slopes
Inv. 0.0±

Pipe Entrance Makai Fr. Rd. Sta. 232+60±, 20' Rt.±, Inv. 0.1± See Note 6
Connect to Existing Pipe Inv. 0.1±

10 Control Stakes @ 50' o.c. Placed in 2 Straight Rows
(CCO #12) Add one (1) Piezometer at Elev. (-) 25

Installed in Phase 1A
Installed in Phase 1B

Limit of Vertical Drains
1 1/2:1 Slope (Typ.)
Bottom of Slope

Place Vertical drains in area of existing road after traffic has been shifted to Temp. Detour 'Z' in Phase 1B See Detail Sheet E-3 Deleted in CCO #1

KAMEHAMEHA HIGHWAY

NIMITZ HIGHWAY

RAMP A

Exist. Trap Ditch

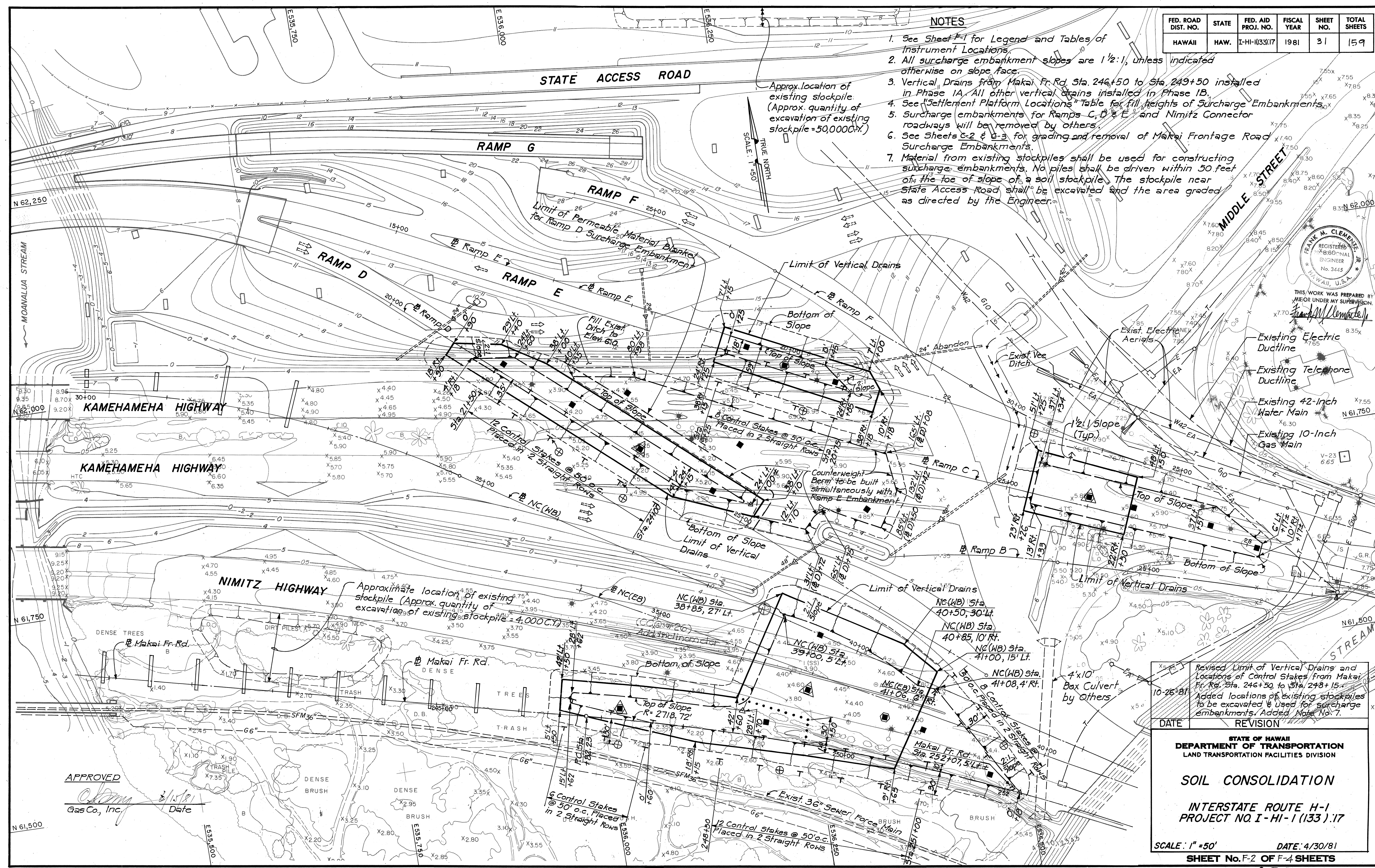
WAR MEMORIAL ACCESS ROAD

534,500 E

61,500 N

534,000 E

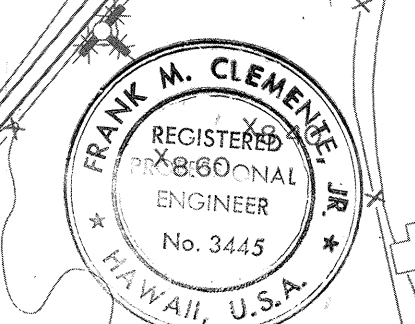
61,750 N



NOTES

1. See Sheet F-1 for Legend and Tables of Instrument Locations.
2. All surcharge embankment slopes are 1 1/2:1, unless indicated otherwise on slope face.
3. Vertical Drains from Makai Fr. Rd. Sta. 246+50 to Sta. 249+50 installed in Phase 1A. All other vertical drains installed in Phase 1B.
4. See "Settlement Platform Locations" Table for fill heights of Surcharge Embankments.
5. Surcharge embankments for Ramps C, D & E and Nimitz Connector roadways will be removed by others.
6. See Sheets C-2 & C-3 for grading and removal of Makai Frontage Road Surcharge Embankments.
7. Material from existing stockpiles shall be used for constructing surcharge embankments. No piles shall be driven within 50 feet of the toe of slope of a soil stockpile. The stockpile near State Access Road shall be excavated and the area graded as directed by the Engineer.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(133).17	1981	31	159



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Frank M. Clemence

Existing Electric Ductline
Existing Telephone Ductline
Existing 42-Inch Water Main
Existing 10-Inch Gas Main

Revised Limit of Vertical Drains and Locations of Control Stakes from Makai Fr. Rd. Sta. 246+50 to Sta. 248+15. Added locations of existing stockpiles to be excavated & used for surcharge embankments. Added Note No. 7.

DATE	REVISION
10-26-81	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

SOIL CONSOLIDATION

INTERSTATE ROUTE H-1
PROJECT NO. I-HI-1(133).17

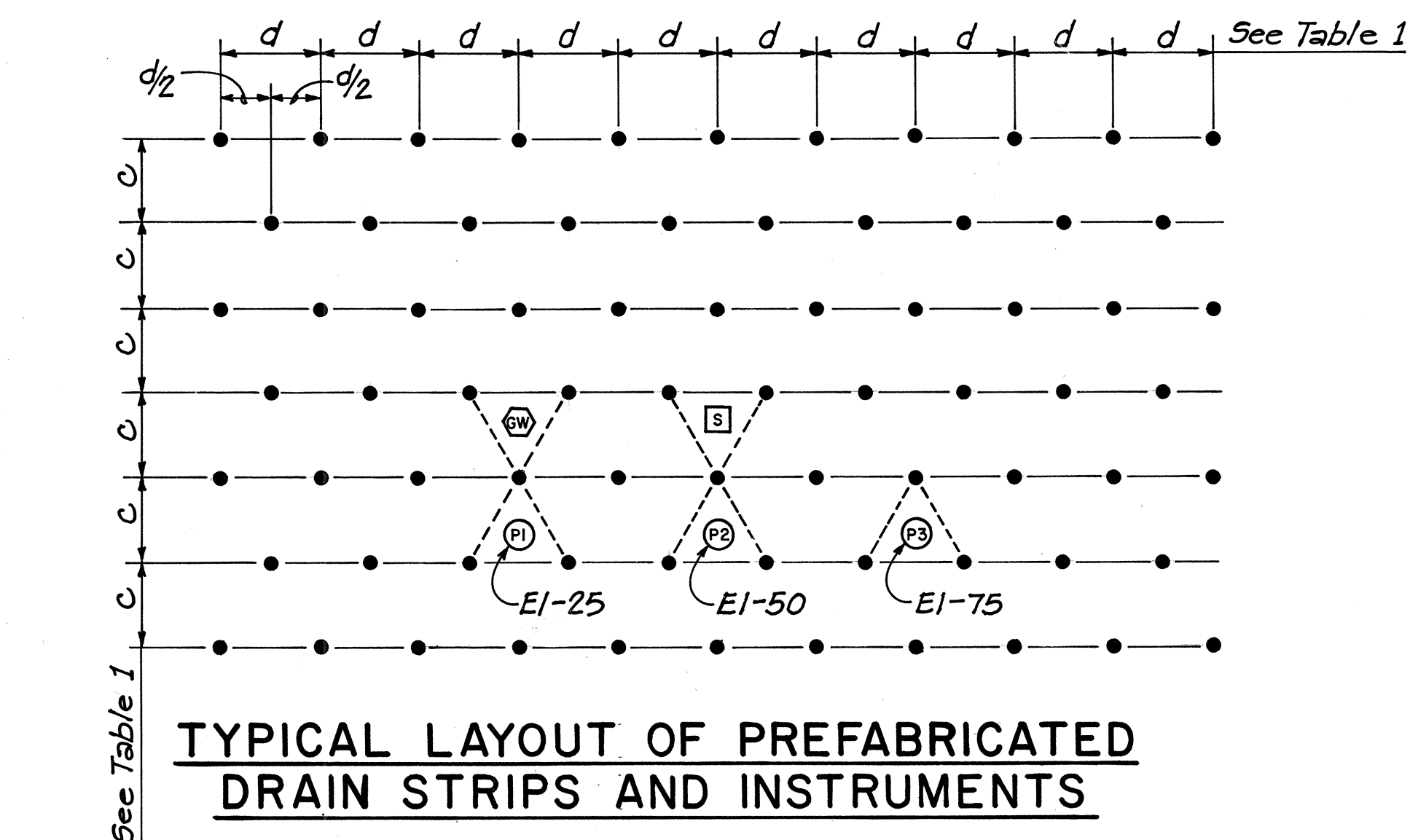
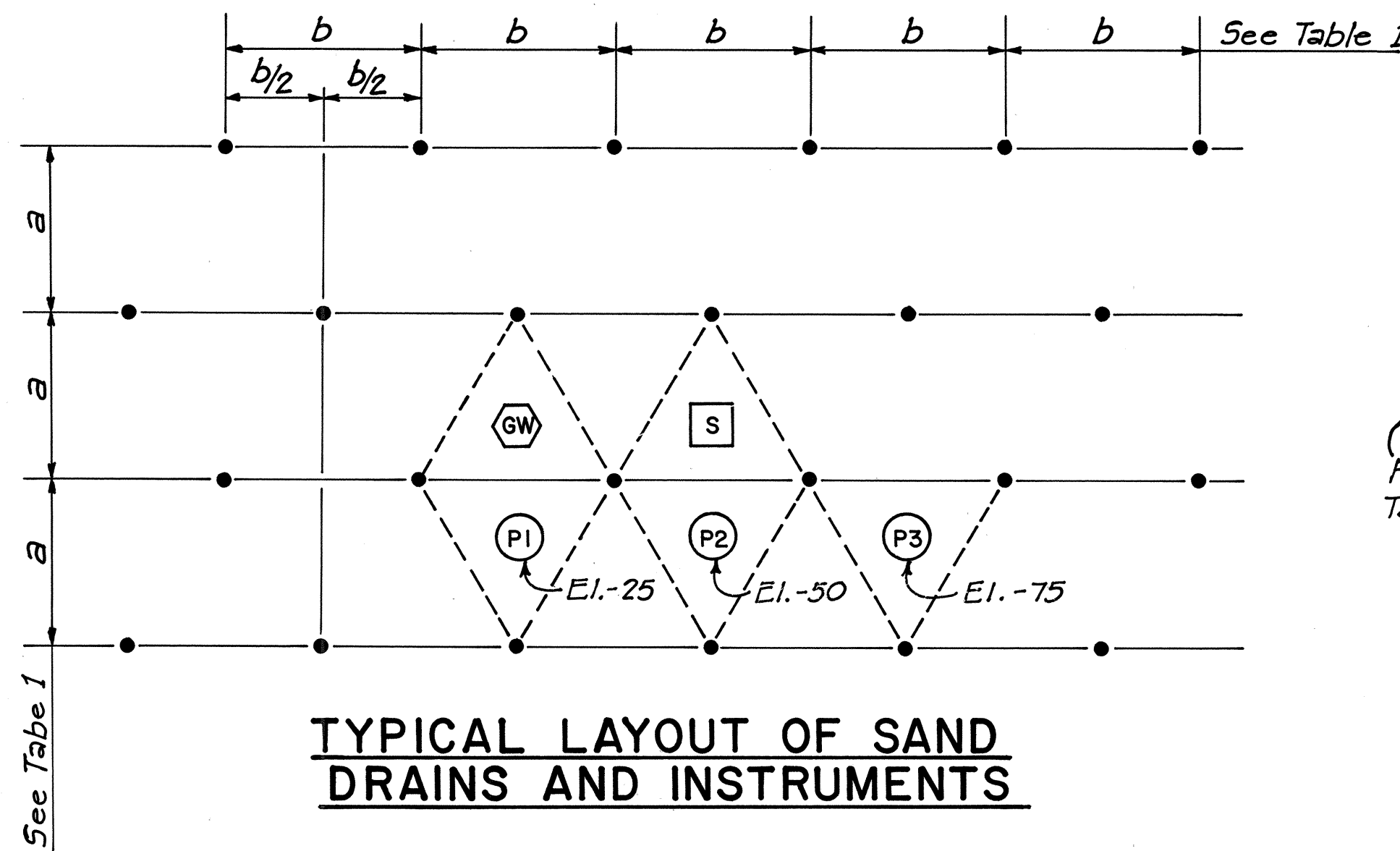
SCALE: 1" = 50' DATE: 4/30/81

SHEET No. F-2 OF F-4 SHEETS

DATE	
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	

APPROVED
[Signature]
Gas Co., Inc. Date: 3/1/81

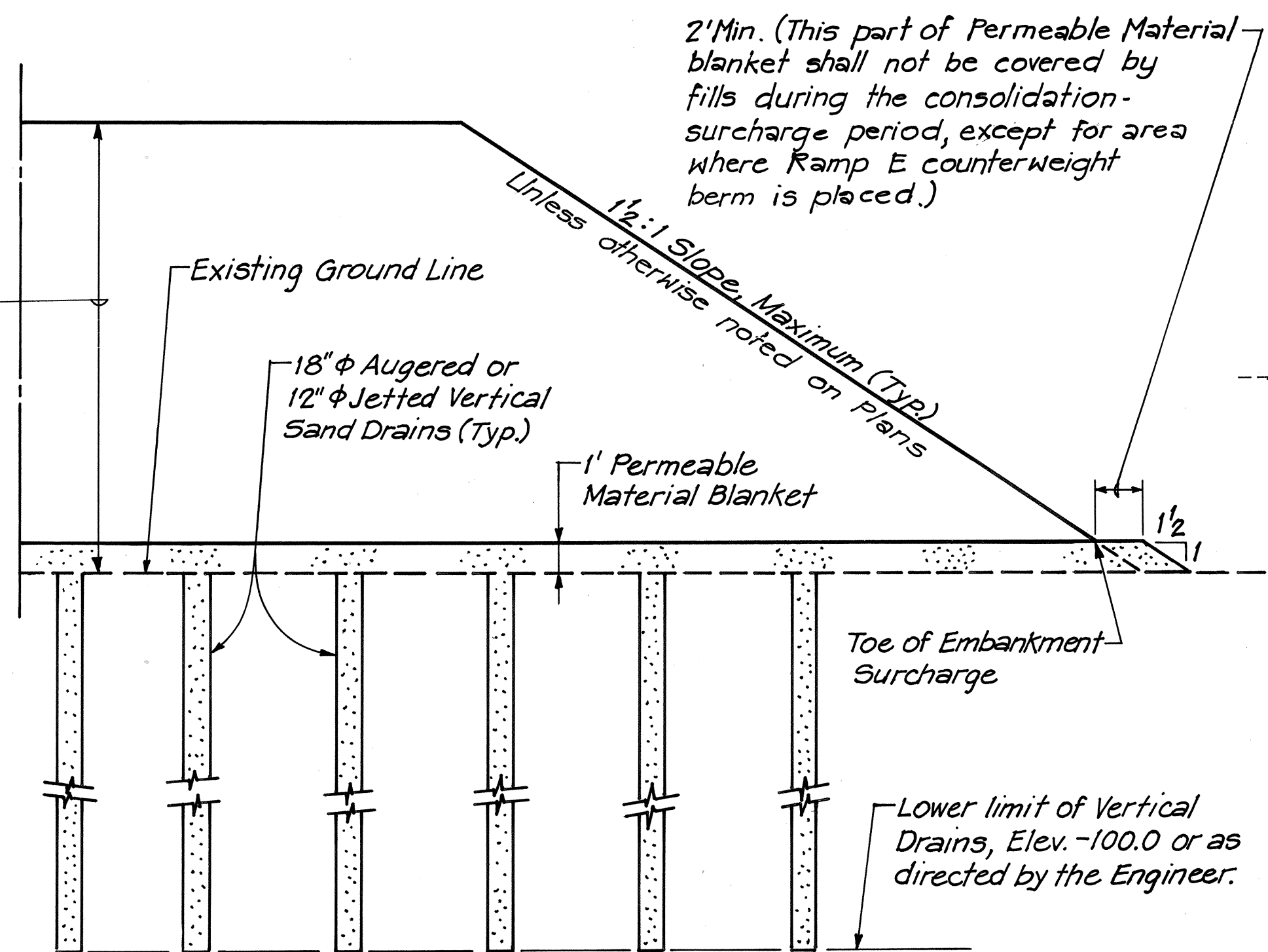
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(133):17	1981	32	159



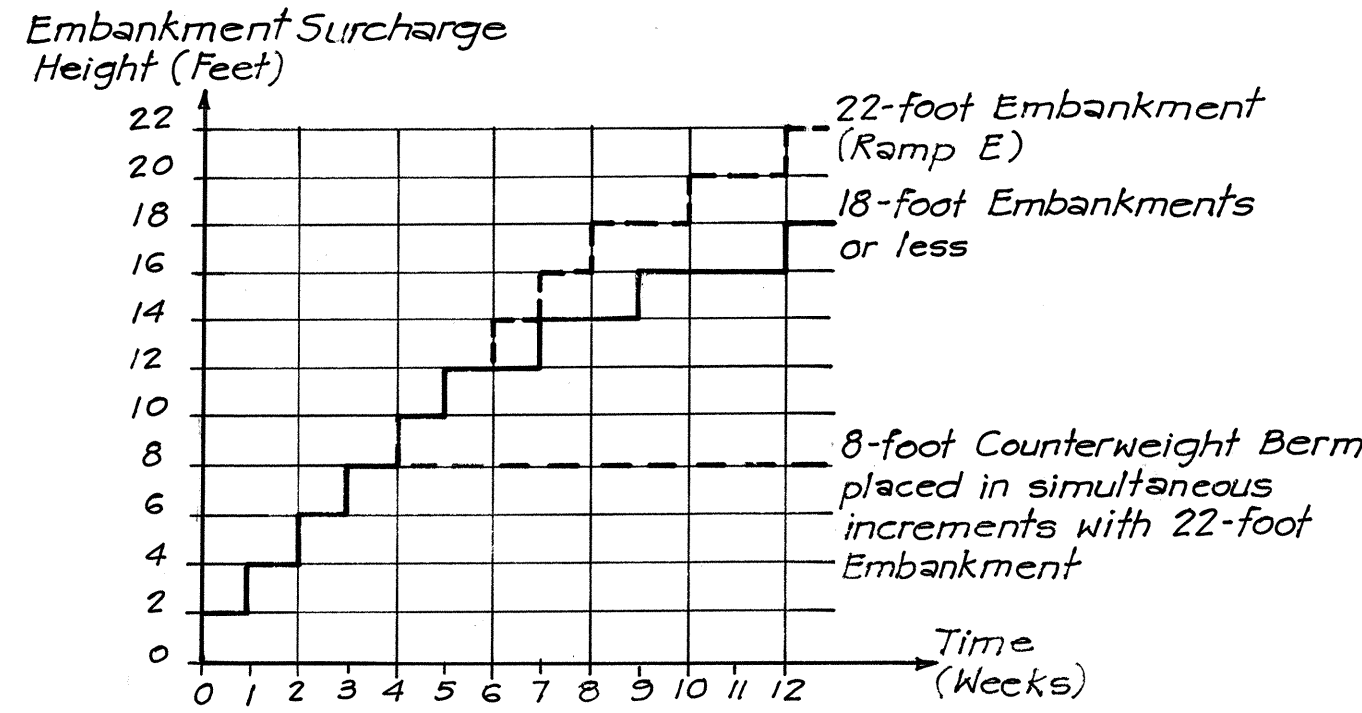
- LEGEND**
- Vertical Drain
 - [S] Settlement Platform
 - (P1) Piezometer
 - EI-25 Elevation of Piezometer Point
 - [GW] Ground Water Observation Well

TABLE 1	
ALTERNATES	VERTICAL DRAIN SPACING
SAND DRAINS	$a \times b$
18" Dia. Augered Drains 12" Dia. Jetted Drains	6' x 7' 6' x 7'
PREFABRICATED DRAIN STRIPS	$c \times d$
"Geodrains"	3' x 3 1/2'
"Alidrains"	3' x 3 1/2'

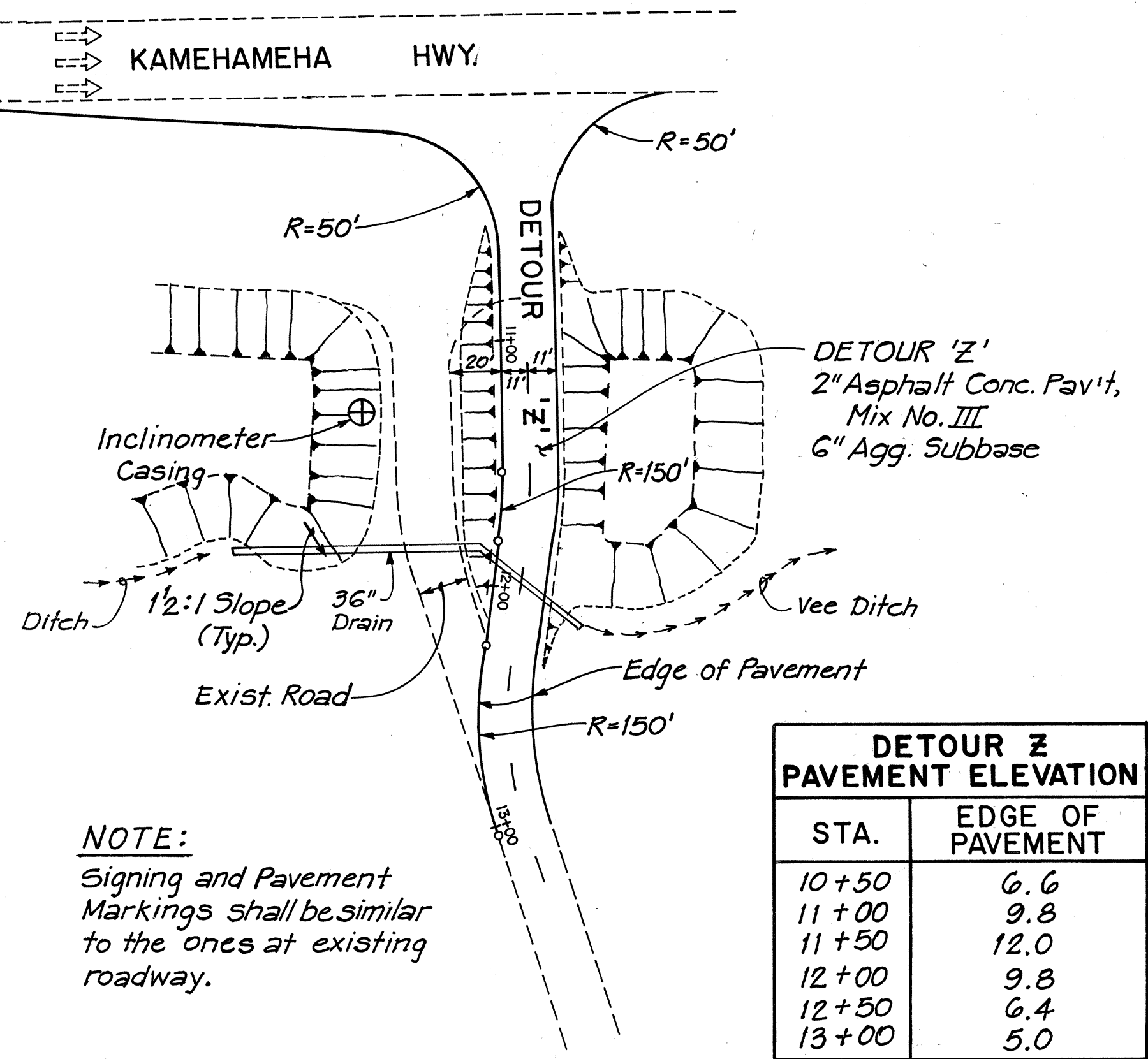
NOTE:
Settlement Platforms, Piezometers & Ground Water Observation Wells shall be installed in center of staggered vertical drain groups, equidistant from drains, as shown. The exact location will be determined in the field.



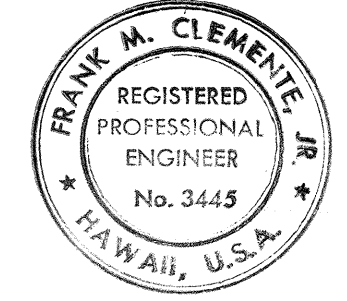
- NOTES:**
- In lieu of Sand Drains the Contractor may install 'Geodrain' or 'Alidrain' prefabricated drain strips to the elevation indicated for sand drains. See Table 1 on this sheet for required spacings of Vertical Drains.
 - It is estimated that the existing ground under the center portion of the sand drain (or prefabricated drains) surcharge embankment will settle 3 to 4 feet during construction of embankment. The total settlements at end of consolidation period are estimated to be 6 to 8 feet.
 - Contractor shall place 1' thick permeable material blanket for surcharge embankments without vertical drains, similar to the limits shown on sand drain surcharge embankment detail above.



NOTE:
Each increment shall be placed within two working days or less. For increments scheduled to be placed on a weekly basis, a minimum of 6 calendar days shall elapse between completion of one increment and commencement of the next increments. For increments scheduled to be placed on a bi-weekly basis, a minimum of 13 calendar days shall elapse, and on a tri-weekly basis a minimum 20 calendar days shall elapse between completion of one increment and commencement of the next increment. The rate of placement may be modified as the Engineer may direct. In case of a delay requested by the Engineer, Subsection 108.07 of the Specifications allows the Contractor to request an extension of time.



DETOUR Z PAVEMENT ELEVATION	
STA.	EDGE OF PAVEMENT
10+50	6.6
11+00	9.8
11+50	12.0
12+00	9.8
12+50	6.4
13+00	5.0



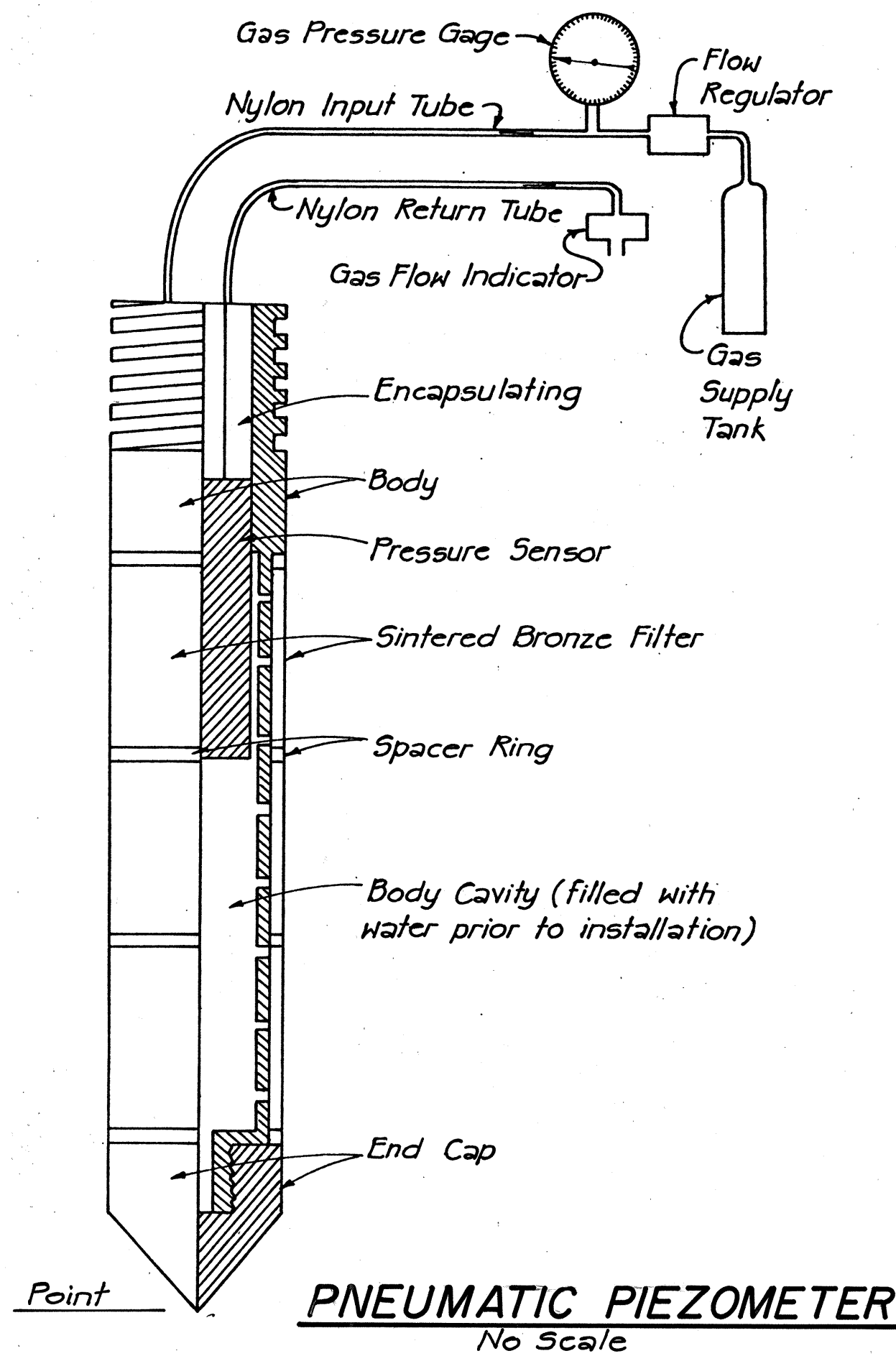
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

SOIL CONSOLIDATION DETAILS

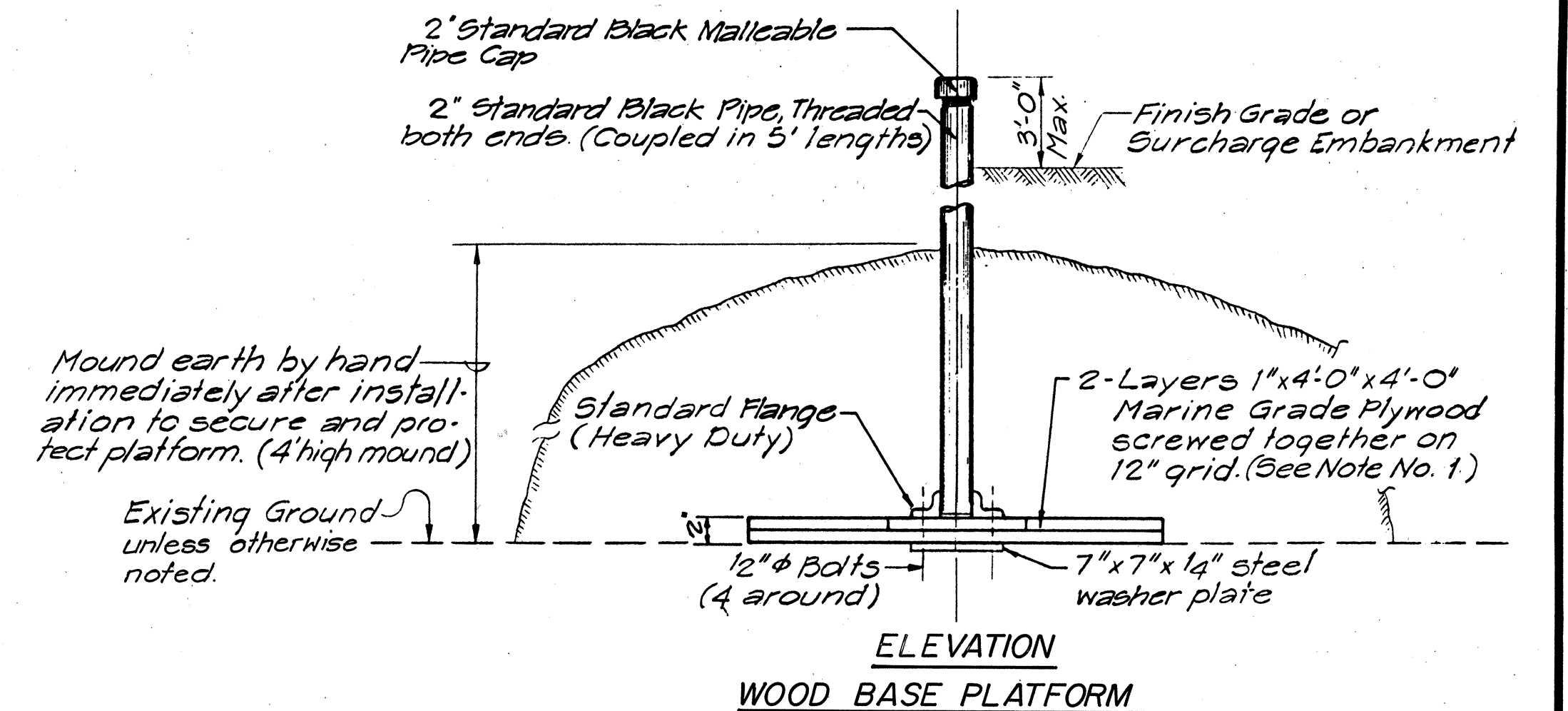
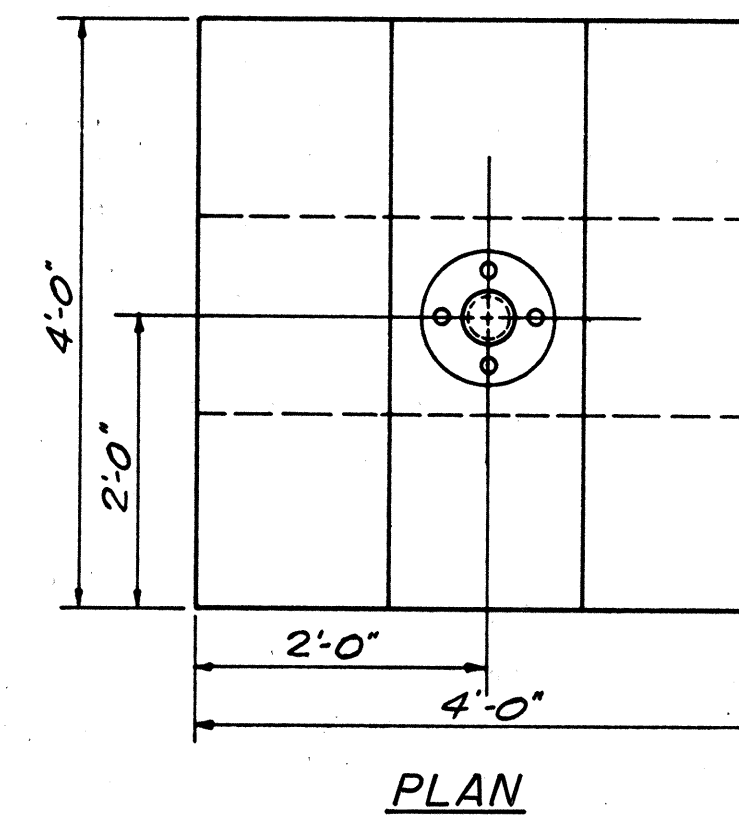
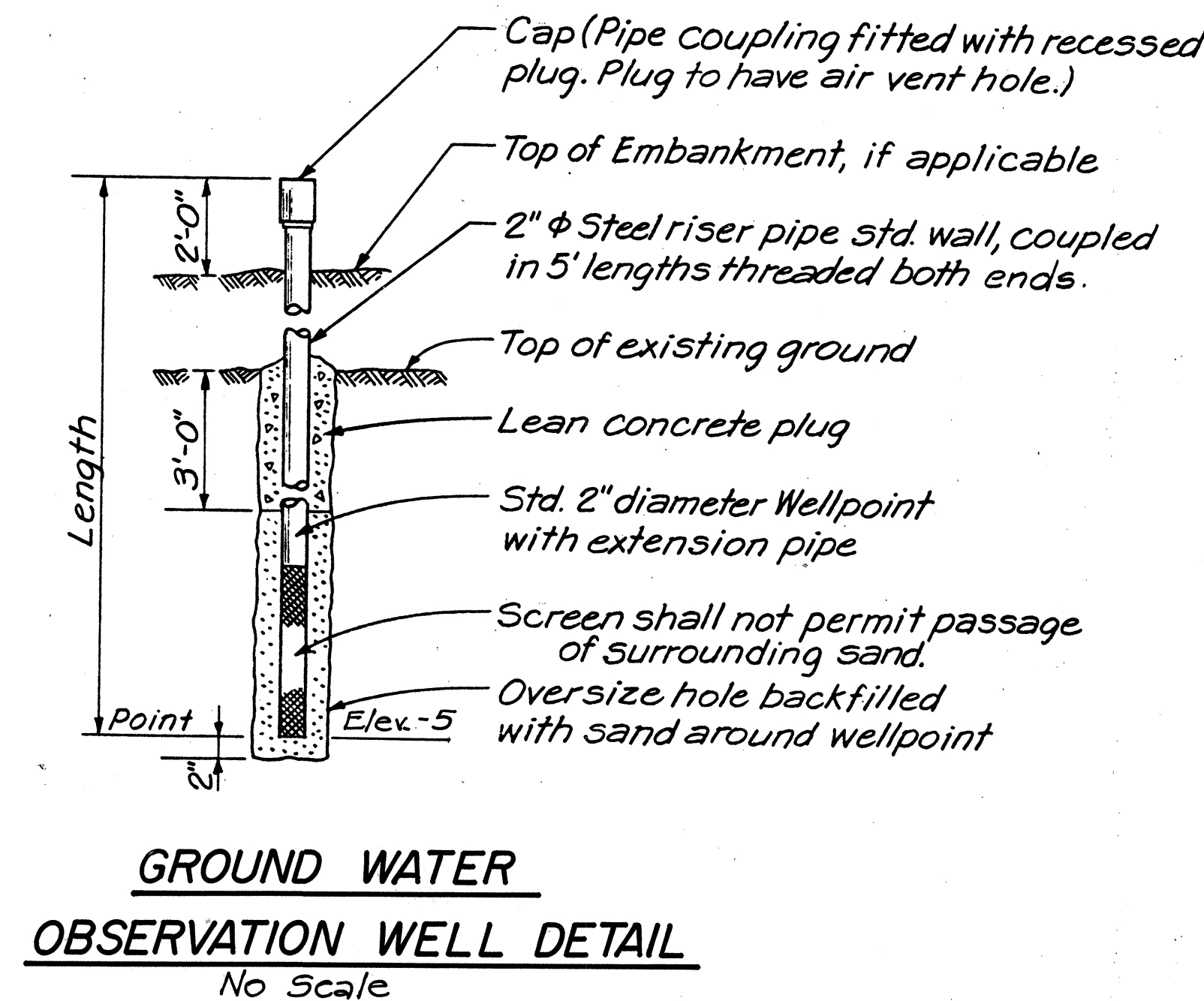
**INTERSTATE ROUTE H-1
PROJECT NO. I-HI-1 (133):17**

SCALE: AS SHOWN DATE: 4/30/81
SHEET NO. F-3 OF F-4 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(133)17	1981	33	159



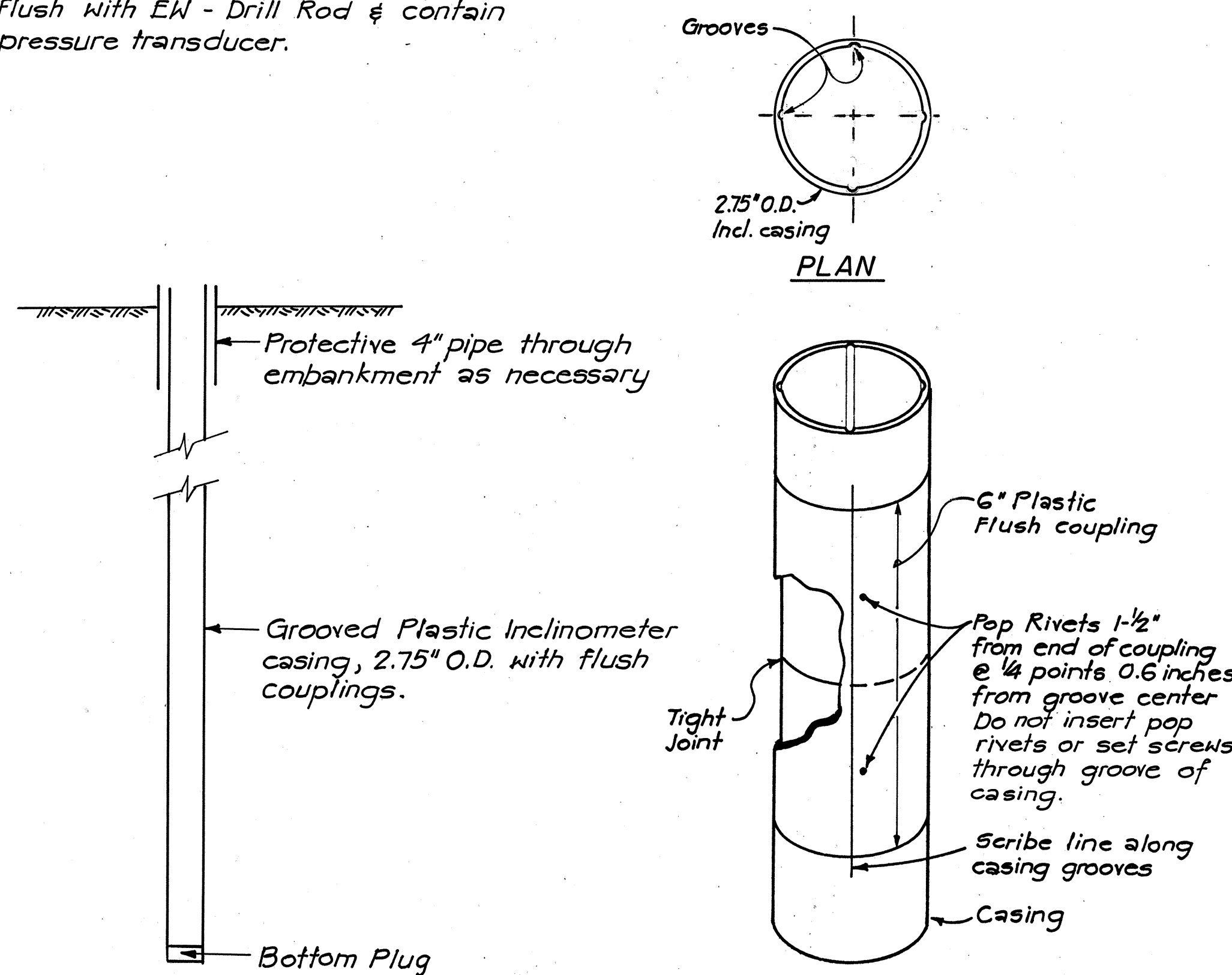
PIEZOMETER NOTE:
Piezometers shall be pneumatic type approximately 18 inches long, O.D. flush with EW - Drill Rod & contain pressure transducer.



SETTLEMENT PLATFORM DETAIL

SETTLEMENT PLATFORM NOTES:

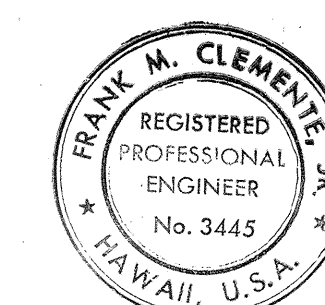
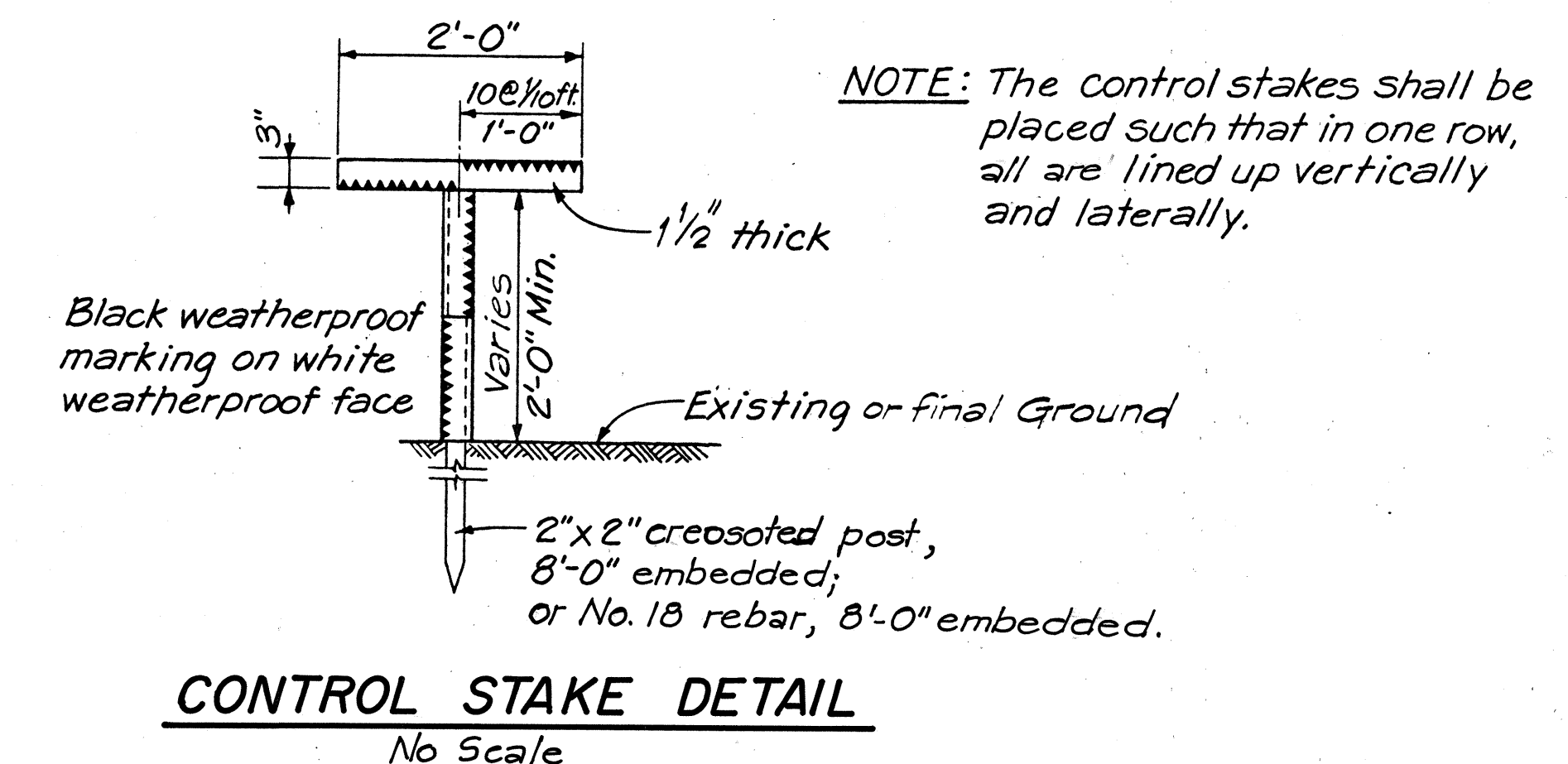
1. The Contractor shall use sound lumber for Wood Base Settlement Platforms.
2. Contractor to furnish material and labor to extend pipe up through fill.
3. All vertical pipes of Settlement Platforms shall be accurately and consecutively numbered in one foot intervals measured from the bottom of the Settlement Platform base. The numbering and graduations shall be marked on the vertical pipe in durable yellow paint by the Contractor immediately after each section of pipe is added.
4. Settlement Platforms shall be placed on existing ground. Ground shall be made level as necessary. At settlement platform locations where existing pavement is to be removed, the Contractor shall backfill the area to the same elevation which existed prior to removal of pavement, before installing settlement platform.



NOTE:
Grooves of Inclinometer Casing to be parallel and perpendicular to the embankment.

PLASTIC INCLINOMETER CASING WITH 6" COUPLING

Scale: 1/2" = 1"



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Frank M. Clemente

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SOIL CONSOLIDATION INSTRUMENTATION DETAILS

INTERSTATE ROUTE H-1
PROJECT NO. I-HI-1(133)17

SCALE: AS SHOWN DATE: 4/30/81
SHEET NO. F-4 OF F-4 SHEETS