

STANDARD PLANS SUMMARY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(14)	1995	2	22

STANDARD PLAN NO.	TITLE	DATE
B-01	Notes and Miscellaneous Details	07/01/86
B-02		
B-03	Typical Structure Excavation and Backfill Pay Limits	07/01/86
B-04		
B-05		
B-06	Concrete Box Girder	07/01/86
B-07	Concrete Box Girder	07/01/86
B-08	Concrete Box Girder	07/01/86
B-09		
B-10		
B-11		
B-12	Prestressed Concrete Piles	r07/16/90
B-13	Prestressed Concrete Piles	r07/16/90

D-01	Chain Link Fence With Toprail	r03/06/87
D-02	Chain Link Fence Without Toprail	r07/26/90
D-03	Wire Fence With Metal Posts	07/01/86
D-04	Typical Details of Curbs and/or Gutters	07/01/86
D-05	Typical Details of Reinforced Concrete Drop Driveway	07/01/86
D-06	Centerline and Reference Survey Monument	07/01/86
D-07	Street Survey Monument	07/01/86
D-08	Landscaping Shrub and Tree Planting	07/01/86
D-09	Field Office	07/01/86
D-10	Field Office	07/01/86
D-11	Project Site Laboratory	07/01/86
D-12	Project Site Laboratory	07/01/86
D-13	Field Office & Project Site Laboratory	07/01/86

H-01	Type A, B, C and D Catch Basin	07/01/86
H-02	Type A1, B1, C1 and D1 Catch Basin	07/01/86
H-03	Type A2, B2, C2 and D2 Catch Basin	07/01/86
H-04	Typical Reinforcing Details for Catch Basins	07/01/86
H-05	Type A, B and C Storm Drain Manhole	07/01/86
H-06	Type D and E Storm Drain Manhole	07/01/86
H-07	Type F Storm Drain Manhole	07/01/86
H-08	Catch Basin and Manhole Casting	07/01/86
H-09	Type A-9 and A-9P Frames and Grates	07/01/86
H-10	Type A-9B Frames and Grates	07/01/86
H-11	Type 61614 and 61214 Grated Drop Inlet	07/01/86
H-12	Type 61616 Grated Drop Inlet	07/01/86
H-13	61214, 61614 & 61616 Steel Frames and Grates	07/01/86
H-14	61214B Steel Frame and Grates	07/01/86
H-15	61614B Steel Frame and Grates	07/01/86
H-16	Concrete and Cement Rubble Masonry Structures	r10/16/90
H-17	Inlet Structures	r10/16/90
H-18	Flared End Section for Culverts	07/01/86
H-19	Outlet Structures	r02/15/91
H-20	Concrete Spillway Inlet	07/01/86
H-21	18" Slotted C.M.P. Drain	07/01/86
H-22	C.M.P. Coupling Details Standard Joint	r10/16/90
H-23	Hot Shaped Coupling Band	r10/16/90

STANDARD PLAN NO.	TITLE	DATE
TE-01	Miscellaneous Sign Details	07/01/86
TE-02	Galvanized Flanged Channel Sign Post Mounting	07/01/86
TE-03	Galvanized Square Tube Sign Post Mounting	07/01/86
TE-04	Regulatory Signs	r09/01/87
TE-05	Warning Signs	07/01/86
TE-06 ●	Miscellaneous Signs	r11/03/89
TE-07	Reserved	07/01/86
TE-08	Construction Signs	r09/01/87
TE-09	Miscellaneous Intersection Signs	r03/06/87
TE-10	Reserved	07/01/86
TE-11	Bike Route Sign and Supplementary Plates	07/01/86
TE-12	State Route Marker and Auxiliary Markers	07/01/86
TE-13	Interstate Route Marker	07/01/86
TE-14	State Route Marker and Border Detail for Guide Signs	07/01/86
TE-15	Route Marker Assemblies	07/01/86
TE-16	Miscellaneous Reflector Markers	07/01/86
TE-17	Type II Object Markers	07/01/86
TE-18	Mileposts	07/01/86
TE-19	Reserved	07/01/86
TE-20	Overhead Sign Supports	07/01/86
TE-21	Overhead Sign Support, Box Truss Type, Aluminum	07/01/86
TE-22	Foundation Details and Schedules	07/01/86
TE-23	Supports for Ground Mounted Guide Sign	r11/03/89
TE-24	Breakaway Sign Supports for Ground Mounted Guide Signs	07/01/86
TE-25	Laminated Aluminum Sign Panels (Overhead)	07/01/86
TE-26	Laminated Aluminum Sign Panels (Ground Mounted)	07/01/86
TE-27	Solid Aluminum Extruded Sign Panel and Accessory Details	07/01/86
TE-28	Guide Signs Luminaire Mountings	07/01/86
TE-29	Reserved	07/01/86
TE-30	Raised Pavement Markers and Striping	r05/09/90
TE-31	Miscellaneous Pavement Markings	r05/09/90
TE-32	Miscellaneous Pavement Markings	r05/09/90
TE-33	Miscellaneous Pavement Markings	r11/03/89
TE-34	Reserved	07/01/86
TE-35	Pavement Alphabets, Numbers & Symbols	07/01/86
TE-36	Pavement Alphabets, Numbers & Symbols	07/01/86
TE-37	Reserved	07/01/86
TE-38	Traffic Signal System, Miscellaneous Details	r11/03/89
TE-39	Traffic Signal System, Miscellaneous Details	07/01/86
TE-40	Loop Detectors	r11/03/89
TE-41	Pullboxes	07/01/86
TE-42	Type III Traffic Signal Standard	07/01/86
TE-43	Concrete Pullbox (2' x 3')	07/01/86
TE-44	Reserved	07/01/86

STANDARD PLAN NO.	TITLE	DATE
TE-45	Reserved	07/01/86
TE-46	Reserved	07/01/86
TE-47	Reserved	07/01/86
TE-48	Reserved	07/01/86
TE-49	Reserved	07/01/86
TE-50	Metal Guardrail	r03/06/87
TE-51	Metal Guardrail	r09/01/87
TE-52	Metal Guardrail with Rubrail	r11/03/89
TE-53	Metal Guardrail with Rubrail at Obstruction	r09/01/87
TE-54	Beam Type Guardrail with Rubrail at Obstruction (Shoulder Installation)	r11/03/89
TE-55	Metal Guardrail Connection to Concrete Barrier	r11/03/89
TE-56	Concrete Barrier Transition	07/01/86
TE-57	Guardrail Type 3, Thrie Beam	r11/03/89
TE-57A	Guardrail Type 3, Modified Thrie Beam	11/03/89
TE-58	Approach End Flare, One & Two Way Roadway	07/01/86
TE-59	Trailing End Flare, One & Two Way Roadway	r11/03/89
TE-60	Anchor Block Details	07/01/86
TE-61	Breakaway Cable Terminal (BCT)	r11/03/89
TE-62	Breakaway Cable Terminal (BCT)	r09/01/87
TE-63	Guardrail Type 4 (Rigid Barrier)	r09/01/87
TE-64	Portable Concrete Barrier	r11/03/89
TE-65	Guardrail Type 4, Miscellaneous	r09/01/87
TE-66 ●	Barricades	07/01/86
TE-67	Delineation & Pavement Markings at Bridges	07/01/86
TE-68	Wheelchair Ramps	r11/03/89
TE-69	Wheelchair Ramps	r11/03/89

02/15/91
10/16/90
07/26/90
07/16/90
05/09/90

11/03/89

09/01/87

03/06/87

REVISED STANDARD PLAN H-19
REVISED STANDARD PLANS H-16,H-17,
H-22 & H-23.
REVISED STANDARD PLANS D-02.
REVISED STANDARD PLANS B-12,B-13,
REVISED STANDARD PLANS TE-30,TE-31,
& TE-32.
REVISED STANDARD PLANS TE-06,TE-23,
TE-30, TE-31, TE-32, TE-33, TE-38,
TE-40, TE-52, TE-54, TE-55, TE-57,
TE-59, TE-61, TE-64, TE-68 & TE-69.
ADDED TE-57A TO STANDARD PLANS
REVISED STANDARD PLANS TE-04,TE-06,
TE-08, TE-32, TE-51, TE-53, TE-54,
TE-55, TE-57, TE-59, TE-62, TE-63,
TE-65 & TE-69.
REVISED STANDARD PLANS D-01, TE-09,
TE-40, TE-50, TE-51, TE-57, TE-59,
TE-61, TE-63 & TE-64.

DATE	REVISION
------	----------

NOTE:
STANDARD PLANS APPLICABLE TO THIS
PROJECT ARE INDICATED BY A " ● "
NEXT TO THE STANDARD PLAN NO.
(D-07 ●)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD PLANS SUMMARY
KAMEHAMEHA HIGHWAY
SAFETY IMPROVEMENTS, PHASE II
Kipapa Gulch towards Mililani
Federal Aid Project No. NH-099-1(14)
Date: January, 1995

SHEET No. 1 OF 1 SHEETS

ORIGINAL PLAN	SURVEY PROVIDED BY DATE	DESIGNED BY CHECKED BY
NOT BOOKED QUANTITIES BY	16-95	DESIGNED BY CHECKED BY

ORIGINAL PLAN	SURVEY PLOTTED BY DRAWN BY DESIGNED BY CHECKED BY	DATE	3/12/95
		NOTED BY	
		QUANTITIES BY	
		CHECKED BY	

A. WASTE DISPOSAL:

1. Waste Materials

All waste materials will be collected and stored in a securely lidded metal dumpster. The dumpster will meet all City and State solid waste management regulations. All trash and construction debris from the site will be deposited in the dumpster. The dumpster will be emptied a minimum of twice per week or as often deemed necessary. No construction waste materials will be buried onsite. Operator's supervisory personnel will be instructed regarding the correct procedure for waste disposal. Notices stating these practices will be posted in the office trailer and the Operator will be responsible for seeing that these procedures are followed.

2. Hazardous Waste

All hazardous waste materials will be disposed of in the manner specified by local or State regulation or by the manufacturer. Operator's site personnel will be instructed in these practices and will be responsible for seeing that these practices are followed.

3. Sanitary Waste

All sanitary waste will be collected from the portable units a minimum of once per week, or as required.

B. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

1. All control measures will be inspected at least once each week and following any rainfall event of 0.5 inches or greater.

2. All measures will be maintained in good working order. If a repair is necessary, it will be initiated within 24 hours after the inspection.

3. Built-up sediment will be removed from silt fence when it has reached one-third the height of the fence.

4. Silt fence will be inspected for depth of sediment, tears, to see if the fabric is securely attached to the fence posts, and to see that the fence posts are firmly in the ground.

5. The sediment basin will be inspected for depth of sediment, and built-up sediment will be removed when it reaches 10 percent of the design capacity and at the end of the job.

6. Diversion dike will be inspected and any breaches promptly repaired.

7. Temporary and permanent seeding and planting will be inspected for bare spots, washouts, and healthy growth.

8. A maintenance inspection report will be made promptly after each inspection by the Operator.

9. The Operator will select a minimum of three personnel who will be responsible for inspections, maintenance and repair activities, and filling out the inspection and maintenance report.

10. Personnel selected for the inspection and maintenance responsibilities will receive training from the Operator. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.

C. BEST MANAGEMENT PRACTICES- Pollutant Control (Good Housekeeping)

1. Material Pollution Prevention Plan -

a. Applicable materials or substances listed below are expected to be present onsite during construction. Other materials and substances not listed below shall be added to the inventory.

Concrete
Detergents
Paints (enamel and latex)
Metal Studs
Tar

Fertilizers
Petroleum Based Products
Cleaning Solvents
Wood
Masonry Block

b. Material Management Practices will be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff. An effort will be made to store only enough product required to do the job.

c. All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.

d. Products will be kept in their original containers with the original manufacture's label.

e. Substances will not be mixed with one another unless recommended by the manufacturer.

f. Whenever possible, all of a product will be used up before disposing of the container.

g. Manufacturers' recommendations for proper use and disposal will be followed.

h. The Operator will conduct a daily inspection to ensure proper use and disposal of materials onsite.

2. Hazardous Material Pollution Prevention Plan -

a. These practices are used to reduce the risks associated with hazardous materials.

b. Products will be kept in original containers unless they are not resealable.

c. Original labels and materials safety data will be retained; they contain important product information.

d. Surplus products must be disposed of, according to manufacturers' instructions or local and State recommended methods for proper disposal will be followed.

3. Onsite and Offsite Product Specific Plan -

a. The following product specific practices will be followed onsite:

1) Petroleum Based Products:

All onsite vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled. Any asphalt substances used onsite will be applied according to the manufacturer's recommendations.

2) Fertilizers:

Fertilizers used will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to storm water. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

3) Paints:

All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the highway drainage system but will be properly disposed of according to manufacturers' instructions or State and local regulations.

4) Concrete Trucks:

Concrete trucks will be allowed to wash out or drum wash water only at designated site. Water will not be discharged in the highway drainage system or waters of the United States. Operator shall contact Drinking Water Branch, Department of Health at 586-4258 to receive permission to designate a disposal site. Operator will clean disposal site as required or as requested by the Owners representative.

b. Offsite Vehicle Tracking:

1) A stabilized construction entrance shall be provided to help reduce vehicle tracking of sediments. The paved street adjacent to the site entrance will be cleaned daily or as required to remove any excess mud, dirt or rock tracked from the site. Dump trucks hauling material from the construction site will be covered with a tarpaulin.

4. Spill Control Plan -

a. Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.

b. Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite.

c. All spills will be cleaned up immediately after discovery.

d. The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.

e. Spills of toxic or hazardous material will be reported to the appropriate State or local government agency, regardless of the size.

f. Spill prevention plan will be posted and adjusted to include measures to prevent spills and how to clean up the spills. A description of the spill, what caused it, and the cleanup measures will also be included.

g. The Operator will be the spill prevention and cleanup coordinator. He will designate at least three site personnel who will receive spill prevention and cleanup training. These individuals will each become responsible for a particular phase of prevention and cleanup. The names of responsible spill personnel will be posted in the material storage area and in the office trailer onsite.

D. SUBMITTAL REQUIREMENTS:

1. CONSTRUCTION ACTIVITIES OF FIVE (5) ACRES OR MORE

a. Storm water discharges into State waters due to construction activities of Five (5) acres or more, will require an NPDES permit from the Department of Health (DOH). The Contractor shall submit to the Engineer four (4) sets of Site-Specific Best Management Plans (BMP). The Plans shall be submitted no later than thirty (30) calendar days after the award of Contract.

b. No construction activities will be authorized until the Contractor's Site-Specific BMP has been approved by the Highways Division.

2. CONSTRUCTION ACTIVITIES DEWATERING AND/OR HYDROTESTING WATER

a. Discharges into State waters due to dewatering and/or hydrotesting activities will require NPDES Permit(s) from DOH. If the Contractor options to discharge dewatering and/or hydrotesting effluent into State waters, the Contractor shall submit to the Engineer four (4) sets of Site-Specific Dewatering and/or Hydrotesting BMP, and four (4) copies of the Quality of Discharge Test results. The Plans and test results shall be submitted no later than thirty (30) calendar days after the award of Contract.

b. No dewatering and/or hydrotesting activities will be authorized until the receipt of the NPDES Permit(s) from DOH.

E. PAYMENT:

1. Unforeseen hazardous material encountered during construction shall be disposed of in the manner as indicated in "A1 Waste Materials" and "A.2 Hazardous Waste". Payment shall be made under Item 639.0200, Disposal of Hazardous Waste under Force Account basis.

2. A portion of the maintenance of erosion and sediment control as indicated in Item "B" excluding the construction operation requirements shall be made under Item 639.0300, Maintenance of Erosion and Sediment Control under Force Account basis. Payment for Item "B" shall be only for repair and removal of built-up sediment, maintenance and repair of dewatering and/or hydrotesting activities.

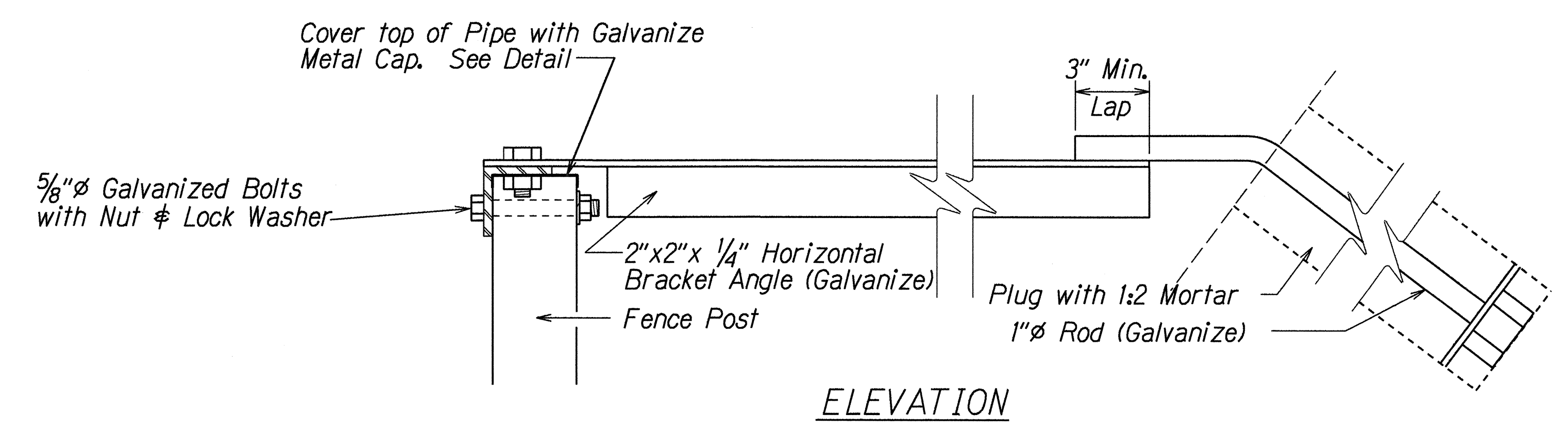
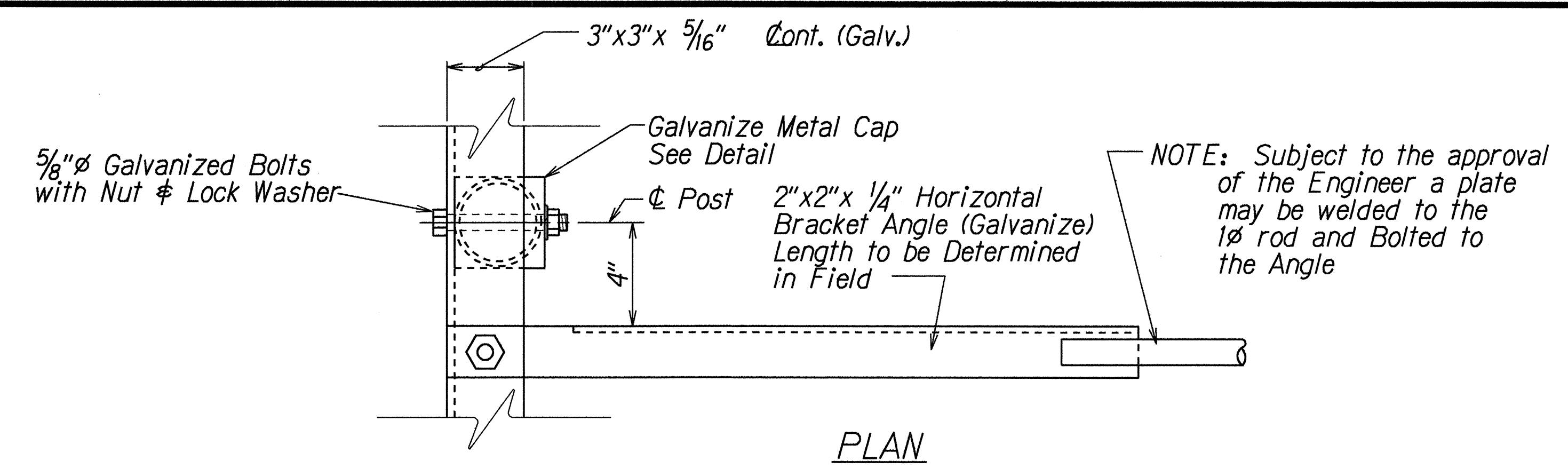
3. Progress payment will not be authorized until the receipt of the BMP as noted in Item D1a and/or D2a.

4. Any citation (fine) received by the State for non-compliance of the NPDES Permit requirement shall be deducted from the progress payment.

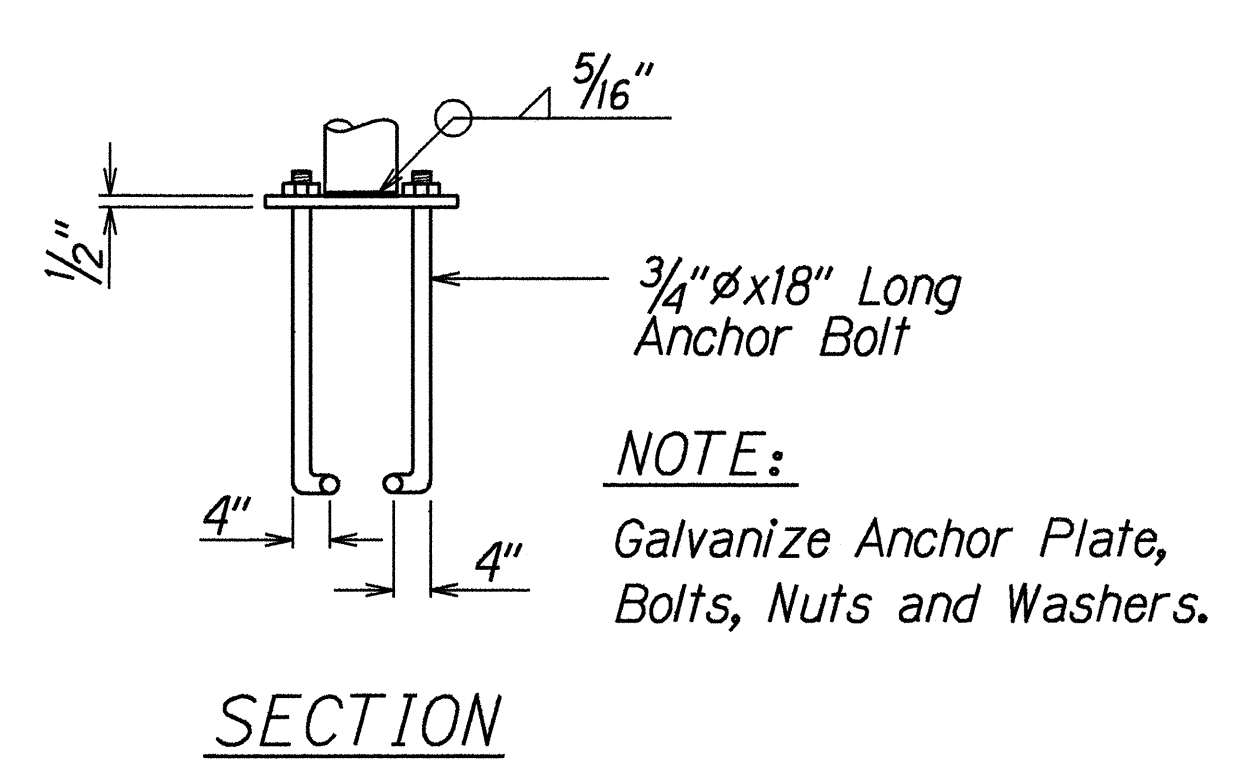
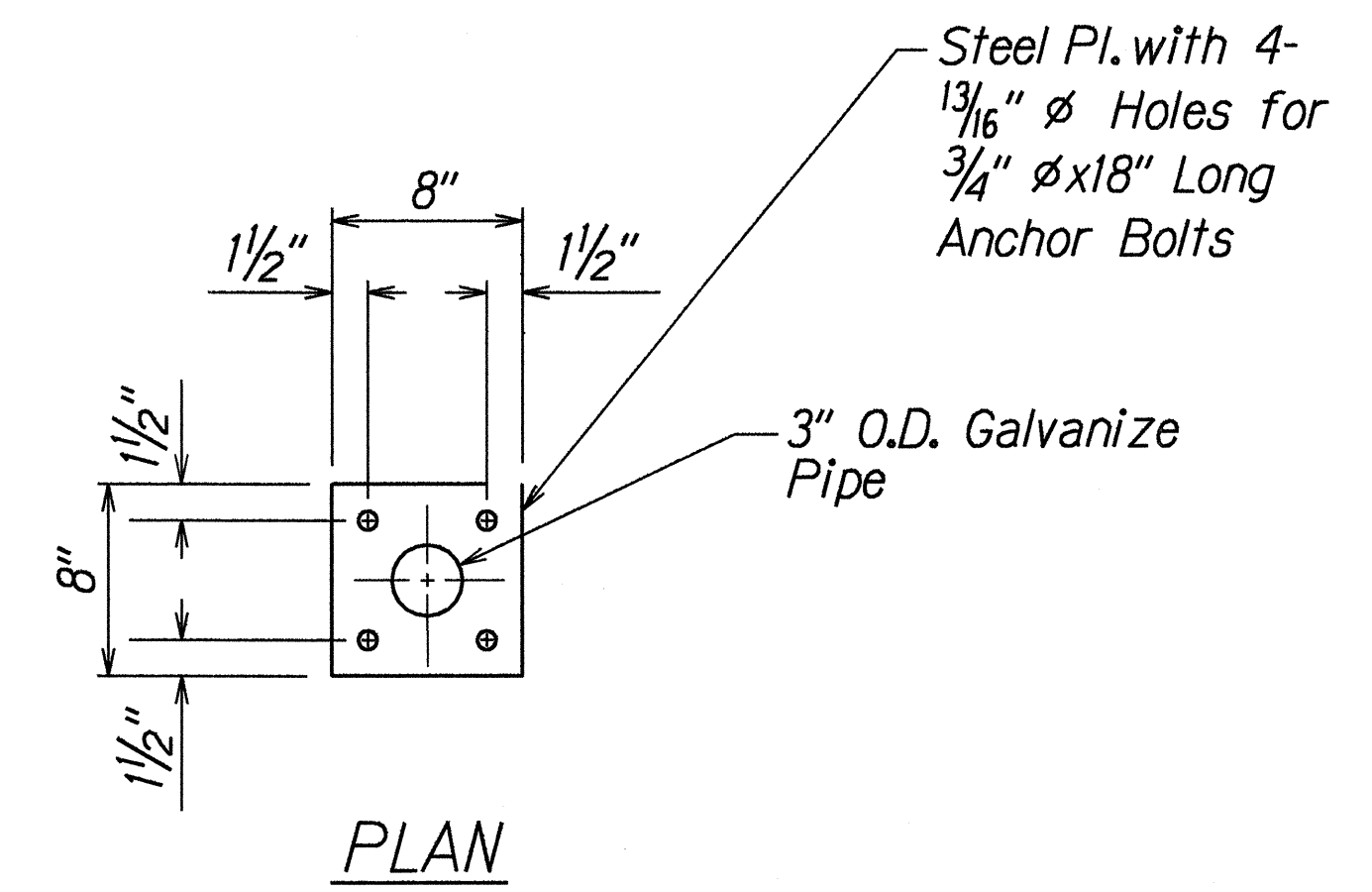
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(14)	1995	3	22

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
NPDES GENERAL NOTES	
KAMEHAMEHA HIGHWAY	
SAFETY IMPROVEMENTS, PHASE II	
Kipapa Gulch towards Mililani	
Federal Aid Project No. NH-099-1(14)	
Scale: None	Date: Mar., 1995
SHEET No. 1 OF 1 SHEETS	

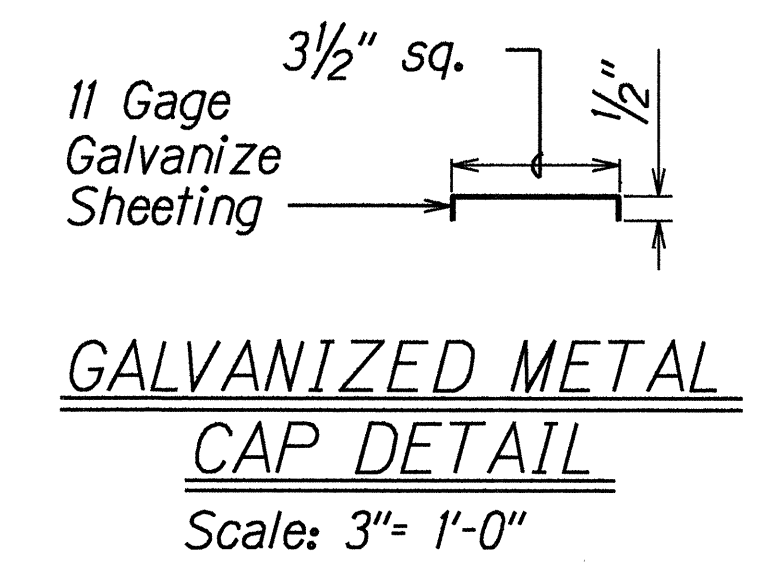
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(14)	1995	5	22



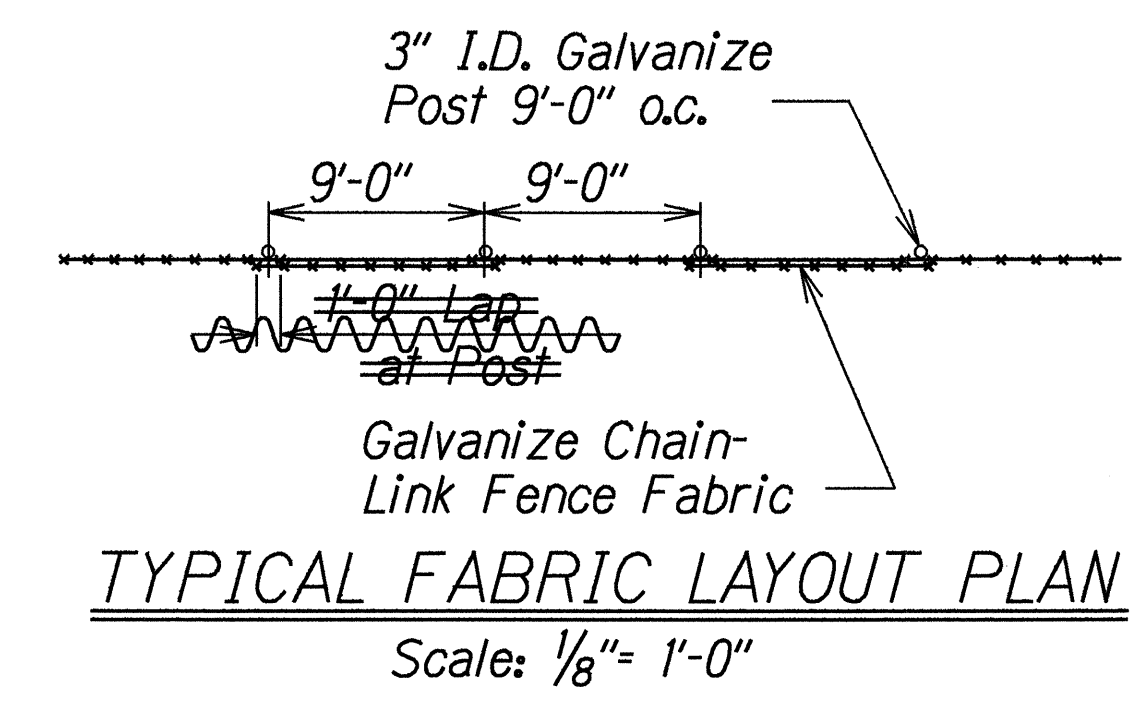
HORIZONTAL BRACKET DETAILS
Scale: 3"=1'-0"



FENCE POST ANCHOR DETAILS
Scale: 1 1/2"=1'-0"

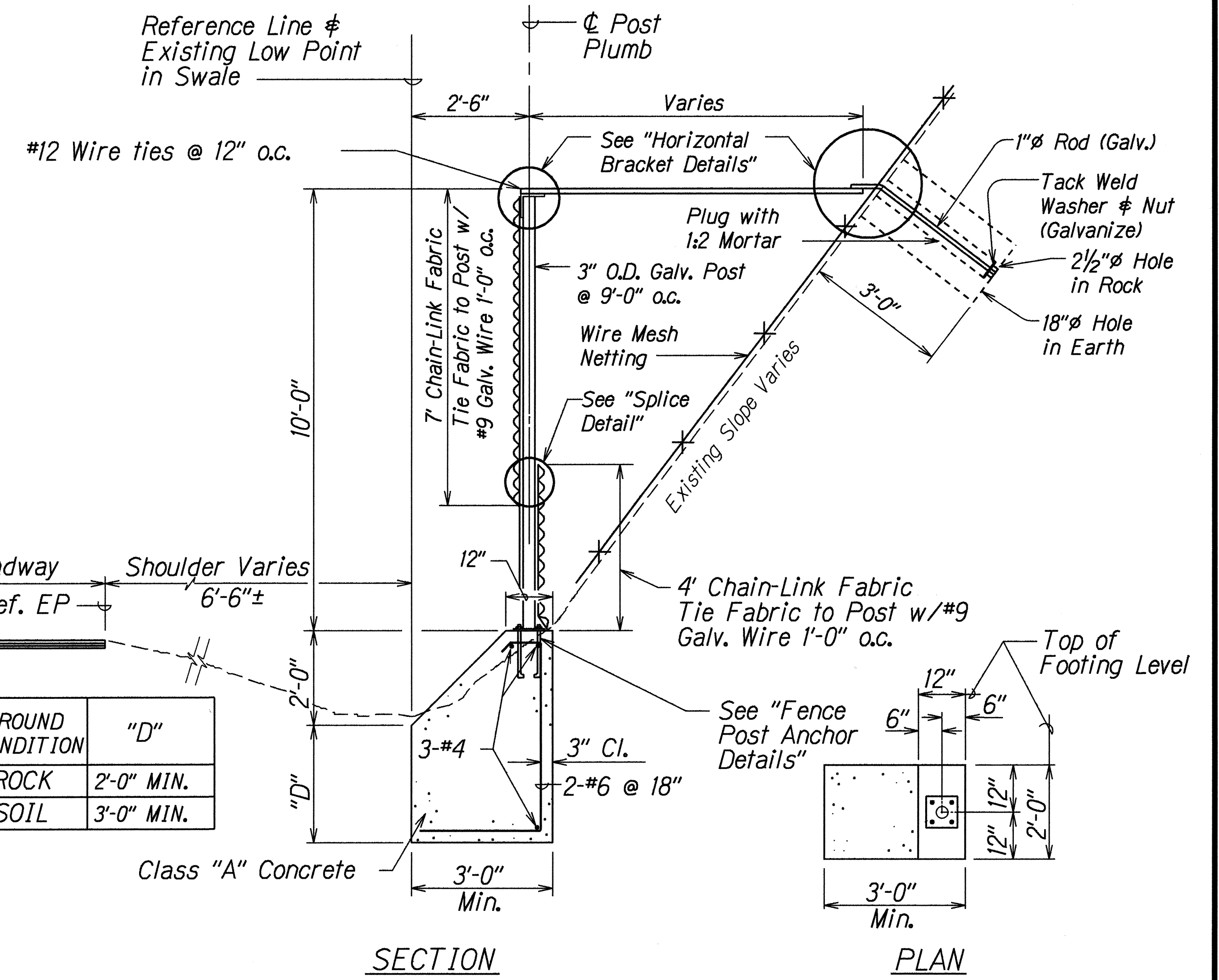


Scale: 3"= 1'-0"

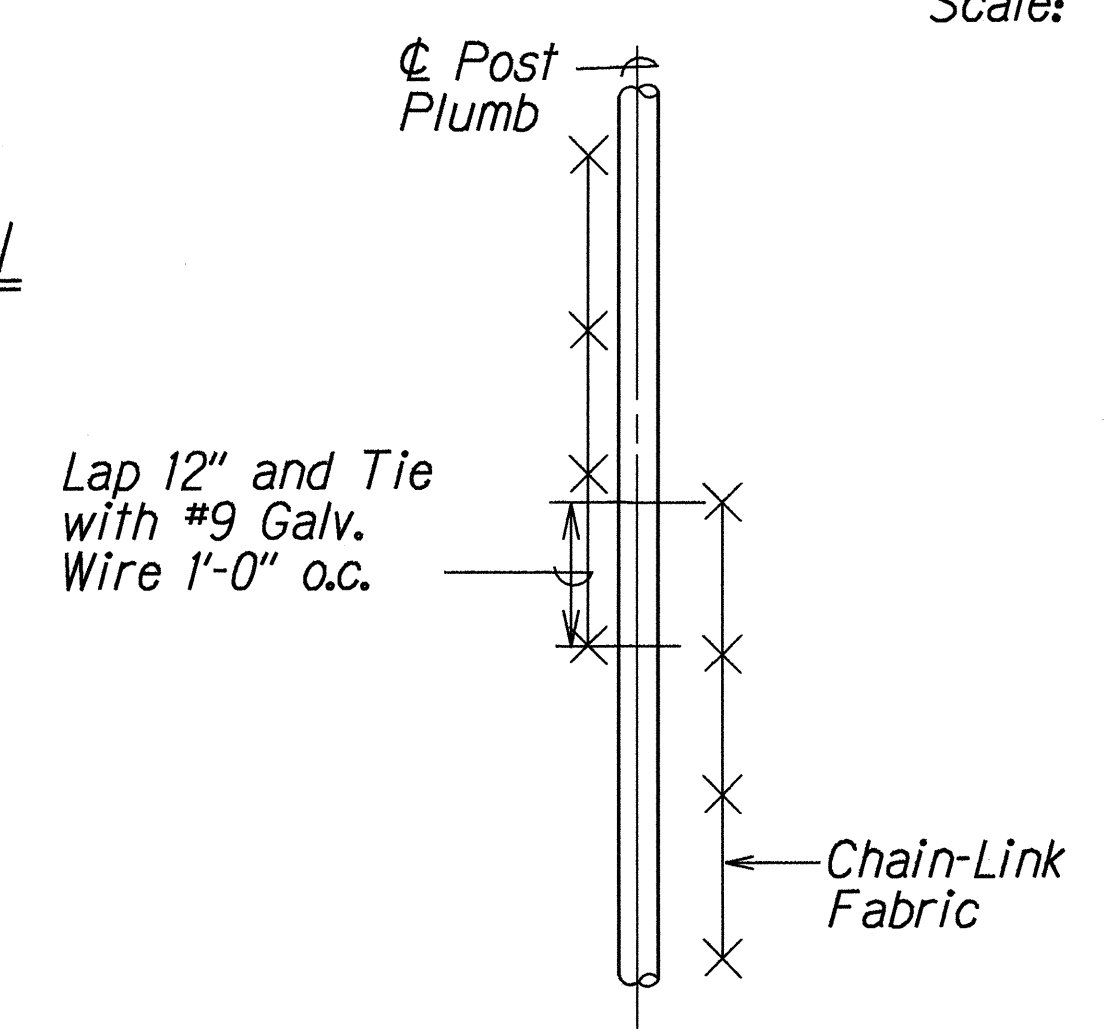


Scale: 1/8"= 1'-0"

GROUND CONDITION	"D"
ROCK	2'-0" MIN.
SOIL	3'-0" MIN.



TYPICAL FENCE POST DETAILS
Scale: Not To Scale



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

LEGEND FOR AS-BUILT POSTINGS

	Squiggly line for as-built deletion
	Double line for as-built deletion
	Text for as-built posting

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SAFETY IMPROVEMENT DETAILS

KAMEHAMEHA HIGHWAY
SAFETY IMPROVEMENTS, PHASE II
Kipapa Gulch towards Mililani
Federal Aid Project No. NH-099-1(14)
Scale: As Shown Date: Dec., 1991

SHEET No. 2 OF 2 SHEETS

DESIGNED BY	DATE
TRACED BY	1/25/95
NOTED BY	
QUANTITIES BY	
CHECKED BY	