

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(39)	1996	28	70

NOTE:

The Contractor shall verify the type of material used in the existing underdrain. If these pipes are made of asbestos, the Contractor shall notify the Engineer. Asbestos pipe shall be plugged and abandoned in place, wherever possible, as determined by the Engineer. Plugging of the pipe shall be done according to Section 202 of the Hawaii Standard Specifications, and shall be considered incidental to the various contract items.

If the depth of the asbestos pipe interferes with the construction of the new pavement structure or if the Engineer feels that the pipe may fail due to construction activities, the pipe shall be removed and disposed of according to all applicable Federal, State, and County laws, rules, and regulations regarding asbestos handling and disposal. Payment for this work shall be paid for under Item No. 202.0421, Removal of Asbestos Pipe.

If the pipe is found not to contain asbestos, payment for the removal of pipe shall be paid for under Item No. 202.0420, Removal of Existing Drainage System.

Sta. 17+75 Lt. to # Sta. 24+60 Lt.
Install: Underdrain
(For details see Typical Roadway Section # sht. no. H6)
Estimated Quantities
Underdrain = 628 L.F.
6-Inch Perforated Underdrain Pipe = 628 L.F.
6-Inch Nonperforated Underdrain Pipe = 40 L.F.

Sta. 18+75 o/s 42'± Lt. to # Sta. 19+65 o/s 42'± Lt.
Construct: 4 Ft. x 2 Ft. Lined Vee Ditch
(For detail see sht. no. H3)
Estimated Quantities
Ditch and Channel Excavation = 18 C.Y.
4 Ft. x 2 Ft. Lined Vee Ditch = 65 L.F.

Sta. 19+65 o/s 42'± Lt. to # Sta. 21+00 o/s 42'± Lt.
Construct: 2 Ft. x 2 Ft. Lined Trapezoidal Drainage Ditch
(For detail see sht. no. H3)
Estimated Quantities
Ditch and Channel Excavation = 40 C.Y.
2 Ft. x 2 Ft. Lined Trapezoidal Drainage Ditch = 135 L.F.

Sta. 17+75 Lt.
Install: Underdrain Cleanout
(For details see sht. no. H7)
Estimated Quantities
Underdrain Cleanout 1 Ea.

Sta. 18+70 Lt.
Construct: Type "2" GDI
Install: 24" CSP
(For details see sht. no. H4)
Estimated Quantities
Structure Excavation for Drainage System = 76 C.Y.
24" CSP, Sht. "t"=0.109 in. = 68 L.F.
Type "2" GDI, 5.50 ft. to 6.49 ft = 1 Ea.

Sta. 19+45 Lt.
Construct: Type "2" GDI
Install: 24" CSP
(For details see sht. no. H4)
Estimated Quantities
Structure Excavation for Drainage System = 80 C.Y.
24" CSP, Sht. "t"=0.109 in. = 72 L.F.
Type "2" GDI, 5.50 ft. to 6.49 ft = 1 Ea.

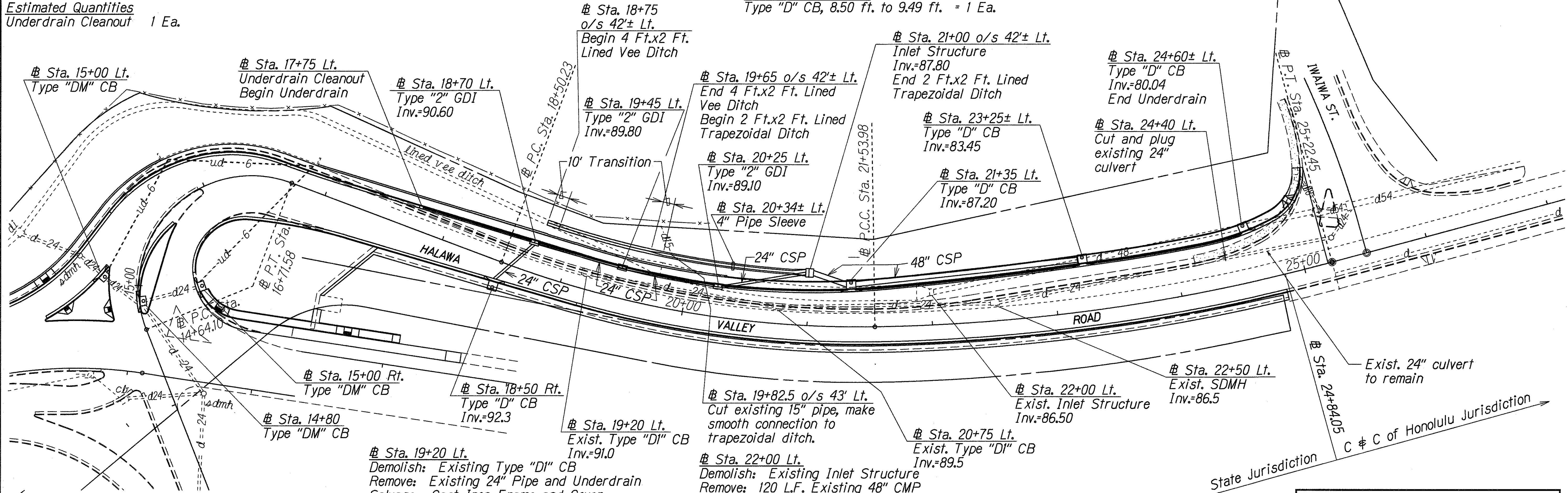
Sta. 20+25 Lt.
Construct: Type "2" GDI
Install: 24" CSP
(For details see sht. no. H4)
Estimated Quantities
Structure Excavation for Drainage System = 86 C.Y.
24" CSP, Sht. "t"=0.109 in. = 70 L.F.
Type "2" GDI, 5.50 ft. to 6.49 ft = 1 Ea.

Sta. 21+00 o/s 42'± Lt.
Construct: Inlet Structure
Install: 48" CSP
(For details see sht. no. H8)
Estimated Quantities
Structure Excavation for Drainage System = 55 C.Y.
48" CSP, Sht. "t"=0.109 in. = 30 L.F.
Inlet Structure = 1 Ea.

Sta. 21+35 Lt.
Construct: Type "D" CB
Install: 48" CSP
Estimated Quantities
Structure Excavation for Drainage System = 371 C.Y.
48" CSP, Sht. "t"=0.109 in. = 180 L.F.
Type "D" CB, 6.50 ft. to 7.49 ft. = 1 Ea.

Sta. 23+25± Lt.
Construct: Type "D" CB
Estimated Quantities
Type "D" CB, 8.50 ft. to 9.49 ft. = 1 Ea.

Sta. 24+60± Lt.
Construct: Type "D" CB
Estimated Quantities
Type "D" CB, 8.50 ft. to 9.49 ft. = 1 Ea.



Sta. 14+80
Sta. 15+00 Lt.
Sta. 15+00 Rt.
Modify Exist'g: Type "DM" CB
(For details see sht. no. H5)
Estimated Quantities
Type "DM" CB 3 Ea.

Sta. 18+50 Lt.
Construct: Type "D" CB
Install: 24" CSP
Estimated Quantities
Structure Excavation for Drainage System = 48 C.Y.
24" CSP, Sht. "t"=0.109 in. = 46 L.F.
Type "D" CB, 4.50 ft. to 5.49 ft. = 1 Ea.

Sta. 20+75 Lt.
Demolish: Existing Type "DI" CB
Remove: Existing 24" Pipe and Underdrain
Salvage: Cast Iron Frame and Cover
Estimated Quantities
Removal of Existing Drainage Structure = 1 Ea.
Removal of Existing Drainage System = 175 L.F.

Sta. 19+82.5 o/s 43' Lt.
Cut existing 15" pipe, make smooth connection to trapezoidal ditch.
Sta. 22+00 Lt.
Demolish: Existing Inlet Structure
Remove: 120 L.F. Existing 48" CMP
Salvage: Trash Rack
Estimated Quantities
Removal of Existing Drainage Structure = 1 Ea.
Removal of Existing Drainage System = 120 L.F.

Sta. 22+50 Lt.
Demolish: Existing SDMH
Remove: Existing 24" Pipe and Underdrain
Salvage: Cast Iron Frame and Cover
Estimated Quantities
Removal of Existing Drainage Structure = 1 Ea.
Removal of Existing Drainage System = 190 L.F.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE PLAN

ULUNE STREET IMPROVEMENTS
Halawa Hts. Rd. to Halawa Valley Rd.
And
HALAWA VALLEY ROAD IMPROVEMENTS
Ulune Street to Iwaiwa Street
Fed. Aid Project No. STP-0300(39)

Scale: 1" = 40' Date: Feb., 1996

SHEET No. **HI** OF **8** SHEETS