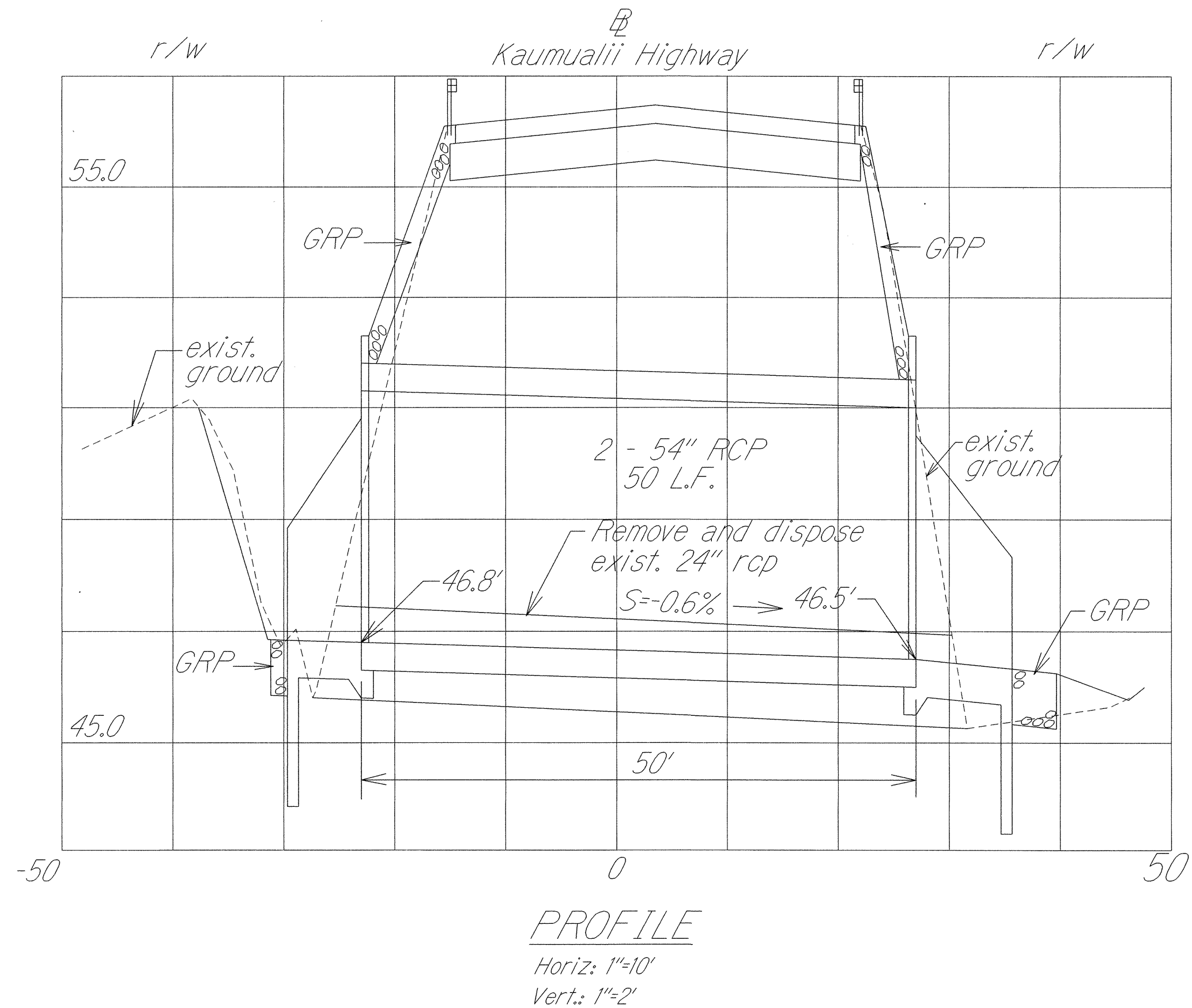
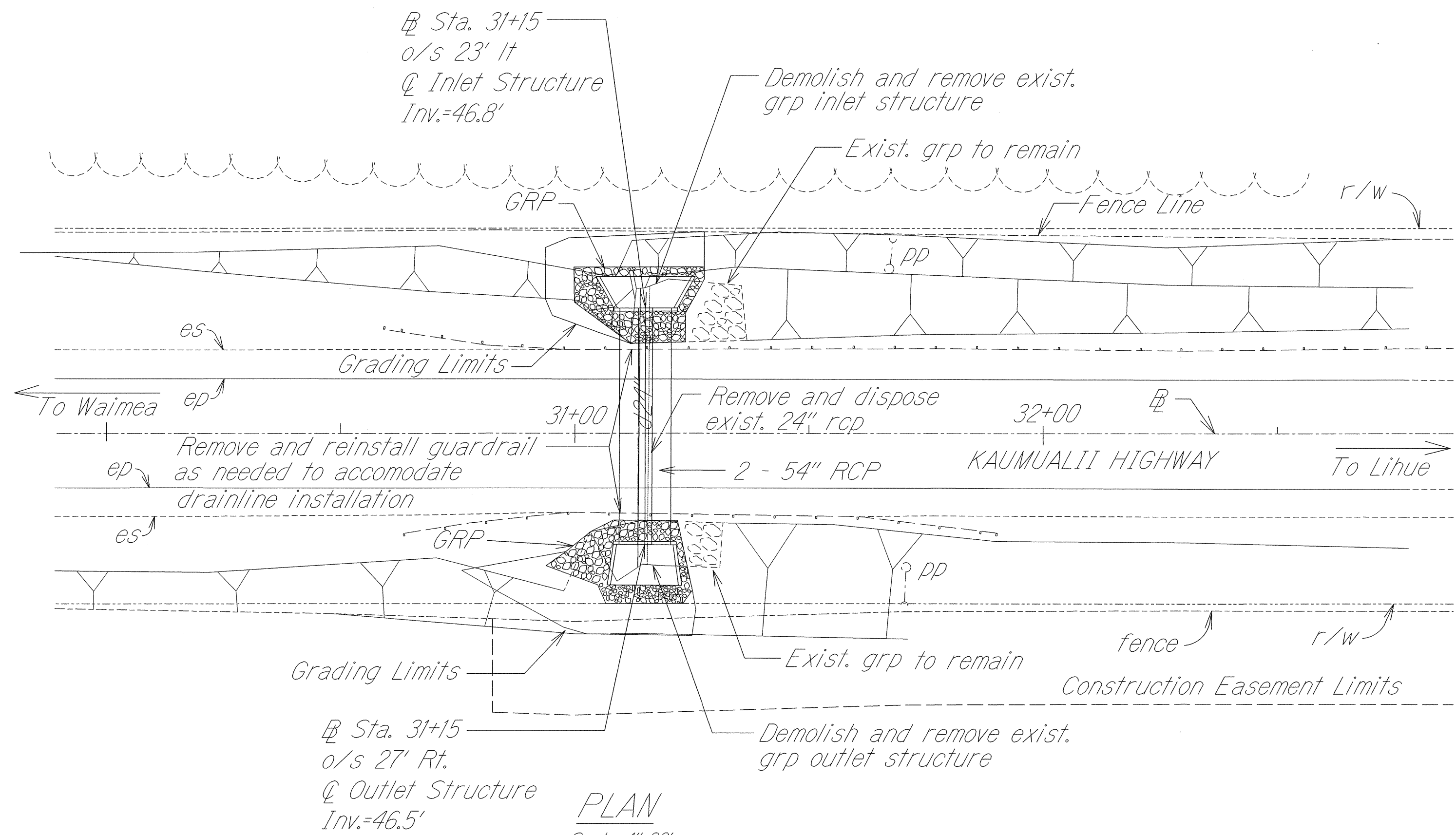


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	50B-02-99	2002	8	16



DRAINAGE PLAN -KAUMUALII HIGHWAY M.P.22.0

TRUE NORTH
Scale: 1"=20' ft.

Sta. 31+15 o/s 23' Lt.
Construct Inlet Structure
(For Details see Sht. No. 11)
Twin 54" Reinforced Concrete Pipe Culverts
(For Typ. Details see Sht. No. 11)

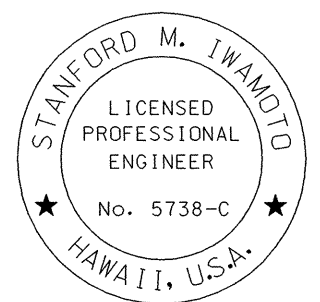
Estimated Quantities
Structural Excavation for Inlet System = 30 C.Y.
Structural Excavation for 54" RCP = 200 C.Y.
Plant Mix Glassphalt Concrete Base Course = 31 Tons
A.C. Pavement Mix No. IV = 14 Tons
Concrete in Inlet Structure = 7 C.Y.
54" RCP Class III = 100 L.F.
Reinforcing Steel in Inlet Structure = 700 Lb.
Bedcourse Material for RCP = 5 C.Y.
Grouted Rubble Paving = 9 C.Y.

Sta. 31+15 o/s 27' Rt.
Construct Outlet Structure
(For Details see Sht. No. 10)

Estimated Quantities
Structural Excavation for Outlet System = 30 C.Y.
Concrete in Outlet Structure = 8 C.Y.
Reinforcing Steel in Outlet Structure = 725 Lb.
Grouted Rubble Paving = 10 C.Y.

DRAINAGE NOTES

- Existing drainage systems shall be functional at all times during construction. the contractor is to furnish materials, equipment, labor, tools, and incidentals necessary to accomplish maintenance of flow. the cost shall be incidental to the various Contract Items.
- The Contractor shall verify the locations of all existing culverts and utilities in the field. any existing culverts and utilities damaged during construction shall be repaired or replaced by the Contractor at his own expense.
- Demolishing, removing, and disposing of existing 24-inch culverts, concrete inlet and outlet structures and removal and installation of existing guardrail shall not be paid for separately, but shall be considered incidental to Item No. 206.2020 - Structure Excavation for Inlet and Outlet Structures.
- For Culvert Trench and A.C. Pavement Restoration Detail, see Sheet No. 4.



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION

Signature

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE PLAN
KAUMUALII HIGHWAY,
DRAINAGE IMPROVEMENTS
Vicinity of M.P. 22.0
Project No. 50B-02-99

Scale: As Shown Date: August, 2001

SHEET No. 1 OF 2 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	CHECKED BY	

ikmukgn.dgn

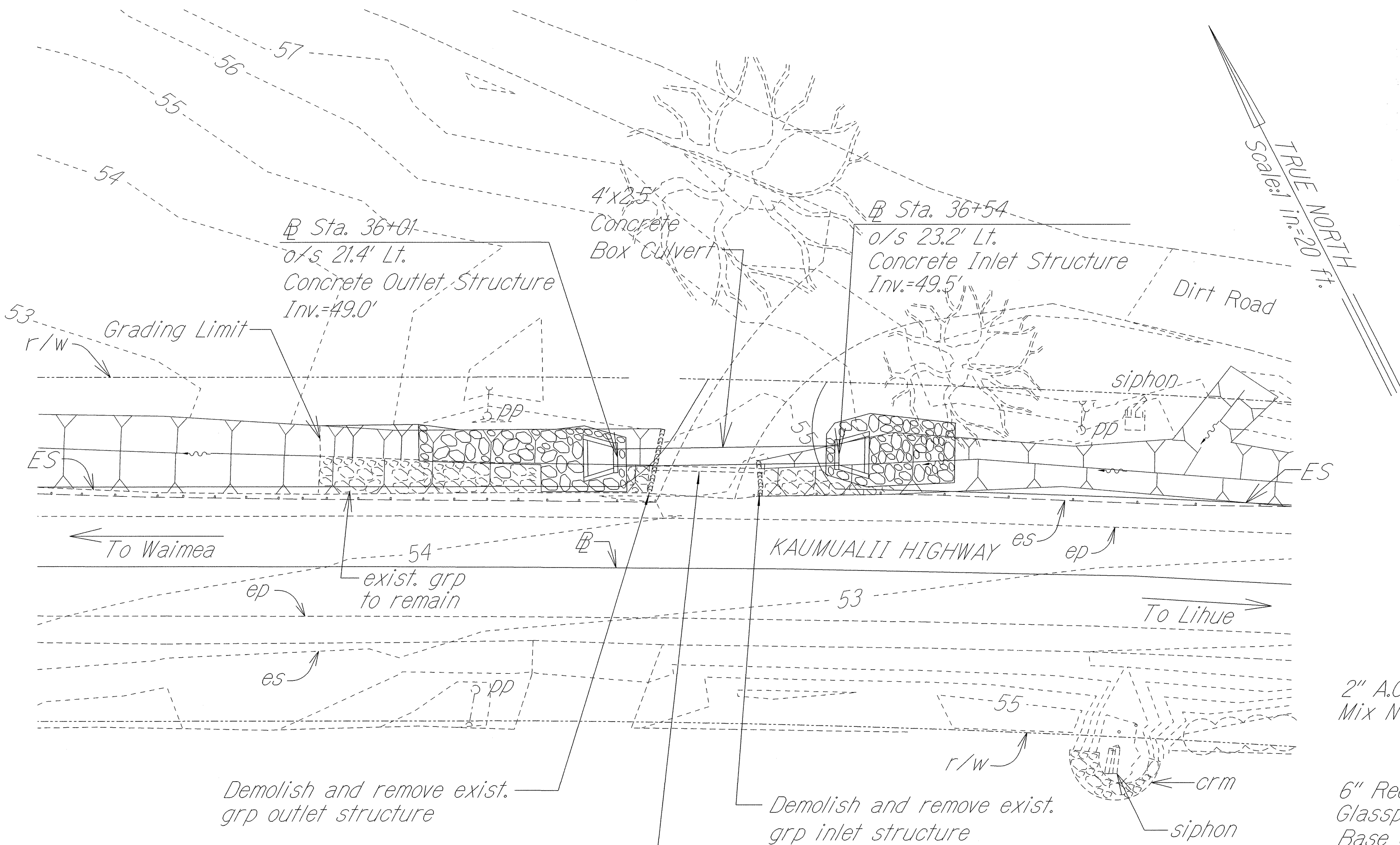
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	50B-02-99	2002	9	16

@ Sta. 36+54 o/s 23.2' Lt
 Construct Inlet Structure
 (For Details see Sht. No. 10)
 4' x 2.5' Concrete Box Culvert (For Typ. Details see Sht. No. 12)

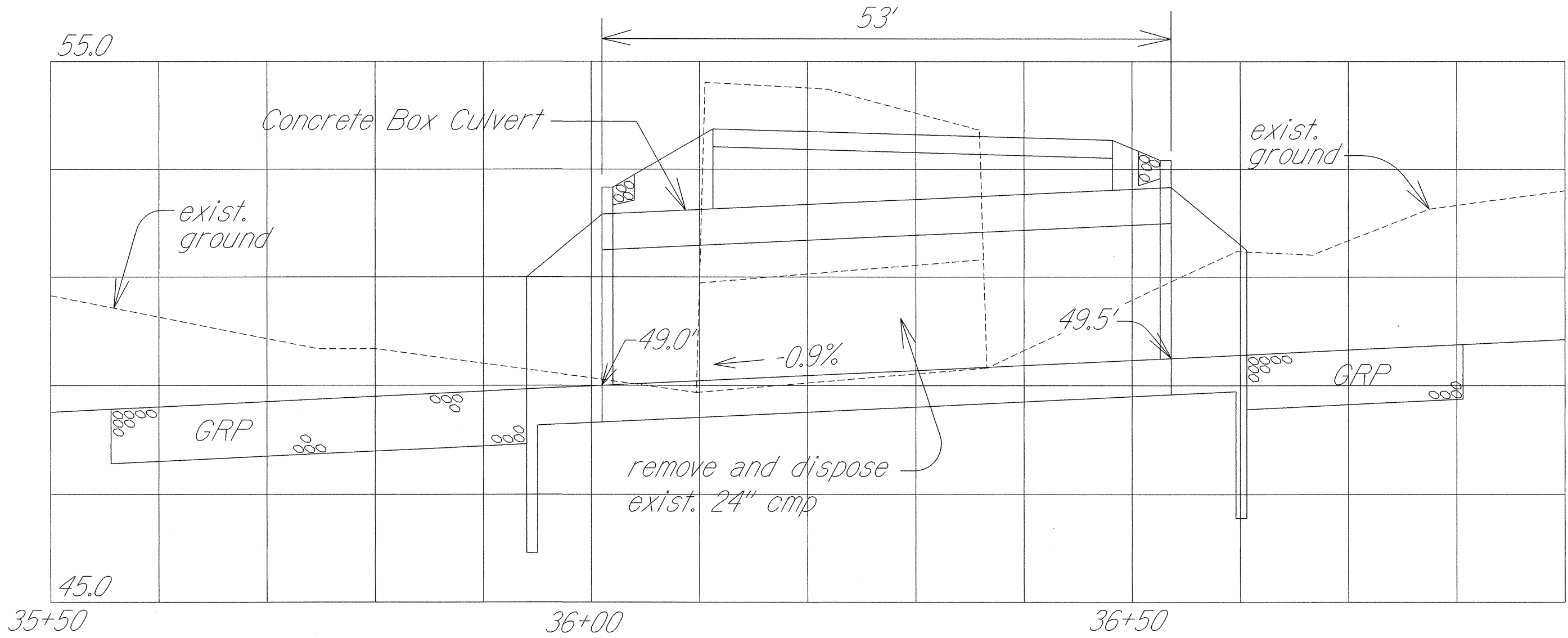
Estimated Quantities
 Structural Excavation for Inlet System = 11 C.Y.
 Structural Excavation for Concrete Box = 40 C.Y.
 Structural Backfill = 11 C.Y.
 Concrete in Inlet Structure = 4 C.Y.
 4'w x 2.5'h Box Culvert = 20 C.Y.
 Reinforcing Steel in Inlet Structure = 400 Lb.
 Grouted Rubble Paving = 17 C.Y.
 Bedcourse Material for Box Culvert = 9 C.Y.

@ Sta. 36+01 o/s 21.4' Lt
 Construct Outlet Structure (For Details see Sht. No. 12)

Estimated Quantities
 Structural Excavation for Outlet System = 8 C.Y.
 Concrete in Outlet Structure = 4 C.Y.
 Reinforcing Steel in Outlet Structure = 400 Lb.
 Grouted Rubble Paving = 17 C.Y.

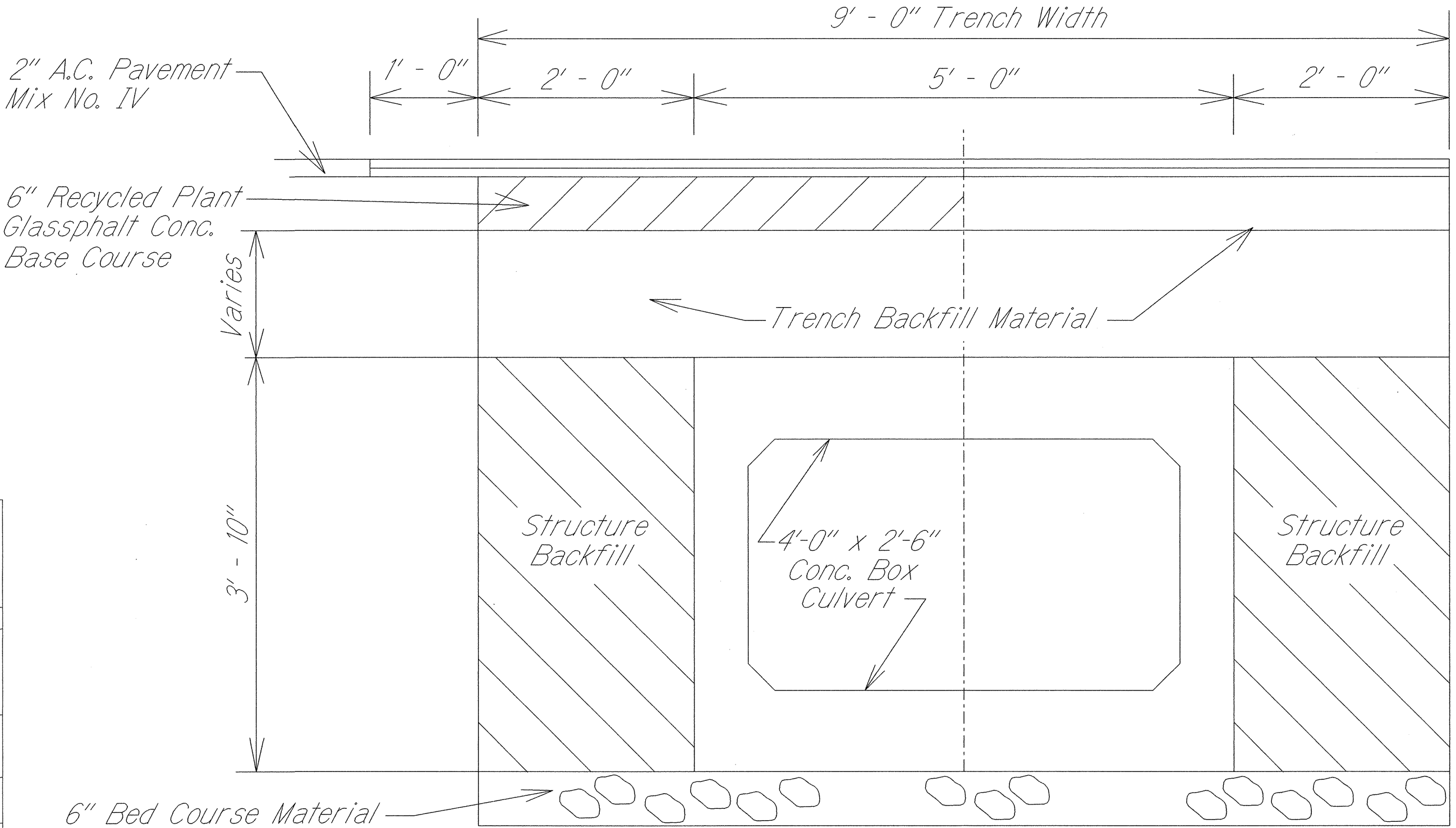


PLAN
 Scale: 1"=20'



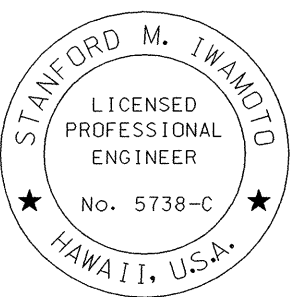
PROFILE
 Horiz: 1"=10'
 Vert.: 1"=2'

DRAINAGE PLAN -KAUMUALII HIGHWAY M.P.22.1



TYPICAL TRENCH DETAIL FOR 4'-0" x 2'-6"
 CONCRETE BOX CULVERT

Scale: 1" = 1'-0"



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Signature

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

DRAINAGE PLAN

KAUMUALII HIGHWAY,
 DRAINAGE IMPROVEMENTS
 Vicinity of M.P. 22.0
 Project No. 50B-02-99

Scale: As Shown Date: August, 2001

SHEET No. 2 OF 2 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
N.	

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