FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-076-1(9)	2006	78	160

BEST MANAGEMENT PRACTICE NOTES:

The following special conditions apply to all land disturbance work conducted under this general permit:

a) Construction Management Techniques

(1) Clearing and grubbing shall be held to the minimum necessary for grading and equipment operation.

(2) Construction shall be sequenced to minimize the exposure time of the cleared surface area.

(3) Construction shall be staged or phased for large projects. Areas of one phase shall be stabilized before another phase is initiated. Stabilization shall be accomplished by temporarily or permanently protecting the disturbed soil surface from rainfall impacts and runoff.

(4) Erosion and sediment control measures shall be in place and functional before earth moving operations begin. These measures shall be properly constructed and maintained throughout the construction period.

(5) All control measures shall be checked and repaired as necessary, for example, weekly in dry periods and within twenty-four hours after any rainfall of 0.5 inches or greater within a 24-hour period. During prolonged rainfall, daily checking is necessary. The permittee shall maintain records of checks and repairs.

(6) The permittee shall maintain records of the duration and estimated volume of storm water discharge(s).

(7) The Contractor shall designate a specific individual to be responsible for erosion and sediment controls on each project site.

b) Vegetation Controls

(1) Pre-construction vegetative ground cover shall not be destroyed, removed, or disturbed more than twenty calendar days prior to land disturbance.

(2) Temporary soil stabilization with appropriate vegetation shall be applied on areas that will remain unfinished for more than thirty calendar days.

(3) Permanent soil stabilization with perennial vegetation or pavement shall be applied as soon as practical after final grading. Irrigation and maintenance of the perennial vegetation shall be provided for thirty calendar days or until the vegetation takes root, whichever is shorter.

c) Structural Controls

(1) Storm water flowing toward the construction area shall be diverted by using appropriate control measures, as practical.

(2) Erosion control measures shall be designed according to the size of disturbed or drainage areas to detain runoff and trap sediment.

(3) Water must be discharged in a manner that the discharge shall not cause or contribute to a violation of the basic water quality criteria as specified in section 11-54-04.

d) Grading Controls

(1) All grading work will be done in conformance with Soil Erosion Standards and Guidelines, Department of Public Works, City & County of Honolulu, dated November 1975; and applicable provisions of Chapter 54, Water Quality Standards, and Chapter 55, Water Pollution Control, Title 11, Administrative Rules of the State Department of Health.

e) Erosion and Sediment Controls

(1) Erosion and sediment controls will consist of silt fences, storm drain inlet protective measures, stabilized construction entrances and any additional control measures (temporary dikes, sandbags, etc.) as needed. Erosion and sediment controls will be in place until construction is complete. Locations of erosion and sediment controls will be determined on an "as needed basis" as determined by a "walk through" of the project area with the State's project engineer and the Contractor's representative. Approximate locations of erosion and sediment controls are shown on the plans.

(2) Silt fences will be installed along the edges of open channels, ditches, and bottom of new and existing slopes to filter sediment from runoff before runoff enters the stream, channels, and/or ditches.

(3) Storm drain inlet protective measures will be installed around existing and new drain inlets to prevent sediment from entering the storm drain system.

(4) Stabilized control entrances shall be installed and maintained wherever vehicles are leaving the construction site and entering public roads to prevent transporting sediment onto paved roads.

(5) Dust mitigation measures include:
1. Daily watering of disturbed areas until construction is complete.
2. Placing gravel where vehicles travel to minimize dust should daily watering not be sufficient.

f) Timing Controls

(1) Clearing and grubbing for the road will start at the beginning of the project.

(2) Construction will be sequenced to minimize exposure time of cleared surfaces.

(3) Temporary erosion and sediment control measures will be in place and functional before earth moving operations begin, and will be maintained throughout the construction period until construction is complete.

(4) Temporary erosion and sediment control measures may be removed at the beginning of the workday to facilitate construction, but shall be replaced at the end of the workday.

(5) All temporary erosion and sediment control measures shall be removed after construction is completed and permanent controls are in place.

(6) Disturbed areas caused by the project construction activities will be restored to their original pre-construction condition or will be hydro-mulched once the permanent work is completed.

HYDRO TESTING WATER:

(1) Untreated hydro testing water will not be discharged into the storm drainage system or any streams on this project.

(2) Any hydro testing water will be treated and neutralized and either contained on-site and allowed to infiltrate into the ground or pumped into the Contractor's water truck and used for dust control.

ADDITIONAL MANAGEMENT PRACTICES:

(1) All construction equipment will be maintained in operable condition and inspected for signs of leaks.

(2) Hazardous material (including fuels, oils, solvents, etc.) will not be stored in the construction area or in the access area.

(3) General daily practices:
a. The work area will be kept clean of debris.
b. All spills will be cleaned immediately.
c. Silt and debris will not be allowed to enter the storm drain system.

(4) All pickup trucks will be fueled off-site.

(5) Slurry from saw cutting operations will be contained by placing absorbent materials and sandbags on the low side of the area being cut. Material that is not contained will be vacuumed immediately following the saw cutting operations.

(6) Slurry from coring operations will be contained and disposed of in the concrete wash pit or lined container.

EMERGENCY POINT OF CONTACT:

- Howard Luyt, Project Manager, 478-4830
- Colin Ching, Project Superintendent, 479-5739
- Darek Kawamoto, Project Engineer, 479-0686

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

J:/FORT WEAVER ROAD/MISC/BMP1.dgn

RANDALL M. URASAKI LICENSED PROFESSIONAL ENGINEER No. 7269-C HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

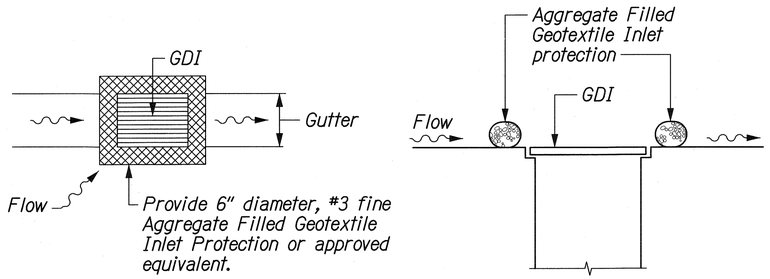
WATER POLLUTION AND EROSION CONTROL NOTES

FORT WEAVER ROAD WIDENING
VICINITY OF AAWA DRIVE TO GEIGER ROAD

Scale: None Date: Sept. 20, 2007

SHEET No. ECI-1 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-076-1(9)	2006	79	160



PLAN SECTION

INLET PROTECTION

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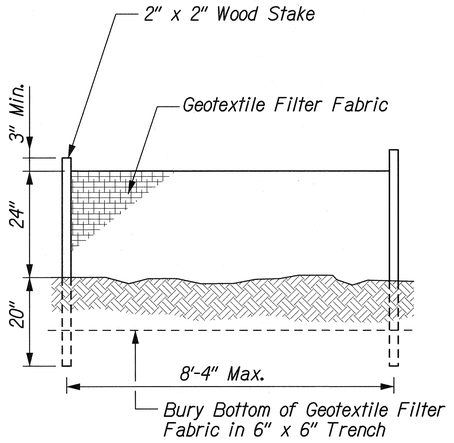
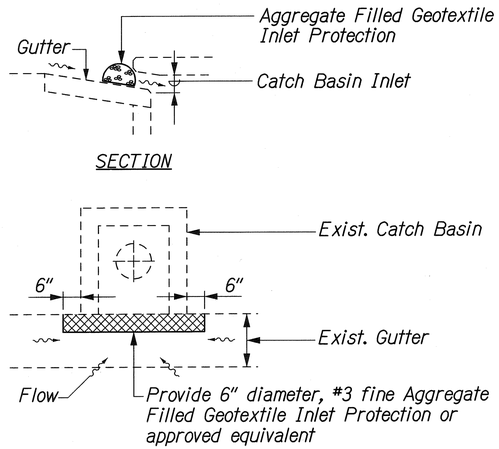
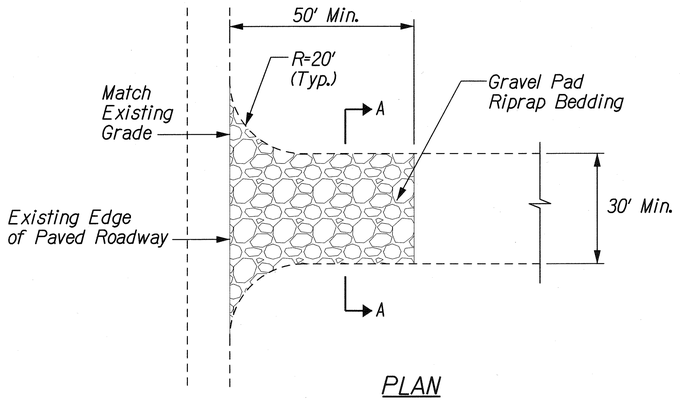




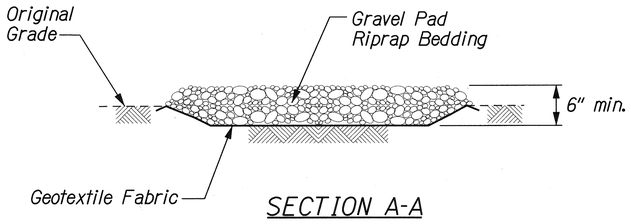
PLAN

INLET PROTECTION AT EXISTING CATCH BASIN

Not to Scale



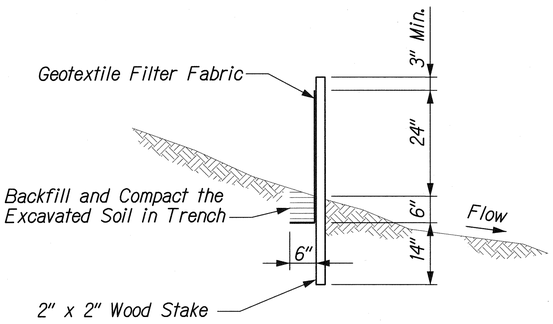
PLAN



SECTION A-A

TEMPORARY CONSTRUCTION ENTRANCE STABILIZATION

Not to Scale



SILT FENCE DETAIL

Not to Scale

SILT FENCE NOTES:

1. The filter fabric shall be a minimum of 36 inches wide.
2. If silt fence is obtained from manufacturer as a package (i.e. fabric attached to post) the manufacturer's installation instructions shall be adhered to.

ORIGINAL PLAN
NOTE BOOK
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STATE OF HAWAII
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HIGHWAYS DIVISION

WATER POLLUTION AND EROSION CONTROL DETAILS

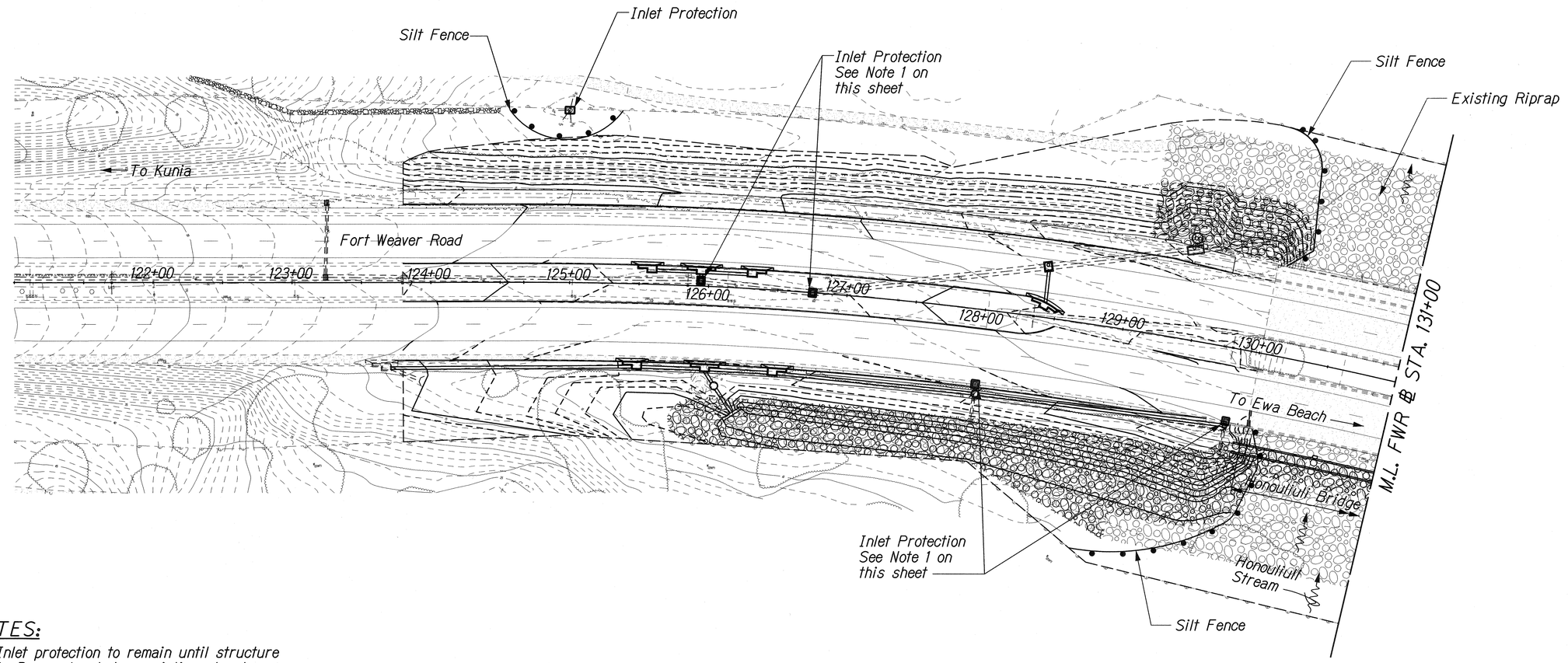
FORT WEAVER ROAD WIDENING
VICINITY OF AAWA DRIVE TO GEIGER ROAD

Scale: None Date: Sept. 20, 2007

SHEET No. EC1-2 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-076-1(9)	2006	80	160

TRUE NORTH



NOTES:

1. Inlet protection to remain until structure is Re-constructed or existing structure removed.
2. Provide inlet protection at all new catch basins and drop inlets.

LEGEND:

Silt Fence

Inlet Protection

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

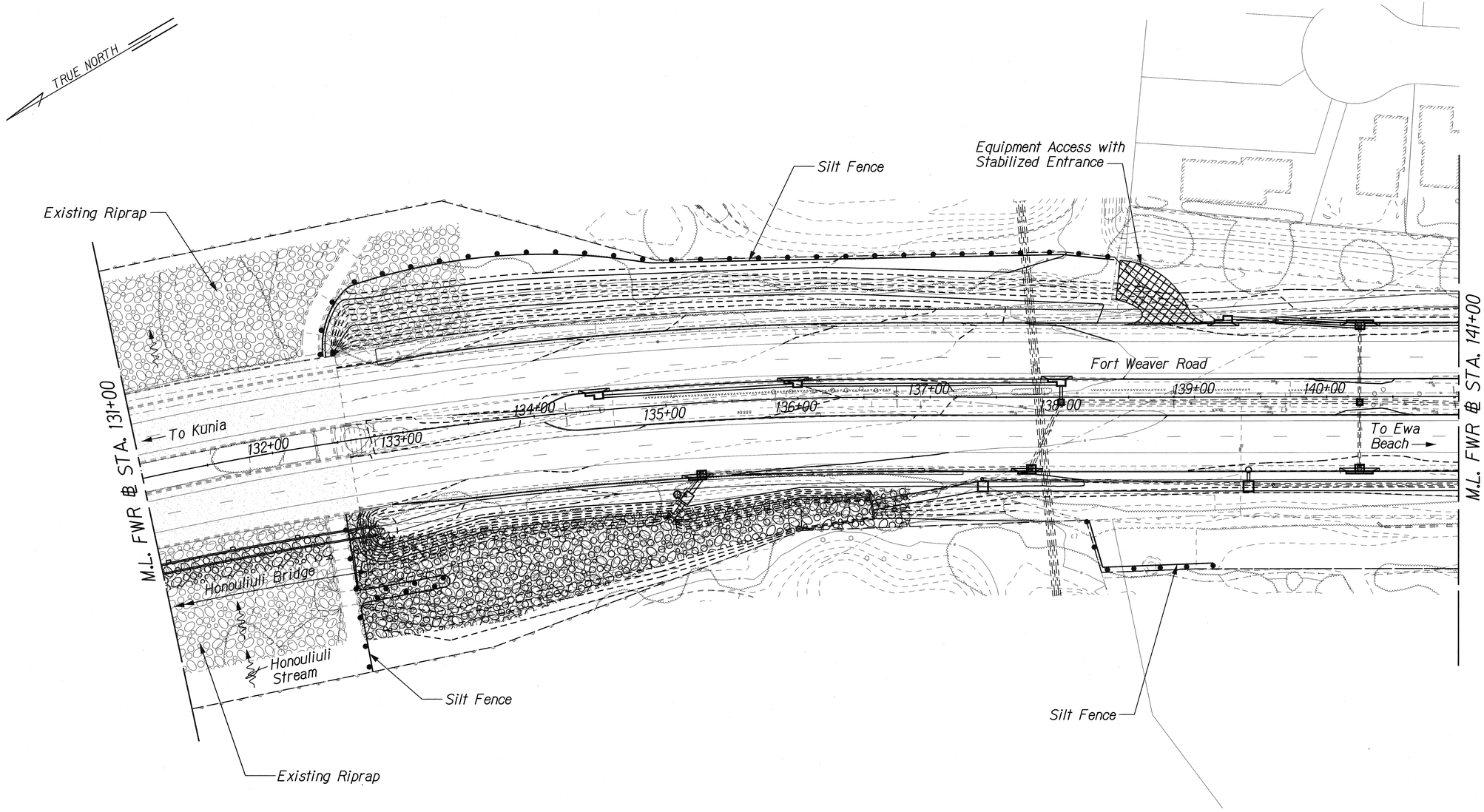
EROSION CONTROL PLAN
STA. 121+00 TO 131+00

FORT WEAVER ROAD WIDENING
VICINITY OF AAWA DRIVE TO GEIGER ROAD

Scale: 1" = 40' Date: Sept. 20, 2007

SHEET No. ECI-3 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-076-1(9)	2006	81	160



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HIGHWAYS DIVISION

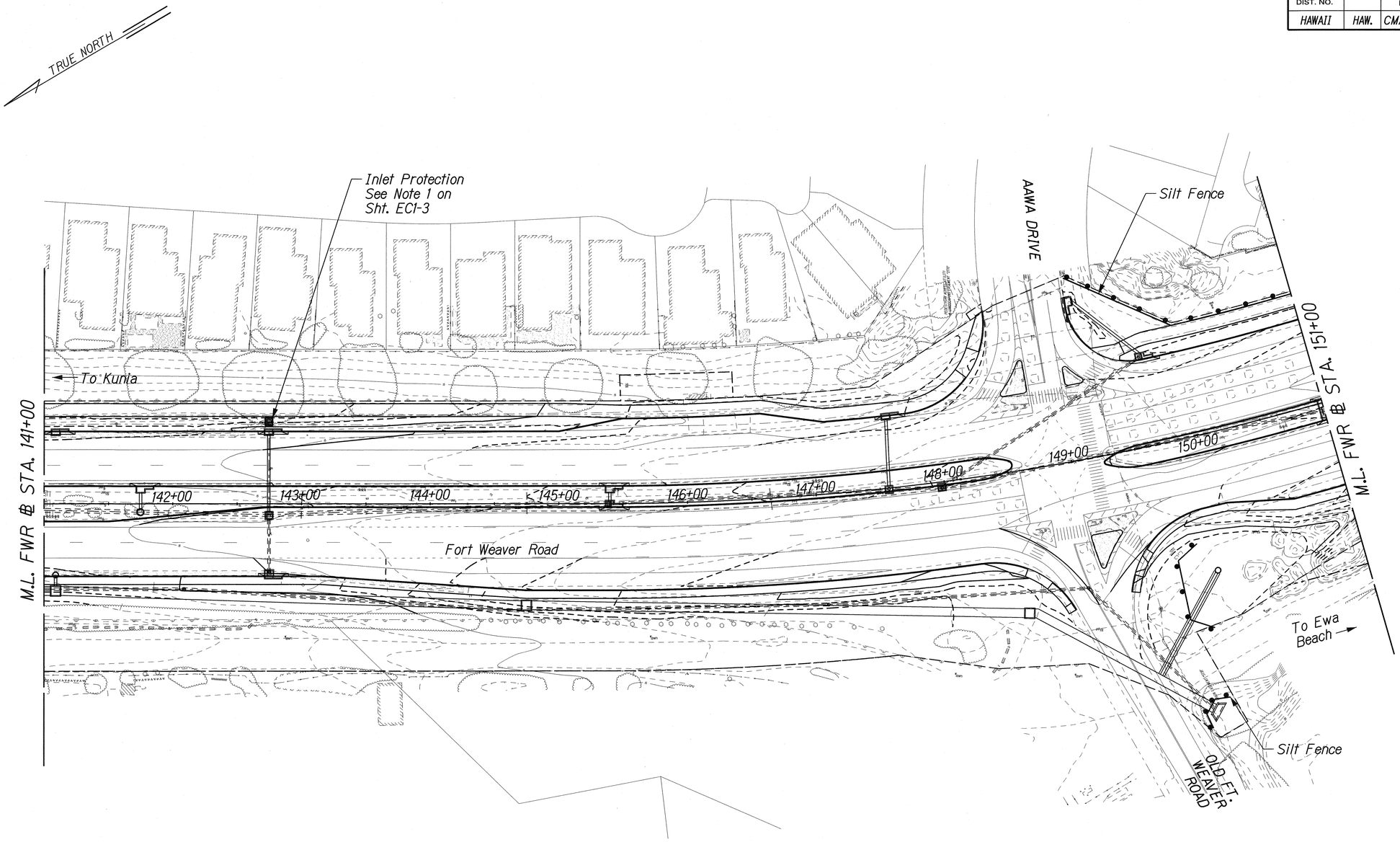
EROSION CONTROL PLAN
STA. 131+00 TO 141+00

FORT WEAVER ROAD WIDENING
VICINITY OF AAWA DRIVE TO GEIGER ROAD

Scale: 1" = 40' Date: Sept. 20, 2007

SHEET No. EC1-4 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-076-1(9)	2006	82	160



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STATE OF HAWAII
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HIGHWAYS DIVISION

EROSION CONTROL PLAN
STA. 141+00 TO 151+00

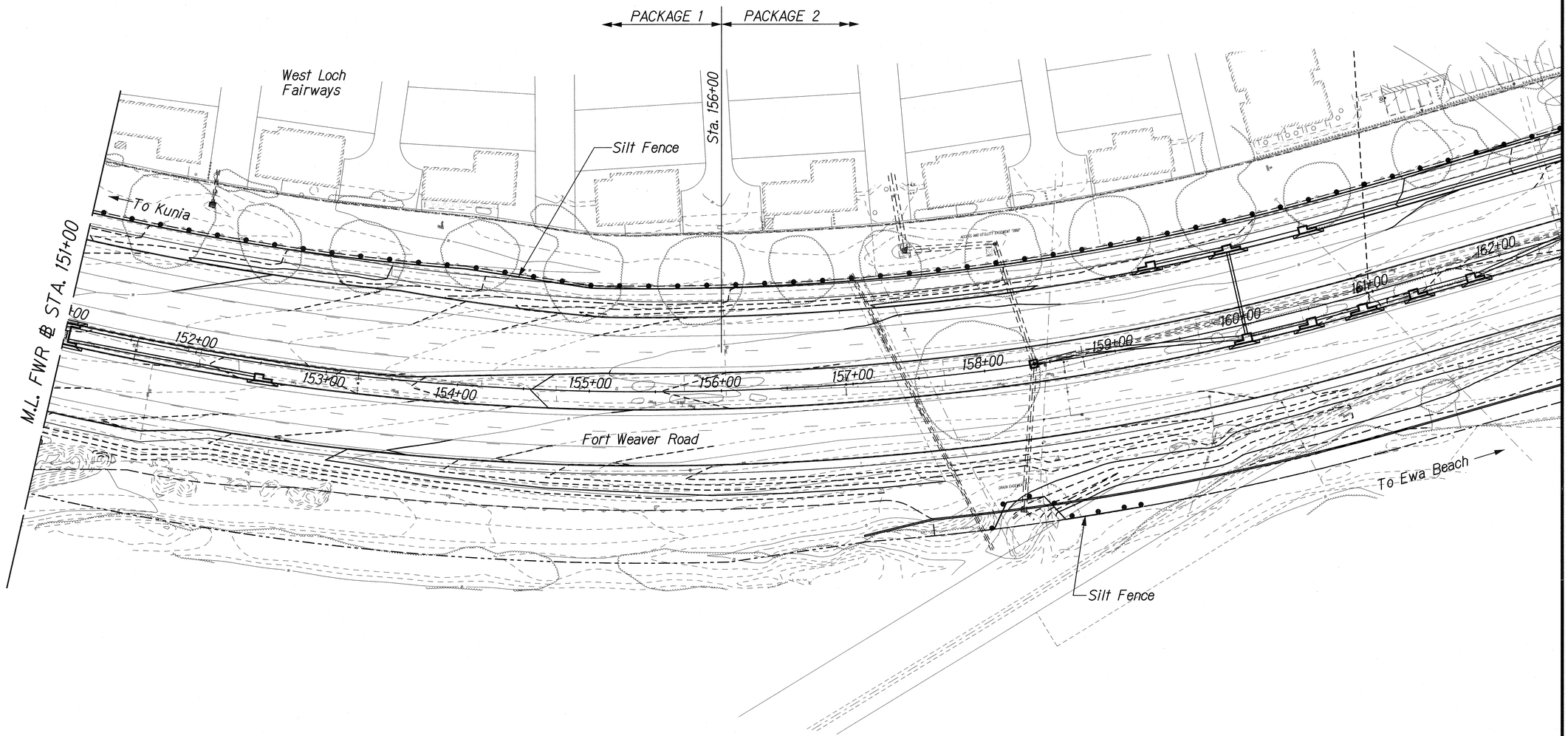
FORT WEAVER ROAD WIDENING
VICINITY OF AAWA DRIVE TO GEIGER ROAD

Scale: 1" = 40' Date: Sept. 20, 2007

SHEET No. EC1-5 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-076-1(9)	2006	83	160

TRUE NORTH



ORIGINAL PLAN
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EROSION CONTROL PLAN
STA. 151+00 TO 160+00

FORT WEAVER ROAD WIDENING
VICINITY OF AAWA DRIVE TO GEIGER ROAD

Scale: 1" = 40' Date: Sept. 20, 2007

SHEET No. EC1-6 OF 6 SHEETS