

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-063-1(22)	2003	26	69

EROSION CONTROL NOTES

1. The grading operations shall be performed in conformance with the applicable provisions of the water quality and water pollution control standards contained in Hawaii Administrative Rules, Chapter 11-54, "Water Quality Standards," Chapter 11-55, "Water Pollution Control," and if applicable, the NPDES permit for the project.
2. The Contractor shall not perform any grading operation which would cause falling rocks, soil or debris, in any form, to fall, slide or flow onto adjoining properties, streets or natural watercourses. Should such violations occur, the Contractor may be cited and shall immediately make all remedial actions necessary.
3. The Contractor shall remove all silt and debris resulting from his work and deposited in drainage facilities, roadways and other areas. The costs incurred for any necessary remedial action by the Engineer shall be payable by the Contractor.
4. The Contractor, at his own expense, shall keep the project area and surrounding area free from dust and other nuisance. The work shall be in conformance with the air pollution control standards contained in the Hawaii Administrative Rules, Chapter 11-60, "Air Pollution Control."
5. Adequate provisions shall be made to prevent surface waters from damaging the cut face of an excavation or the sloped surfaces of a fill. Furthermore, adequate provisions shall be made to prevent sediment-laden runoff from leaving the site.
6. Fills on slopes steeper than 5:1 shall be keyed and benched.
7. No grading work shall be done on Saturdays, Sundays and holidays at any time without prior written notice to the Engineer.
8. The limits of the area to be graded shall be flagged by the Contractor before the commencement of the grading work. The maximum surface area of earth material exposed at any is 300,000 square feet.
9. Where applicable and feasible, the measures to control erosion and other pollutants shall be in place before any earth moving phase of the grading is initiated.
10. Temporary erosion control procedures shall be submitted by the contractor for approval by the Engineer prior to the start of actual grading operations.
11. Temporary erosion controls shall not be removed before permanent erosion controls are in-place and established.
12. Soil stabilization:
 - A. Pre-construction vegetative ground cover shall not be Destroyed, removed, or disturbed more than twenty calendar days prior to site disturbance.
 - B. Disturbed areas left unworked or unfinished for more than 30 calendar Days will be stabilized as necessary according to soil conditions.
 - C. In disturbed areas where surface conditions consist of erodible soils, the surface will be stabilized with grassing.
 - D. In disturbed areas where surface conditions are bare rock, or Non-erodible soils, no additional stabilization will be applied.

13. Erosion control measures shall remain in place until all disturbed areas are reestablished with ground vegetation or other means of ground stabilization.
14. Contractor shall stop all construction activities in the work area when storm runoff is present except to prevent and control soil erosion. All cost to repair the erosion control measures due to storm runoff and/or regular maintenance shall be done at no cost to the State.

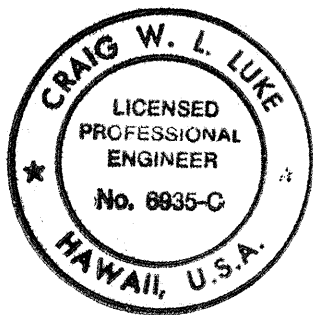
TEMPORARY SILT FENCE NOTES

1. Filter fabric shall be approved by the Engineer, and shall be installed with a support net of polyester netting or approved equal. The filter fabric shall be a minimum of 36" wide and the support net a minimum of 30".
2. If silt fence is obtained from a manufacturer as a package (i.e., fabric attached to posts), the manufacturer's installation instructions shall be adhered to.
3. Posts shall be metal, cross section of posts shall be substantial enough to support a loaded silt fence without bending.
4. Temporary silt fence shall be installed prior to beginning of grading work, and shall not be removed until exposed areas are stabilized.
5. Location of silt fence is provided as general guideline only. Provide breaks in fence as necessary to ensure clear access into and out of existing road. Adjust limits of fence to conform to existing features as necessary to ensure protection from sediment and erosion damage.

CONSTRUCTION ACCESS NOTES

1. The entrance will be maintained in a condition that will prevent tracking or flowing of sediment onto public rights-of-way. This may require top dressing, repair and/or cleanout of any measures used to trap sediment.
2. When necessary, wheels shall be cleaned prior to entrance onto public right-of-way.
3. When washing is required, it shall be done on an area stabilized with crushed stone that drains into an approved sediment trap or sediment basin.

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



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION AND
CONSTRUCTION OF THIS PROJECT
WILL BE UNDER MY OBSERVATION.

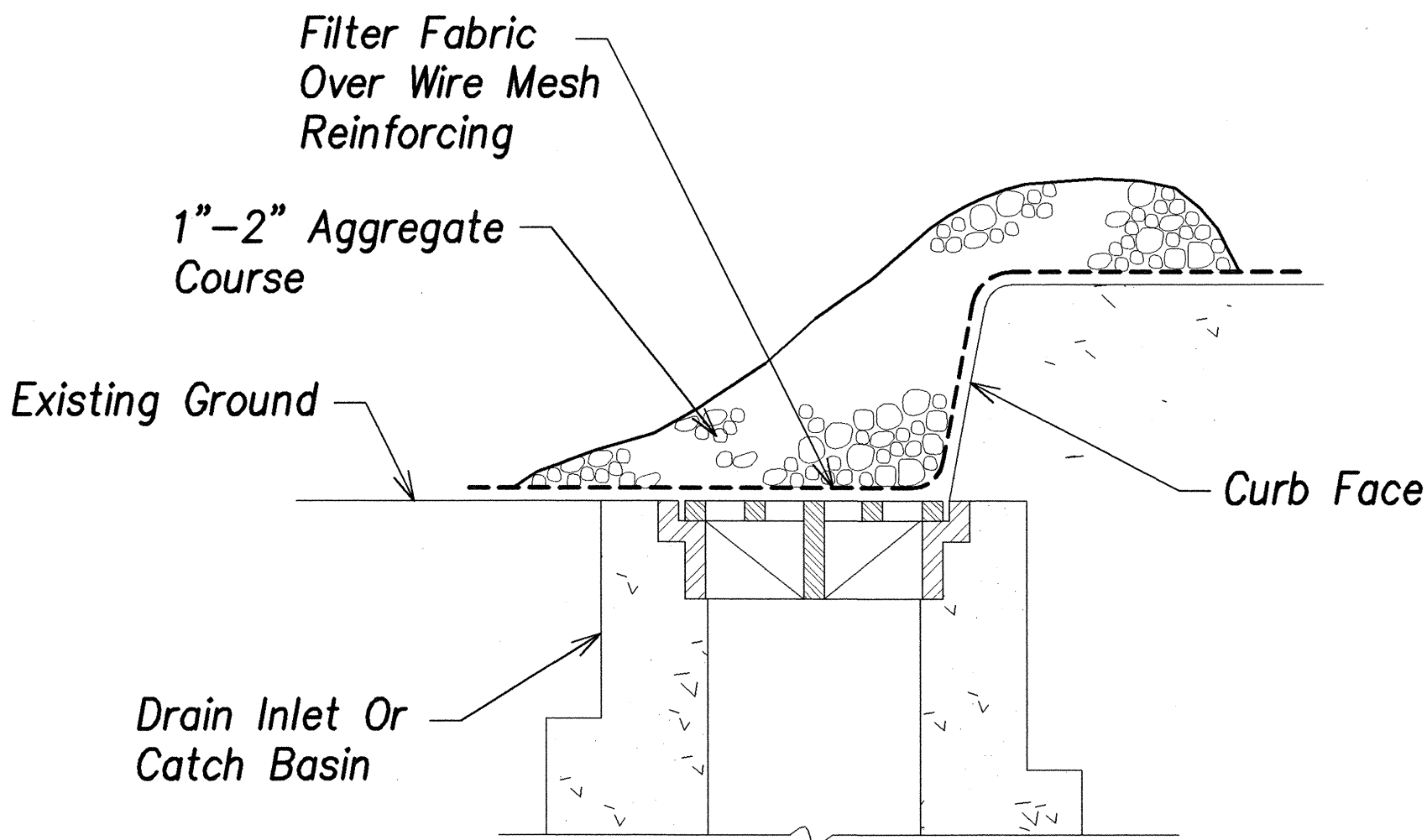
SIGNATURE _____ April 30, 2004
EXPIRATION DATE
OF THE LICENSE

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<u>EROSION CONTROL MEASURES -1</u>	
<u>LIKELIKE HIGHWAY</u>	
<u>Wilson Tunnel Improvements</u>	
<u>Leak and Crack Remediation</u>	
<u>F. A. Project No. STP-063-1(22)</u>	
Scale: As Shown	Date: April 24, 2003
SHEET No. C-25OF 30 SHEETS	

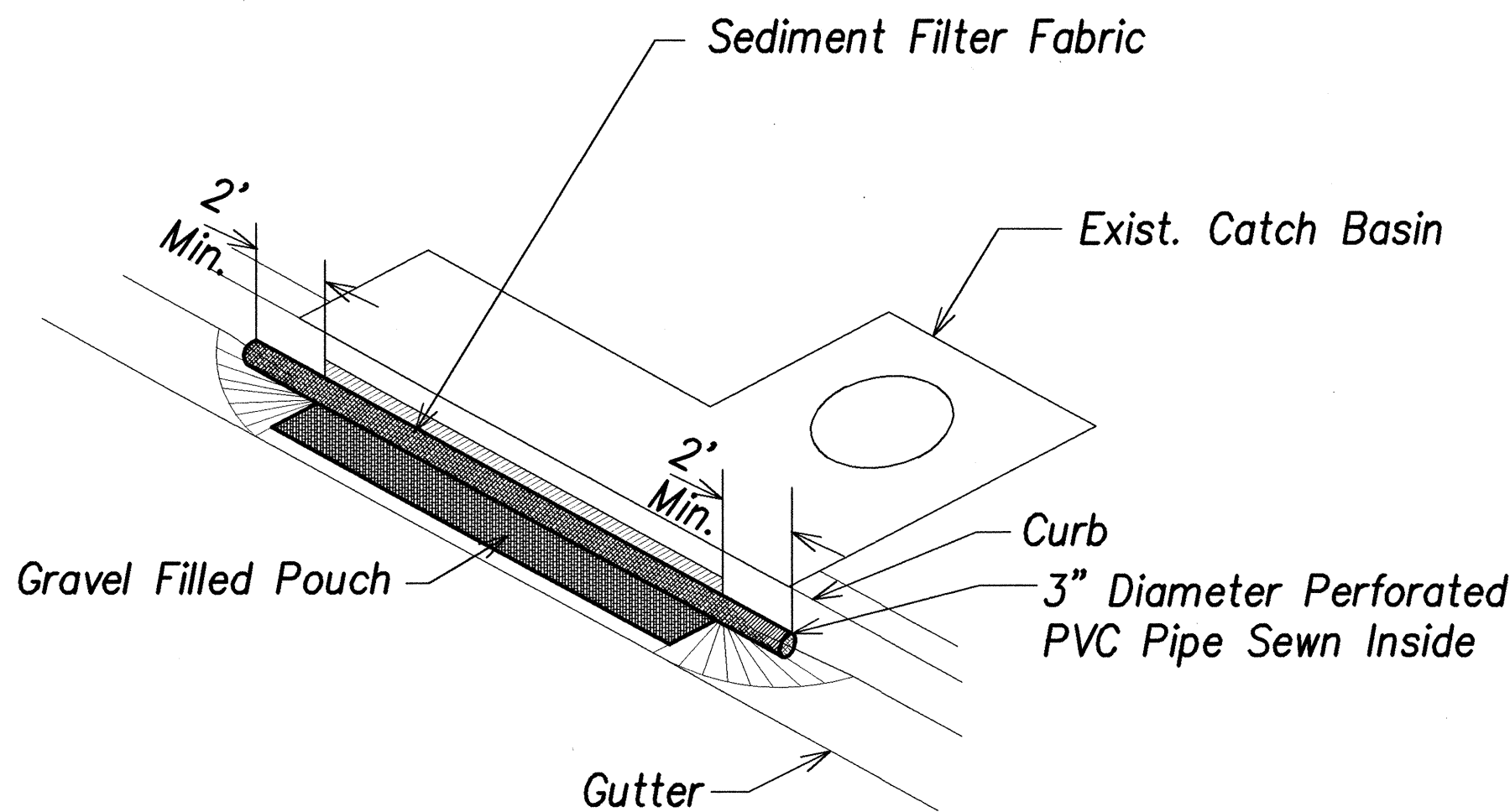
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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TEMPORARY SILT FENCE NOTES

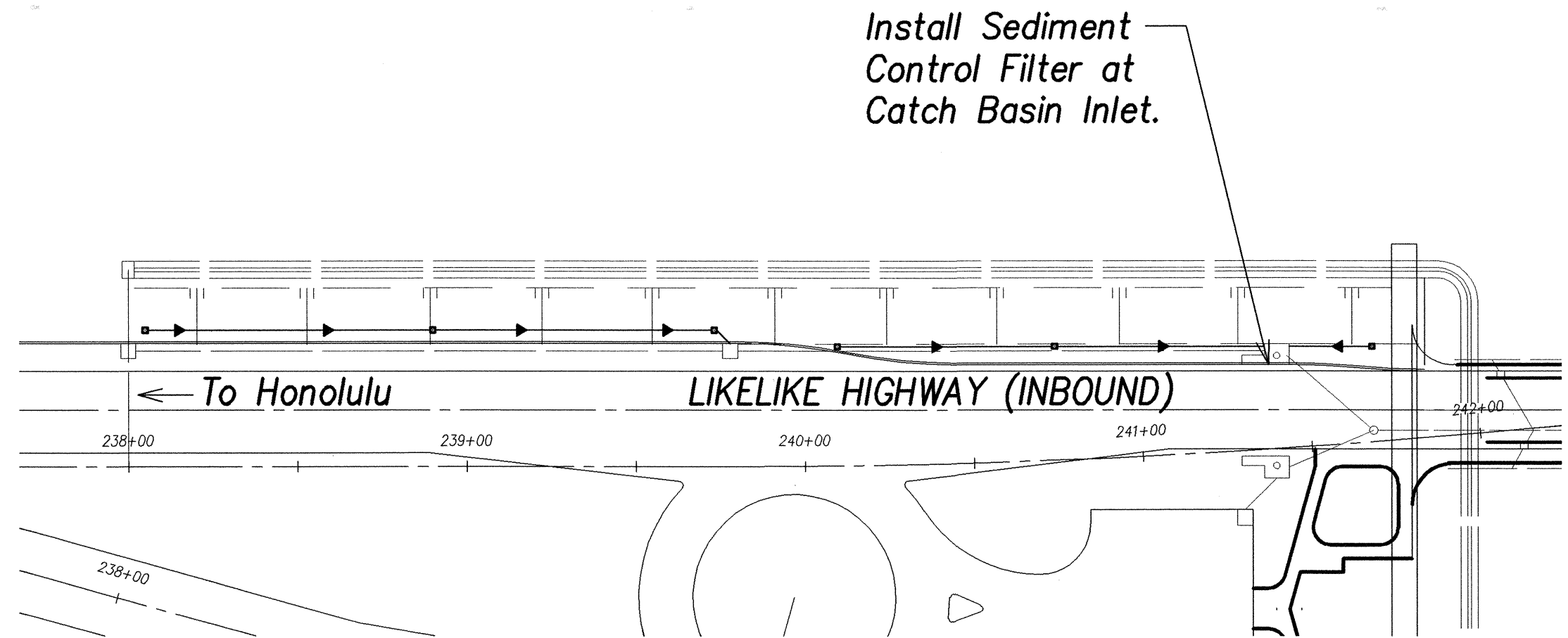
- Filter fabric shall be approved by the engineer, and shall be installed with a support net of polyester netting or approved equal. The filter fabric shall be a minimum of 36" wide and the support net a minimum of 30".
- If silt fence is obtained from a manufacturer as a package (i.e., fabric attached to posts), the manufacturer's installation instructions shall be adhered to.
- Posts shall be metal, cross section of posts shall be substantial enough to support a loaded silt fence without bending.
- Temporary silt fence shall be installed prior to beginning of grading work, and shall not be removed until exposed areas are stabilized.
- Limits shown in silt fence schedule are provided as general guidelines only. Provide breaks in fence as necessary to ensure clear access into and out of existing driveways and roads. Adjust limits of fence to conform to existing features as necessary to ensure protection from sediment and erosion damage for ocean, streams, and other features to be protected.



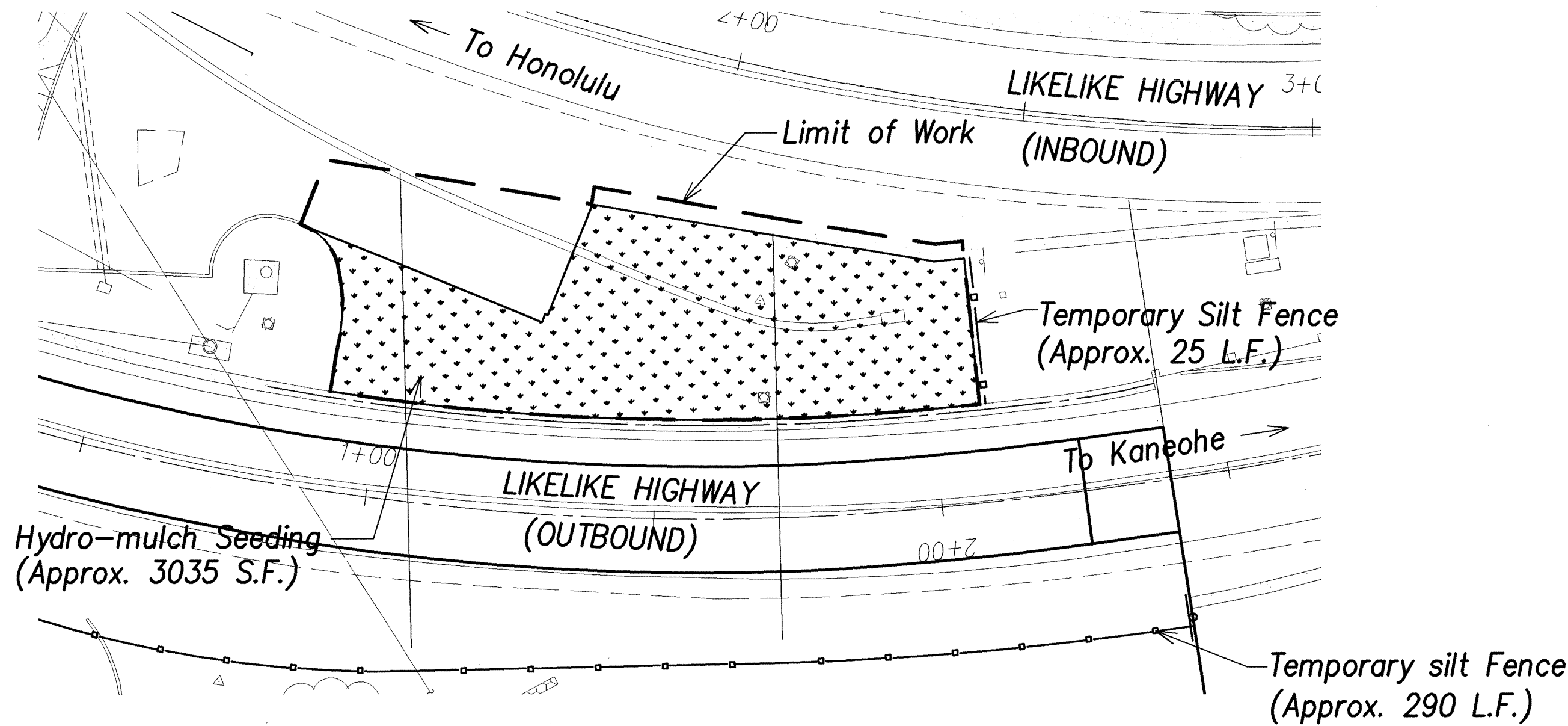
ROADWAY DRAIN INLET PROTECTION
Not To Scale



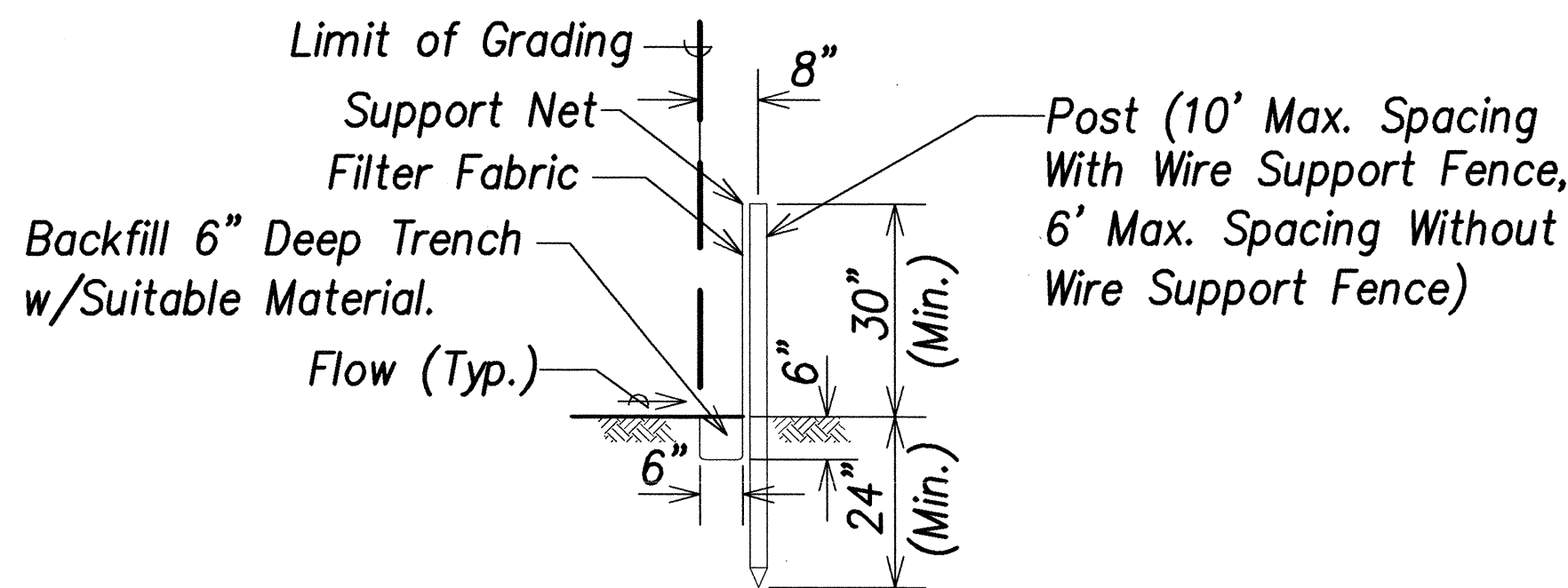
SEDIMENT CONTROL FILTER AT CATCH BASIN
Not To Scale



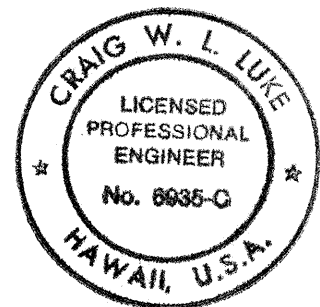
EROSION CONTROL PLAN - KALIHI PORTAL
Scale: 1" = 40'



EROSION CONTROL PLAN - KANEOHE PORTAL
Scale: 1" = 20'



TEMPORARY SILT FENCE
Scale: 1" = 2'



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION AND
CONSTRUCTION OF THIS PROJECT
WILL BE UNDER MY OBSERVATION.

SIGNATURE: *[Signature]* April 30, 2004
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EROSION CONTROL MEASURES -2

LIKELIKE HIGHWAY
Wilson Tunnel Improvements
Leak and Crack Remediation
F. A. Project No. STP-063-1(22)
Scale: As Shown Date: April 24, 2003

SHEET No. C-26 OF 30 SHEETS