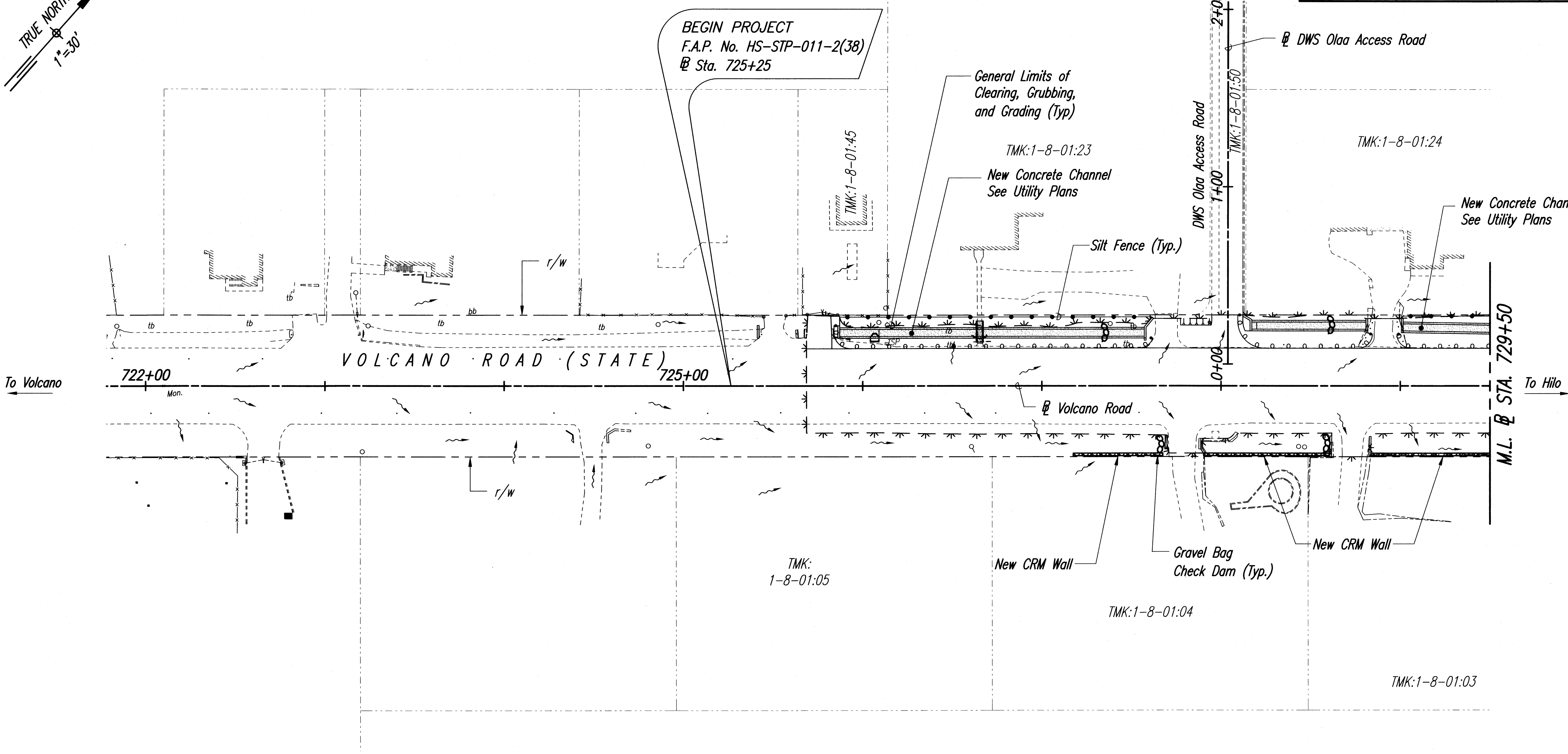
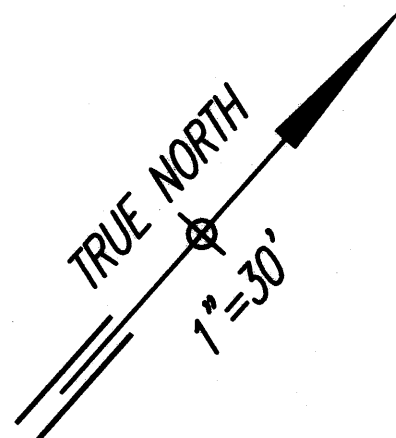


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HS-STP-011-2(38)	2010	43	141

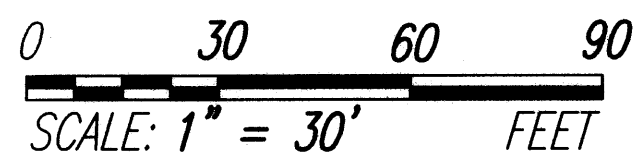


**Legend**

- 1300 — Existing Contour
- ~~~~~ Direction of Surface Runoff
- - - Limits of Clearing, Grubbing, and Grading
- oooooo Gravel Bag
- Silt Fence

**Notes:**

- Place double width of curb inlet protectors at driveway entrance, where necessary. See Detail, Sheet 46.
- Place gravel bag check dams at 100' o.c. in new and existing ditches/channels, and before driveway culverts.
- See Sheet 46 for Typical Silt Fence Detail.



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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**EROSION CONTROL PLAN**

**Volcano Road Intersection and  
Drainage Improvements**

**Federal-Aid Project No. HS-STP-011-2(38)**

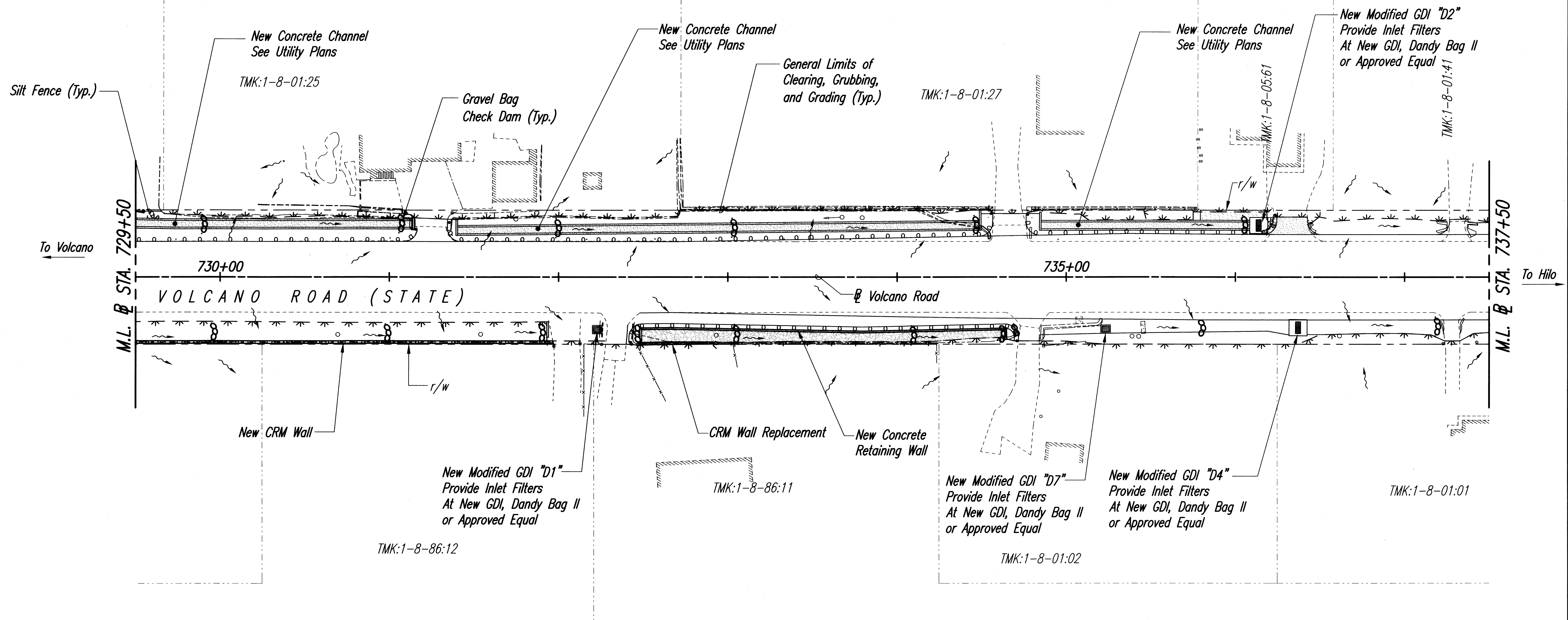
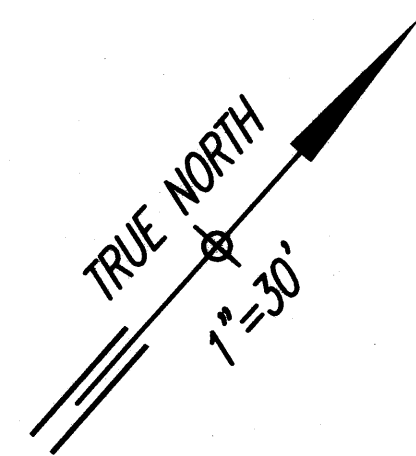
Scale: 1"=30'      Date: November 2010

SHEET No. **1** OF **4** SHEETS

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

P:\PROJECTS\2010\HS-STP-011-2(38)\Erosion\Drawings\Drawings.dwg  
 LAST UPDATE: December 02, 2010 @ 08:27:45 pm  
 PLOT DATE: December 03, 2010 @ 08:02:57 am

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HS-STP-011-2(38)	2010	44	141

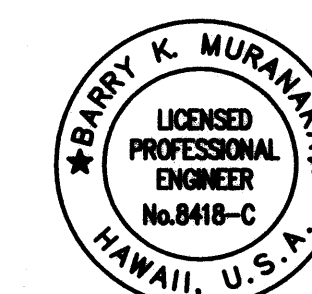
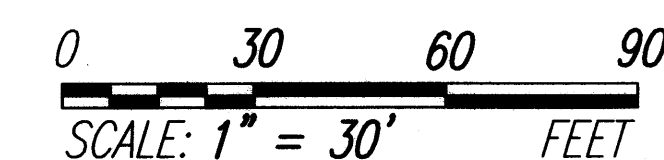


#### Legend

- 1300 — Existing Contour
- ~ ~ ~ Direction of Surface Runoff
- - - Limits of Clearing, Grubbing, and Grading
- o o o o o Gravel Bag
- • • Silt Fence

#### Notes:

1. Place double width of curb inlet protectors at driveway entrance, where necessary. See Detail, Sheet 46.
2. Place gravel bag check dams at 100' o.c. in new and existing ditches/channels, and before driveway culverts.
3. See Sheet 46 for Typical Silt Fence Detail.



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*[Signature]*

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DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

#### EROSION CONTROL PLAN

*Volcano Road Intersection and  
Drainage Improvements*

Federal-Aid Project No. HS-STP-011-2(38)

Scale: 1"=30' Date: November 2010

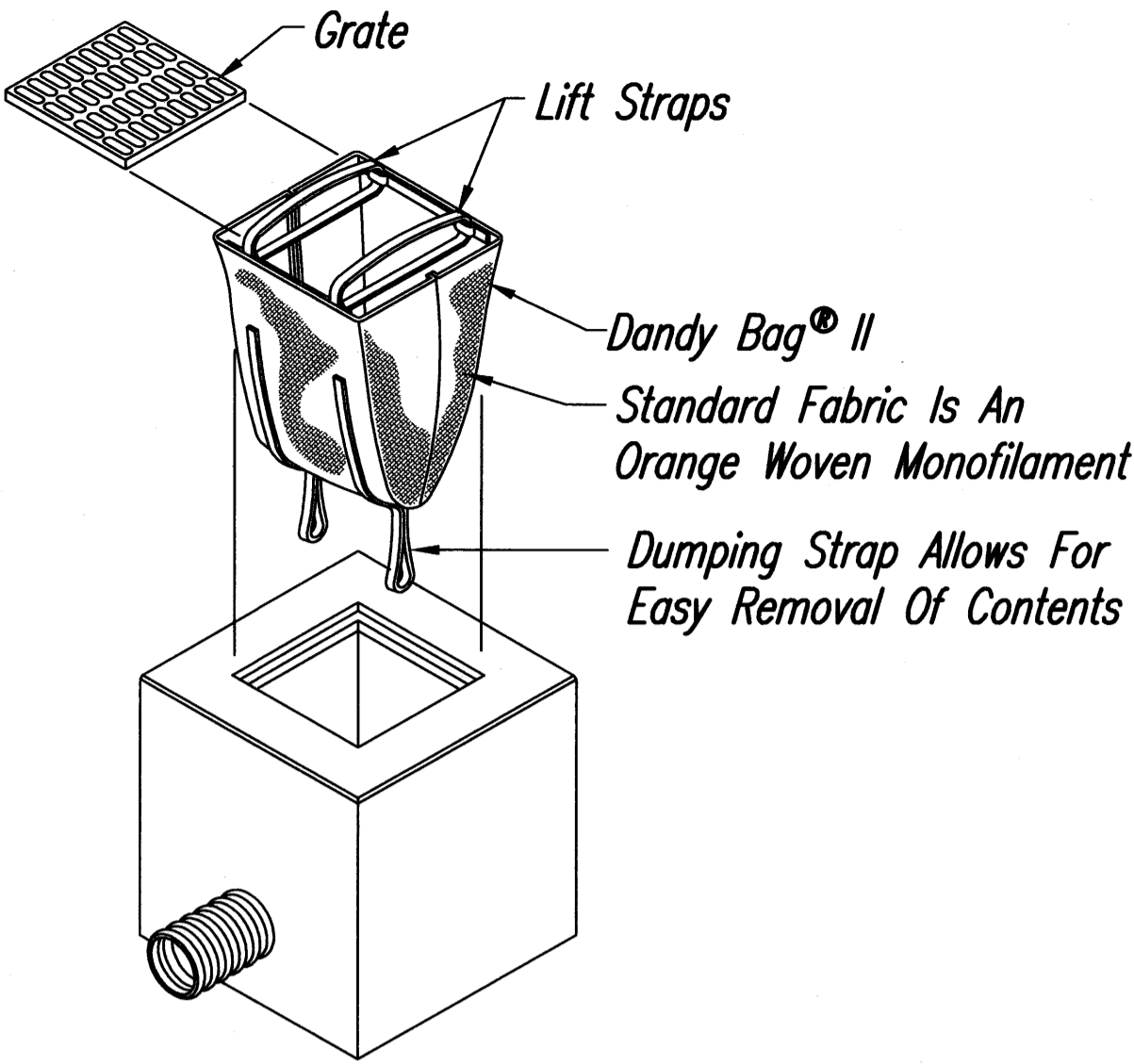
SHEET No. 2 OF 4 SHEETS



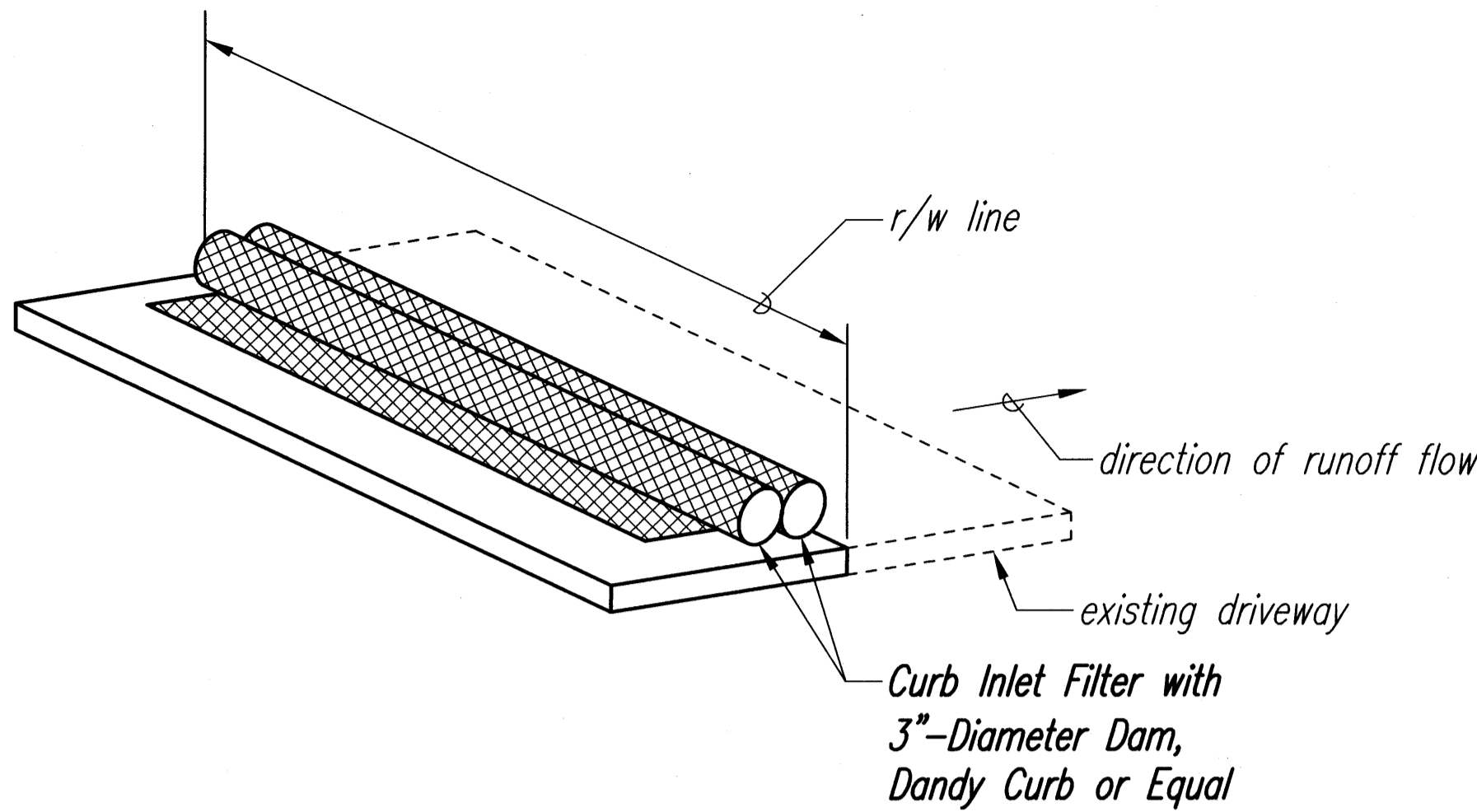
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HS-STP-011-2(38)	2010	46	141

**Notes:**

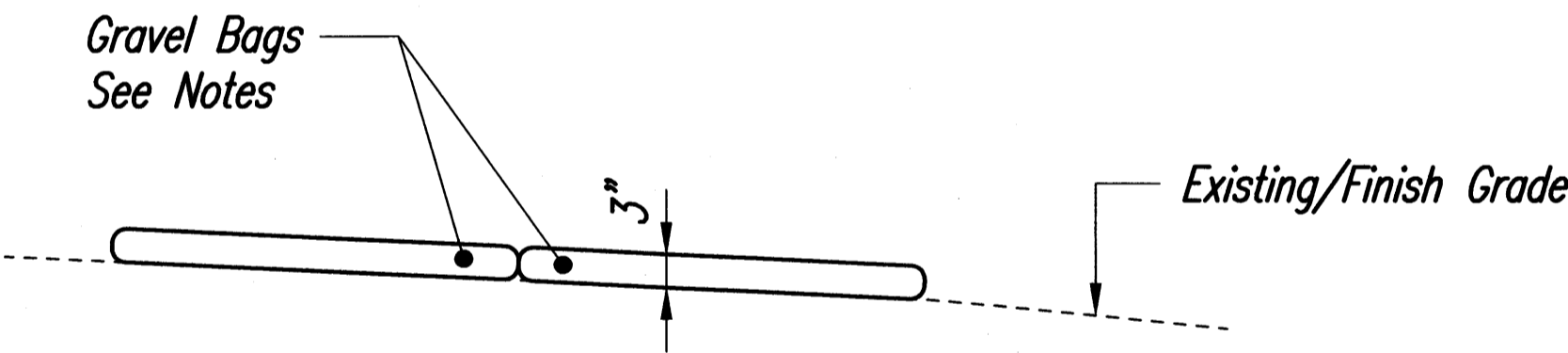
1. Dandy Bag II is Manufactured by Dandy Producers, Inc., Grove City, Ohio.
2. The Contractor Shall Remove Filters During Times of Above Normal Rainfall Events and Replace Them When Event Has Passed.
3. The Contractor Shall Remove All Accumulated Sediment and Debris from Vicinity of Unit After Each Storm Event. The Sediment Bag Should be Checked After Each Storm Event and at Regular Intervals. If the Containment Area is More than 1/3 Full of Sediment, the Unit Must be Emptied.



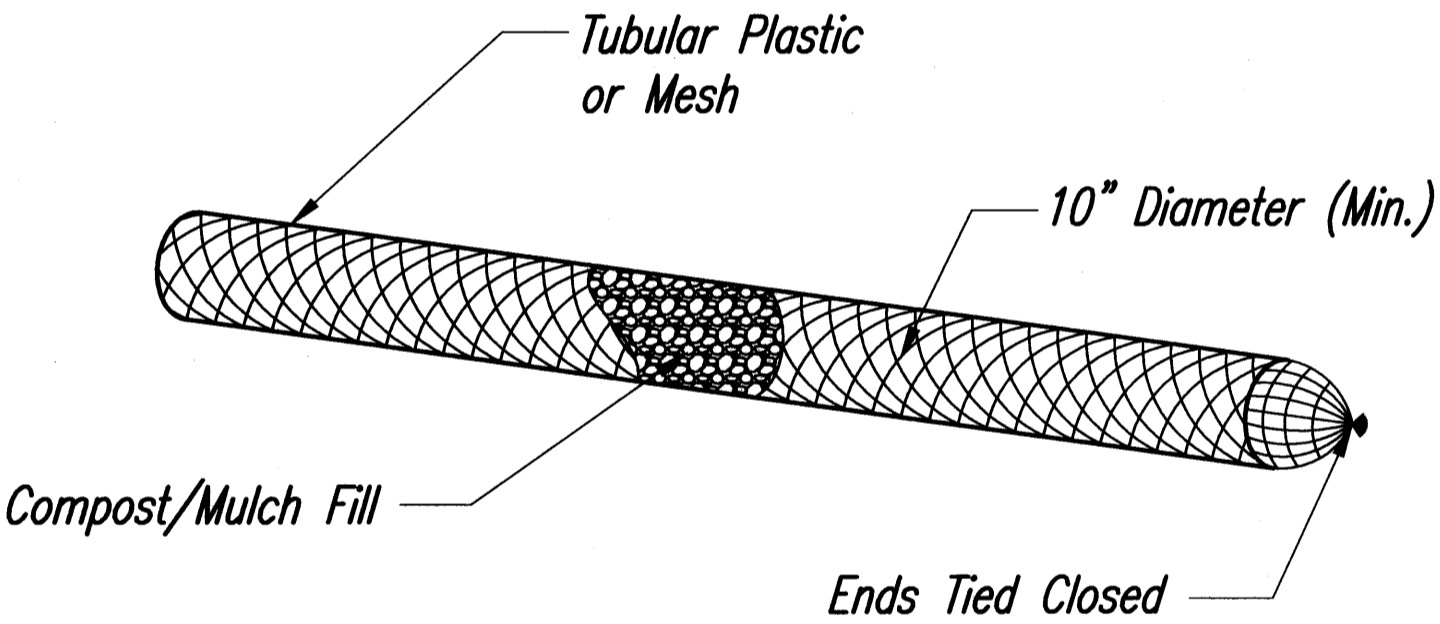
**DANDY BAG II FOR CURB INLET**  
Not To Scale



**TYPICAL DRIVEWAY RUNOFF PROTECTION**  
Not To Scale



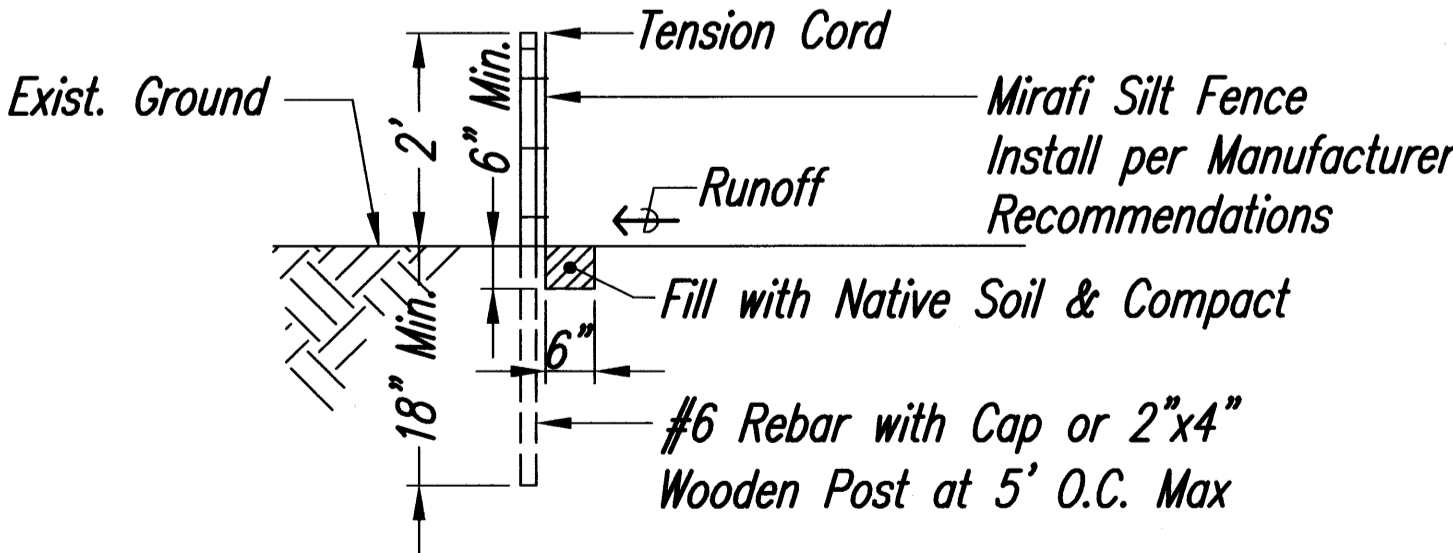
**GRAVEL BAG TYPICAL DETAIL**  
Not To Scale



**FILTER SOCK DETAIL**  
Not To Scale

**Gravel Bag Berm Notes:**

1. Bag Material: Bags Should be Woven Polypropylene, Polyethylene or Polyamide Fabric or Burlap, Minimum Unit Weight of 4 Ounces/yd<sup>2</sup>, Mullen Burst Strength Exceeding 300 lb/in<sup>2</sup> in Conformance with the Requirements in ASTM Designation D3786, and Ultraviolet Stability Exceeding 70% in Conformance with the Requirements in ASTM Designation D4355.
2. Bag Size: Each Gravel-Filled Bag Should Have a Length of 18 in., Width of 12 in., Thickness of 3 in., and Mass of Approximately 33 lbs. Bag Dimensions Are Nominal, and May Vary Based on Locally Available Materials.
3. Fill Material: Fill Material Should be 0.5 to 1 in. Class 2 Aggregate Base, Clean and Free from Clay, Organic Matter, and Other Deleterious Material, or Other Suitable Open-Graded, Non-Cohesive, Porous Gravel.
4. Turn the Ends of the Gravel Bag Barriers Up Slope to Prevent Runoff from Going Around the Berm.
5. Butt Ends of Bags Tightly.



**TYPICAL SILT FENCE DETAIL**  
Not To Scale

**Compost Filter Sock Notes:**

1. Installation:
  - a. Installation shall be done according to the Manufacturer's recommendations.
  - b. Assemble by tying a knot at one end of the mesh sock, filling the sock with compost, and knotting the other end of the sock. A pneumatic blower may be used to fill the sock with compost.
  - c. For multi-sock use, place socks end-to-end and interlock the ends.
  - d. Anchor filter socks to ground; stakes shall be installed per the Manufacturer's recommendations. Where staking is not possible, heavy concrete blocks shall be used behind the filter sock for stabilization during rainfall events.
  - e. Turn ends of filter sock up slope to prevent flow around the ends.
2. Material for compost berm may be left at the site and used as a soil amendment.
3. Inspection & Maintenance:
  - a. Contractor shall inspect the filter sock(s) weekly during dry periods, daily during periods of prolonged rainfall, and within 24 hours of any rainfall event of 0.5 inch or greater that occurs within a 24-hour period.
  - b. The Contractor shall remove all accumulated sediment and debris from vicinity of filter sock(s) after each storm event. Remove sediment which has accumulated to within 1/3 of the berm height.

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



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**EROSION CONTROL DETAILS**

**Volcano Road Intersection and Drainage Improvements**  
**Federal-Aid Project No. HS-STP-011-2(38)**

Scale: Not To Scale Date: November 2010

SHEET No. 4 OF 4 SHEETS