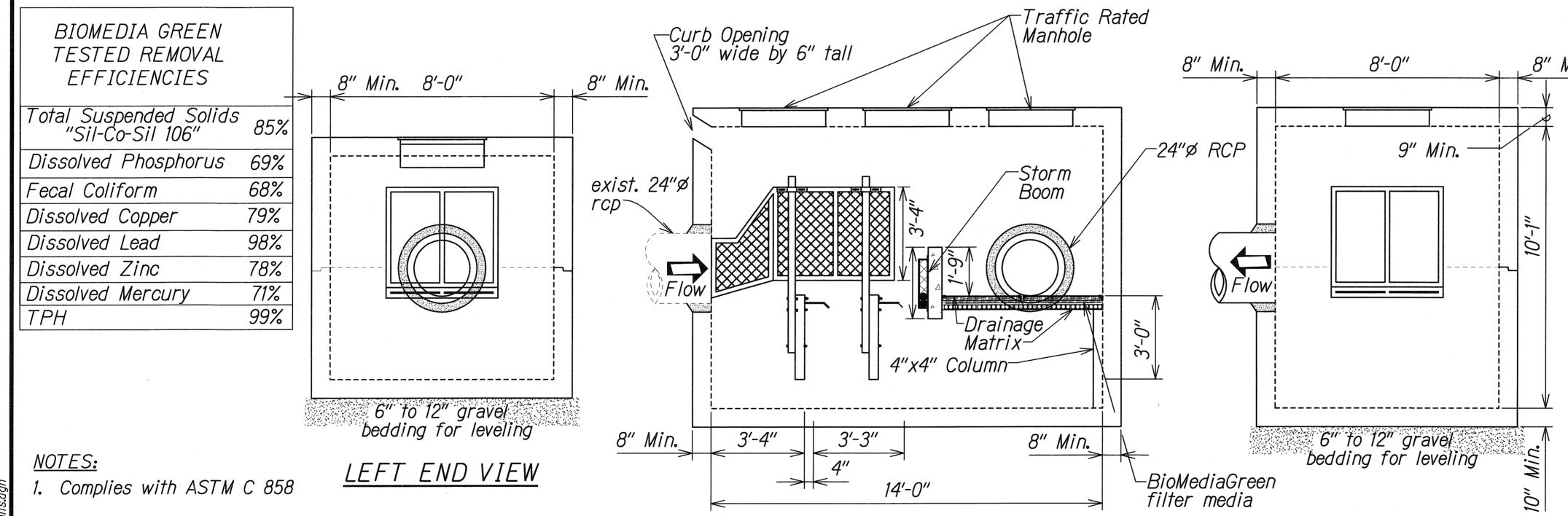
FISCAL YEAR SHEET | TOTAL FED. ROAD FEDERAL AID DIST. NO. PROJ. NO. HAWAII HAW. HWY-0-02-11 2012 ADD. 33 43

All measurments are in inches *√36*″ø -Storm Boom 4" Conc. Baffle Typ. FILTER FLOW CALCULATIONS UP FLOW Media Surface Area (flat) 46 sq ft -Skimmer Hydraulic Conductivity (BioMediaGREEN) .0138 Feet/Second Available Head exist. 24"ø/ -36"ø MAX Media Filter 5.07 CFS Flow Rate (no clogging) Non-Shrink Grout Typ. -Safety Factor Media Filter Screen System is 78'x48" wide 2.54 CFS Flow Rate (accounts for clogging) 40" tall w/ lids— -Grout Typ. 96 x 68.9-Turbulance-PEAK DESIGN FLOW TBD Deflectors Screen System Screen Boots -exist. 24"ø Hinged



FRONT VIEW

RIGHT END VIEW

2. The shop drawings provide information on the storm filter, filter media and accessory equipment including priciple dimensions, filter placement, location of fittings and unit foundation.

3. This is a passive treatment system. Up flow vertical media filter.

- 4. Media cartridges easily replaceble and can incorporate a variety of filter
- See manufacturer's representative regarding recommendations for specified equipment.
- 6. Manhole Frames and Covers shall be cast iron conforming to ASTM A48/A48M, Class No. 30, see standard Specs. These manhole covers are equipped with recesses lift handle and a locking latch. The manhole covers shall meet HL-93 loading requirements. Ladders shall be constructed of aluminum and steel reinforced copolymer conforming to ASTM D 4101. Ladder shall meet all ASTM C 497M. Steps shall conform with ASTM C 478.

BIOCLEAN ENVIRONMENTAL NSBB-WATER POLISHER-UP FLOW MEDIA FILTER DESIGN DETAILS

NOTES:

- 1. Concrete 28 day compressive strength fc=5,000 psi
- 2. Reinforcing: ASTM A-615, grade 60, deformed bars.
- 3. Loads:

A: Dead load: Concrete weight=160 pcf

- B: Live load: HL-93 as indicated by AASHTO LRFD specifications.
- C: Soil properties: Soil dry weight=120 pcf At-Rest pressure=50 pcf Passive pressure=300 pcf Coefficient of friction=0.4 Allowable bearing pressure=3,000 psf
- 4. Joint sealant: Butyl rubber SS-S-00210.
- 5. Unless otherwise noted, all walls shall be 8" thick minimum. Top slab shall be 9" thick minimum. Bottom slab shall be 10" thick minimum.
- 6. Concrete cover reinforcement:
  - A: Top slab: 2 1/2" for reinforcement at exterior face; 2" for reinforcement at interior face.
- B: Bottom slab 3" for reinforcement at exterior face; 2" for reinforcement at interior face.
- C: Wall: 2" for reinforcement at exterior face and interior face.
- 7. Filter material and structural backfill material A shall conform with the requirements of 2005 HDOT Standards Specifications Subsections 206.03.
- 8. The BMP drawings and calculations shall be prepared, designed, stamped, and signed under the supervision of a civil and structural engineer licensed in the State of Hawaii as required in Section 627. 🔥

LICENSED PROFESSIONAL \ **ENGINEER** THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

6/13/12 / Revised notes. Revision **DEPARTMENT OF TRANSPORTATION** 

MISCELLANEOUS DETAIL KANEOHE BAY DRIVE BMP RETROFIT MISCELLANEOUS PERMANENT BEST

MANAGEMENT PRACTICES ON OAHU PROJECT NO. HWY-0-02-11 Scale: NTS Date: May, 2012

SHEET No. C-21 OF 23 SHEETS

ADD. 33

