

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-03-04M	2005	3	32

WATER POLLUTION AND EROSION CONTROL NOTES:

A. GENERAL:

- The Contractor is reminded of the requirements of Section 209 – Water Pollution and Erosion Control, in the Special Provisions. Section 209 describes but is not limited to: submittal requirements; scheduling of a water pollution and erosion control conference with the Engineer; construction requirements; method of measurement; and basis of payment.
- The Contractor shall follow the guidelines in the "Best Management Practices Manual for Construction Sites in Honolulu", dated May 1999 in developing, installing and maintaining the Best Management Practices (BMP) for the project.
- The Engineer may assess liquidated damages of up to \$27,500 for non-compliance of each BMP requirement and each requirement stated in Section 209, for every day of non-compliance. There is no maximum limit on the amount assessed per day.
- The Engineer will deduct the cost from the progress payment for all citations received by the Department for non-compliance, or the Contractor shall reimburse the State for the full amount of the outstanding cost incurred by the State.

B. WASTE DISPOSAL:

- Waste Materials
All waste materials shall be collected and stored in a securely lidded metal dumpster. The dumpster shall meet all local and State solid waste management regulations. All trash and construction debris from the site shall be deposited in the dumpster. The dumpster shall be emptied a minimum of twice per week or as often as is deemed necessary. No construction waste materials shall be buried onsite. The Contractor's supervisory personnel shall be instructed regarding the correct procedure for waste disposal. Notices stating these practices shall be posted in the office trailer and the Contractor shall be responsible for seeing that these procedures are followed.
- Hazardous Waste
All hazardous waste materials shall be disposed of in the manner specified by local or State regulations or by the manufacturer. The Contractor's site personnel shall be instructed in these practices and shall be responsible for seeing that these practices are followed.
- Sanitary Waste
All sanitary waste shall be collected from the portable units a minimum of once per week, or as required.

C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

- All control measures shall be inspected at least once each week and following any rainfall event of 0.5 inches or greater.
- All measures shall be maintained in good working order. If repair is necessary, it shall be initiated within 24 hours after the inspection.
- Built-up sediment shall be removed from silt fence when it has reached one-third the height of the fence.
- Silt screen or fence shall be inspected for depth of sediment, tears, to verify that the fabric is securely attached to the fence posts or concrete slab and to verify that the fence posts are firmly in the ground. The bottom of the silt screen shall be inspected and verified that it is buried a minimum of 6 inches below the existing ground.
- Temporary and permanent seeding and planting shall be inspected for bare spots, washouts and healthy growth.
- A maintenance inspection report shall be made promptly after each inspection by the Contractor.
- The Contractor shall select a minimum of three personnel who shall be responsible for inspections, maintenance and repair activities and filling out the inspection and maintenance report.
- Personnel selected for the inspection and maintenance responsibilities shall receive training from the Contractor. They shall be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.

D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:

- Materials Pollution Prevention Plan
 - Applicable materials or substances listed below are expected to be present onsite during construction. Other materials and substances not listed below shall be added to the inventory.

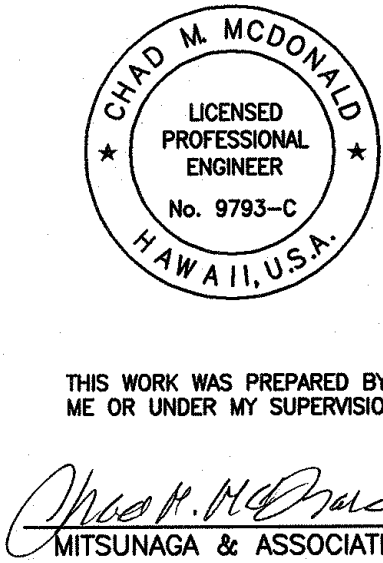
Concrete
Detergents
Paints (enamel and latex)
Metal Studs
Tar

Fertilizers
Petroleum Based Products
Cleaning Solvents
Wood
 - Material Management Practices shall be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff. An effort shall be made to store only enough product as is required to do the job.
 - All materials stored onsite shall be stored in a neat, orderly manner in their appropriate containers and if possible under a roof or other enclosure.
 - Products shall be kept in their original containers with the original manufacturer's label.
 - Substances shall not be mixed with one another unless recommended by the manufacturer.
 - Whenever possible, a product shall be used up completely before disposing of the container.
 - Manufacturer's recommendations for proper use and disposal shall be followed.
 - The Contractor shall conduct a daily inspection to ensure proper use and disposal of materials onsite.
- Hazardous Material Pollution Prevention Plan
 - Products shall be kept in original containers unless they are not resealable.
 - Original labels and material safety data sheets (MSDS) shall be retained.
 - Surplus products shall be disposed of according to manufacturers' instructions or local and State recommended methods.
- Onsite and Offsite Product Specific Plan
 - The following product specific practices shall be followed onsite:
 - Petroleum Based Products:
All onsite vehicles shall be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products shall be stored in tightly sealed containers which are clearly labeled. Any asphalt substances used onsite shall be applied according to the manufacturer's recommendation.
 - Fertilizers:
Fertilizers used shall be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer shall be worked into the soil to limit exposure to storm water. Storage shall be in a covered shed. The contents of any partially used bags of fertilizer shall be transferred to a sealable plastic bin to avoid spills.
 - Paints:
All containers shall be tightly sealed and stored when not required for use. Excess paint shall not be discharged to the highway drainage system but shall be properly disposed of according to manufacturers' instructions or State and local regulations.
 - Concrete Trucks:
Concrete trucks shall be allowed to wash out or discharge drum wash water only at a designated site. Water shall not be discharged in the highway drainage system or waters of the United States. The Contractor shall contact Drinking Water Branch, Department of Health at 586-4258 to receive permission to designate a disposal site. The Contractor shall clean disposal site as required or as requested by the Owner's representative.

D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES: –Cont.

- Offsite Vehicle Tracking:
A stabilized construction entrance shall be provided to help reduce vehicle tracking of sediments. The paved street adjacent to the site entrance shall be cleaned daily or as required to remove any excess mud, cold planed materials, dirt or rock tracked from the site. Dump trucks hauling material from the construction site shall be covered with a tarpaulin.
- Spill Control Plan
 - A spill prevention plan shall be posted to include measures to prevent and clean up each spill.
 - The Contractor shall be the spill prevention and cleanup coordinator. The Contractor shall designate at least three site personnel who shall receive spill prevention and cleanup training. These individuals shall each become responsible for a particular phase of prevention and cleanup. The names of responsible spill personnel shall be posted in the material storage area and in the office trailer onsite.
 - Manufacturers' recommended methods for spill cleanup shall be clearly posted and site personnel shall be made aware of the procedures and the location of the information and cleanup supplies.
 - Materials and equipment necessary for spill cleanup shall be kept in the material storage area onsite.
 - All spills shall be cleaned up immediately after discovery.
 - The spill area shall be kept well ventilated and personnel shall wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
 - Spills of toxic hazardous material shall be reported to the appropriate State or local government agency, regardless of the size.

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

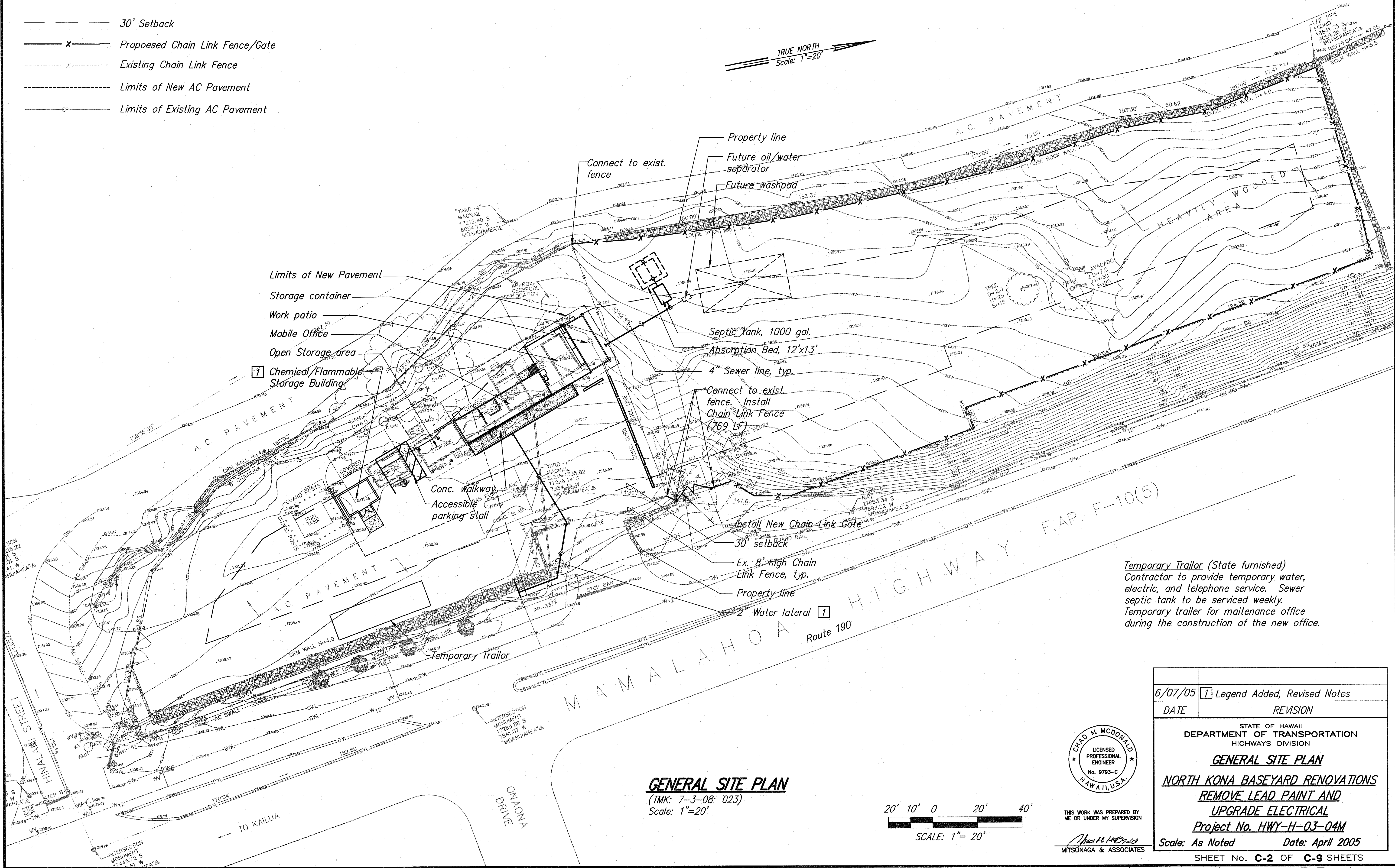


STATE OF HAWAII	
DEPARTMENT OF TRANSPORTATION	
HIGHWAYS DIVISION	
WATER POLLUTION AND EROSION	
CONTROL NOTES	
NORTH KONA BASEYARD RENOVATIONS	
REMOVE LEAD PAINT AND	
UPGRADE ELECTRICAL	
Project No. HWY-H-03-04M	
Scale: As Noted	Date: April 2005
SHEET No. C-1 OF C-9 SHEETS	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-03-04M	2005	ADD.4	32

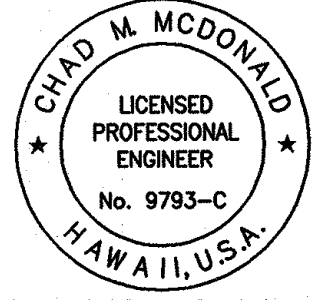
Legend

- 30' Setback
- Proposed Chain Link Fence/Gate
- Existing Chain Link Fence
- Limits of New AC Pavement
- Limits of Existing AC Pavement



GENERAL PLAN	SURVEY PLOTTED BY	DATE
	DESIGNED BY	
	NOTED BY	
	CHECKED BY	

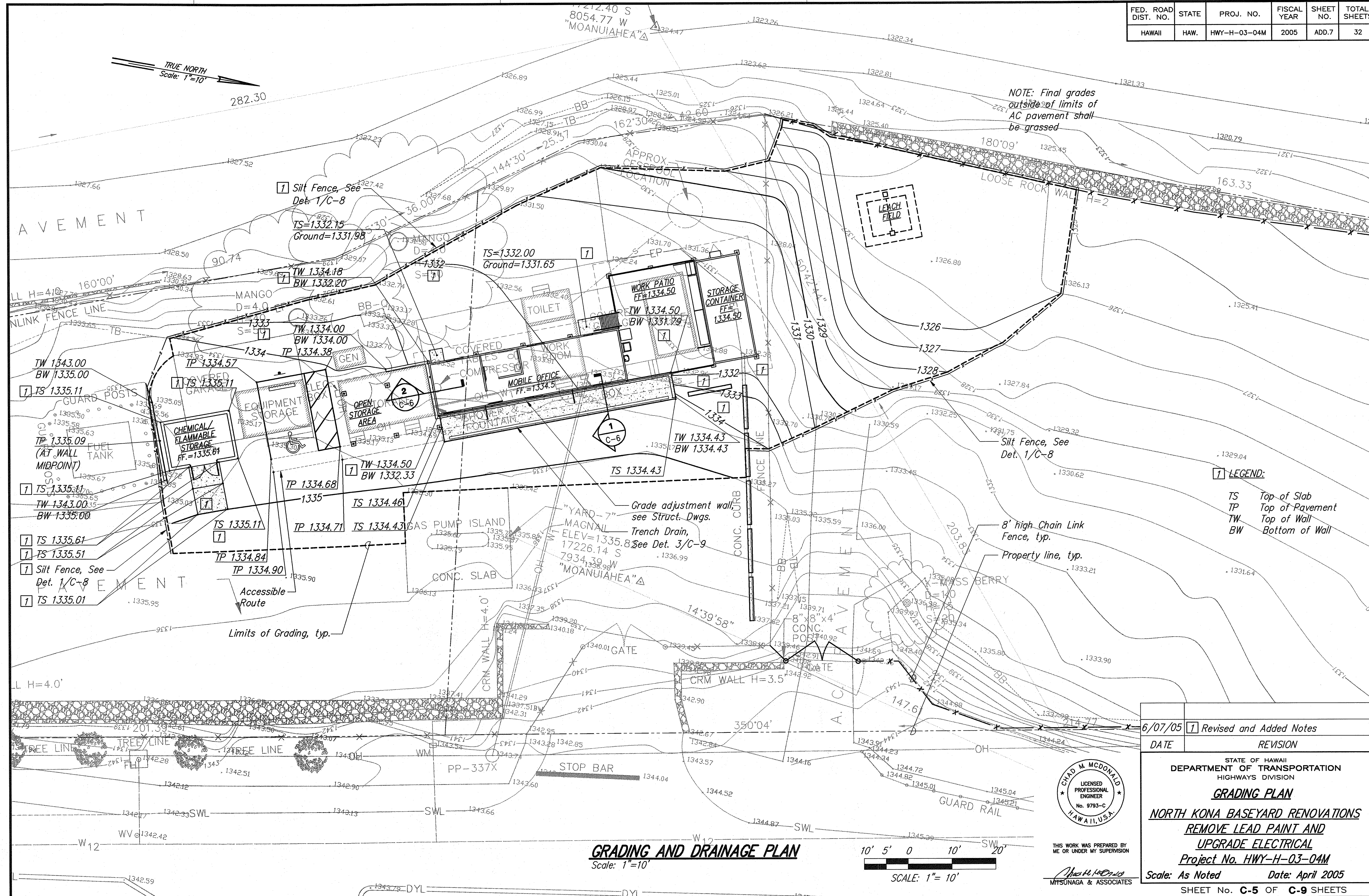
6/07/05	Legend Added, Revised Notes
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION GENERAL SITE PLAN NORTH KONA BASEYARD RENOVATIONS REMOVE LEAD PAINT AND UPGRADE ELECTRICAL Project No. HWY-H-03-04M Scale: As Noted Date: April 2005 SHEET No. C-2 OF C-9 SHEETS	



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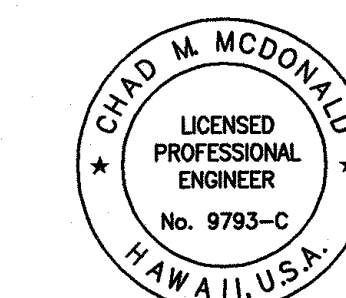
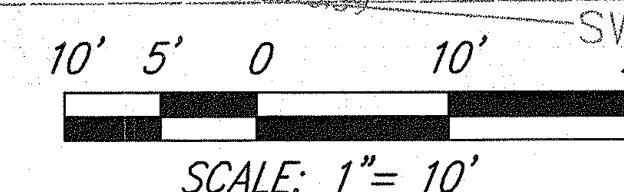
Chad M. McDonald
MITSUNAGA & ASSOCIATES

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-03-04M	2005	ADD.7	32



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
DESIGNED BY	DRAWN BY	
NOTED BY	CHECKED BY	
NO.		

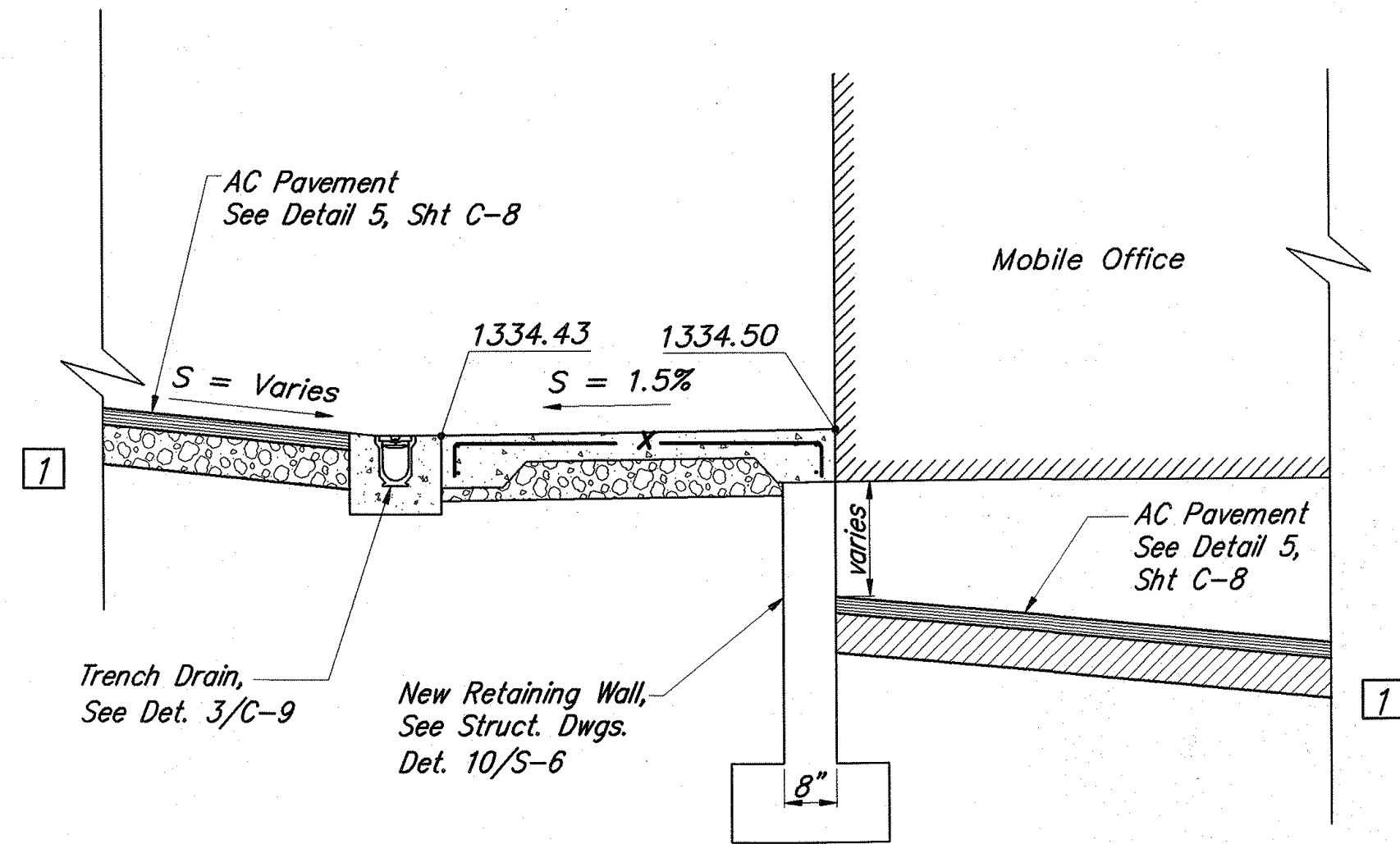
GRADING AND DRAINAGE PLAN
Scale: 1"=10'



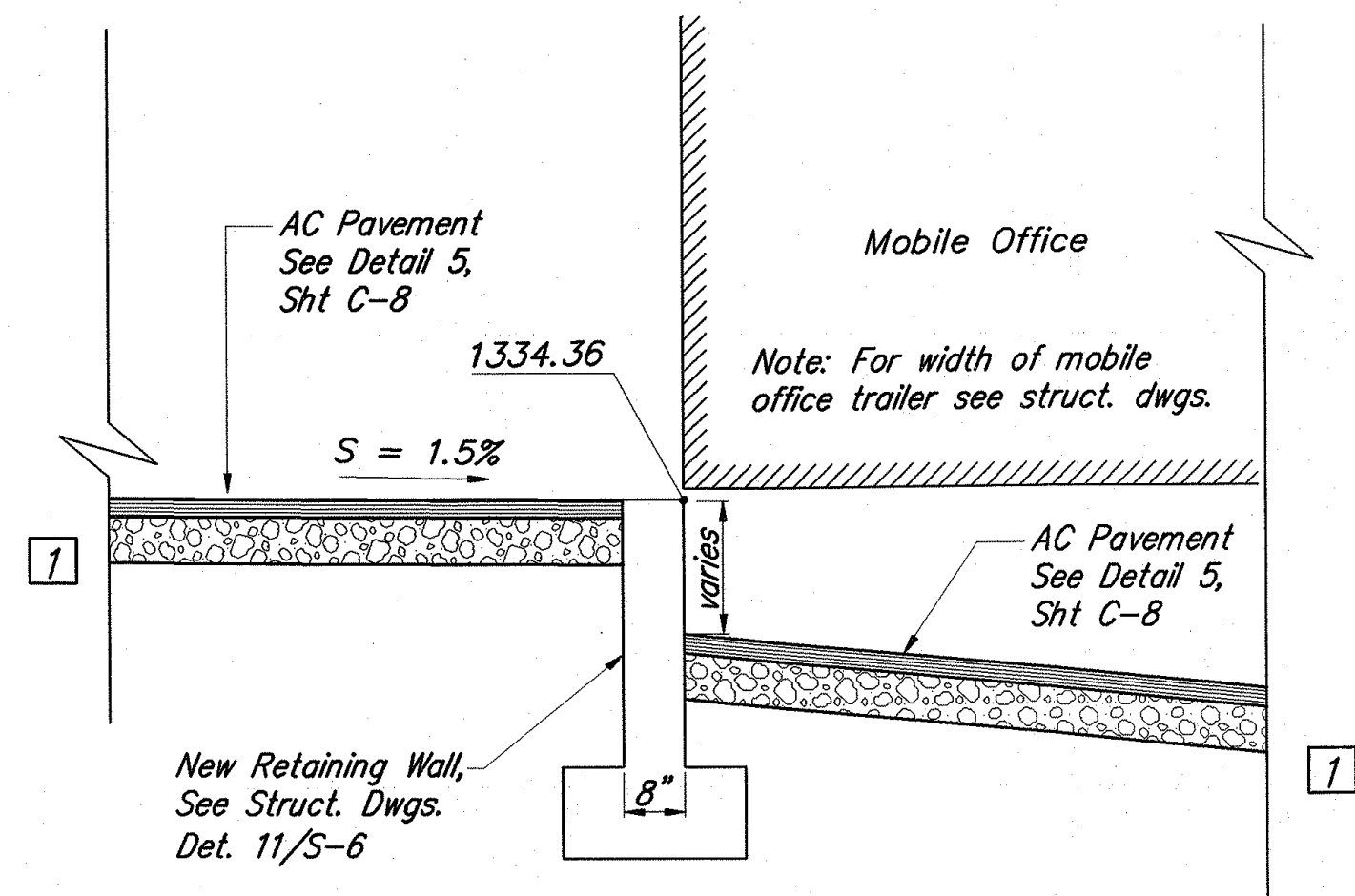
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6/07/05	1	Revised and Added Notes
DATE	REVISION	
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION		
GRADING PLAN		
NORTH KONA BASEYARD RENOVATIONS		
REMOVE LEAD PAINT AND		
UPGRADE ELECTRICAL		
Project No. HWY-H-03-04M		
Scale: As Noted	Date: April 2005	
SHEET No. C-5 OF C-9 SHEETS		

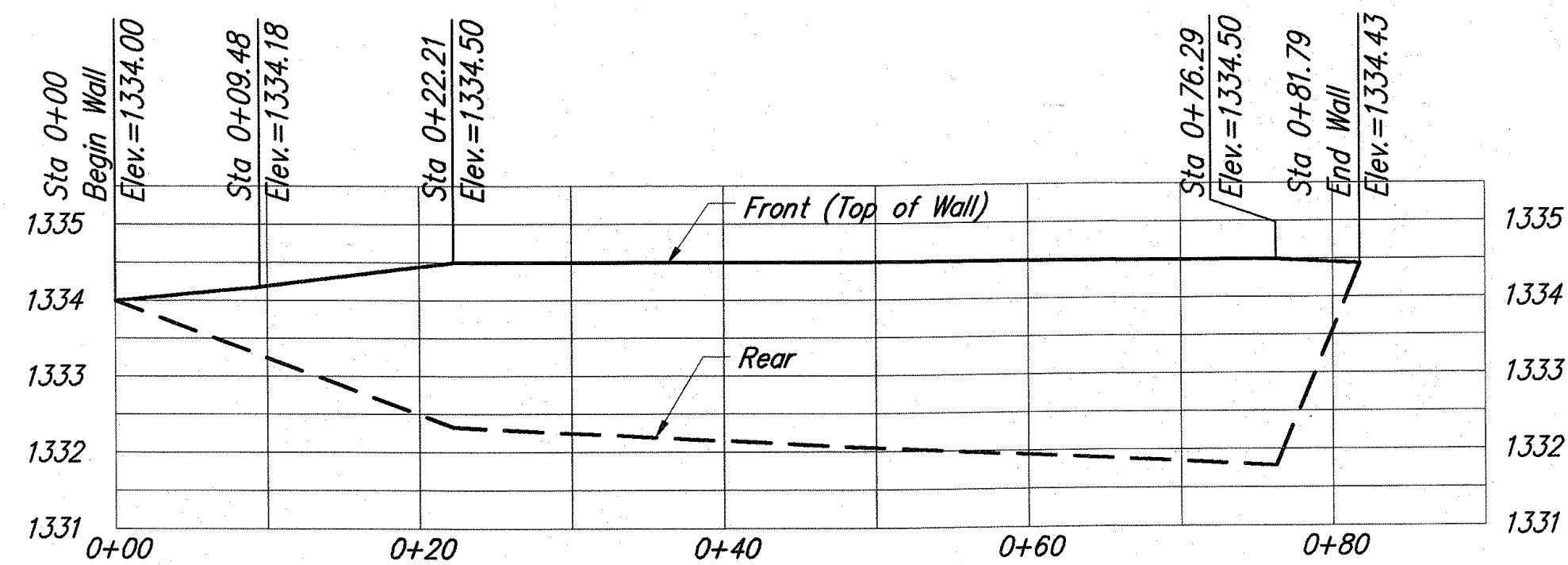
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-03-04M	2005	ADD.8	32



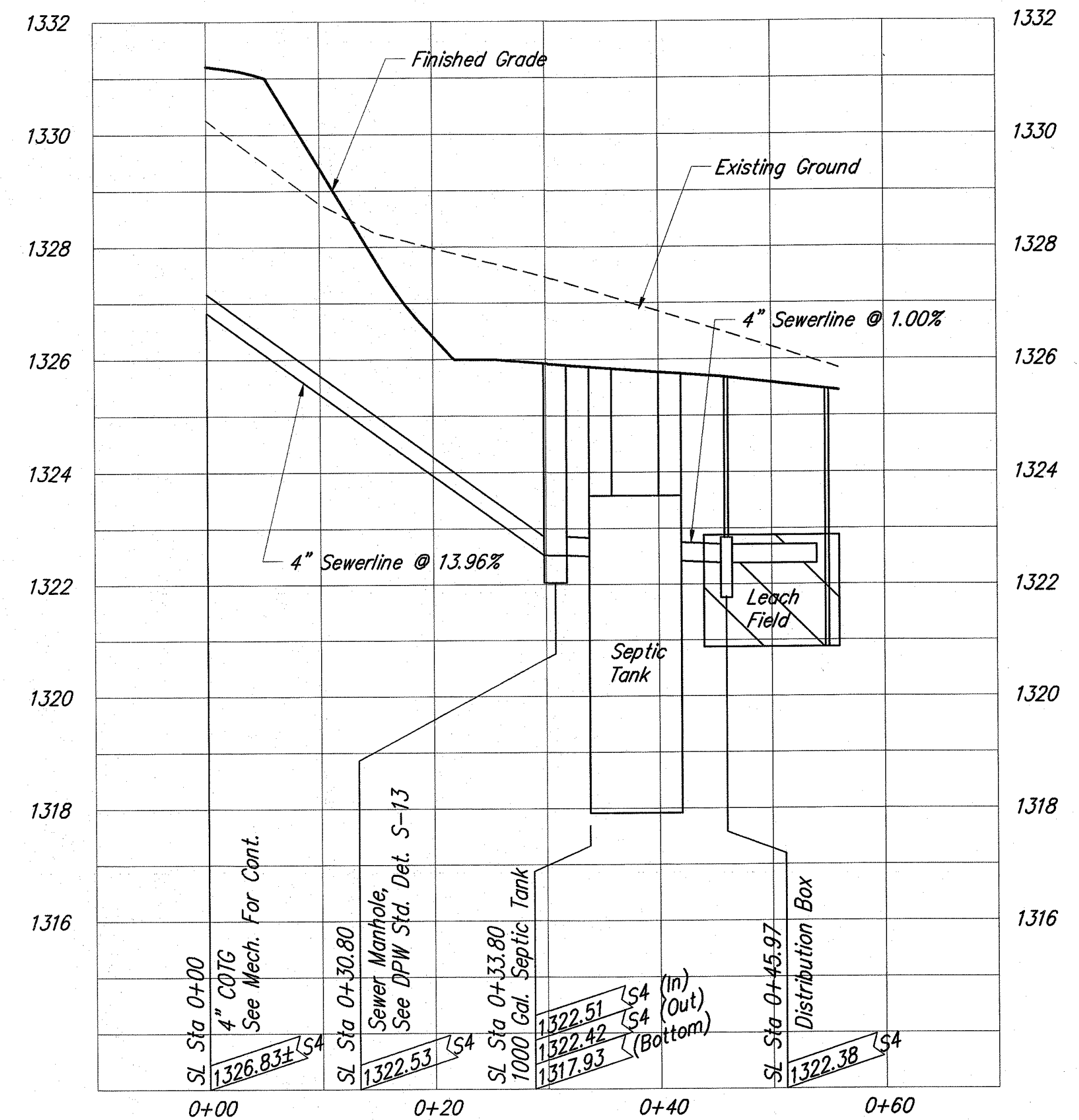
1 SECTION 1
Scale: 1" = 2'



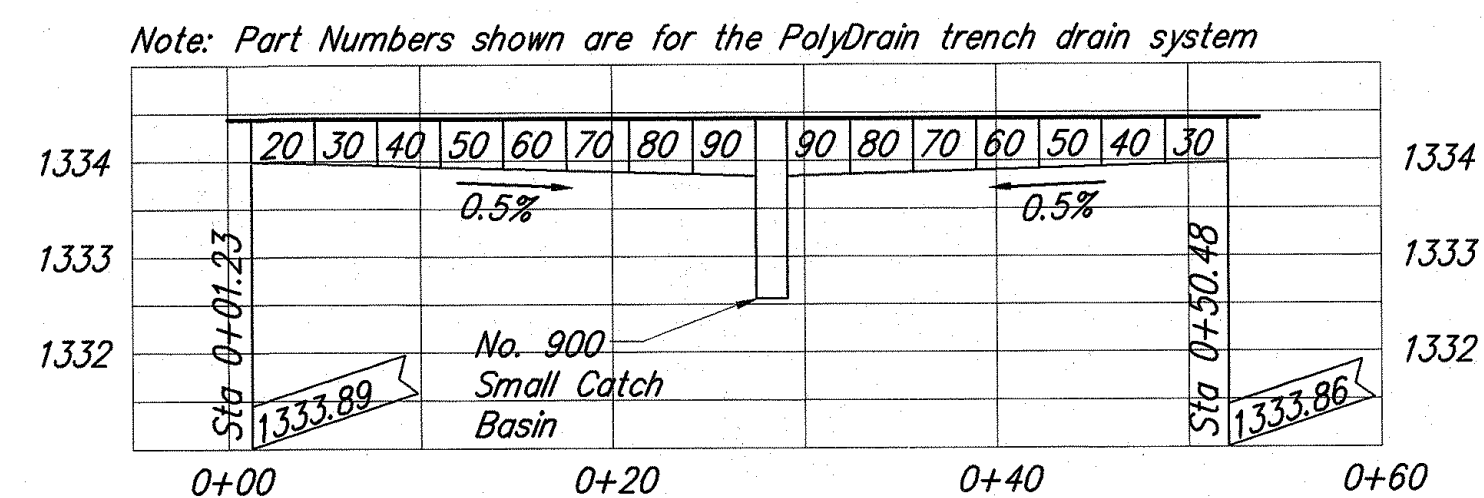
2 SECTION 2
Scale: 1" = 2'



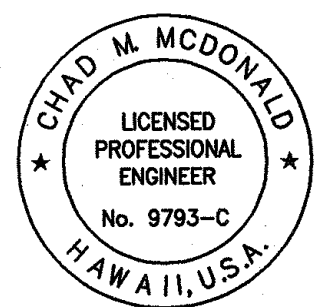
1 4 WALL PROFILE
Scale: Horiz.: 1" = 10'
Vert.: 1" = 2'



3 SEWERLINE PROFILE
Scale: Horiz.: 1" = 10'
Vert.: 1" = 2'



5 TRENCH DRAIN PROFILE
Scale: Horiz.: 1" = 10'
Vert.: 1" = 2'

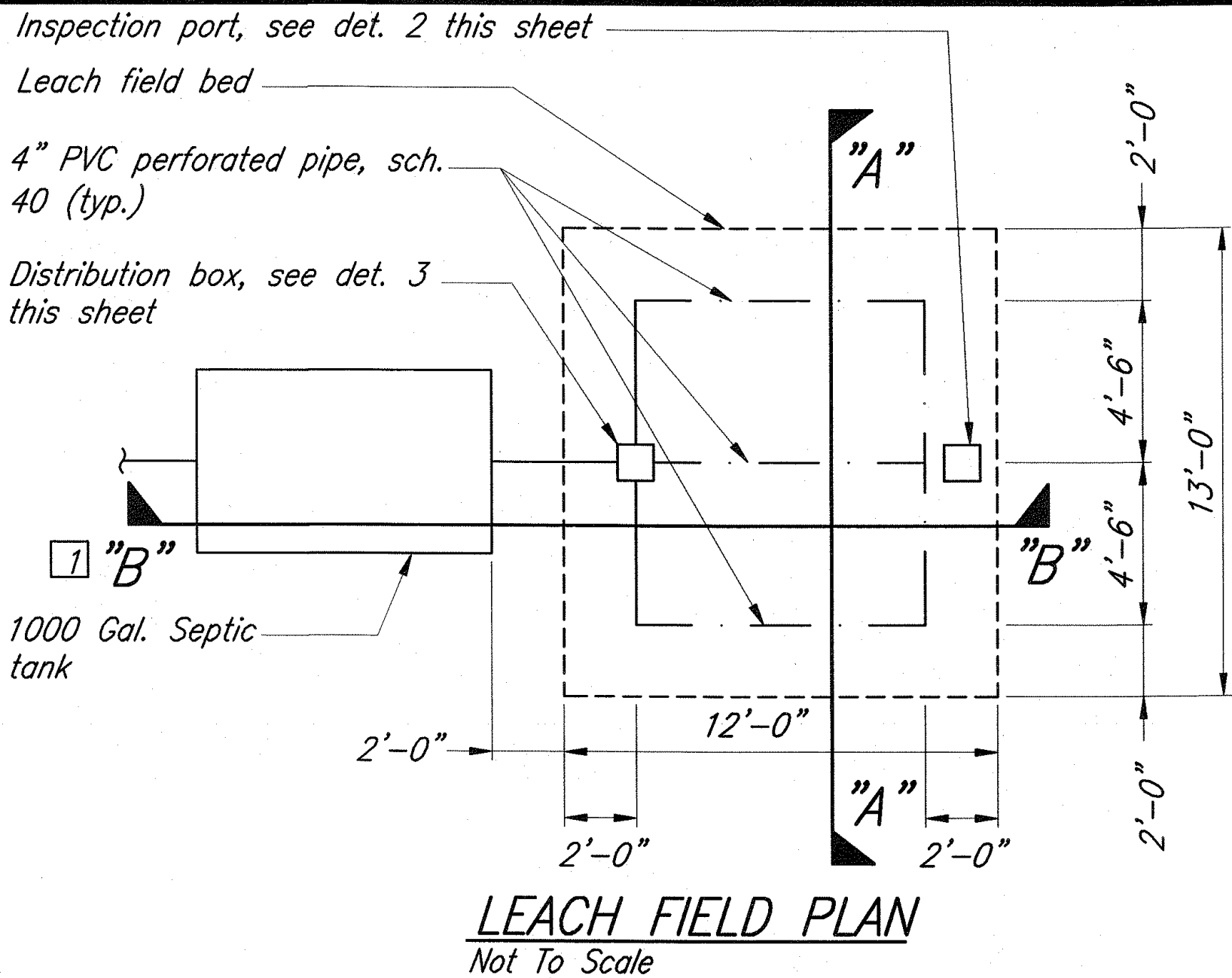


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6/07/05	1 Revised Wall Profile and Sections
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PROFILES AND CROSS SECTIONS	
NORTH KONA BASEYARD RENOVATIONS	
REMOVE LEAD PAINT AND	
UPGRADE ELECTRICAL	
Project No. HWY-H-03-04M	
Scale: As Noted	Date: April 2005
SHEET No. C-6 OF C-9 SHEETS	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-03-04M	2005	ADD.9	32

Septic tank manufactured by:
 Quality precast products, llc
 87-1101#5 Iliili Road
 Waianae, Hawaii 96792
 (808) 833-5925
 Model # JP1500
 or approved equal.



LEACH FIELD NOTES:

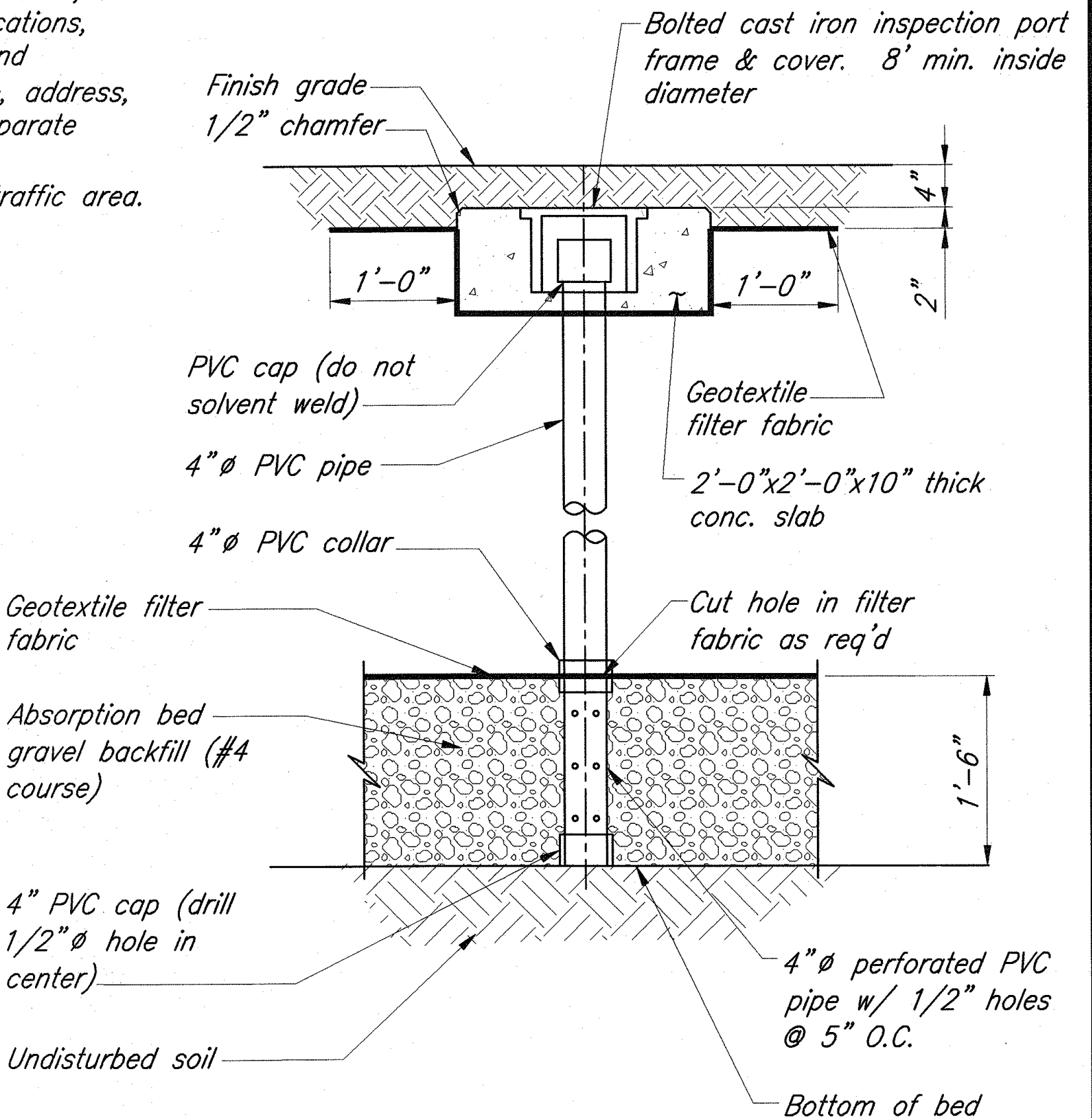
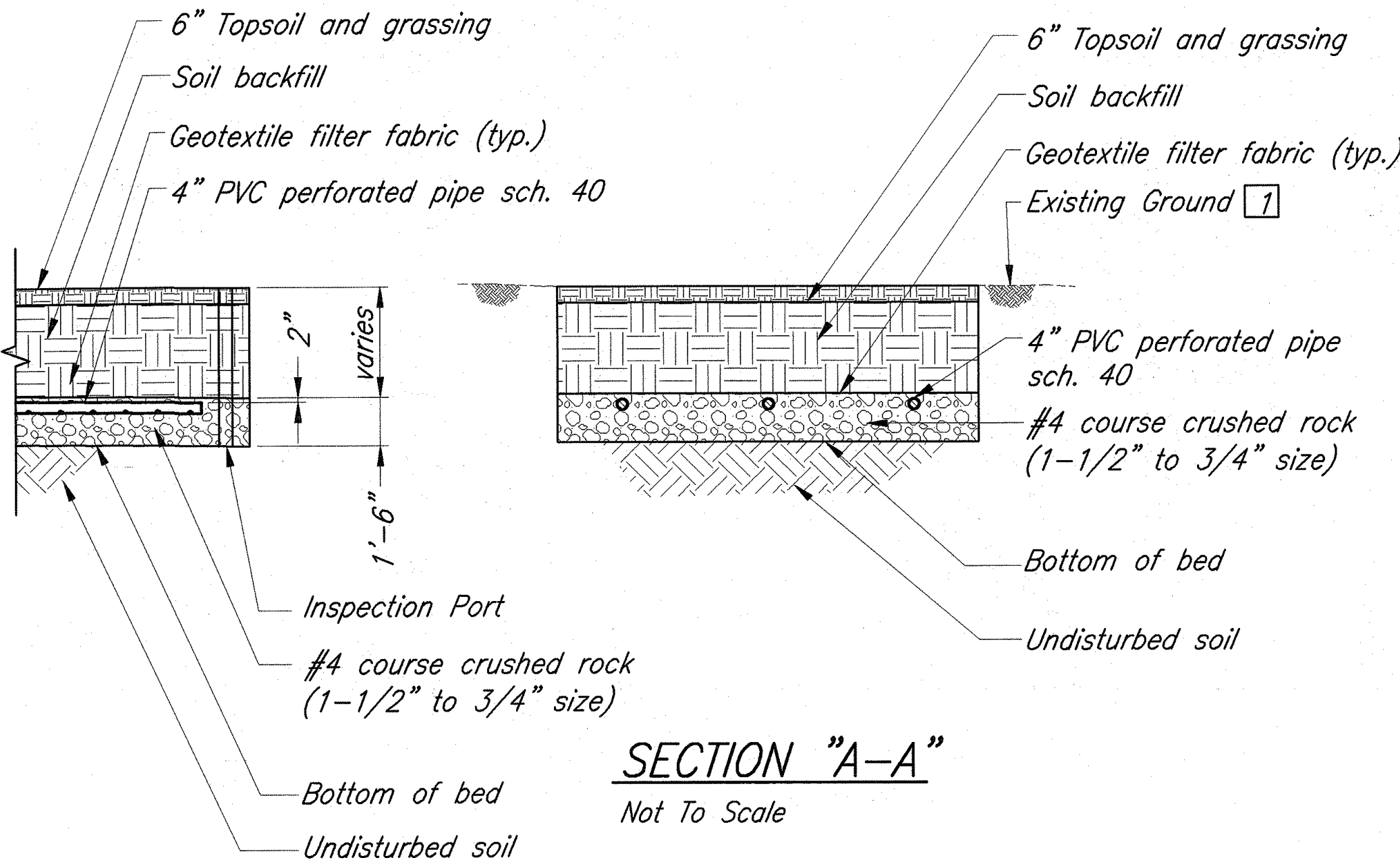
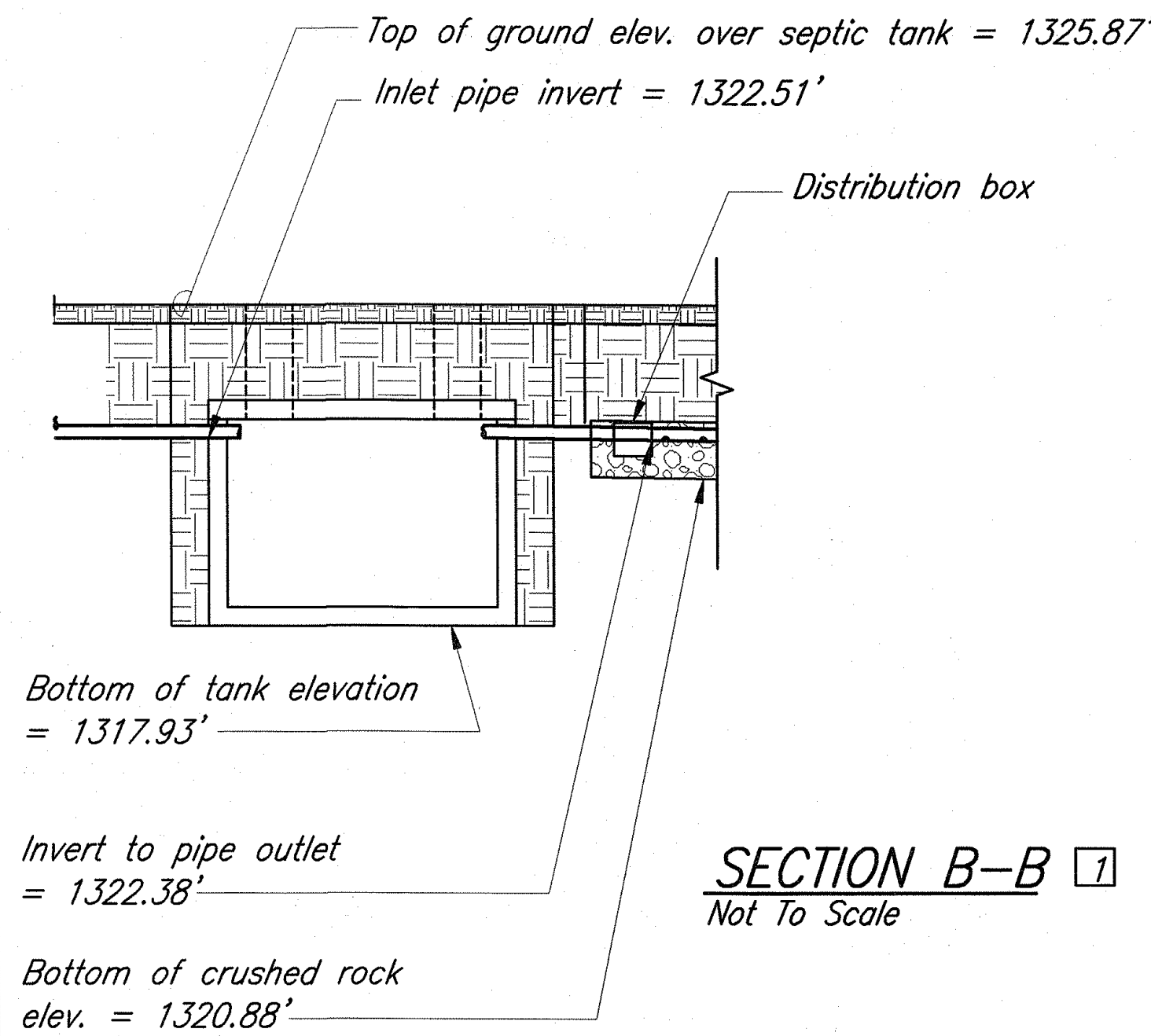
- The contractor shall notify the Engineer and Department of Health after completion of absorption bed excavation. Gravel, backfill and infiltration units shall not be placed until the soil in the bed area is inspected and necessary testing is completed.
- Invert elevations identical for all infiltrator units.
- All changes shall be approved by the engineer before and during construction.
- Provide pipe marker at all inspection port and distribution box locations.

SEPTIC TANK AND DISTRIBUTION BOX NOTES:

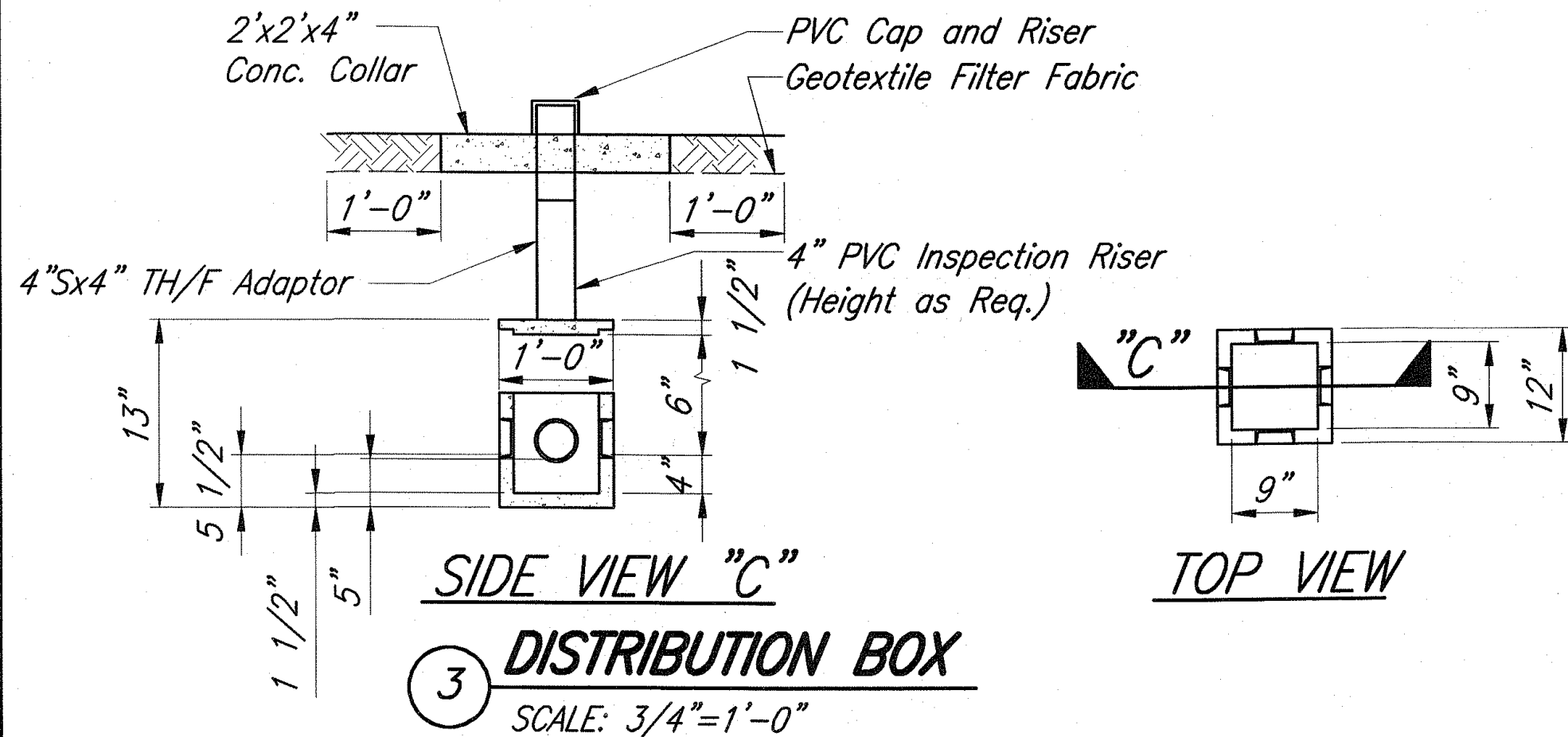
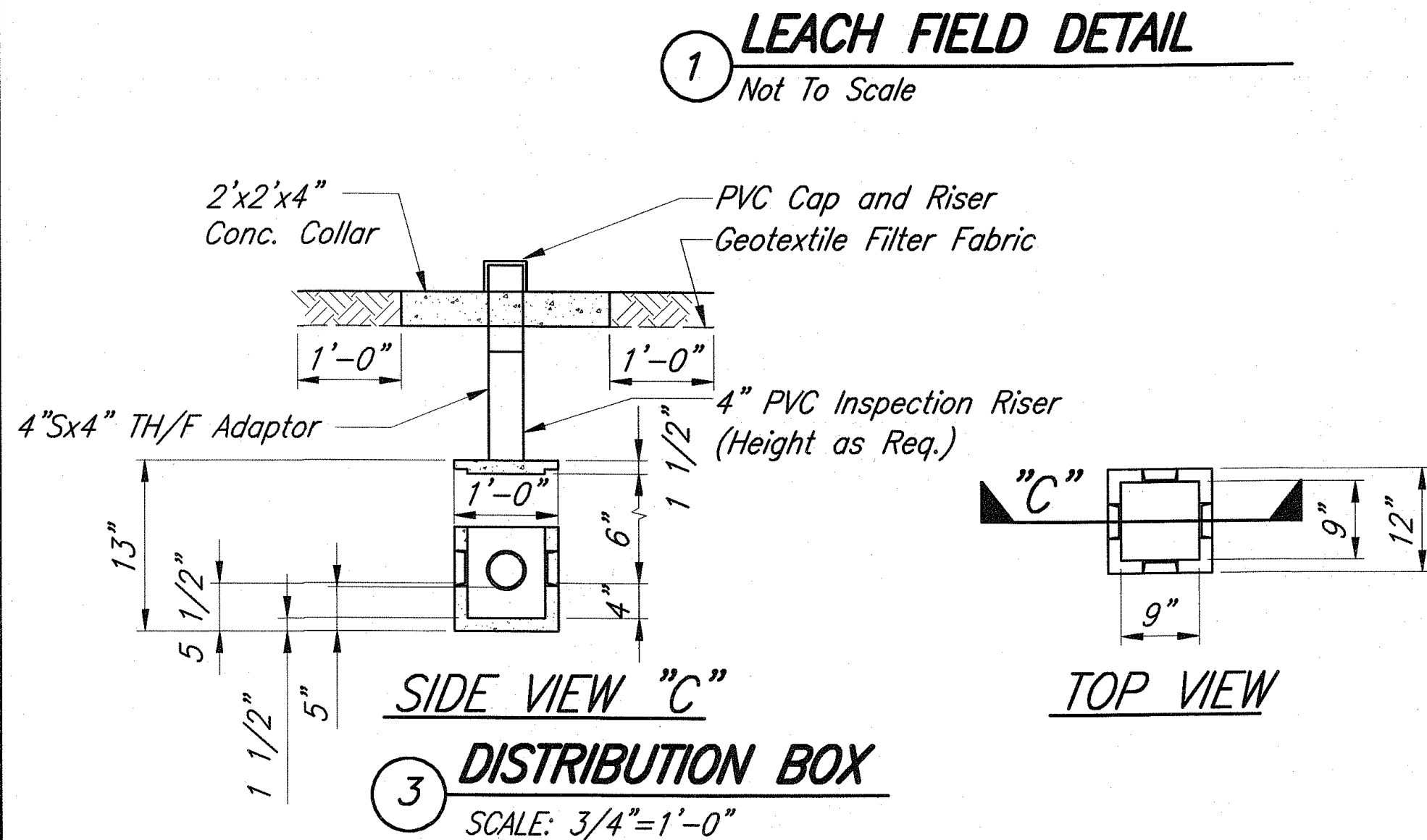
- All concrete shall develop a minimum compressive strength of 3000 psi at 28 days.
- Cement to be portland cement conforming to astm c 150.
- Reinforcing steel shall be intermediate grade, deformed conforming to astm a-616 grade 40.
- Reinforcing bars shall be in long lengths and shall be lapped a minimum of 15 inches, or 40 bar diameters.
- Interior area of the tanks shall be coated with an approved waterproof bituminous coating and shall be applied per the manufacturer's recommendation.

SEPTIC TANK AND DISTRIBUTION BOX NOTES (CON'T):

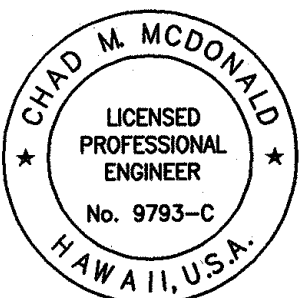
- Tanks shall bear on undisturbed soil a minimum of 12" below original grade on a solid bed and to be installed level. Two 2x6 redwood grade boards shall be placed below the tanks side walls along the long dimension.
- If tank hole is over excavated or has rocky unlevel bottom, 2" sand-pea gravel to level bottom is required.
- Fill tanks with water after it has been set in place and the sides backfilled.
- All pipes leaving-entering tanks shall be sealed with a non-shrink grout mix.
- The septic tanks manufacturer shall submit two (2) sets of plans stamped by a structural engineer, licensed in the state of hawaii, for the septic tank drawn to scale to the wastewater branch, department of health, state of hawaii and to the engineer for approval before fabrication. The plans shall show all dimensions, manholes, tees, baffles, compartment walls, and cleanouts. Material specifications, liquid and water volume calculations, installation and maintenance instructions and manufacturer's name, address, and phone number shall be submitted under a separate cover.
- Septic tanks shall be located in a non-vehicular traffic area.



2 INSPECTION PORT DETAIL
 SCALE: 1"=1'-0"

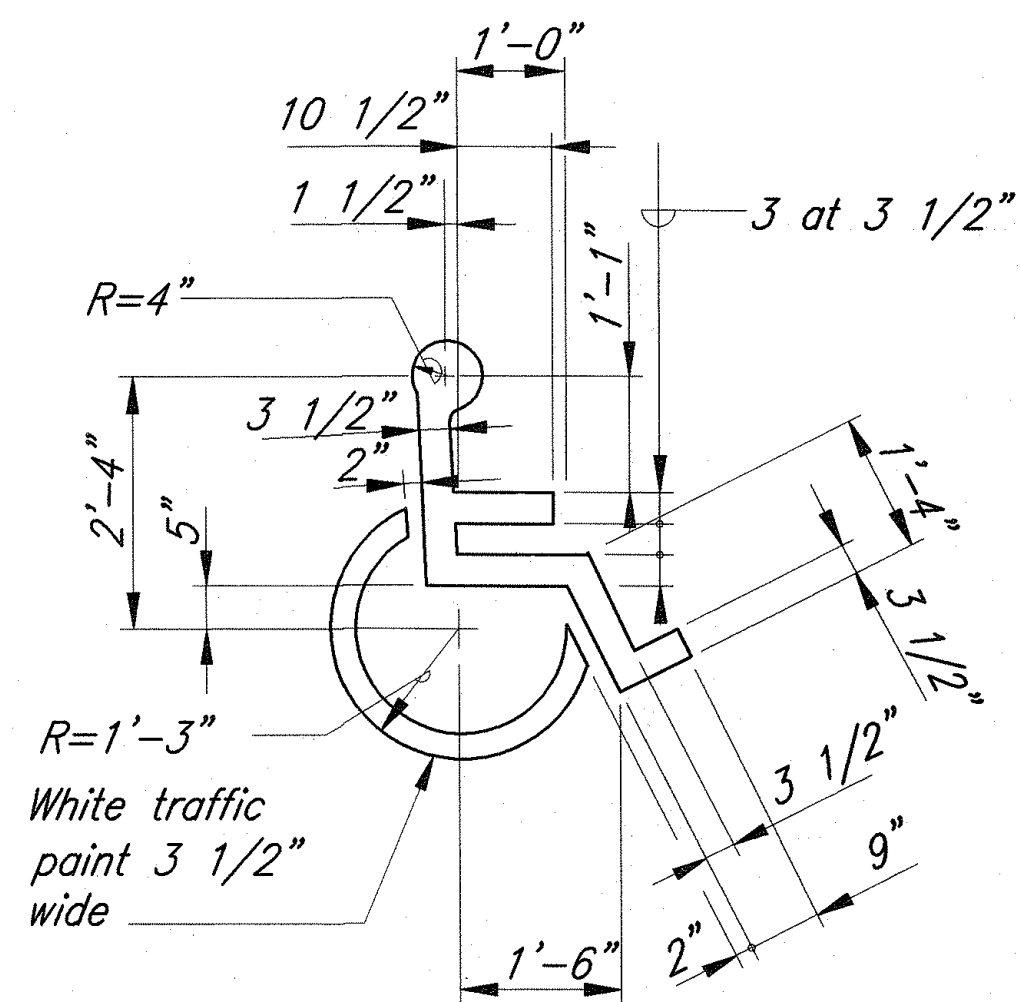


6/07/05	[1] Revised and Added Notes
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
SEWERAGE DETAILS	
NORTH KONA BASEYARD RENOVATIONS	
REMOVE LEAD PAINT AND UPGRADE ELECTRICAL	
Project No. HWY-H-03-04M	
Scale: As Noted	Date: April 2005
SHEET No. C-7 OF C-9 SHEETS	

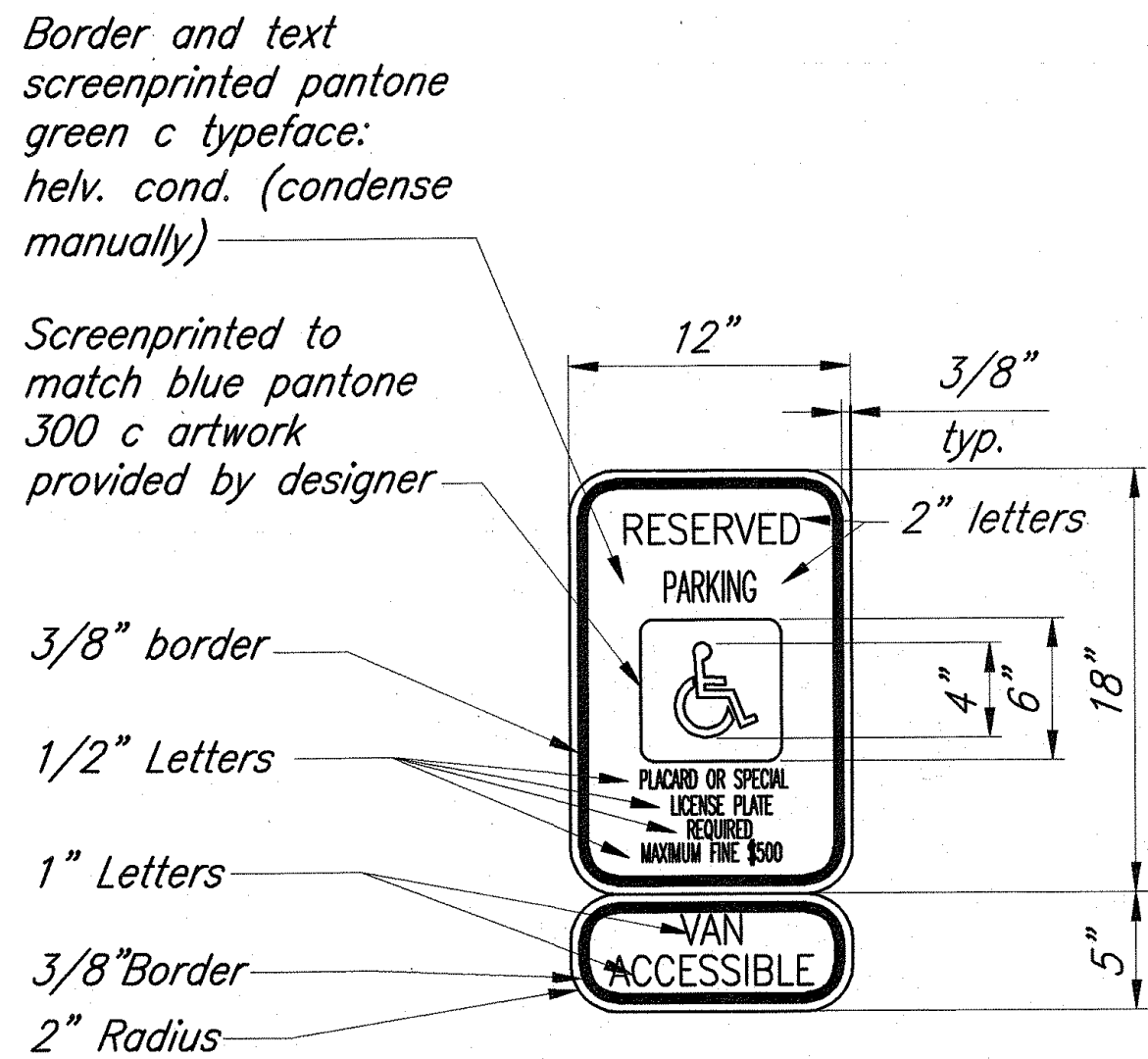


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FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-03-04M	2005	ADD.11	32

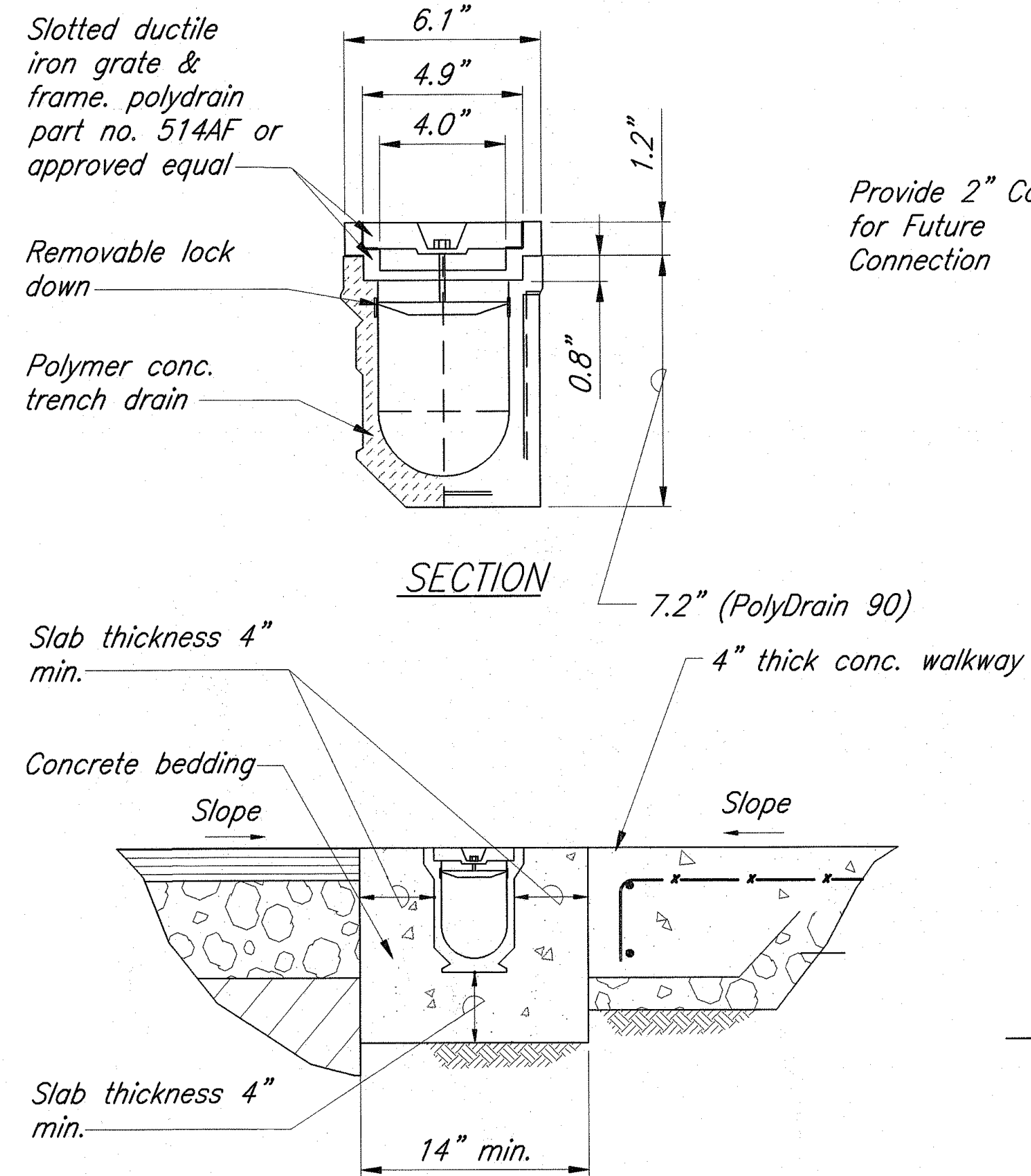


1 **ISA SYMBOL DETAIL**
Not to Scale

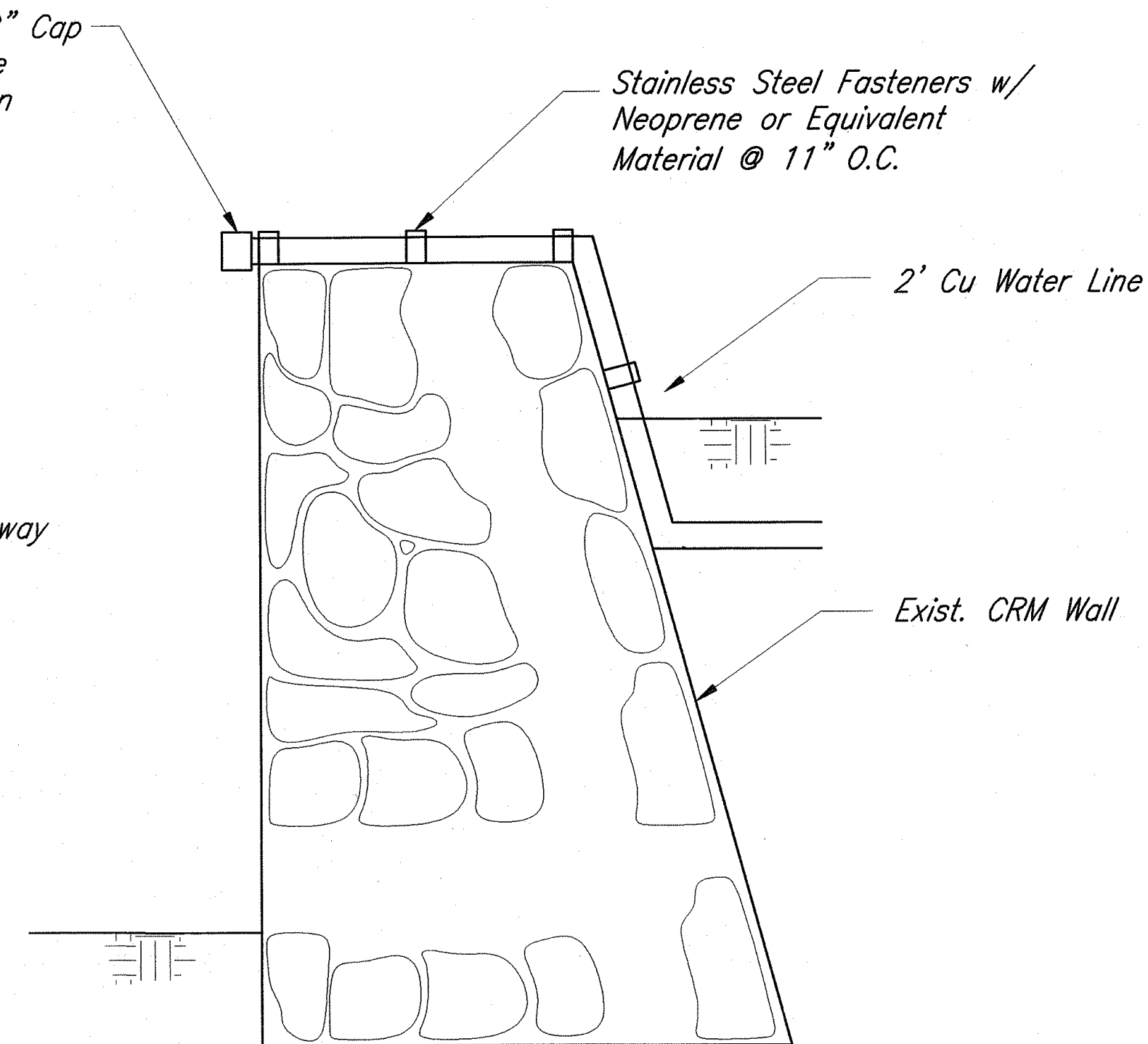


- NOTES:**
1. Signs shall be alum t6061 sheet covered with engineering grade reflective sheeting.
 2. Sign lettering shall be uppercase letters of the type approved by federal highway administration.
 3. Signs shall be screw mounted to roof eaves.

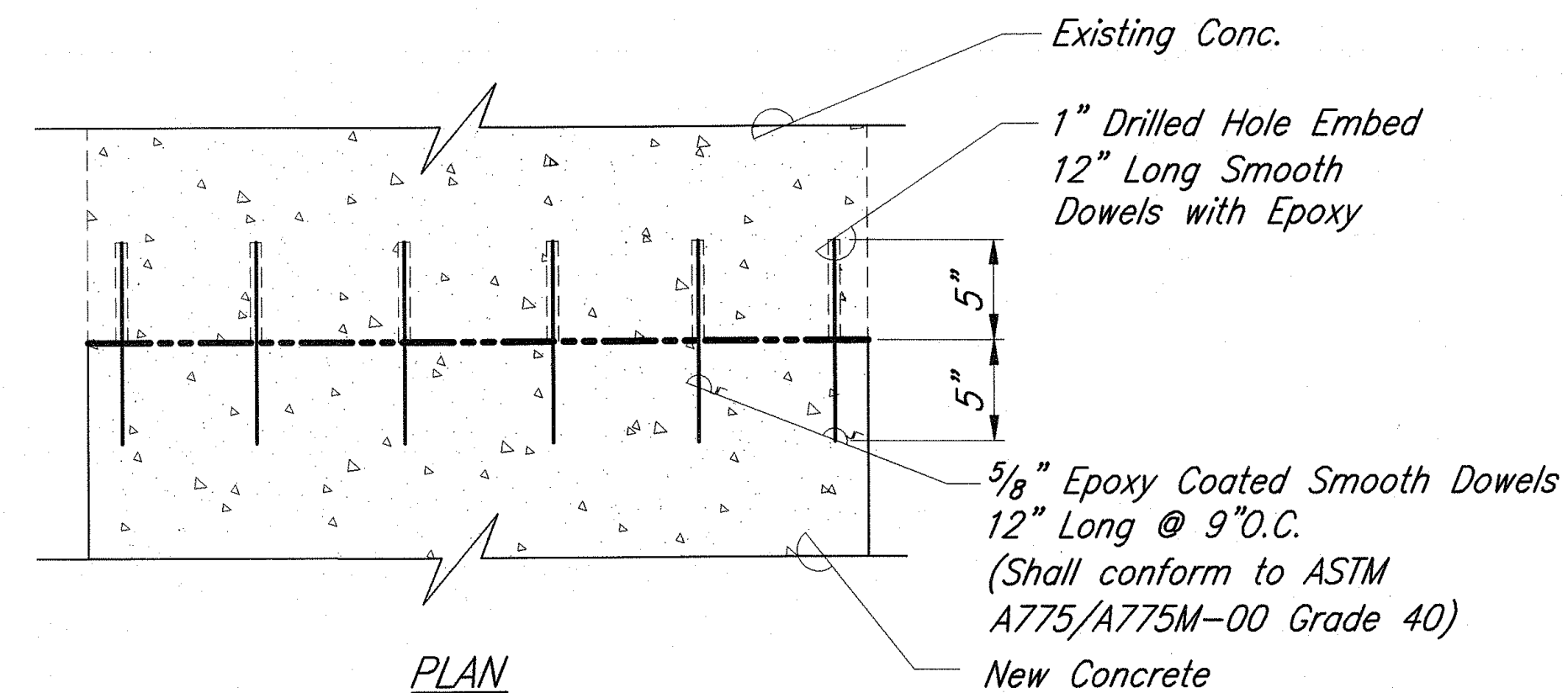
2 **VAN ACCESSIBLE SIGN DETAIL**
SCALE: 1 1/2"=1'-0"



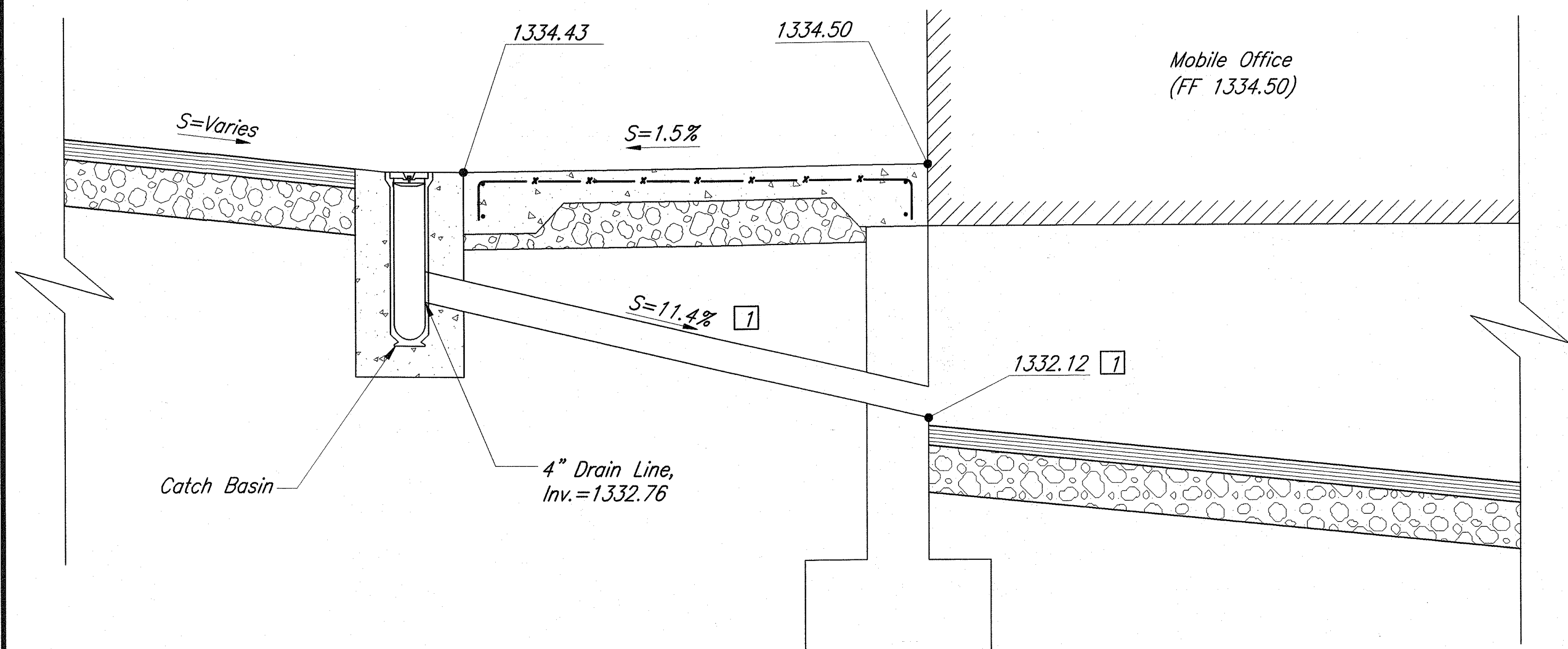
3 **TRENCH DRAIN DETAIL**
SCALE: 1 1/2"=1'-0"



4 **WATER LINE CONNECTION TO CRM WALL**
Not to Scale



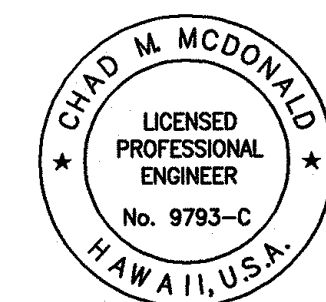
6 **CONCRETE TO CONCRETE CONNECTION**
Not to Scale



5 **DAYLIGHT TO TRENCH DRAIN**
SCALE: 1"=1'-0"

Note: The cost of the 4" Drain Line is incidental to item No. 604.1000

SURVEY PLOTTED BY	DATE
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ORIGINAL PLAN	
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No.	



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6/07/05	1 Added Detail and Revised Notes
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
MISCELLANEOUS DETAILS - 2	
NORTH KONA BASEYARD RENOVATIONS	
REMOVE LEAD PAINT AND	
UPGRADE ELECTRICAL	
Project No. HWY-H-03-04M	
Scale: As Noted	Date: April 2005
SHEET No. C-9 OF C-9 SHEETS	