

WATER POLLUTION AND EROSION CONTROL NOTES:

A. GENERAL:

1. 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.
2. 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.
3. 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.
4. 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:

1. 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.

2. 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.

3. 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:

1. All control measures shall be inspected at least once each week and following any rainfall event of 0.5 inches or greater.
2. All measures shall be maintained in good working order. If repair is necessary, it shall be initiated within 24 hours after the inspection.
3. Built-up sediment shall be removed from silt fence when it has reached one-third the height of the fence.
4. 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.
5. Temporary and permanent seeding and planting shall be inspected for bare spots, washouts and healthy growth.
6. A maintenance inspection report shall be made promptly after each inspection by the Contractor.
7. 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.
8. 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:

1. Materials Pollution Prevention Plan

- a. 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

- b. 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.
- c. 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.
- d. Products shall be kept in their original containers with the original manufacturer's label.
- e. Substances shall not be mixed with one another unless recommended by the manufacturer.
- f. Whenever possible, a product shall be used up completely before disposing of the container.
- g. Manufacturer's recommendations for proper use and disposal shall be followed.
- h. The Contractor shall conduct a daily inspection to ensure proper use and disposal of materials onsite.

2. Hazardous Material Pollution Prevention Plan

- a. Products shall be kept in original containers unless they are not resealable.
- b. Original labels and material safety data sheets (MSDS) shall be retained.
- c. Surplus products shall be disposed of according to manufacturers' instructions or local and State recommended methods.

3. Onsite and Offsite Product Specific Plan

- a. The following product specific practices shall be followed onsite:

1) 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.

2) 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.

3) Paints:

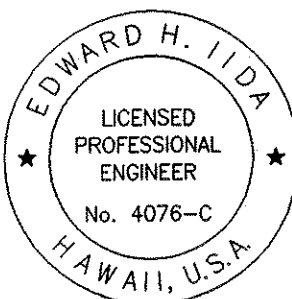
All containers shall be tightly sealed and stored when not required for use. Excess paint shall not be discharged to the highway drainage system but shall be properly disposed of according to manufacturers' instructions or State and local regulations.

4) 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.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-03-02M	2003	3	53

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
IN CHARGE	
REVIEWED BY	
APPROVED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	



This work was prepared by me or under my supervision.

signature
expiration date of the license

NOTE: Contractor to check and verify dimensions at job before proceeding with work.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

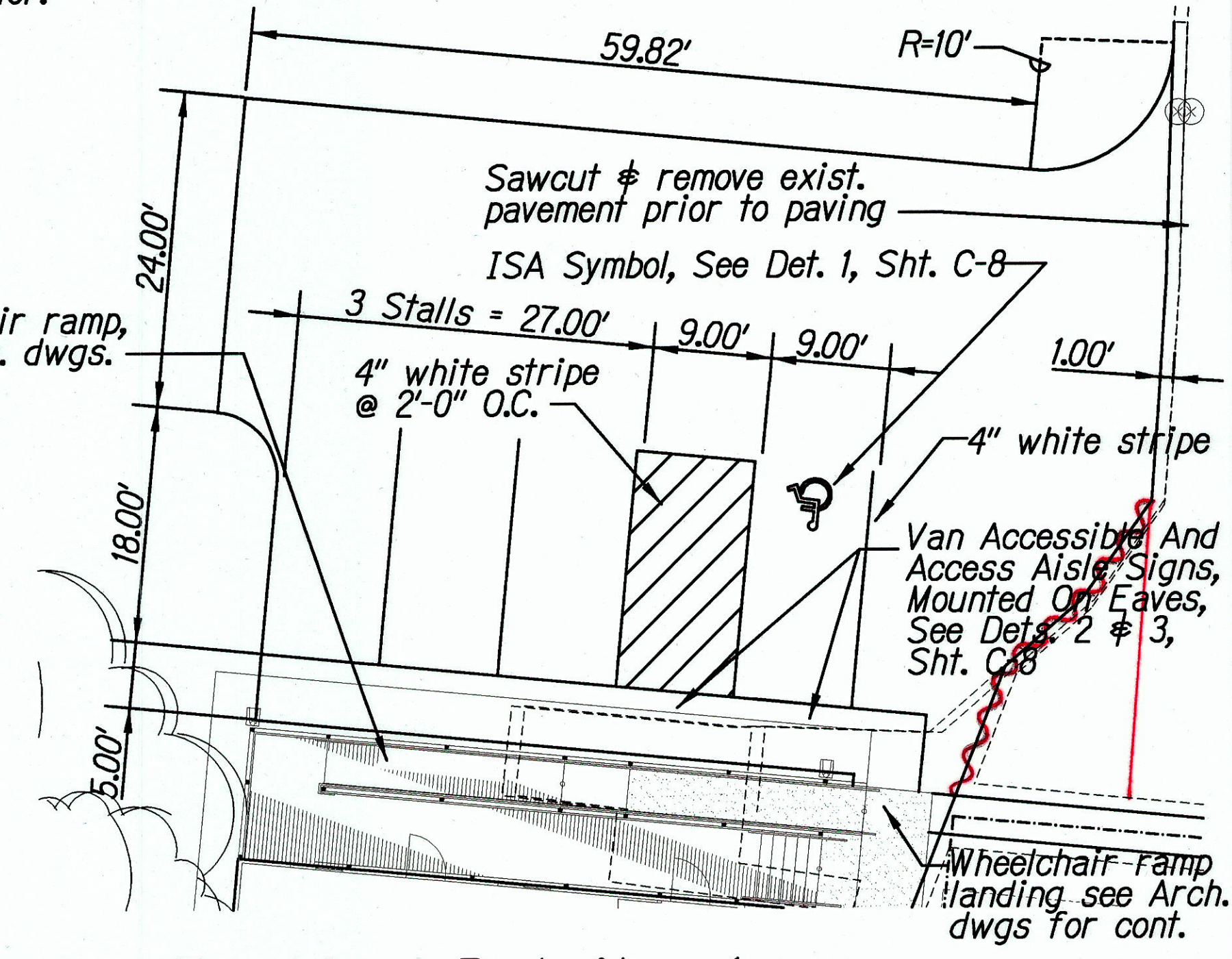
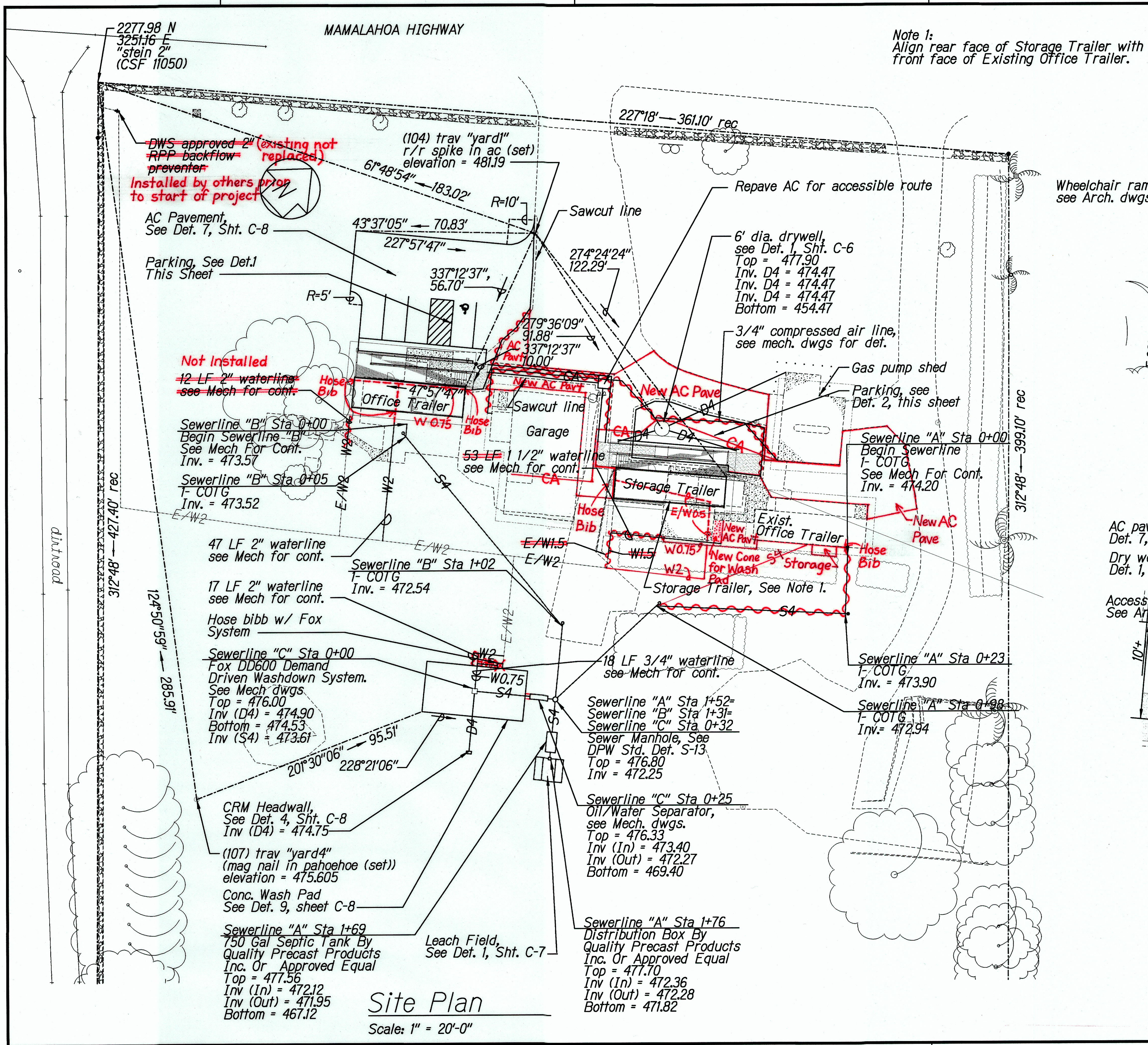
**WATER POLLUTION AND
EROSION CONTROL NOTES – 1**

**NAALEHU BASEYARD RENOVATIONS
Project No. HWY-H-03-02M**

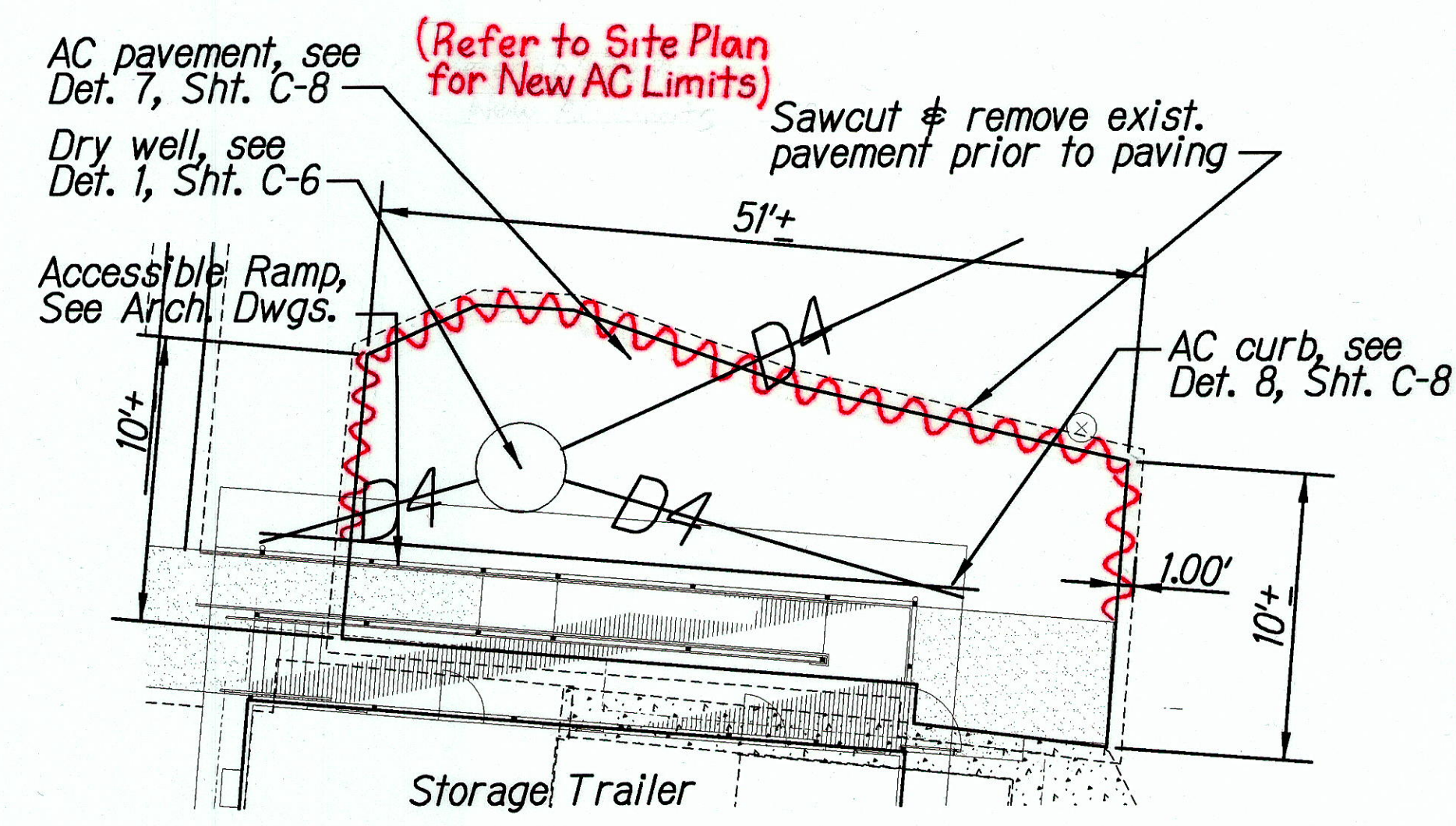
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SHEET No. C-1 OF C-9 SHEETS

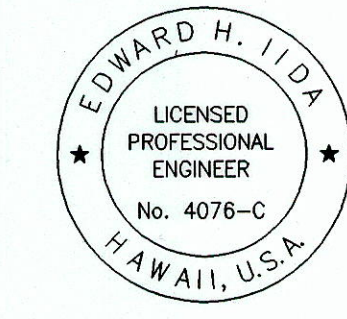
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-03-02M	2003	5	53



Parking Detail - 1
(Deductive Bid Alternate)
Scale: 1" = 10'



Parking Detail - 2
Scale: 1" = 10'



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Signature: *Edward H. Iida*
Date: 3/30/2004
Expiration date of the license: 3/30/2008
NOTE: Contractor to check and verify dimensions at job before proceeding with work.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SITE PLAN

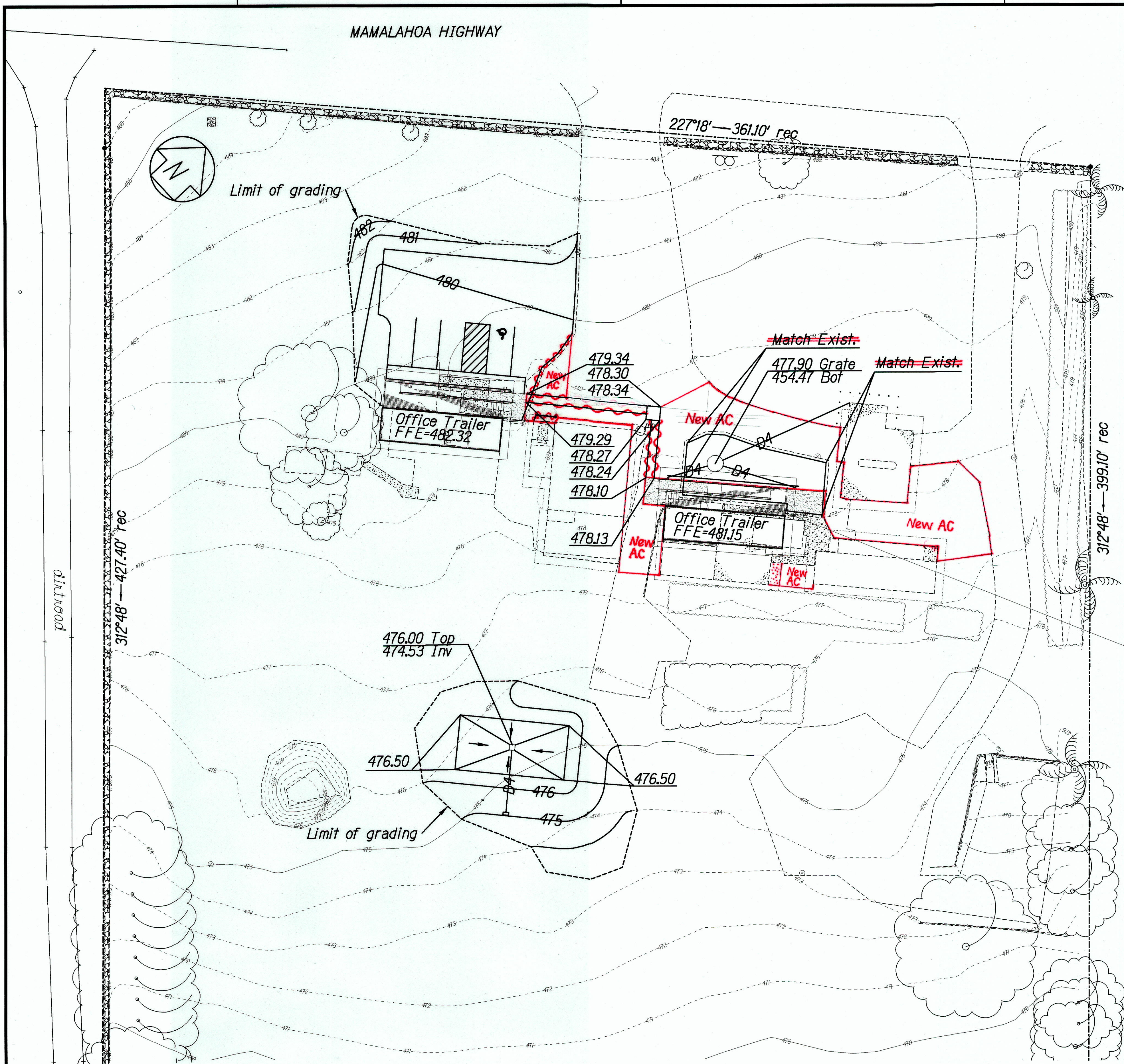
NAALEHU BASEYARD RENOVATIONS
Project No. HWY-H-03-02M
Scale: As Noted Date: April 2003
SHEET No. C-3 OF C-9 SHEETS

REVISIONS	DATE
1. AS-BUILT	4/1/2003

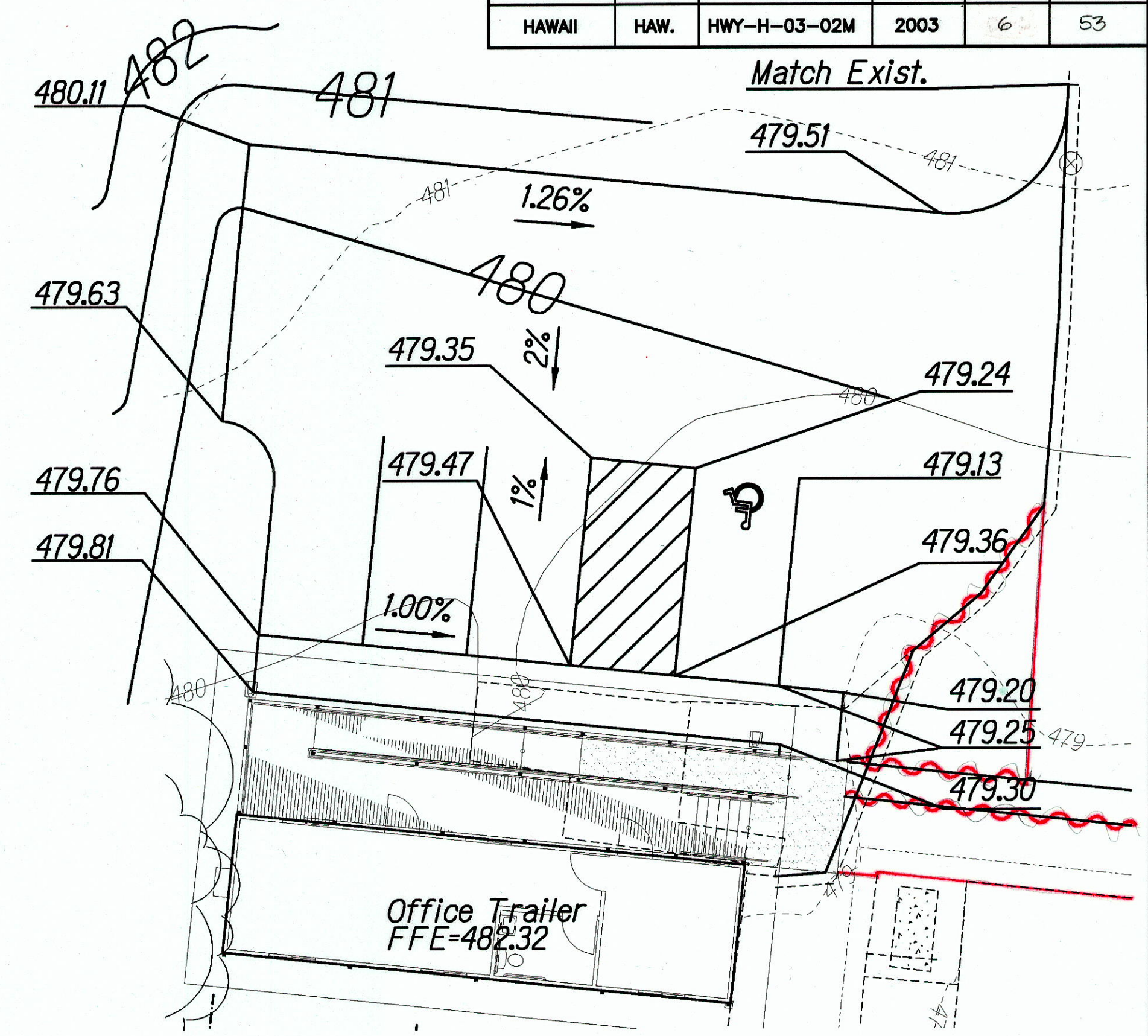
"AS-BUILT"

FINAL SUBMITTAL

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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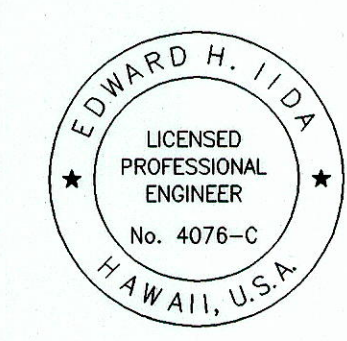


Grading Plan
Scale: 1" = 20'



Parking Grading Plan
Scale: 1" = 10'

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
IN CHARGE	
NOTED BY	
REVISIONS	
1.	
2.	
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Signature: *Edward H. Iida* / 30/2004
expiration date of the license

NOTE: Contractor to check and verify dimensions of job before proceeding with work.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GRADING PLAN

NAALEHU BASEYARD RENOVATIONS
Project No. HWY-H-03-02M

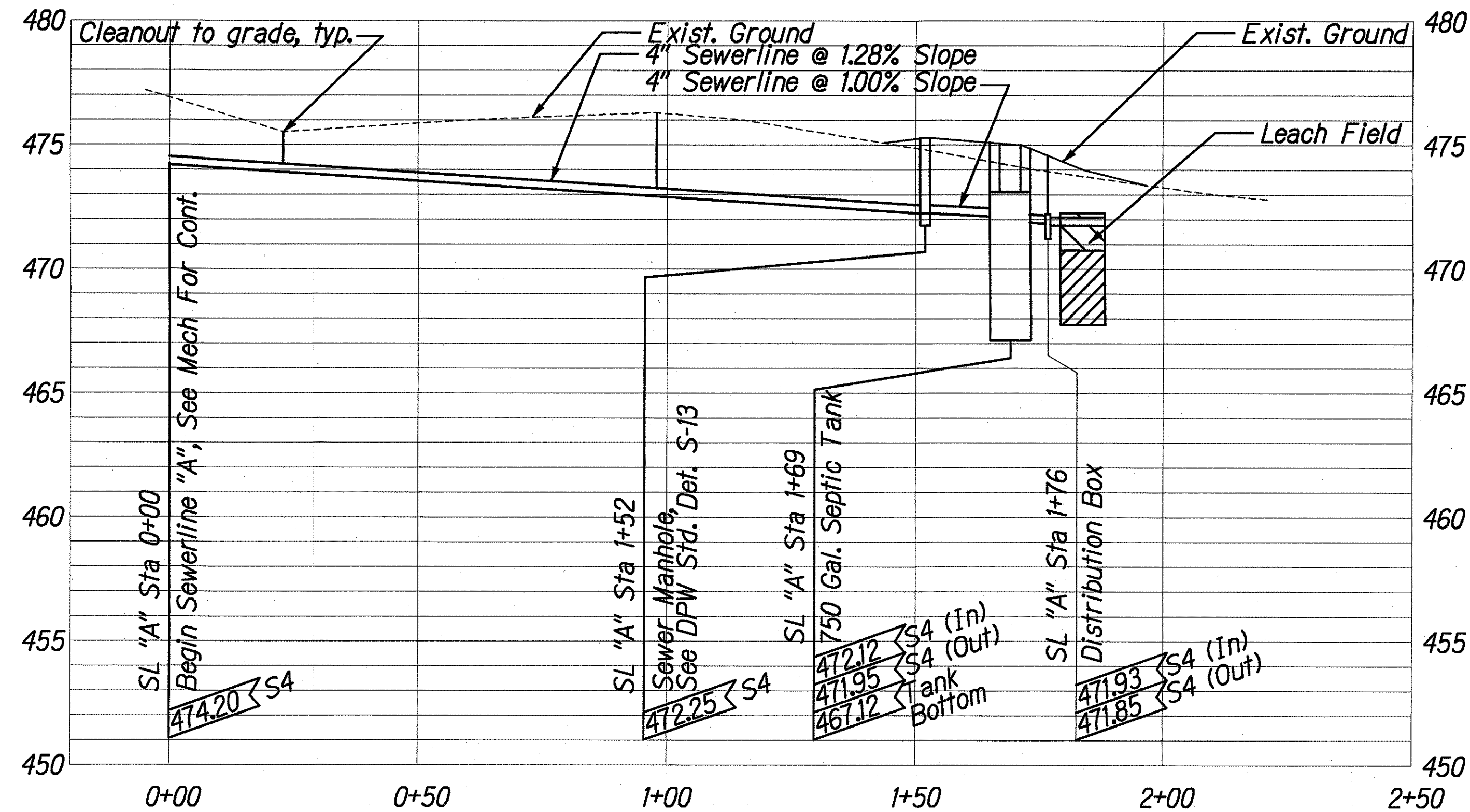
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SHEET No. C-4 OF C-9 SHEETS

"AS-BUILT"

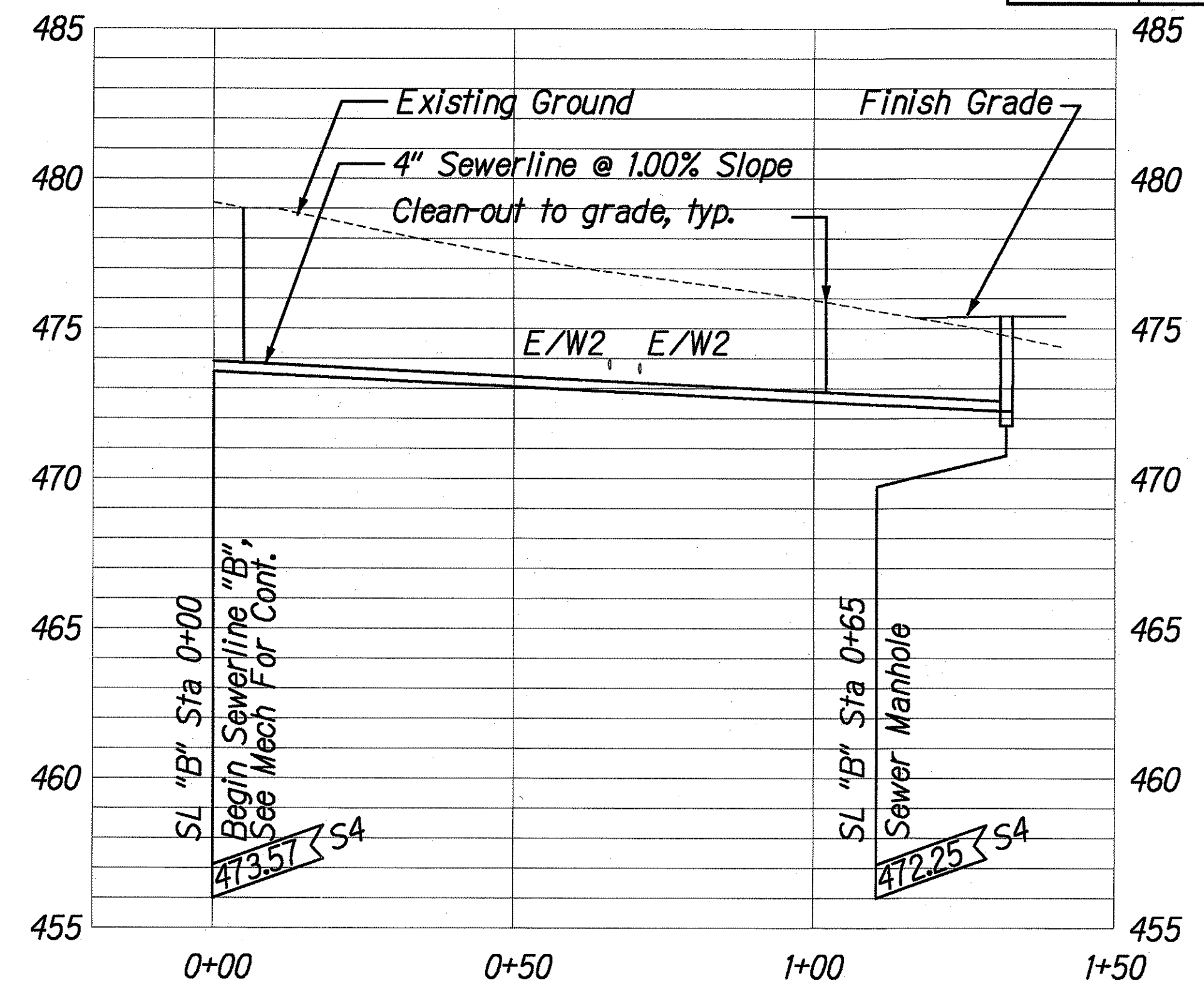
FINAL SUBMITTAL

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-03-02M	2003	7	53



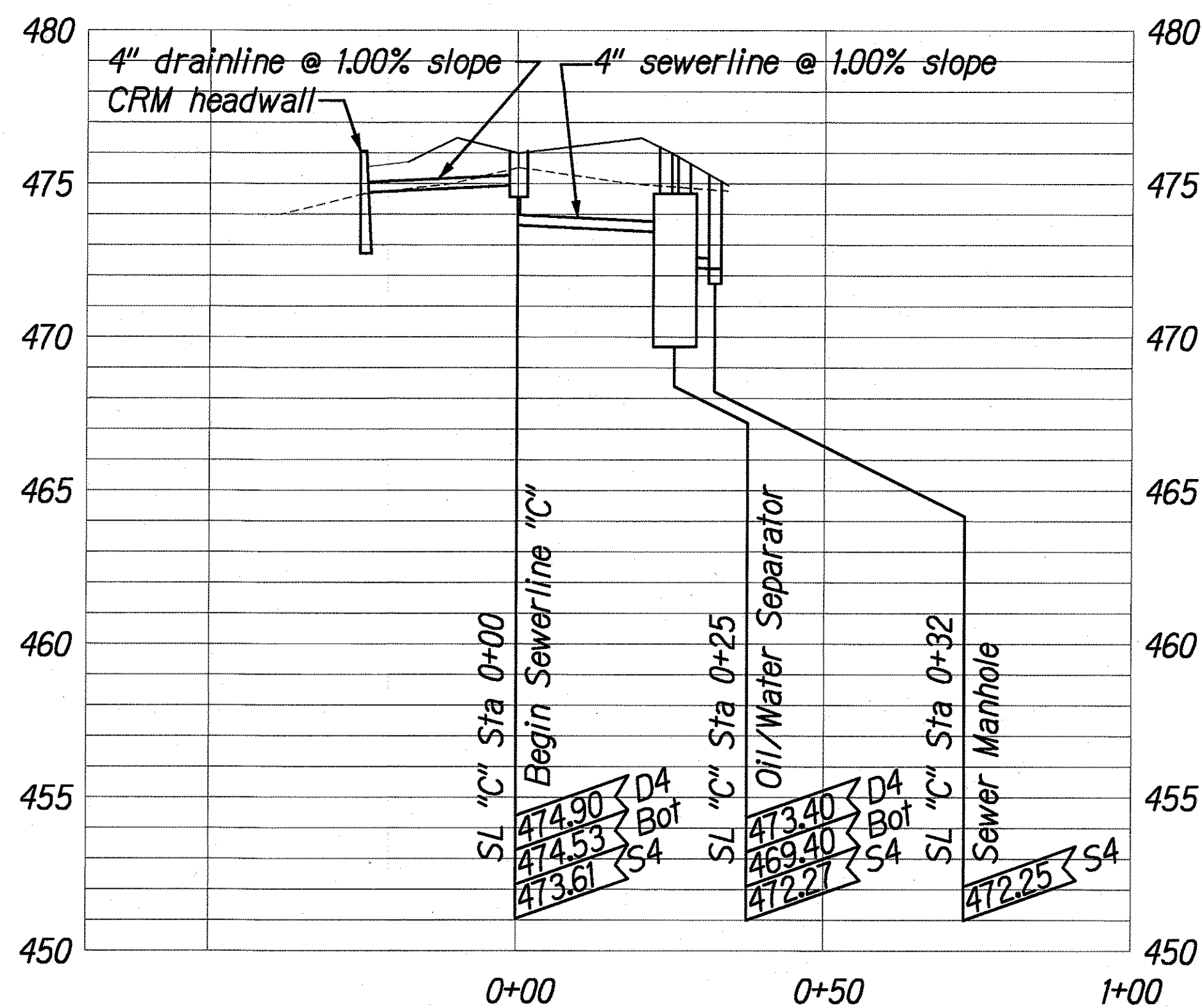
Sewerline "A" Profile

Scale: Horiz.: 1" = 20'
Vert.: 1" = 4'



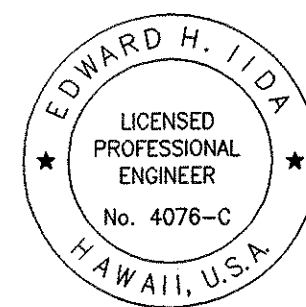
Sewerline "B" Profile

Scale: Horiz.: 1" = 20'
Vert.: 1" = 4'



Sewerline "C" Profile

Scale: Horiz.: 1" = 20'
Vert.: 1" = 4'



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Date: 3/30/2004

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

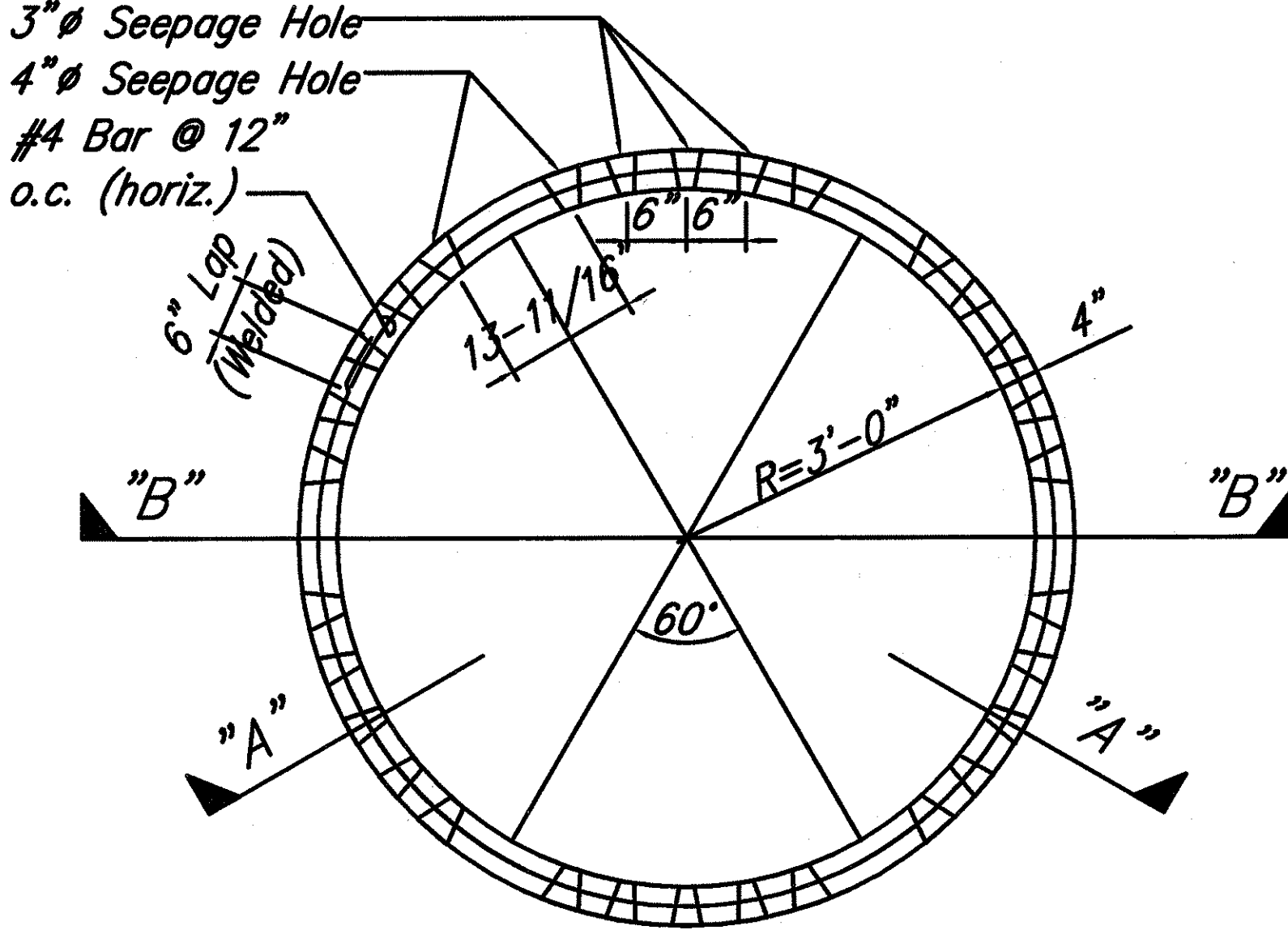
Profiles

NAALEHU BASEYARD RENOVATIONS
Project No. HWY-H-03-02M

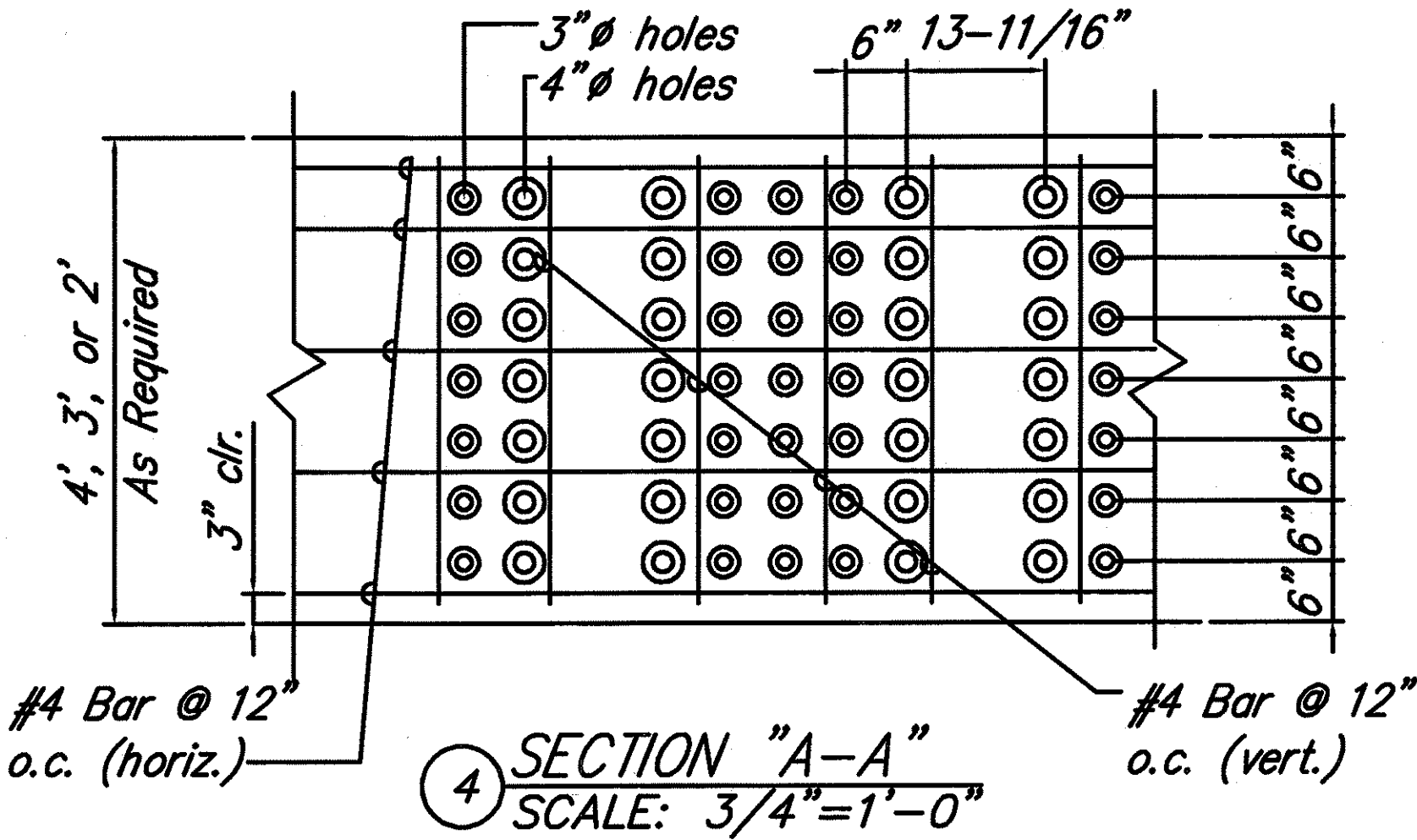
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SHEET No. C-5 OF C-9 SHEETS

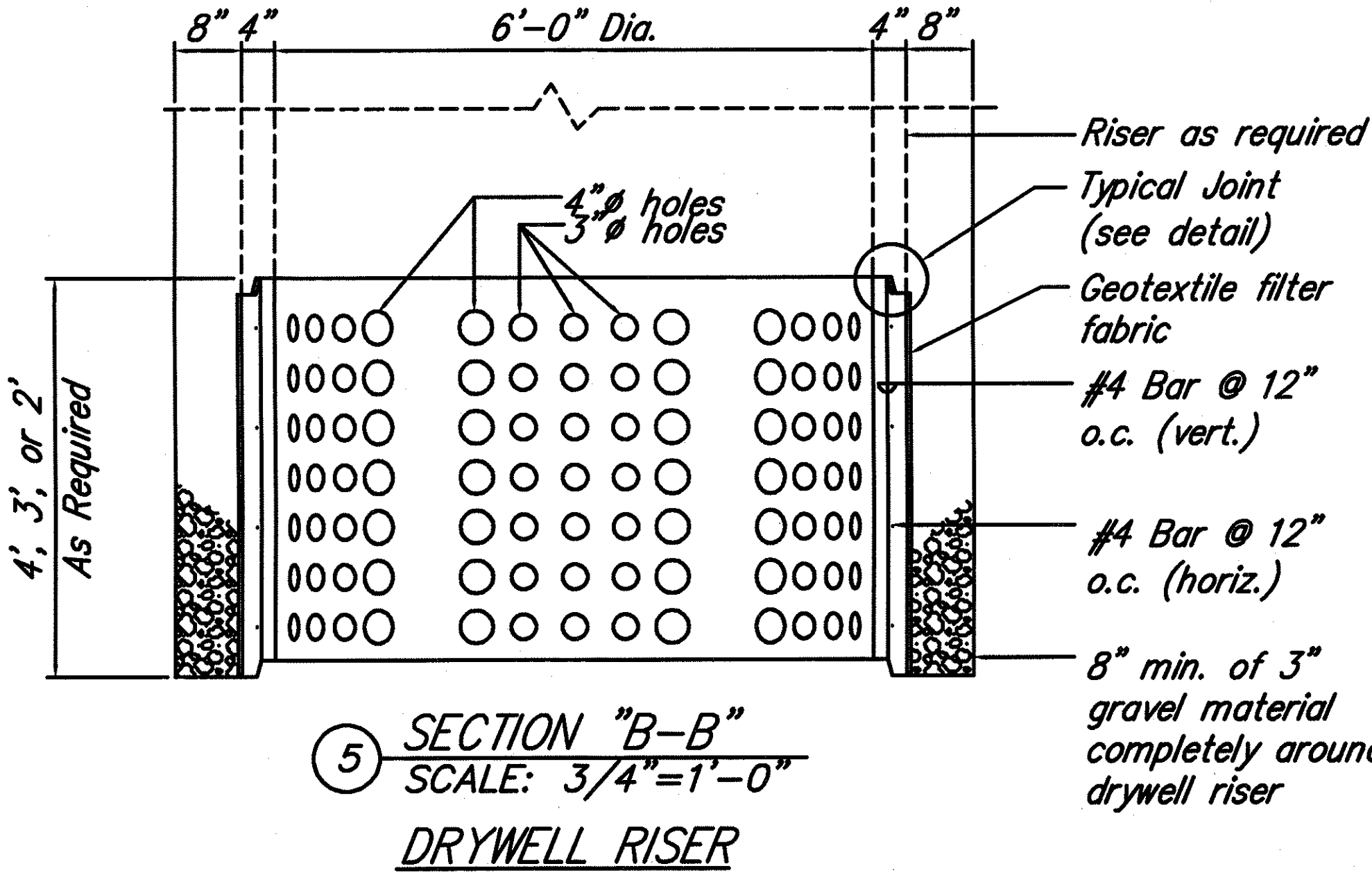
DESIGNED BY	DATE
CHECKED BY	
NOTED BY	
REVISIONS	
NO.	



1 DRYWELL RISER PLAN
SCALE: 3/4"=1'-0"



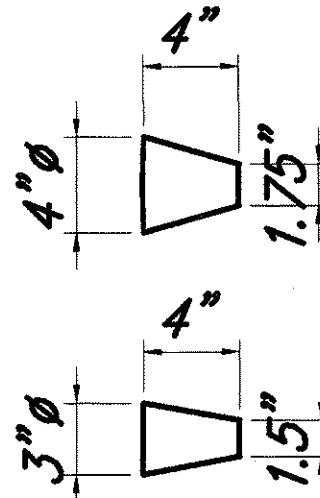
4 SECTION "A-A"
SCALE: 3/4"=1'-0"



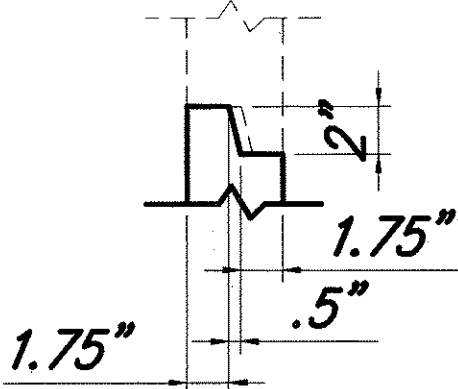
5 SECTION "B-B"
SCALE: 3/4"=1'-0"
DRYWELL RISER

- NOTES:
- Concrete: 5,000 psi at 20 days
 - Approx. Wt: 2.5 tons.
 - Drywell details are for information only. Contractor to submit manufacturer's shop drawings for review.

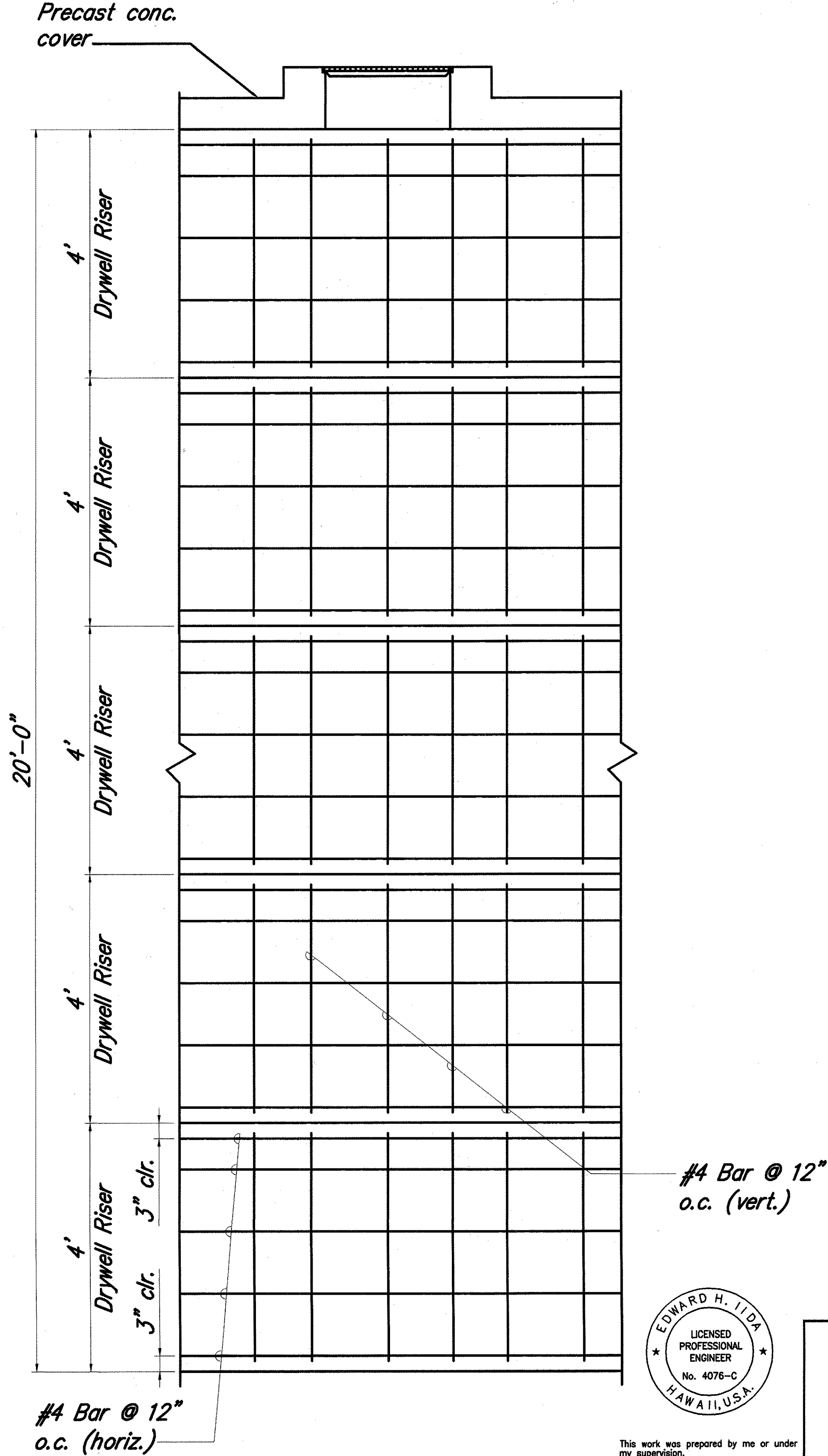
HEIGHT	WEIGHT
4'-0"	3,595 Lbs.
3'-0"	2,695 Lbs.
2'-0"	1,800 Lbs.



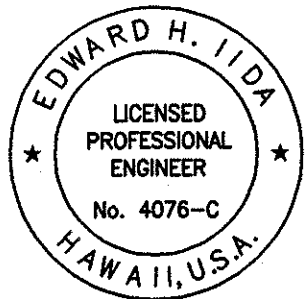
TYPICAL
SEEPAGE HOLE
Scale: 1 1/2"=1'-0"



JOINT DETAIL
Scale: 1 1/2"=1'-0"



DRYWELL WALL



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expiration date of the license
4/30/2004

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

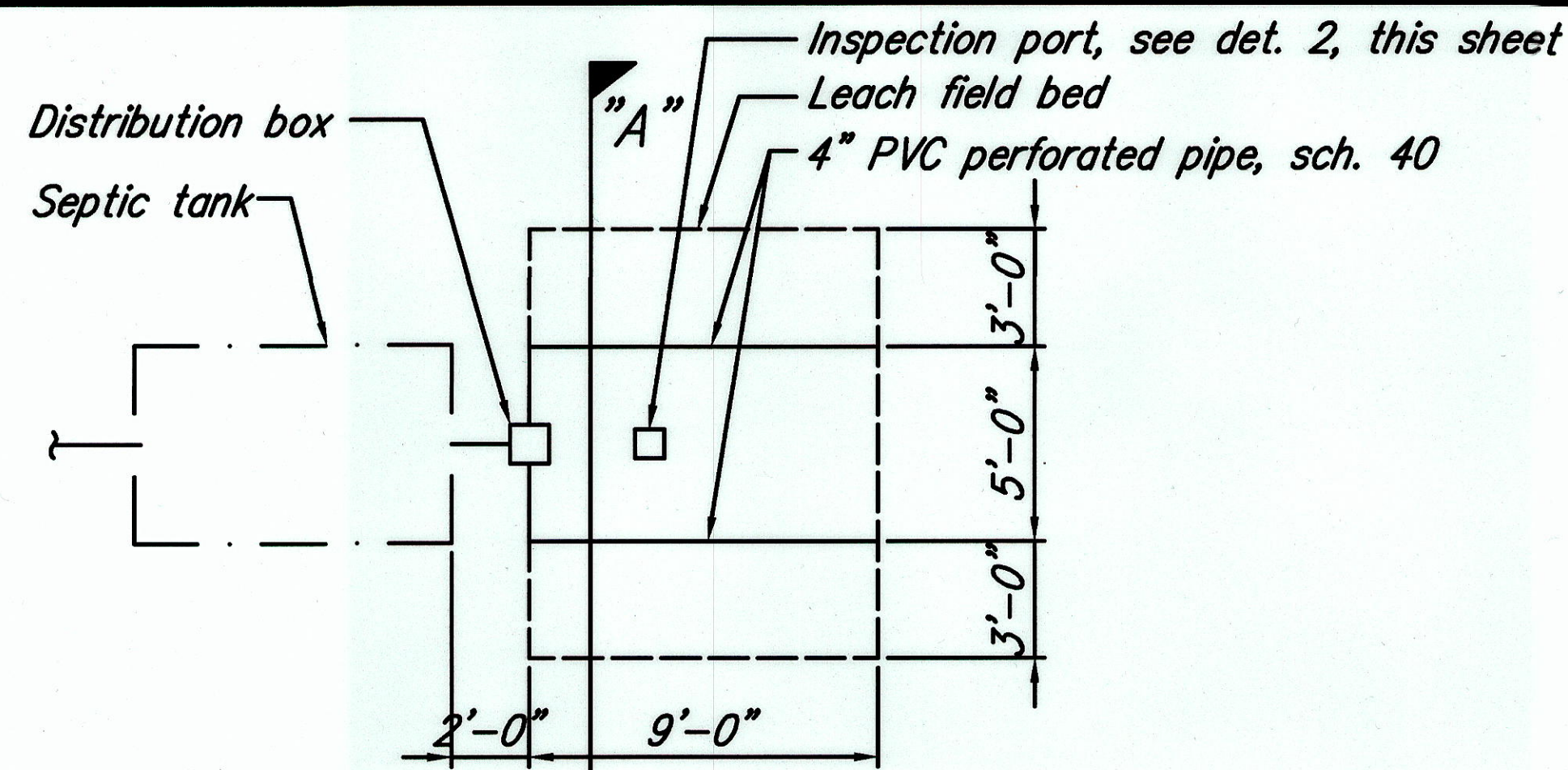
MISCELLANEOUS DETAILS - 1

NAALEHU BASEYARD RENOVATIONS
Project No. HWY-H-03-02M

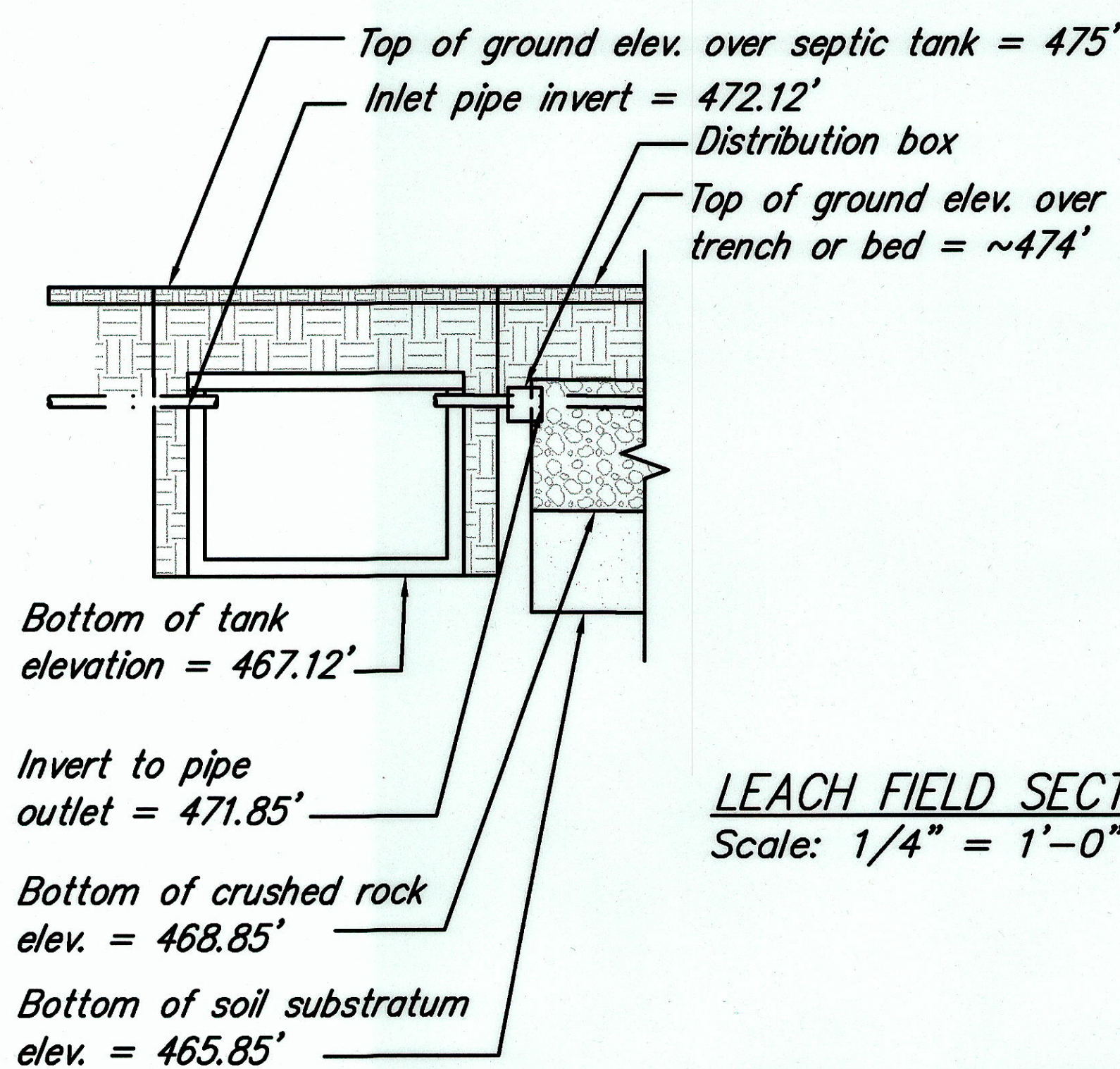
Scale: As Noted Date: April 2003

SHEET No. C-6 OF C-9 SHEETS

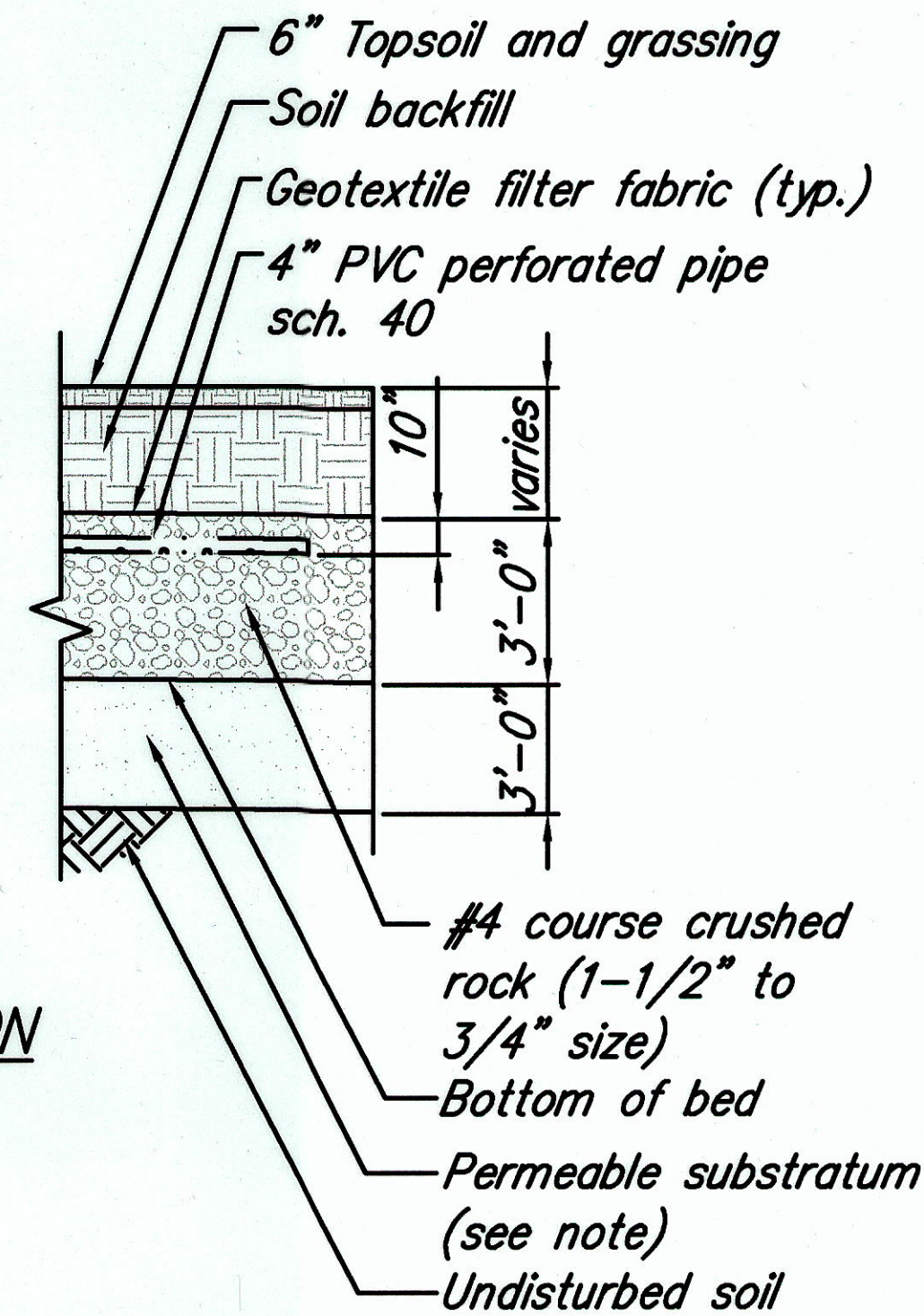
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-03-02M	2003	9	53



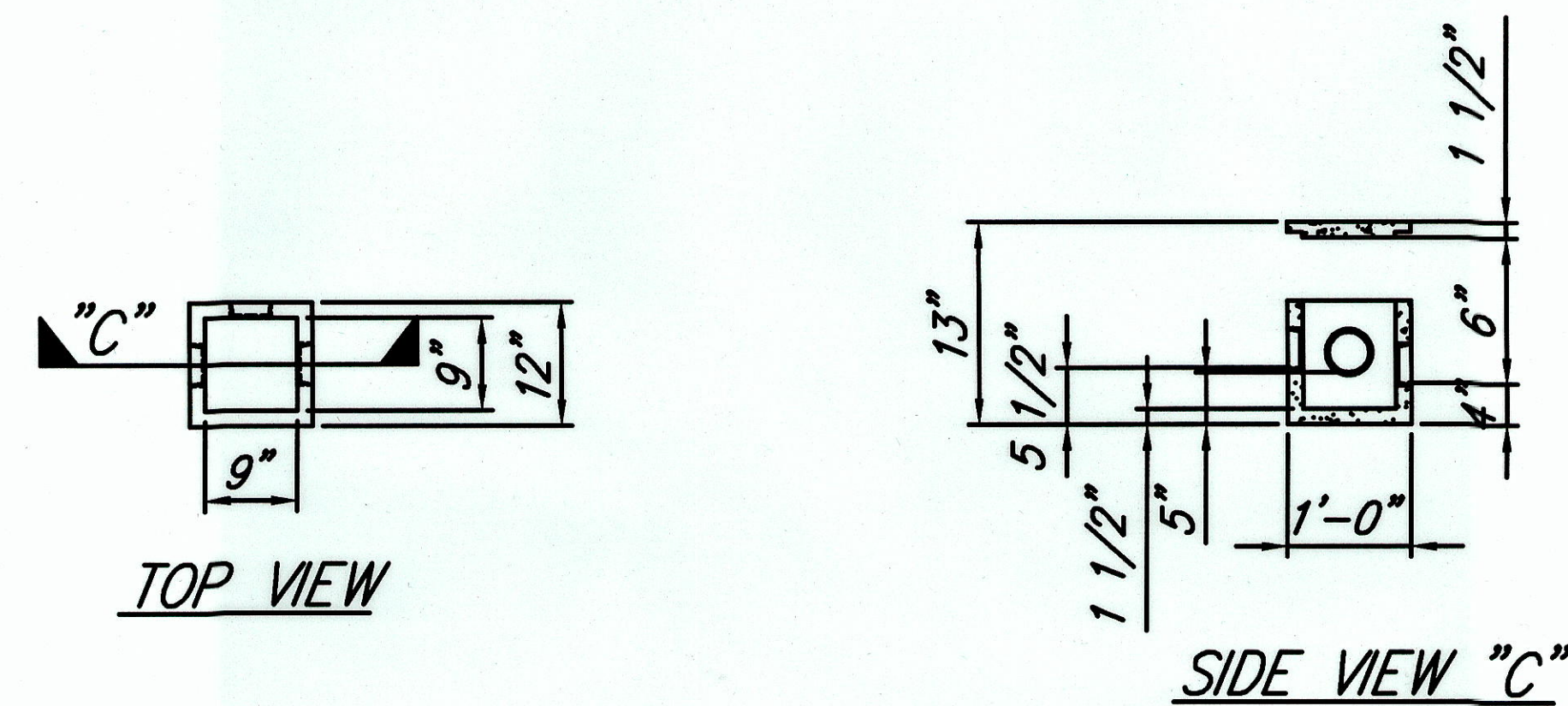
LEACH FIELD PLAN
Scale: 1/4" = 1'-0"



LEACH FIELD SECTION
Scale: 1/4" = 1'-0"



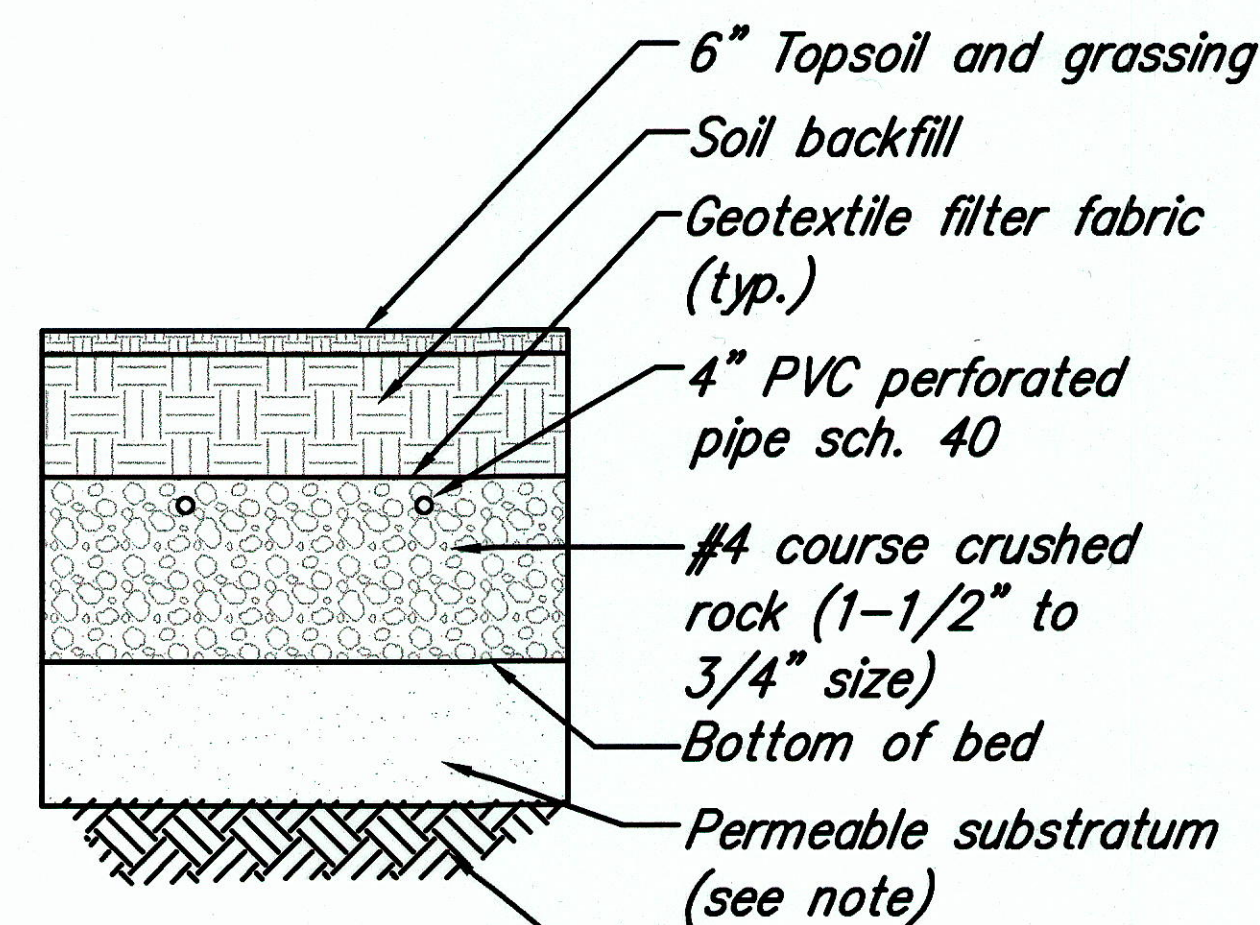
1 LEACH FIELD DETAIL



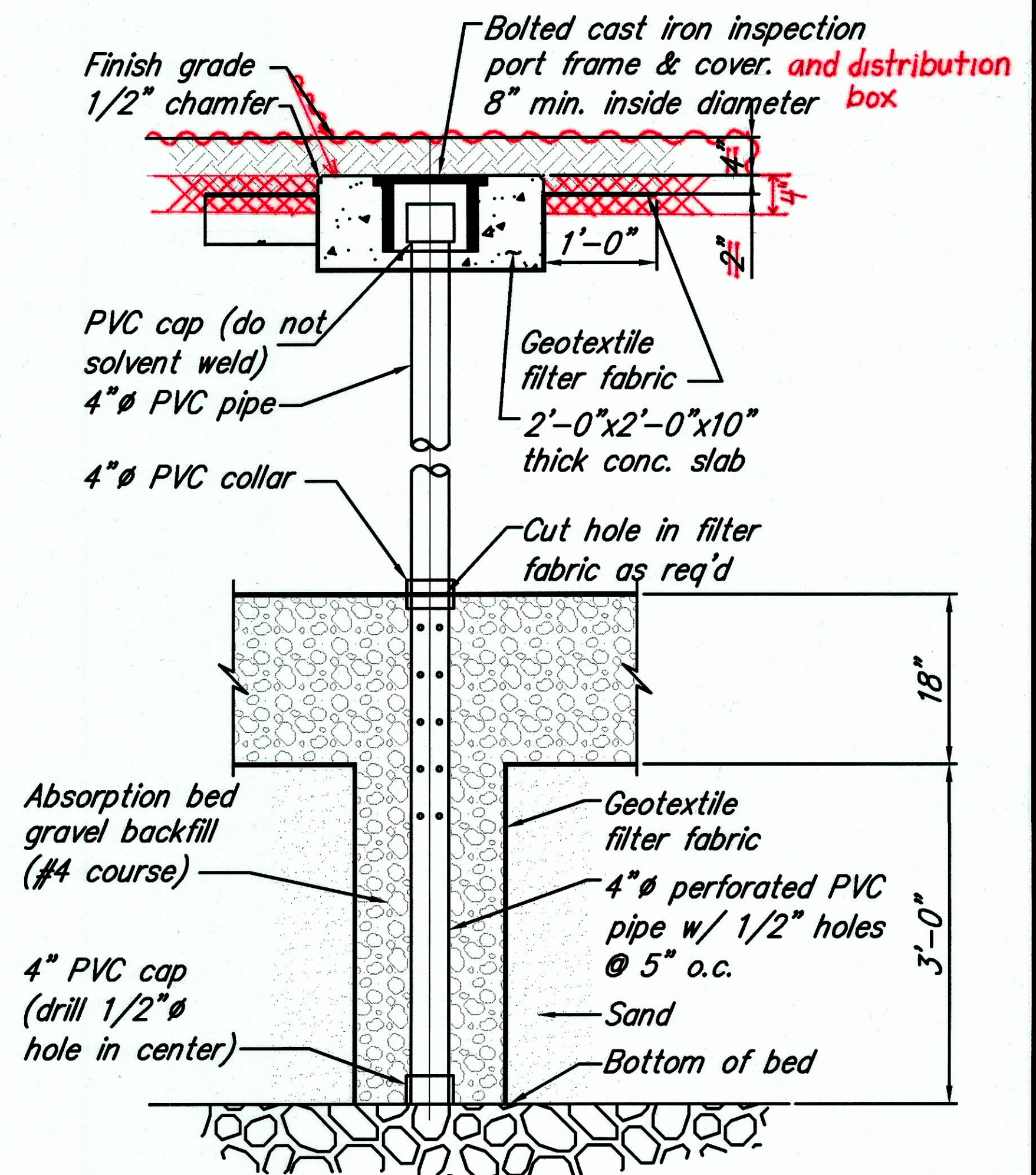
3 DISTRIBUTION BOX
SCALE: 3/4"=1'-0"

LEACH FIELD NOTES:

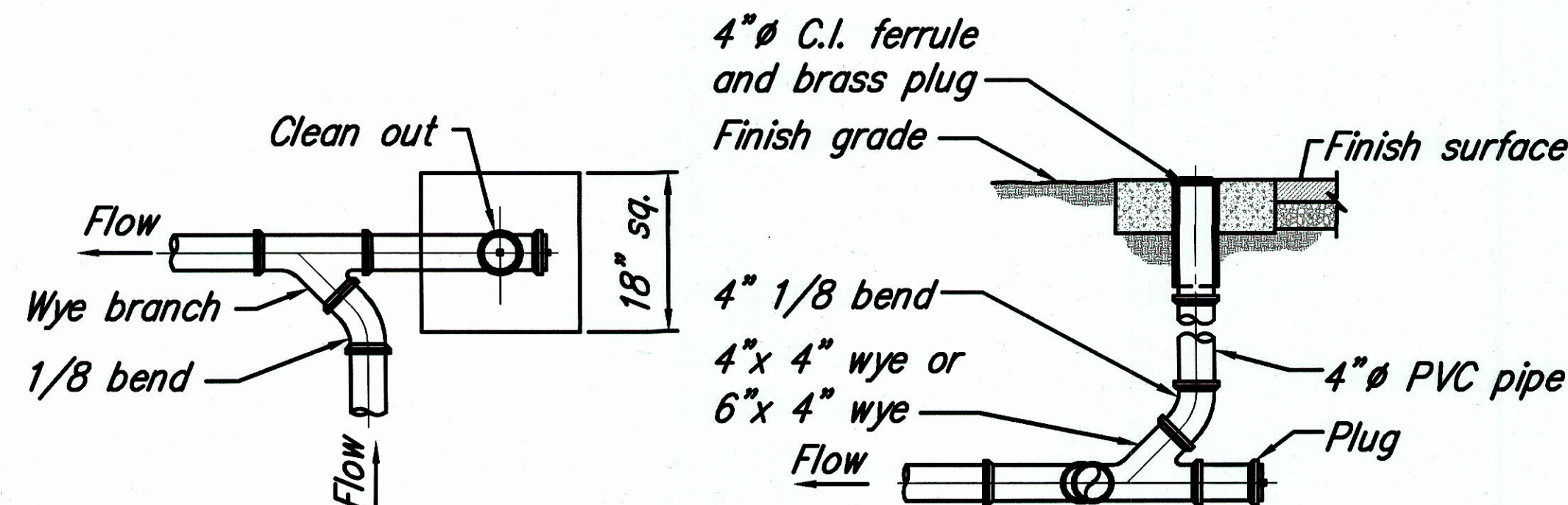
1. The contractor shall notify the Engineer and Department of Health after completion of absorption bed excavation. Sand, gravel, backfill and infiltration units shall not be placed until the soil in the bed area is inspected and necessary testing is completed. (See construction notes)
2. Invert elevations identical for all infiltrator units.
3. All changes shall be approved by the engineer before and during construction.
4. Provide pipe marker at all inspection port and distribution box locations.
5. Permeable substratum shall be defined as #67 rock or as determined by the Engineer.



SECTION "A-A"
Scale: 1/4" = 1'-0"



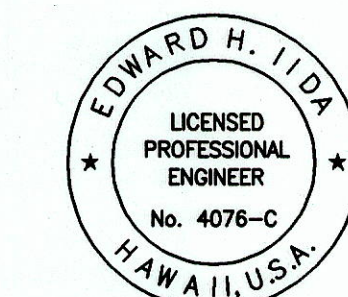
2 INSPECTION PORT DETAIL
SCALE: 1"=1'-0"



PLAN

ELEVATION

4 CLEAN OUT TO GRADE DETAIL
SCALE: 3/4"=1'-0"

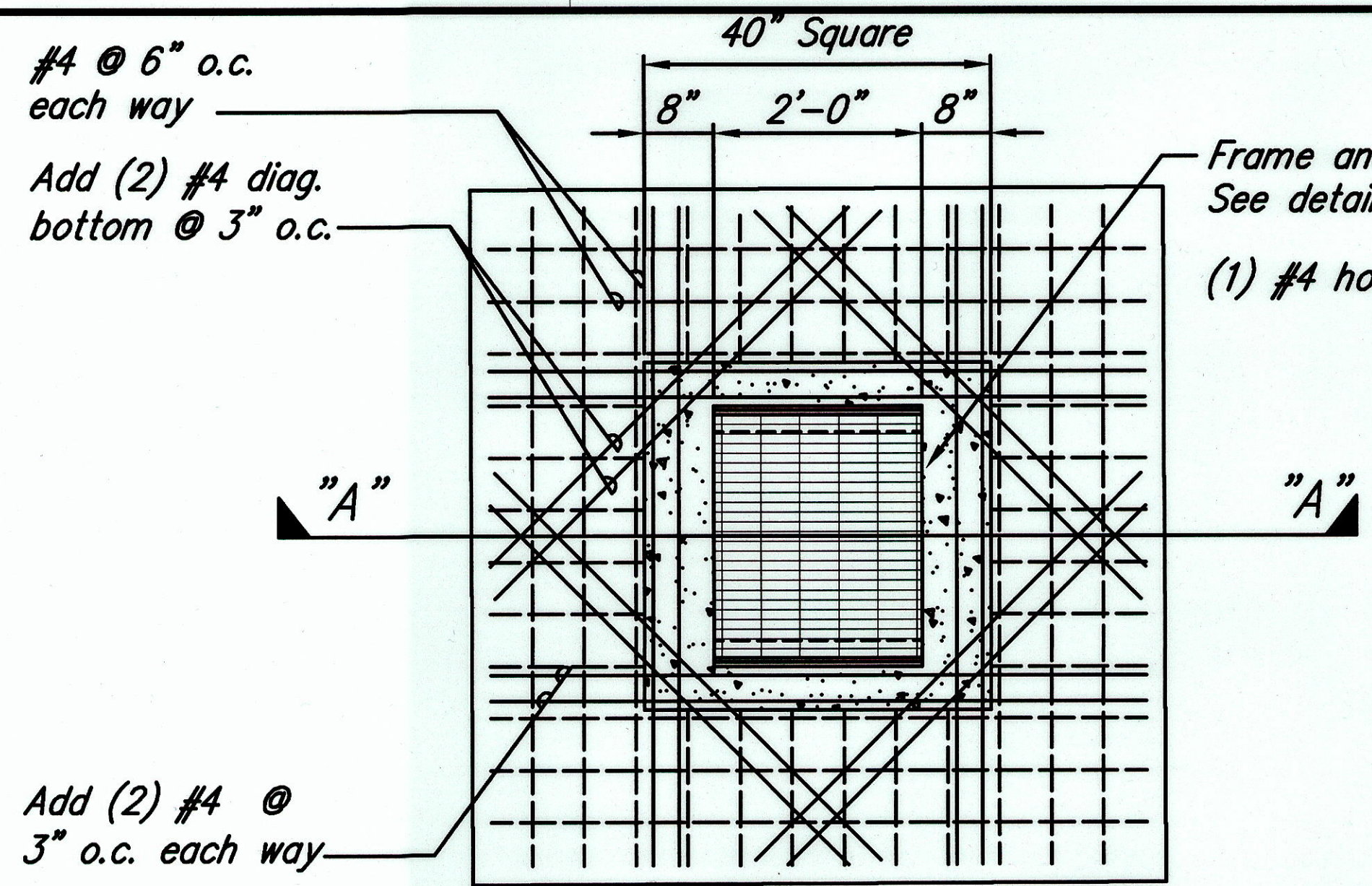


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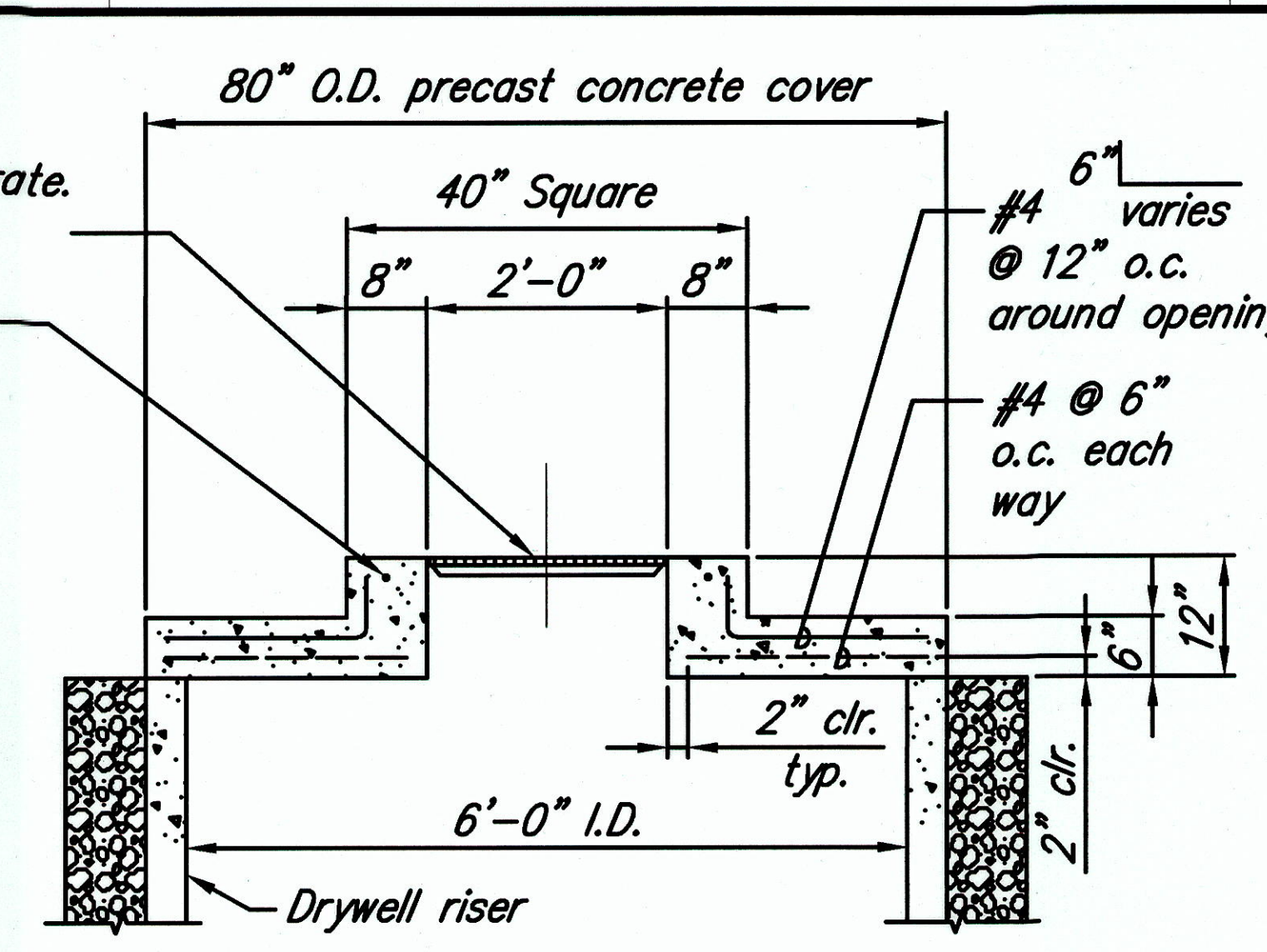
Signature: *Edward H. Iida* 4/30/2004
Date of the license: 4/30/2004
NOTE: Contractor to check and verify dimensions at job before proceeding with work.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
MISCELLANEOUS DETAILS - 2
NAALEHU BASEYARD RENOVATIONS
Project No. HWY-H-03-02M
Scale: As Noted Date: April 2003
SHEET No. C-7 OF C-9 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-03-02M	2003	11	53



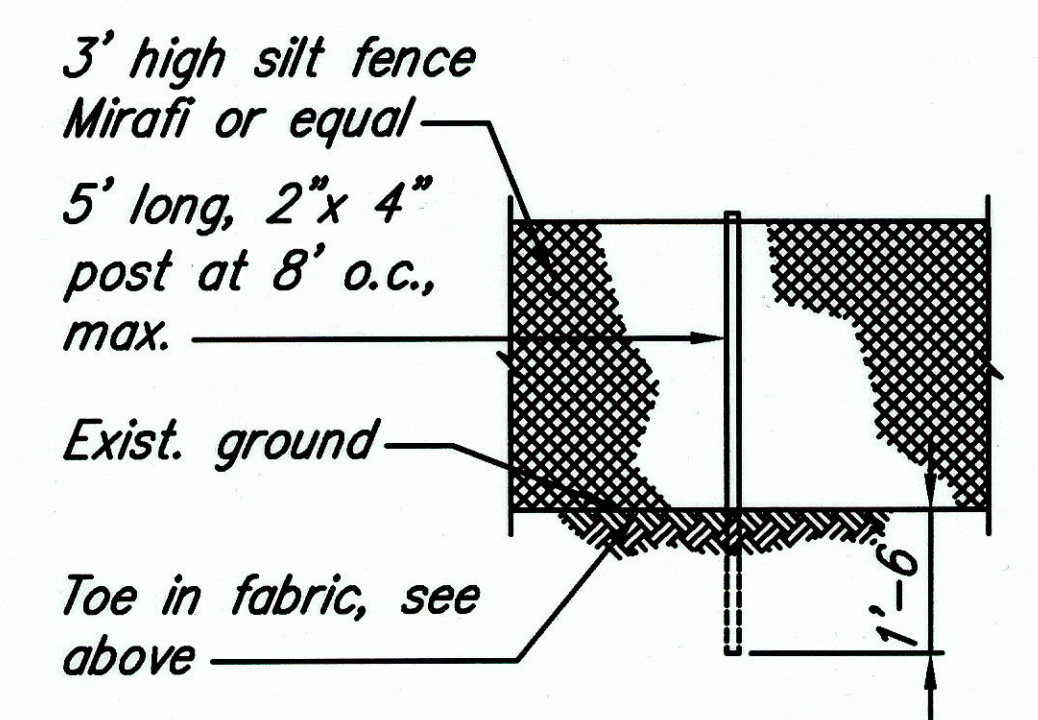
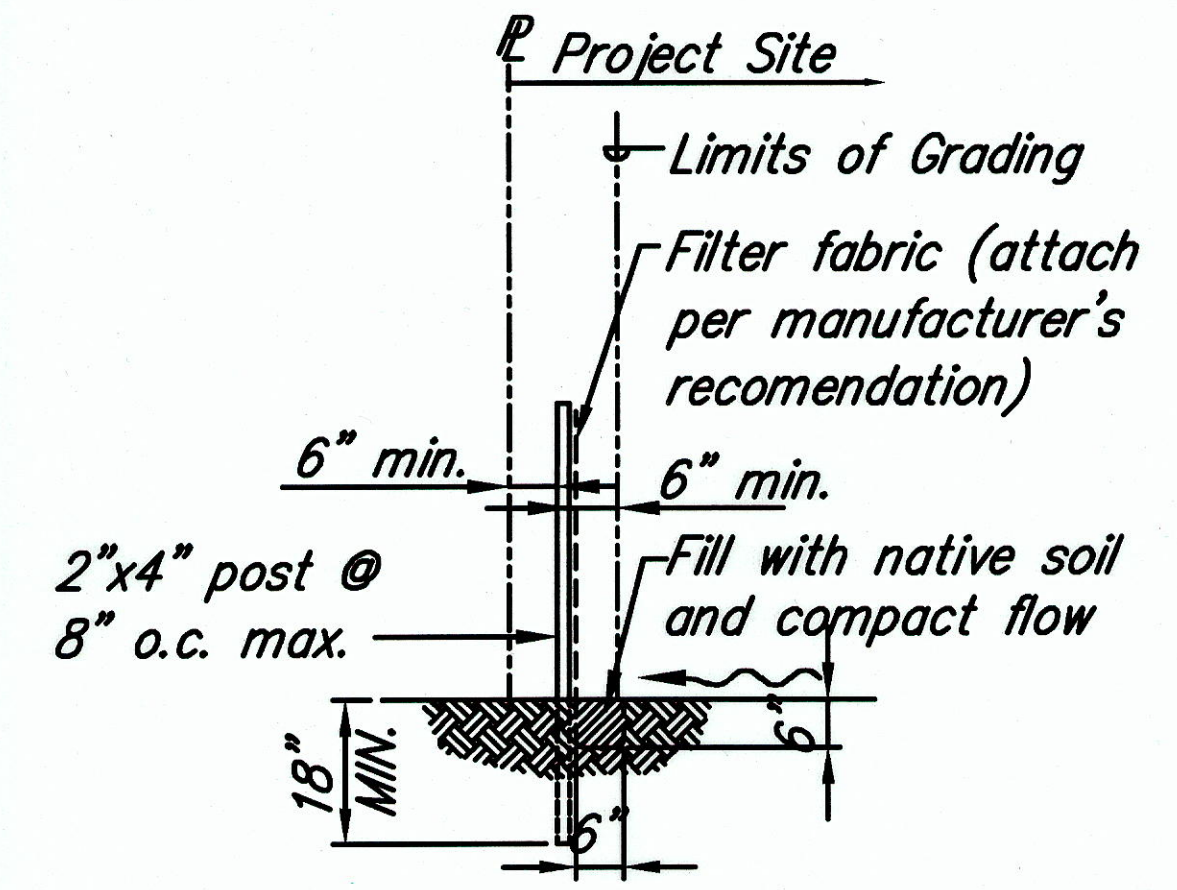
PRECAST CONCRETE
 ① DRY WELL COVER PLAN
 SCALE: 3/4"=1'-0"



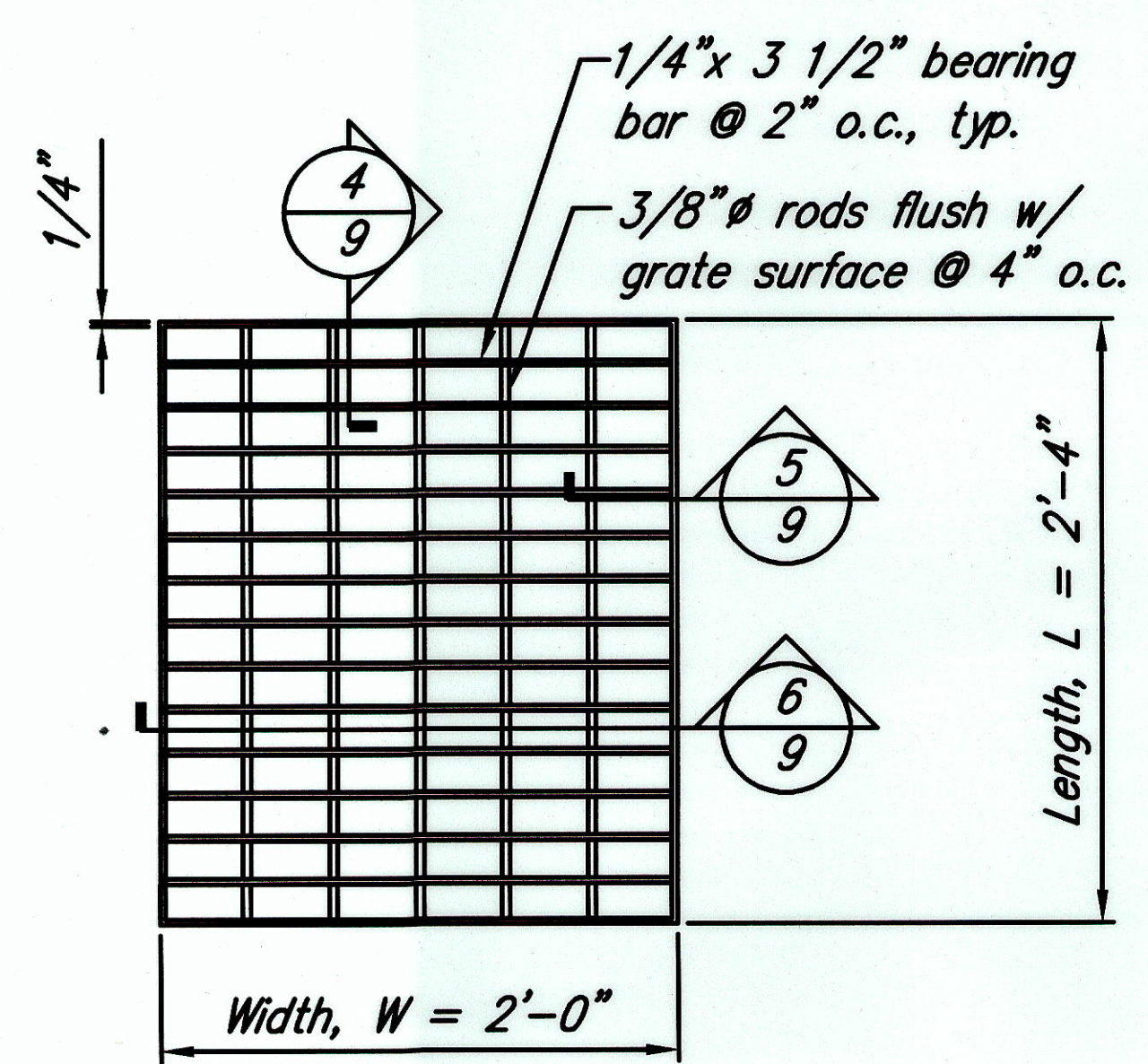
② SECTION "A-A"
 SCALE: 3/4"=1'-0"

- NOTES:**
1. All concrete and reinforced concrete work shall be done in accordance with applicable provisions of the American concrete Institute's Building Code Requirements for reinforced concrete (ACI 301) as specified herein.
 2. Concrete comprehensive strength: 4000 PSI in 28 days.
 3. Cement shall conform to the requirements of the current "Standard Specification for Portland Cement" ASTM designation C-150.
 4. Mixing: Ready mixed ASTM C-94.
 5. Reinforced Steel shall be deformed, Intermediate Grade, conforming to the current "Standard Specifications for Billet-Steel Bars for concrete reinforcements", ASTM A 706, grade 60.

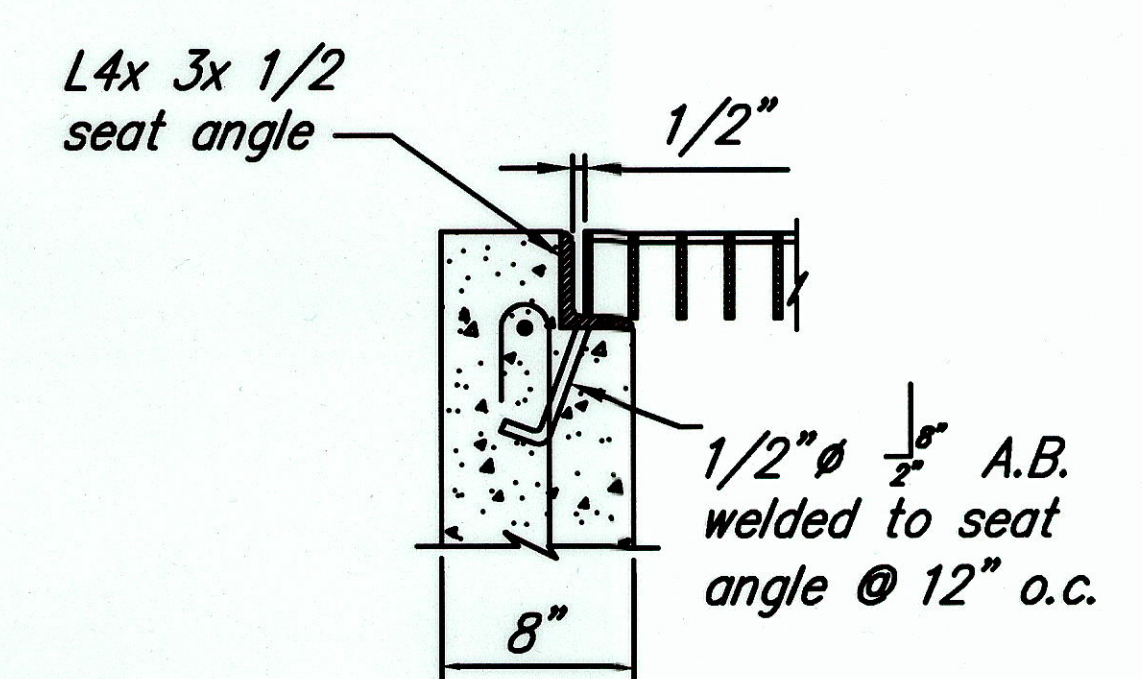
~~Drywell cover details are provided for information only. Contractor to submit manufacturer's shop drawings for review.~~



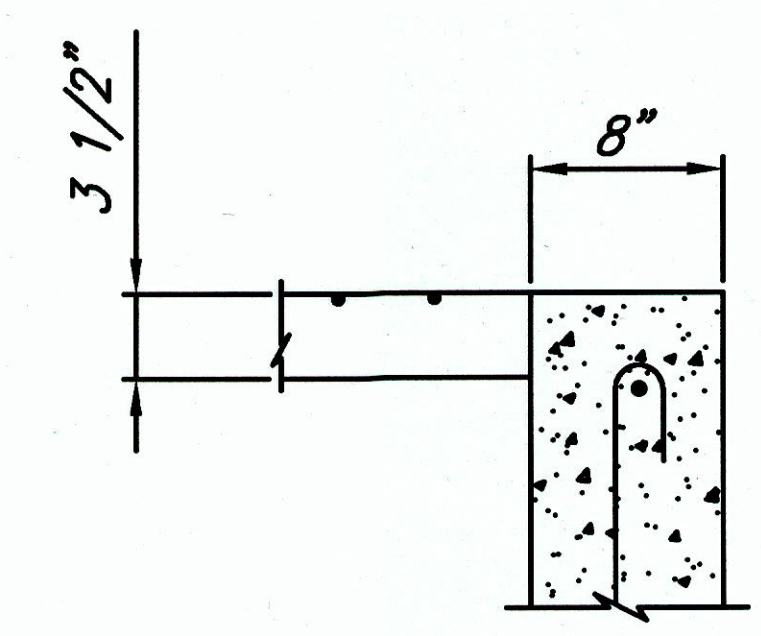
⑧ SILT FENCE DETAIL
 Not to Scale



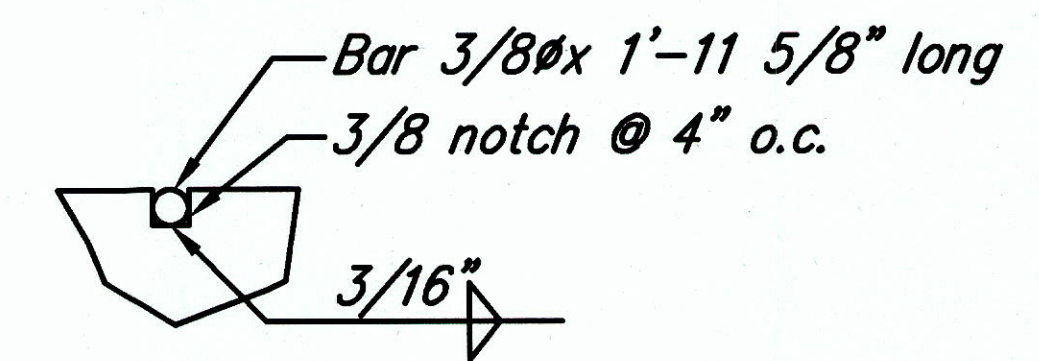
③ GRATE DETAIL
 SCALE: 1-1/2"=1'-0"



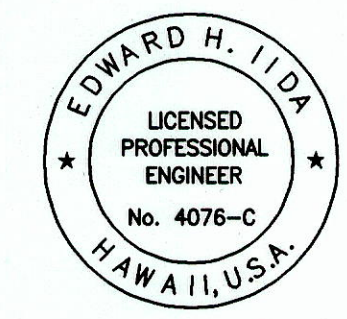
④ SECTION
 SCALE: 1-1/2"=1'-0"



⑤ SECTION
 SCALE: 1-1/2"=1'-0"



⑦ NOTCH DETAIL
 NOT TO SCALE



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 Signature: *Edward H. Iida* 4/30/2004
 expiration date of the license
 NOTE: Contractor to check and verify dimensions of job before proceeding with work.

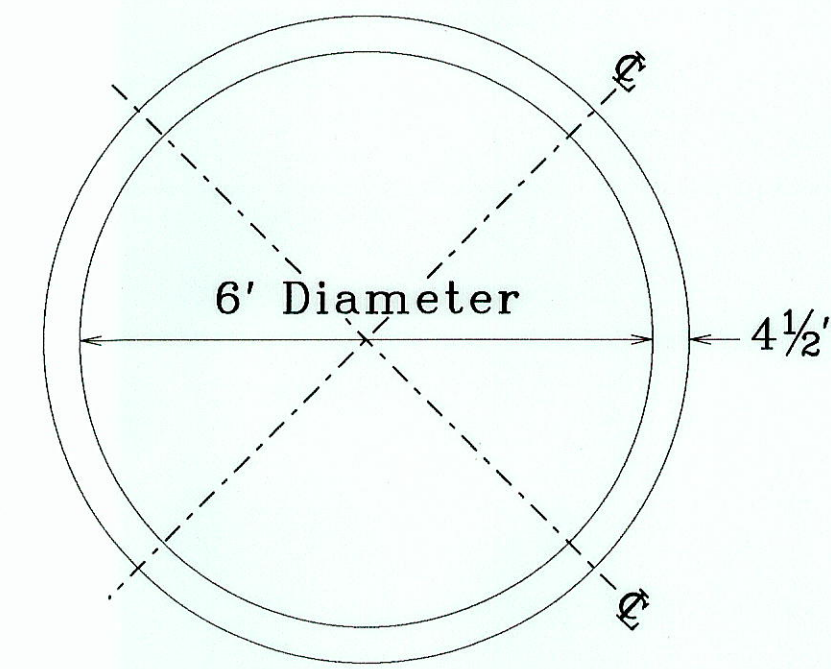
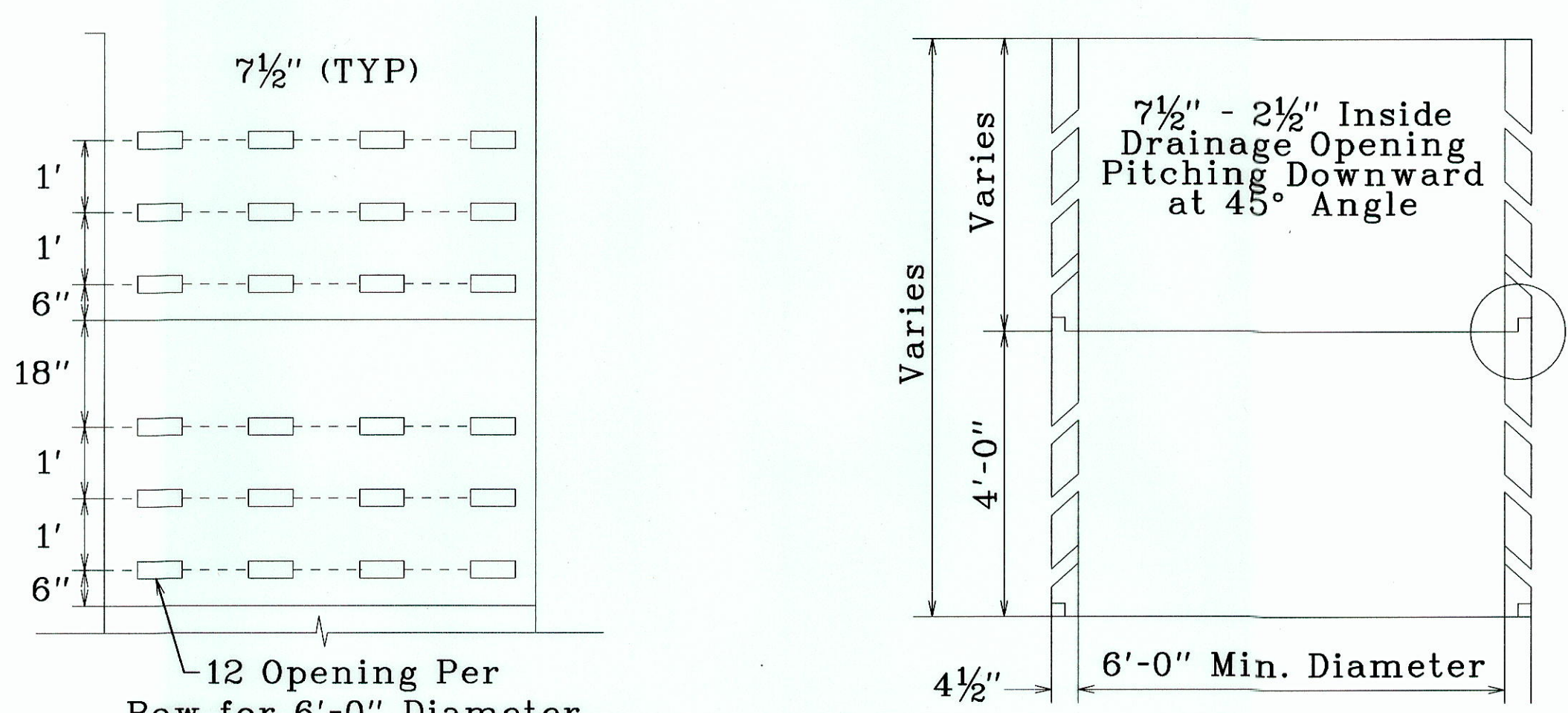
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

MISCELLANEOUS DETAILS - 4

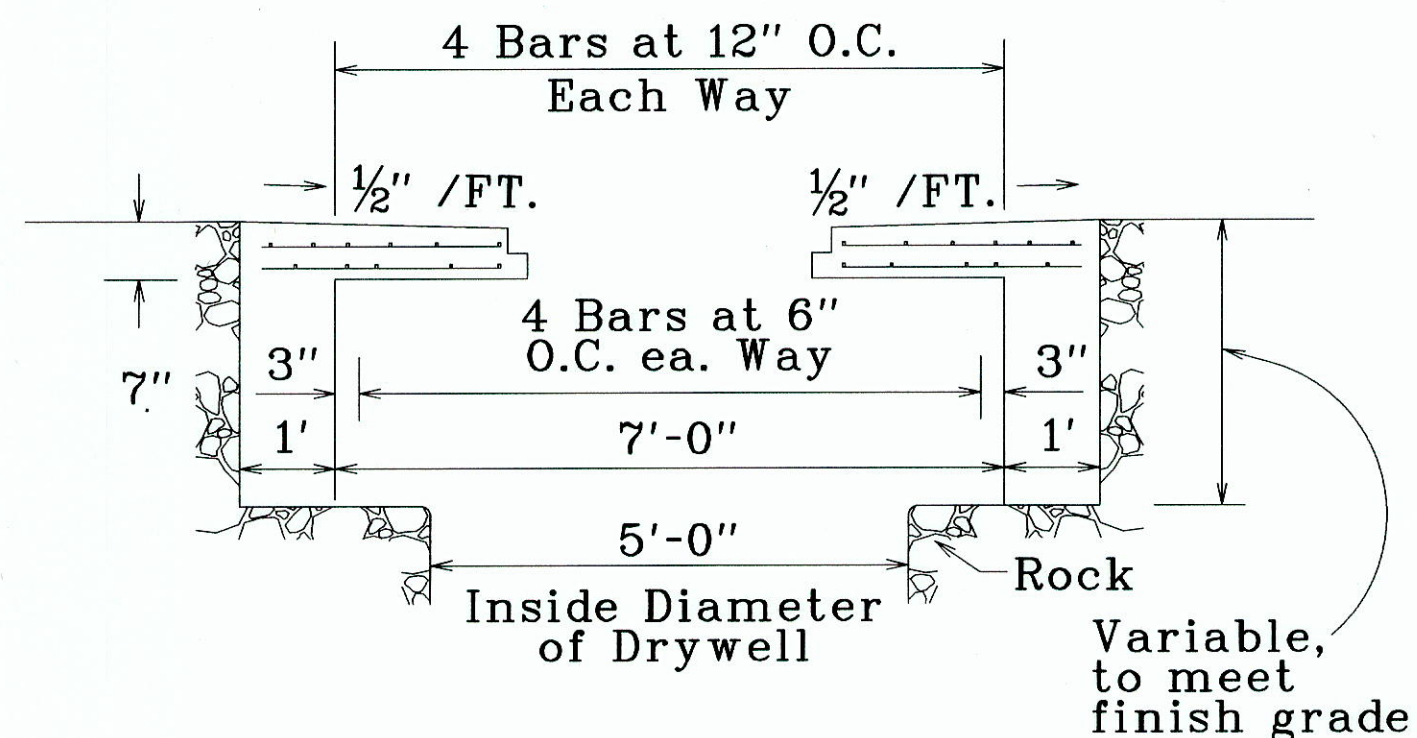
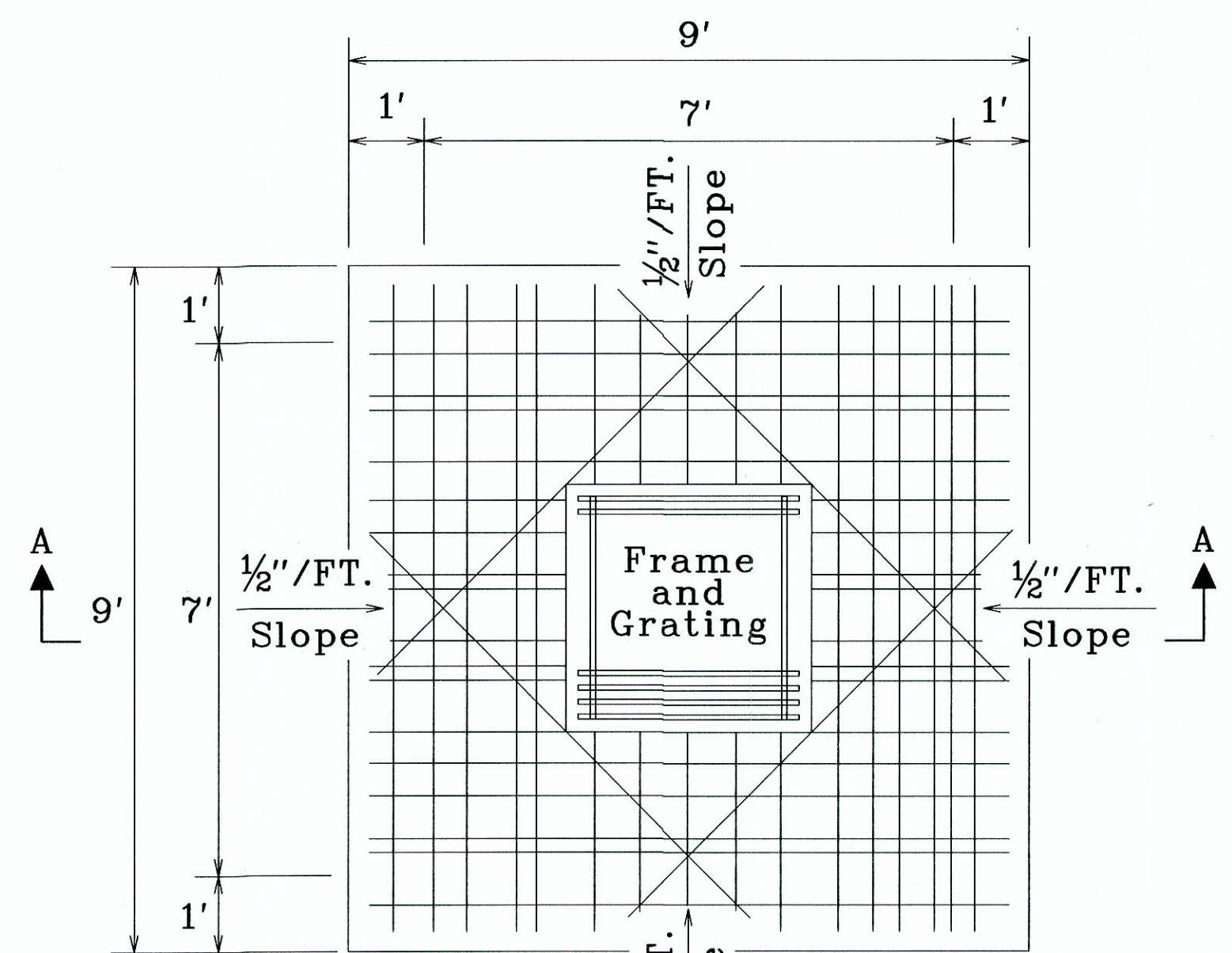
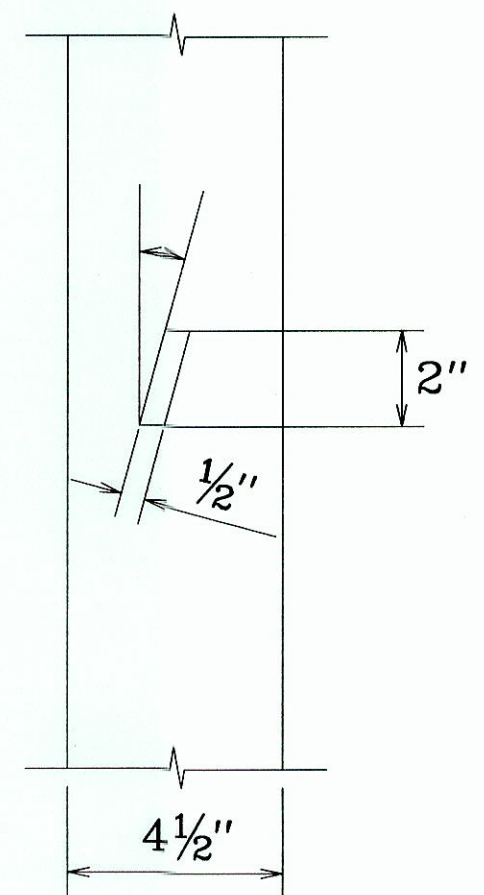
 NAALEHU BASEYARD RENOVATIONS
 Project No. HWY-H-03-02M
 Scale: As Noted Date: April 2003
 SHEET No. C-9 OF C-9 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	CHECKED BY	

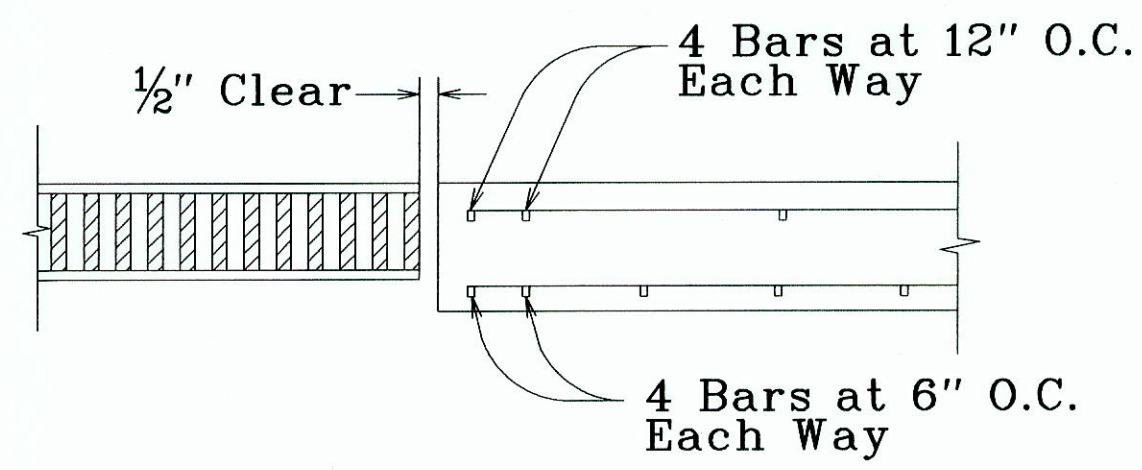
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-03-02M	2003	11 S-1	53



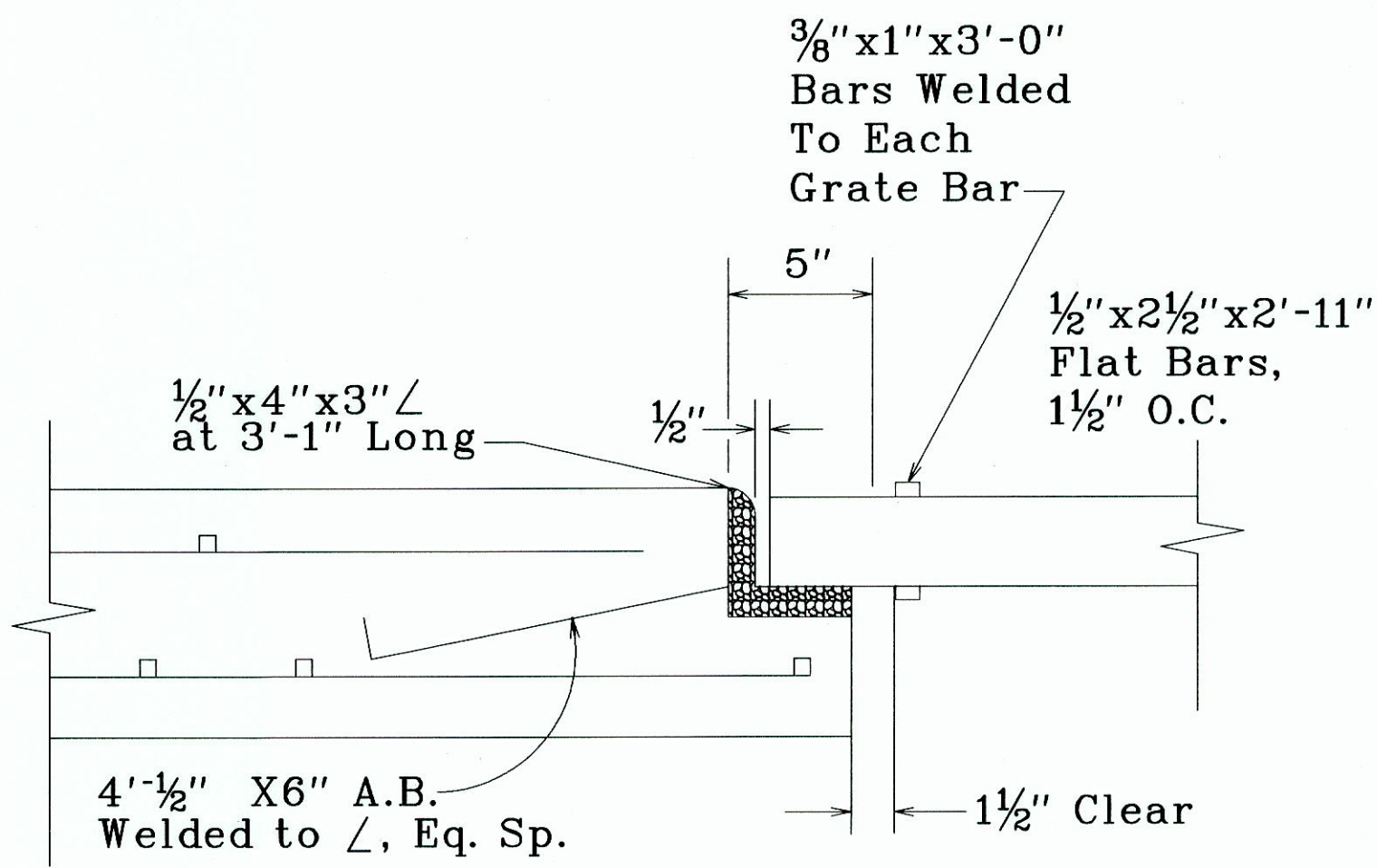
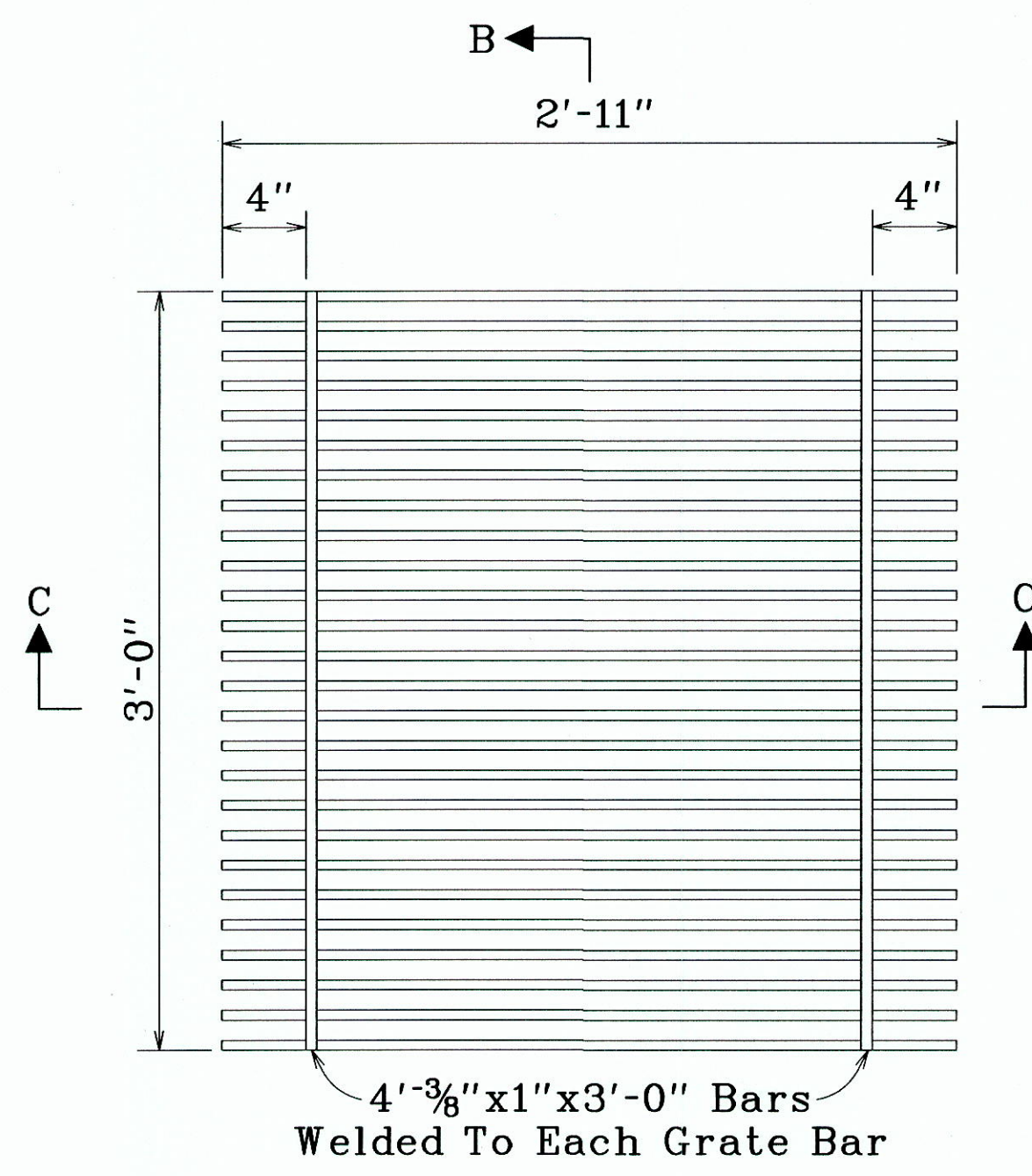
CONCRETE RING DETAIL
N.T.S.



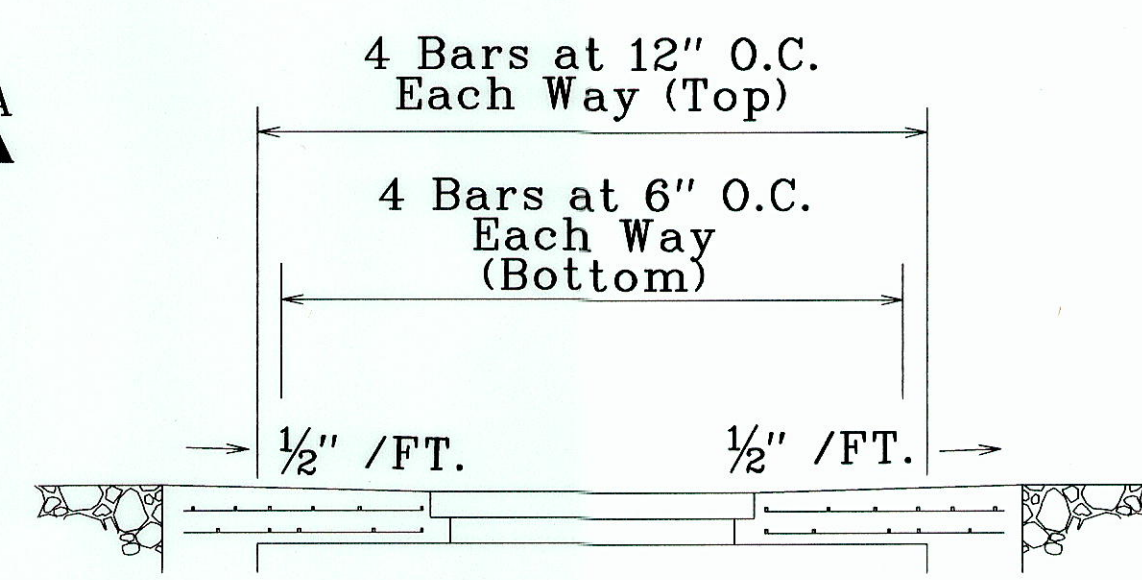
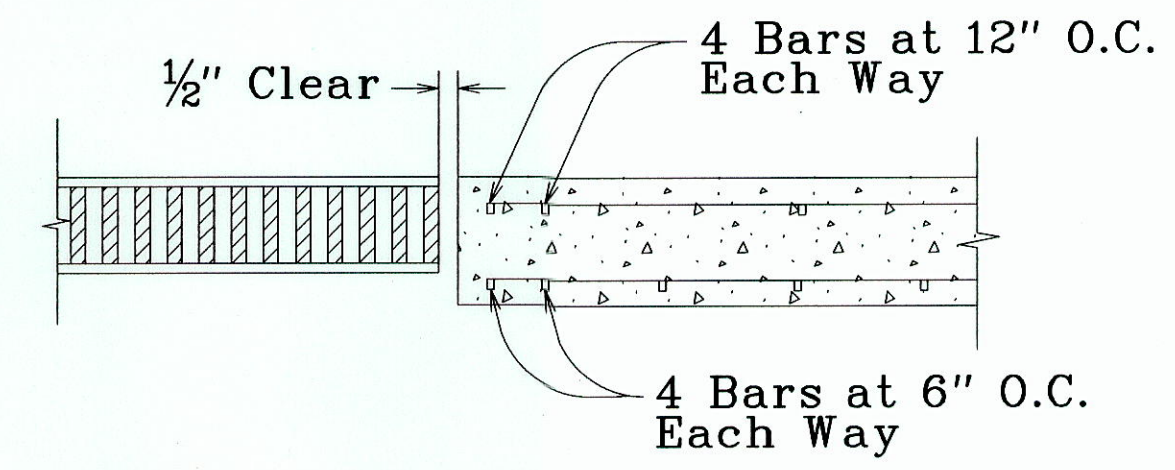
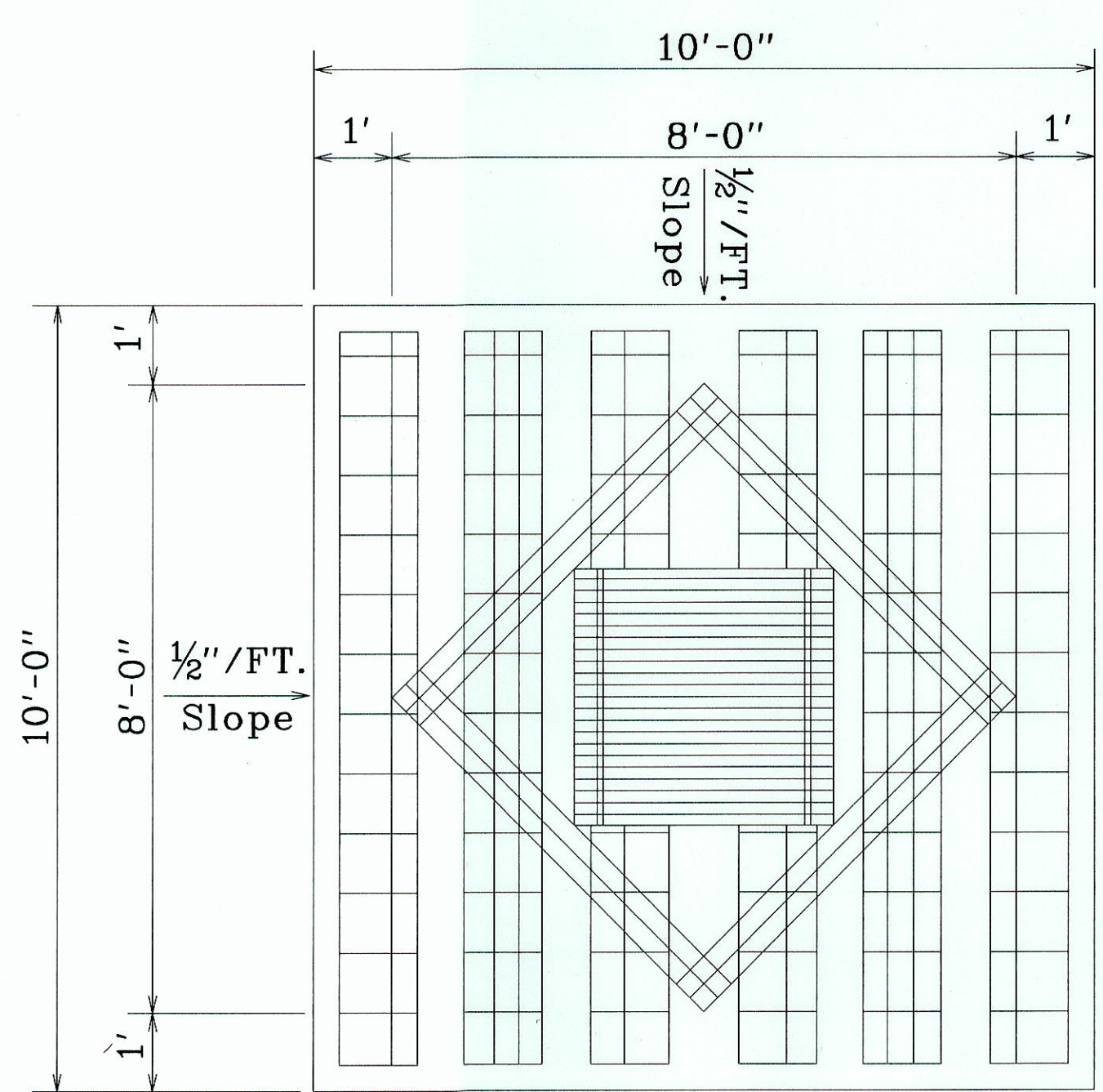
SECTION A-A
1/2" = 1'



SECTION B-B
2" = 1'



SECTION C-C
2" = 1'



N.T.S.

- NOTES:
1. All Weld 5/16".
 2. All ??? Shall Be Structural Grade.
 3. Grates And frame /s Shall Be Hot Dip Galvanized After Fabrication In Accordance With ASTM A 123.
 4. Minimum Depth Shall Be 20'-0" Or As Directed By The Engineer.
 5. RM-1 Delineator Shall Be Placed As Directed By The Engineer.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MISCELLANEOUS DETAILS

NAALEHU BASEYARD RENOVATIONS
Project No. HWY-H-03-02M

Scale: As Noted Date: April, 2003

SHEET No. C-9a OF C-9a SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
CHECKED BY	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	