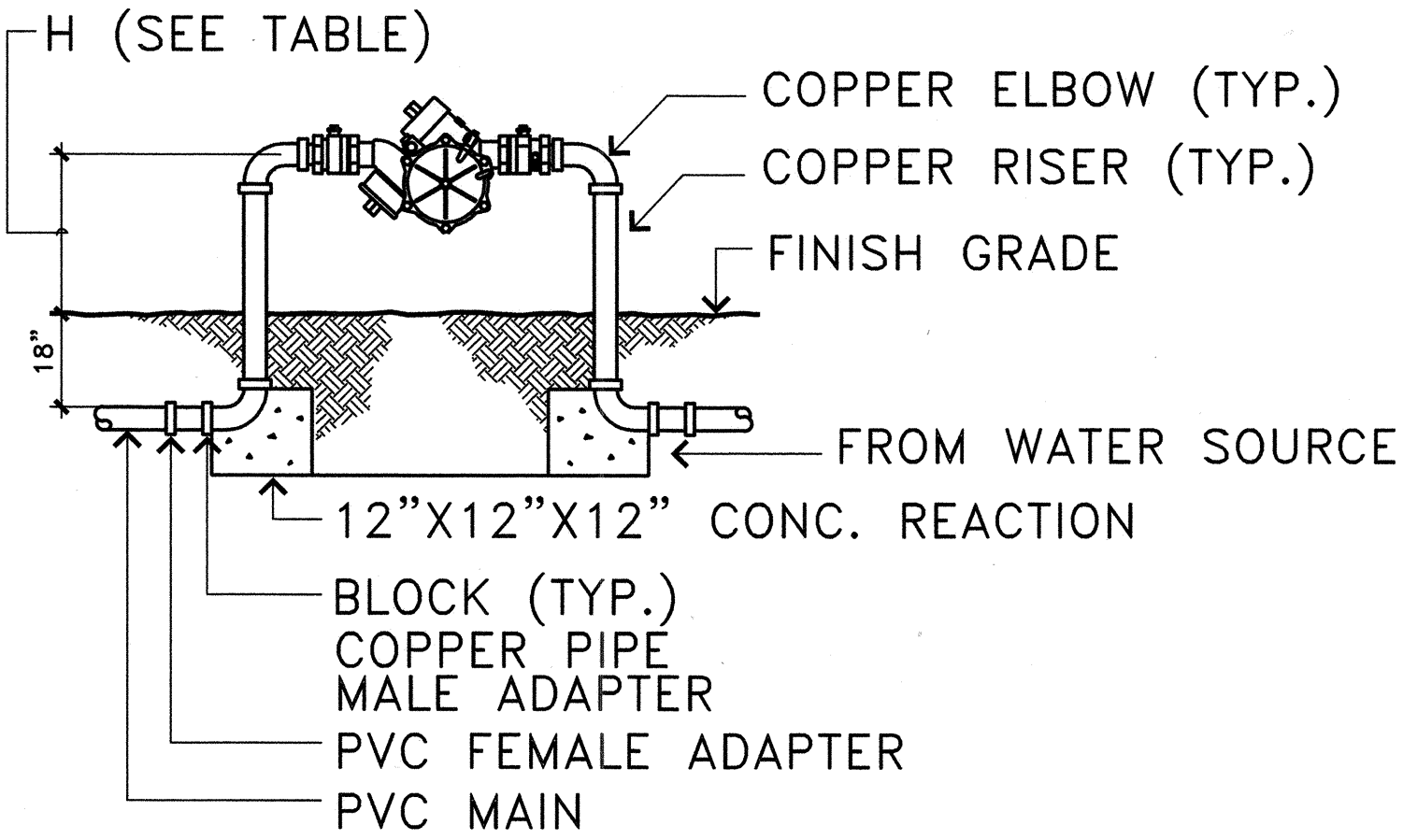
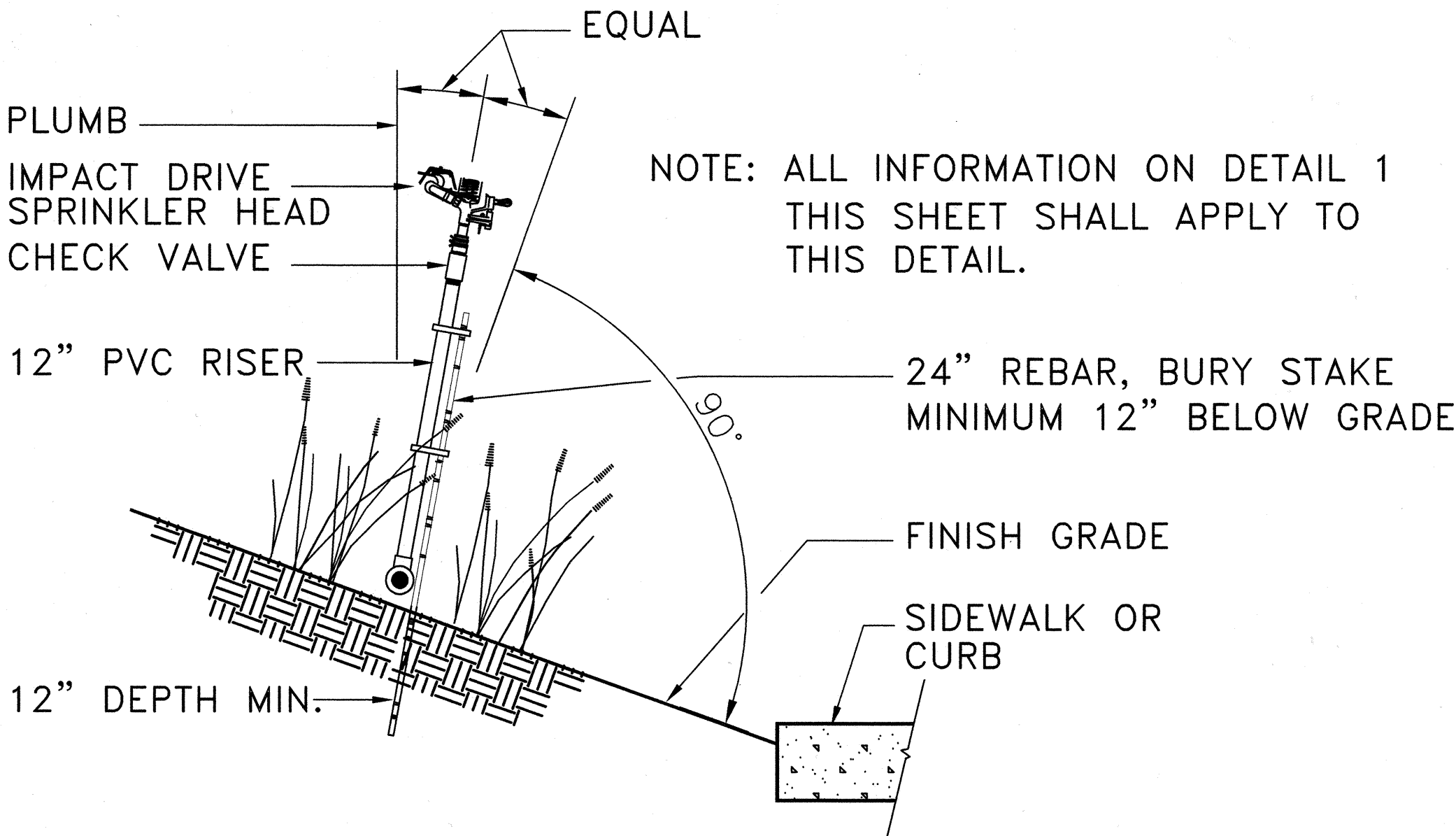


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61C-01-04M	2004	48	91

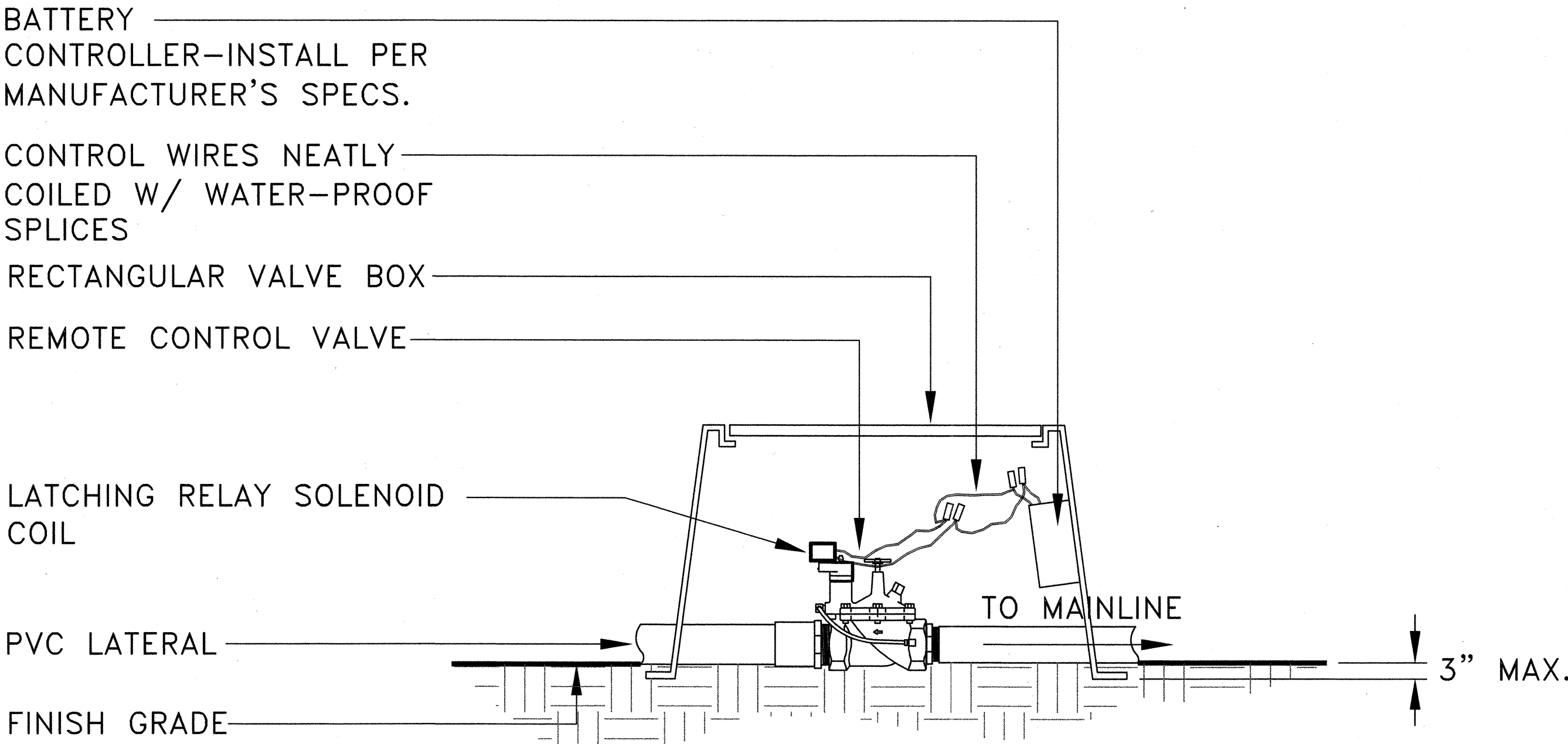


SIZE (INCHES)	H (INCHES)
3/4 TO 1-1/2	18
2 TO 3	24

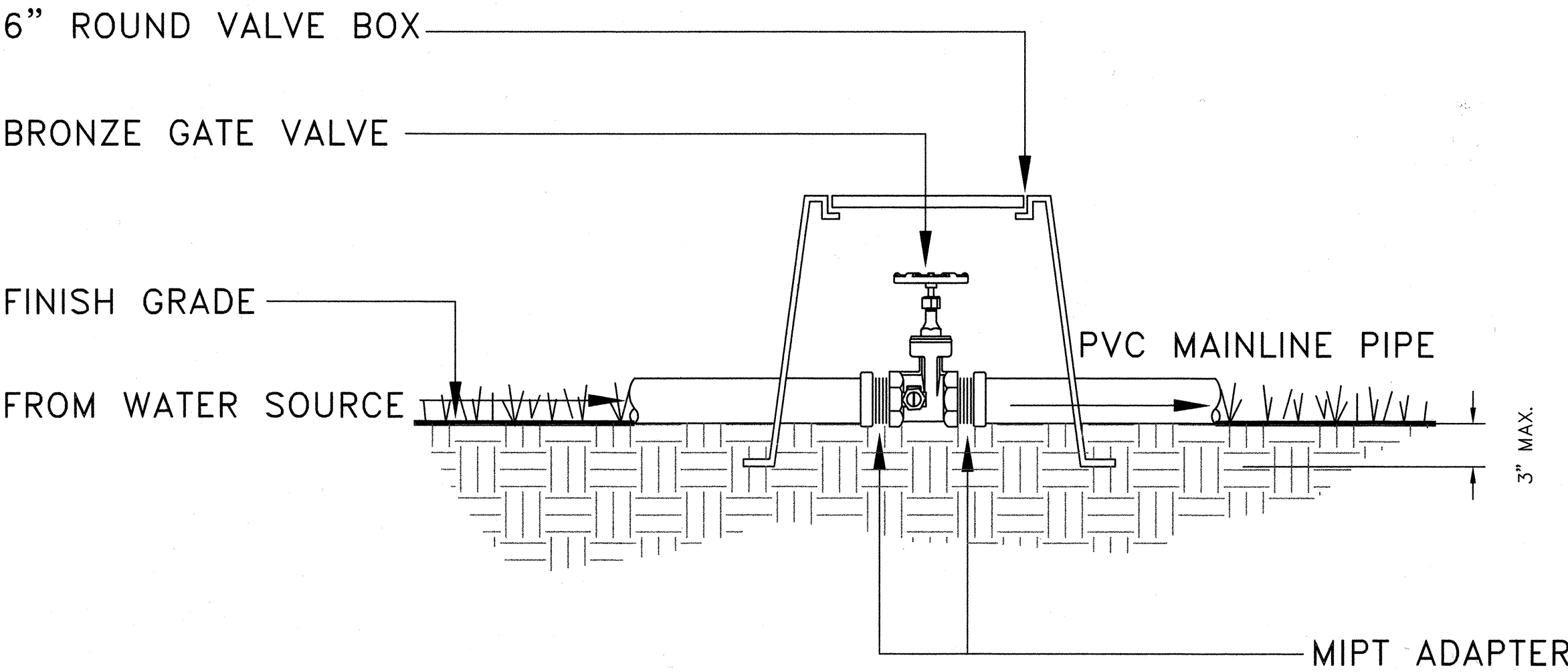
3 REDUCED PRESSURE BACKFLOW PREVENTER
NOT TO SCALE



1 SPRINKLER HEAD ON SLOPE
NOT TO SCALE



4 REMOTE CONTROL VALVE W/ BATTERY CONTROLLER
NOT TO SCALE



2 GATE VALVE
NOT TO SCALE

CADD REF: IRR-204

ORIGINAL PLAN
 SURVEY PLOTTED BY
 DRAWN BY
 DESIGNED BY
 CHECKED BY
 No.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

IRRIGATION DETAILS
KALANIANA'OLE HIGHWAY
EMERGENCY LANDSLIDE REPAIRS AT CASTLE JUNCTION
PROJECT NO. 61C-01-04M

Scale: NTS Date: Sept. 26, 2003

SHEET No. I-3 OF 5 SHEETS

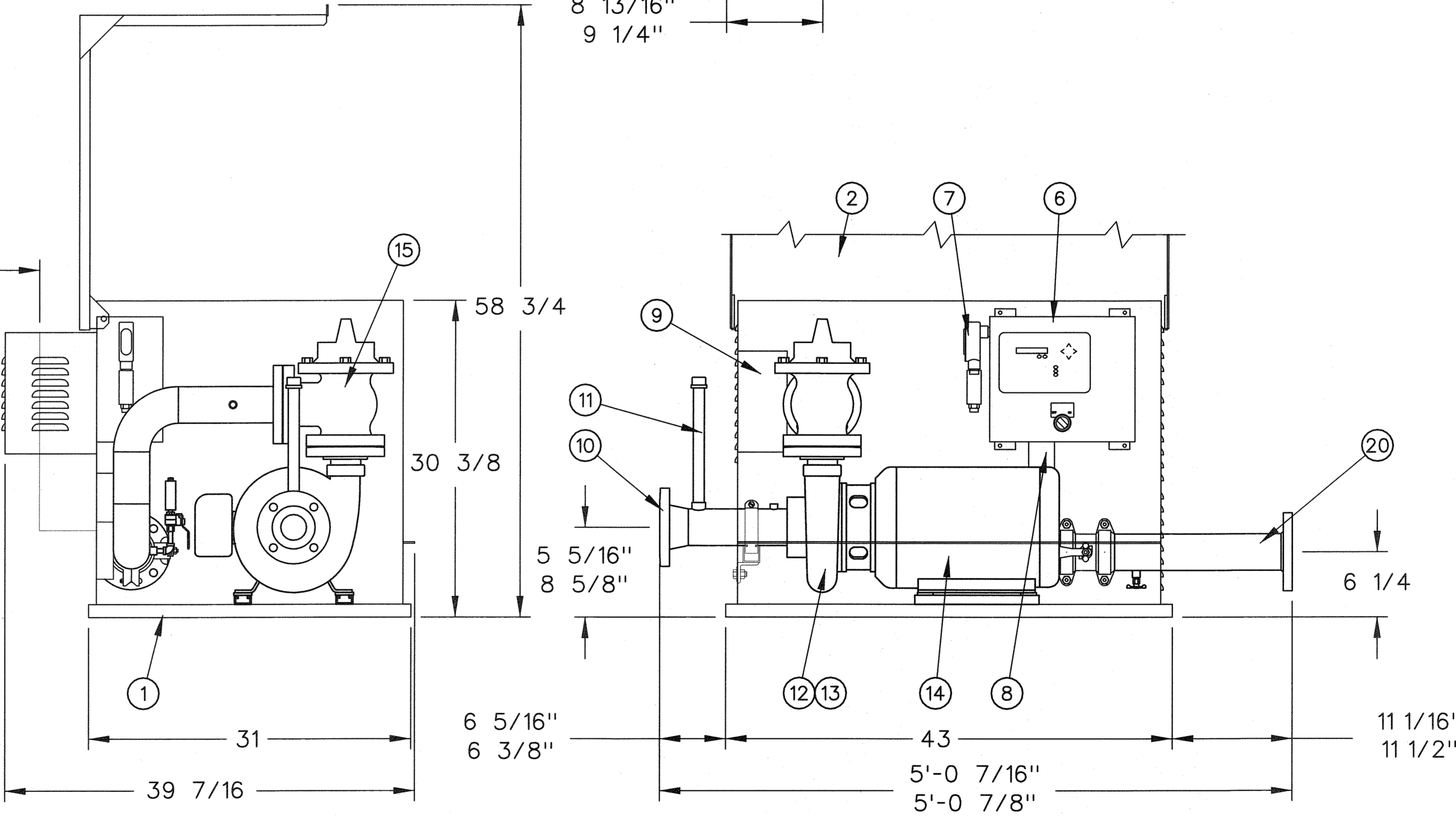
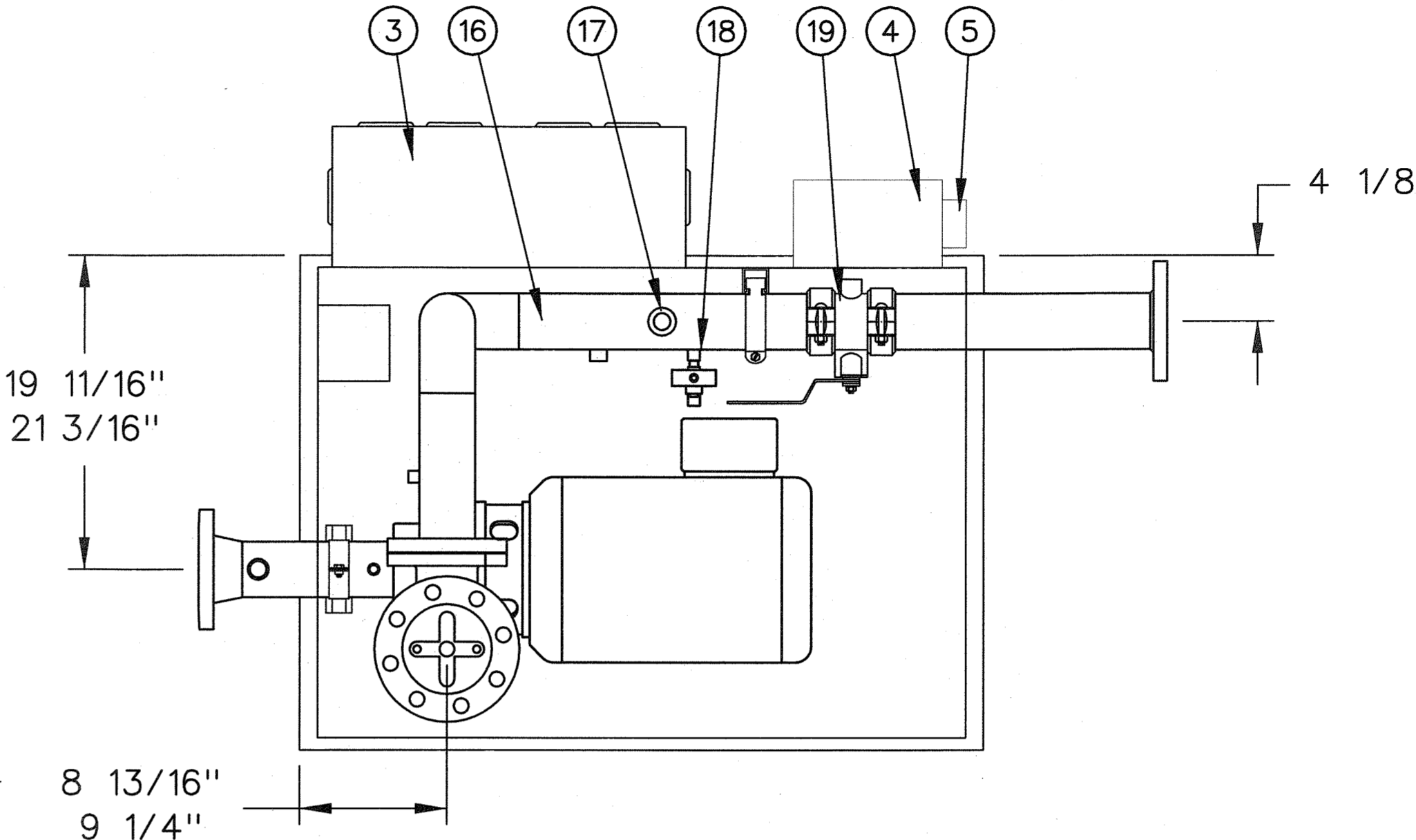
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61C-01-04#	2004	49	91

02-04

	DESCRIPTION		QTY
1	STATION BASE, SMALL	ALUMINUM	1
2	ENCLOSURE, SMALL	ALUMINUM	1
3	FAN, EXHAUST		1
4	DISCONNECT, FUSIBLE		1
5	SURGE ARRESTOR		1
6	PANEL, OASIS CONTROL		1
7	TRANSDUCER, PRESSURE		1
8	THERMOSTAT, FAN		1
9	TRANSFORMER		1
10	INLET, 3" FLANGED		1
11	TUBE, 3/4" FILL		1
12	PUMP		1
13	SENSOR, THERMAL		1
14	MOTOR		1
15	VALVE, 3" PRESSURE CONTROL		1
16	MANIFOLD, 3" DISCHARGE		1
17	SWITCH, FLOW		1
18	GAUGE, DISCHARGE PRESSURE		1
19	VALVE, 3" ISO		1
20	DISCHARGE, 3" FLANGED		1

WEIGHT:
660-810 LBS.

3'-6"
NOTE 1



NOTES:

- 1.) MINIMUM CLEARANCE FROM ANY OBSTRUCTION AS REQUIRED BY NATIONAL ELECTRIC CODE
- 2.) PUMP DRAWINGS ARE FOR PRICING ONLY. CONTRACTOR SHALL OBTAIN SHOP DRAWINGS FROM FACTORY AND HAVE THEM APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION. ADJUST AS NEEDED BASED UPON ACTUAL APPROVED FACTORY SHOP DRAWINGS.
- 3.) CONTRACTOR SHALL INSTALL CONCRETE PAD FOR MOUNTING BOOSTER PUMP AS RECOMMENDED BY THE MANUFACTURER.

1 BOOSTER PUMP DETAIL
NOT TO SCALE

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
DATE	

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

Date	Revision
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	IRRIGATION DETAILS
	KALANIANA'OLE HIGHWAY
	EMERGENCY LANDSLIDE REPAIRS AT CASTLE JUNCTION
	PROJECT NO. 61C-01-04# 02-04
Scale: NTS	Date: Sept. 26, 2003

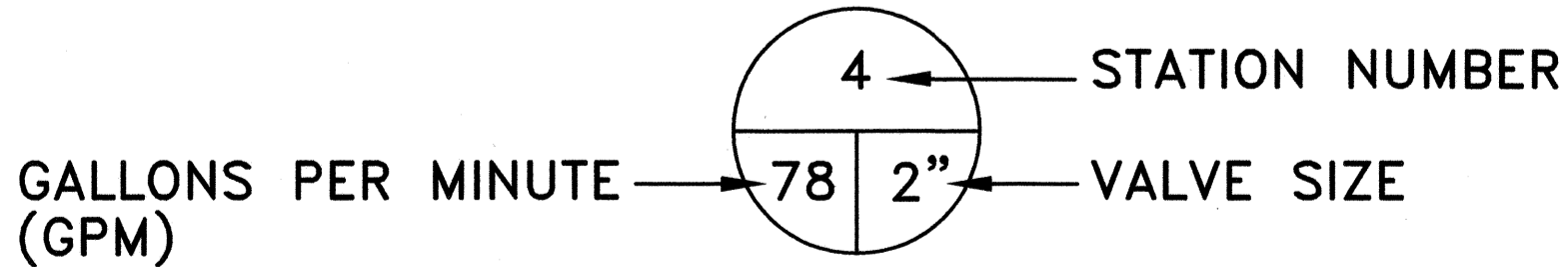
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61C-01-04M	2004	50	91

IRRIGATION HEAD SCHEDULE

HEAD SYMBOL	ANGLE	MANUFACTURER/ CATALOG NUMBER	G.P.M.	P.S.I.	RAD.	DETAIL
IMPACT HEAD ON RISER		RAINBIRD IMPACT SPRINKLER (OR APPROVED EQUAL)				
	ADJ	65PJADJ-TNT	12.9	50	57'	

IRRIGATION MATERIAL SCHEDULE

SYMBOL	DESCRIPTION	MANUFACTURER/ CATALOG NUMBER
	REDUCED PRESSURE BACKFLOW PREVENTER	FEBCO 860 SERIES OR BWS APPROVED EQUAL, SIZE AS NOTED
	REMOTE CONTROL VALVE	RAINBIRD PEB SERIES OR APPROVED EQUAL, SIZE AS NOTED
	BATTERY OPERATED AUTOMATIC CONTROLLER	DIG ACTUATOR / CONTROLLER, OR APPROVED EQUAL, SIZE AS NOTED
	SOLENOID ADAPTER	RAINBIRD LATCHING SOLENOID APPROVED EQUAL, SIZE AS NOTED
	GATE VALVE	NIBCO T-113, OR APPROVED EQUAL SIZE AS NOTED
	BOOSTER PUMP 80 GPM @ 50 PSI BOOST	FLOBOY "S" BOOSTER PUMPING SYSTEM MODEL SFBF-S3H2A-21RON0/40 OR APPROVED EQUAL
----	IRRIGATION MAINLINE	2-1/2" SCHEDULE 40 PVC, OR SIZE AS NOTED
_____	IRRIGATION LATERAL	CLASS 200 PVC, SIZE AS NOTED



IRRIGATION NOTES

- 1.THIS PLAN IS DIAGRAMMATIC. IRRIGATION SYSTEM IS SUBJECT TO FIELD ADJUSTMENTS DUE TO UNANTICIPATED SITE CONDITIONS. THE IRRIGATION SYSTEM IS INTENDED TO BE TEMPORARY AND SHALL BE INSTALLED ABOVE GRADE. NO TRENCHING OR BURYING OF LINES SHALL OCCUR. LOCATE ALL MAINLINES, LATERALS, VALVES AND SPRINKLER HEADS WITHIN PLANTING AREAS, UNLESS OTHERWISE NOTED. AVOID ANY CONFLICT BETWEEN UTILITIES, STRUCTURES AND PLANTINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES.
- 2.THIS IRRIGATION SYSTEM WAS DESIGNED WITH A MINIMUM STATIC WATER PRESSURE OF 64 PSI AT THE POINT OF CONNECTION WITH A 50 PSI WATER PRESSURE BOOST AT THE BOOSTER PUMP. NOTIFY THE ENGINEER, IF WATER PRESSURE IS LESS THAN 114 PSI OR GREATER THAN 120 PSI DOWNSTREAM OF THE BOOSTER PUMP.
- 3.CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS AND OBSERVE ALL LOCAL CODES AND REGULATIONS. THE CONTRACTOR SHALL CONFIRM ALL SITE DIMENSIONS AND CONDITIONS, AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
- 4.CONTRACTOR SHALL INSTALL IRRIGATION LINES, WIRES, VALVES AND HEADS PER SPECIFICATIONS. EXISTING GATE VALVES, POINT OF CONNECTION, ETC. ARE DERIVED FROM THE BEST AVAILABLE INFORMATIN AND ON SITE INSPECTIONS. THE CONTRACTOR SHALL VERIFY THOSE POINTS OF CONNECTION NOTED AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
- 5.LOCATE AND INSTALL ALL SPRINKLER HEADS AS DETAILED UNLESS NOTED OTHERWISE. ADJUST ALL SPRINKLER HEADS AND FLOW CONTROL FOR MAXIMUM COVERAGE AND MINIMUM OVERTHROW AND MISTING. OPERATE ONLY ONE VALVE AT A TIME PER CONTROLLER.

BWS FLOW REQUIREMENT CHART

Premise ID#:			
Meter Number (M/N):			
Description	fu	gpm	gpd
A.Proposed Domestic: (All fixtures being installed)	none	none	21,850
B.Proposed Irrigation:	140	78	21,850
C.Other	none	none	none
D.Total Proposed:	140	78	21,850
Demolition: (All fixtures being removed)	none	none	none
F.net Change: (Subtract "E" from "D" above)	140	78	21,850
G.Existing to Remain: (Other fixtures serviced by this E.meter but not affected by project)	none	none	none
H.GRAND TOTAL (Add "D" and "G" above)	140	78	21,850

NOTE:
MAXIMUM GPM IS 78 GPM DURING
NON-PEAK HOURS.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

IRRIGATION LEGEND AND NOTES

KALANIANA'OLE HIGHWAY

EMERGENCY LANDSLIDE REPAIRS AT CASTLE JUNCTION

PROJECT NO. 61C-01-04M

Scale: NTS Date: Sept. 26, 2003

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