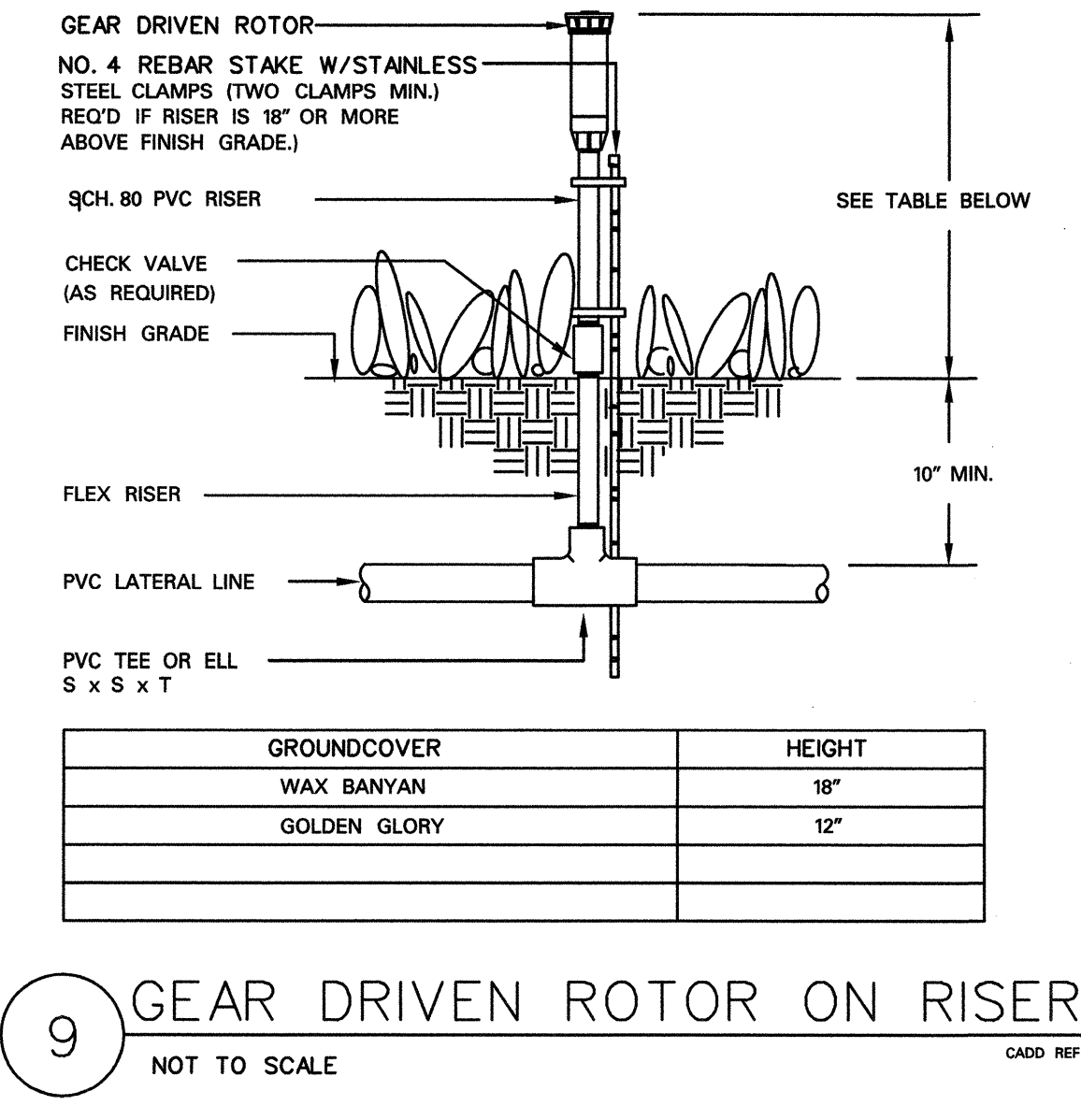
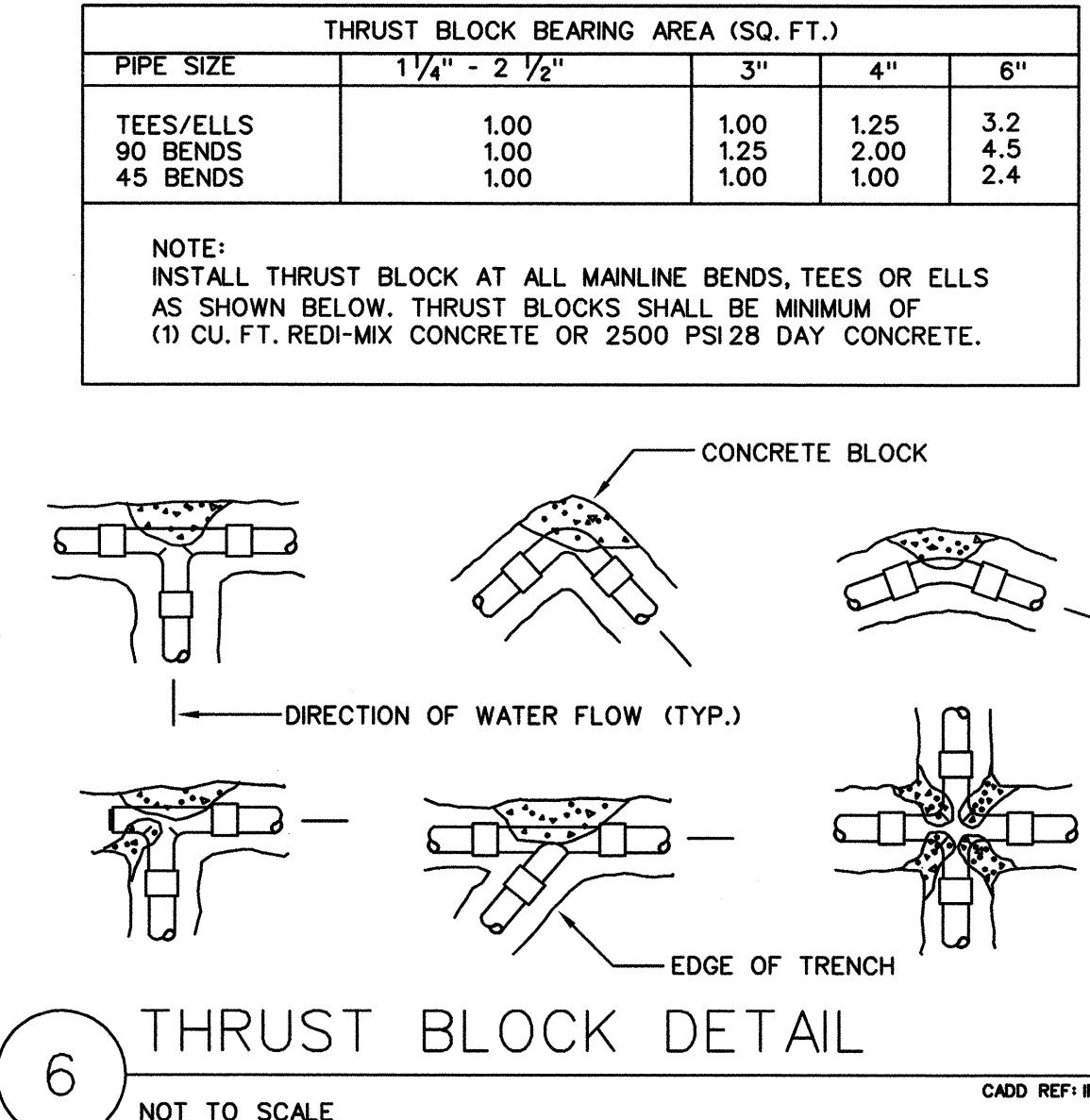
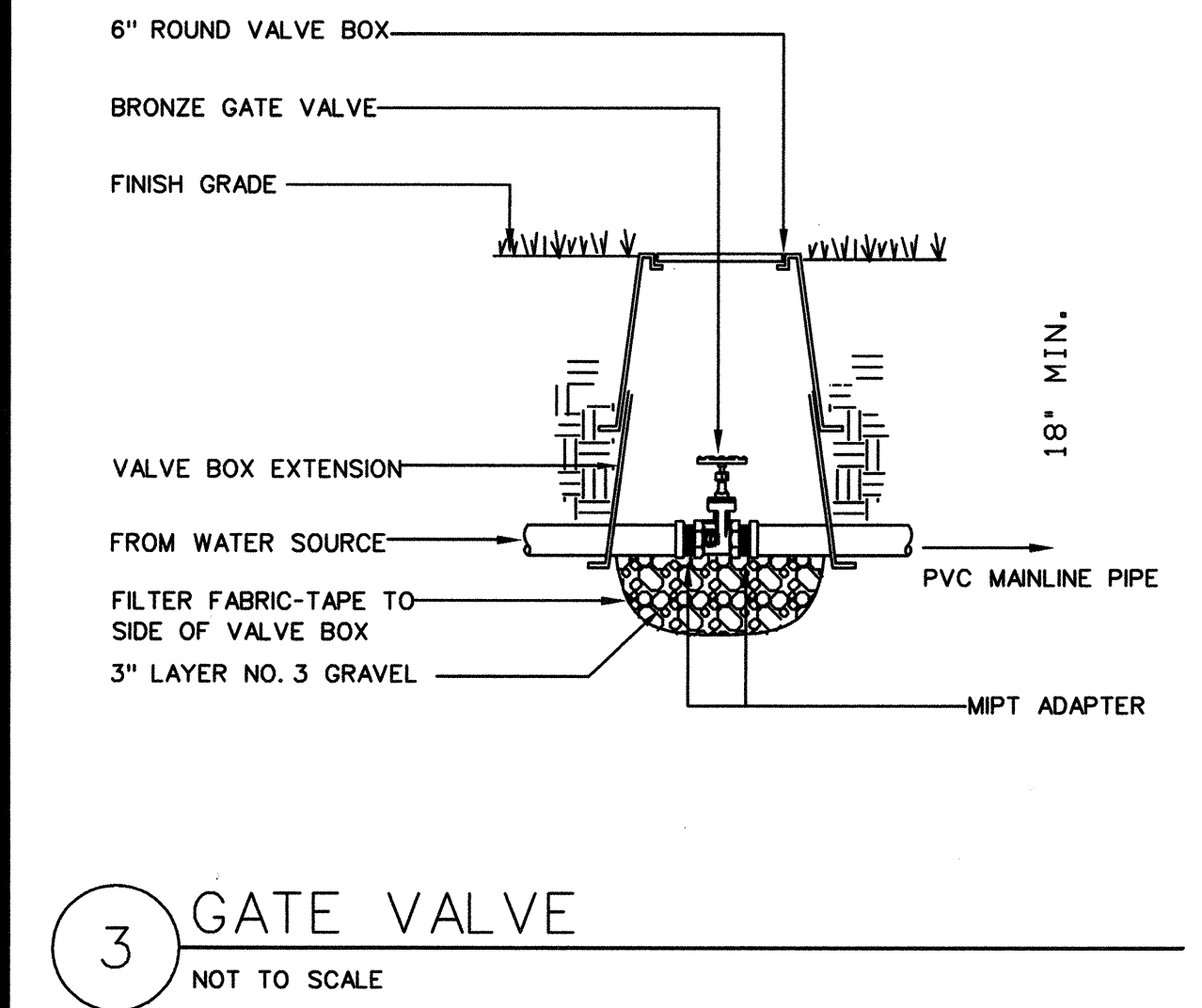
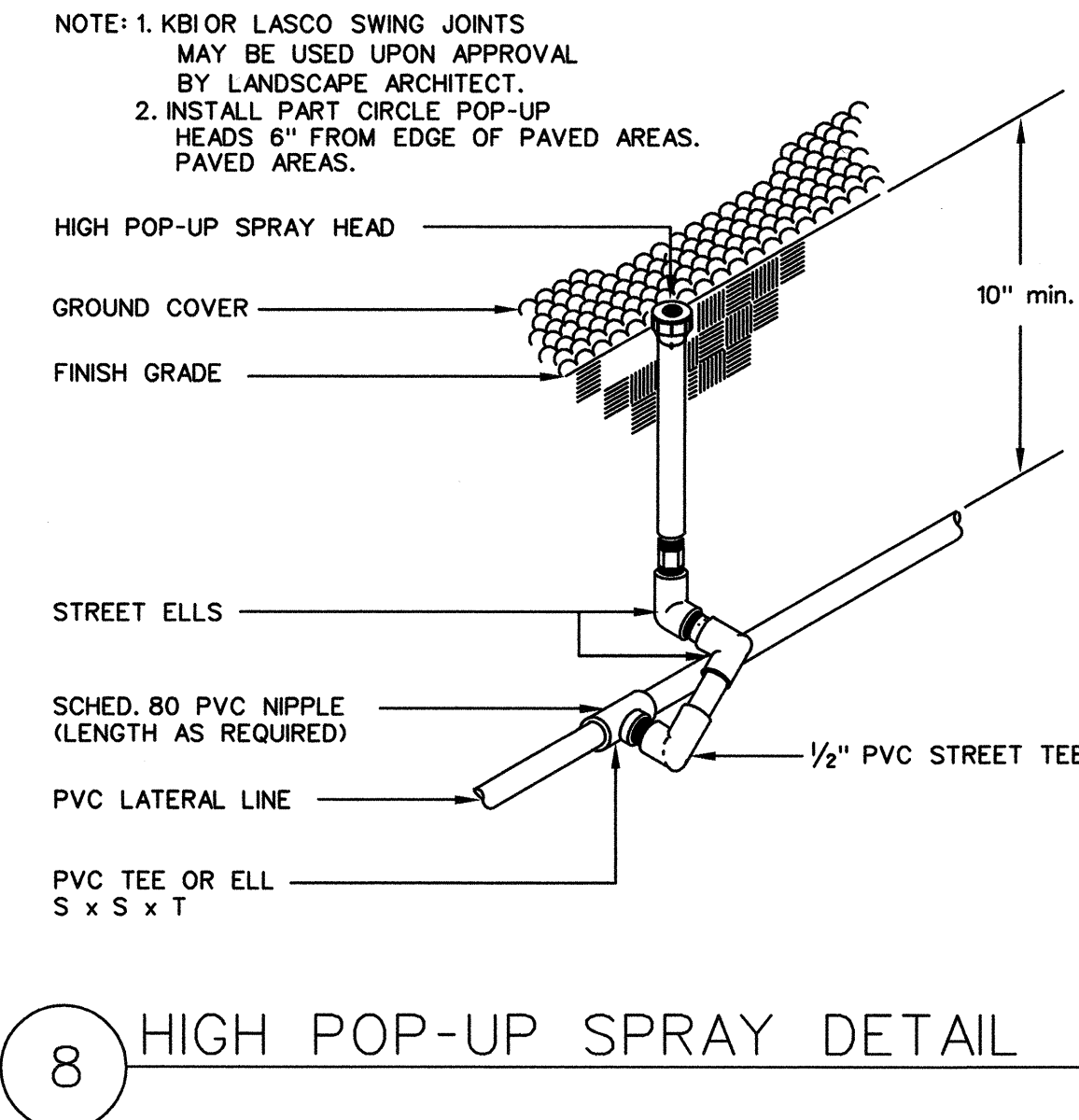
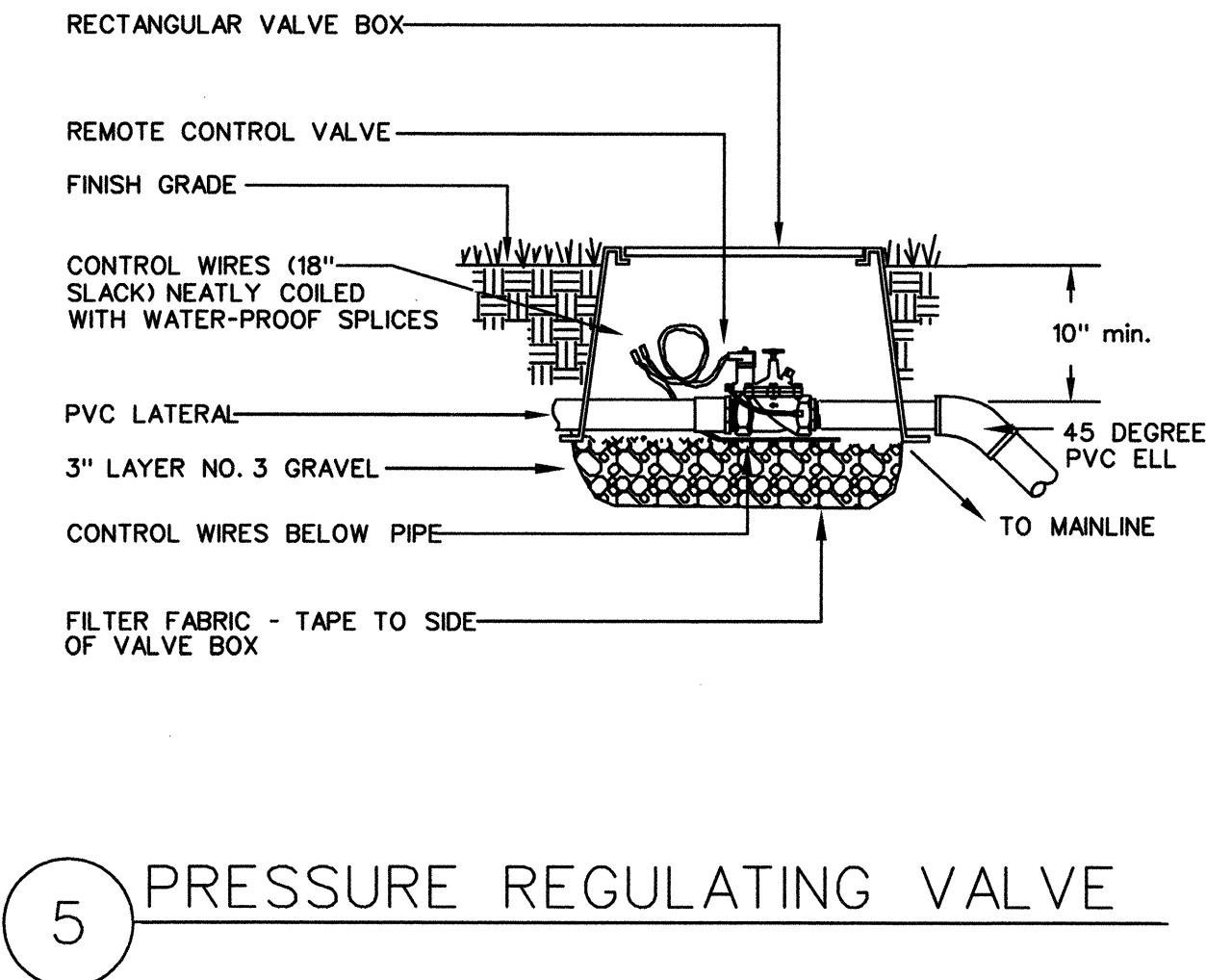
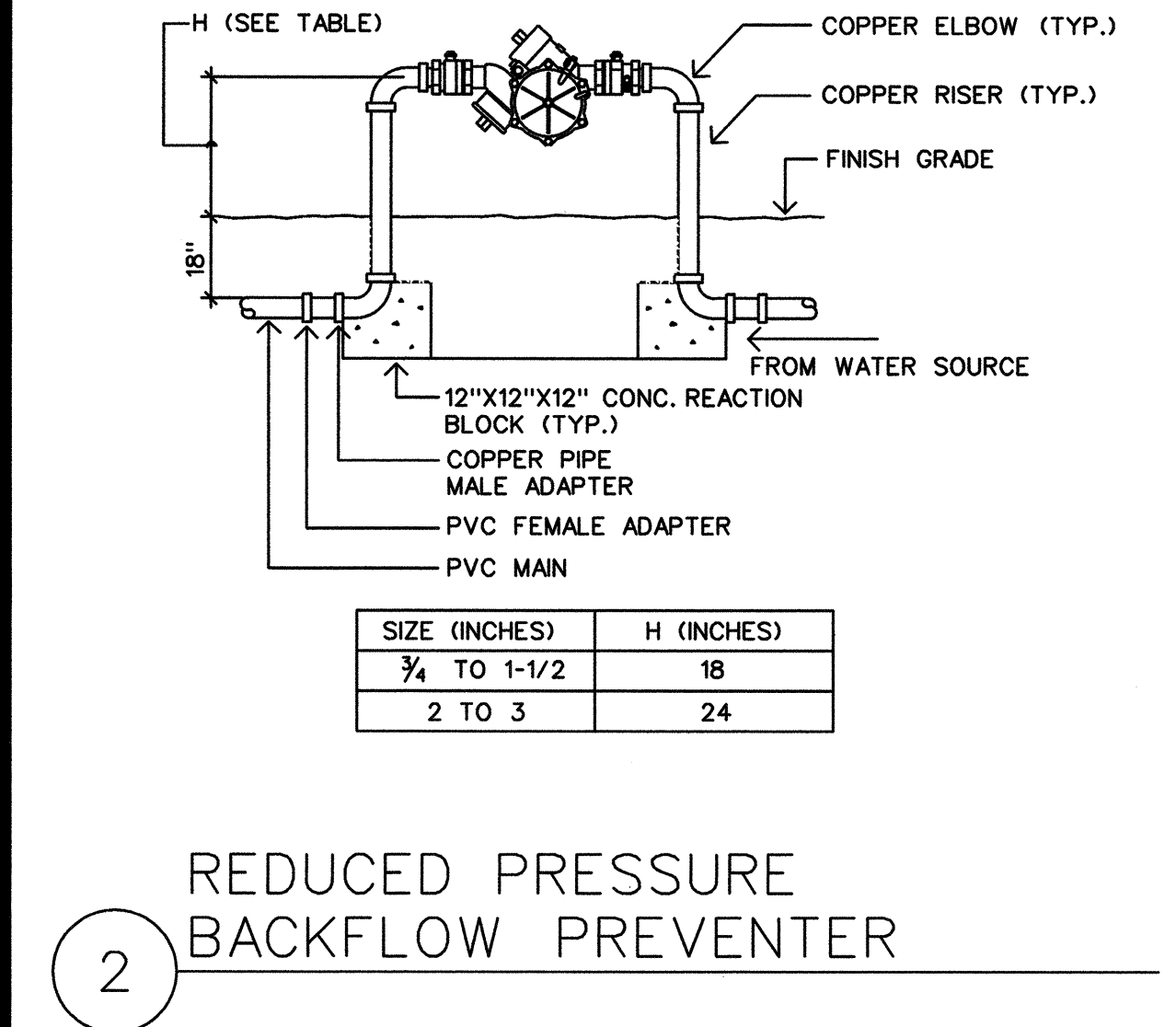
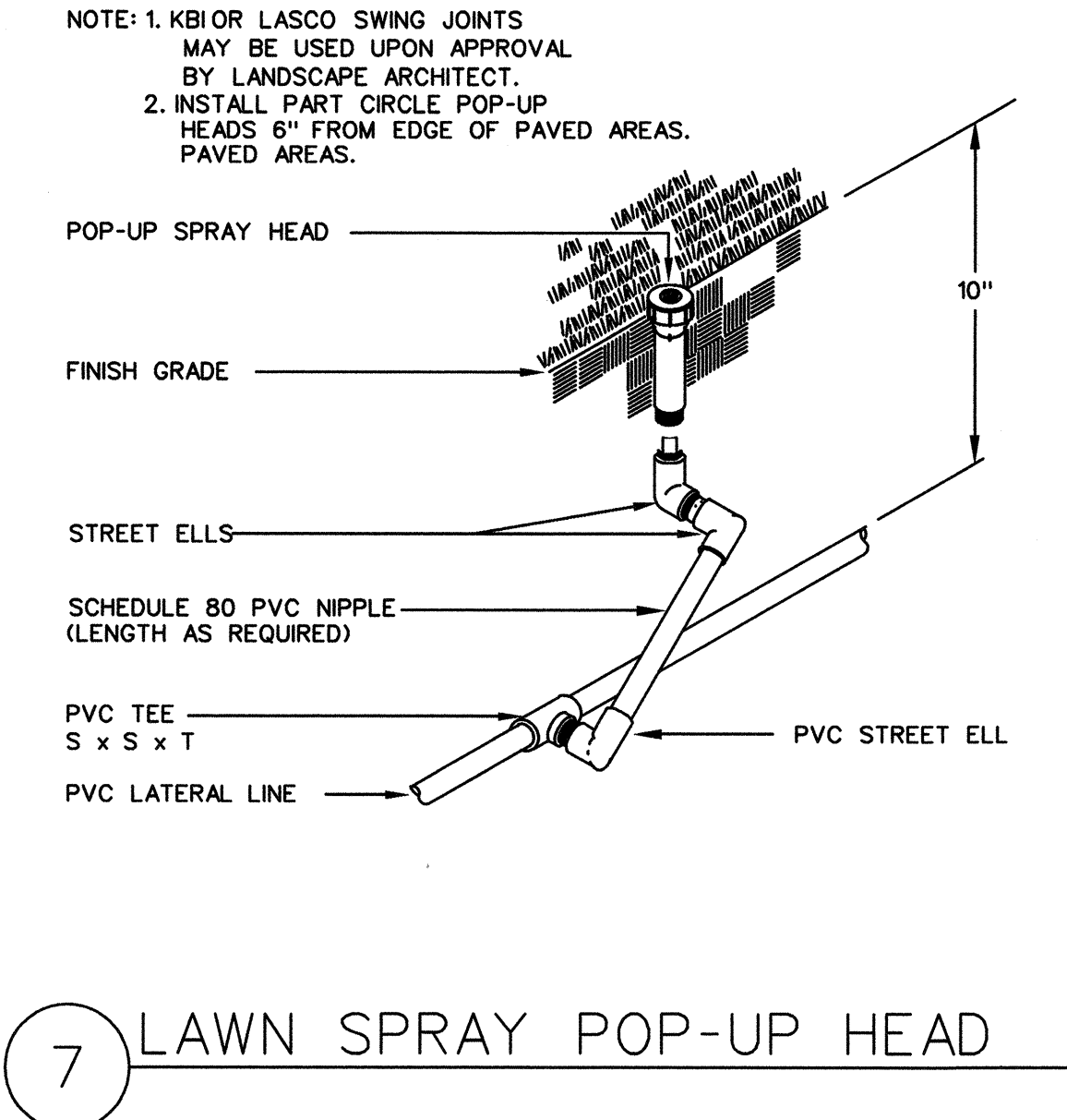
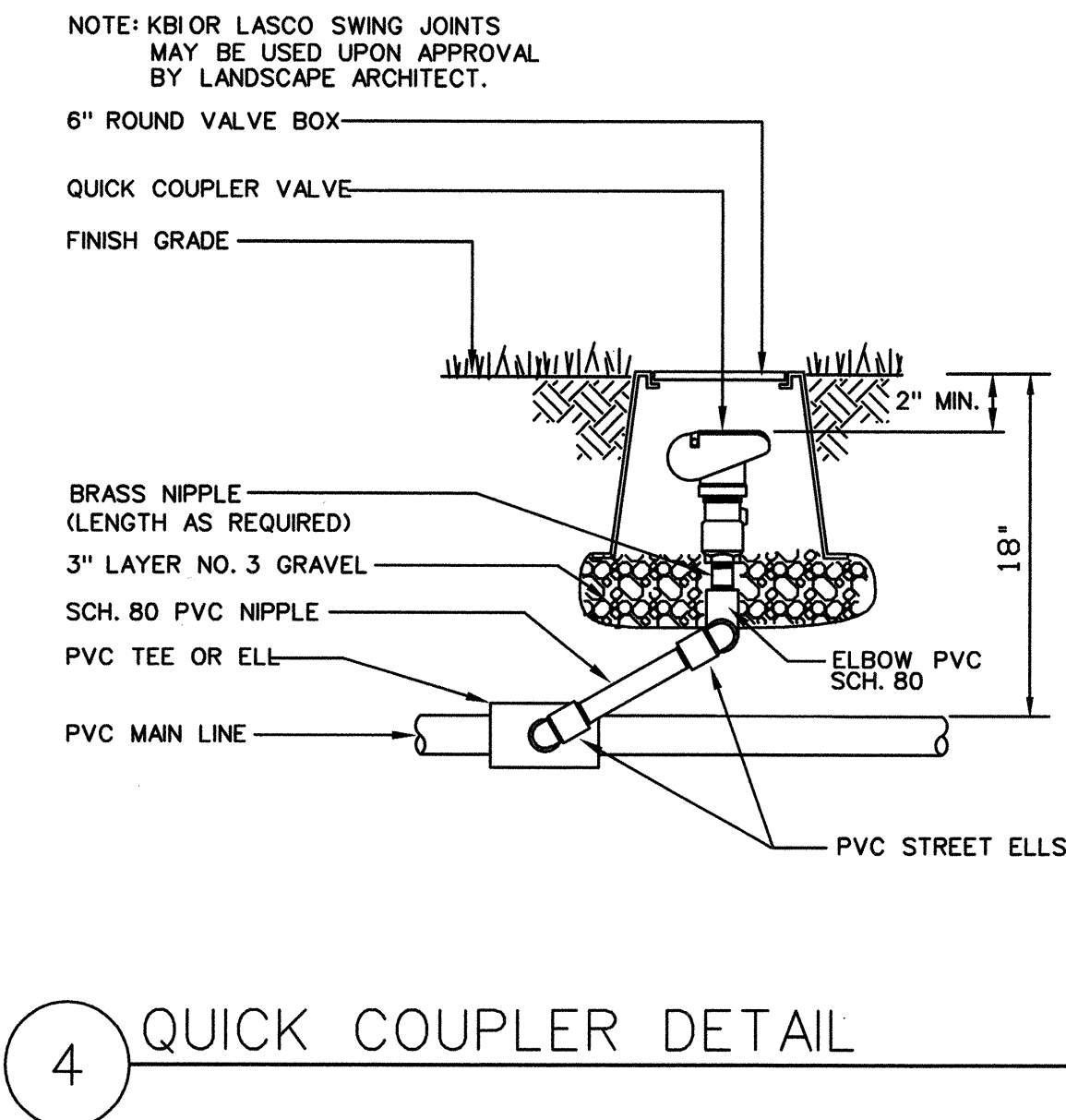
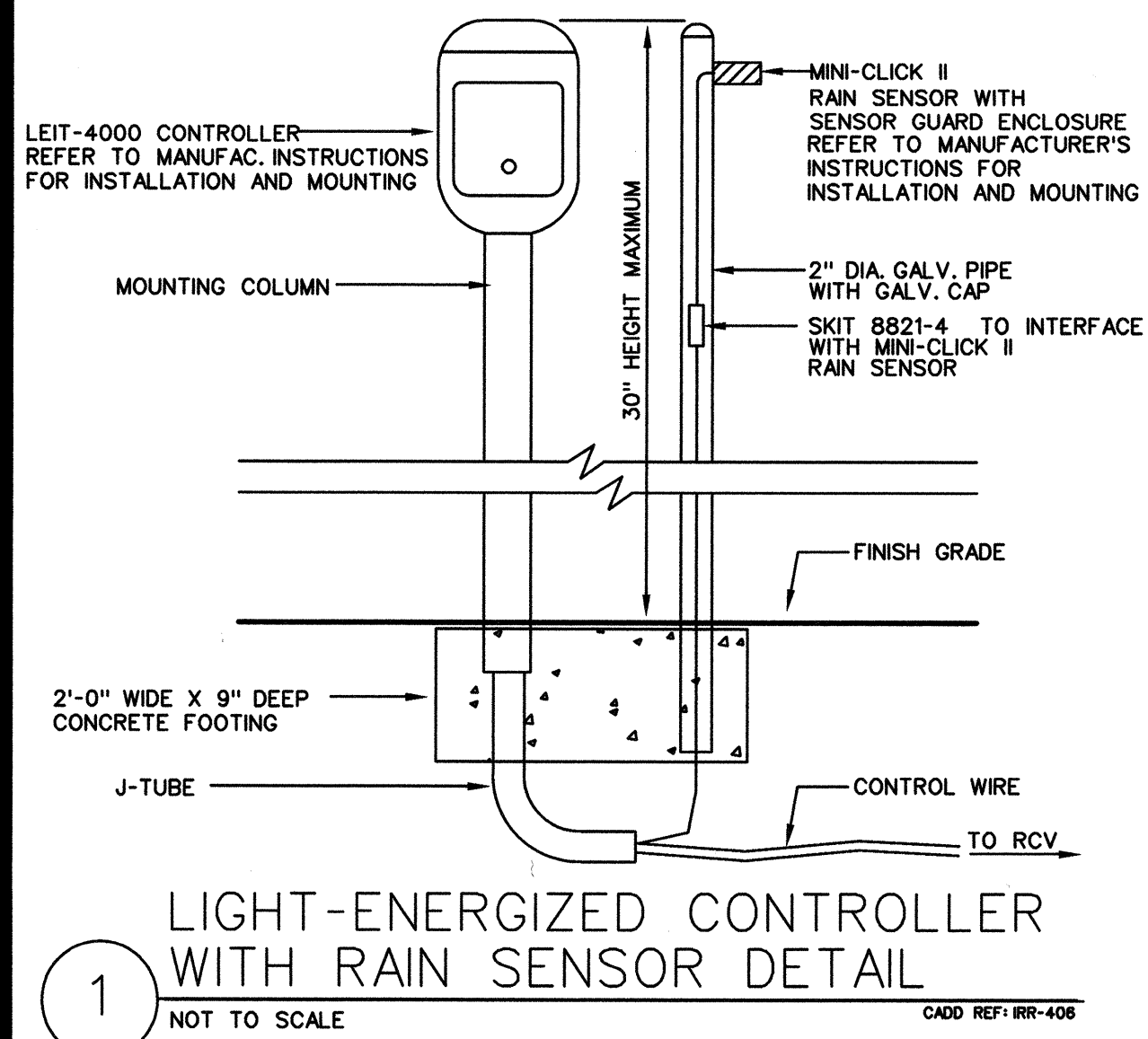


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99E-01-98	2000	7	14



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

R. STAN DUNCAN
 LICENSED PROFESSIONAL LANDSCAPE ARCHITECT
 No. 5815
 HAWAII, U.S.A.
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

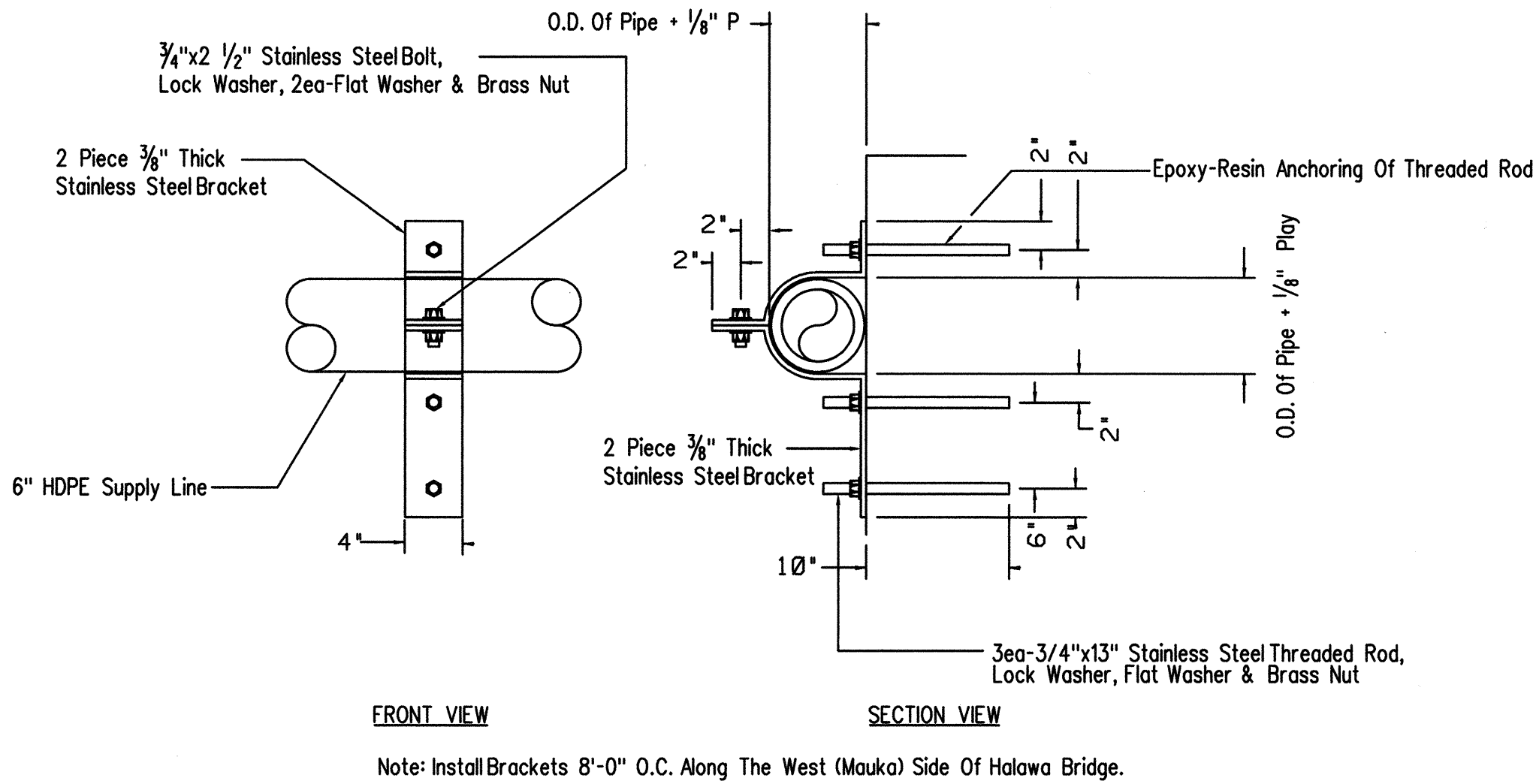
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

 IRRIGATION DETAILS

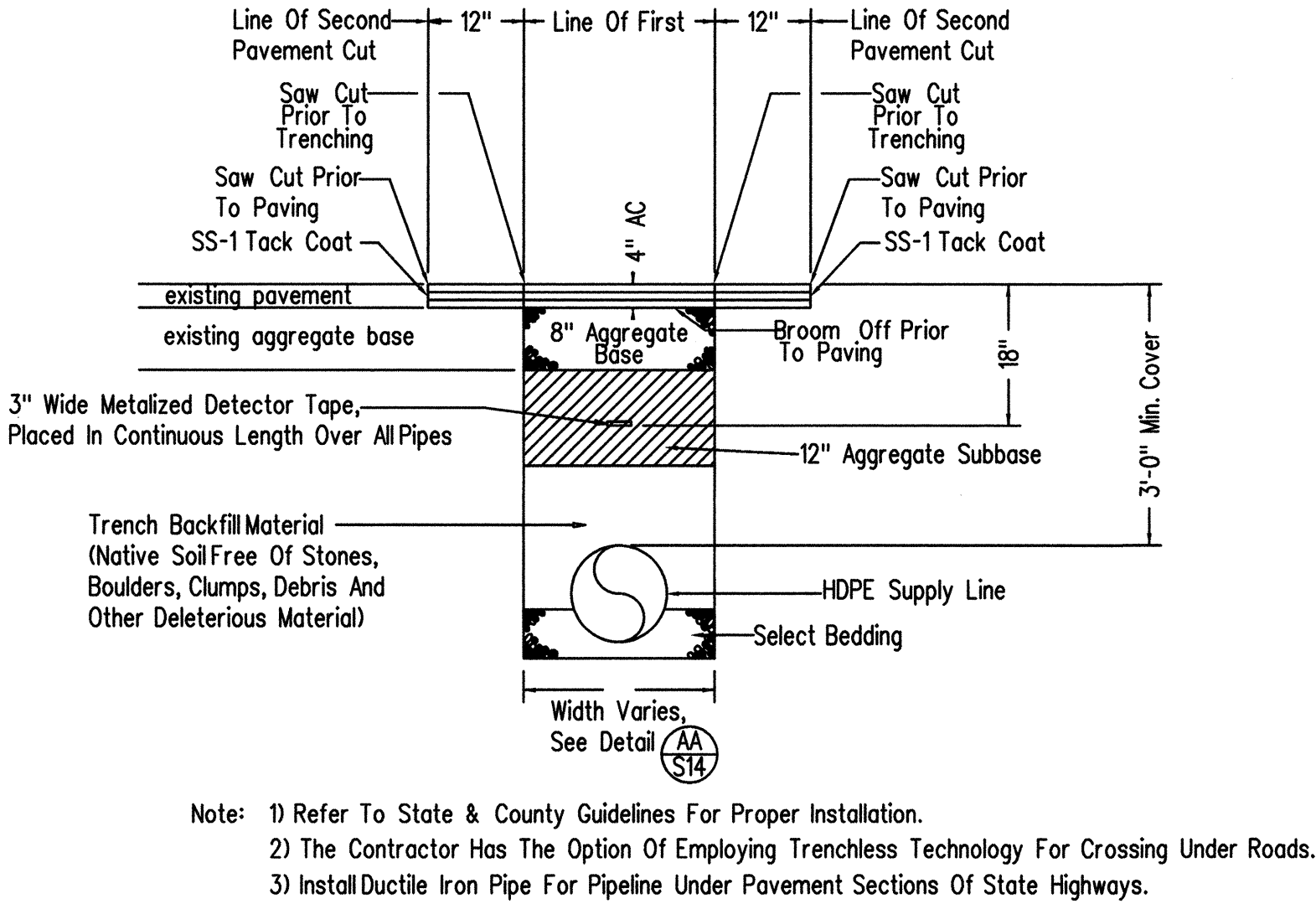
 KAMEHAMEHA HIGHWAY
 LANDSCAPE IMPROVEMENTS,
 VICINITY OF ARIZONA MEMORIAL
 SCALE: 1"=20'-0"

SHEET No. 1-5 OF 14 SHEETS

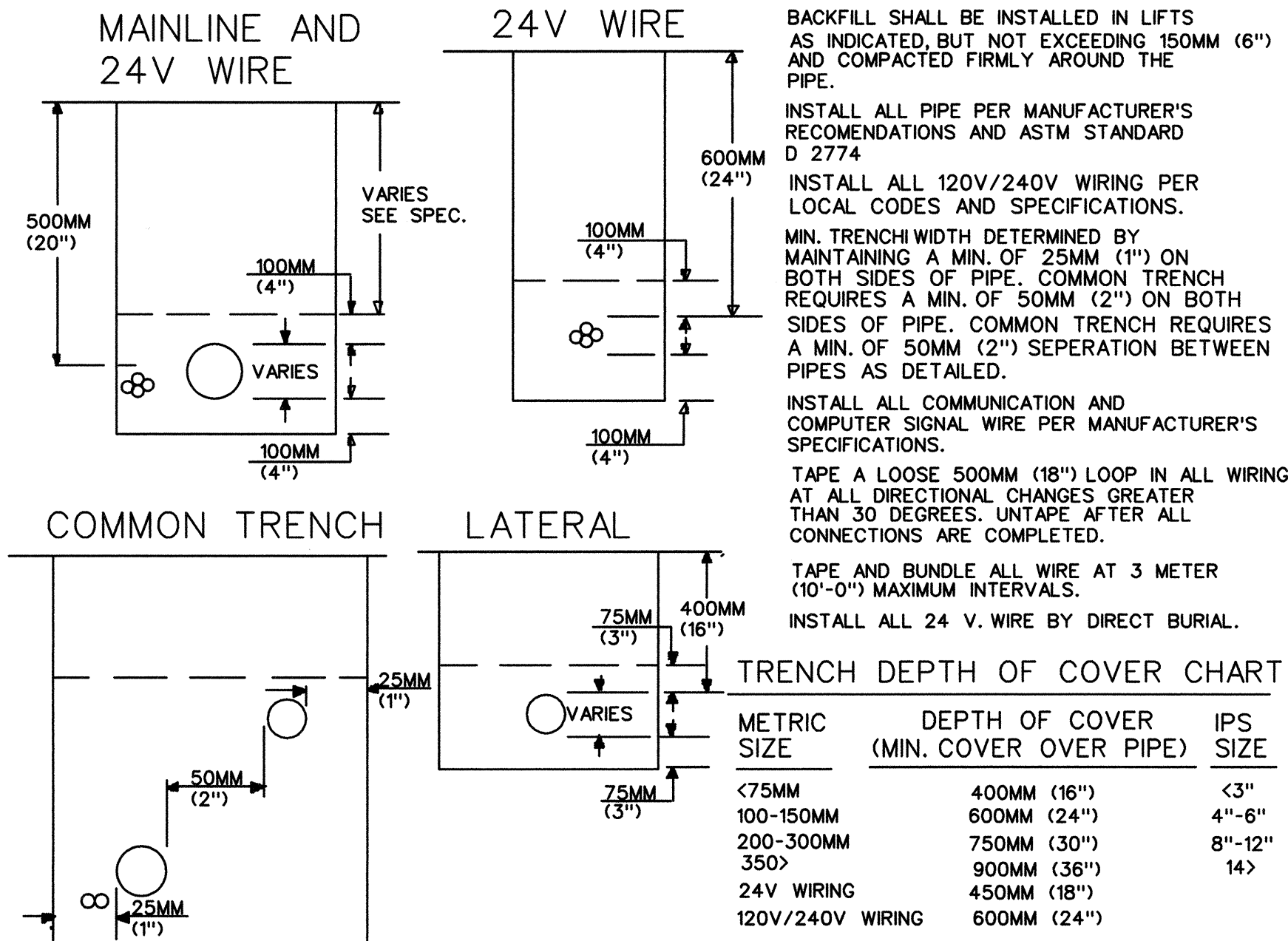
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HAWAII	HAW.	99E-01-98	2000	8	14



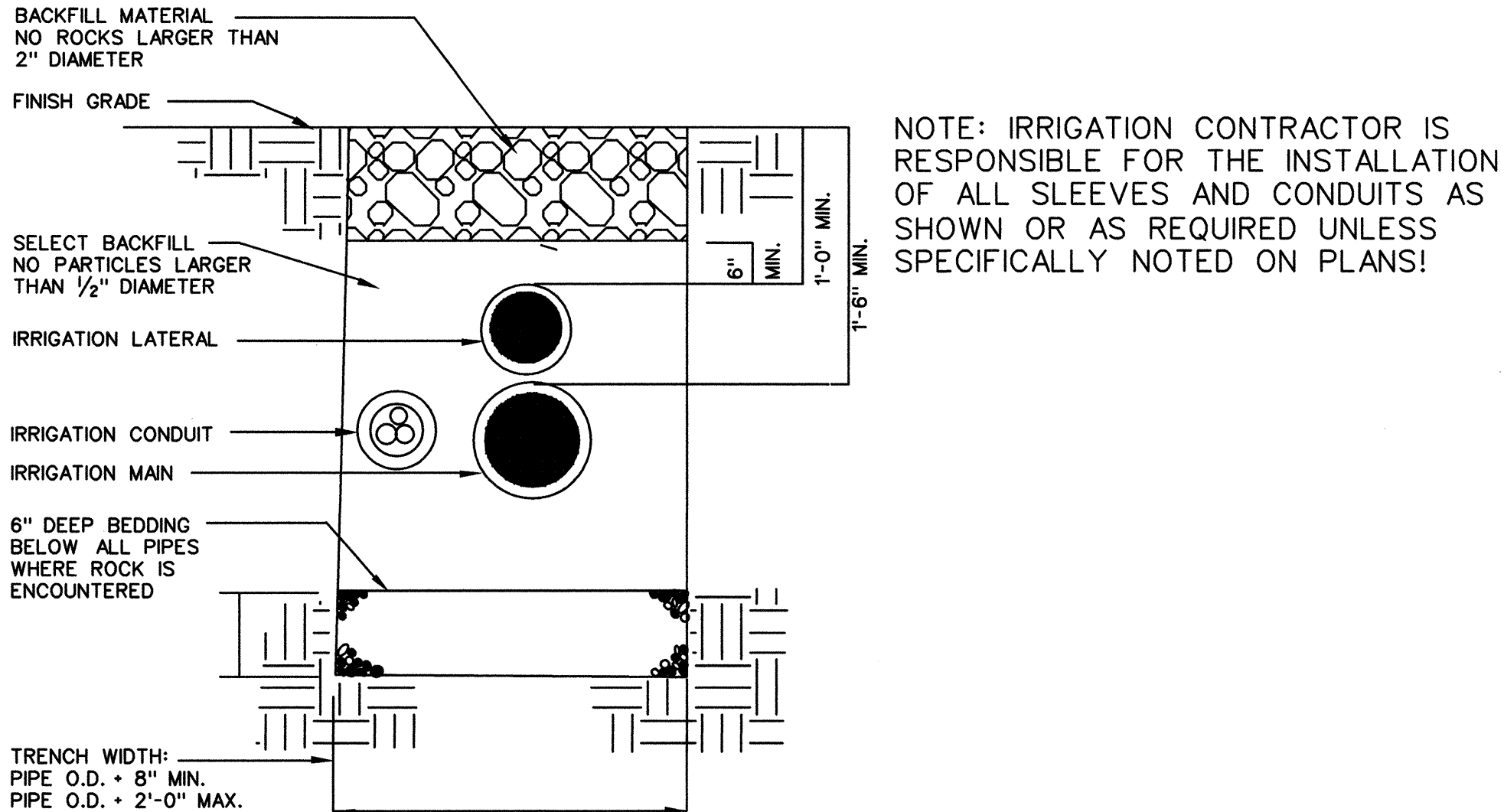
1 TYPICAL 6" HDPE SUPPLY LINE BRACKET DETAIL
NTS



2 TYPICAL ROAD CROSSING DETAIL, SECTION VIEW
NTS

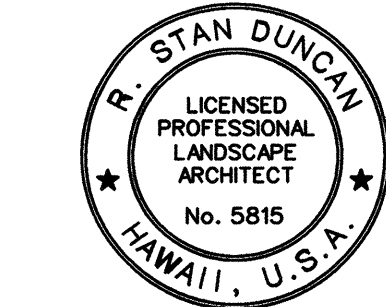


3 TRENCH DETAIL (NON-DRIP ONLY)
No Scale



4 DRIVEWAY & SIDEWALK CROSSING DETAIL
No Scale

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
DATE	



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

IRRIGATION DETAILS

KAMEHAMEHA HIGHWAY
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

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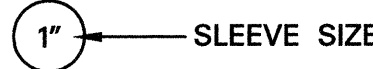
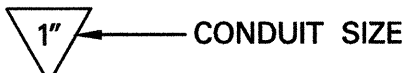
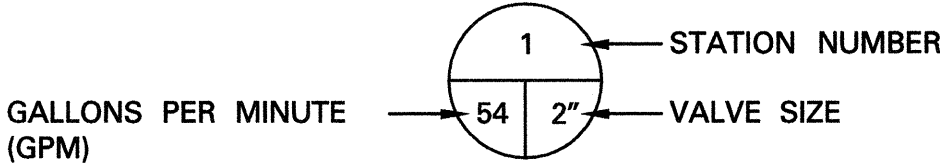
SHEET No. 1-6 OF 14 SHEETS

IRRIGATION NOTES








1. THIS PLAN IS DIAGRAMMATIC. IRRIGATION SYSTEM IS SUBJECT TO FIELD ADJUSTMENTS DUE TO UNANTICIPATED SITE CONDITIONS. LOCATE ALL MAINLINES, LATERALS, VALVES AND SPRINKLER HEADS WITHIN PLANTING AREAS, UNLESS OTHERWISE NOTED. PLACE MAINLINE IN PLANTING AREAS WHERE NO SLEEVES ARE SHOWN. AVOID ANY CONFLICT BETWEEN UNDERGROUND UTILITIES, STRUCTURES AND PLANTINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES. BURY ALL IRRIGATION LINES UNDER PAVING 24" DEEP. IN PLANTING AREAS BURY PRESSURE MAINLINES 18" AND LATERAL LINES 10" DEEP.
2. THIS IRRIGATION SYSTEM WAS DESIGNED WITH A MINIMUM STATIC WATER PRESSURE OF 110 PSI AT THE POINT OF CONNECTION. NOTIFY THE PROJECT ENGINEER, IF WATER PRESSURE IS LESS THAN 75 PSI OR GREATER THAN 100 PSI.
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 IS TO COORDINATE THE INSTALLATION OF ALL SLEEVES, CONDUITS, MAINLINES AND LATERALS UNDER PAVEMENT AND THROUGH WALLS. CONTRACTOR SHALL ASSURE THAT THESE ITEMS ARE LAID PRIOR TO PLACEMENT OF PAVEMENT OR WALL STRUCTURES.
5. CONTRACTOR SHALL INSTALL IRRIGATION LINES, WIRES, VALVES AND HEADS PER SPECIFICATIONS. EXISTING GATE VALVES, POINT OF CONNECTION, ETC. ARE DERIVED FROM THE BEST AVAILABLE INFORMATION AND ON SITE INSPECTIONS. THE CONTRACTOR SHALL VERIFY THOSE POINTS OF CONNECTION NOTED AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
6. LOCATE AND INSTALL ALL SPRINKLER HEADS 6" FROM SIDEWALKS, CURBS, DRIVEWAYS, BUILDINGS AND WALLS UNLESS NOTED OTHERWISE. FLEX TUBING SHALL BE INSTALLED ON ALL SPRINKLER HEADS ALONG SIDEWALKS, DRIVEWAYS AND PARKING SPACES. ADJUST ALL SPRINKLER HEADS AND FLOW CONTROL FOR MAXIMUM COVERAGE AND MINIMUM OVERTHROW AND MISTING. OPERATE ONLY ONE VALVE AT A TIME PER CONTROLLER.
7. INSTALL ALL IRRIGATION EQUIPMENT IN PLANTING AREAS.
8. CONTRACTOR SHALL FURNISH THE STATE WITH 2 SETS OF REPRODUCIBLE "AS BUILTS" PLANS UPON COMPLETION OF IRRIGATION SYSTEM.

IRRIGATION MATERIAL SCHEDULE

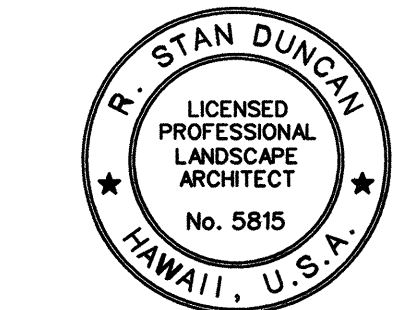
SYMBOL	DESCRIPTION	MANUFACTURER/ CATALOG NUMBER	DETAIL
	REMOTE CONTROL VALVE	RAINBIRD EFB-CP-PRS-B SERIES OR APPROVED EQUAL, SIZE AS NOTED	NO. 6, SHT. I-5
	REDUCED PRESSURE BACKFLOW PREVENTER	FEBCO 825Y, OR APPROVED EQUAL 2" SIZE	NO. 2, SHT. I-5
	GATE VALVE	NIBCO T-113, OR APPROVED EQUAL SIZE AS NOTED	NO. 3, SHT. I-5
	QUICK COUPLING VALVE QUICK COUPLING VALVE KEY SWIVEL HOSE ELL COVER KEY	RAINBIRD 44NP RAINBIRD 44K RAINBIRD SH SERIES RAINBIRD 2049 COVER KEY	NO. 4, SHT. I-5
	IRRIGATION CONTROLLER 16 STATION - PEDESTAL	SOLATROL LEIT SERIES OR APPROVED EQUAL	NO. 1, SHT. I-5
	IRRIGATION MAINLINE	SCHEDULE 40 PVC, SIZE AS NOTED LAVENDER COLOR	NO. 6, SHT. I-5
	IRRIGATION LATERAL	CLASS 200 PVC, SIZE AS NOTED LAVENDER COLOR	NO. 3, SHT. I-6
	IRRIGATION SLEEVE	SCHEDULE 40 PVC, SIZE AS NOTED	NO. 1, 2, 3, 4 SHT, I-6



IRRIGATION HEAD SCHEDULE

HEAD SYMBOL	ANGLE	MANUFACTURER/ CATALOG NUMBER	G.P.M.	P.S.I.	RAD.	DETAIL
ROTOR HEAD	90 °	HUNTER PGP SERIES (OR APPROVED EQUAL)	0.5-0.8	30-60	28'-30'	NO. 7, SHT. I-5
4" POP-UP		PGP-ADJ-01 LA				
	180 °	PGP-ADJ-03 LA	0.9-1.3	30-60	31'-32'	
ROTOR HEAD						
4" POP-UP	90 °	PGP-ADJ-01 LA (ON RISER)	0.5-0.8	30-60	28'-30'	NO. 9, SHT. I-5
		PGP-ADJ-03 LA (ON RISER)				
SPRAY HEAD	90 °	1812-SAM-PRS-15Q 1800 NP COVER (1804-SAM-PRS-15Q IN LAWN AREAS)	1.30-1.85	15-30	11'-15'	NO. 8, SHT. I-5
12" POP-UP						
	180 °	1812-SAM-PRS-15H 1800 NP COVER (1804-SAM-PRS-15H IN LAWN AREAS)	1.30-1.85	15-30	11'-15'	
						
	360 °	1812-SAM-PRS-15H 1800 NP COVER	2.60-3.70	15-30	11'-15'	
SPRAY HEAD						
12" POP-UP	EST	1812-SAM-PRS-15EST 1800 NP COVER	0.45-0.61	15-30	4' X 15'	NO. 8, SHT. I-5
						
	SST	1812-SAM-PRS-15SST 1800 NP COVER	0.89-1.21	15-30	4' X 30'	

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



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

IRRIGATION NOTES &
LEGEND

KAMEHAMEHA HIGHWAY
LANDSCAPE IMPROVEMENTS,
VICINITY OF ARIZONA MEMORIAL

SCALE: 1"=20'-0" DATE: MAY 13, 1999