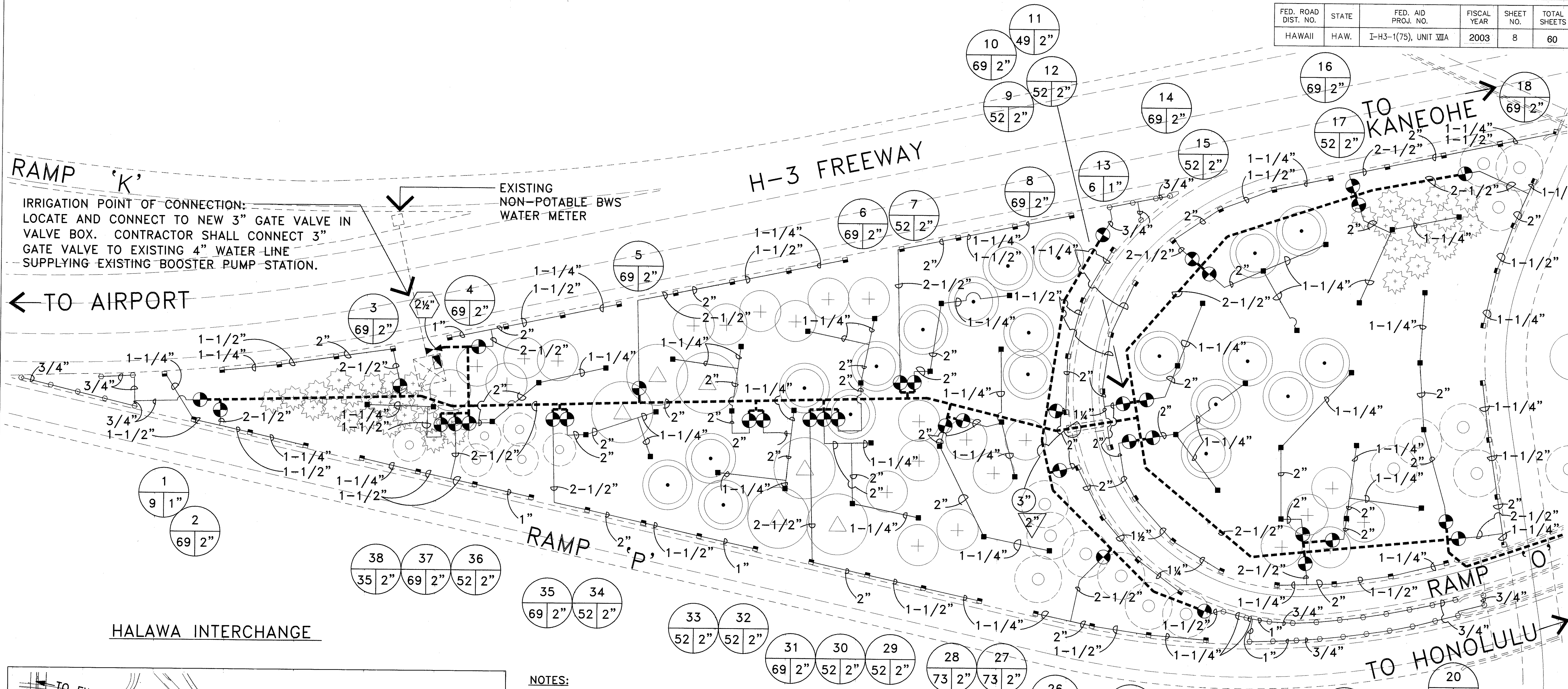


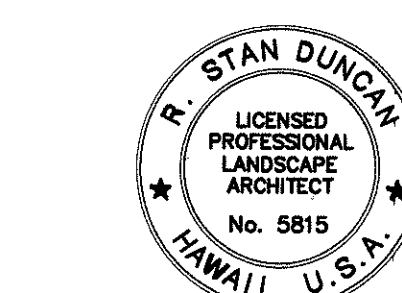
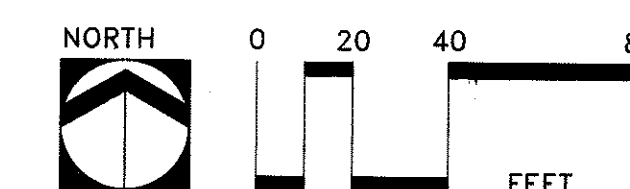
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75), UNIT VIIA	2003	8	60



HALAWA INTERCHANGE

NOTES:

1. CONTRACTOR TO CONNECT NEW IRRIGATION SYSTEM TO EXISTING 4" WATER SUPPLY LINE FEEDING EXISTING BOOSTER PUMP STATION.
2. CONTRACTOR SHALL INSTALL 40 STATION (WALL MOUNT) AUTOMATIC IRRIGATION CONTROLLER IN STAINLESS STEEL CABINET IN BOOSTER PUMP ENCLOSURE. CONNECT IRRIGATION CONTROLLER TO EXISTING 120 VOLT POWER SOURCE IN PUMP STATION ENCLOSURE. TYPICAL SYMBOL FOR CONTROLLER
3. CONTRACTOR SHALL VERIFY EXACT LOCATION OF EXISTING CONCRETE SWALES IN PLANTING AREA. CONTRACTOR SHALL SLEEVE UNDER CONCRETE SWALES AS REQUIRED. SLEEVING SHALL BE CONSIDERED INCIDENTAL TO CONTRACT ITEM "SPRINKLER SYSTEM".
4. ALL ROADWAY CROSSING SHALL BE DONE THROUGH A TRENCHLESS SLEEVE MULTIPLE IRRIGATION CONDUIT. FOR DETAIL, SEE SHEET L-9.
5. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING A PRE-CONSTRUCTION INSPECTION WITH THE STATE TO CHECK THE CONDITION OF ALL SPRINKLER SYSTEMS AND PLANT MATERIAL PRIOR TO START OF WORK. ANY DAMAGE TO EXISTING SPRINKLER SYSTEM OR PLANTS DURING CONSTRUCTION SHALL BE RESTORED/REPLACED TO THE ORIGINAL CONDITION BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE.



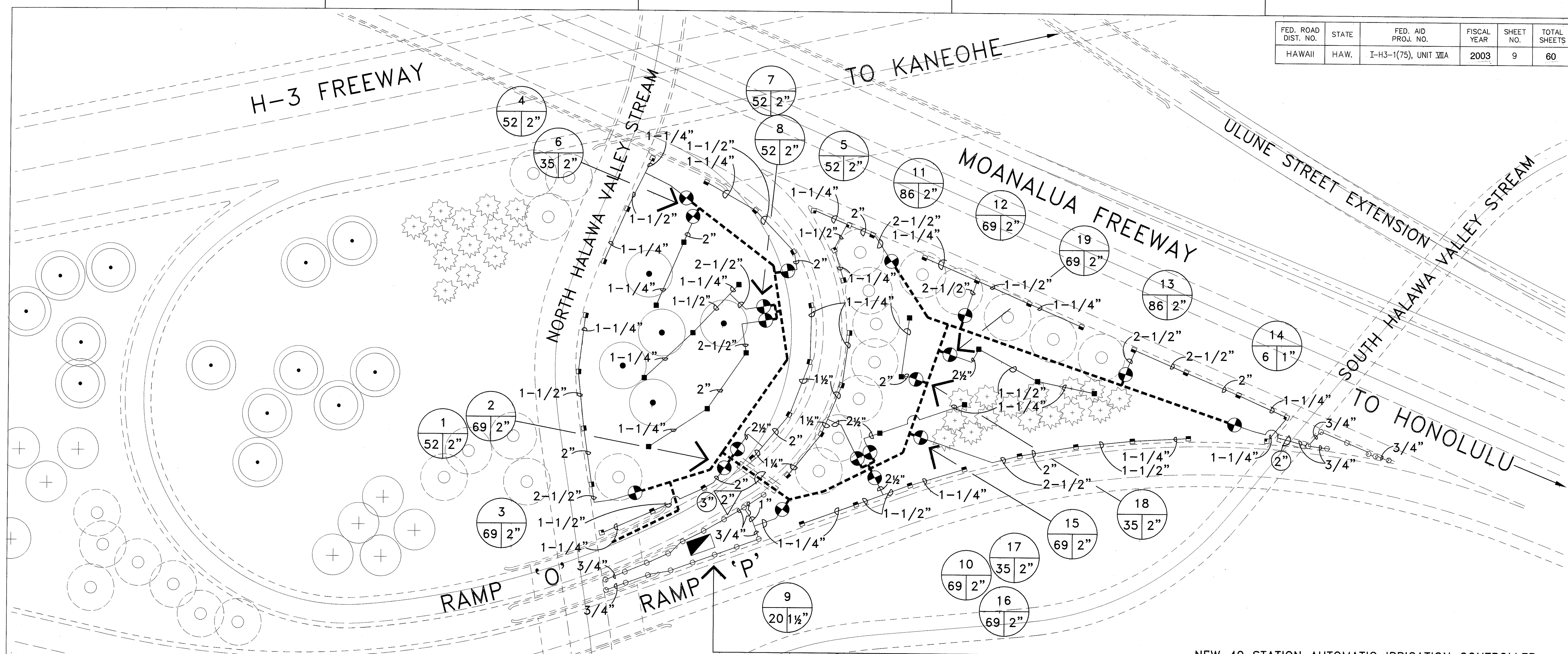
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
LANDSCAPE PLAN
HALAWA INTERCHANGE
IRRIGATION PLAN
H-3 FINISH (UNIT VIIA)
FAIP NO. I-H3-1(75), UNIT VIIA

SCALE: 1"=40' DATE: NOVEMBER 2001
SHEET NO. L-1 OF 14 SHEETS

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

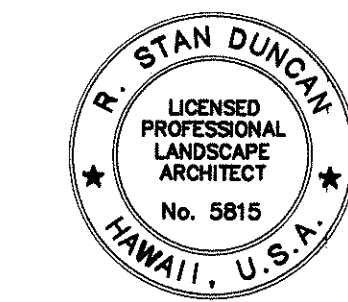
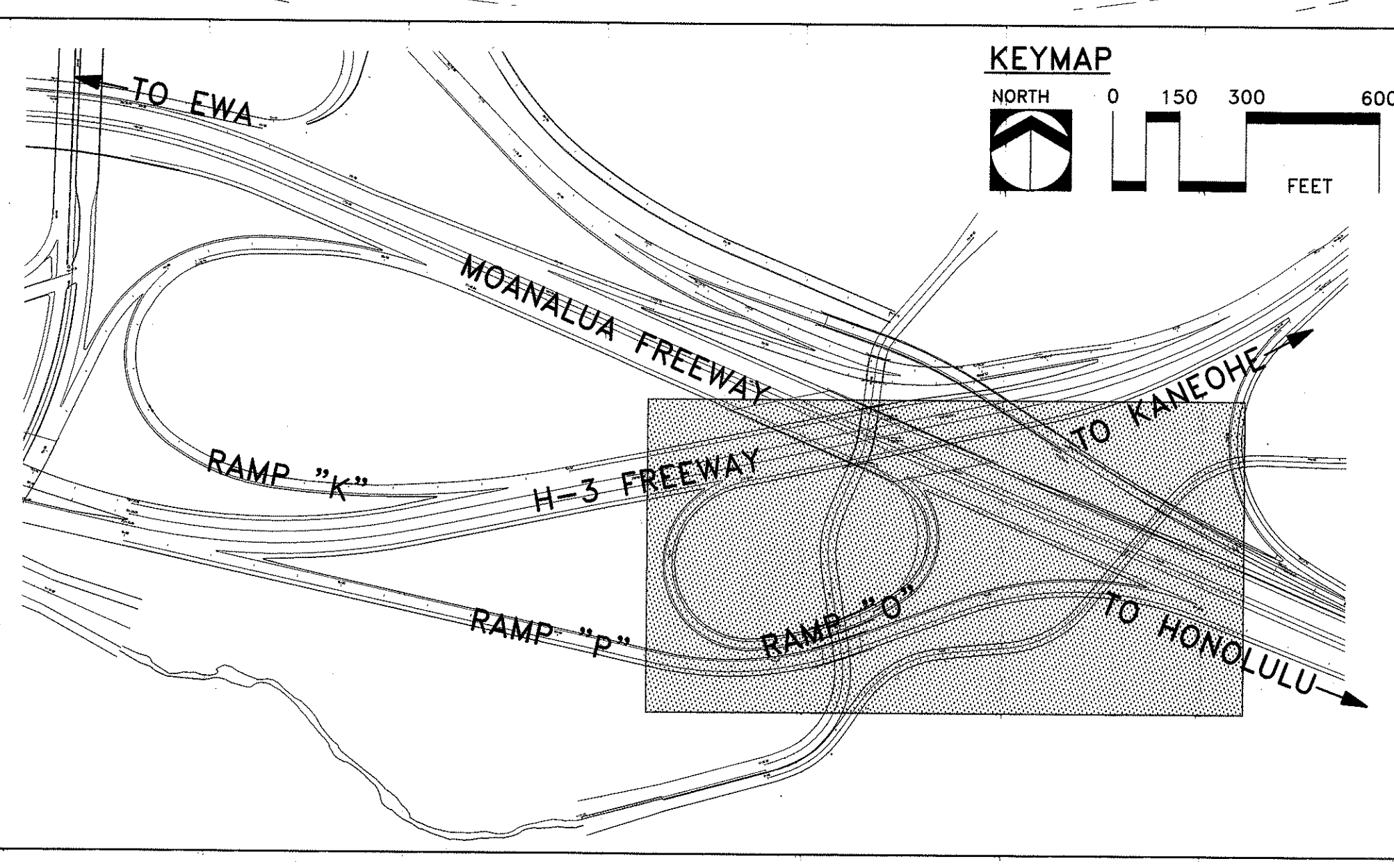
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75), UNIT VIIA	2003	9	60



NEW 40 STATION AUTOMATIC IRRIGATION CONTROLLER STRATEGICALLY PLACED FOR ACCESS (WALL MOUNT) INSIDE STAINLESS STEEL STRONGBOX. VERIFY EXACT LOCATION WITH THE ENGINEER PRIOR TO INSTALLATION. PROVIDE 120 VOLT POWER IN WATERPROOF J-BOX.

NOTES:

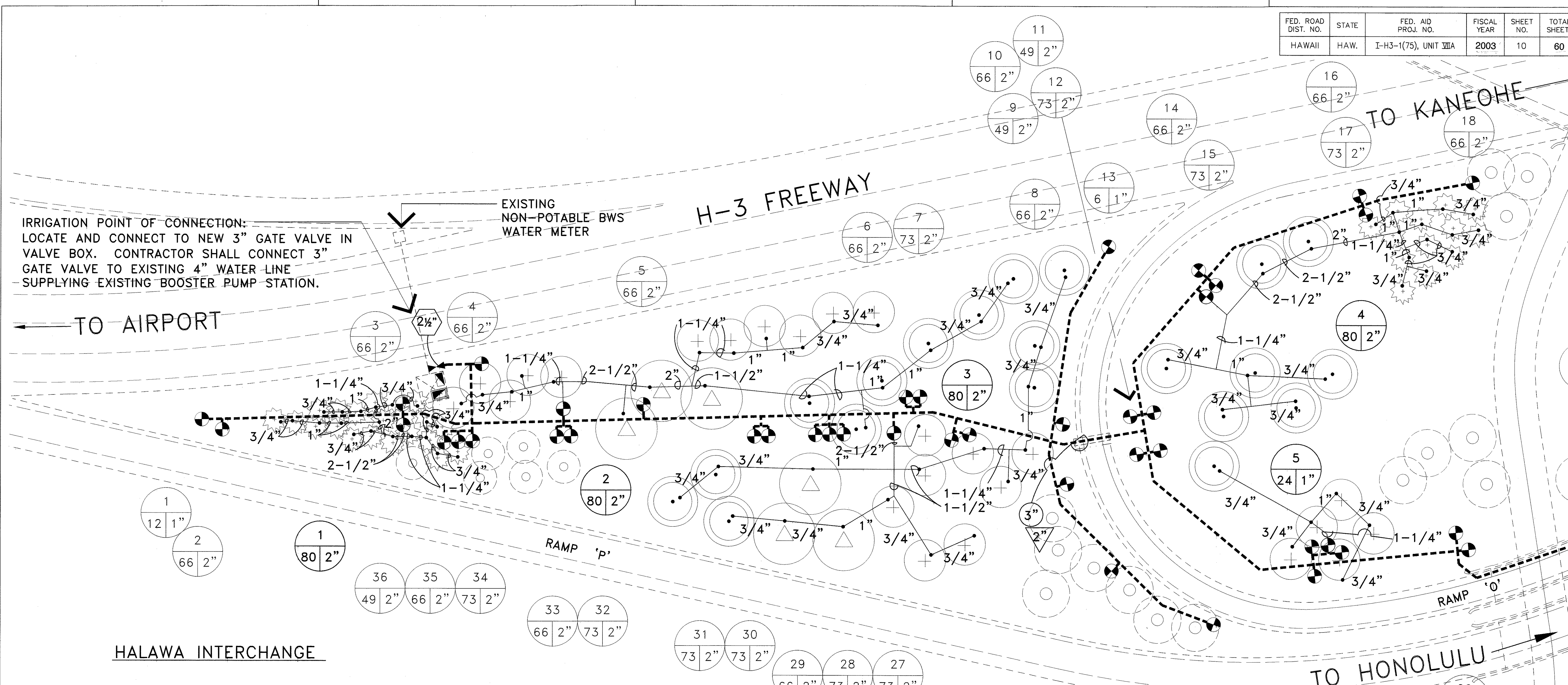
1. CONTRACTOR TO CONNECT NEW IRRIGATION SYSTEM TO EXISTING 4" WATER SUPPLY LINE FEEDING EXISTING BOOSTER PUMP STATION.
2. CONTRACTOR SHALL INSTALL NEW 40 STATION (WALL MOUNT) AUTOMATIC IRRIGATION CONTROLLER IN STAINLESS STEEL STRONGBOX ENCLOSURE. CONNECT IRRIGATION CONTROLLER TO 120 VOLT POWER SOURCE IN WATERPROOF J-BOX.
3. ALL ROADWAY CROSSINGS SHALL BE DONE THROUGH A TRENCHLESS SLEEVE MULTIPLE IRRIGATION CONDUIT. FOR DETAIL, SEE SHEET L-9.
4. FOR MAINLINE CROSSING AT BRIDGE SEE DETAIL SHEETS L-10 THROUGH L-12.
5. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING A PRE-CONSTRUCTION INSPECTION WITH THE STATE TO CHECK THE CONDITION OF ALL SPRINKLER SYSTEMS AND PLANT MATERIAL PRIOR TO START OF WORK. ANY DAMAGE TO EXISTING SPRINKLER SYSTEM OR PLANTS DURING CONSTRUCTION SHALL BE RESTORED/REPLACED TO THE ORIGINAL CONDITION BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE.



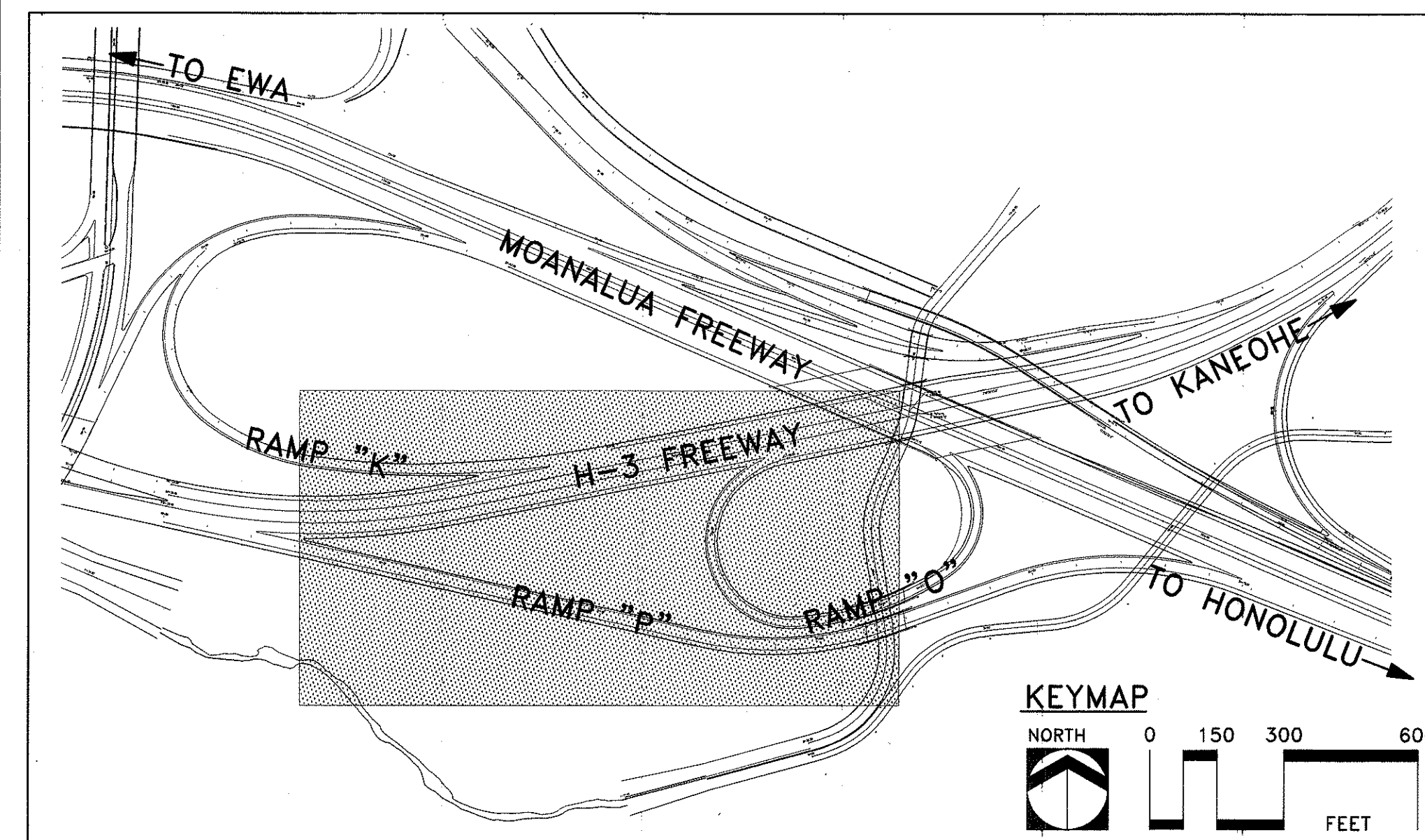
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
LANDSCAPE PLAN
HALAWA INTERCHANGE
IRRIGATION PLAN
H-3 FINISH (UNIT VIIA)
FAIP NO. I-H3-1(75), UNIT VIIA
SCALE: 1"=40'
DATE: NOVEMBER 2001
SHEET NO. L-2 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75), UNIT VIIA	2003	10	60

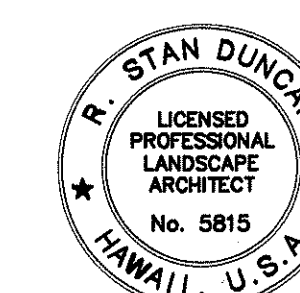
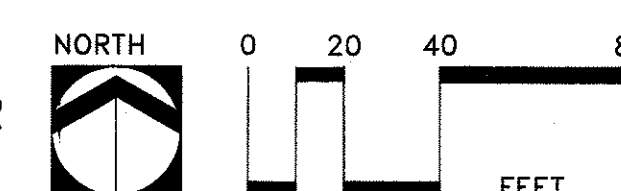


HALAWA INTERCHANGE



NOTES:

1. CONTRACTOR TO CONNECT NEW IRRIGATION SYSTEM TO EXISTING 4" WATER SUPPLY LINE FEEDING EXISTING BOOSTER PUMP STATION.
2. CONTRACTOR SHALL INSTALL 8 STATION (WALL MOUNT) AUTOMATIC IRRIGATION CONTROLLER IN STAINLESS STEEL CABINET IN BOOSTER PUMP ENCLOSURE FOR BUBBLER IRRIGATION SYSTEM. CONNECT IRRIGATION CONTROLLER TO EXISTING 120 VOLT POWER SOURCE IN PUMP STATION ENCLOSURE. TYPICAL SYMBOL FOR CONTROLLER
3. CONTRACTOR SHALL VERIFY EXACT LOCATION OF EXISTING CONCRETE SWALES IN PLANTING AREA. CONTRACTOR SHALL SLEEVE UNDER CONCRETE SWALES AS REQUIRED. SLEEVING SHALL BE CONSIDERED INCIDENTAL TO CONTRACT ITEM "SPRINKLER SYSTEM".
4. ALL ROADWAY CROSSING SHALL BE DON THROUGH A TRENCHLESS SLEEVE MULTIPLE IRRIGATION CONDUIT. FOR DETAIL, SEE SHEET L-9.
5. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING A PRE-CONSTRUCTION INSPECTION WITH THE STATE TO CHECK THE CONDITION OF ALL SPRINKLER SYSTEMS AND PLANT MATERIAL PRIOR TO START OF WORK. ANY DAMAGE TO EXISTING SPRINKLER SYSTEM OR PLANTS DURING CONSTRUCTION SHALL BE RESTORED/REPLACED TO THE ORIGINAL CONDITION BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE.

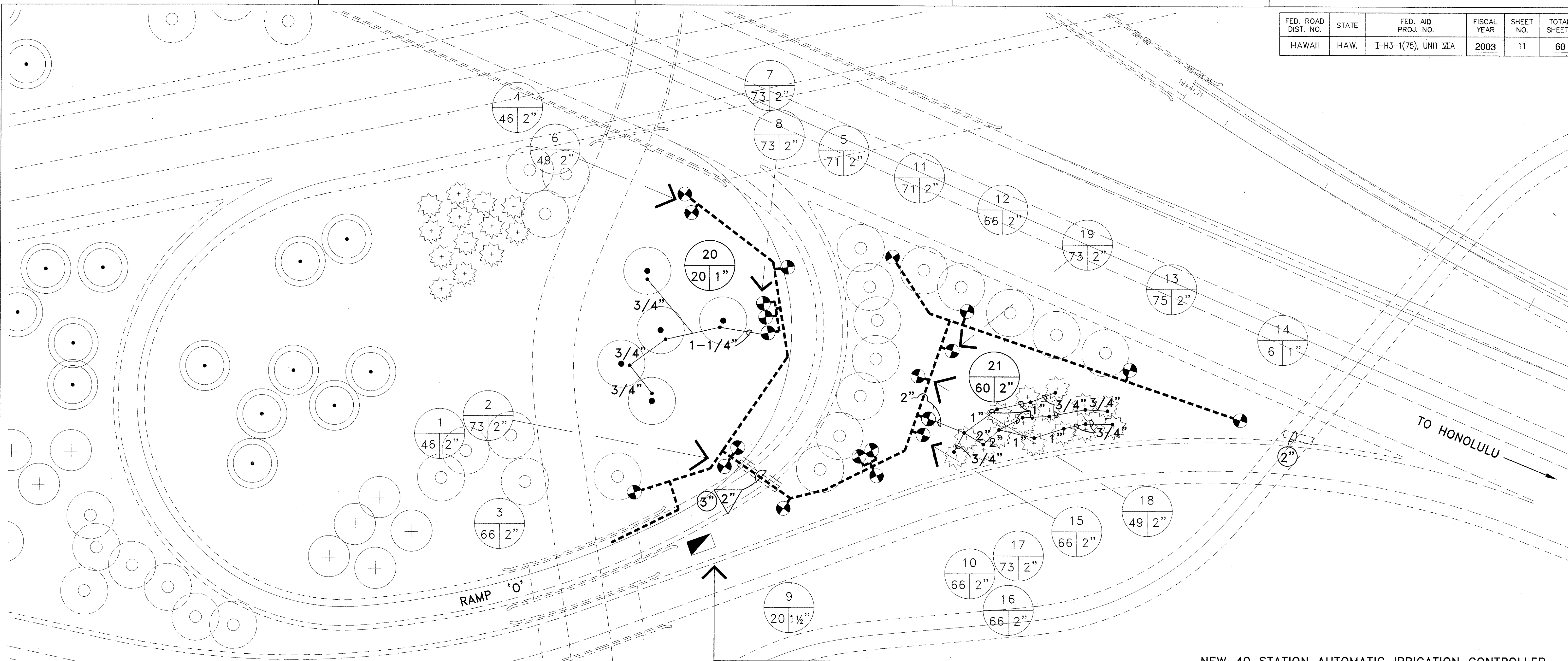


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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
LANDSCAPE PLAN
HALAWA INTERCHANGE
BUBBLER IRRIGATION PLAN
H-3 FINISH (UNIT VIIA)
FAIP NO. I-H3-1(75), UNIT VIIA

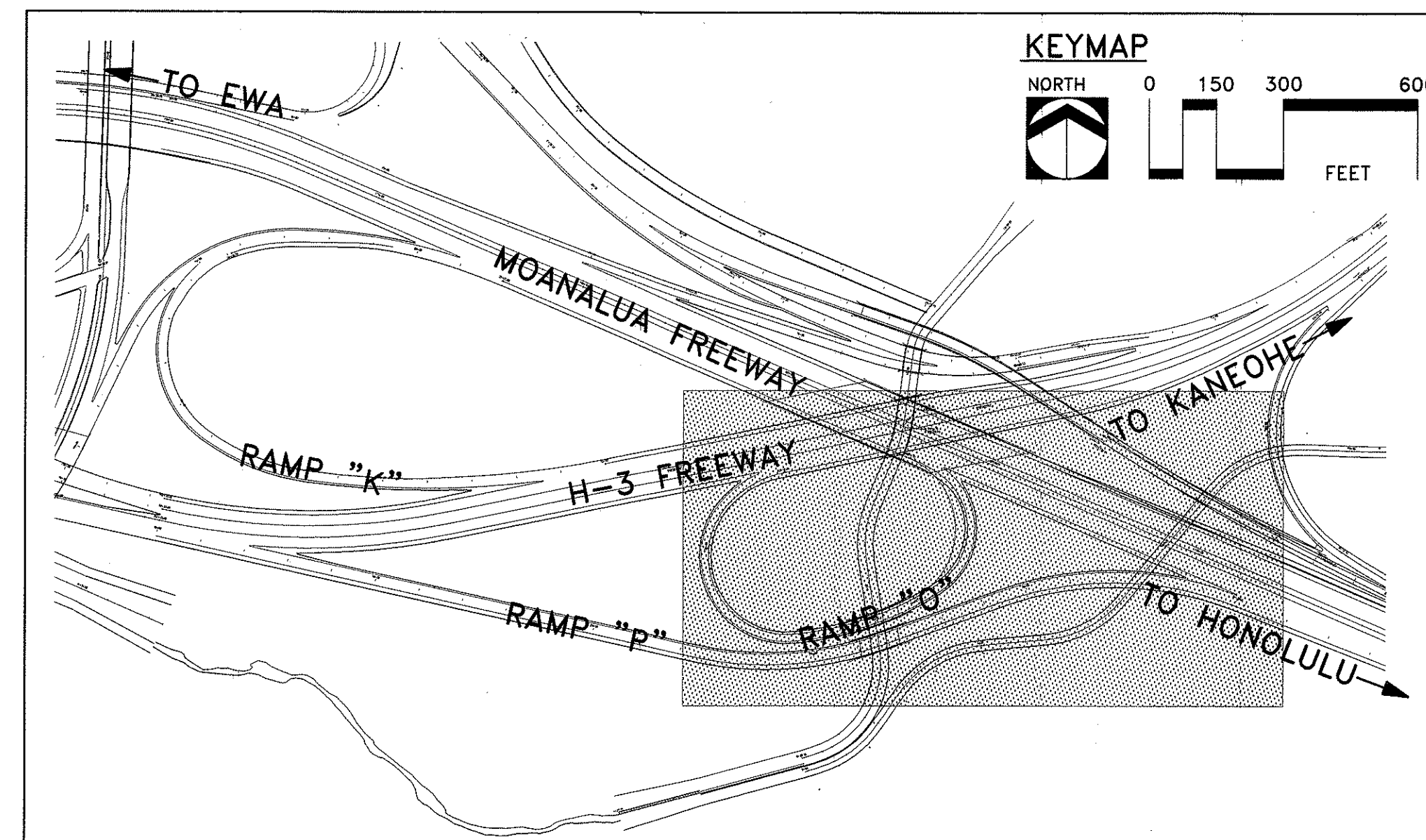
SCALE: 1"=40'
DATE: NOVEMBER 2001
SHEET NO. L-3 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75), UNIT VIIA	2003	11	60



TO HONOLULU

RAMP 'O'

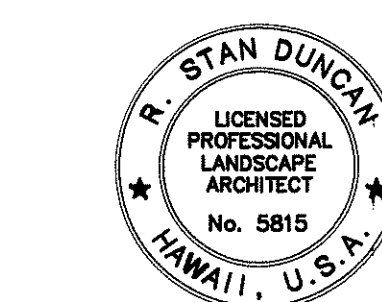
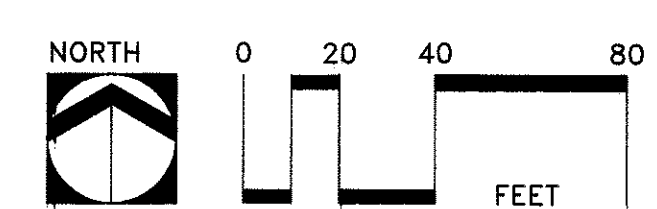


NOTES:

1. CONTRACTOR TO CONNECT NEW IRRIGATION SYSTEM TO EXISTING 4" WATER SUPPLY LINE FEEDING EXISTING BOOSTER PUMP STATION.
2. CONTRACTOR SHALL INSTALL 40 STATION (WALL MOUNT) AUTOMATIC IRRIGATION CONTROLLER IN STAINLESS STEEL STRONGBOX ENCLOSURE. CONNECT IRRIGATION CONTROLLER TO 120 VOLT POWER SOURCE IN WATERPROOF J-BOX.
3. ALL ROADWAY CROSSING SHALL BE DONE THROUGH A TRENCHLESS SLEEVE MULTIPLE IRRIGATION CONDUIT. FOR DETAIL, SEE SHEET L-9.
4. FOR MAINLINE CROSSING AT BRIDGE SEE DETAIL SHEET L-10 THROUGH L-12.
5. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING A PRE-CONSTRUCTION INSPECTION WITH THE STATE TO CHECK THE CONDITION OF ALL SPRINKLER SYSTEMS AND PLANT MATERIAL PRIOR TO START OF WORK. ANY DAMAGE TO EXISTING SPRINKLER SYSTEM OR PLANTS DURING CONSTRUCTION SHALL BE RESTORED/REPLACED TO THE ORIGINAL CONDITION BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE.

NEW 40 STATION AUTOMATIC IRRIGATION CONTROLLER STRATEGICALLY PLACED FOR ACCESS (WALL MOUNT) INSIDE STAINLESS STEEL STRONGBOX. VERIFY EXACT LOCATION WITH THE ENGINEER PRIOR TO INSTALLATION. PROVIDE 120 VOLT POWER IN WATERPROOF J-BOX.

DATE: _____
 SURVEY PLOTTED BY: _____
 DRAWN BY: _____
 TRACED BY: _____
 DESIGNED BY: _____
 CHECKED BY: _____
 No. _____








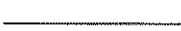


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STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

LANDSCAPE PLAN
HALAWA INTERCHANGE
BUBBLER IRRIGATION PLAN







H-3 FINISH (UNIT VIIA)
 FAIP NO. I-H3-1(75), UNIT VIIA

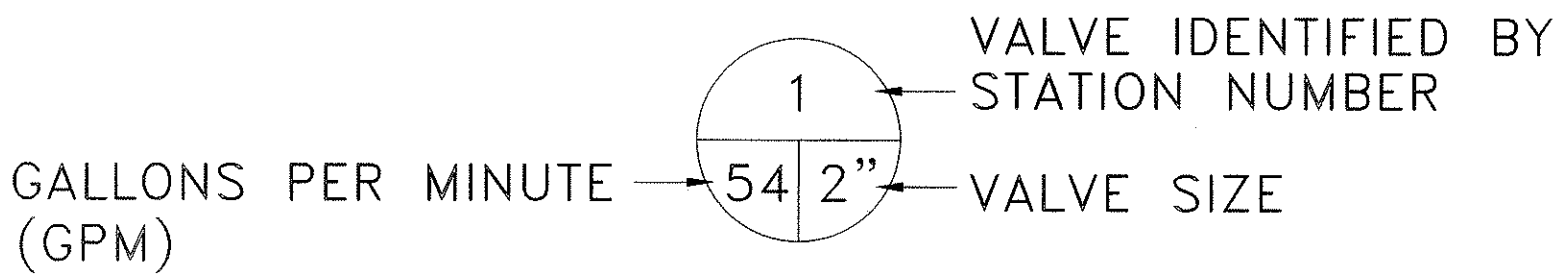
SCALE: 1"=40' DATE: NOVEMBER 2001
 SHEET NO. L-4 OF 14 SHEETS

IRRIGATION MATERIAL SCHEDULE			
SYMBOL	DESCRIPTION	MANUFACTURER/ CATALOG NUMBER	DETAIL
	REMOTE CONTROL VALVE	RAINBIRD EFB-GB-PRS-B OR EQUAL, SIZE AS NOTED	
	40 STATION CONTROLLER WALL MOUNT	RAINBIRD ESP-MC SERIES OR APPROVED EQUAL	
	STAINLESS STEEL STRONG BOX WITH PEDESTAL	STRONGBOX MODEL SB-18SS WITH PED-18SS	
	8 STATION CONTROLLER WALL MOUNT	RAINBIRD ESP-MC SERIES OR APPROVED EQUAL	
	GATE VALVE	NIBCO T-113, OR EQUAL 2 1/2" SIZE.	
	IRRIGATION MAINLINE	SCHEDULE 40 PVC, 2-1/2" SIZE	
	IRRIGATION LATERAL	CLASS 200 PVC, SIZE AS NOTED	
	IRRIGATION SLEEVE	HIGH DENSITY POLYETHYLENE, SIZE AS DETAILED	
	IRRIGATION CONDUIT	SCHEDULE 80 PVC, SIZE AS NOTED	

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, AND ACCEPTABLE TO THE ENGINEER. 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 36" DEEP. IN PLANTING AREAS BURY PRESSURE MAINLINES 18" AND LATERAL LINES 12" DEEP.
2. THIS IRRIGATION SYSTEM WAS DESIGNED WITH A MINIMUM STATIC WATER PRESSURE OF 110 PSI AT THE POINT OF CONNECTION. NOTIFY THE ENGINEER, IF WATER PRESSURE IS LESS THAN 110 PSI OR GREATER THAN 120 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 WITH THE ENGINEER.
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 WALLS UNLESS NOTED OTHERWISE. ADJUST ALL SPRINKLER HEADS TO OBTAIN HEAD TO HEAD COVERAGE. ADJUST FLOW CONTROL OF IRRIGATION CONTROL VALVES TO MINIMIZE MISTING. OPERATE ONLY ONE VALVE AT A TIME.
7. PHRASE "OR EQUAL" SHALL MEAN EQUALLY ACCEPTABLE TO THE ENGINEER.
8. ALL SPRINKLER HEADS SHALL BE INSTALLED WITH DOUBLE SWING JOINTS.
9. TRENCH AND WIRING DETAIL: TOPSOIL, SELECT BACKFILL MATERIAL, AND 6-INCH BEDDING MATERIAL SHALL BE CONSIDERED INCIDENTAL.

IRRIGATION HEAD SCHEDULE						
HEAD SYMBOL	ANGLE	MANUFACTURER/ CATALOG NUMBER	G.P.M.	P.S.I.	RAD.	DETAIL
IMPACT SPRINKLER ON RISER	90° 180°	RAINBIRD 5000 PLUS SERIES (OR EQUAL)				
		5000-S-PL-PC-SAM-N	4.25	25	39'	
		5000-S-PL-PC-SAM-N	7.06	35	43'	
IMPACT SPRINKLER ON RISER		RAINBIRD L36H SERIES (OR EQUAL)				
	360°	A07360-09	17.10	55	60'	
IMPACT SPRINKLER ON RISER	90° 180°	HUNTER I-10 SERIES (OR EQUAL)				
		I-10-ARV-0.75SR	0.58	30	23'	
		I-10-ARV-1.5SR	1.1	30	23'	
FLOOD BUBBLER (MOUNT ON 4" RISER)		RAINBIRD 1800 SERIES (OR EQUAL)				
	90°	(2 PER TREE) 1408	2.0 EACH	30	---	



VALVE FLAG

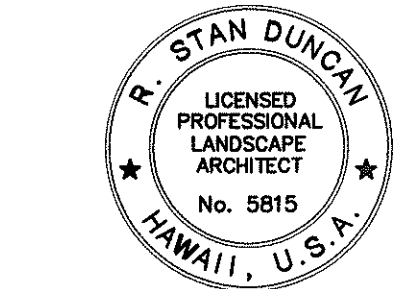


CONDUIT CALL OUT



SLEEVE CALL OUT

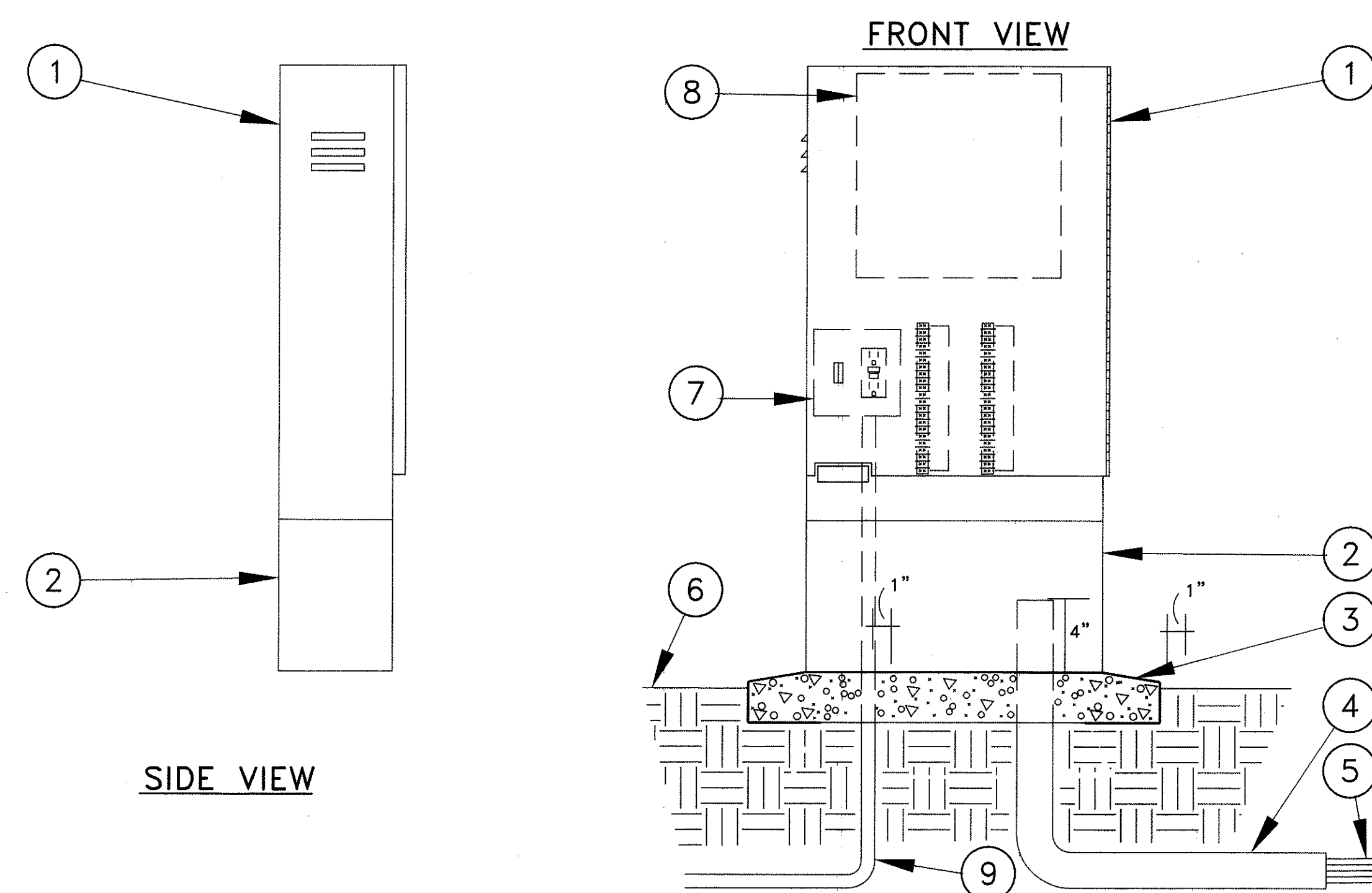
ORIGINAL PLAN
DATE
DRAWN BY
CHECKED BY
NOTED BY
QUANTITIES BY
No.



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8/16/04	Revised Irrigation Material Schedule & Irrigation Head Schedule
Date	Revision
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
LANDSCAPE PLAN HALAWA INTERCHANGE	
IRRIGATION LEGEND AND NOTES	
H-3 FINISH (UNIT VIIA) FAIP NO. I-H3-1(75), UNIT VIIA	
SCALE: AS SHOWN	DATE: NOVEMBER 2001
SHEET NO. L-5 OF 14 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75), UNIT VIIA	2003	13	60



LEGEND

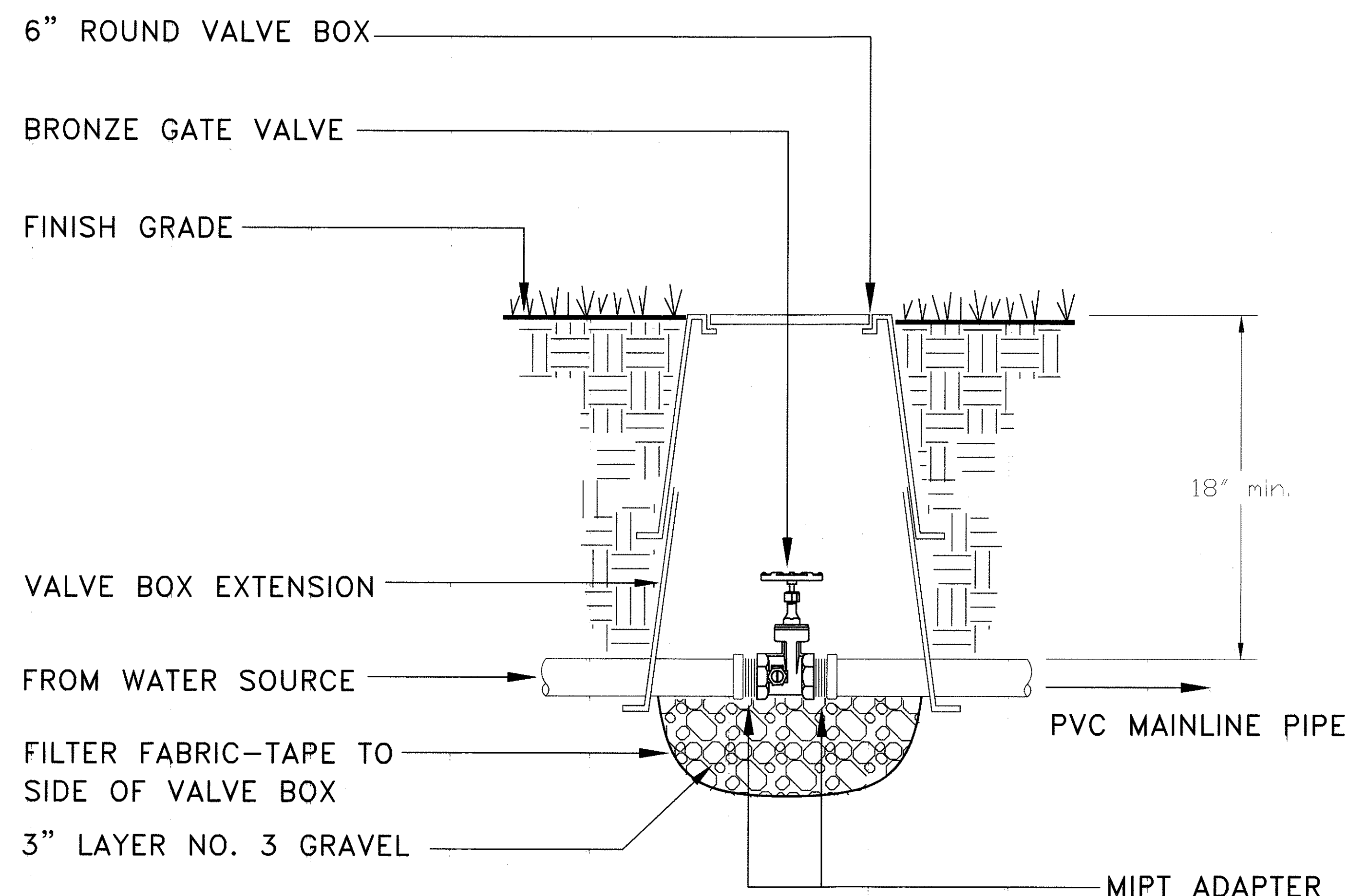
- | | |
|---|---|
| <p>①. CONTROLLER ENCLOSURE.</p> <p>②. PEDESTAL.</p> <p>③. POURED CONCRETE BASE. - 6" MIN. THICKNESS - EXTEND 6" BEYOND OUTSIDE DIMENSIONS OF ENCLOSURE WITH 1/2% SLOPE FOR DRAINAGE.</p> <p>④. PVC LONG SWEEP ELL - USE ONE SWEEP ELL PER CONTROLLER. RUN CONTROL WIRES IN ELEC. CONDUIT TO NEAREST IRRIG. PIPE. BEYOND THIS POINT DIRECT BURY CONTROL WIRE BELOW IRRIGATION PIPE TO REMOTE CONTROL VALVES.</p> | <p>⑤. DIRECT BURIAL CONTROL WIRES TO CONTROL VALVES.</p> <p>⑥. FINISH GRADE.</p> <p>⑦. CONTROLLER SUB-ASSEMBLY (CSA) INCLUDES GFI & TERMINAL STRIPS WITH PLACARDS.</p> <p>⑧. AUTOMATIC CONTROLLER - FASTEN SECURELY TO BACK BOARD OF BOX</p> <p>⑨. POWER SOURCE CONDUIT - PROVIDE 120-VOLT SERVICE IN CONDUIT AND PLUG OR HARD WIRE IF REQUIRED. CONNECT TO WATERPROOF ELECTRICAL OUTLET PROVIDED BY OTHER (SEE ELECTRICAL DRAWINGS).</p> |
|---|---|

1

CONTROLLER MOUNTED IN ENCLOSURE

NOT TO SCALE

CADD REF: CLOCK-2



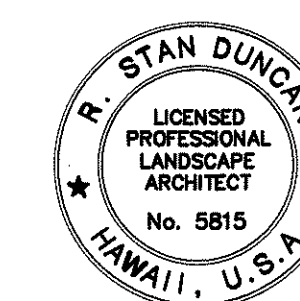
2

GATE VALVE

NOT TO SCALE

CADD REF: IRR-204

ORIGINAL PLAN
DATE: _____
DRAWN BY: _____
DESIGNED BY: _____
CHECKED BY: _____
No. _____

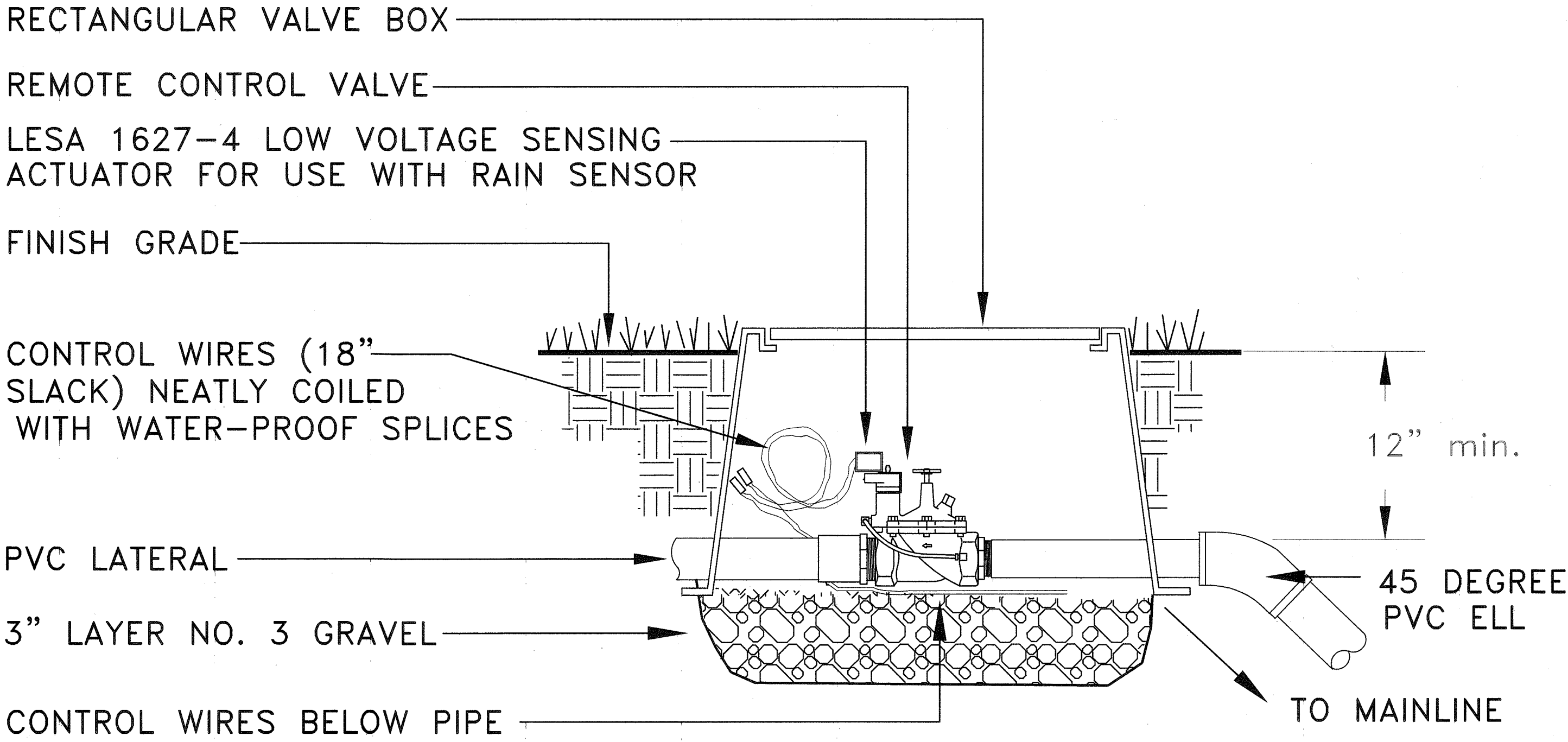


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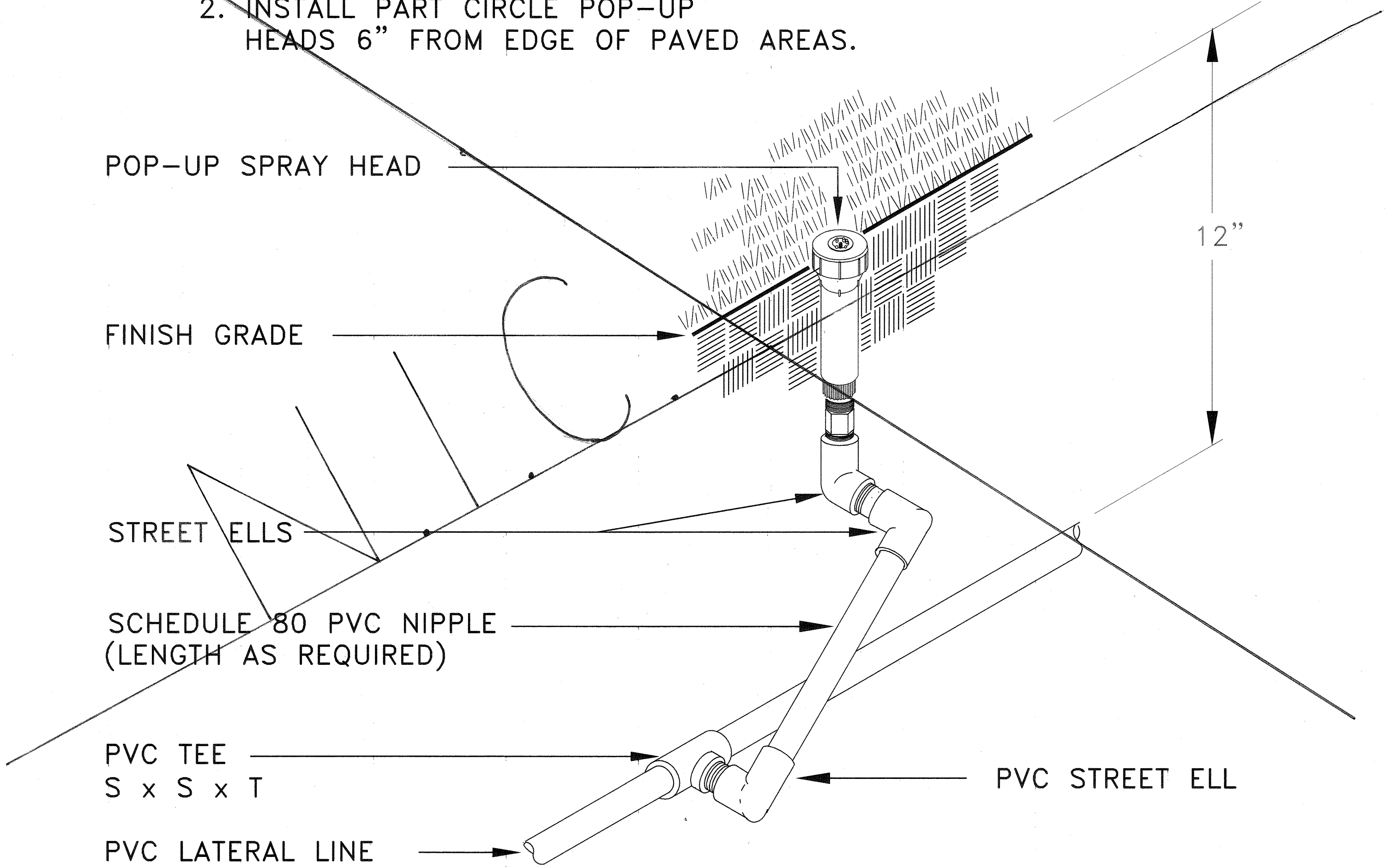
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
LANDSCAPE PLAN
HALAWA INTERCHANGE
IRRIGATION DETAILS
H-3 FINISH (UNIT VIIA)
FAIP NO. I-H3-1(75), UNIT VIIA

SCALE: AS SHOWN DATE: OCTOBER 2001
SHEET NO. L-6 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75), UNIT VIIA	2003	14	60



- NOTE: 1. KBI OR LASCO SWING JOINTS MAY BE USED UPON APPROVAL BY ENGINEER.
2. INSTALL PART CIRCLE POP-UP HEADS 6" FROM EDGE OF PAVED AREAS.



3 REMOTE CONTROL VALVE

NOT TO SCALE

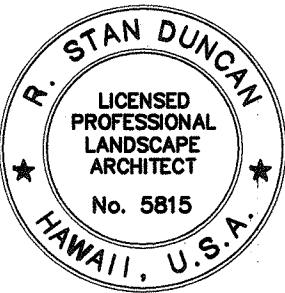
CADD REF: IRR-201a

4 LAWN SPRAY POP-UP HEAD

NOT TO SCALE

CADD REF: IRR-101

ORIGINAL PLAN
DATE
SURVEY PLOTTED BY
DRAWN BY
CHECKED BY
NOTE BOOK
QUANTITIES BY
No.



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LANDSCAPE PLAN
HALAWA INTERCHANGE
IRRIGATION DETAILS

H-3 FINISH (UNIT VIIA)
FAIP NO. I-H3-1(75), UNIT VIIA

SCALE: AS SHOWN DATE: NOVEMBER 2001
SHEET NO. L-7 OF 14 SHEETS

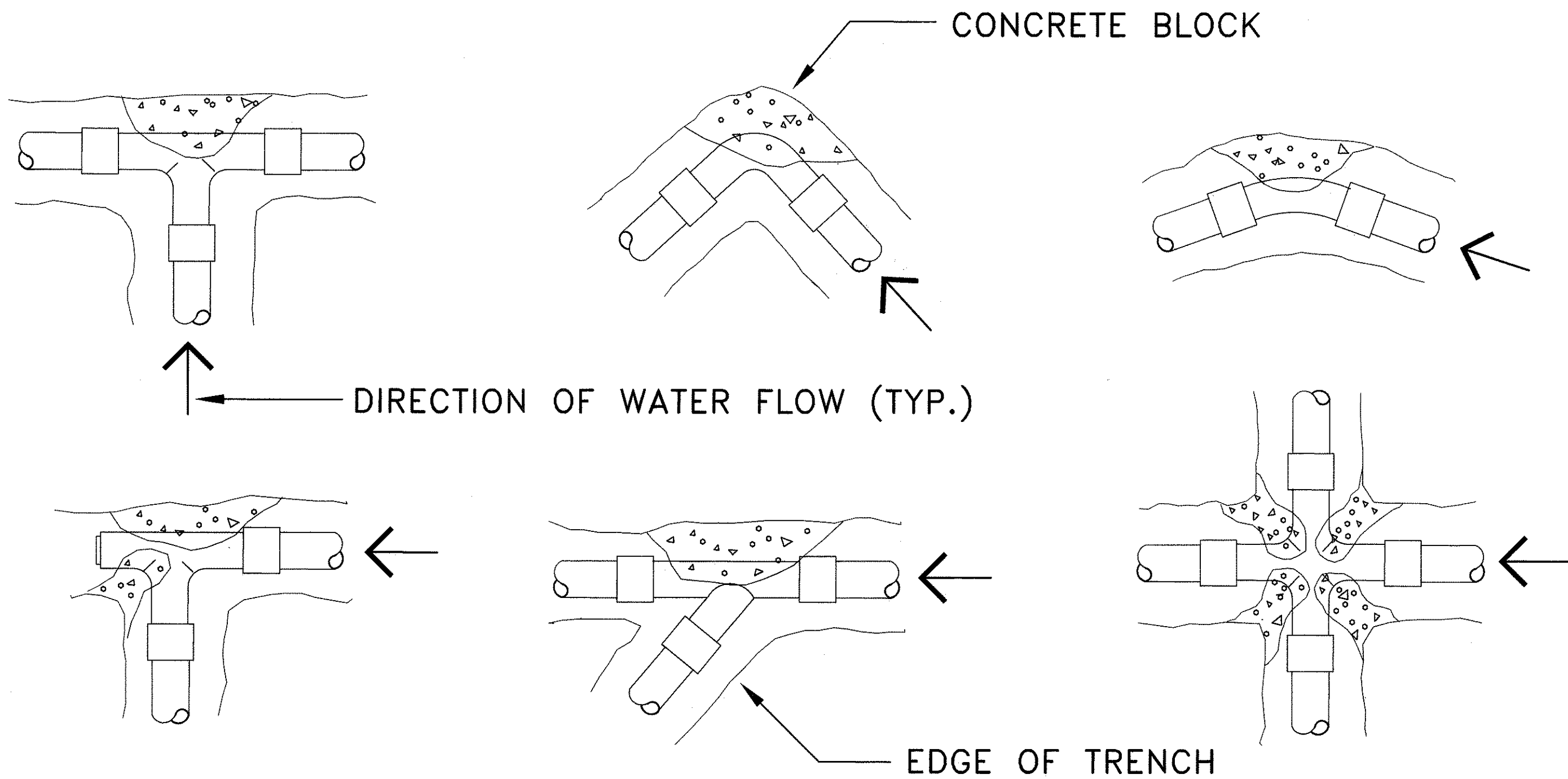
"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75), UNIT VIIA	2003	15	60

THRUST BLOCK BEARING AREA (SQ. FT.)				
PIPE SIZE	1 1/4" - 2 1/2"	3"	4"	6"
TEES/ELLS	1.00	1.00	1.25	3.2
90 BENDS	1.00	1.25	2.00	4.5
45 BENDS	1.00	1.00	1.00	2.4

NOTE:

INSTALL THRUST BLOCK AT ALL MAINLINE BENDS, TEES OR ELLS AS SHOWN BELOW. THRUST BLOCKS SHALL BE MINIMUM OF (1) CU. FT. REDI-MIX CONCRETE OR 2500 PSI 28 DAY CONCRETE.

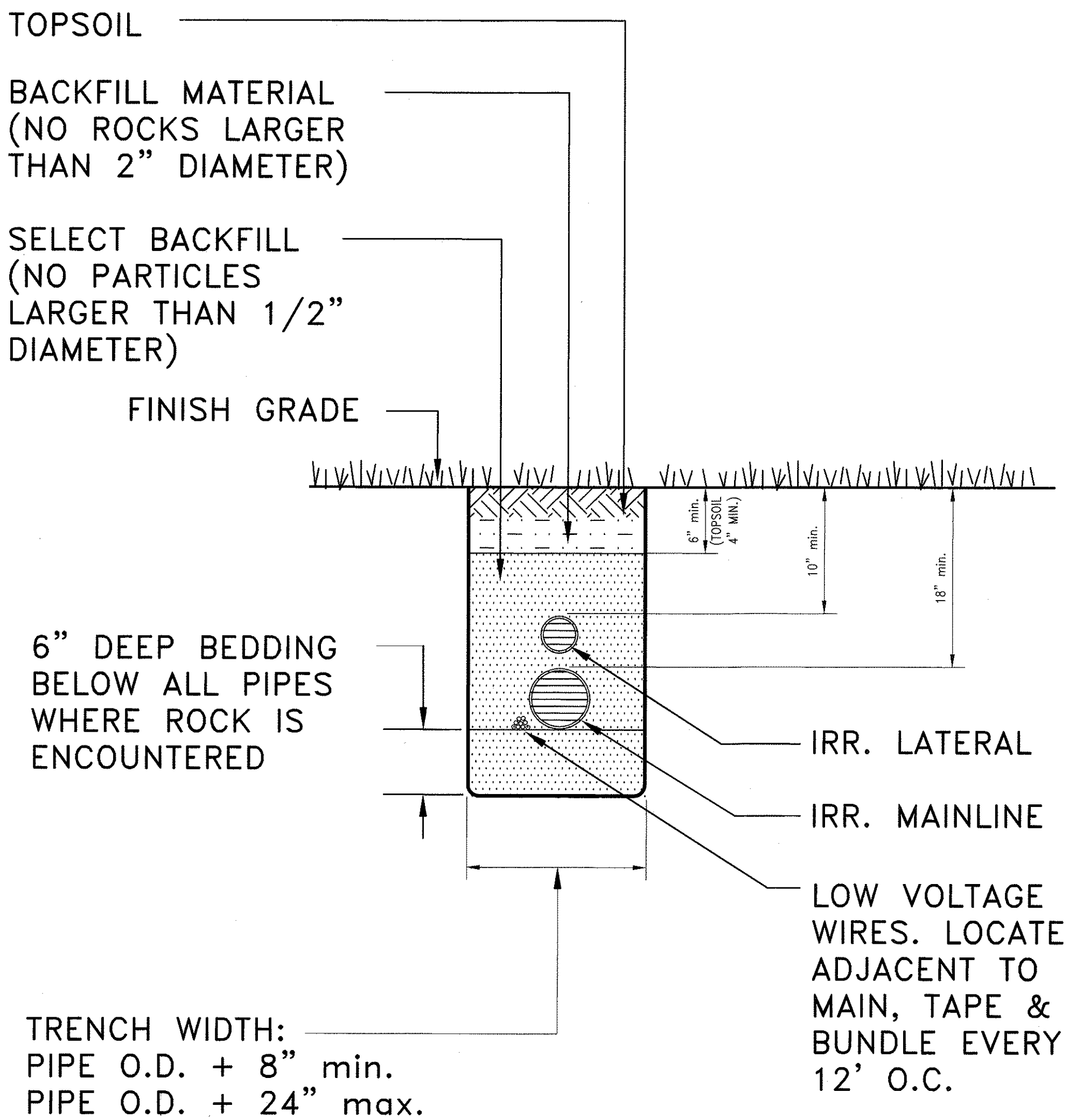


5

THRUST BLOCK DETAIL

NOT TO SCALE

CADD REF: IRR-401



6

TRENCH & WIRING DETAIL

NOT TO SCALE

CADD REF: IRR-402

ORIGINAL PLAN

DATE

SURVEY PLOTTED BY

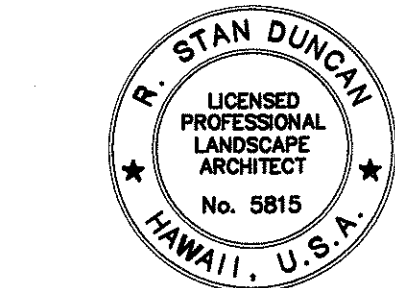
DRAWN BY

TRACED BY

NOTES BY

CHECKED BY

No.



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STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

LANDSCAPE PLAN

HALAWA INTERCHANGE

IRRIGATION DETAILS

H-3 FINISH (UNIT VIIA)

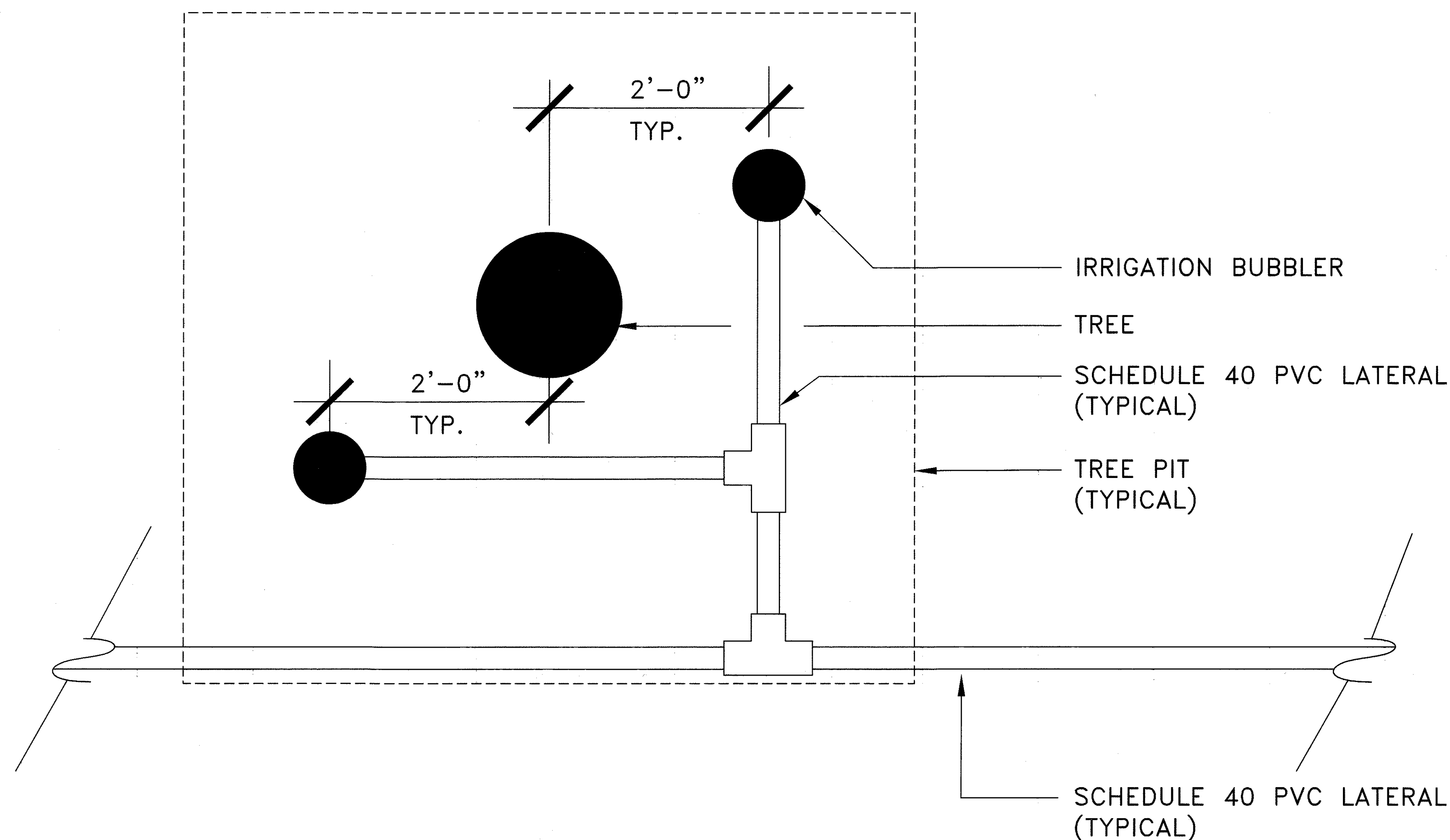
FAIP NO. I-H3-1(75), UNIT VIIA

SCALE: AS SHOWN

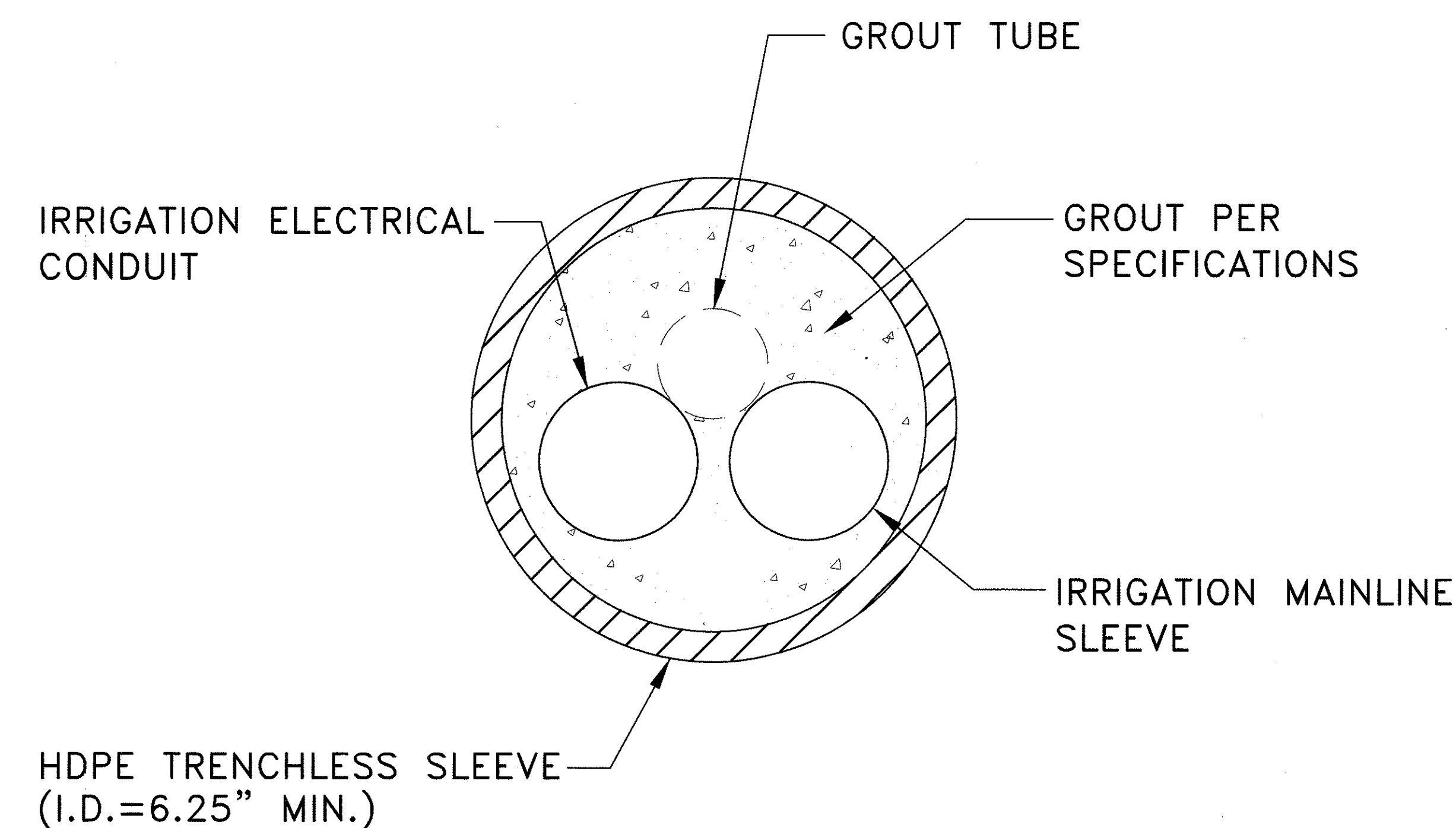
DATE: NOVEMBER 2001

SHEET NO. L-8 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75), UNIT VIIA	2003	16	60



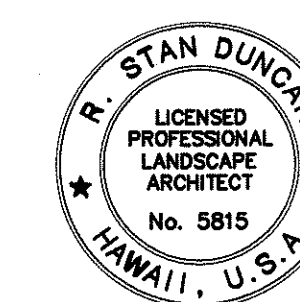
7 TYPICAL TREE WELL BUBBLER PLAN
NOT TO SCALE



- NOTES:
1. 48" MINIMUM COVER OVER HDPE SLEEVE.
 2. REFER TO SPECIFICATIONS FOR INSTALLATION AND PROCEDURES.

8 TRENCHLESS SLEEVE MULTIPLE IRRIGATION SYSTEM CONDUIT
NOT TO SCALE

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

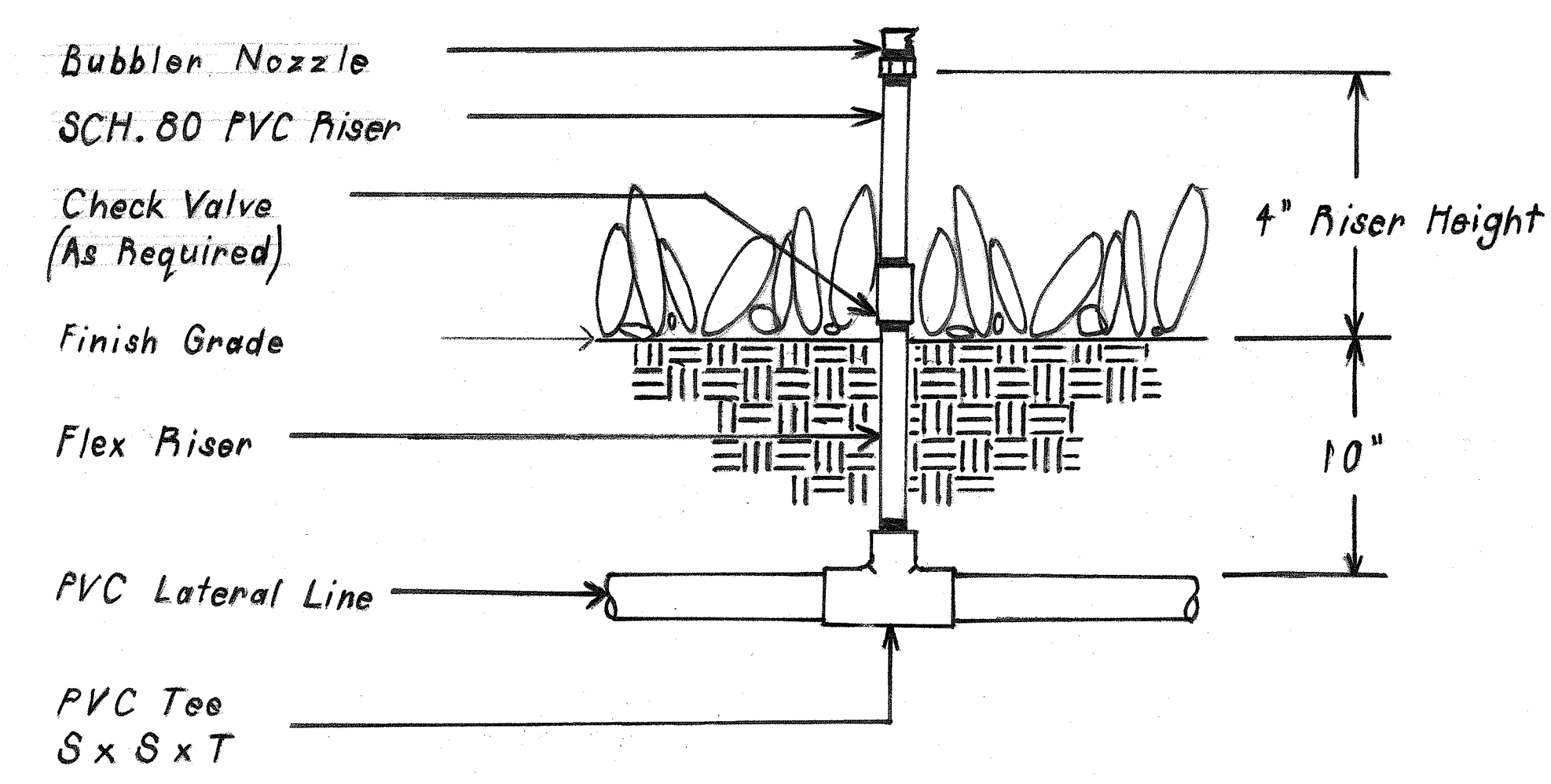
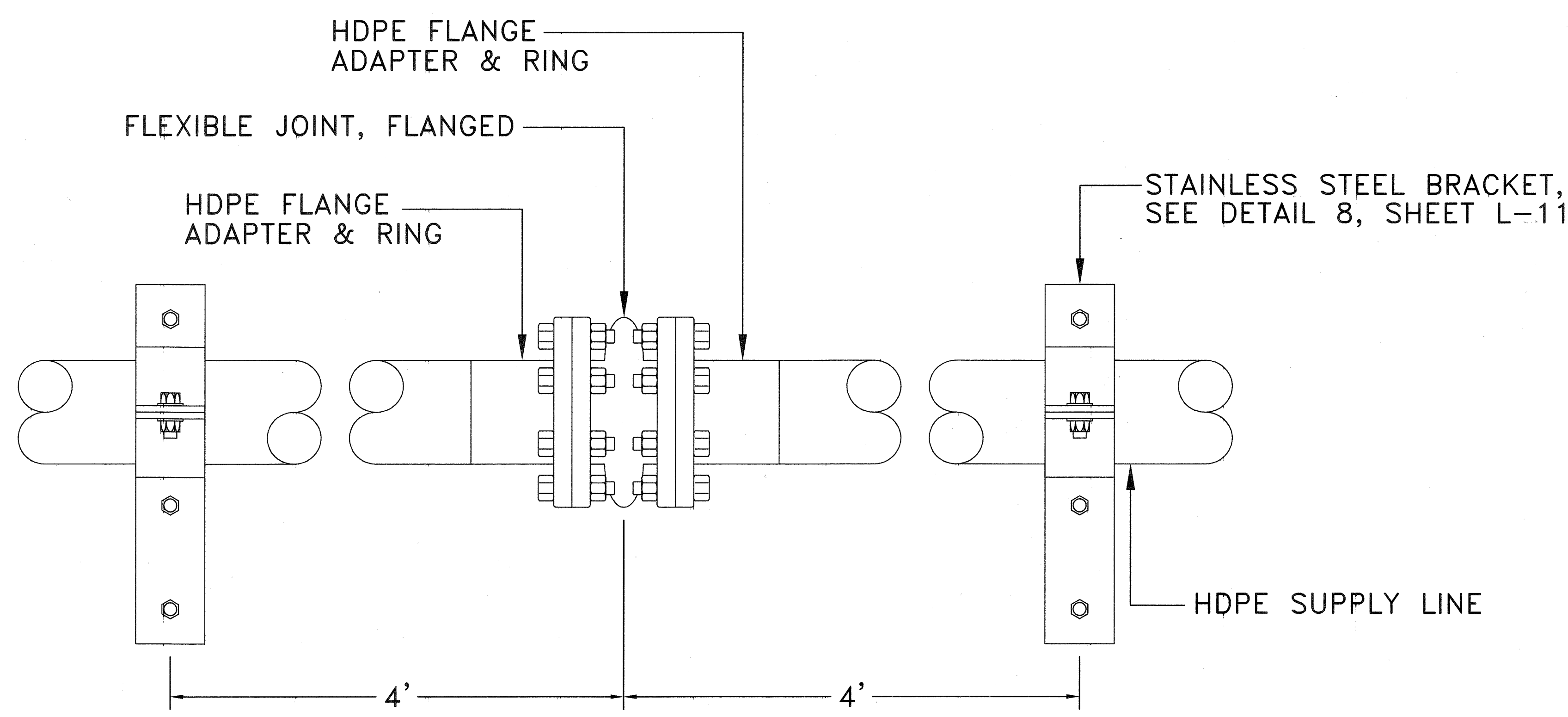


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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
LANDSCAPE PLAN
HALAWA INTERCHANGE
IRRIGATION DETAILS
H-3 FINISH (UNIT VIIA)
FAIP NO. I-H3-1(75), UNIT VIIA

SCALE: AS SHOWN DATE: NOVEMBER 2001
SHEET NO. L-9 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75), UNIT VIIA	2003	17	60

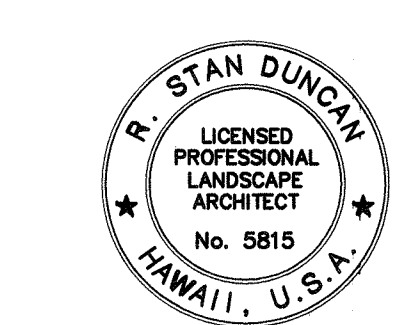


Note: Locate Shrub Spray Heads on Riser 12" From Paved Areas and Building Wall Lines Unless Otherwise Directed By the Engineer.

11 BUBBLER HEAD ON RISER
Not To Scale

7 TYPICAL DEVICE FOR BRIDGE EXPANSION / CONTRACTION DETAIL,
ELEVATION VIEW
NOT TO SCALE

ORIGINAL PLAN
SURVEY PLOTTED BY
DRAWN BY
DESIGNED BY
NOTE BOOK
QUANTITIES BY
CHECKED BY
No.



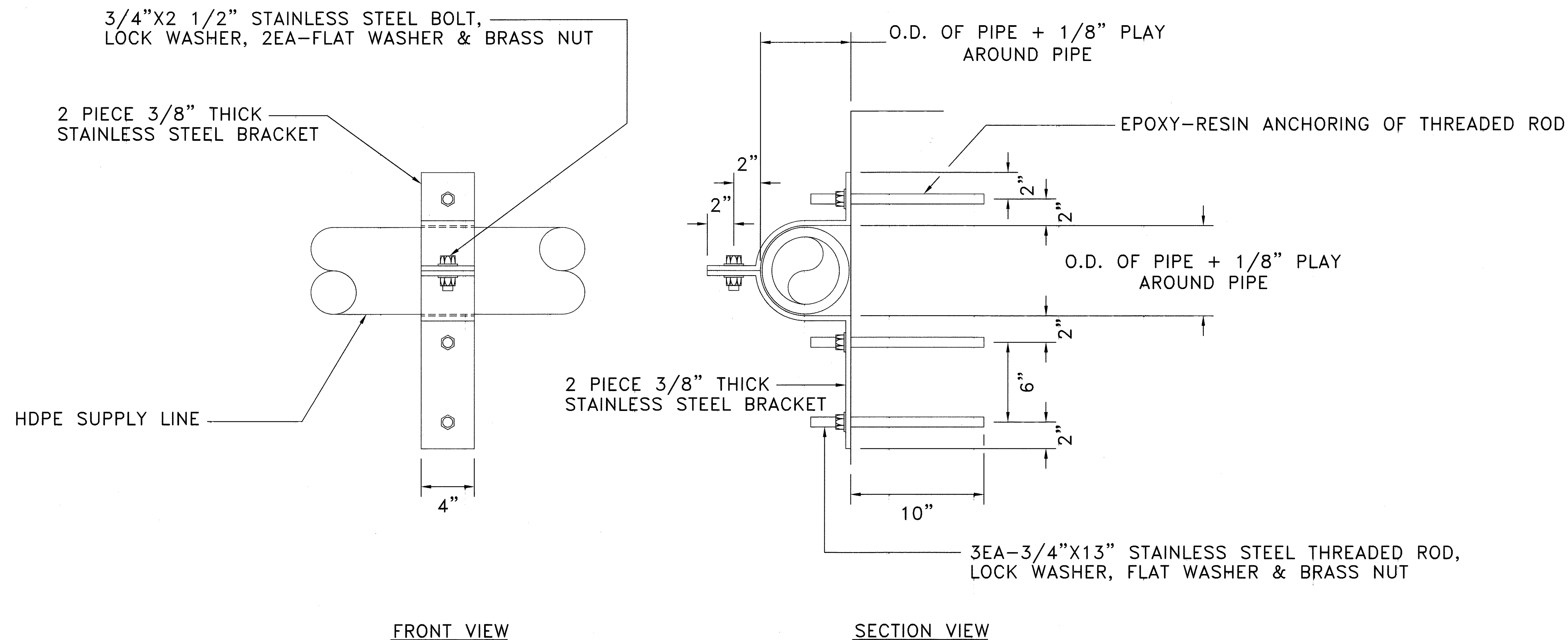
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LANDSCAPE PLAN
HALAWA INTERCHANGE
IRRIGATION DETAILS
H-3 FINISH (UNIT VIIA)
FAIP NO. I-H3-1(75), UNIT VIIA
SCALE: AS SHOWN
DATE: NOVEMBER 2001
SHEET NO. L-10 OF 14 SHEETS

17

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75), UNIT VIIA	2003	18	60

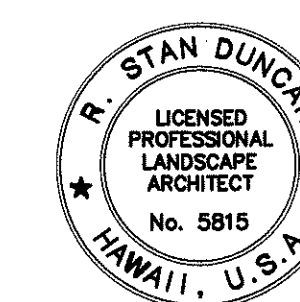


NOTE: INSTALL BRACKETS 8'-0" O.C. ALONG THE SOUTH (MAKAI) SIDE OF BRIDGE CROSSING NORTH HALAWA VALLEY STREAM.

8

TYPICAL HDPE SUPPLY LINE BRACKET DETAIL NOT TO SCALE

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DESIGNED BY	CHECKED BY	
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HALAWA INTERCHANGE
IRRIGATION DETAILS

H-3 FINISH (UNIT VIIA)
FAIP NO. I-H3-1(75), UNIT VIIA

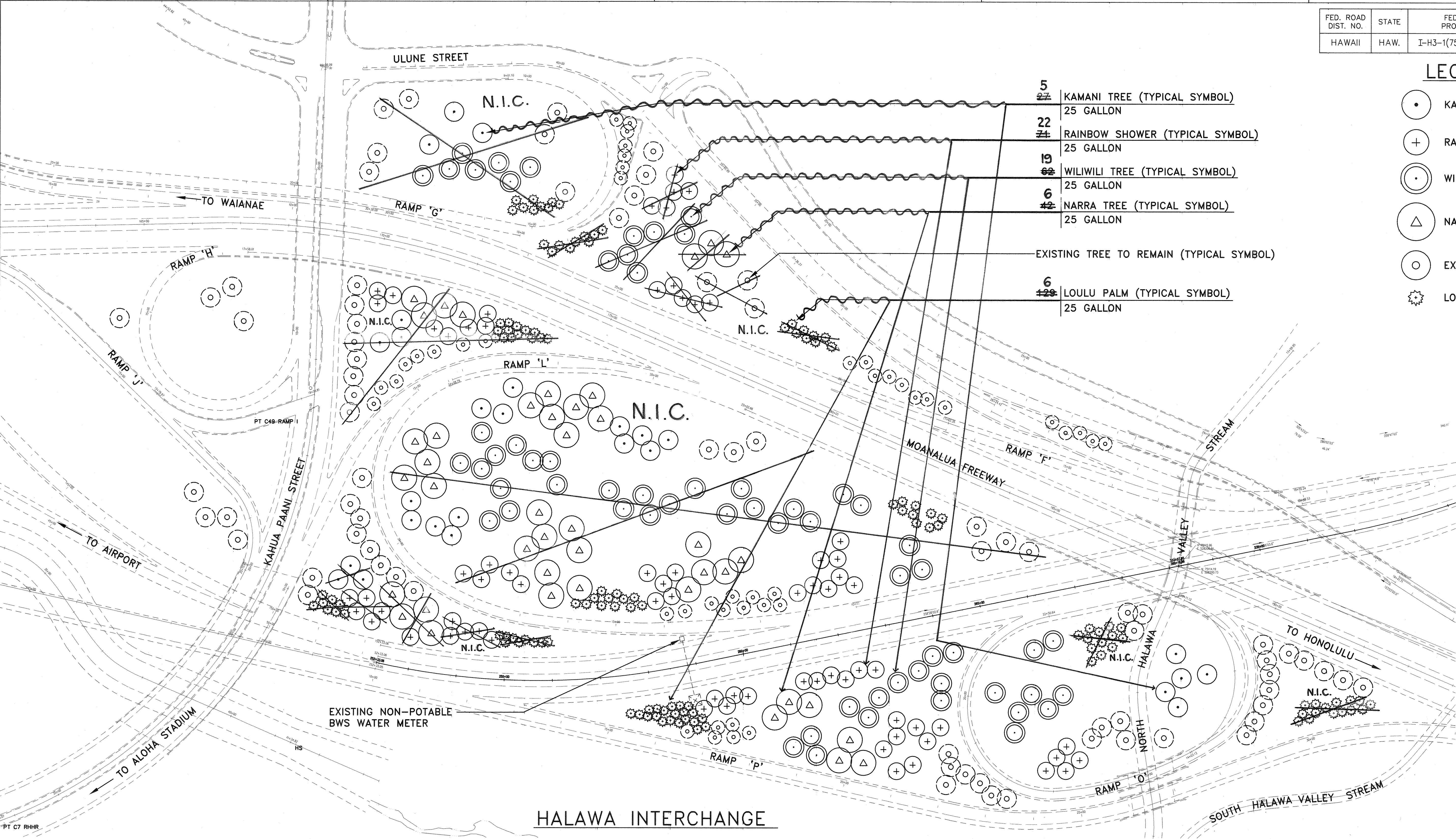
SCALE: AS SHOWN DATE: NOVEMBER 2001
SHEET NO. L-11 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75), UNIT VIIA	2003	19	56

LEGEND

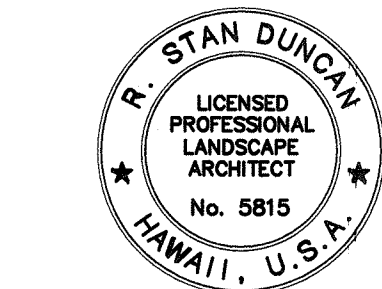
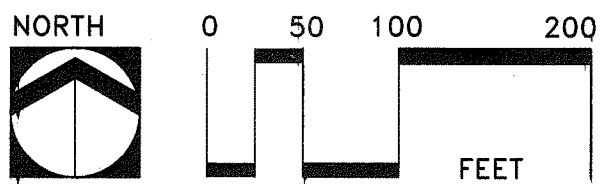
- KAMANI TREE
- RAINBOW SHOWER TREE
- WILIWILI TREE
- NARRA TREE
- EXISTING TREE
- LOULU PALM

- 5 ~~22~~ KAMANI TREE (TYPICAL SYMBOL) 25 GALLON
- 22 ~~74~~ RAINBOW SHOWER (TYPICAL SYMBOL) 25 GALLON
- 19 ~~62~~ WILIWILI TREE (TYPICAL SYMBOL) 25 GALLON
- 6 ~~42~~ NARRA TREE (TYPICAL SYMBOL) 25 GALLON
- EXISTING TREE TO REMAIN (TYPICAL SYMBOL)
- 6 ~~42~~ LOULU PALM (TYPICAL SYMBOL) 25 GALLON



NOTES:
1.CONTRACTOR TO FIELD STAKE ALL TREE AND PALM LOCATIONS FOR APPROVAL BY THE ENGINEER PRIOR TO PLANTING OPERATIONS.

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	



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HALAWA INTERCHANGE
PLANTING PLAN

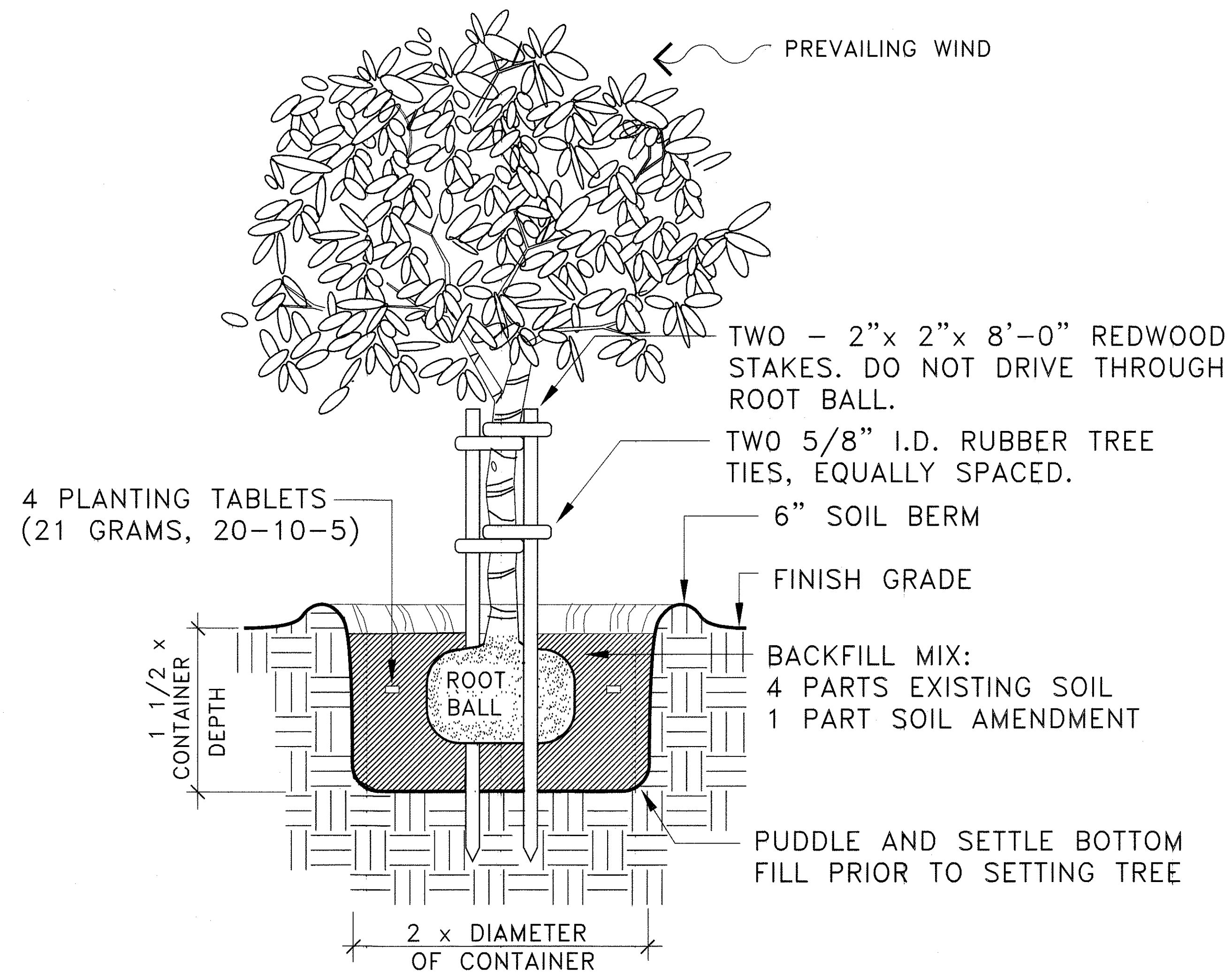
H-3 FINISH (UNIT VIIA)
FAIP NO. I-H3-1(75), UNIT VIIA

SCALE: 1"=100' DATE: NOVEMBER 2001

SHEET NO. L-12 OF 14 SHEETS

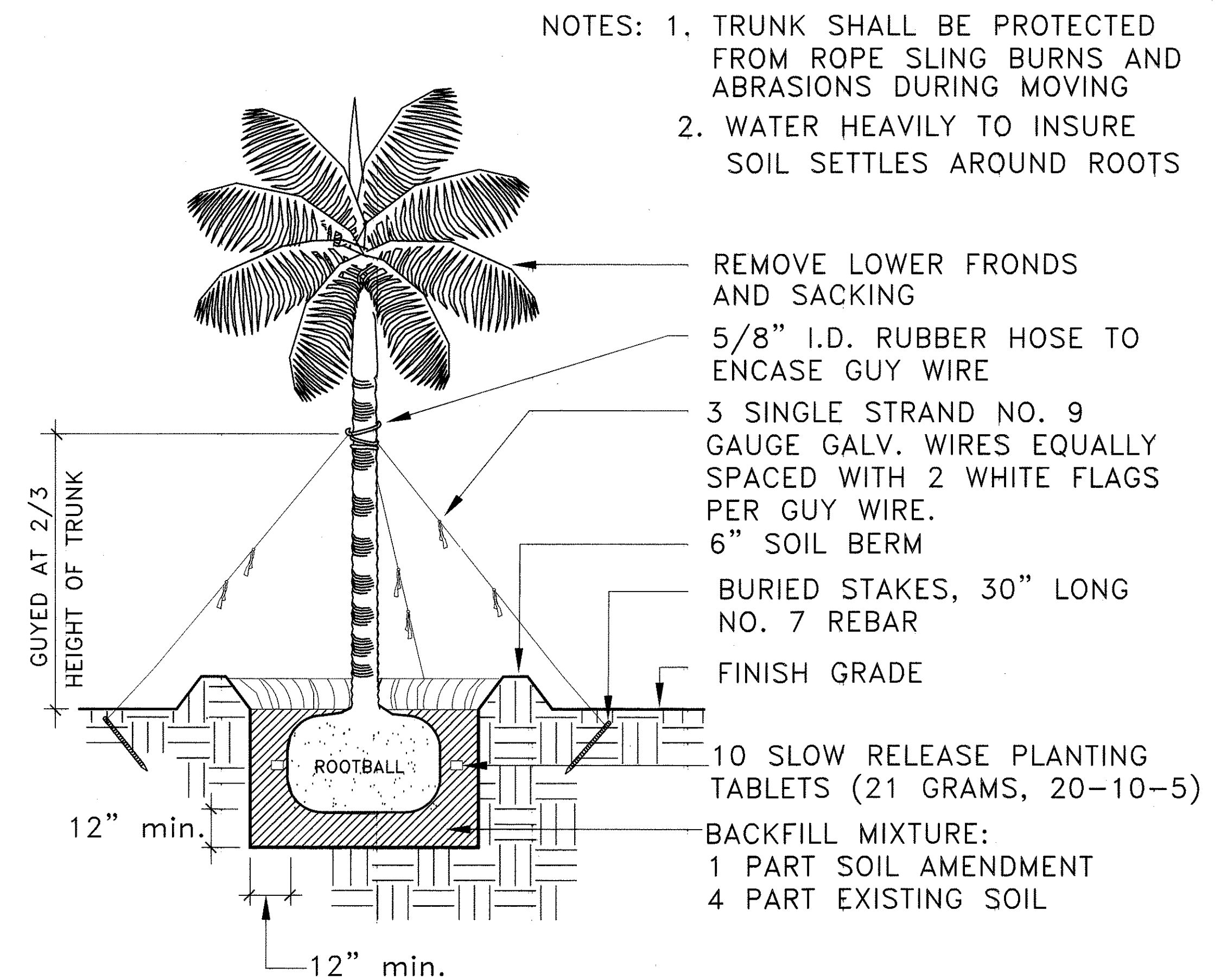
"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75), UNIT VIIA	2003	20	60



1 DOUBLE TREE STAKING DETAIL
NOT TO SCALE

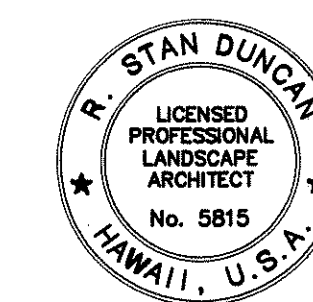
CADD REF: P-102



2 PALM PLANTING DETAIL
NOT TO SCALE

CADD REF: P-105

ORIGINAL PLAN	DATE
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No.	



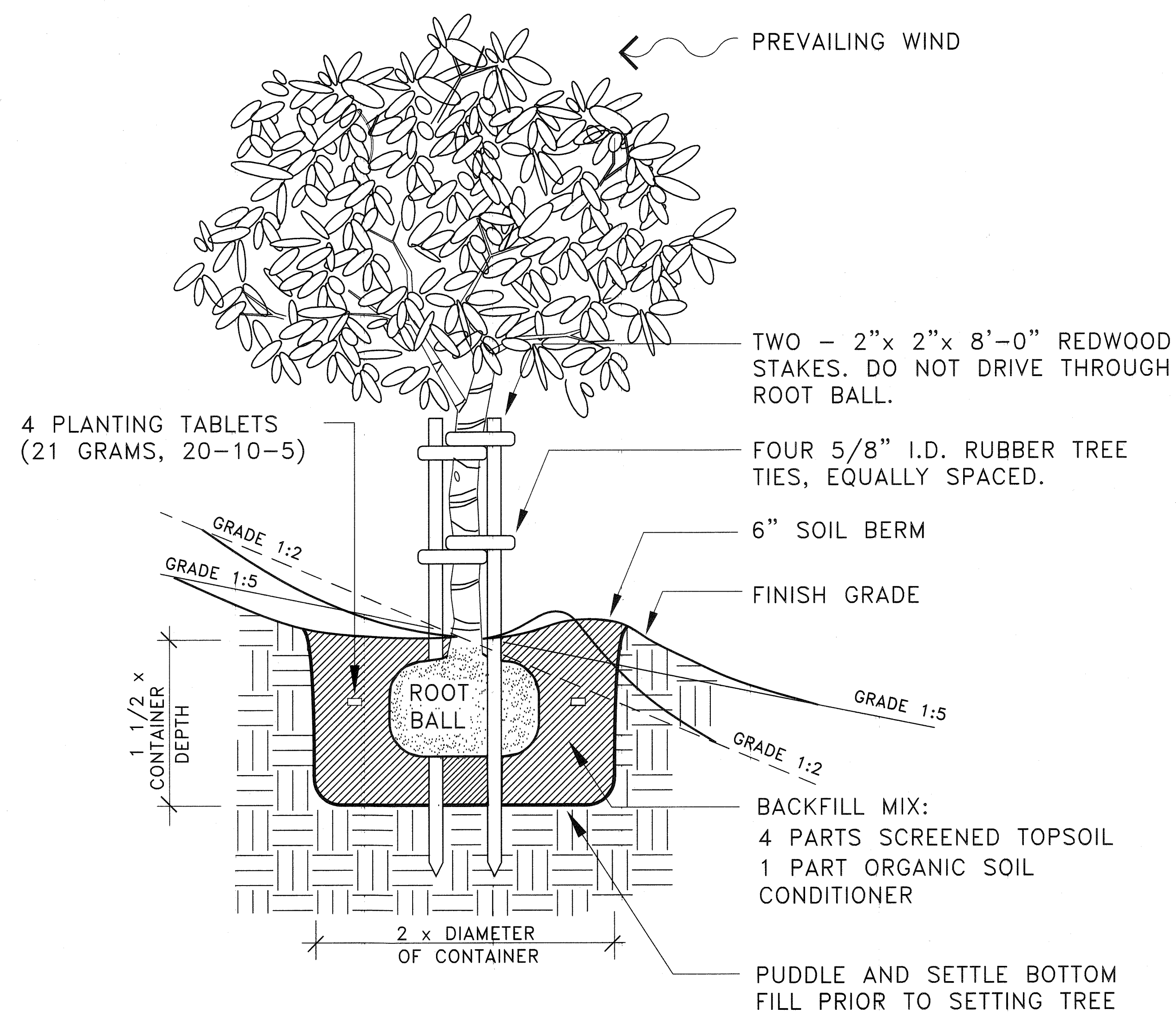
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LANDSCAPE PLAN
HALAWA INTERCHANGE
DETAILS, LIST AND NOTES
H-3 FINISH (UNIT VIIA)
FAIP NO. I-H3-1(75), UNIT VIIA

SCALE: AS SHOWN DATE: NOVEMBER 2001
SHEET NO. L-13 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75), UNIT VIIA	2003	21	60



DOUBLE TREE STAKING ON SLOPE

NOT TO SCALE

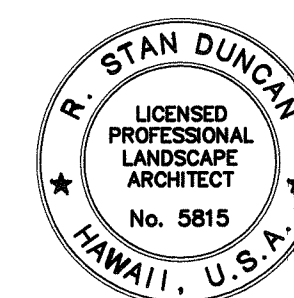
CADD REF: P-103

PLANT LIST FOR HALAWA INTERCHANGE							
QUANTITY	C O M M O N	N A M E	B O T A N I C A L	N A M E	SIZE	HEIGHT	REMARKS
	T R E E S						
5 27	KAMANI		Calophyllum	inophyllum	25 gal.	10'-12'	2" caliper minimum
19 62	WILIWILI		Erythrina	sandwicensis	25 gal.	10'-12'	2" caliper minimum
22 71	RAINBOW SHOWER		Cassia	javanica x. C. fistula	25 gal.	10'-12'	2" caliper minimum
6 42	NARRA		Pterocarpus	indicus	25 gal.		2" caliper minimum
	P A L M S						
6 129	LOULU PALM		Pritchardia	spp.	25 gal.	2'-3'	Trunk Height

PLANT NOTES:

1. CONTRACTOR SHALL FIELD VERIFY ALL PLANT QUANTITIES AND DIMENSIONS PRIOR TO INSTALLATION. QUANTITIES SHOWN IN PLANT LIST ARE FOR CONVENIENCE ONLY, ACTUAL FIELD CONDITIONS SHALL GOVERN.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES.
3. CONTRACTOR SHALL NOTIFY AND MEET WITH THE ENGINEER PRIOR TO INSTALLATION FOR VERIFICATION AND INTERPRETATION OF PLANS.
4. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES IN PLANT LOCATIONS OR INSUFFICIENT PLANT QUANTITIES DUE TO DIFFERENCES IN PLAN AND ACTUAL FIELD CONDITIONS.
5. CONTRACTOR SHALL NOTIFY THE ENGINEER 30 DAYS PRIOR TO PLANTING OPERATIONS FOR ACCEPTANCE OF ALL PLANT MATERIAL AT PLACE OF GROWTH. ALL PLANT MATERIAL NOT ACCEPTED BY THE ENGINEER WILL BE SUBJECT TO REJECTION.

ORIGINAL PLAN	SURVEY PLOTTED BY _____ DATE _____
NOTE BOOK	DRAWN BY _____
	TRACED BY _____
	DESIGNED BY _____
	QUANTITIES BY _____
No. _____	CHECKED BY _____



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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LANDSCAPE PLAN
HALAWA INTERCHANGE
DETAILS, LIST AND NOTES

H-3 FINISH (UNIT VIIA)
FAIP NO. I-H3-1(75), UNIT VIIA

SCALE: AS SHOWN DATE: NOVEMBER 2001

SHEET NO. L-14 OF 14 SHEETS

"AC-BUILT"