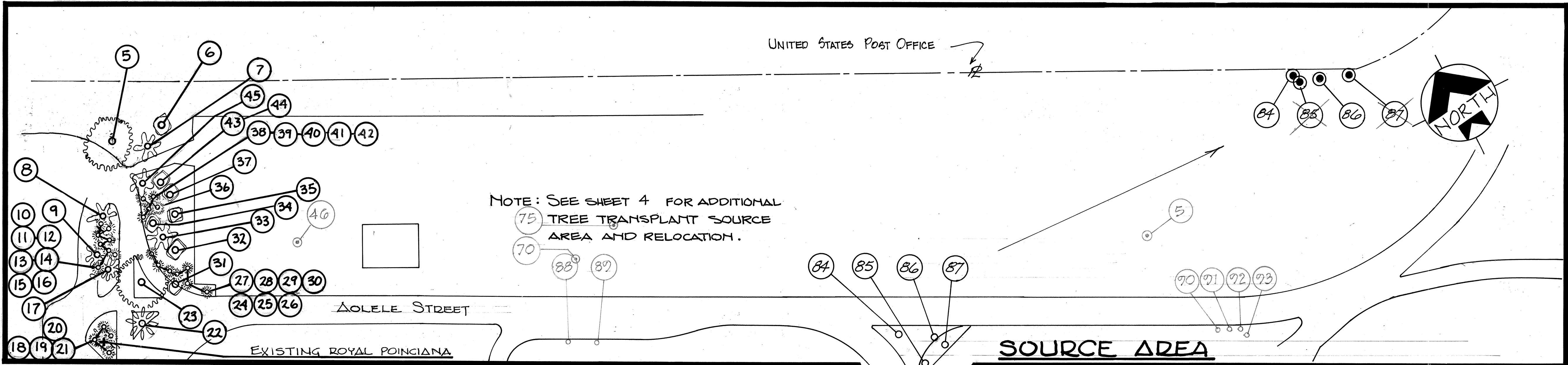
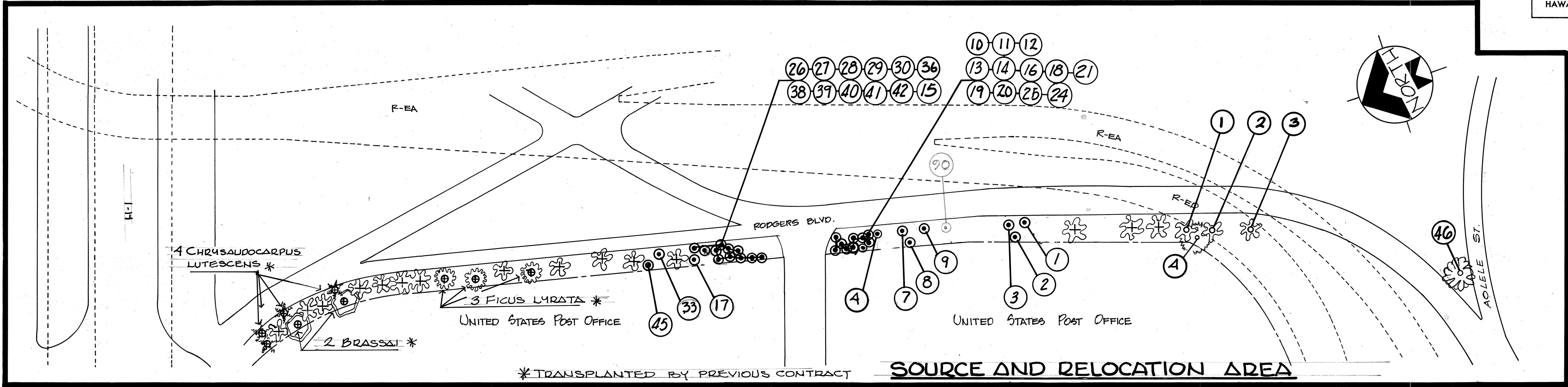


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(122)	1977	80	181



Note:
1. Trees to be relocated within Airport Terminal Area as directed by the Engineer.

TRANSPLANT TREE LIST

TREE NO	BOTANIC NAME	COMMON NAME	SIZE	NEW LOCATION
1	COCOS NUCIFERA	COCONUT PALM	25'	EAST OF POST OFF.
2	"	"	35'	" " " "
3	"	"	25'	" " " "
4	SPATHODEA CAMPANULA	AFRICAN TULIP TREE	25'	" " " "
5	FICUS RETUSA	BANYON	15'	SEE NOTE 1
6	PANDANUS ODORATISS.	SCREW PINE "HALA"	20'	SEE SHEET 82
7	COCOS NUCIFERA	COCONUT PALM	40'	E. OF P.O.
8	"	"	40'	" " " "
9	"	"	50'	" " " "
10	CYCAS CIRCINALIS	SAGO PALM	6'	" " " "
11	"	"	6'	" " " "
12	"	"	6'	" " " "
13	"	"	6'	" " " "
14	"	"	6'	" " " "
15	"	"	6'	" " " "
16	"	"	6'	" " " "
17	COCOS NUCIFERA	COCONUT PALM	30'	" " " "
18	CYCAS CIRCINALIS	SAGO PALM	6'	" " " "
19	"	"	6'	" " " "
20	"	"	6'	" " " "
21	"	"	6'	" " " "
22	ROystonea REGIA	ROYAL PALM	30'	SEE NOTE 1
23	SAManea SAMAN	MONKEYPOD TREE	25'	" " " "
24	CYCAS CIRCINALIS	SAGO PALM	6'	E. OF P.O.

TREE NO	BOTANIC NAME	COMMON NAME	SIZE	NEW LOCATION
25	CYCAS CIRCINALIS	SAGO PALM	6'	E. OF P.O.
26	"	"	6'	" " " "
27	"	"	6'	" " " "
28	"	"	6'	" " " "
29	"	"	6'	" " " "
30	PANDANUS ODORATISS.	SCREW PINE "HALA"	20'	SEE SHEET 82
31	"	"	20'	" " " "
32	COCOS NUCIFERA	COCONUT PALM	40'	E. OF P.O.
33	PANDANUS ODORATISS.	SCREW PINE "HALA"	20'	SEE SHEET 82
34	"	"	20'	" " " "
35	CYCAS CIRCINALIS	SAGO PALM	6'	E. OF P.O.
36	PANDANUS ODORATISS.	SCREW PINE "HALA"	20'	SEE SHEET 82
37	CYCAS CIRCINALIS	SAGO PALM	6'	E. OF P.O.
38	"	"	6'	" " " "
39	"	"	6'	" " " "
40	"	"	6'	" " " "
41	"	"	6'	" " " "
42	PANDANUS ODORATISS.	SCREW PINE "HALA"	20'	SEE SHEET 82
43	"	"	20'	" " " "
44	COCOS NUCIFERA	COCONUT PALM	40'	E. OF P.O.
45	FICUS RETUSA	BANYON	30'	SEE NOTE 1
46	PANDANUS ODORATISS.	HALA	25'	POST OFFICE PL
47	SPATHODEA CAMPANULA	AFRICAN TULIP TREE	25'	SEE NOTE 1

LEGEND

- ✦ EXISTING TREE TO REMAIN
- EXISTING TREE TO TRANSPLANT
- TRANSPLANTED TREE LOCATION
- ⑤ TREE TRANSPLANT NUMBER
- NEW TREE LOCATION



THIS WORK WAS PREPARED BY
AND IS UNDER MY SUPERVISION
Robert L. Buck

NO.	DATE	REVISION
2	7-12-78	Relocate Trees 84, 85, 86 & 87
1	11-1-77	Revised Note under "New Location" for Screw Pine "Hala"

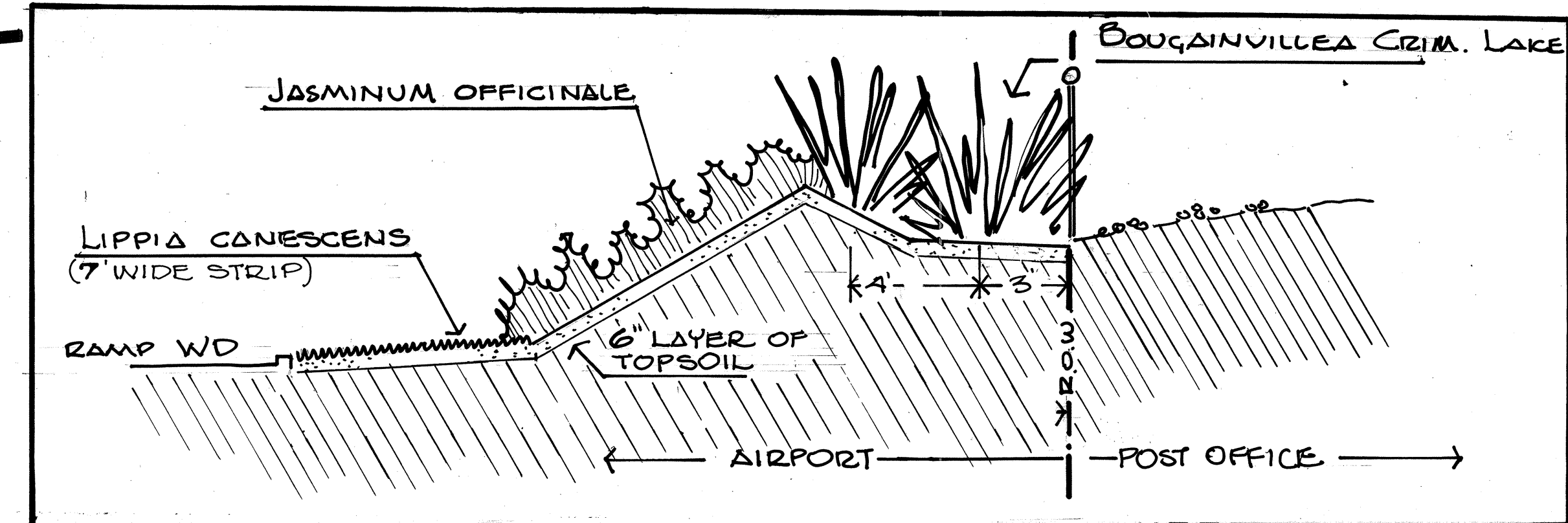
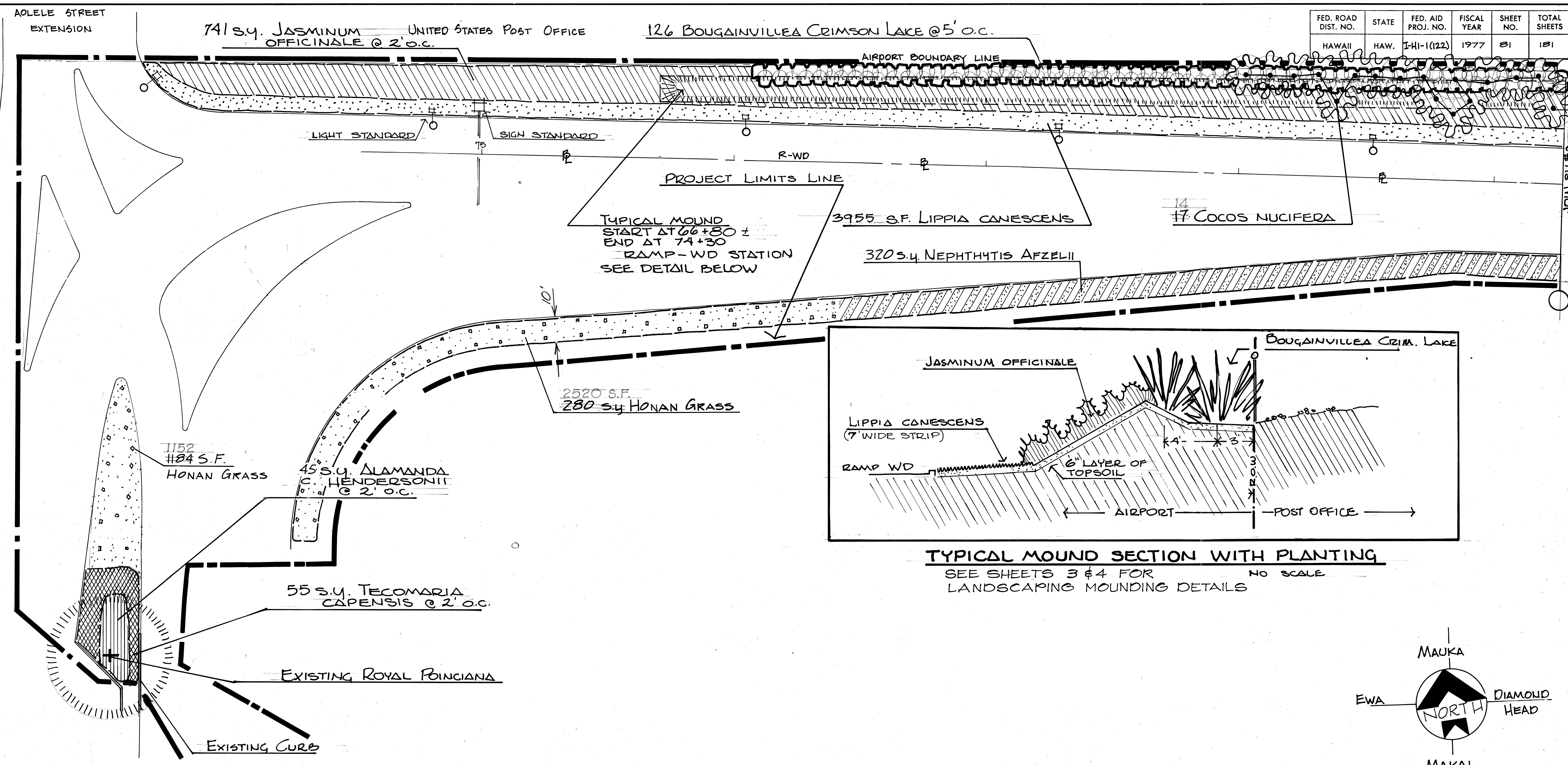
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRANSPLANT SOURCE &
RELOCATION - RODGER'S BLVD.
AIRPORT INTERCHANGE
F.A.I. PROJ. I-HI-1(122) 16

SCALE: 1"=50'
DATE: 2-1-77
SHEET No. 1 OF 16 SHEETS

90 SPATHODEA CAMPANULA AFRICAN TULIP TREE 25' E. OF P.O.

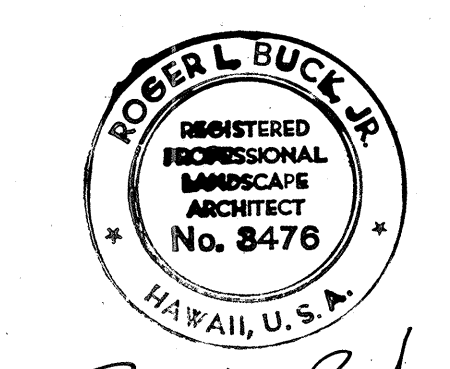
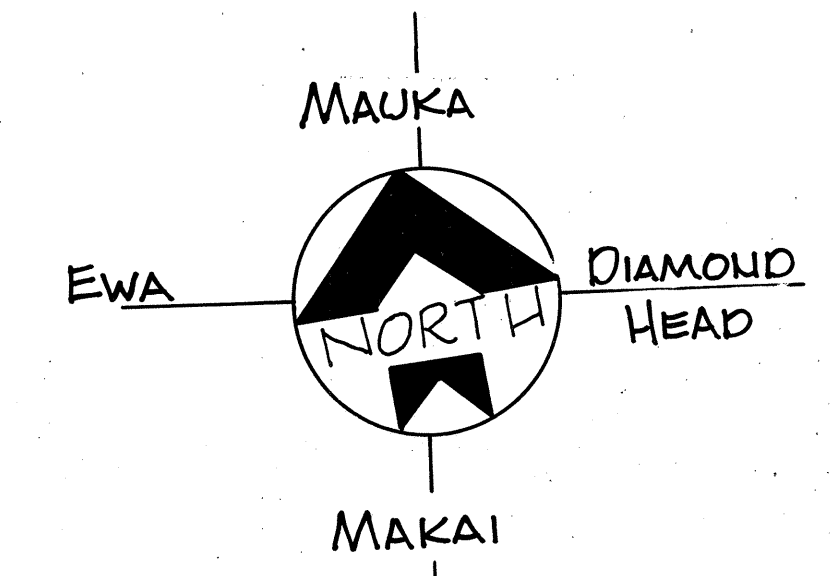
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(122)	1977	81	181



TYPICAL MOUND SECTION WITH PLANTING
SEE SHEETS 3 & 4 FOR LANDSCAPING MOUNDING DETAILS

NOTE: SEE SHEET 4 FOR ADDITIONAL PLANTING THIS AREA.

HONOLULU INTERNATIONAL AIRPORT PARKING



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

NO.	DATE	REVISION
2	4-28-78	DELETED HONAN GRASS & 2 ROYAL POINCIANA FROM TRAFFIC ISLANDS
1	10-5-77	REPLACED TIFWAY BERMUDA GRASS WITH HONAN GRASS. REVISED QUANTITIES OF HONAN GRASS & NEPHOTHYTIS

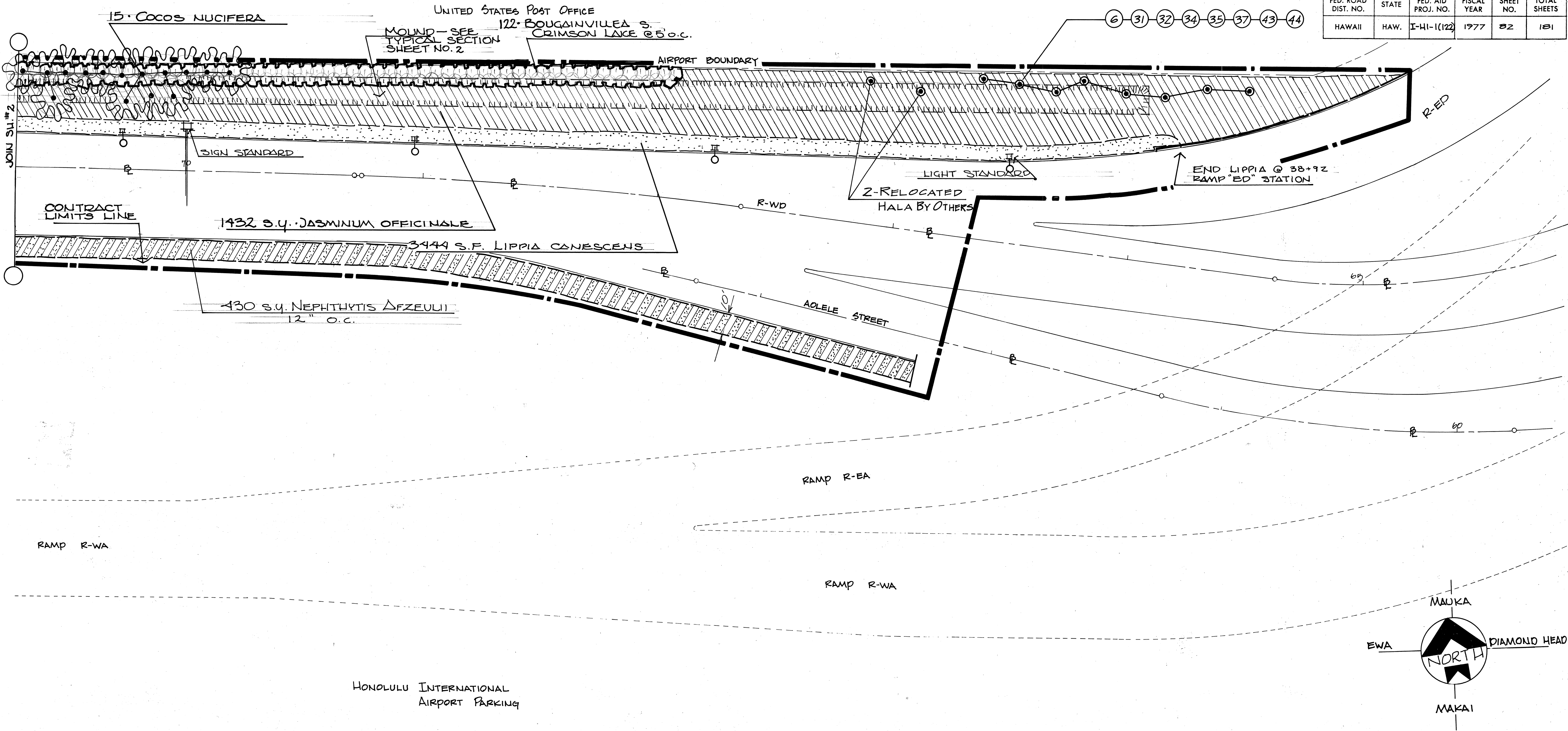
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLANTING PLAN

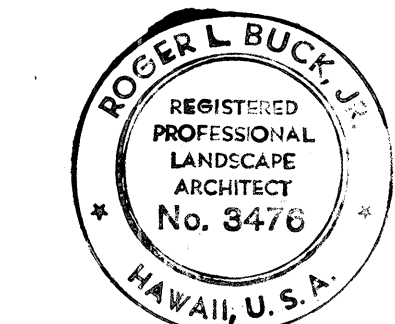
AIRPORT INTERCHANGE
F.A.I. PROJ. NO. I-HI-1(122) 16

SCALE: 1"=20' DATE: 2-1-77
SHEET No. 2 OF 16 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(122)	1977	82	181



1	11-1-77	Deleted 15 Brassaia Actinophylla and replaced with transplanted Screw Pine "Hala"
NO.	DATE	REVISION



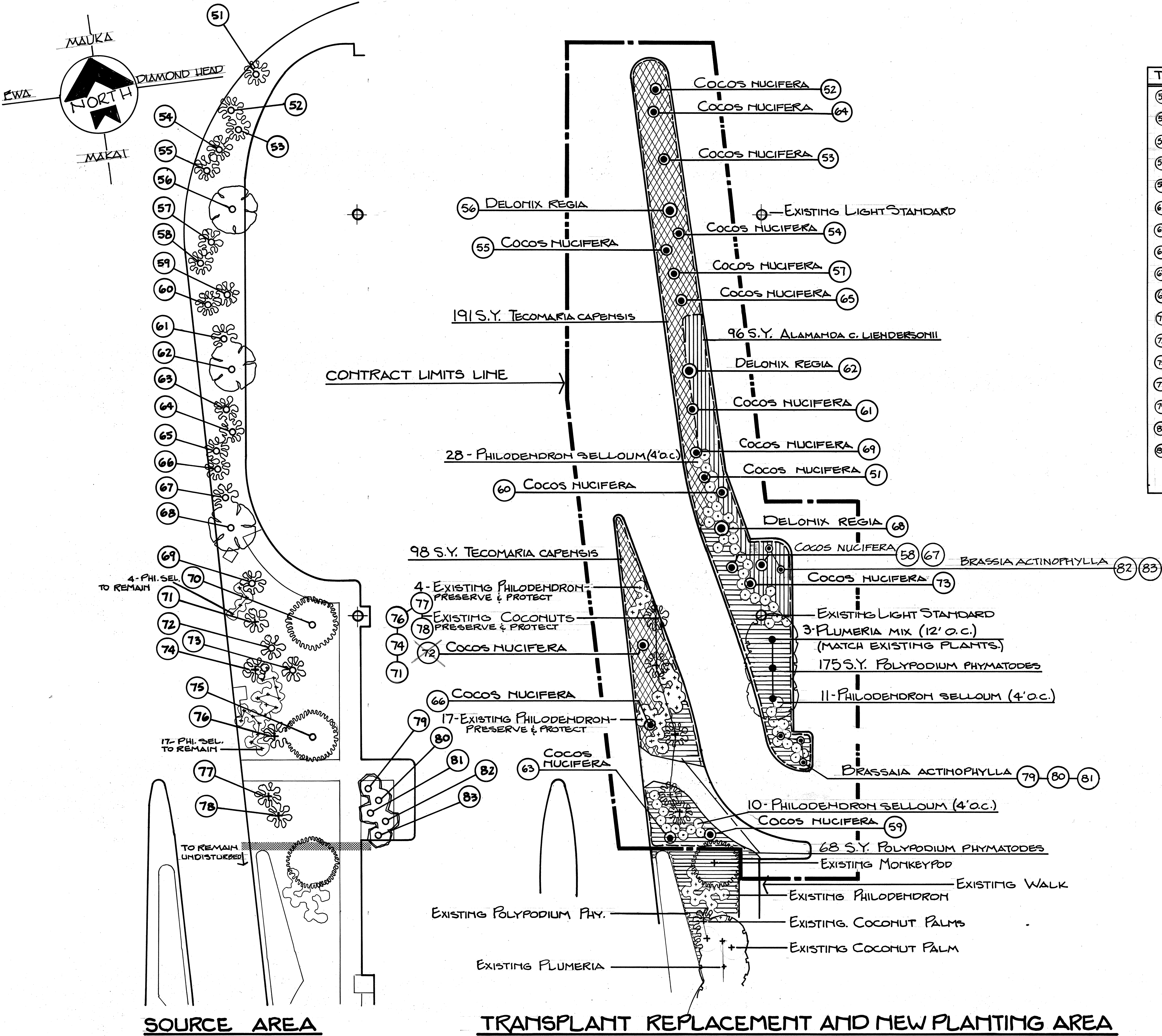
Roger L. Buck, Jr.
THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLANTING PLAN

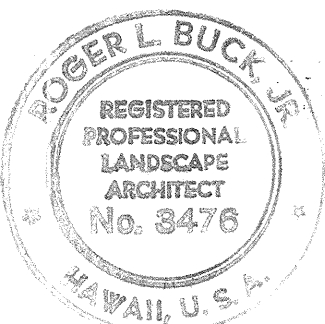
AIRPORT INTERCHANGE
F.A.I. PROJ. I-HI-1(122) 16

SCALE: 1"=20' DATE: 2-1-77
SHEET No. 3 OF 16 SHEETS



TRANSPLANT TREE LIST					
TREE NO.	BOTANIC NAME	COMMON NAME	SIZE	NEW LOCATION	
51	COCOS NUCIFERA	COCONUT PALM	30'	NEW ISLAND	
52	"	"	30'	"	
53	"	"	30'	"	
54	"	"	30'	"	
55	"	"	30'	"	
56	DELONIX REGIA	POINCIANA	15'	"	
57	COCOS NUCIFERA	COCONUT PALM	30'	"	
58	"	"	30'	"	
59	"	"	25'	"	
60	"	"	30'	"	
61	"	"	60'	"	
62	DELONIX REGIA	POINCIANA	15'	"	
63	COCOS NUCIFERA	COCONUT PALM	30'	"	
64	"	"	30'	"	
65	"	"	30'	"	
66	"	"	50'	"	
67	DELONIX REGIA	POINCIANA	15'	"	
68	COCOS NUCIFERA	COCONUT PALM	25'	"	
69	SAManea SAMAN	MONKEYPOD	25'	SEE NOTE W. of Leisland	
70	COCOS NUCIFERA	COCONUT PALM	25'	REMAINS IN PLACE	
71	"	"	30'	NEW ISLAND	
72	"	"	30'	REMAINS IN PLACE	
73	"	"	30'	SEE NOTE W. of Leisland	
74	SAManea SAMAN	MONKEYPOD	25'	"	
75	COCOS NUCIFERA	COCONUT PALM	30'	REMAINS IN PLACE	
76	"	"	25'	"	
77	"	"	25'	"	
78	BRASSIA ACTINOPHYLLA	OCTOPUS TREE	10'	NEW ISLAND	
79	"	"	10'	"	
80	"	"	10'	"	
81	"	"	10'	"	
82	"	"	10'	"	
83	"	"	10'	"	

NOTE:
TREE TO BE RELOCATED WITHIN AIRPORT
TERMINAL AREA AS DIRECTED BY THE ENGINEER.



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION
R. L. Buck, Jr.

NO.	DATE	REVISIONS
1	10/23/77	REVISED PLANTING @ ENTRANCE TO PARKING AREA.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

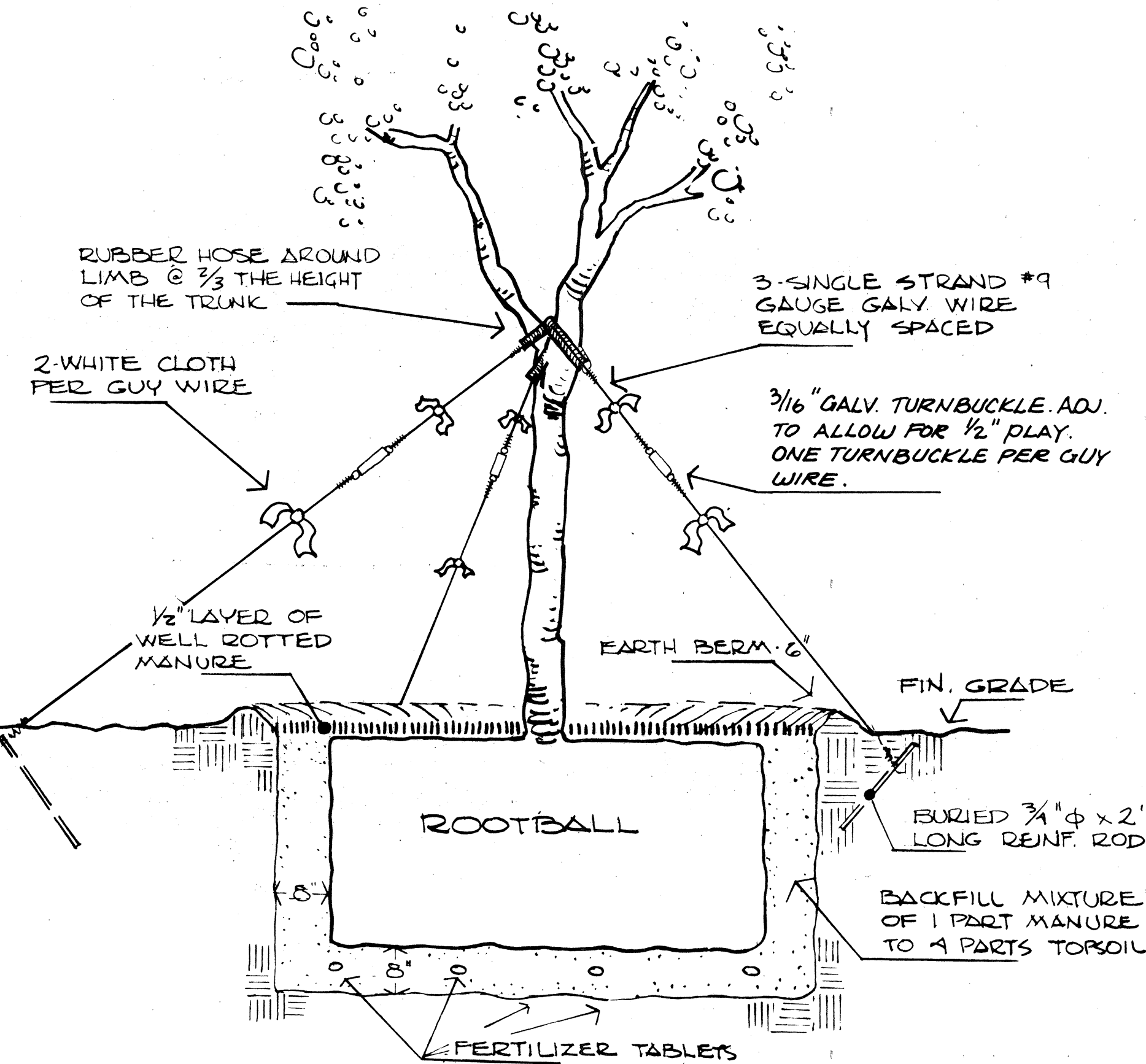
PLANTING PLAN

AIRPORT INTERCHANGE
F.A.I. PROJ. I-HI-1(22)16

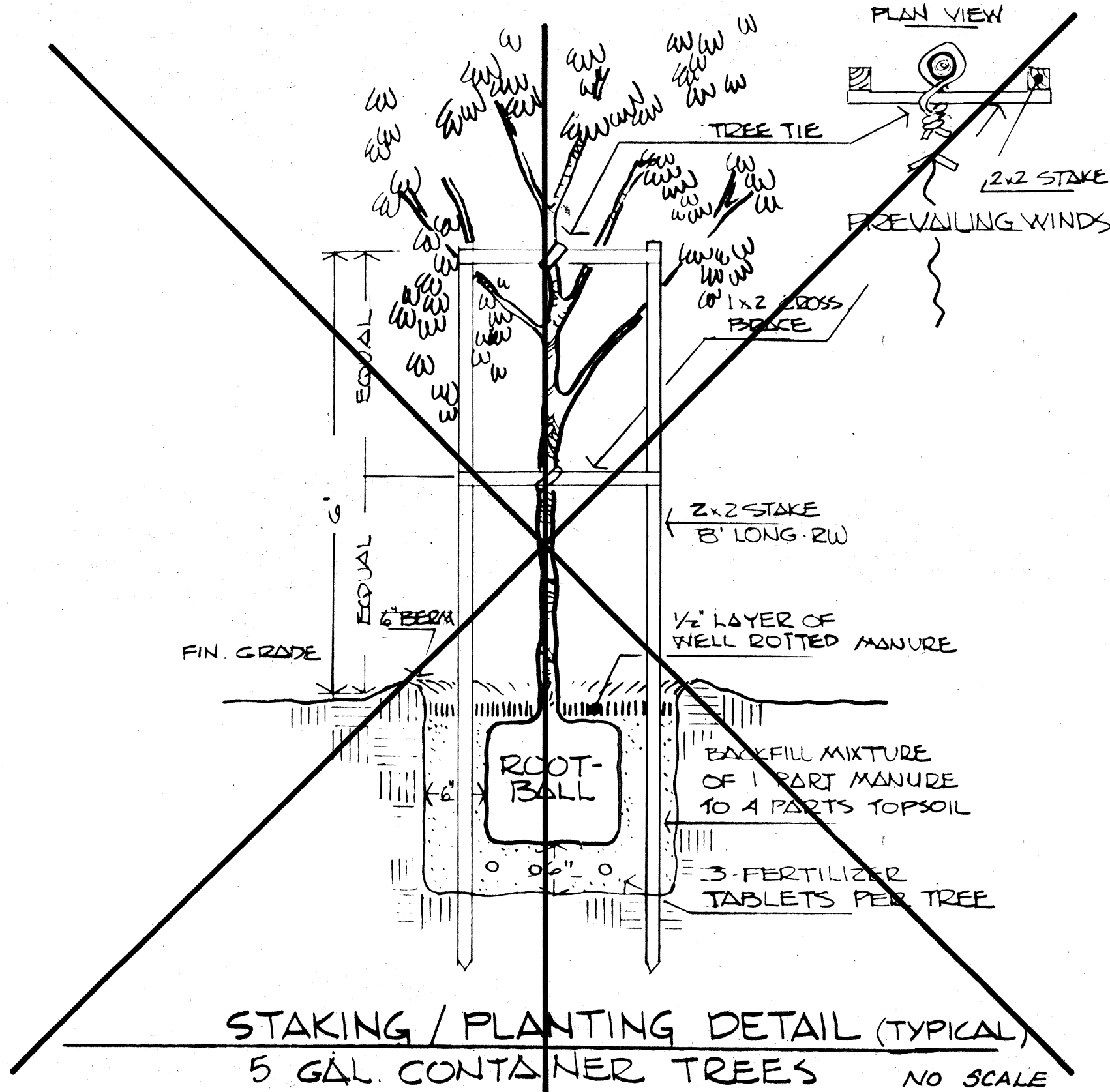
SCALE: 1"=20' DATE: FEB. 1, 1977

SHEET No. 4 OF 16 SHEETS

PLANT MATERIAL LIST



STAKING / PLANTING DETAIL (TYPICAL)
15 & 25 GAL. CONTAINER TREES NO SCALE



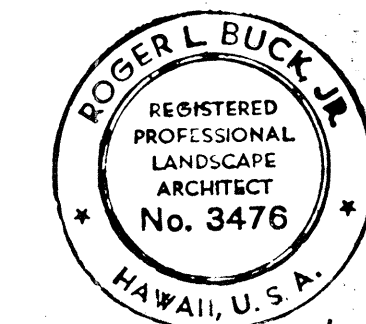
STAKING / PLANTING DETAIL (TYPICAL)
5 GAL. CONTAINER TREES NO SCALE

SYMBOL	BOTANICAL NAME	COMMON NAME	QUAN.	ROOT PREP.	SIZE	REMARKS
TREES						
A.	BRASSIA ACTINOPHYLLA	OCTOPUS TREE	15	15 GAL.	8' HT. 3' SPD. 2 1/2" CAL.	
B.	DELONIX REGIA	ROYAL POINCIANA	2	25 GAL.	10' HT. 4' SPD. 3" CAL.	
C.	PLUMARIA MIX	PLUMARIA	3	15 GAL.	8' HT. 3' SPD. 2 1/2" CAL.	MATCH EXISTING 3
PALMS						
D.	COCOS NUCIFERA	COCONUT	32	B & B	20' HEIGHT	
SHRUBS						
E.	BOUGAINVILLEA S. CRIMSON LAKE	CRIMSON LAKE BOUGAINVILLEA	248	5 GAL.	3' HT. 2 SPD.	CRIMSON RED FLOWER.
F.	PHILODENDRON SELLOUM	SELF HEADING PHILODENDRON	49	5 GAL.	3' HT. 3' SPD.	
GROUNDCOVERS						
G.	ALAMANDA C. HENDERSONII	YELLOW ALAMANDA	128 S.Y.	1 GAL.	12" HT.	2' O.C. 2.25 PLANTS / S.Y.
H.	JASMINUM OFFICINALE	STAR JASMINE	2173 S.Y.	1 GAL.	12" HT.	2' O.C. 2.25 PLANTS / S.Y.
I.	LIPPIDIA CANESCENS	LIPPIDIA	6607 S.F.	STOLONS	HYDROMULCH	
J.	TECOMARIA CAPENSIS	CAPE HONEYSUCKLE	244 S.Y.	1 GAL.	12" HT.	2' O.C. 2.25 PLANTS / S.Y.
K.	EREMIOCHLOA OPHIOIDES	HOMAN GRASS	3672	STOLONS	HYDROMULCHED	
L.	POLYPODIUM PHYMATODES	LAVA'A FERN	243 S.Y.	1 QT.	12" HT. CLUMPING	18" O.C. 4 PLANTS / S.Y.
M.	NEPENTHYSIS AFZELII	NEPENTHYSIS	750 S.Y.	STOLONS	12" RUNNERS	12" O.C. 9 PLANTS / S.Y.

KEY TO TREE CONDITION

- EXISTING TREE TO REMAIN
- EXISTING TREE TO TRANSPLANT
- TREE TRANSPLANT LOCATION
- TREE TRANSPLANT NUMBER
- PROPOSED NEW TREE

DATE	
DESIGNED BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

1	10-25-77	REVISED POLYPODIUM PHYMATODES QUANTITY DELETED BRASSIA ACTINOPHYLLA REPLACED "TIFWAY" GRASS WITH "HOMAN" GRASS. REVISED QUANTITIES OF HOMAN & NEPENTHYSIS
No.	DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION		
LANDSCAPE DETAILS		
AIRPORT INTERCHANGE F.A.I. PROJ. NO. I-H-1(122)16		
SCALE: AS NOTED DATE: 2-1-77		
SHEET No. 5 OF 16 SHEETS		

WIND

6'-0"

2'-0"

2'-0"

BURLAP CLOTH WIND SCREEN. WRAP AROUND STAKES & STAPLE.

3-2"x2"x8' REDWOOD STAKES

5'-0"

6'-0"

5'-0"

TREE

A cross-sectional diagram showing two shrubs in a double row. The shrubs are planted in square pits. The ground surface is labeled "EARTH BERM FIN. GRADE". The pits are filled with "BACKFILL MATERIAL OF 1 PART MANURE TO 4 PARTS TOPSOIL.". The distance between the centers of the two shrubs is 4'0". The width of each pit is 2'0". The depth of the pits is 8". Two fertilizer tablets are shown in each pit, with a label "2 FERTILIZER TABLETS PER SHRUB". A layer of "1/2" LAYER OF WELL ROTTED MANURE" is shown on the surface around the base of the shrubs.

NOTE:
MOUNDING SHALL NOT IMPAIR PROPER DRAINAGE.
IN NO CASE SHALL PONDING OCCUR. SEE
GRADING PLAN FOR DIRECTION OF DRAINAGE.

APPROX. BOUNDARY OF
AREA TO BE MOUNDED

SPOT ELEVATIONS
ABOVE PROPOSED
ROUGH GRADE.

+3.6' +2.0' +5.0'

PLAN

6" LAYER - TOPSOIL

PROPOSED
ROUGH
GRADE.

MAKE SMOOTH
TAPER TO MEET
GRADE.

6
5
4
3
2
1
0

SECTION

NOTE:
1. SLOPES TO BE A MAXIMUM 2:1.

TYPICAL MOUND CONSTRUCTION DETAIL

The diagram illustrates staggered spacing between two rows of reinforcement. It shows two horizontal lines representing the reinforcement rows. The top row has three circles representing reinforcement bars, and the bottom row has four circles. The circles in the bottom row are offset horizontally from those in the top row. A diagonal line connects the center of a bar in the top row to the center of a bar in the bottom row. A double-headed arrow labeled "O.C. SPACING" indicates the horizontal distance between the centers of two bars in the top row. Another double-headed arrow labeled "DISTANCE BETWEEN ROWS" indicates the vertical distance between the two horizontal reinforcement lines. The text "NOTE:" is written at the bottom right.

LANDSCAPE NOTES:

1. PRIOR TO EXCAVATION, ALL TREE PLANTING LOCATIONS SHALL BE STAKED BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEER.
2. GROUND COVERS TO BE PLANTED IN A UNIFORM TRIANGULAR PATTERN, SPACED AS SHOWN ON THE PLANS.
3. USE FERTILIZER TABLETS WITH A 20-10-5 ANALYSIS IN ALL PLANTING HOLES AT THE FOLLOWING RATES:
5 GAL. STOCK ---- 2 TABLETS.
25 GAL. & SPECIMEN --- 1 TAB. PER EVERY $\frac{1}{2}$ " CALIPER OF TRUNK.
4. STOP ALL TOPSOIL IN CONTACT WITH CURB OR WALK 02' FOOT BELOW TOP OF CONCRETE.

1. PRIOR TO EXCAVATION, ALL TREE PLANTING LOCATIONS SHALL BE STAKED BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEER.
2. GROUND COVERS TO BE PLANTED IN A UNIFORM TRIANGULAR PATTERN, SPACED AS SHOWN ON THE PLANS.
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5 GAL. STOCK ---- 2 TABLETS.
25 GAL. & SPECIMEN --- 1 TAB. PER EVERY $\frac{1}{2}$ " CALIPER OF TRUNK.
4. STOP ALL TOPSOIL IN CONTACT WITH CURB OR WALK 02' FOOT BELOW TOP OF CONCRETE.

4. STOP ALL TOPSOIL IN CONTACT WITH CURB OR WALK
02' FOOT BELOW TOP OF CONCRETE.

4. STOP ALL TOPSOIL IN CONTACT WITH CURB OR WALK
02' FOOT BELOW TOP OF CONCRETE.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LANDSCAPE DETAILS

AIRPORT INTERCHANGE
F.A.I. PROJ. NO. I-HI-1(122)16

SCALE: AS SHOWN DATE: 2-1-77

SHEET No. 6 OF 16 SHEETS

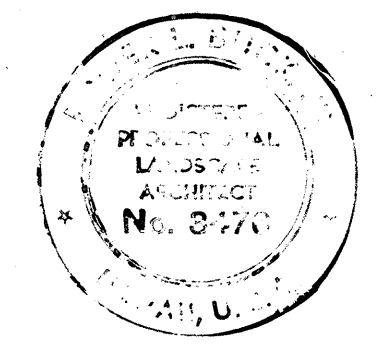
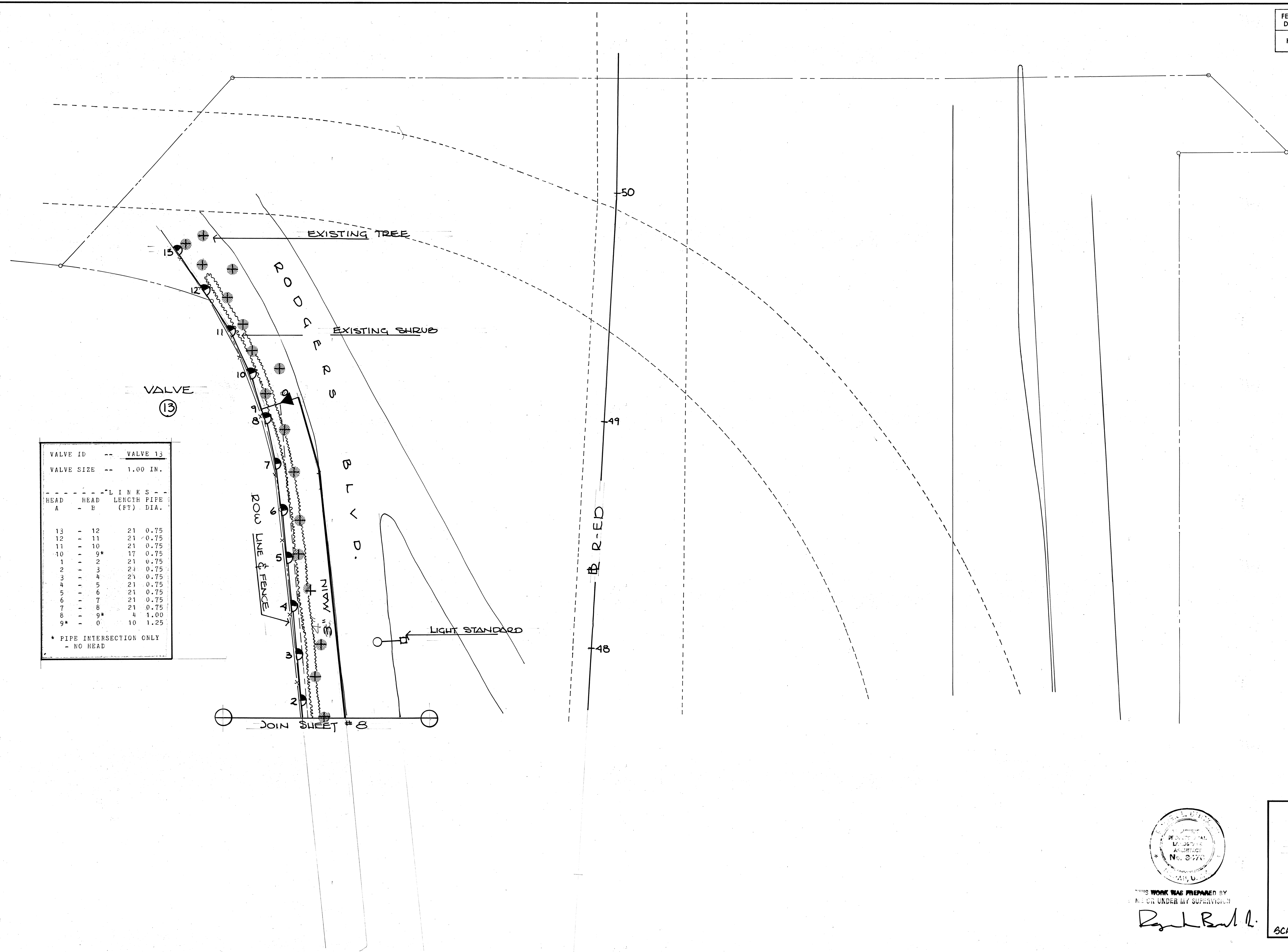
85

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FHH(122)-16	1977	86	181

VALVE ID	--	VALVE 13
VALVE SIZE	--	1.00 IN.
LINKS		
HEAD A	HEAD B	LENGTH PIPE (FT) DIA.
13	12	21 0.75
12	11	21 0.75
11	10	21 0.75
10	9*	17 0.75
9	8	21 0.75
8	7	21 0.75
7	6	21 0.75
6	5	21 0.75
5	4	21 0.75
4	3	21 0.75
3	2	21 0.75
2	1	21 0.75
1	0	4 1.00
0	9*	10 1.25

* PIPE INTERSECTION ONLY
- NO HEAD



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION
Ronald R. R. R.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SPRINKLER PLAN

AIRPORT INTERCHANGE
F.A.I. PROJ. I-HI-1(122)-16

SCALE: 1" = 20' DATE: FEB. 1, 1977
SHEET No. 7 OF 16 SHEETS

D-3-7

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IHI-1(22)16	1977	87	181

VALVE ID		--	VALVE 12	
VALVE SIZE		--	1.00 IN.	
LINKS				
HEAD	HEAD	LENGTH	PIPE	
A	B	(FT)	DIA.	
12	- 11	21	0.75	
11	- 10	21	0.75	
10	- 9	21	0.75	
9	- 8	21	0.75	
8	- 7	21	0.75	
7	- 6*	14	0.75	
1	- 2	21	0.75	
2	- 3	21	0.75	
3	- 4	21	0.75	
4	- 5	21	0.75	
5	- 6*	7	0.75	
6*	- 0	10	1.25	

* PIPE INTERSECTION ONLY
- NO HEAD

VALVE
⑫

U.S. POST OFFICE
ACCESS

RODGERS
BLVD.

LIGHT
STANDARD



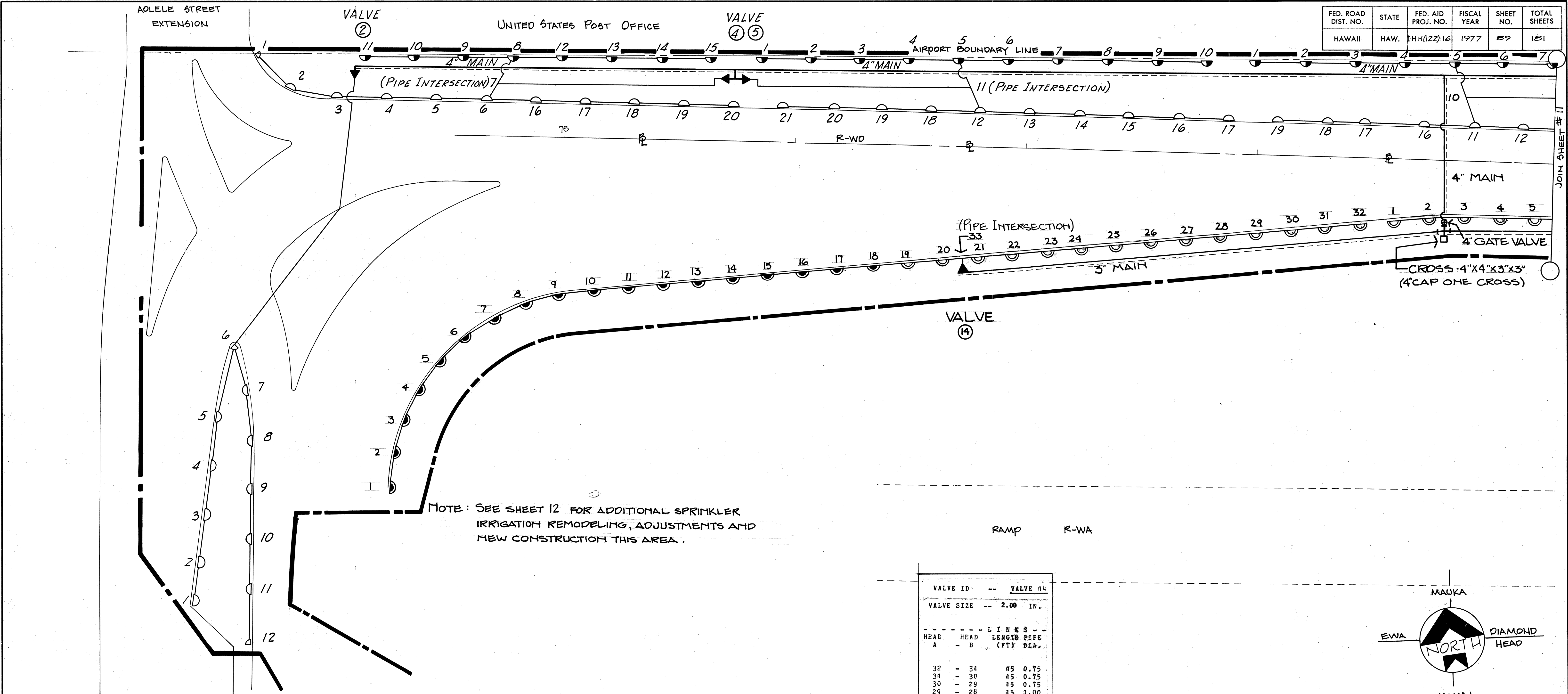
THIS WORK WAS PREPARED BY
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Robert P. Pickett

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SPRINKLER PLAN

AIRPORT INTERCHANGE
F.A.I. PROJ. IHI-1(22)16
SCALE: 1"=20' DATE: FEB. 1, 1977
SHEET No. 8 OF 16 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FHH(122)-16	1977	89	181



VALVE ID		--	VALVE 1	
VALVE SIZE		--	1.25 IN.	
HEAD A	HEAD B	LINKS LENGTH (FT)	PIPE DIA.	
7	6	N/C	12	0.75
6	5		12	0.75
5	4		12	0.75
1	2		20	0.75
2	3		12	0.75
3	4		12	0.75
4	10		20	1.25
8	9		15	0.75
9	10		11	0.75
10	11		12	1.50
14	13		12	0.75
13	12		12	0.75
12	11		12	0.75
11	15		12	1.50
22	21		12	0.75
21	20		12	0.75
20	16	14	0.75	
19	18	20	0.75	
18	17	12	0.75	
17	16	12	0.75	
15	16	12	2.00	
16	0	50	2.50	

VALVE ID		--	VALVE 2	
VALVE SIZE		--	1.00 IN.	
----- L I N K S -----				
HEAD	HEAD	LENGTH	PIPE	
A	B	(FT)	DIA.	
12	- 11	21	0.75	
11	- 10	21	0.75	
10	- 9	21	0.75	
9	- 8	21	0.75	
8	- 7	21	0.75	
7	- 6	21	0.75	
1	- 2	21	0.75	
2	- 3	21	0.75	
3	- 4	21	0.75	
4	- 5	21	0.75	
5	- 6	32	0.75	
6	- 0	140	1.25	

VALVE ID		--	VALVE 3	
VALVE SIZE		--	1.00 IN.	
HEAD A	HEAD B	LINKS LENGTH (FT)	PIPE DIA.	
6	-	5	21	0.75
5	-	4	21	0.75
1	-	2	12	0.75
2	-	3	21	0.75
3	-	4	21	0.75
4	-	7	26	1.00
16	-	15	18	0.75
15	-	14	12	0.75
14	-	13	12	0.75
13	-	7	21	0.75
12	-	11	12	0.75
11	-	10	12	0.75
10	-	9	21	0.75
9	-	8	21	0.75
8	-	7	21	0.75
7	-	0	60	1.50

VALVE ID	--	VALVE 4
VALVE SIZE	--	1.00 IN.
----- L I N K S -----		
HEAD A	HEAD B	LENGTH PIPE (FT) DIA.
15	- 14	21 0.75
14	- 13	21 0.75
13	- 12	21 0.75
12	- 8	21 0.75
11	- 10	21 0.75
10	- 9	21 0.75
9	- 8	21 0.75
8	- 7*	6 1.00
20	- 19	21 0.75
19	- 18	21 0.75
18	- 17	21 0.75
17	- 16	21 0.75
16	- 6	21 0.75
1	- 2	21 0.75
2	- 3	21 0.75
3	- 4	21 0.75
4	- 5	21 0.75
5	- 6	21 0.75
6	- 7*	17 1.00
7*	- 0	100 1.50

* PIPE INTERSECTION ONLY
- NO HEAD

* PIPE INTERSECTION ONLY
- NO HEAD

VALVE ID		--	VALVE 5	
VALVE SIZE		--	1.00 IN.	
- - - - -		L I N K S		
HEAD	HEAD	LENGTH	PIPE	
A	B	(FT)	DIA.	
21	- 20	21	0.75	
20	- 19	21	0.75	
19	- 18	21	0.75	
18	- 12	21	0.75	
17	- 16	21	0.75	
16	- 15	21	0.75	
15	- 14	21	0.75	
14	- 13	21	0.75	
13	- 12	21	0.75	
12	- 11*	18	1.00	
10	- 9	21	0.75	
9	- 8	21	0.75	
8	- 7	21	0.75	
7	- 6	21	0.75	
6	- 5	21	0.75	
1	- 2	21	0.75	
2	- 3	21	0.75	
3	- 4	21	0.75	
4	- 5	21	0.75	
5	- 11*	6	1.00	
11*	- 0	100	1.50	

* PIPE INTERSECTION ONLY
- NO HEAD.

* PIPE INTERSECTION ONLY
- NO HEAD

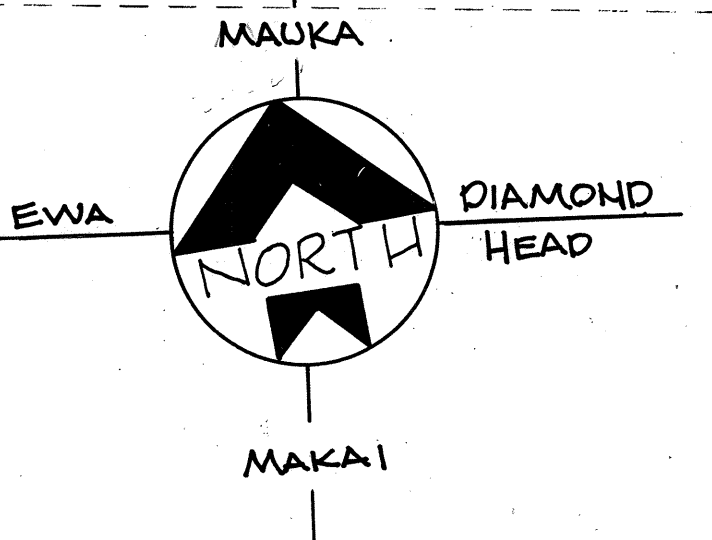
HONOLULU
INTERNATIONAL
AIRPORT PARKING

HEAD "0" ON THE TABLE
DENOTES THE VALVE.

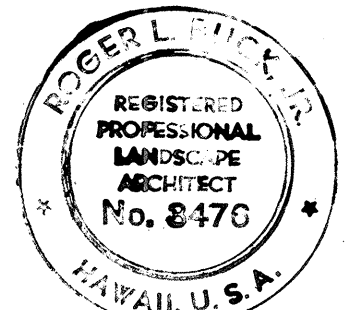
VALVE ID		--	VALVE 14	
VALVE SIZE		--	2.00 IN.	
			L I N K S	
HEAD	HEAD		LENGTH	PIPE
A	B		(FT)	DIA.
32	- 31		45	0.75
31	- 30		45	0.75
30	- 29		45	0.75
29	- 28		45	1.00
28	- 27		45	1.00
27	- 26		45	1.25
26	- 25		45	1.25
25	- 24		45	1.25
24	- 23		45	1.50
23	- 22		45	1.50
22	- 21		45	1.50
21	- 33*		5	1.50
1	- 2		45	0.75
2	- 3		45	0.75
3	- 4		45	0.75
4	- 5		45	1.00
5	- 6		45	1.00
6	- 7		45	1.25
7	- 8		45	1.25
8	- 9		45	1.25
9	- 10		45	1.50
10	- 11		45	1.50
11	- 12		45	1.50
12	- 13		45	1.50
13	- 14		45	2.00
14	- 15		45	2.00
15	- 16		45	2.00
16	- 17		45	2.00
17	- 18		45	2.50
18	- 19		45	2.50
19	- 20		45	2.50
20	- 33*		40	2.50
33*	- 0		3	3.00

* PIPE INTERSECTION ONLY
- NO HEAD

* PIPE INTERSECTION ONLY
- NO HEAD



NO.	DATE	REVISION
2		Deleted Valves 14, 3 and sprinklers in Traffic Islands
1	1-15-78	Revised Sprinkler Heads 1-5 (Valves 5) and 19-32 (Valve 14)



WORK WAS PREPARED BY
R. L. K. H.

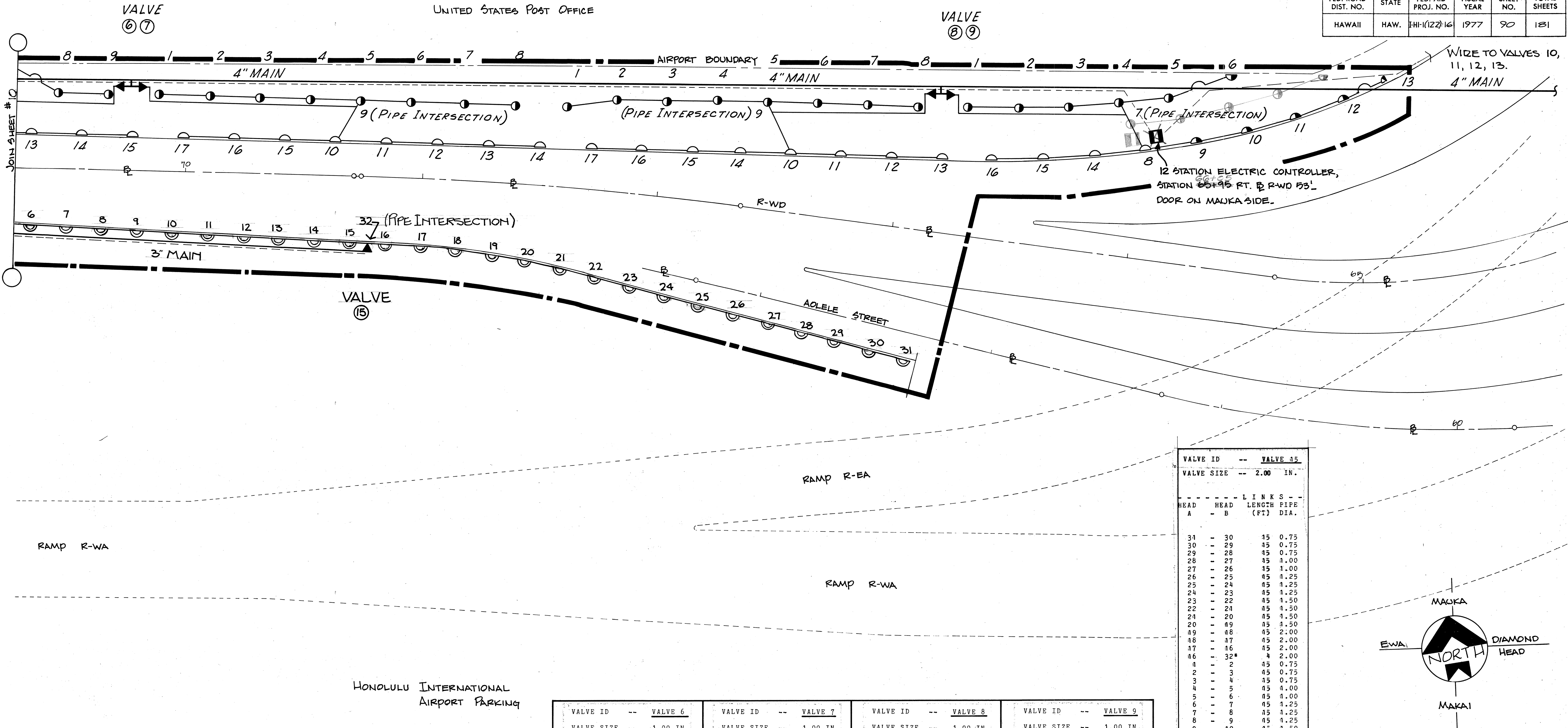
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SPRINKLER PLAN

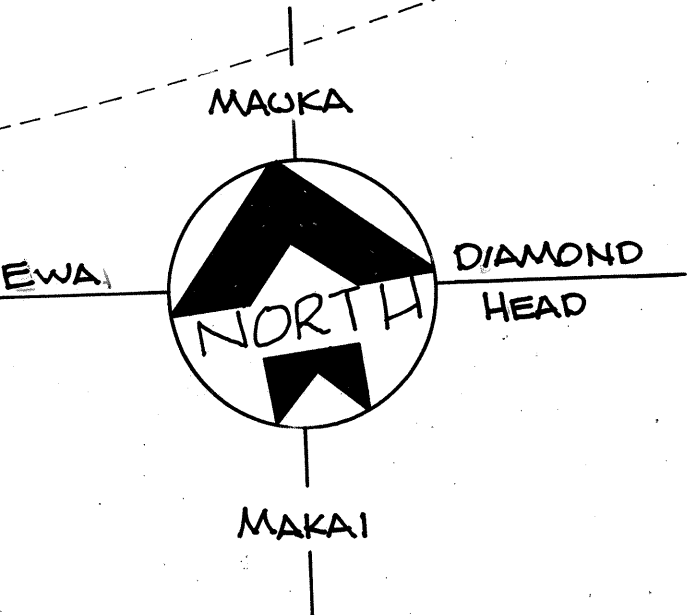
AIRPORT INTERCHANGE
F.A.I. PROJ. NO. I-HI-1(122)16

SCALE: 1"=20'
DATE: 2-1-77
SHEET No. 10 OF 16 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FH-1(122)16	1977	90	181



VALVE ID -- VALVE 15			
VALVE SIZE -- 2.00 IN.			
HEAD A	HEAD B	LINKS (FT)	PIPE DIA.
31	30	15	0.75
30	29	15	0.75
29	28	15	0.75
28	27	15	1.00
27	26	15	1.00
26	25	15	1.25
25	24	15	1.25
24	23	15	1.25
23	22	15	1.50
22	21	15	1.50
21	20	15	1.50
20	19	15	2.00
19	18	15	2.00
18	17	15	2.00
17	16	15	2.00
16	32*	4	2.00
1	2	15	0.75
2	3	15	0.75
3	4	15	0.75
4	5	15	1.00
5	6	15	1.00
6	7	15	1.25
7	8	15	1.25
8	9	15	1.25
9	10	15	1.50
10	11	15	1.50
11	12	15	1.50
12	13	15	2.00
13	14	15	2.00
14	15	15	2.00
15	32*	11	2.00
32*	0	3	3.00



HONOLULU INTERNATIONAL AIRPORT PARKING

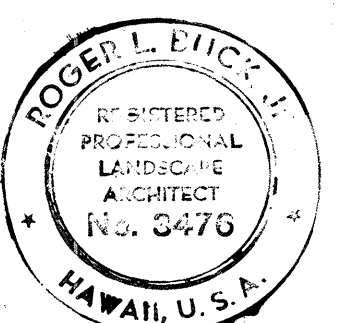
HEAD "0" ON THE TABLES DENOTES THE VALVE.

VALVE ID -- VALVE 6			
VALVE SIZE -- 1.00 IN.			
HEAD A	HEAD B	LINKS (FT)	PIPE DIA.
19	18	21	0.75
18	17	16	0.75
17	16	26	0.75
16	15	21	0.75
15	14	21	0.75
14	13	21	0.75
13	12	21	0.75
12	11	21	0.75
11	10	21	0.75
10	9	18	1.00
9	8	21	0.75
8	7	21	0.75
7	6	21	0.75
6	5	21	0.75
5	4	21	0.75
4	3	21	0.75
3	2	21	0.75
2	1	21	0.75
1	0	21	0.75
0	0	90	1.50

VALVE ID -- VALVE 7			
VALVE SIZE -- 1.00 IN.			
HEAD A	HEAD B	LINKS (FT)	PIPE DIA.
17	16	21	0.75
16	15	21	0.75
15	14	21	0.75
14	13	21	0.75
13	12	21	0.75
12	11	21	0.75
11	10	21	0.75
10	9	18	1.00
9	8	21	0.75
8	7	21	0.75
7	6	21	0.75
6	5	21	0.75
5	4	21	0.75
4	3	21	0.75
3	2	21	0.75
2	1	21	0.75
1	0	95	1.50

VALVE ID -- VALVE 8			
VALVE SIZE -- 1.00 IN.			
HEAD A	HEAD B	LINKS (FT)	PIPE DIA.
17	16	21	0.75
16	15	21	0.75
15	14	21	0.75
14	13	21	0.75
13	12	21	0.75
12	11	21	0.75
11	10	21	0.75
10	9	24	1.00
9	8	21	0.75
8	7	21	0.75
7	6	21	0.75
6	5	21	0.75
5	4	21	0.75
4	3	21	0.75
3	2	21	0.75
2	1	21	0.75
1	0	75	1.50

VALVE ID -- VALVE 9			
VALVE SIZE -- 1.00 IN.			
HEAD A	HEAD B	LINKS (FT)	PIPE DIA.
16	15	21	0.75
15	14	21	0.75
14	13	21	0.75
13	12	21	0.75
12	11	21	0.75
11	10	21	0.75
10	9	21	0.75
9	8	21	0.75
8	7	23	1.00
7	6	28	0.75
6	5	21	0.75
5	4	21	0.75
4	3	21	0.75
3	2	21	0.75
2	1	21	0.75
1	0	78	1.50



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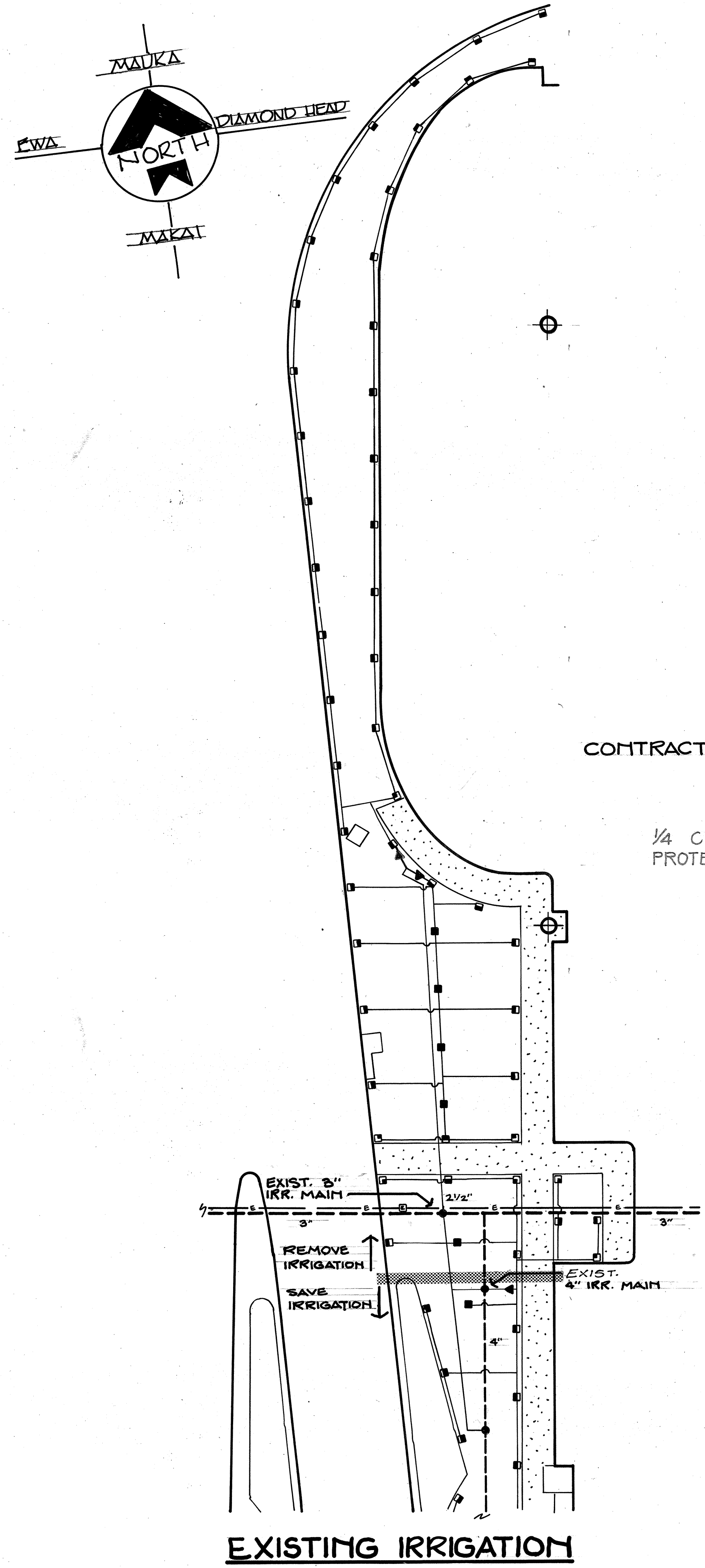
1	1-15-78	Revised Sprinkler Heads G-31 (Valve 15)
NO.	DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

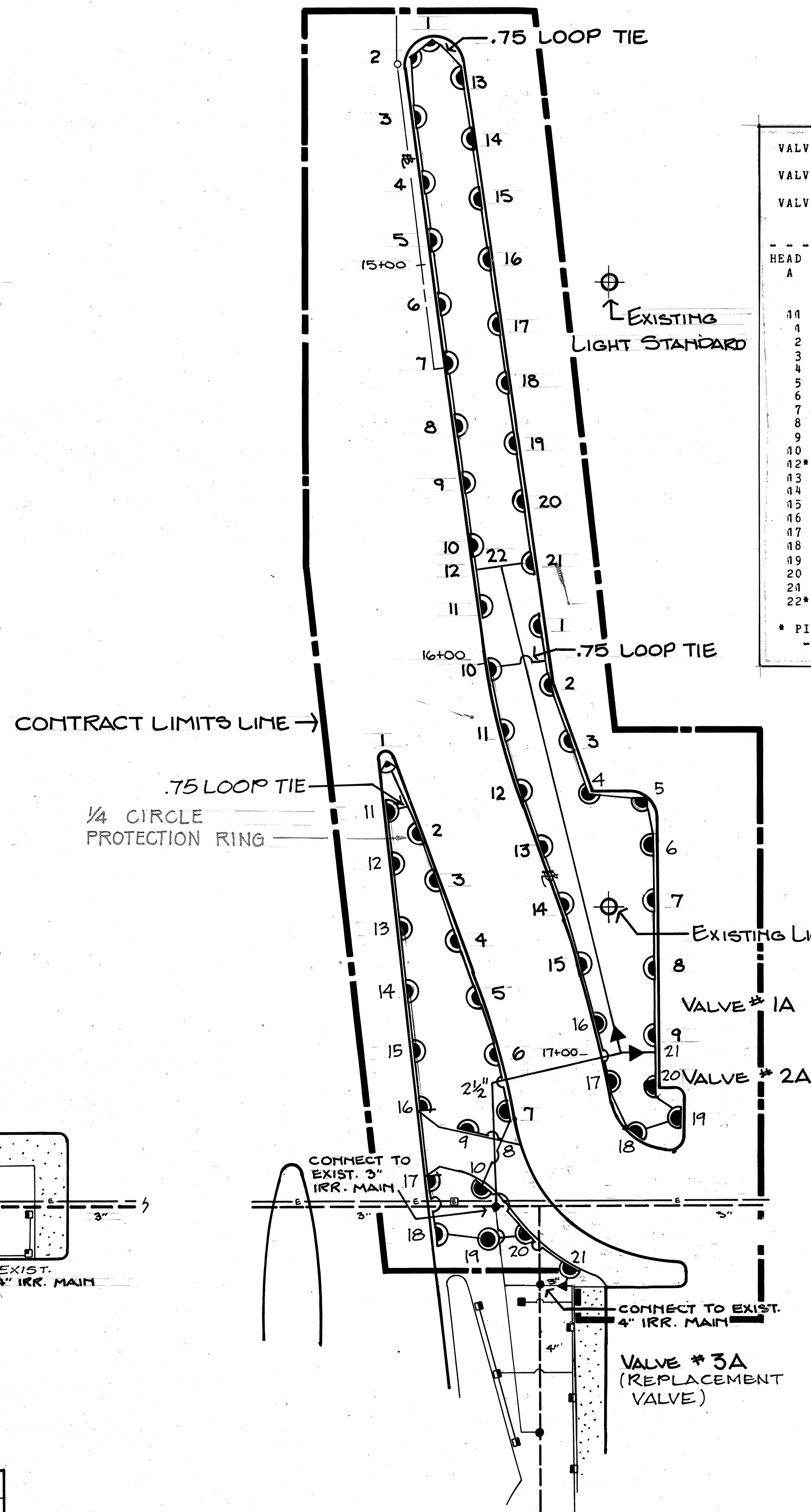
SPRINKLER PLAN

AIRPORT INTERCHANGE
F.A.I. PROJ. I-HI-1(122)16

SCALE: 1"=20' DATE: 2-1-77
SHEET NO. 11 OF 16 SHEETS



EXISTING IRRIGATION



PROPOSED NEW AND ADJUSTED IRRIGATION

VALVE 1A				
VALVE MODEL -- 150 SERIES				
VALVE SIZE -- 1.25 IN.				
HEAD A	HEAD B	LINKS	LENGTH (FT)	PIPE DIA.
11	12*	10	0.75	
1	2	7	0.75	
2	3	15	0.75	
3	4	15	0.75	
4	5	15	0.75	
5	6	15	1.00	
6	7	15	1.00	
7	8	15	1.25	
8	9	15	1.25	
9	10	15	1.25	
10	11	5	1.50	
12*	22*	7	1.50	
13	14	15	0.75	
14	15	15	0.75	
15	16	15	0.75	
16	17	15	1.00	
17	18	15	1.00	
18	19	15	1.25	
19	20	15	1.25	
20	21	15	1.25	
21	22*	8	1.50	
22*	0	120	2.50	

* PIPE INTERSECTION ONLY
- NO HEAD

VALVE 2A				
VALVE MODEL -- 150 SERIES				
VALVE SIZE -- 1.50 IN.				
HEAD A	HEAD B	LINKS	LENGTH (FT)	PIPE DIA.
5	6*	10	0.75	
1	2	15	0.75	
2	3	15	0.75	
3	4	15	0.75	
4	5*	14	1.00	
5*	6*	14	1.00	
10	11	15	0.75	
11	12	15	0.75	
12	13	15	0.75	
13	14	15	1.00	
14	15	15	1.00	
15	16	15	1.25	
16	17	15	1.25	
17	18	15	1.25	
18	19	12	1.25	
19	20	12	1.50	
20	21	8	1.50	
21	22	11	1.50	
6	7	14	1.50	
7	8	15	1.25	
8	9	15	1.25	
9	10	4	1.25	
21*	22*	0	5	2.50

* PIPE INTERSECTION ONLY
- NO HEAD

VALVE 3A				
VALVE MODEL -- 150 SERIES				
VALVE SIZE -- 1.50 IN.				

HEAD	HEAD	L I N K S -----		
A	- B	LENGTH	PIPE	DIA.
		(FT)		
43	44	7	0.75	
44	42	6	0.75	
42	44	9	0.75	
44	40	11	0.75	
40	9	14	0.75	
1	2	21	0.75	
2	3	1	0.75	
3	4	4	0.75	
4	5	15	1.00	
5	6	15	1.00	
6	7	15	1.25	
7	8	8 1/2	1.25	
8*	9	8 1/2	1.25	
9*	-1024*	11 1/2	2-501.25	
1043	-2046	15	2-511.25	
1146	-1248	15	0.75	
1247	-1948	15	0.75	
1348	-1449	15	1.00	
1449	-1520	15	1.00	
1520	-1621	15	2-253.00	
1621	-1722	10 1/2	1.25	
1722	-1823	15 1/8	1.25	
1823	-1924*	11 1/6	2-501.25	
1924*	-2025*	11 1/3	2-501.25	
2025*	-2126	15 1/5	2-502.00	
2126	-0	5	2-502.00	

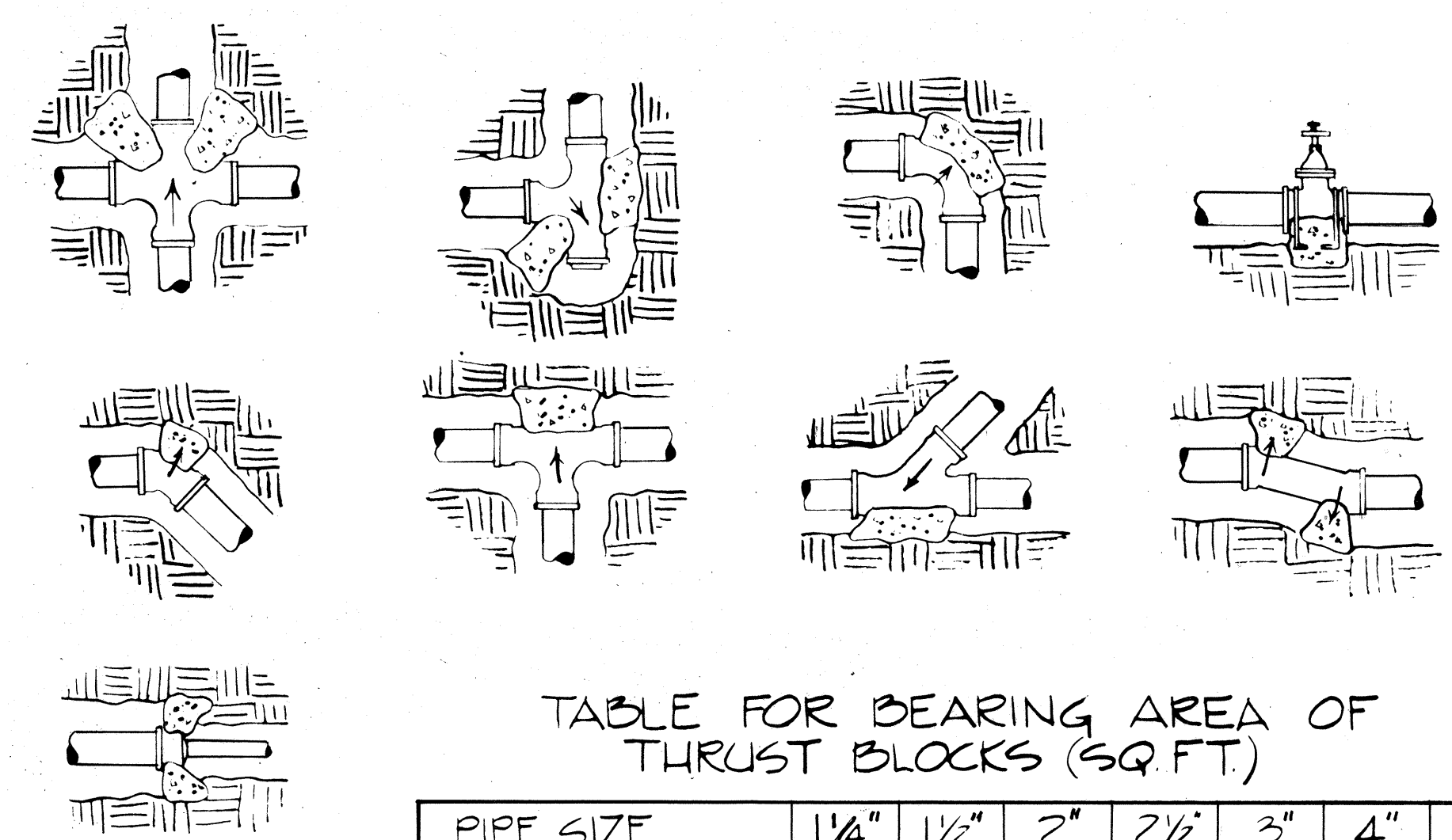
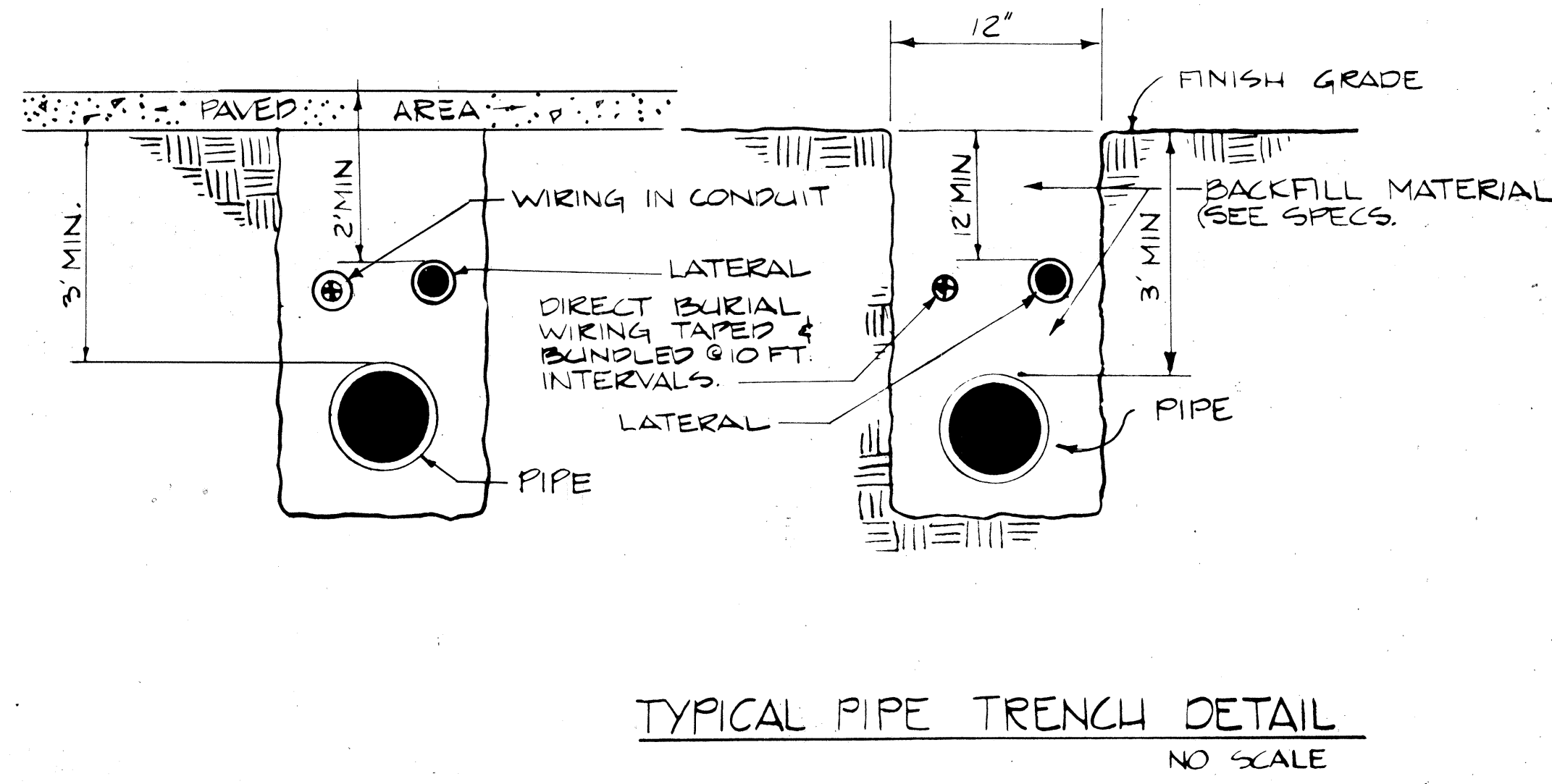
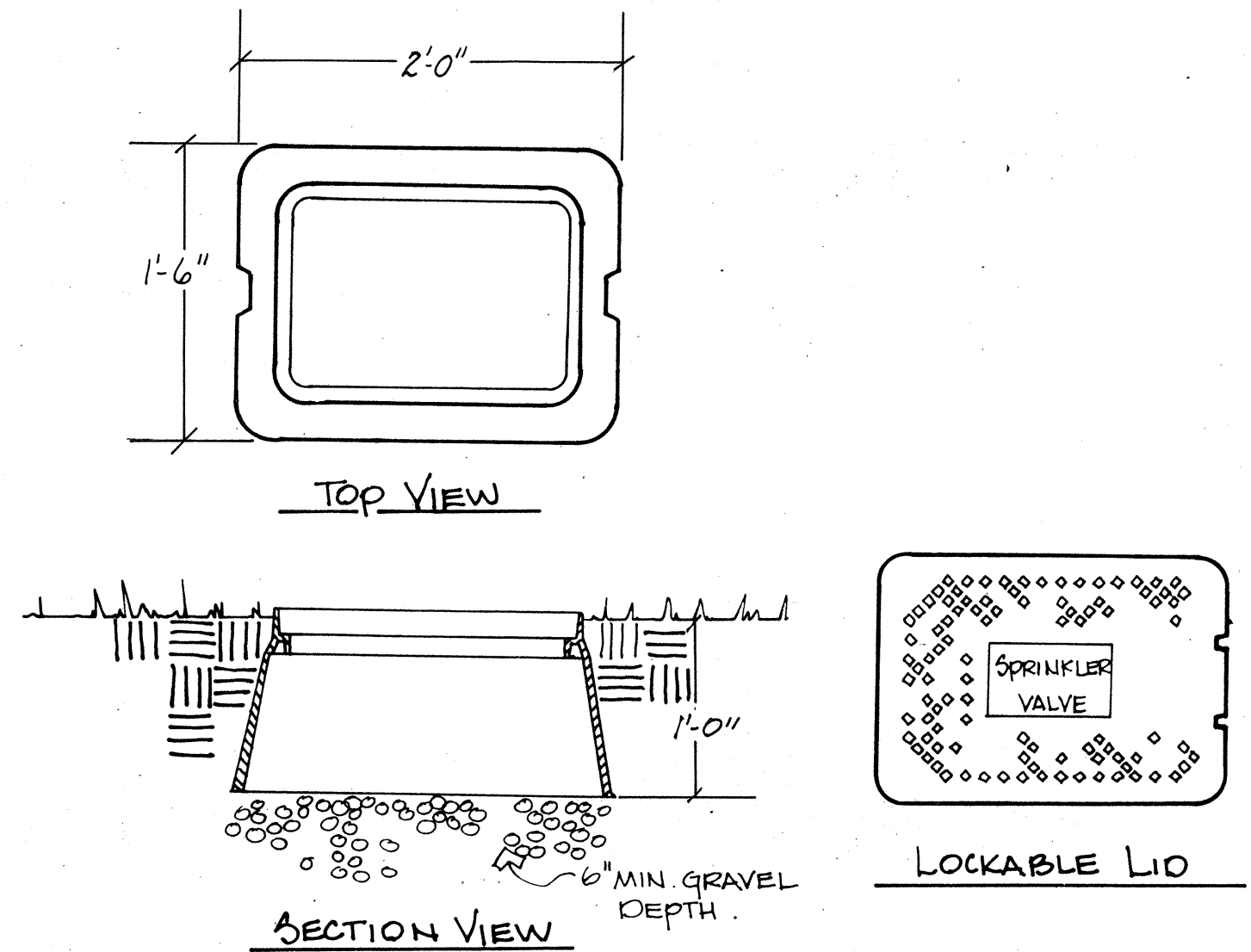
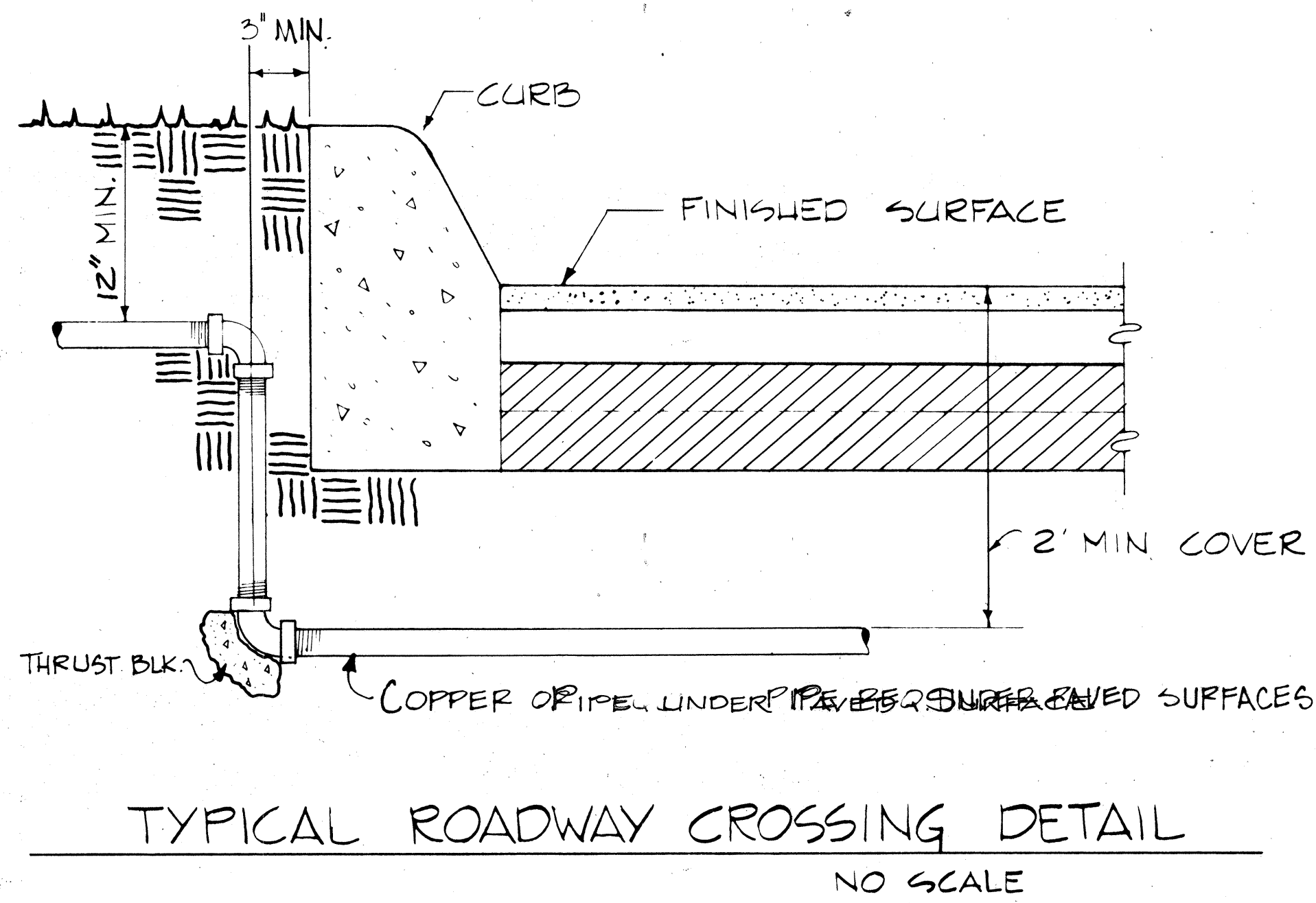


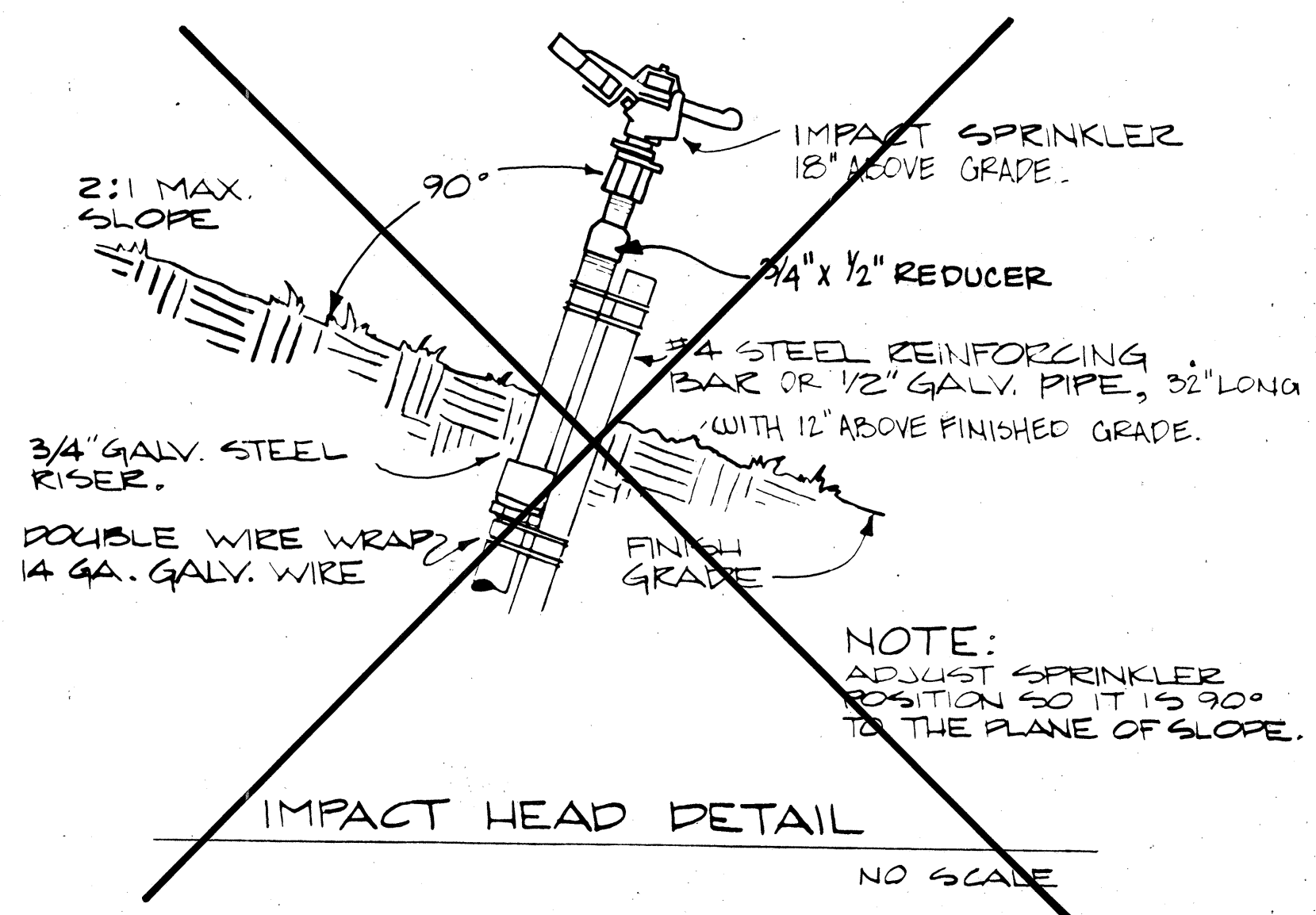
TABLE FOR BEARING AREA OF THRUST BLOCKS (SQ. FT.)

PIPE SIZE	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"
TEES & CROSSES	0.50	0.50	0.50	0.50	1.00	1.25	3.00
90° BEND	0.50	0.50	0.50	0.75	1.25	2.00	4.00
45° BEND	0.50	0.50	0.50	0.50	0.75	1.00	2.25

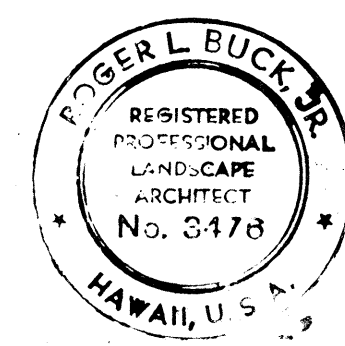
TYPE 'A' VALVE BOX NO SCALE

1. THIS TYPE "A" VALVE BOX IS TO BE USED AS AN IRRIGATION ELECTRIC PULL-BOX WHERE REQUIRED.
2. THE TYPE "A" VALVE BOX IS SIMILAR TO A HONOLULU BOARD OF WATER SUPPLY TYPE "X" BOX.
3. THE VALVE COVER MAYBE SUBSTITUTED WITH THE BWS METER COVER, BUT THE WORDS "BOARD OF WATER SUPPLY" AND "WATER METER" SHALL BE GROUND OFF. IMPRINT THE WORDS "SPRINKLER VALVE" ON THE COVER.
4. PLASTIC VALVE BOXES MAYBE SUBSTITUTED FOR THE TYPE "A" VALVE BOXES. PLASTIC BOXES SHALL BE COMMERCIALY MANUFACTURED PRODUCTS AND SHALL BE A RIDGID COMBINATION OF POLYOLEFIN AND FIBROUS INORGANIC COMPONENTS. PHYSICAL PROPERTIES SHALL BE AS FOLLOWS:

	ASTM TEST METHOD	MINIMUM TEST VALUE
TENSILE STRENGTH	D 638	3,400 PSI
IMPACT STRENGTH	D 256	1.5 FT. LBS./IN.
DUROMETER HARDNESS	D 676	63
DEFLEC. TEMP.	D 648	230°F.
SPECIFIC GRAVITY	D 792	1.15

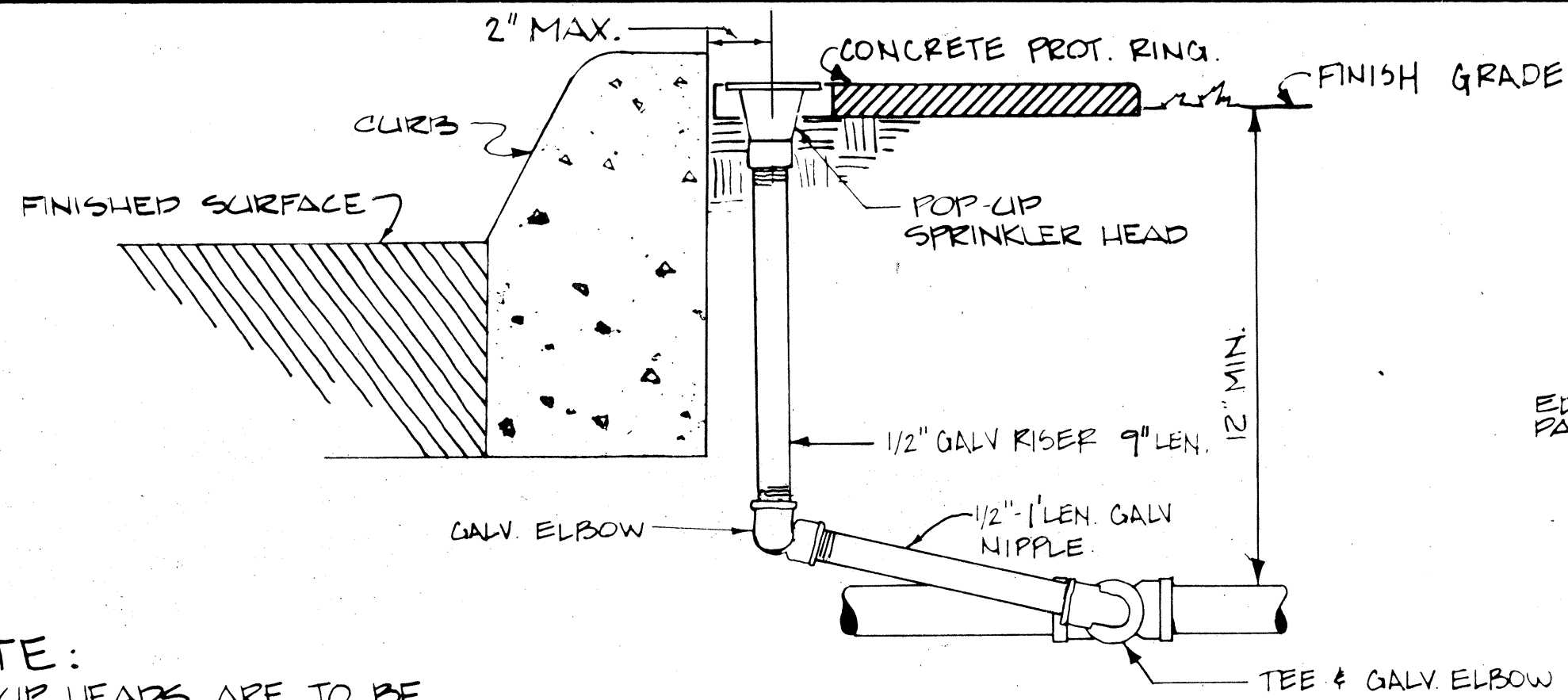


DATE: _____
 DESIGNED BY: _____
 CHECKED BY: _____
 NO. _____

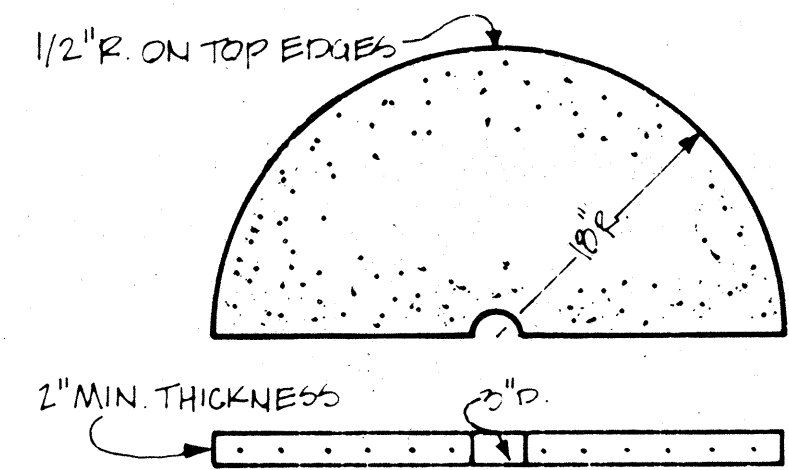


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

NO.	DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION		
SPRINKLER DETAILS		
AIRPORT INTERCHANGE F.A.I. PROJ. NO. I-HI-1(122)16		
SCALE: AS SHOWN		DATE: 2-1-77
SHEET No. 13 OF 16 SHEETS		

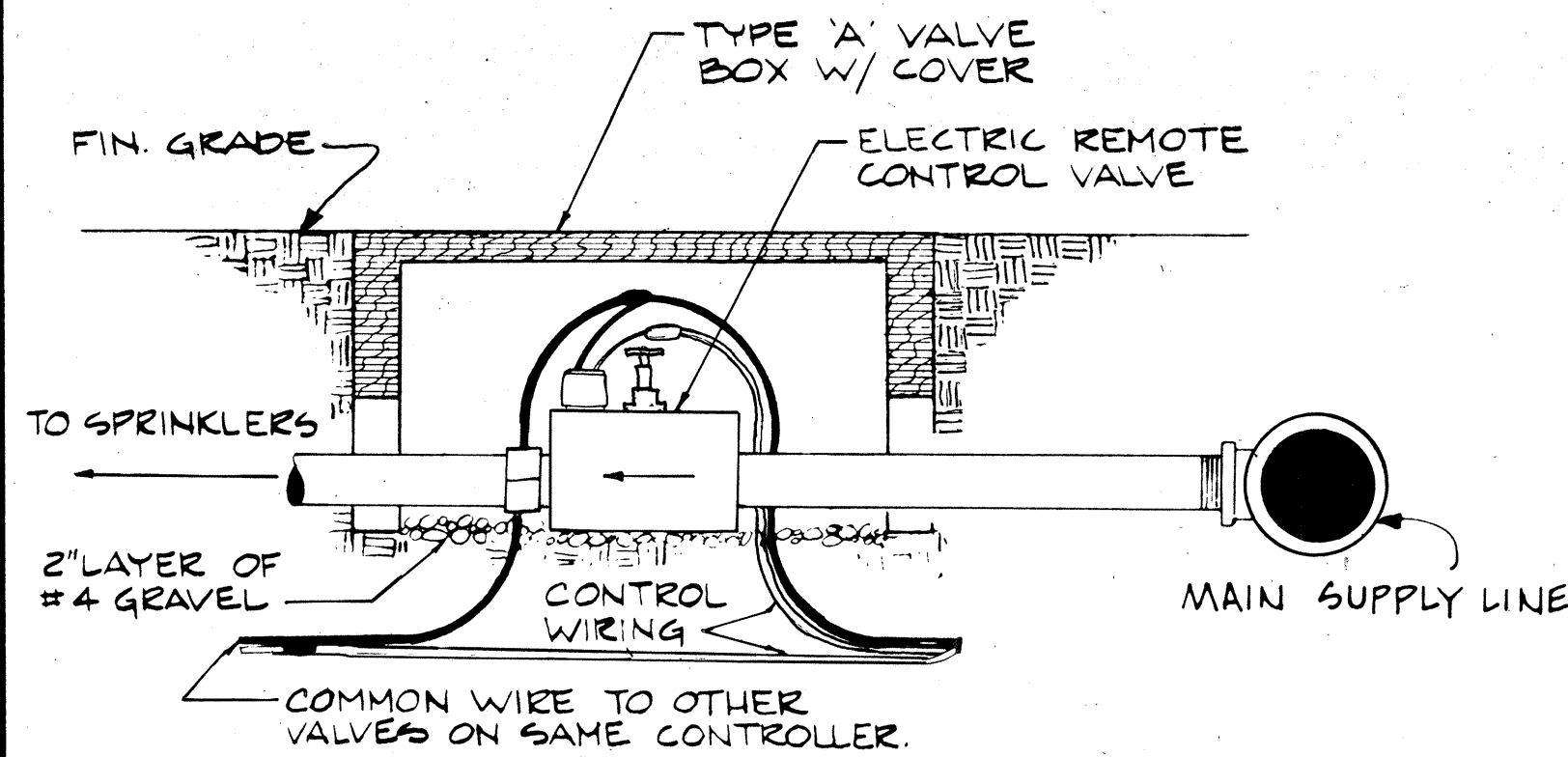


NOTE:
POP-UP HEADS ARE TO BE PLACED ALONG CURBS & SHALL HAVE SWING JOINTS. ALL HEADS WILL BE A MIN. OF ONE TENTH FOOT BELOW TOP OF CURB AS SHOWN.

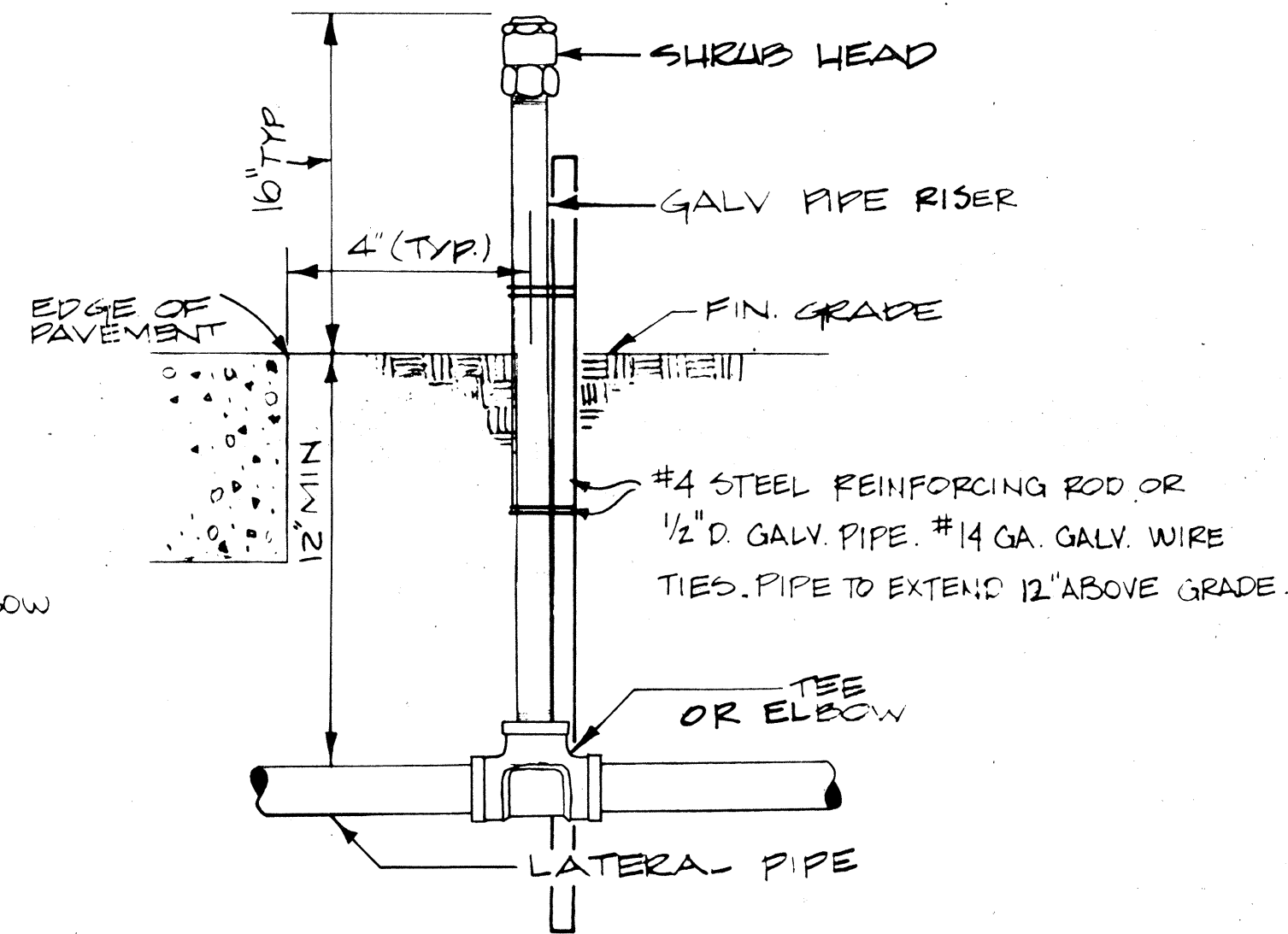


4"x4" 10-10 GA. WIRE MESH REINF.
CLASS "B" CONCRETE TINTED TO SPECIFIED COLOR.

TYPICAL PROTECTION RING DETAIL
NO SCALE



VALVE ASSEMBLY DETAIL
NO SCALE

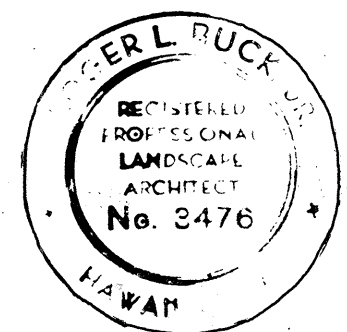
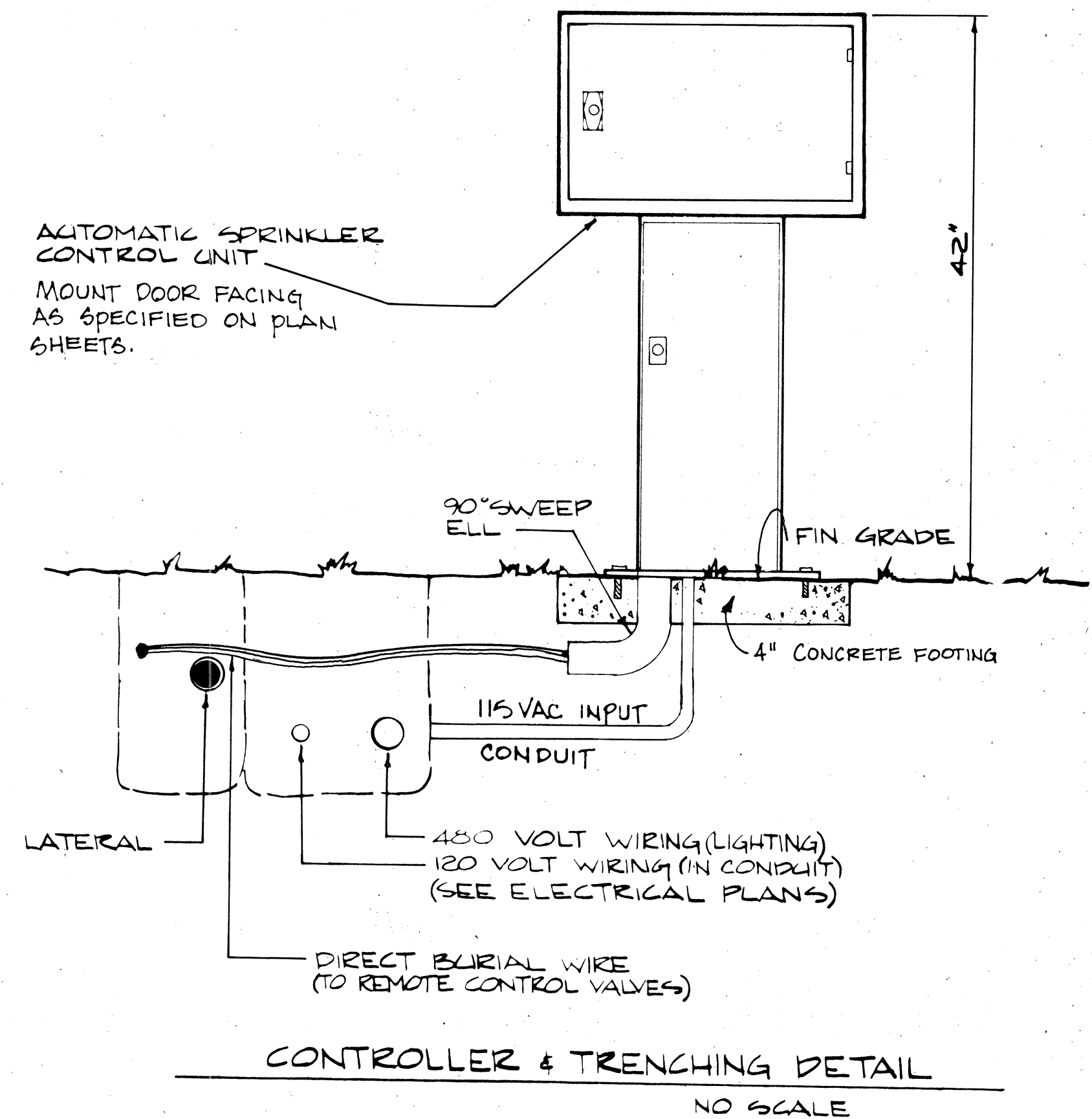


TYPICAL SHRUB HEAD DETAIL
NO SCALE

GENERAL NOTES

1. FINAL LOCATIONS OF VALVES, BACKFLOW PREVENTERS, CONTROLLERS AND SUPPLY LINES SHALL BE DETERMINED BY THE ENGINEER.
2. CONCRETE REACTION BLOCKS SHALL BE CLASS "B" CONCRETE.
3. MINIMUM LINE SIZE BETWEEN SPRINKLER HEADS SHALL BE AS SHOWN ON THE TABLES.
4. LINE SIZES UP TO AND INCLUDING 3" SHALL BE GALVANIZED STEEL, COPPER OR P.V.C. PIPE EXCEPT THAT PIPE UNDER PAVED AREAS SHALL BE COPPER. ALL PIPE ABOVE GROUND TO BE GALVANIZED STEEL.
5. ALL WIRING UNDER PAVED AREAS SHALL BE INSTALLED IN CONDUITS.
6. NO ROCKS OR SHARP OBJECTS ONE INCH OR LARGER SHALL BE USED IN BACKFILL MATERIAL FOR TRENCHES.
7. CONTRACTOR SHALL ADJUST ALL SPRINKLER HEADS FOR PROPER COVERAGE, AND NOTIFY THE ENGINEER OF ANY ALTERATIONS TO THE PLANS.
8. TWO 24"x1" LONG HEAVY PLATED IRON KEYS SHALL BE PROVIDED FOR CONTROL VALVES AND SHALL BE INCIDENTAL TO VALVE COST.
9. IRRIGATION LINES PASSING THRU A RETAINING WALL WILL PASS THRU A 2"x8" PVC FACEWAY FITTED INTO THE WALL AT THE TIME OF FORMING.
10. NIPPLES AND RISERS TO SPRINKLER HEADS FROM FEEDER LINES SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS PAY ITEMS OF THE SPRINKLER SYSTEM AND SHALL NOT BE MEASURED FOR PAYMENT.

SPRINKLER LEGEND								
SPRINKLER	SYMBOL	DESCRIPTION	PRESSURE PSI	COVERAGE FT.	FLOW GPM	NOZZLE INCHES	RISER INCHES	SPECIAL FEATURES
P-12	●	LOW ANGLE POP-UP - FULL	20	12 RAD.	3.0		1/2	2" POP-UP, LOW ANGLE SPRAY
P-12	●	LOW ANGLE POP-UP - HALF	20	12 RAD.	2.5		1/2	
P-12	●	LOW ANGLE POP-UP - QUARTER	20	12 RAD.	1.8		1/2	
S-13	⤴	SHRUB HEAD - HALF	30	14 RAD.	2.5		1/2	PORTION OF RISER ABOVE GROUND LINE TO BE 5" MINIMUM LENGTH 2" POP-UP STREAM SPRAY
P-225	◐	LAWN POP-UP - HALF	35	21 RAD.	1.3		1/2	
P-225	◐	LAWN POP-UP - QUARTER	35	21 RAD.	.9		1/2	
S-225	⦿	SHRUB SPRAY - FULL	35	21 RAD.	2.4		1/2	STREAM SPRAY
S-225	◐	SHRUB SPRAY - HALF	35	21 RAD.	1.3		1/2	
P-13	⦿	POP-UP SHORT RAD. - FULL	30	14' RAD.	3.8		1/2	2 3/16" HIGH POP - RAMP WD HEADS WITH CONCRETE PROTECTION RINGS - RODGERS - PLACE HEADS ON RISERS.
P-13	◐	POP-UP SHORT RAD. - 3/4 TR.	30	14' RAD.	3.1		1/2	
P-13	◐	POP-UP SHORT RAD. - HALF	30	14' RAD.	2.5		1/2	
P-13	◐	POP-UP SHORT RAD. - THIRD	30	14' RAD.	1.9		1/2	
P-13	◐	POP-UP SHORT RAD. - QUARTER	30	14' RAD.	1.6		1/2	
	⦿	ELECTRIC 12 STATION AUTOMATIC CONTROLLER						PEDestal MOUNT
	◐	ELECTRIC REMOTE CONTROL VALVE W/ TYPE A VALVE BOX						24V WATERPROOF SOLENOID.
	⦿	ELECTRIC 10 STATION AUTOMATIC CONTROLLER						PEDestal MOUNT

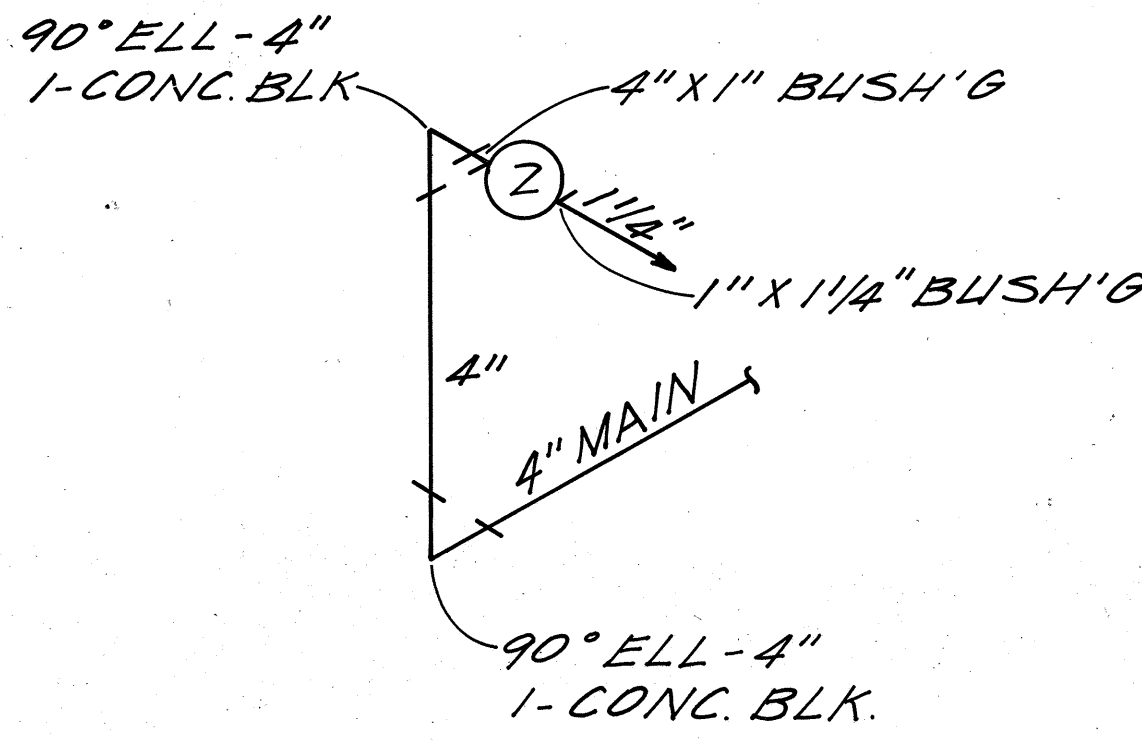


Peter L. Buck
REGISTERED PROFESSIONAL
LANDSCAPE ARCHITECT
No. 2476
HAWAII
THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

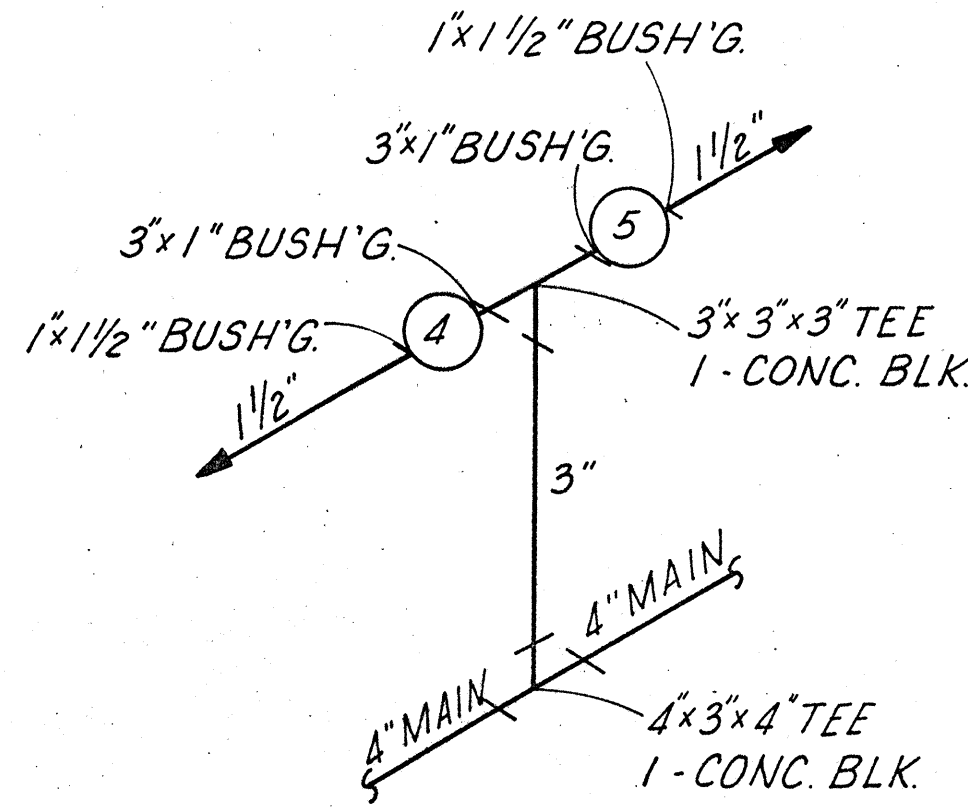
1	1/15/78	ADDED S-13 SPRINKLER HEAD
NO	DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION		
SPRINKLER DETAILS		
AIRPORT INTERCHANGE F.A.I. PROJ NO I-HI-1(122)16		
SCALE: AS SHOWN		DATE: 2-1-77
SHEET No 14 OF 16 SHEETS		

DATE	
DESIGNED BY	
CHECKED BY	
NOTED BY	
ORIGINAL PLAN	
NO. BOOK	
NO.	

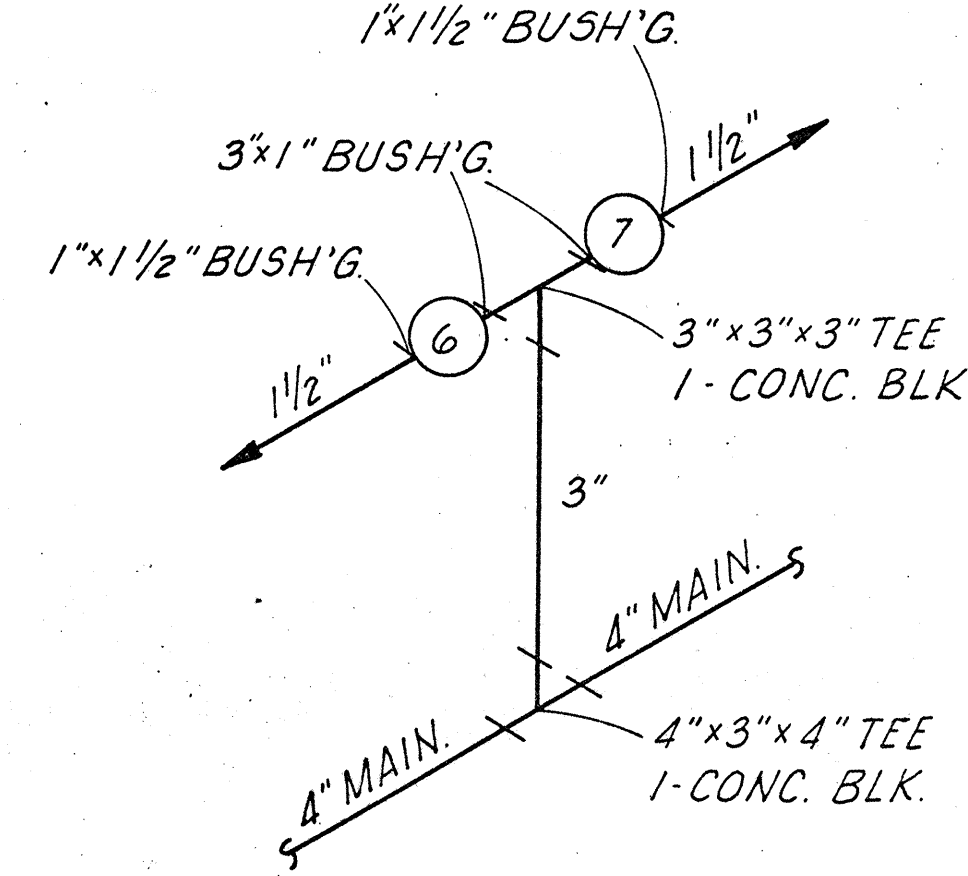
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(122)16	1977	94	181



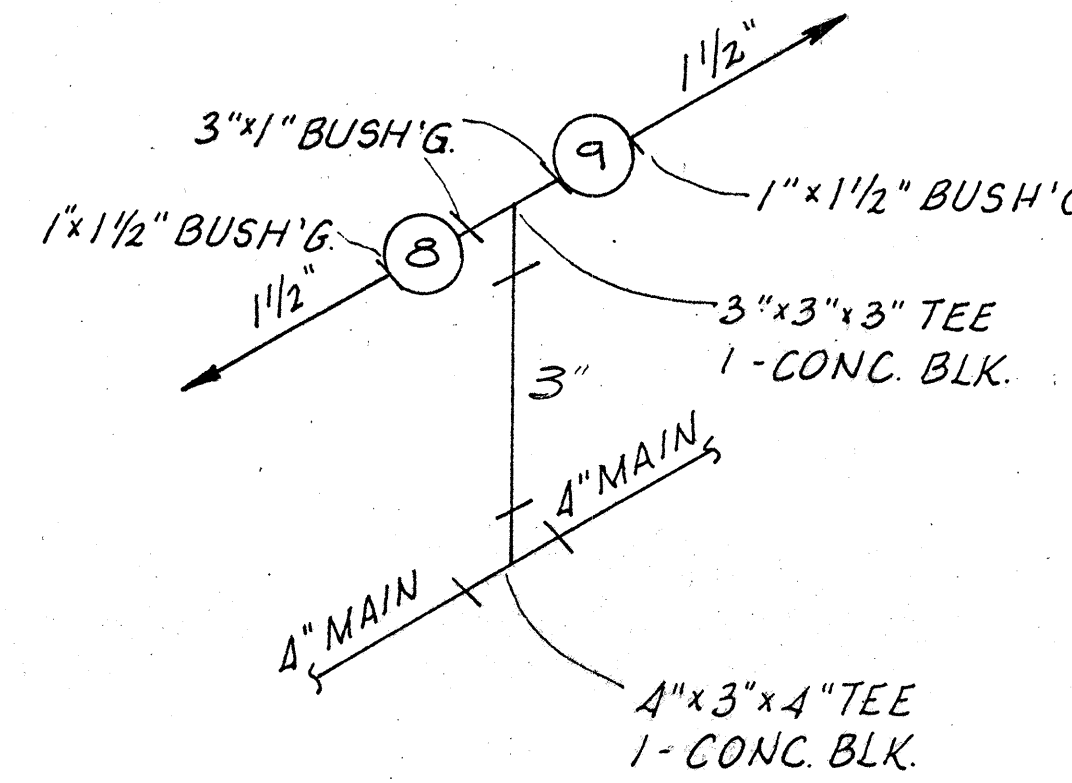
VALVE 2 - 1"



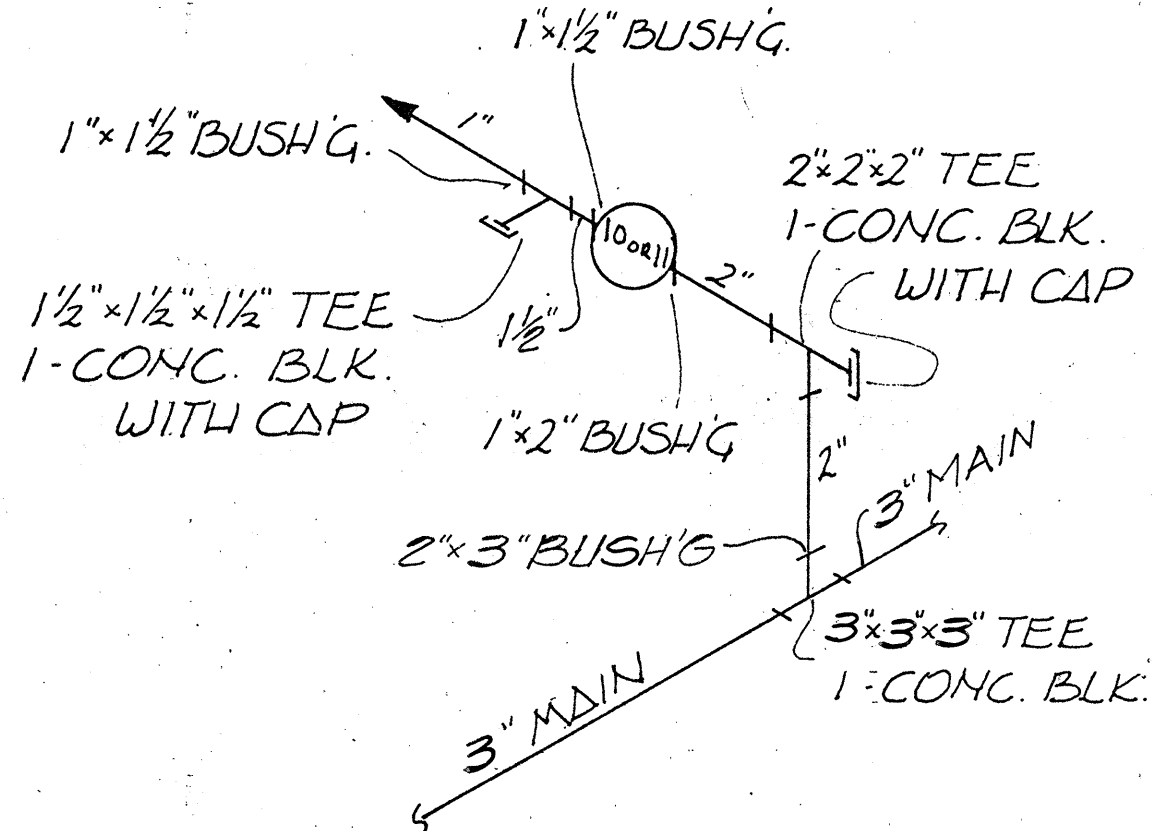
VALVE 4 - 1" 5 - 1"



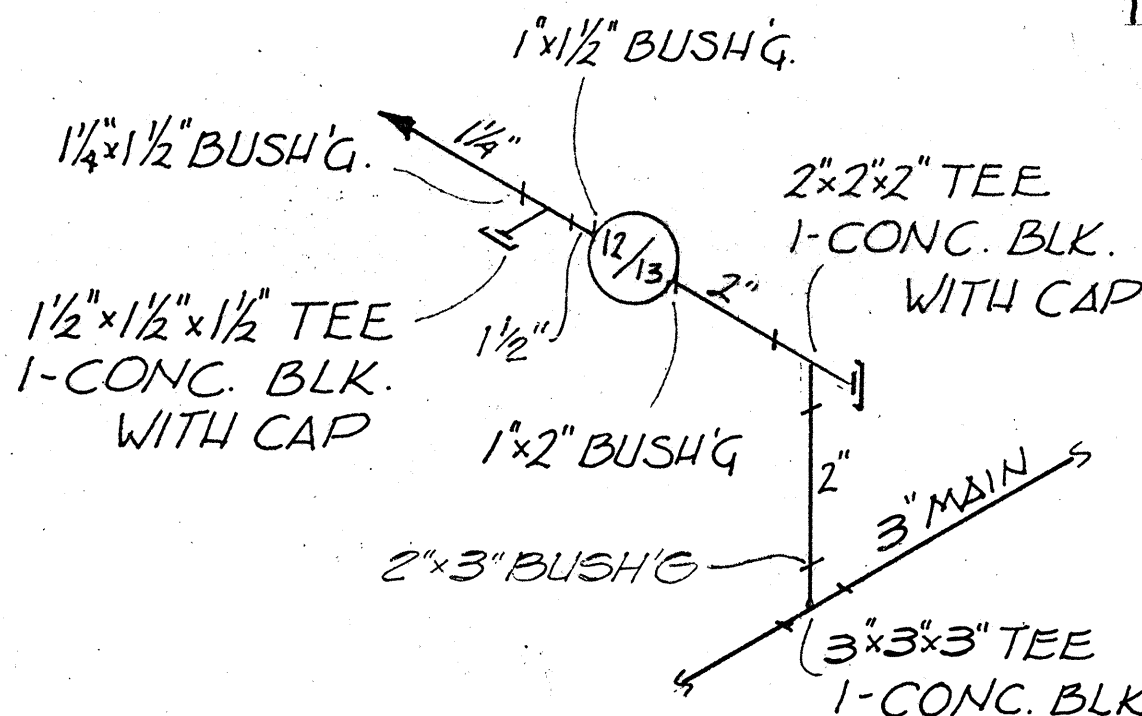
VALVE 6 - 1" 7 - 1"



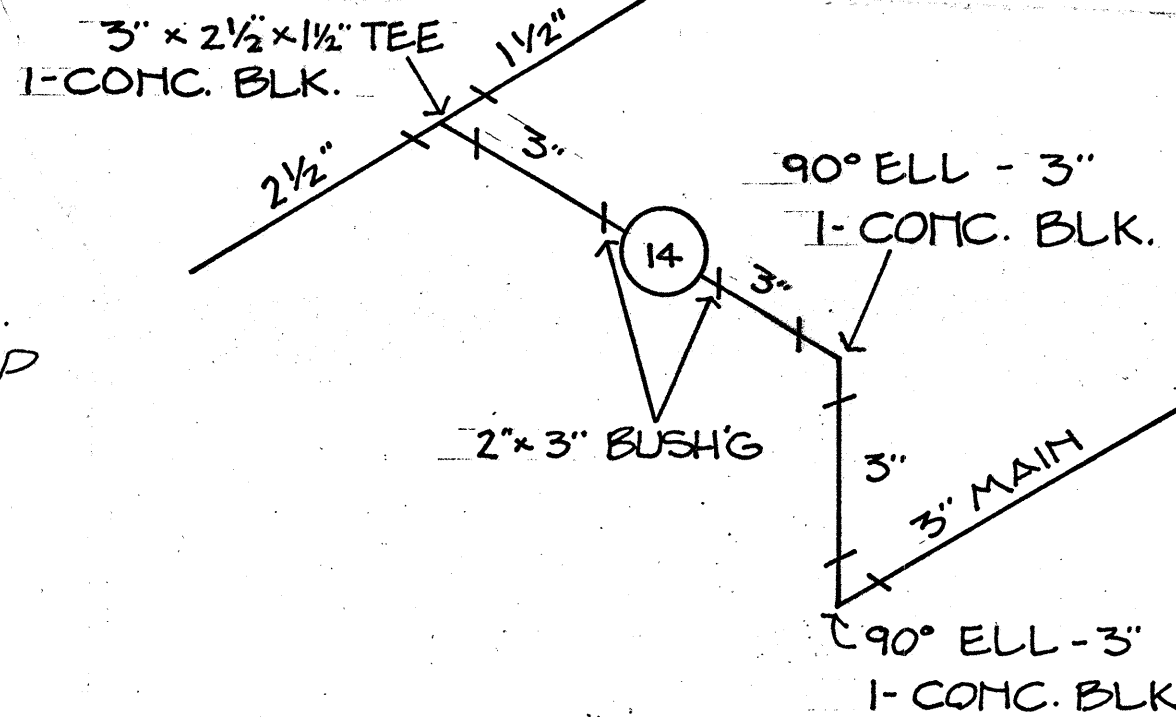
VALVE 8 - 1" 9 - 1"



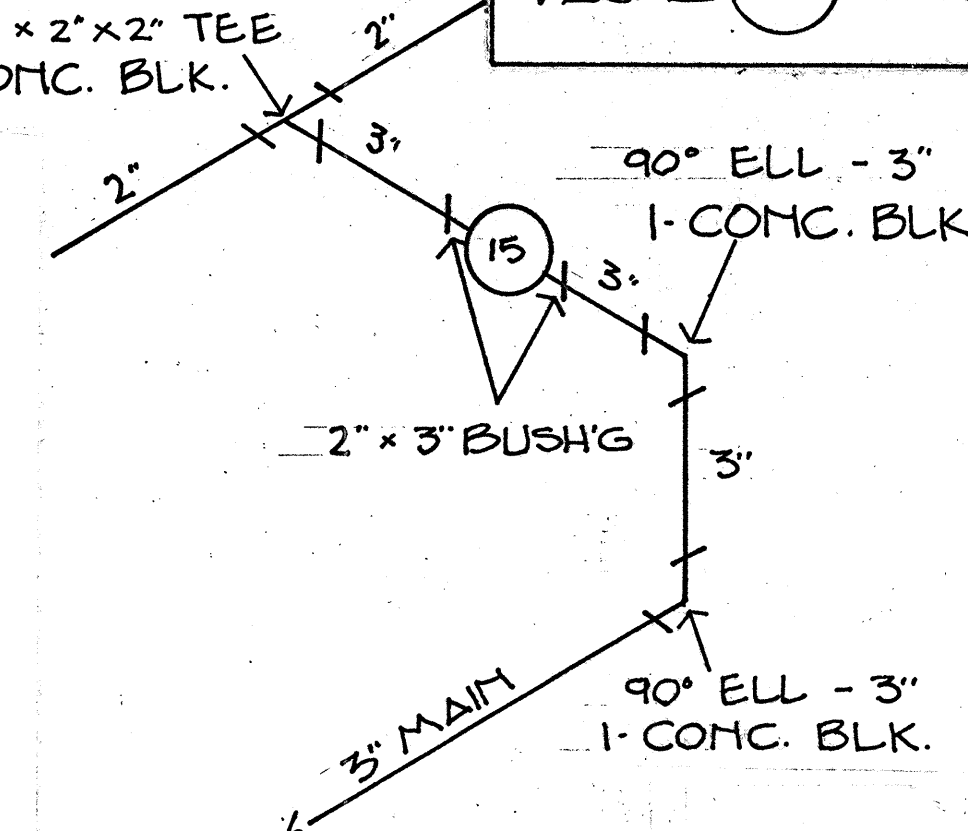
VALVE 10 - 1" or 11 - 1"



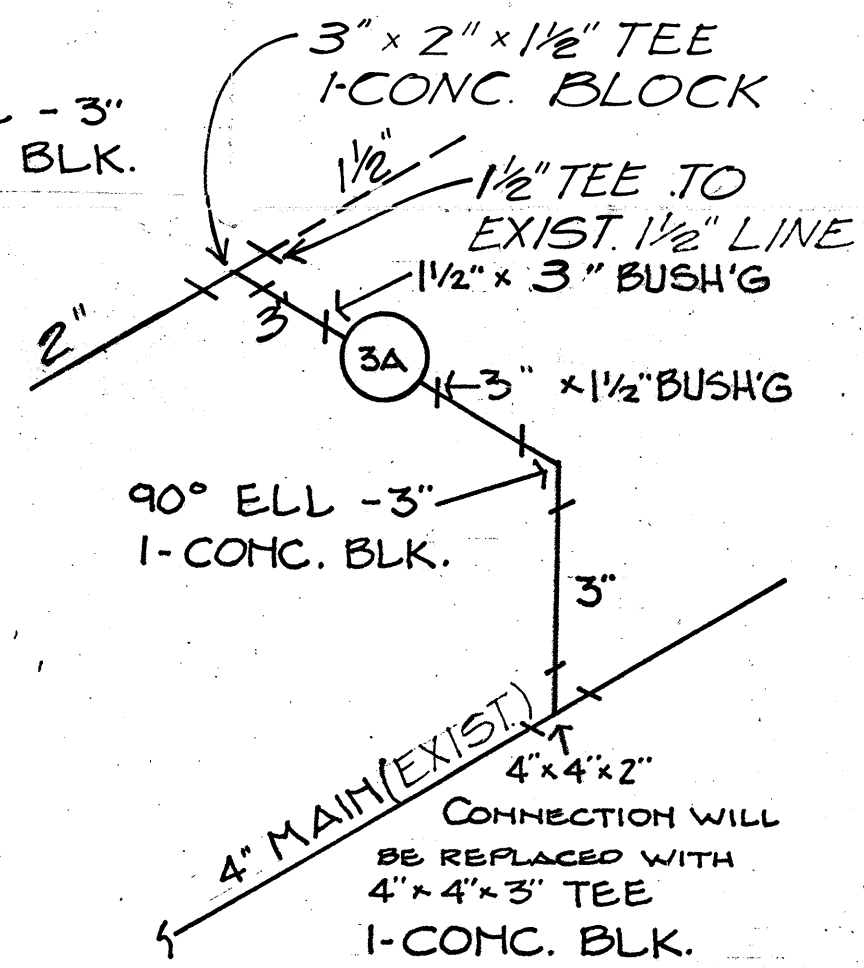
VALVE 12 - 1" or 13 - 1"



VALVE 14 - 2"



VALVE 15 - 2"



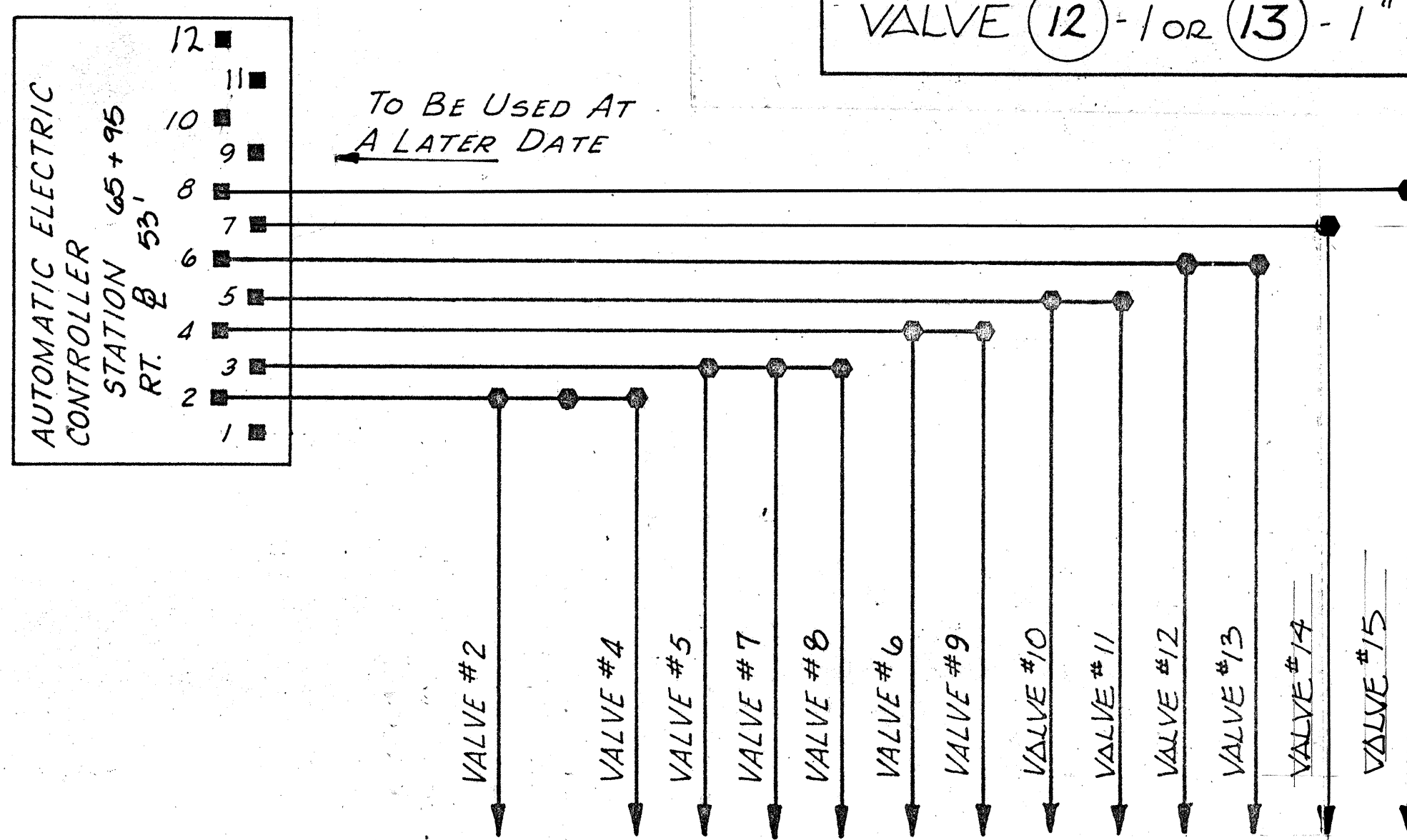
VALVE 3A - 1 1/2"

OPERATION MTWTHFS	STATION	MIN.
START SYSTEM 2 A.M.	1	
	2	24
	3	33
	4	37
	5	28
	6	31
	7	9
	8	9
	9	-
	10	-

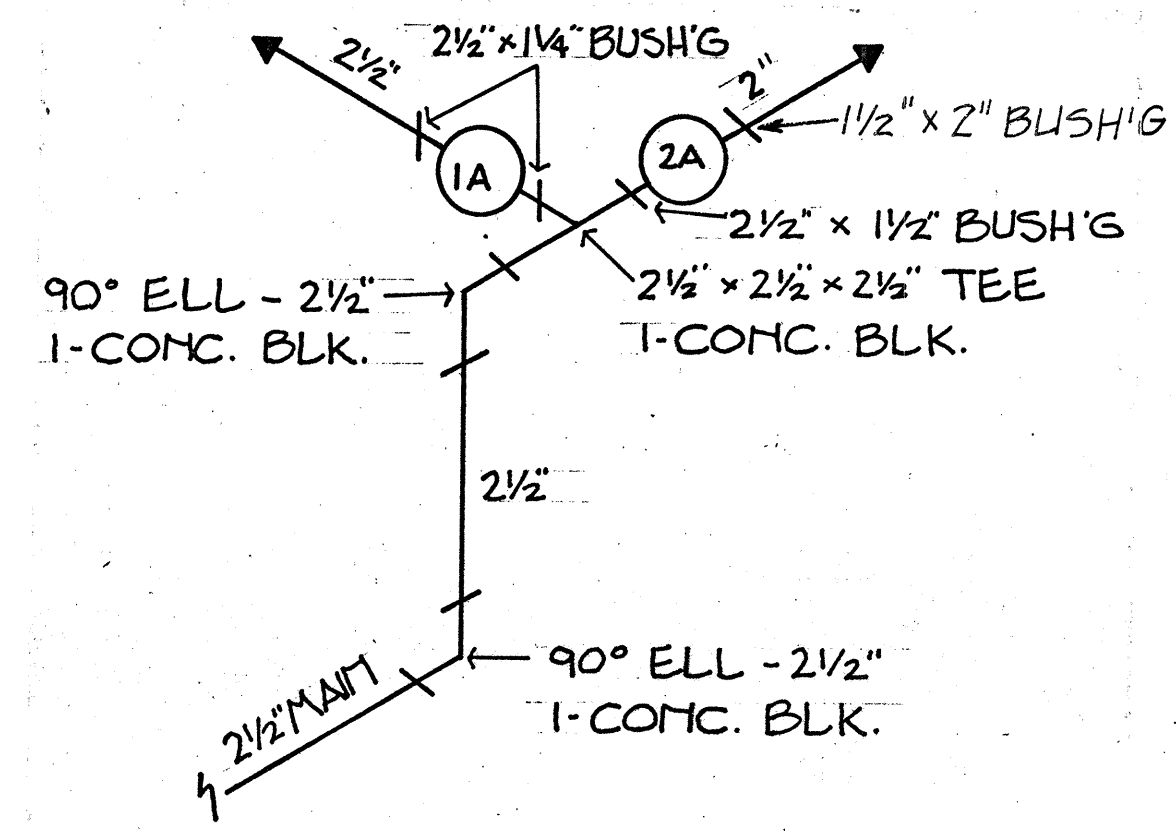
CONTROLLER AT WD RAMP 65+95
STATION CLOCK TIMES FOR 1 1/2" WATER / WEEK

OPERATION MTWTHFS	STATION	MIN.
FIT TIMES INTO EXISTING AIRPORT # I CONTROLLER	1A	7
	2A	7
	3A	6

I CONTROLLER AT AIRPORT PARKING LOT

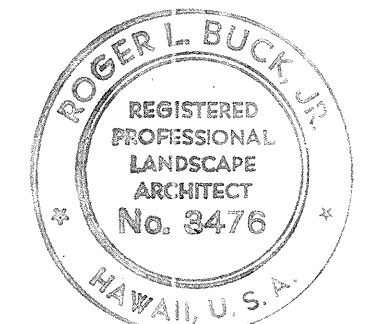


VALVE SCHEDULE TO CONTROLLER STATION



VALVE 1A - 1 1/4" & 2A - 1 1/2"

2		Deleted Valves 1 & 3
1	11-1-77	Revised Fittings for Valves 1A - 2A and 3A
NO.	DATE	REVISION



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
R. L. Buck, Jr.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SPRINKLER DETAILS
ISOMETRIC VALVE LAYOUT & SCHEDULE

AIRPORT INTERCHANGE
F.D.I. PROJ. I-HI-1(122)16

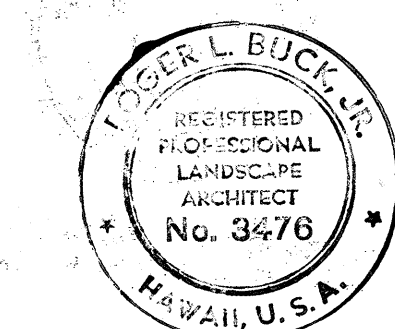
SCALE: NO SCALE DATE: 2-1-77
SHEET No. 15 OF 16 SHEETS

ESTIMATED QUANTITIES

[illegible]

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

3		REVISED QUANTITIES DUE TO DELETION OF VALVES 1 & 3
2	1-15-78	ADDED ITEM GIG.2290 AND REVISED QUANTITIES FOR VALVE 14 AND 15
1	10-25-77	REVISED QUANTITIES FOR VALVES 2A & 3A
NO	DATE	REVISIONS



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

IRRIGATION SUMMARY

SCALE: NONE DATE: 2-1-77

SHEET No. 16 OF 16 SHEETS

CO 95