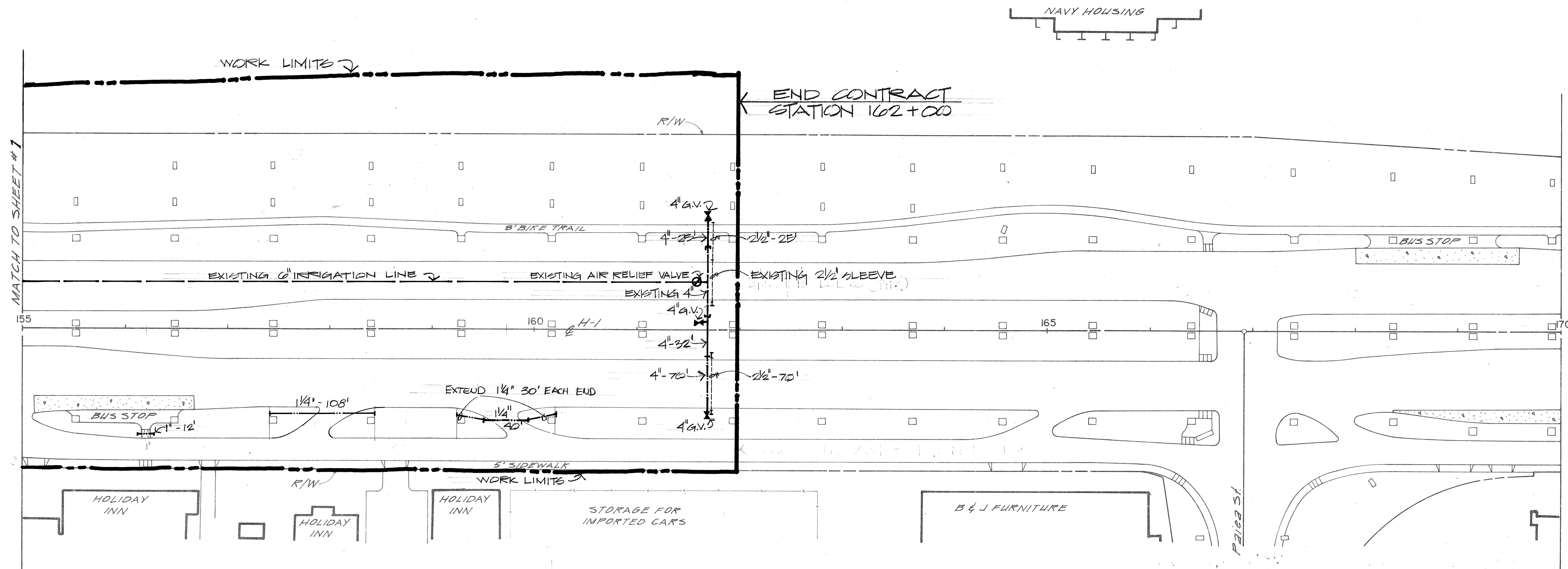


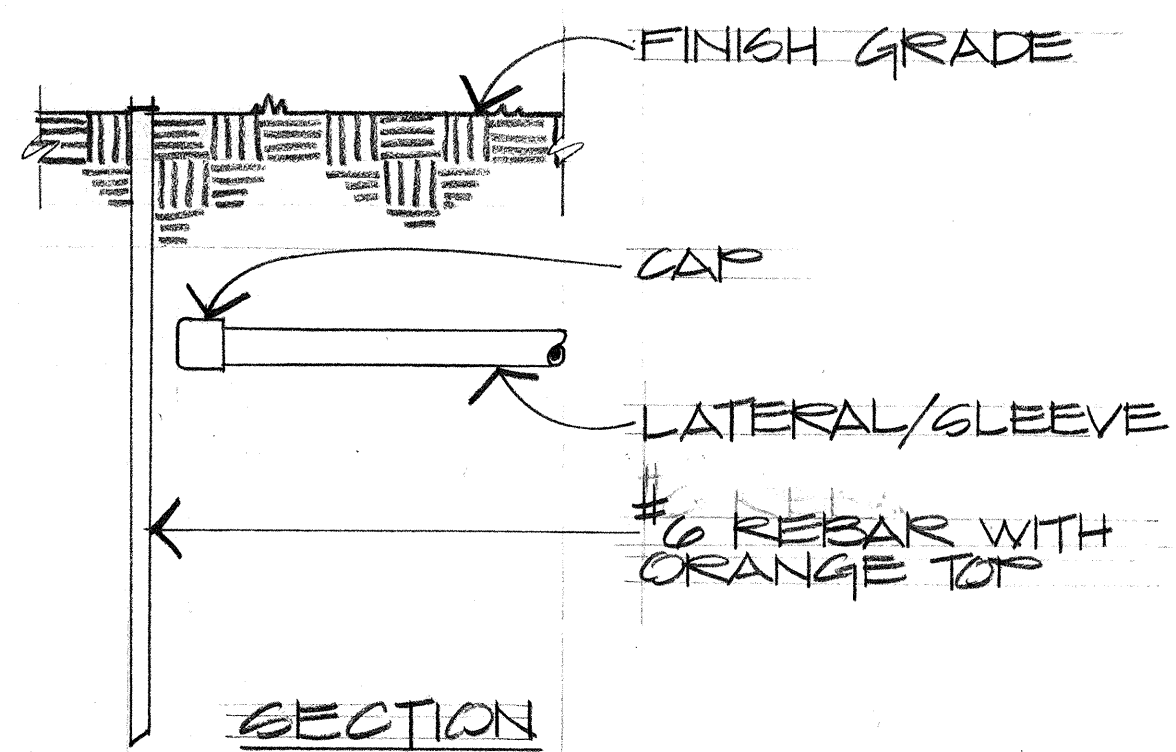
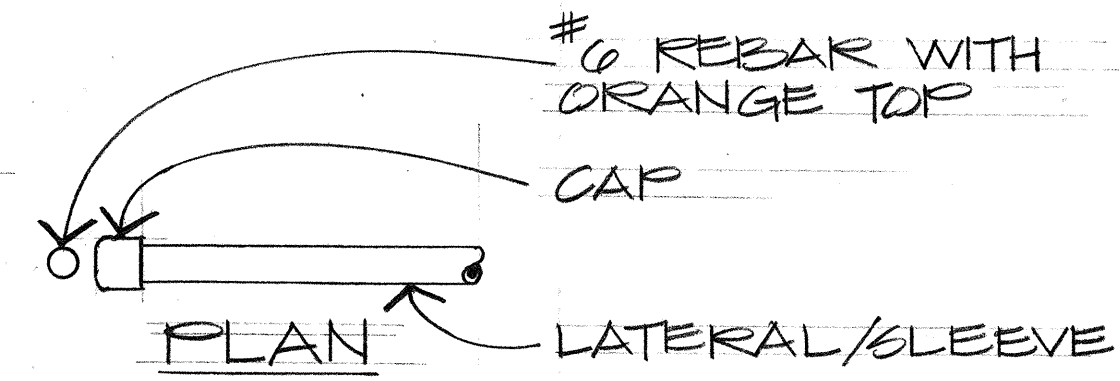


| NO. | DATE     | REVISION               |
|-----|----------|------------------------|
| 1   | 1-19-79  | Added Approval Block   |
| 2   | 10-10-80 | Added 168' 1 1/4" Pipe |

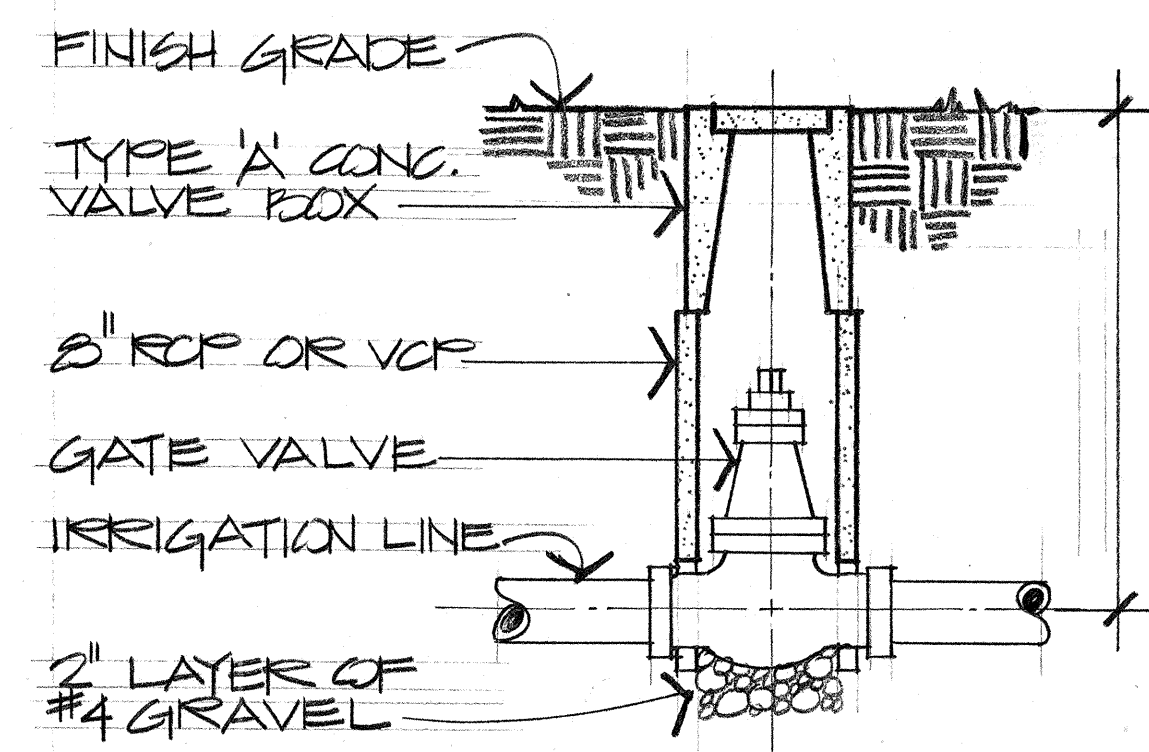
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 1-HI-1(124)16      | 1978        | 101       | 223          |



**PARTIAL IRRIGATION PLAN**  
SCALE: 1" = 50'



**CAPPED LATERAL & SLEEVE LOCATION DET.**  
NO SCALE



**GATE VALVE DETAIL**  
NO SCALE

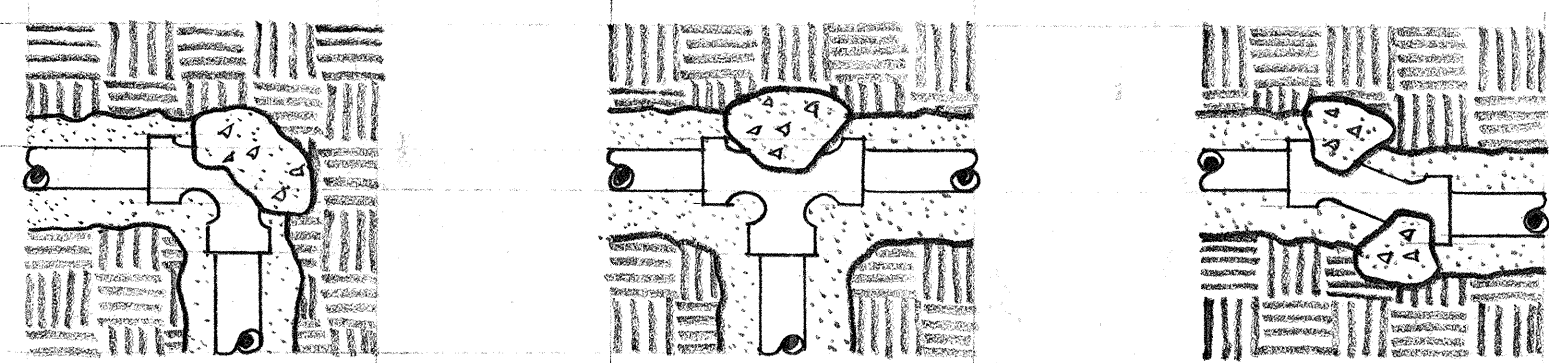
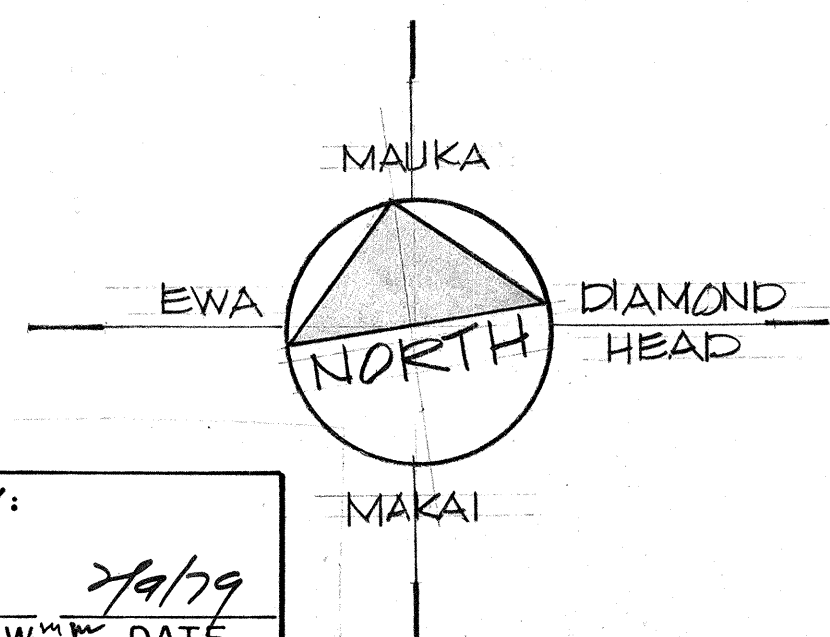


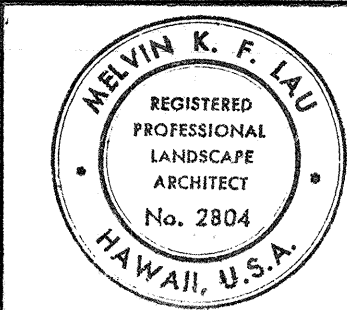
TABLE FOR BEARING AREA OF THRUST BLOCKS (SQ. FT.)

| 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 |

**TYPICAL THRUST BLOCK DETAILS**  
NO SCALE



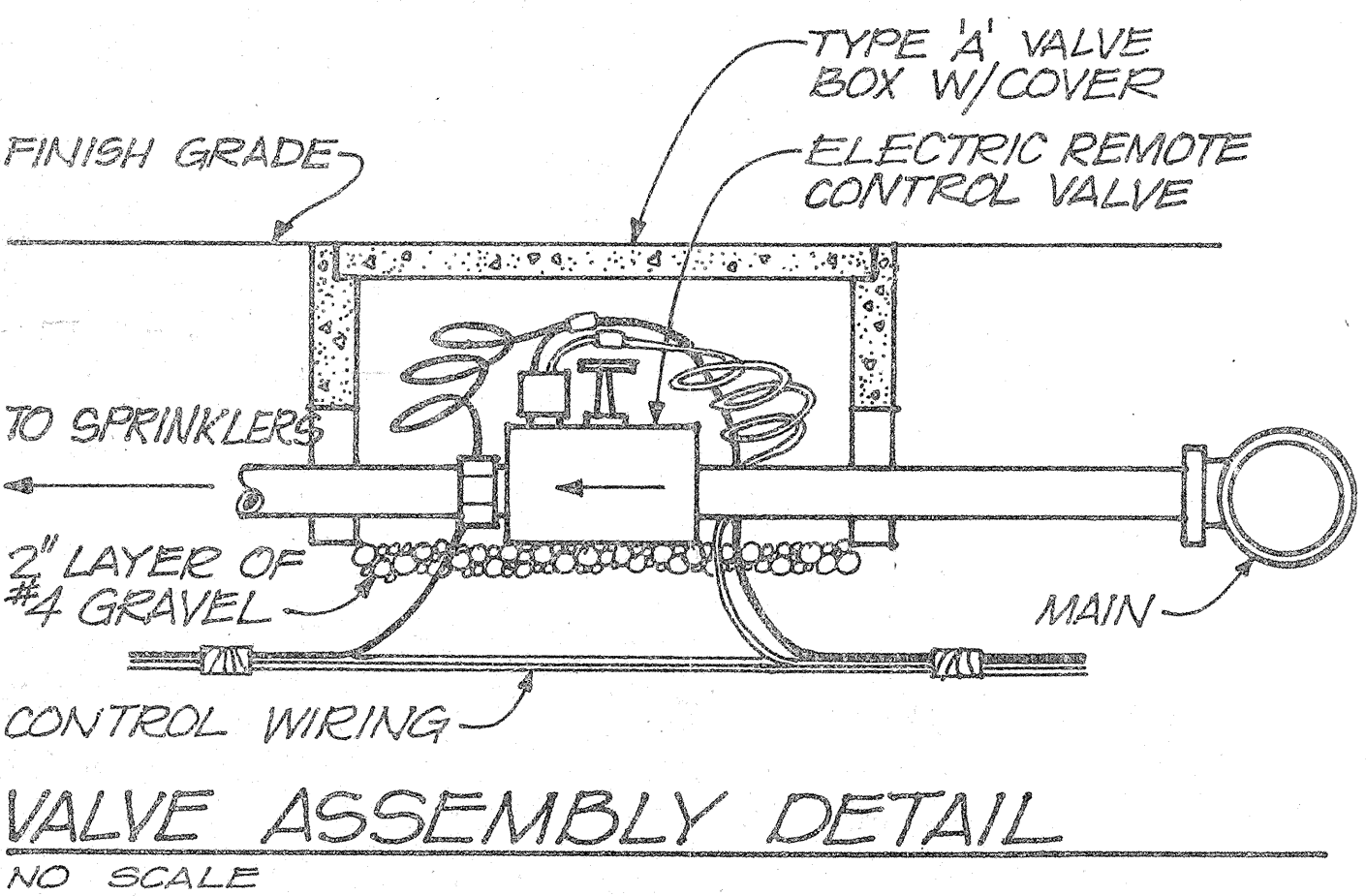
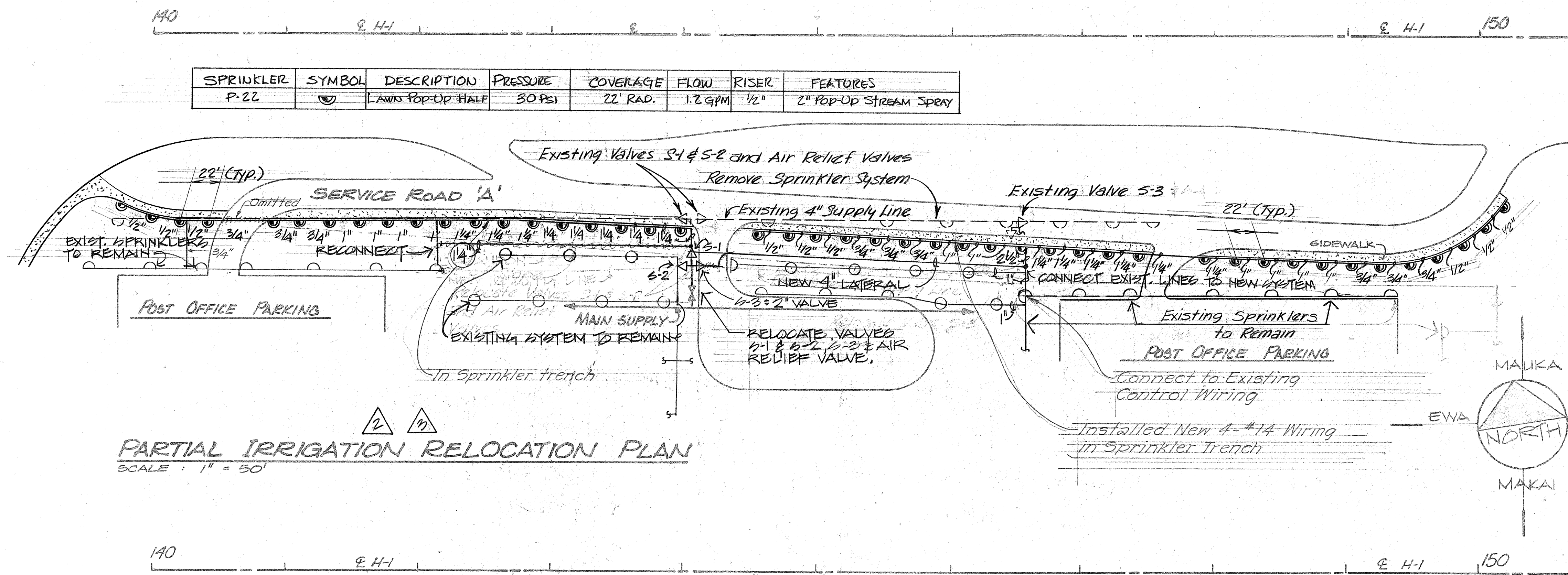
APPROVED FOR GRADING ONLY:  
*J. Young* 7/9/79  
CHIEF, DIVISION OF ENGINEERING, DPW DATE



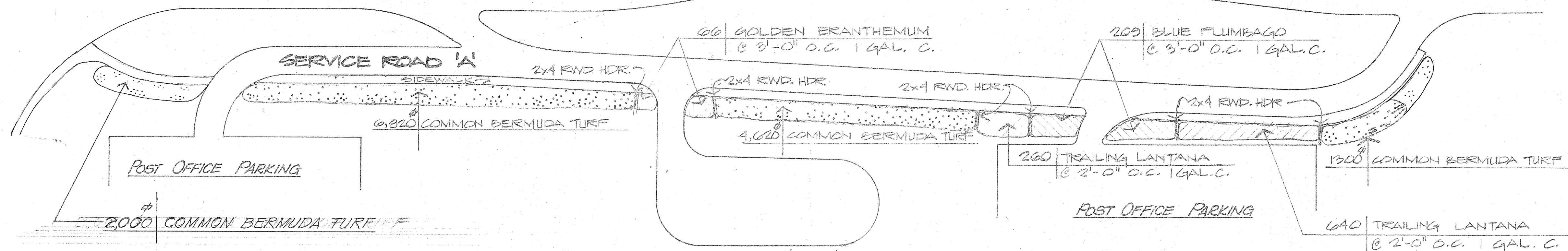
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
LAND TRANSPORTATION FACILITIES DIVISION  
**IRRIGATION PLAN  
PIPE SUB-OUTS & SLEEVES  
& DETAILS**  
AIRPORT INTERCHANGE  
F.A.I. PROJ. NO. 1-HI-1(124)16  
SCALE: AS SHOWN DATE: SEPT 5, 1978  
SHEET NO. 12 OF 4 SHEETS

|               |      |
|---------------|------|
| ORIGINAL PLAN | DATE |
| DRAWN BY      |      |
| CHECKED BY    |      |
| DESIGNED BY   |      |
| NOTED BY      |      |
| QUANTITIES BY |      |
| CHECKED BY    |      |
| NO.           |      |

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | I-H-1(124)16       | 1978        | 102       | 223          |



- IRRIGATION NOTES**
1. IRRIGATION PLAN IS SCHEMATIC, ALL LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
  2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL EXISTING UTILITIES.



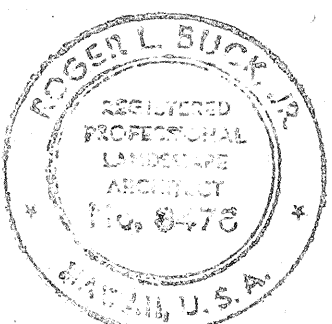
- PLANTING NOTES**
1. ALL PLANTING AREAS DISTURBED BY REALIGNMENT OF ACCESS ROAD SHALL BE REPLANTED TO MATCH PLANT MATERIAL REMOVED.
  2. TOP 6" DEPTH OF 6:1 SLOPE SHALL BE IMPORTED TOP SOIL.
  3. PLANT COUNT SHOWN IS APPROXIMATE FINAL COUNT SHALL BE DETERMINED IN THE FIELD.

**PARTIAL REPLANTING PLAN**  
SCALE: 1" = 50'

**PLANT MATERIAL LIST**

| SYMBOL | BOTANICAL NAME              | COMMON NAME       | QUAN.  | ROOT PREP | SIZE        |
|--------|-----------------------------|-------------------|--------|-----------|-------------|
|        | PSEUDERANTHEMUM RETICULATUM | GOLDEN BRANTHEMUM | 66     | 1 GAL.    | 18" HT.     |
|        | PLUMBAGO CAPENSIS           | BLUE PLUMBAGO     | 209    | 1 GAL.    | 18" HT.     |
|        | LANTANA SELLOWIANA          | TRAILING LANTANA  | 260    | 1 QT.     | 12" HT.     |
|        | CYNODON DACTYLON            | COMMON BERMUDA    | 13,740 | STOLONS   | HYDRO-MULCH |

APPROVED FOR GRADING ONLY:  
CHIEF, DIVISION OF ENGINEERING, DPW  
DATE



| SYMBOL | REVISIONS                                         | DATE   | APP'D |
|--------|---------------------------------------------------|--------|-------|
| 1      | REVISED SPRINKLER PLAN @ POST OFFICE AREA 5-2-80  |        |       |
| 2      | REVISED SPRINKLER PLAN @ POST OFFICE AREA 8-23-79 |        |       |
| 3      | ADDED APPROVAL BLOCK                              | 1-1979 |       |

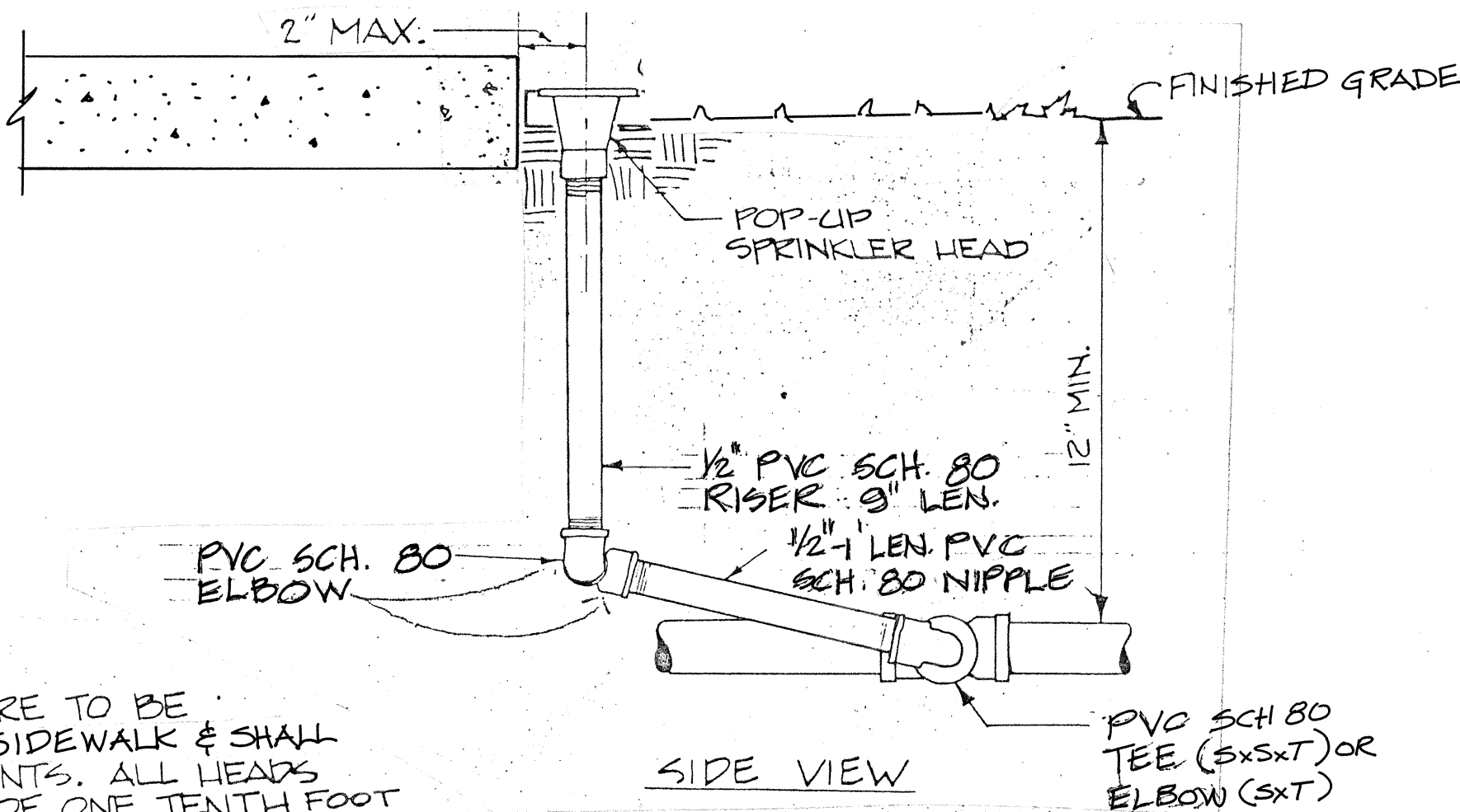
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**PARTIAL REPLANTING & SPRINKLER RELOCATION PLAN**  
**POST OFFICE AREA**

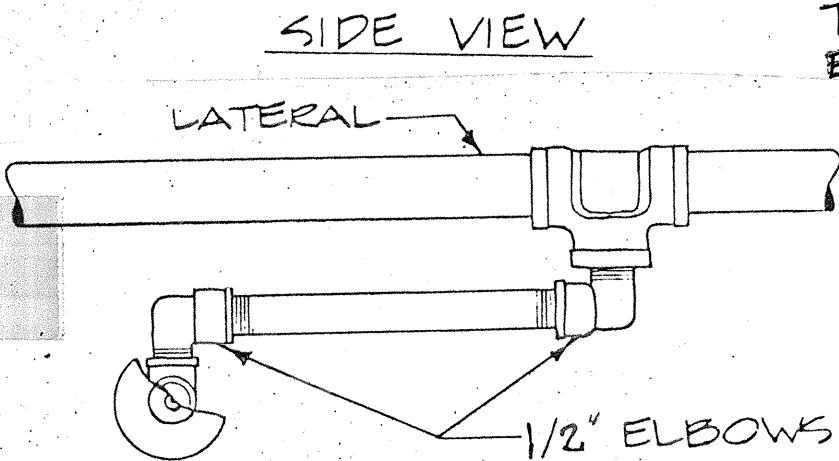
AIRPORT INTERCHANGE  
F.A.I. PROJECT NO. I-H-1(124)16  
SCALE: AS SHOWN DATE: AUG. 9, 1977  
SHEET NO. L3 OF 4 SHEETS

00102

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | I-HI-1(124)16      | 1978        | 103       | 223          |



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



1 TOP VIEW  
TYPICAL POP-UP DETAIL  
SWING JOINT  
NO SCALE

1 SPRINKLER QUANTITIES AT  
POST OFFICE AREA

| ITEM NO  | DESCRIPTION                                           | UNIT     | QUANTITY                    |
|----------|-------------------------------------------------------|----------|-----------------------------|
| G16.1111 | 3/4-INCH COPPER PIPE                                  | LIN. FT. | 50.00                       |
| G16.1131 | 1/4-INCH COPPER PIPE                                  | LIN. FT. | 50.00                       |
| G16.1301 | 1/2-INCH GALV. STEEL PIPE, COPPER PIPE, OR PVC PIPE   | LIN. FT. | 200.00                      |
| G16.1311 | 3/4-INCH GALV. STEEL PIPE, COPPER PIPE, OR PVC PIPE   | LIN. FT. | 180.00                      |
| G16.1321 | 1-INCH GALV. STEEL PIPE, COPPER PIPE, OR PVC PIPE     | LIN. FT. | 250.00                      |
| G16.1331 | 1-1/4-INCH GALV. STEEL PIPE, COPPER PIPE, OR PVC PIPE | LIN. FT. | 444.00<br><del>290.00</del> |
| G16.1361 | 2-1/2-INCH GALV. STEEL PIPE, COPPER PIPE, OR PVC PIPE | LIN. FT. | 30.00                       |
| G16.2260 | P-22 SPRINKLER HEAD                                   | EACH     | 45.00                       |
| G16.1380 | 4-INCH GALV. STEEL PIPE, COPPER PIPE, OR PVC PIPE     | LIN. FT. | 260.00                      |

SPRINKLER LEGEND

| SYMBOL | DESCRIPTION                            |
|--------|----------------------------------------|
| ■      | EXISTING CONTROLLER                    |
| ✕      | NEW GATE VALVE                         |
| ---    | EXISTING IRRIGATION MAIN               |
| ---    | NEW IRRIGATION MAIN, CAST IRON         |
| ---    | NEW IRRIGATION MAIN, PVC               |
| ----   | NEW GALVANIZED IRON PIPE SLEEVE        |
| ---    | NEW IRRIGATION LATERAL, COPPER         |
| □      | NEW ELECTRIC REMOTE CONTROL VALVE      |
| ■      | EXISTING ELECTRIC REMOTE CONTROL VALVE |
| ✕      | EXISTING GATE VALVE                    |

IRRIGATION NOTES

1. FINAL LOCATIONS OF GATE VALVES, SUPPLY LINES & G.I. PIPE SLEEVES SHALL BE DETERMINED BY THE ENGINEER.
2. CONCRETE REACTION BLOCKS SHALL BE CLASS "B" CONCRETE.
3. ALL IRRIGATION PIPE UNDER PAVED AREAS SHALL BE COPPER.
4. NO ROCKS OR SHARP OBJECTS ONE INCH OR LARGER SHALL BE USED IN BACKFILL MATERIAL FOR TRENCHES.
5. CAP & MARK LOCATIONS OF ALL PIPE STUB-OUTS & SLEEVES.

1 SPRINKLER NOTES

1. MINIMUM LINE SIZE BETWEEN SPRINKLER HEADS SHALL BE AS SHOWN ON PLANS.
2. LINE SIZES UP TO 3" SHALL BE GALV. STEEL, COPPER OR PVC EXCEPT THAT PIPE UNDER PAVED AREAS SHALL BE COPPER.
3. ALL WIRING UNDER PAVED AREAS SHALL BE INSTALLED IN CONDUIT.
4. NO ROCKS OR SHARP OBJECTS ONE INCH OR LARGER SHALL BE USED IN BACKFILL MATERIAL FOR TRENCHES.
5. CONTRACTOR SHALL ADJUST ALL SPRINKLER HEADS FOR PROPER COVERAGE AND NOTIFY THE ENGINEER OF ANY ALTERATIONS TO THE PLANS.
6. NIPPLES AND RISERS TO SPRINKLER HEADS FROM THE FEEDER LINES SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS PAY ITEMS OF THE SPRINKLER SYSTEM.
7. EXCAVATION AND BACKFILL FOR INSTALLATION OF SPRINKLER SYSTEM SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS PAY ITEMS OF THE SPRINKLER SYSTEM.

|    |         |                                               |
|----|---------|-----------------------------------------------|
| 1  | 8-23-79 | ADDED SPRINKLER NOTE, QUANTITIES AND DETAILS. |
| NO | DATE    | REVISION                                      |

SPRINKLER SUMMARY  
ESTIMATED QUANTITIES

| SPRINKLER SUMMARY<br>ESTIMATED QUANTITIES |      |                                                 | ITEM LOCATIONS | SIDEWALK CROSSING<br>STATION 139+75 | ROAD CROSSING<br>STATION 142+00 | ROAD CROSSING<br>STATION 142+50 | ROAD CROSSING<br>STATION 142+80 | ROAD CROSSING<br>STATION 143+00 | ROAD CROSSING<br>STATION 143+15 | SIDEWALK CROSSING<br>STATION 143+50 | ROAD CROSSING<br>STATION 148+15 | ROAD CROSSING<br>STATION 153+75 | SIDEWALK CROSSING<br>STATION 154+00 | ROAD CROSSING<br>STATION 154+40 | SIDEWALK CROSSING<br>STATION 156+20 | ROAD CROSSING<br>STATION 159+75 | ROAD CROSSING<br>STATION 161+70 | ACCESS ROAD @<br>POST OFFICE<br>STATION 145+50 | TOTAL |
|-------------------------------------------|------|-------------------------------------------------|----------------|-------------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|-------------------------------------|---------------------------------|---------------------------------|-------------------------------------|---------------------------------|-------------------------------------|---------------------------------|---------------------------------|------------------------------------------------|-------|
| ITEM NO.                                  | ITEM |                                                 | UNIT           |                                     |                                 |                                 |                                 |                                 |                                 |                                     |                                 |                                 |                                     |                                 |                                     |                                 |                                 |                                                |       |
| G16                                       | 3540 | 2-INCH ELECTRIC REMOTE CONTROL VALVE            | EA.            |                                     |                                 |                                 |                                 |                                 |                                 |                                     |                                 |                                 |                                     |                                 |                                     |                                 |                                 | 1                                              | 1     |
| G16                                       | 0650 | 2½-INCH RIGID STEEL PIPE SLEEVE                 | LIN. FT.       |                                     | 60                              |                                 |                                 |                                 | 75                              |                                     | 20                              | 95                              |                                     | 28                              |                                     |                                 | 20                              |                                                | 500   |
| G16                                       | 1120 | 1-INCH COPPER PIPE                              | LIN. FT.       | 12                                  |                                 |                                 |                                 |                                 |                                 |                                     |                                 |                                 |                                     |                                 | 12                                  |                                 |                                 |                                                | 24    |
| G16                                       | 1130 | ¼-INCH COPPER PIPE                              | LIN. FT.       |                                     |                                 |                                 |                                 |                                 |                                 |                                     |                                 |                                 |                                     |                                 |                                     | 40                              |                                 |                                                | 40    |
| G16                                       | 1150 | 2-INCH COPPER PIPE                              | LIN. FT.       |                                     |                                 |                                 |                                 |                                 |                                 | 10                                  |                                 |                                 |                                     |                                 |                                     |                                 |                                 |                                                | 10    |
| G16                                       | 1380 | 4-INCH GALVANIZED STEEL,<br>COPPER, OR PVC PIPE | LIN. FT.       |                                     |                                 |                                 | 45                              |                                 |                                 |                                     | 50                              |                                 |                                     |                                 |                                     |                                 | 32                              | 260                                            | 127   |
| G16                                       | 1910 | 4-INCH CAST IRON PIPE (CLASS 150)               | LIN. FT.       |                                     |                                 | 72                              | 23                              | 35                              |                                 |                                     | 65                              | 55                              | 30                                  | 58                              |                                     |                                 | 20                              | 260                                            | 748   |
| G16                                       | 2890 | 4-INCH GATE VALVE W/ VALVE BOX                  | EA.            |                                     |                                 | 1                               | 1                               | 1                               |                                 |                                     | 3                               | 1                               | 1                                   | 1                               |                                     |                                 | 3                               |                                                | 12    |

|                   |     |
|-------------------|-----|
| DATE              | NO. |
| SURVEY PLOTTED BY |     |
| DRAWN BY          |     |
| TRACED BY         |     |
| DESIGNED BY       |     |
| CHECKED BY        |     |
| ORIGINAL PLAN     |     |
| NOTE BOOK         |     |
| NO.               |     |



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
M. K. F. Lau

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
LAND TRANSPORTATION FACILITIES DIVISION

IRRIGATION LEGEND  
SUMMARY & NOTES

AIRPORT INTERCHANGE  
F.A.I. PROJ. NO. I-HI-1(124)16  
SCALE: NONE DATE: SEPT. 5, 1978  
SHEET NO. 14 OF 4 SHEETS