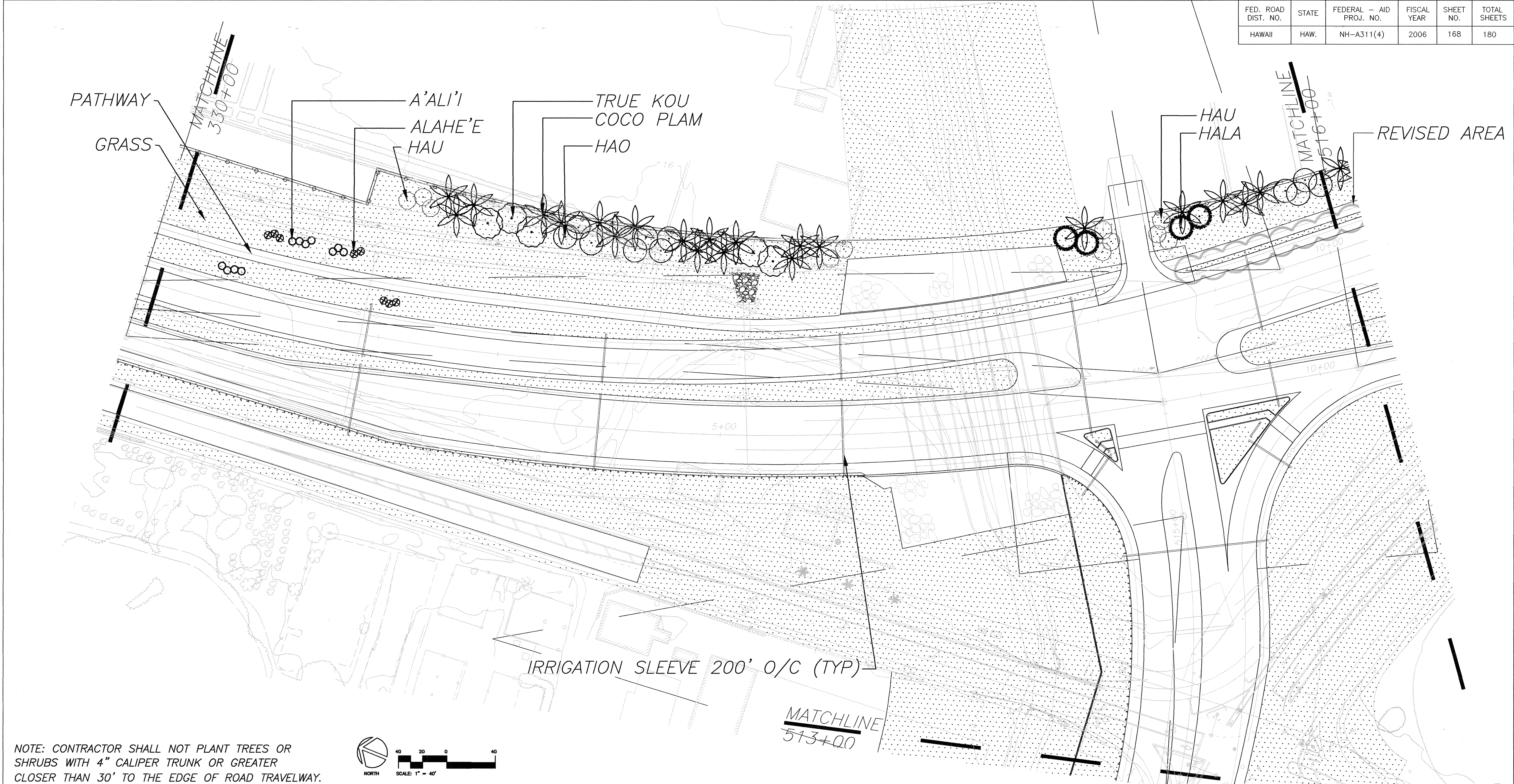
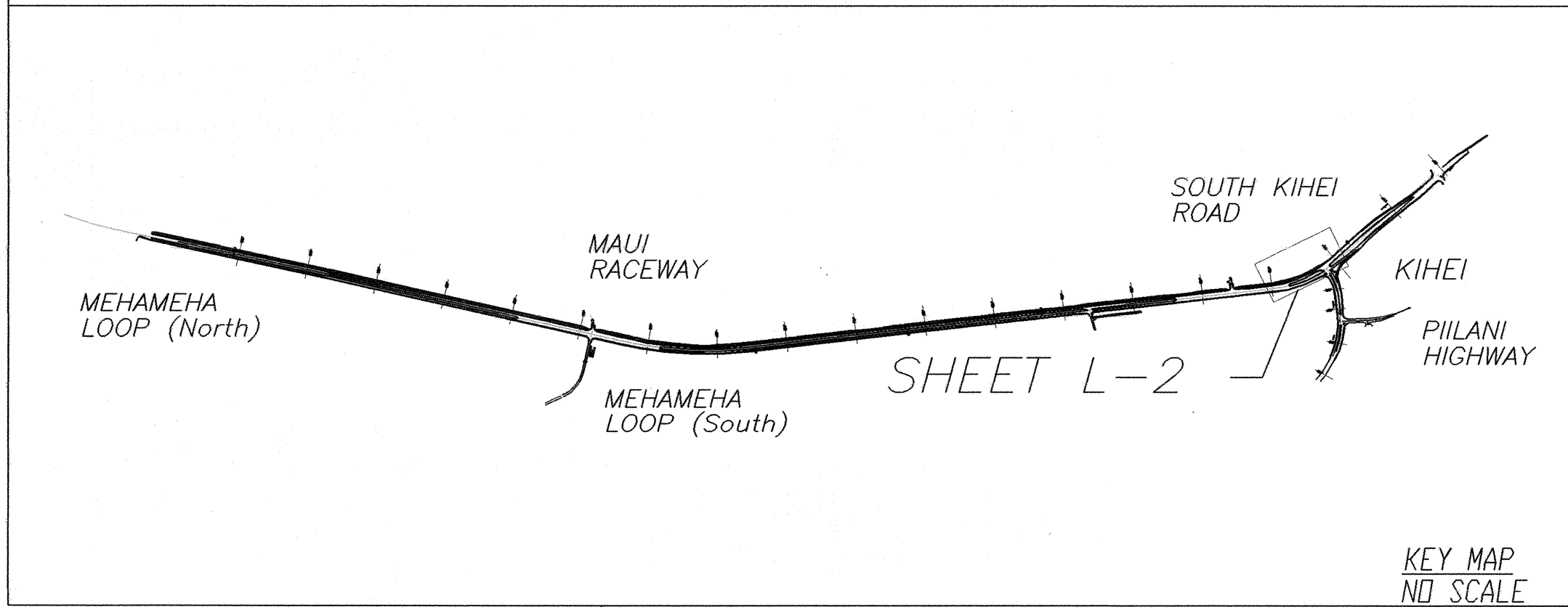
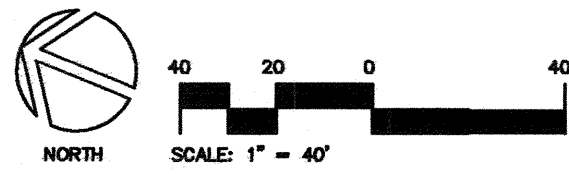


FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(4)	2006	168	180



NOTE: CONTRACTOR SHALL NOT PLANT TREES OR SHRUBS WITH 4" CALIPER TRUNK OR GREATER CLOSER THAN 30' TO THE EDGE OF ROAD TRAVELWAY.



PLANT LIST	
EST. QTY.	COMMON NAME
21 EA.	COCO PALM
4 EA.	HALA
11 EA.	HAO
11 EA.	HAU
5 EA.	TRUE KOU
8 EA.	ALAHE'E
11 EA.	A'ALI'I
193,190 SF.	GRASSING
2385 CY.	IMPORTED SCREENED SOIL
191,842 SF.	SOIL AMENDMENTS
850 LF.	IRRIGATION SLEEVES
15 CY.	COVER MULCH

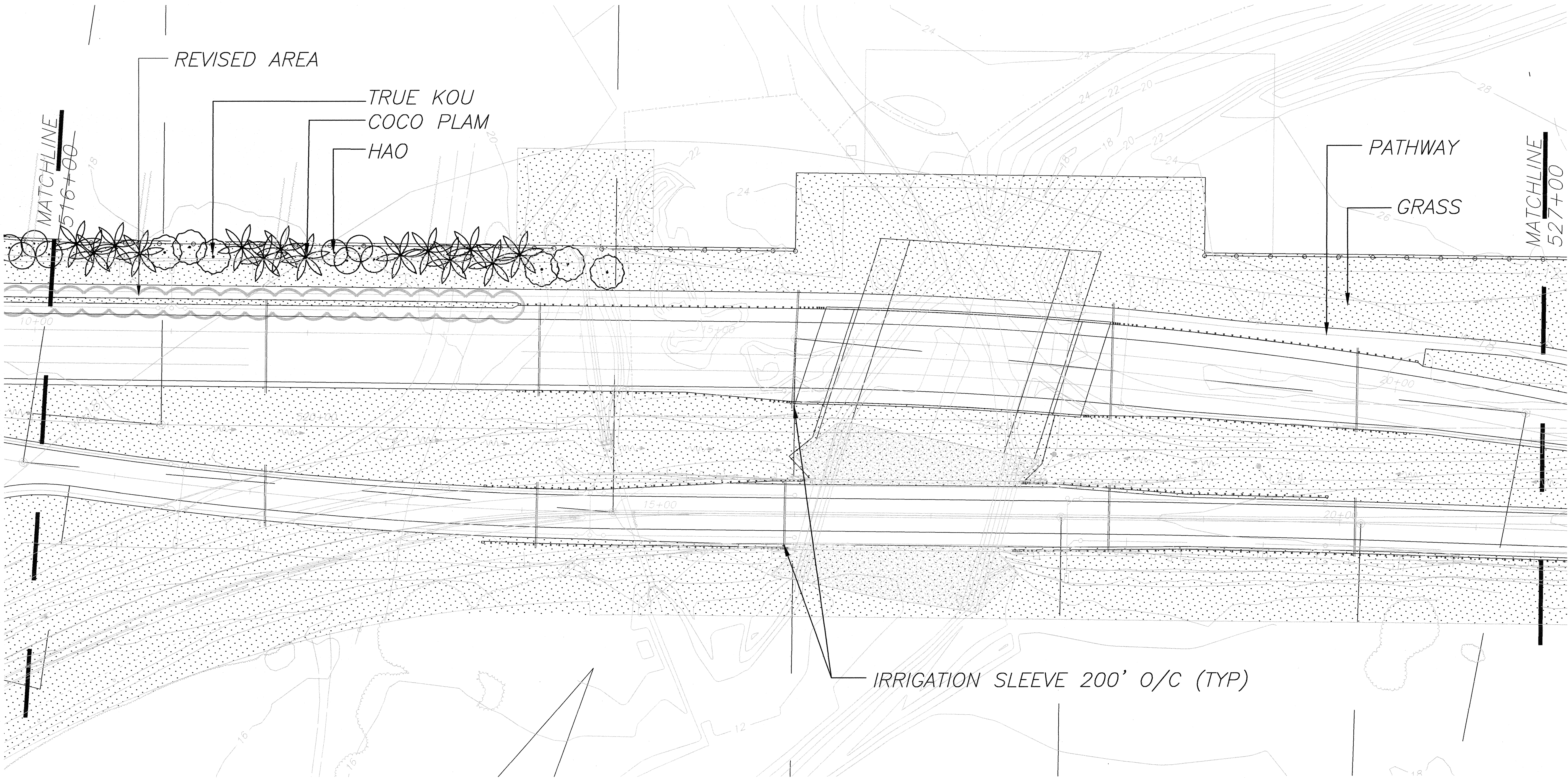
IDEEL N. KUROKAWA
LICENSED PROFESSIONAL LANDSCAPE ARCHITECT
No. 10659
HAWAII, U.S.A.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
SIGNATURE: [Signature]
EXPIRATION DATE: 04/30/08
HAWAII DESIGN ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PLANTING PLAN - STA. 330+00 - 516+00
MOKULELE HIGHWAY WIDENING
Vicinity of Kealia Pond Driveway
To
Piilani Highway
Federal - Aid Project No. NH-A311(4)
Scale: 1" = 40'-0" Date: JULY, 2005
SHEET No. L-2 OF 9 SHEETS

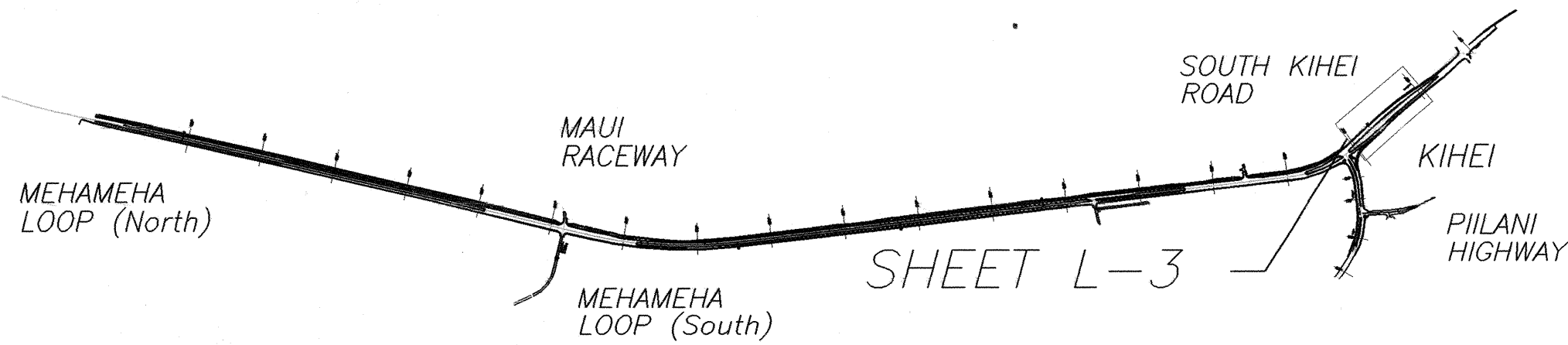
ORIGINAL PLAN
DATE: _____
DRAWN BY: _____
NOTED BY: _____
DESIGNED BY: _____
QUANTITIES BY: _____
CHECKED BY: _____
No. _____

PROJ. NO.: M8901.00

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(4)	2006	169	180

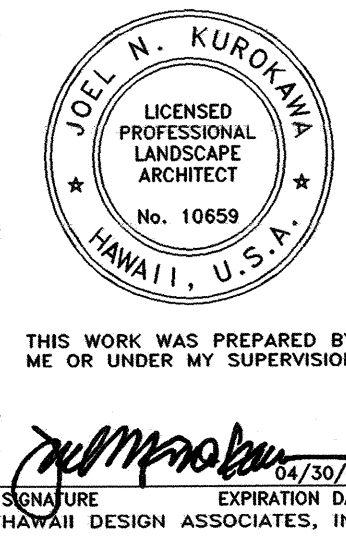


NOTE: CONTRACTOR SHALL NOT PLANT TREES OR SHRUBS WITH 4" CALIPER TRUNK OR GREATER CLOSER THAN 30' TO THE EDGE OF ROAD TRAVELWAY.



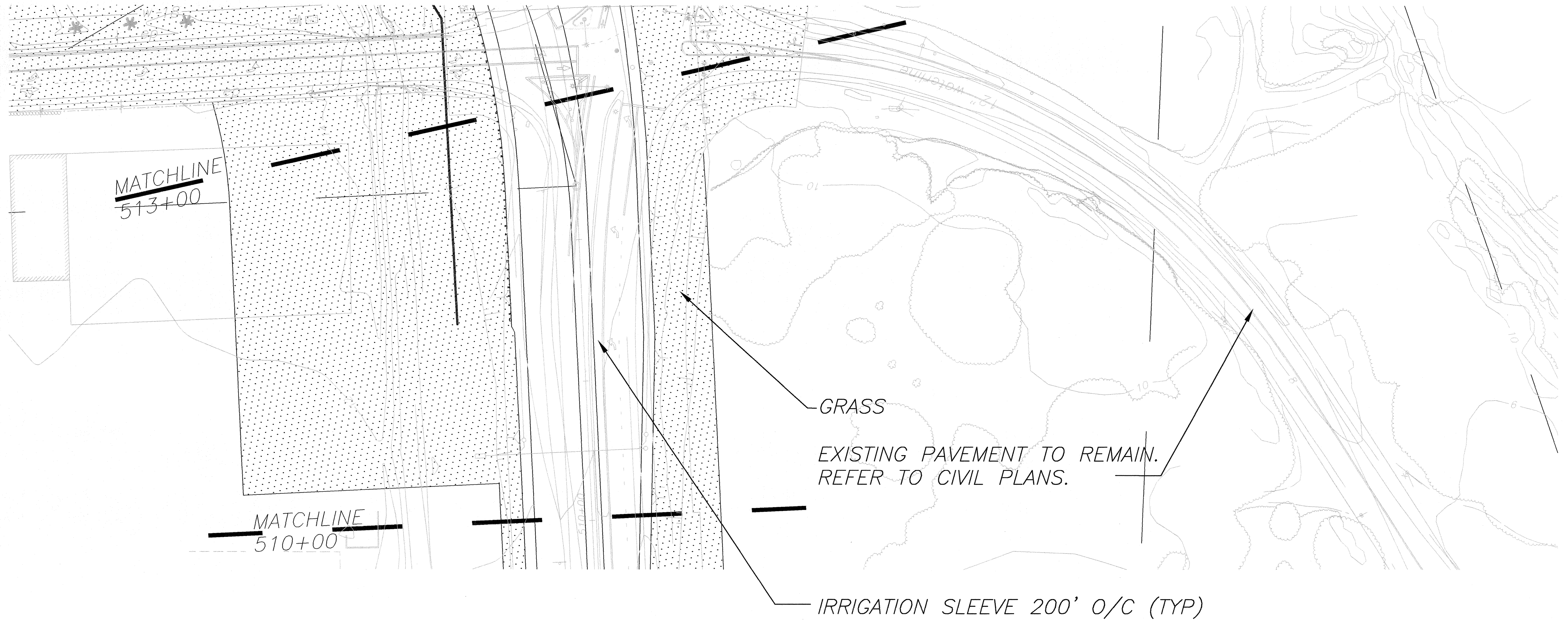
KEY MAP
NO SCALE

PLANT LIST	
EST. QTY.	COMMON NAME
14 EA.	COCO PALM
4 EA.	HAO
6 EA.	TRUE KOU
207,130 SF.	GRASSING
2558 CY.	IMPORTED SCREENED SOIL
204,641 SF.	SOIL AMENDMENTS
600 LF.	IRRIGATION SLEEVES
7 CY.	COVER MULCH
AREA REVISED FROM AC PAVEMENT TO GRASSING	

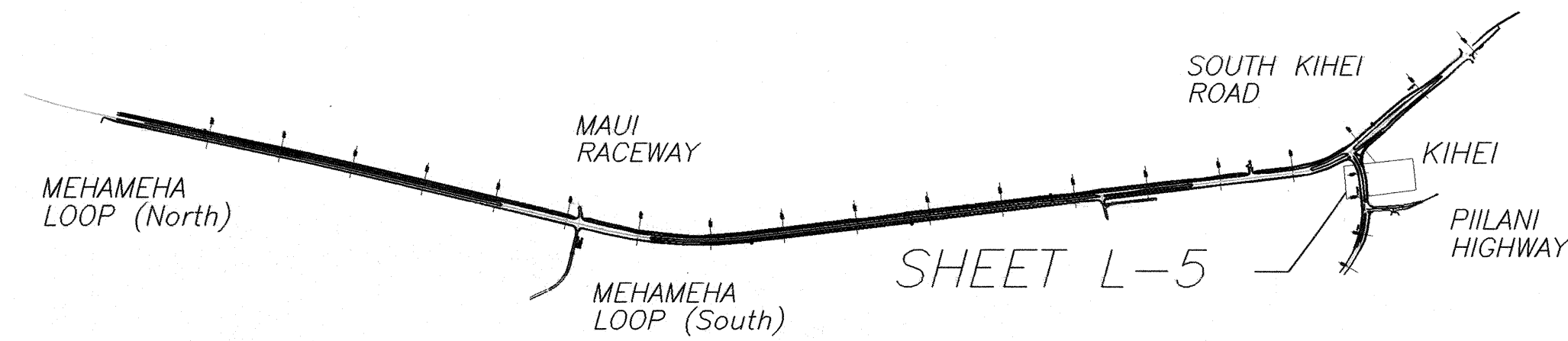


STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PLANTING PLAN - STA. 516+00 - 527+00
MOKULELE HIGHWAY WIDENING
Vicinity of Keadia Pond Driveway
To
Piilani Highway
Federal - Aid Project No. NH-A311(4)
Scale: 1" = 40'-0" Date: JULY, 2005
SHEET No. L-3 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(4)	2006	171	180

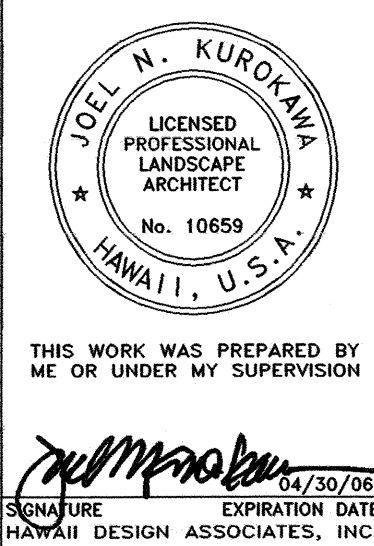
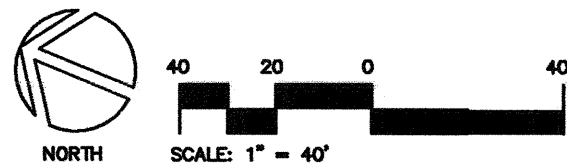


NOTE: CONTRACTOR SHALL NOT PLANT TREES OR SHRUBS WITH 4" CALIPER TRUNK OR GREATER CLOSER THAN 30' TO THE EDGE OF ROAD TRAVELWAY.



KEY MAP
NO SCALE

EST. QTY.	PLANT LIST COMMON NAME
65,072 SF.	GRASSING
803 CY.	IMPORTED SCREENED SOIL
65,072 SF.	SOIL AMENDMENTS
100 LF.	IRRIGATION SLEEVES



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLANTING PLAN - STA. 510+00 - 513+00

MOKULELE HIGHWAY WIDENING

Vicinity of Kealia Pond Driveway

To
Piilani Highway

Federal - Aid Project No. NH-A311(4)

Scale: 1" = 40'-0" Date: JULY, 2005

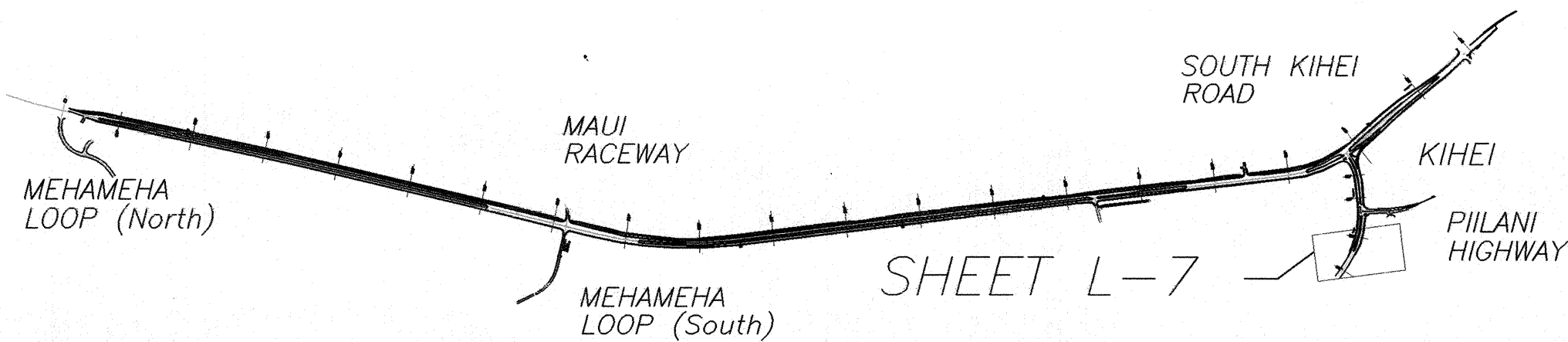
SHEET No. L-5 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(4)	2006	173	180



NOTE: CONTRACTOR SHALL NOT PLANT TREES OR SHRUBS WITH 4" CALIPER TRUNK OR GREATER CLOSER THAN 30' TO THE EDGE OF ROAD TRAVELWAY.

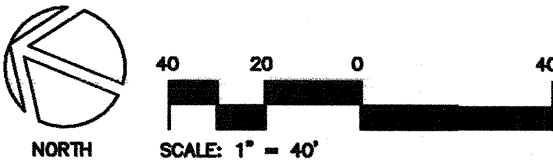
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
No.	DESIGNED BY	
	CHECKED BY	



EST. QTY.	PLANT LIST COMMON NAME
16,614 SF.	GRASSING
205 CY.	IMPORTED SCREENED SOIL
16,614 SF.	SOIL AMENDMENTS
150 LF.	IRRIGATION SLEEVES

JOEL N. KUROKAWA
LICENSED PROFESSIONAL LANDSCAPE ARCHITECT
No. 10659
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
[Signature]
SIGNATURE EXPIRATION DATE
HAWAII DESIGN ASSOCIATES, INC.



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PLANTING PLAN - STA. 500+00 - 505+00
MOKULELE HIGHWAY WIDENING
Vicinity of Kealia Pond Driveway
To
Piilani Highway
Federal - Aid Project No. NH-A311(4)
Scale: 1" = 40'-0" Date: JULY, 2005
SHEET No. L-7 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(4)	2006	174	180

SPECIAL CONDITIONS AND NOTES

THE FOLLOWING NOTES ARE PROVIDED TO INFORM THE CONTRACTOR OF SPECIFIC REQUIREMENTS, DIRECTIONS, INSPECTIONS, ETC. WHICH SHALL BE REQUIRED TO COMPLY WITH THE TERMS OF THE CONTRACT. THE CONTRACTOR SHALL REFER TO THE HAWAII STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND PUBLIC WORKS CONSTRUCTION (1994) AND THE SPECIAL PROVISIONS WHILE REVIEWING THE WORK INDICATED ON THE PLANS MENTIONED BELOW.

1. PLANTING PLANS

- A. SUBMIT ALL NECESSARY SAMPLES AND DOCUMENTS TO ENGINEER PRIOR TO THE START OF WORK, I.E. CERTIFICATE OF PLANTS, MATERIALS, FERTILIZER AND WEEDING SCHEDULE, ETC. REFER TO SPECIFICATIONS SECTION 619.02(A), 619.02(B), 619.02(C), 619.02(D), AND 619.02(G)
- B. EXISTING DEBRIS AND PLANTS SHALL BE REMOVED. REFER TO SPECIFICATIONS 619.03(A), 619.03(H)(1), AND 619.03(H)(4).
- C. IMPORTED PLANTING SOIL AND ORGANIC SOIL AMENDMENTS SHALL BE REQUIRED. REFER TO SPECIFICATIONS 619.03(A).
- D. THE CONTRACTOR SHALL MEET THE MINIMUM ACCEPTABLE STANDARDS FOR PLANT SIZE. REFER TO SPECIFICATIONS 619.02(C) AND THE "REMARKS" COLUMN OF THE PLANT LIST FOR MINIMUM REQUIREMENTS.
- E. EXCAVATION FOR PLANT HOLES SHALL BE REQUIRED. PROPER PREPARATION OF PLANT HOLES WILL BE MONITORED. SEE SPECIFICATIONS 619.03(A), 619.03(D) AND 201.
- F. A MINIMUM THIRTY-SIX (36) MONTH PLANT ESTABLISHMENT PERIOD IS REQUIRED. REFER TO SECTION 619.03(I).
- G. FORMAL INSPECTIONS BY THE ENGINEER WILL BE HELD WITH THE CONTRACTOR TO VERIFY COMPLIANCE TO THE CONTRACT AS LISTED IN SECTION 619.03(J)
- H. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER WRITTEN CERTIFICATION THAT ALL NATIVE HAWAIIAN PLANT MATERIALS SPECIFIED HAVE BEEN PROPAGATED FROM SEED OR PLANT STOCKS ORIGINALLY FROM THE EAST MAUI REGION.

2. TEMPORARY IRRIGATION

- A. THE CONTRACTOR SHALL SEEK AND SECURE A POTABLE OR NON-POTABLE WATER SOURCE FOR TEMPORARY IRRIGATION OF ALL LANDSCAPE AREAS WITHIN THE PROJECT LIMITS DURING THE CONTRACT PERIOD. ALL REQUIRED PERMITS, FEES AND CHARGES FOR SECURING, TRANSPORTING AND USING THE WATER SHALL BE BORN BY THE CONTRACTOR.
- B. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEERS FOR REVIEW AND APPROVAL FROM AN ENVIRONMENTAL TESTING LABORATORY, A WATER QUALITY ANALYSIS REPORT OF WATER SAMPLES TAKEN FROM THE PROPOSED WATER SOURCE.
- C. THE CONTRACTOR SHALL PROVIDE A TEMPORARY IRRIGATION SYSTEM APPROVED BY THE ENGINEER TO PROVIDE SUPPLEMENTAL WATER TO ALL LANDSCAPE AREAS WITHIN THE PROJECT LIMITS THROUGHOUT THE PLANTING AND THE PLANT ESTABLISHMENT PERIOD. REFER TO SECTION 619 PLANTING AND TRANSPLANTING.

THE FOLLOWING PROCEDURES SHALL BE FOLLOWED:

- a. AFTER THE CONTRACT HAS BEEN AWARDED TO THE CONTRACTOR, SUBMIT A PLAN FOR THE TEMPORARY IRRIGATION SYSTEM FOR APPROVAL BY THE ENGINEER. APPROVAL WILL BE BASED ON COMPLIANCE TO THE IRRIGATION PERFORMANCE REQUIREMENTS LISTED BELOW, ITEM NO. 3.

THE APPROVED IRRIGATION SYSTEM PLAN SHALL BE INSTALLED OR MADE AVAILABLE FOR A FIELD TEST IN THE PRESENCE OF THE ENGINEER. MAKE ALL NECESSARY ADJUSTMENTS TO THE SYSTEM IN ACCORDANCE TO THE PERFORMANCE REQUIREMENTS AND AS DIRECTED BY THE ENGINEER. CONTACT THE ENGINEER IN WRITING ONE WEEK IN ADVANCE TO ARRANGE A DAY AND TIME OF THE FIELD TEST.

THE TYPE OF IRRIGATION SYSTEM TO BE PROVIDED IS AT THE CONTRACTOR'S DISCRETION SO LONG AS IT MEETS THE IRRIGATION PERFORMANCE REQUIREMENTS LISTED BELOW.

- D. 6" PVC SLEEVES UNDER THE ROADWAY ARE INDICATED ON THE LANDSCAPE PLANS FOR USE BY THE CONTRACTOR IF SO DESIRED.

3. TEMPORARY IRRIGATION PERFORMANCE REQUIREMENTS

- A. THE INTENT OF THE TEMPORARY IRRIGATION SYSTEM (OR METHOD) IS TO PROVIDE A RELIABLE AND REGULATED SOURCE OF SUPPLEMENTAL WATER TO NEW PLANTING AREAS TO OPTIMIZE PLANT GROWTH AND ROOT DEVELOPMENT DURING THE PLANTING AND PLANT ESTABLISHMENT PERIOD.

- B. REGULATE IRRIGATION TO ENSURE ACTIVE GROWTH KEEPING AREAS MOIST BUT NOT SATURATED. REGULATE IRRIGATION TO AVOID MISTING AND OVERSPRAYING AS WELL AS TO AVOID EROSION AND GULLYING.
- C. THE FREQUENCY AND QUANTITY OF IRRIGATION WATER SHALL BE GRADUALLY REDUCED AND EVENTUALLY ELIMINATED AT THE END OF THE PLANT ESTABLISHMENT PERIOD TO ACCLIMATIZE THE PLANTS TO ENABLE THEM TO SURVIVE UNDER NATURAL CONDITIONS.
- D. THROUGH OUT THE INITIAL PLANTING PERIOD AND THE FIRST 90 DAYS OF THE PLANT ESTABLISHMENT PERIOD, WATER DAILY. APPLY APPROXIMATELY 1/4 INCH OF WATER IN A 10-15 MINUTE RUN TIME.
- E. REDUCE THE FREQUENCY OF WATERING DURING THE PLANT ESTABLISHMENT PERIOD TO EVERY OTHER DAY FROM DAY 91 TO DAY 365 (OR END OF 12 MONTHS) OF THE PLANT ESTABLISHMENT PERIOD. APPLY AT THE SAME RATE ABOVE. MONITOR FOR ANY SIGNS OF DROUGHT STRESS AND ADJUST AS NECESSARY.
- F. FROM DAY 366 TO DAY 913 (OR END OF 30 MONTHS) OF THE PLANT ESTABLISHMENT PERIOD, FURTUR REDUCE THE FREQUENCY OF WATERING TO EVERY THIRD DAY. MAINTAIN THE SAME RATE AS ABOVE. MONITOR AND ADJUST AS REQUIRED.
- G. FROM DAY 914 TO DAY 1096 (OR END 36 MONTHS) OF THE PLANT ESTABLISHMENT PERIOD REDUCE THE FREQUENCY OF WATERING TO ONCE A WEEK. APPLY AT THE SAME RATE ABOVE. MONITOR FOR ANY SIGNS OF DROUGHT STRESS AND ADJUST AS NECESSARY.
- H. AT THE FINAL ACCEPTANCE AND COMPLETION OF THE PROJECT THE TEMPORARY IRRIGATION SYSTEM (OR METHOD) SHALL BE SHUT-OFF, DISMANTLED AND REMOVED.

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

JOEL N. KUROKAWA

LICENSED PROFESSIONAL LANDSCAPE ARCHITECT

No. 10659

HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Signature

04/30/06

SIGNATURE

EXPIRATION DATE

HAWAII DESIGN ASSOCIATES, INC.

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

SPECIAL CONDITIONS & NOTES

MOKULELE HIGHWAY WIDENING

Vicinity of Kealia Pond Driveway

To

Piilani Highway

Federal - Aid Project No. NH-A311(4)

Scale: 1" = 40'-0" Date: JULY, 2005

SHEET No. L-8 OF 9 SHEETS

174

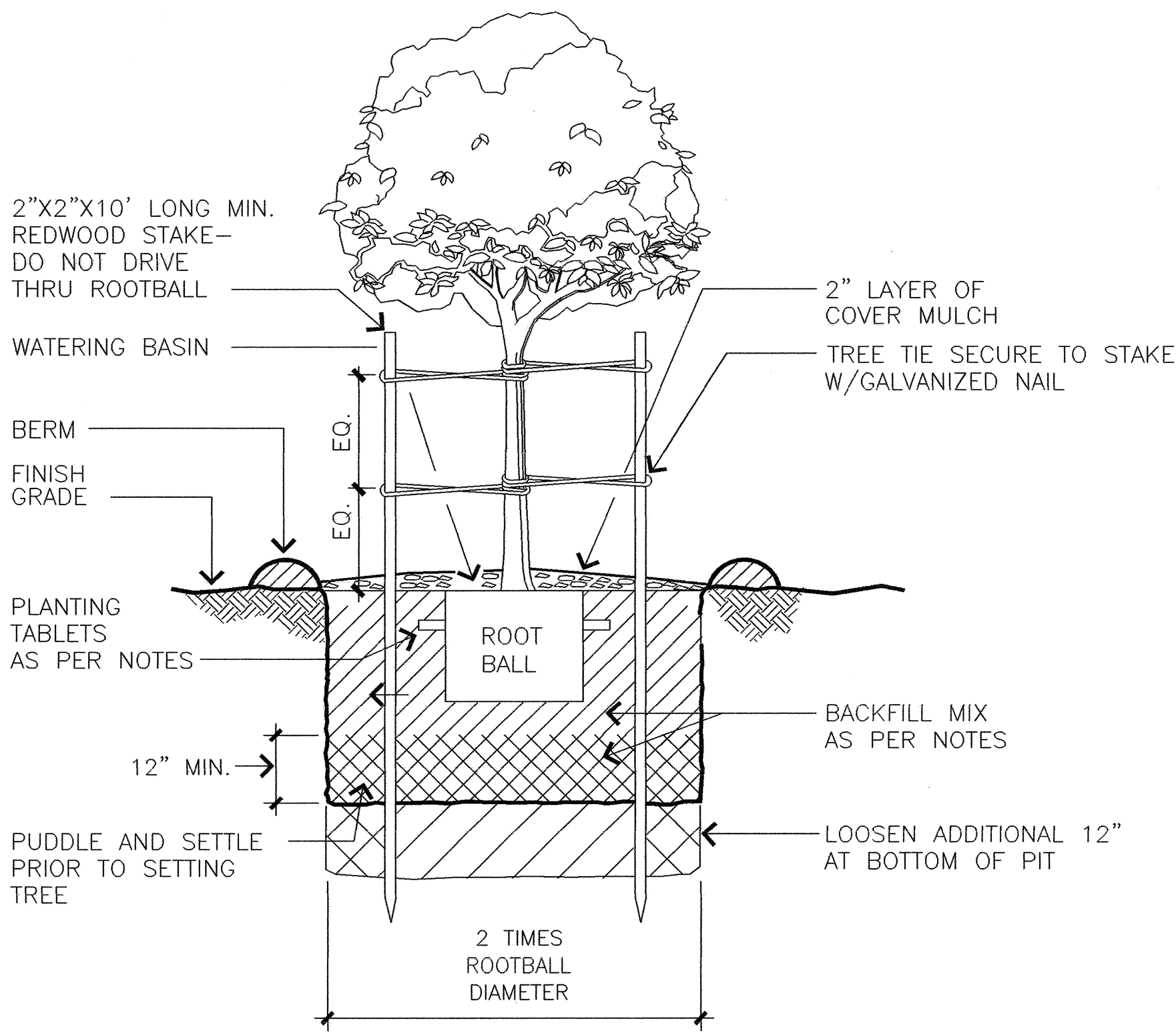
PROJ. NO.: M9901.00

FED. ROAD DIST. NO.	STATE	FEDERAL -- AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(4)	2006	175	180

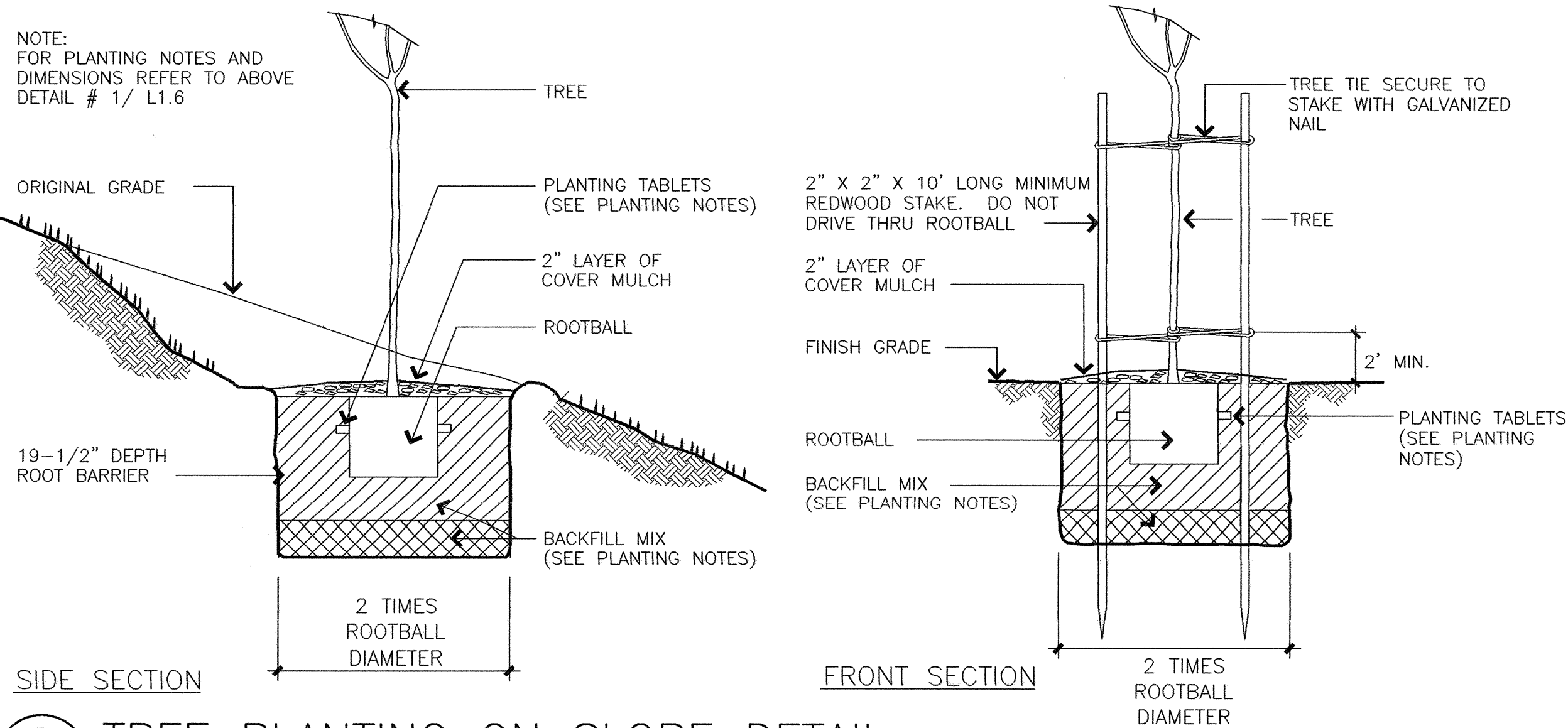
MATERIALS LIST

QUANTITY	COMMON NAME	BOTANICAL NAME	SIZE	REMARKS
10 EA. 35 EA.	<u>PALMS</u> LOULU PALM COCO PALM	PRITCHARDIA ARECINA COCOS NUCIFERA	FS. FS.	3' BTH., 6' SPREAD 15-20' BTH., 6' SPREAD
11 EA. 4 EA. 34 EA. 11 EA.	<u>TREES</u> HAU HALA HAO TRUE KOU	HIBISCUS TILIACEUS PANDANUS TECTORIUS RAUVOLFIA SANDWICENSE CORDIA SUBCORDATA	25 GAL. 25 GAL. 15 GAL. 45 GAL. 15 GAL. 15 GAL.	8' HT., 4' SPREAD, 2 1/2" CAL. 8' HT., 4' SPREAD, 2 1/2" CAL. 6' HT., 3' SPREAD, 1 1/2" CAL. 8' HT., 4' SPREAD, 2 1/2" CAL. 6' HT., 3' SPREAD, 1 1/2" CAL. 6' HT., 3' SPREAD, 1 1/2" CAL.
49 EA. 8 EA.	<u>SHRUBS</u> A'ALI'I ALAHE'E	DODONAEA VISCOSA (USE NATIVE VARIETY) PSYDRAX ODORATA	3 GAL. 3 GAL. 3 GAL.	18" HT., 8" SPREAD 18" HT., 8" SPREAD 18" HT., 8" SPREAD
826,050 SF.	<u>GRASSES</u> AKI'AKI	SPOROBOLUS VIRGINICUS	STOLONS	2" PLUGS AT 12" O.C.
10,198 CY. 826,050 SF.	<u>MISCELLANEOUS MATERIALS</u> IMPORTED SCREENED SOIL SOIL AMENDMENTS	4" DEPTH		SEE SPECIFICATIONS SEE SPECIFICATIONS
3115 LF. 36 CY.	IRRIGATION SLEEVES COVER MULCH			6" PVC PIPE SEE SPECIFICATIONS

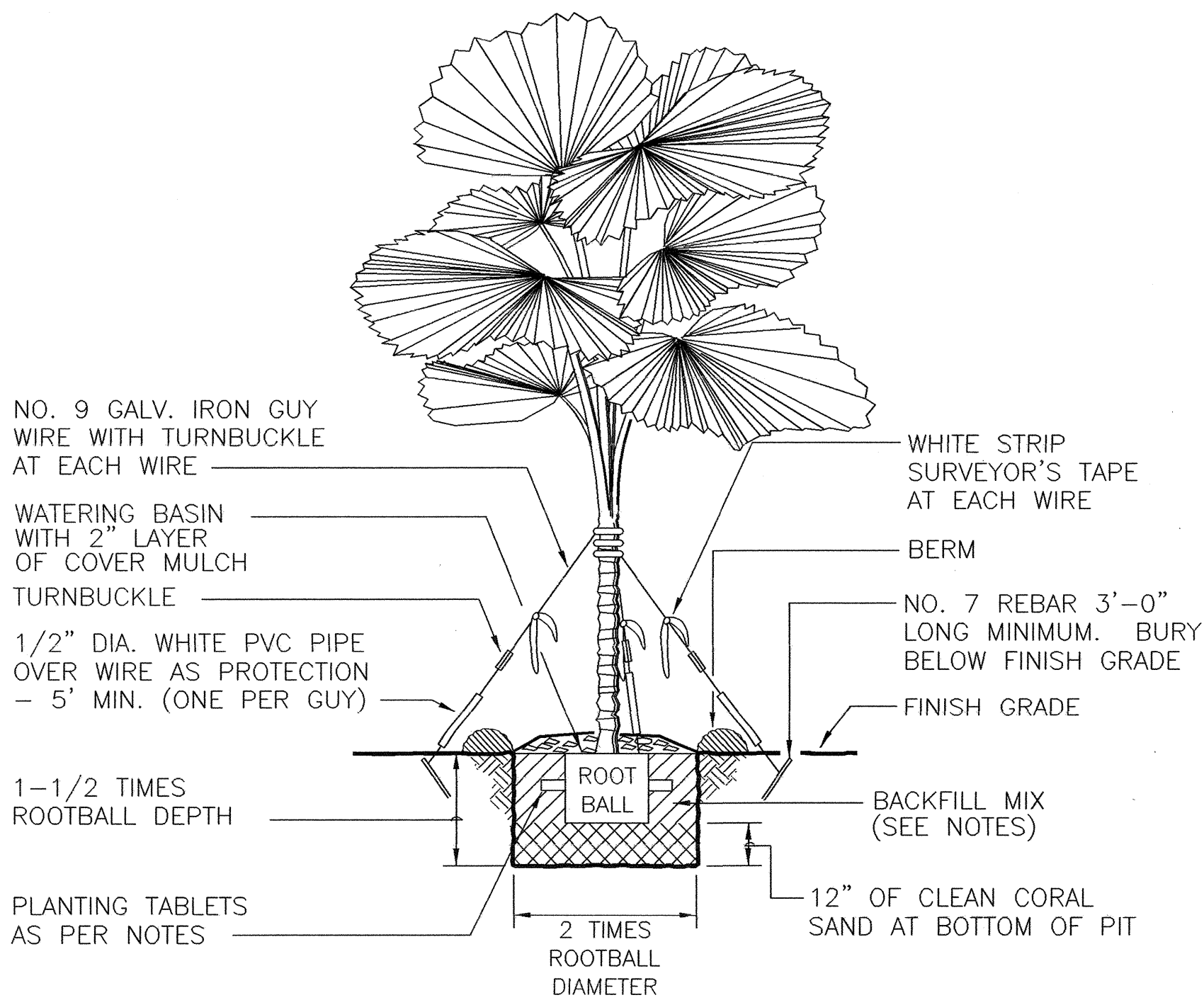
- NOTES:
1. QUANTITIES SHOWN ON PLANT LIST ARE FOR REFERENCE ONLY. VERIFY ACTUAL QUANTITIES AS SHOWN ON PLAN.
 2. SEE SHEET L-8 FOR PLANTING NOTES.



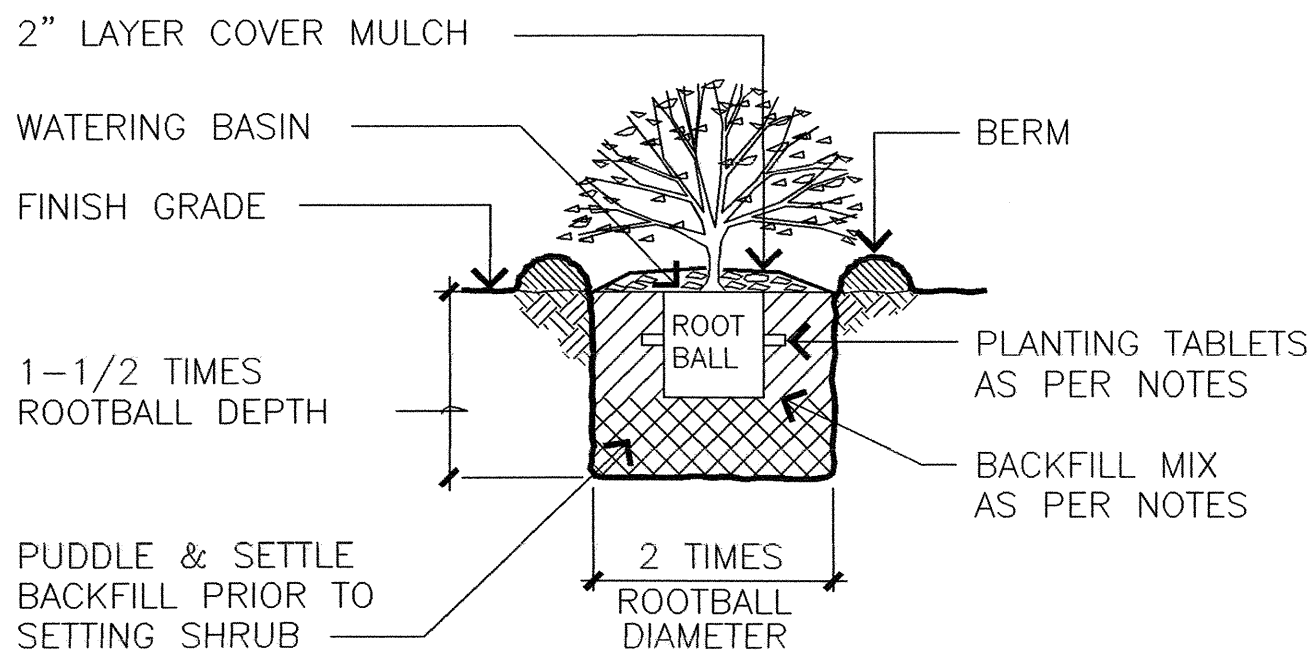
1 TREE PLANTING DETAIL
L-9 NOT TO SCALE



2 TREE PLANTING ON SLOPE DETAIL
L-9 NOT TO SCALE

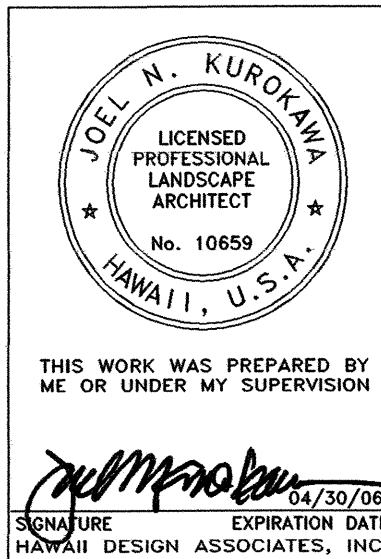


3 PALM PLANTING DETAIL
L-9 NOT TO SCALE



4 SHRUB PLANTING DETAIL
L-9 NOT TO SCALE

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



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PLANTING DETAILS & PLANT LIST
MOKULELE HIGHWAY WIDENING
Vicinity of Kealia Pond Driveway
To
Piilani Highway
Federal - Aid Project No. NH-A311(4)
Scale: 1" = 40'-0" Date: JULY, 2005
SHEET No. L-9 OF 9 SHEETS