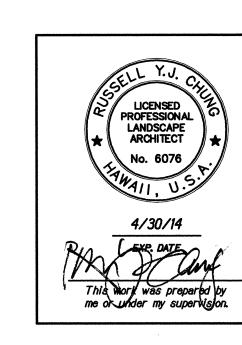
PLANT NOTES:

- 1. Contractor shall field verify all plant quantities and dimensions prior to installation. Contractor shall determine quantities of plant materials to be provided. In all cases, Contractor shall install plant material on all areas affected by construction.
- 2. Contractor shall be responsible for locating and protecting existing utilities.
- 3. Prior to excavating tree or shrub holes, all planting locations shall be staked out by Contractor for acceptance by Engineer. Do not plant until ground has been prepared and site is neat, orderly, and the Engineer accepts site for planting.
- 4. Notify Engineer of any discrepancies in plant locations.
- 5. Notify 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.
- 6. The Engineer will inspect plants at the place of growth and after the delivery to the project.
- 7. Plants shall meet size indicated. Plants shall be straight and uniformly shaped, unless unique or special characteristics are specified, and shall be undamaged, sound, healthy, vigorous and free of disease and insect infestation. Plants not conforming to these requirements on delivery to the project and at the end of the plant establishment period will be rejected.
- 8. Contractor shall be solely responsible for the complete removal and damages resulting from planting any plant species listed on the Hawaii Department of Agriculture 'Noxious Weed Rules' as defined in the statute, Hawaii Administrative Rules 4:68:1 or the 'Federal Noxious Weed List' as defined in Title 7 of the Code of Federal Regulations (CFR), parts 360 and 361.
- 9. All tree work must adhere to American National Standard Institute (or ANSI) a300 Tree Care Standards and ANSI-z133 safety standards for tree work. Work shall be contracted to arborists that has been certified in good standings as an ISA certified arborist for at least 5 years to assure that tree work is performed properly and trees are not damaged by practices such as topping, flush cuts, over-thinning, or climbing with spikes. Contractor shall submit a copy of the ISA arborist certification of good standing of 5 years to the Engineer minimum 7 days prior to tree pruning.
- 10. For the duration of construction within the drip line of trees to remain there must be: no changes, alterations or disturbance to the grade by adding fill, excavating or scraping except as noted on plans; no storage of construction material or equipment; no stockpiling of any construction material or any excavated material no disposal of any liquids (E.G. Concrete slurry, gas, oil, paint); no vehicular traffic, equipment or excessive pedestrian traffic, no attachment of any wires, ropes, lights, or any other such attachment other than those of protective nature to any tree to be preserved; and no cleaning of equipment or material under the canopy of any tree or group of trees to remain.
- 11. Representative samples of soil from project site shall be submitted to the University of Hawaii Agricultural Extension Service or laboratory acceptable to the Engineer for analysis of required soil amendments. Test results and fertilization schedule shall be presented to the Engineer for review and acceptance before placing planting soil or amending existing soil. Uniformly distribute fertilizer and amendments over planting areas as recommended by the soil analysis report. For slopes flatter than 3H:1V, till top six-inches of soil to evenly incorporate fertilizer and amendments. For slopes steeper than 3H:1V, no tilling is required.
- 12. Guy wires, flagging, stakes, windbreakers, etc. shall be maintained and replaced if necessary by the Contractor until the tree/shrub is able to stand by itself. The Contractor shall remove and dispose of these items at the end of plant establishment period.

- FED. ROAD FISCAL SHEET PROJ. NO. DIST. NO. YEAR SHEETS H1I-01-14M 2014 HAW. 31 HAWAII
- 13. Any planting that obstructs sight distance, signs or traffic lights shall be relocated or removed as determined by the Engineer.
- 14. Provide water for all plant material for the duration of the project, including plant establishment period. Water trees, shrubs, ground cover and all grassed areas. Water for planting shall not cause erosion damage to the slopes. The Contractor shall be responsible for repairing any damage cause by the watering of plants. The Contractor shall gradually decrease the amount of water being provided to the plant material 8 weeks prior to final acceptance of plantings.
- 15. Temporary irrigation system shall be provided, installed, and maintained by the Contractor for the duration of the project. Refer to Specification Section 641.03(E). Temporary irrigation system shall be considered incidental to Specification Section 619 - Planting.



STATE OF HAWAII DEPARTMENT OF TRANSPORTATION

<u>LANDSCAPE</u> NOTES

ALA WAI WATERSHED STORM WATER BEST MANAGEMENT PRACTICES ON OAHU

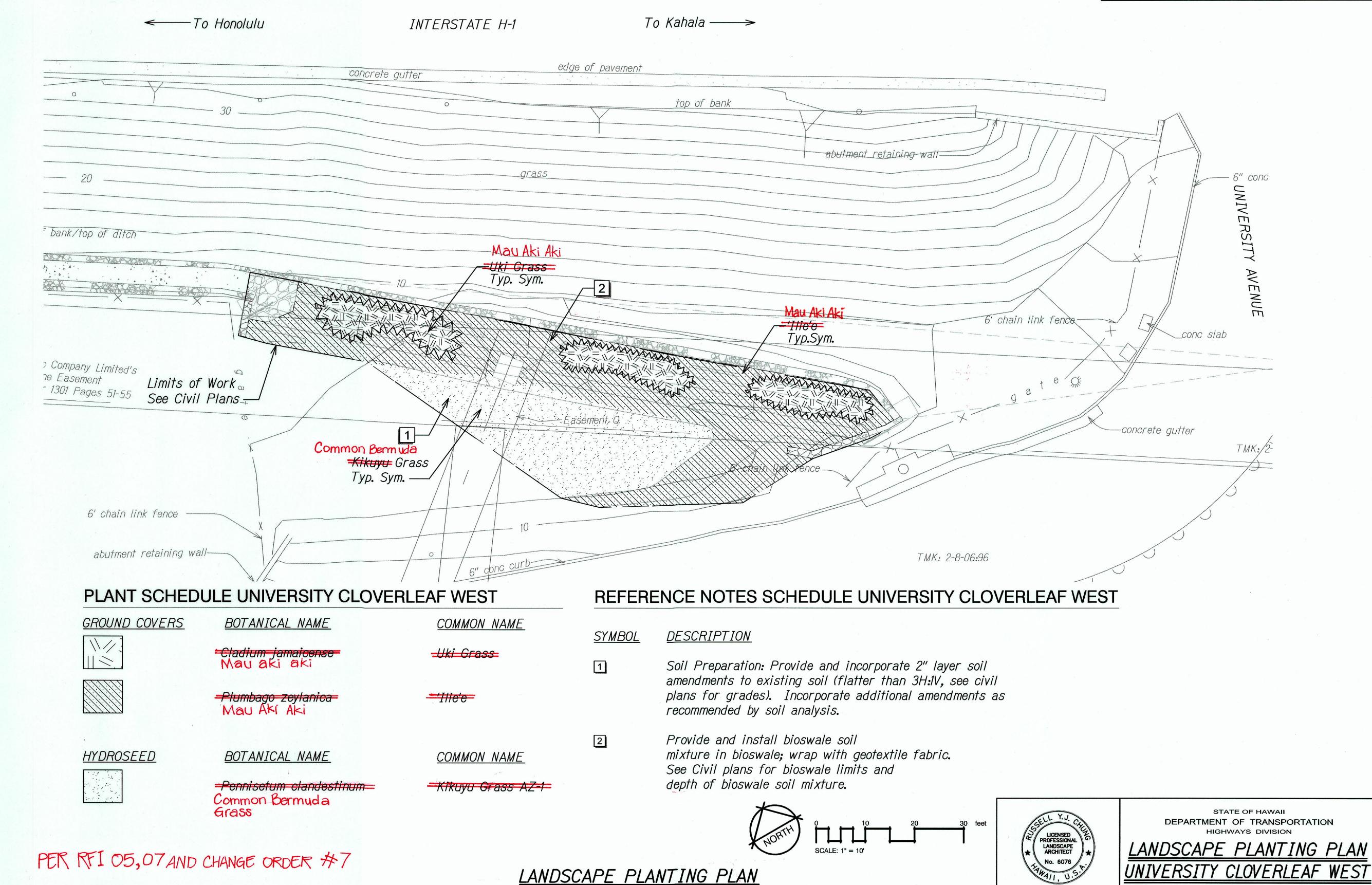
Project No. H1I-01-14M Scale: None Date: January 2014

SHEET No. LP-01 OF 5 SHEETS



FED. ROAD DIST. NO. STATE PROJ. NO. FISCAL SHEET TOTAL SHEETS

HAWAII HAW. H1I-01-14M 2014 32 42



UNIVERSITY CLOVERLEAF WEST

Scale: 1" = 10'-0"

Date: January 2014

ALA WAI WATERSHED STORM WATER

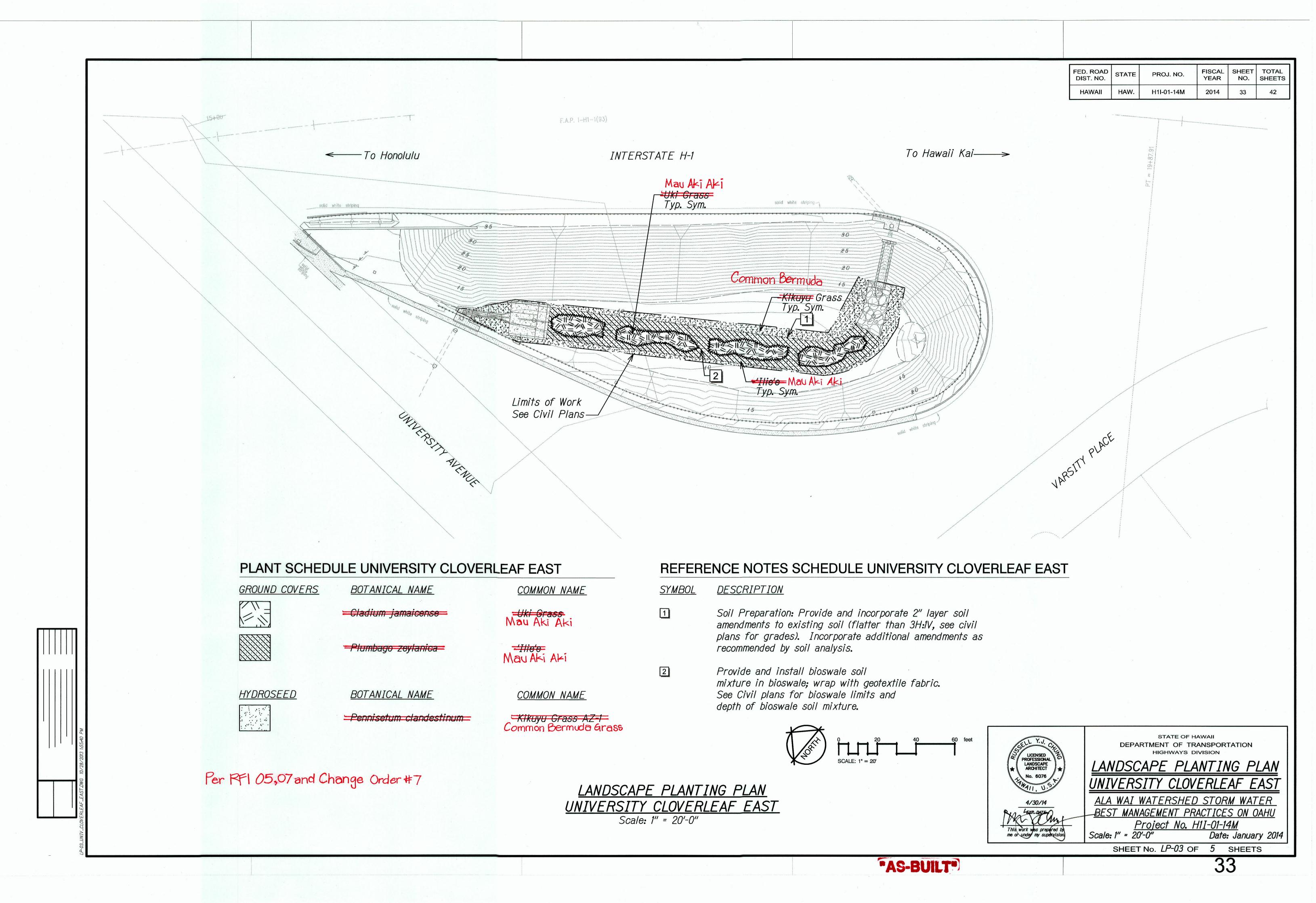
BEST MANAGEMENT PRACTICES ON OAHU

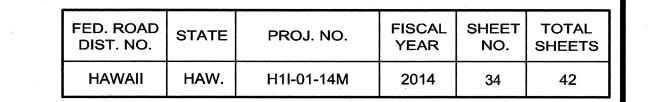
Scale: 1" = 10'-0"

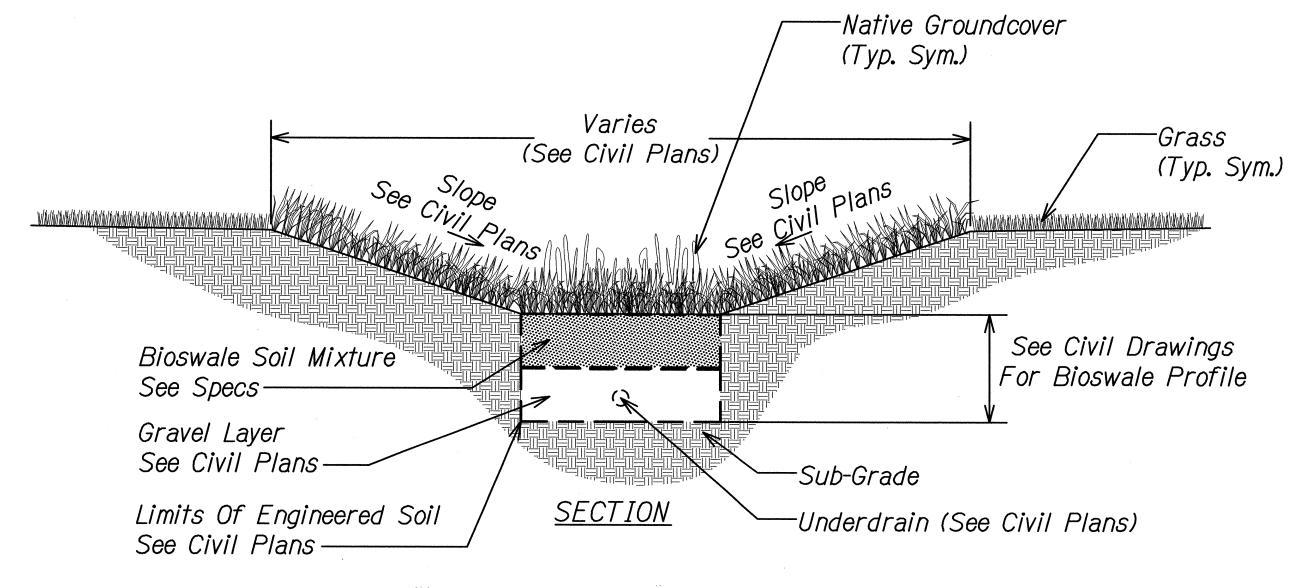
Project No. H1I-01-14M

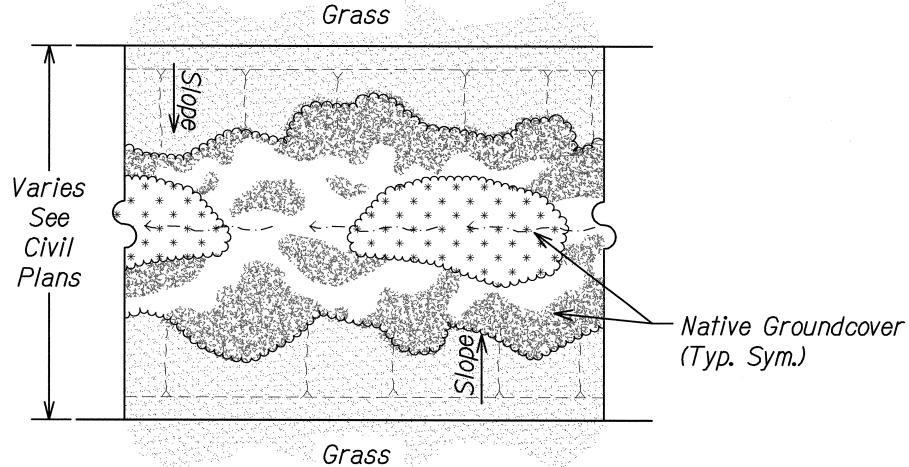
SHEET No. LP-02 OF 5 SHEETS

This work was prepared by me or under my supervision.









PLAN VIEW

TYPICAL BIOSWALE PLANTING DETAIL

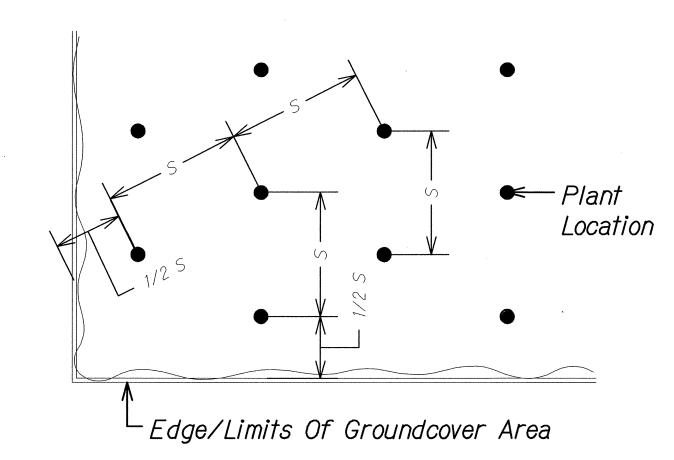
Scale: Not to Scale

LP-04LP-04

Note:

- 1. S = Spacing, (Refer to plant list for spacing)

 2. Use spacing layout for shrubs groundcovers and
- 2. Use spacing layout for shrubs, groundcovers, and annuals



TRIANGULAR SPACING 2
Scale: Not to Scale

Hydro-Seed/ Hydro-Sprig:
Shall be specifically processed fiber containing no growth or germination inhibiting factors. It shall be such that after addition and agitation in the hydraulic equipment with seeds/sprigs, fertilizer, water, and other additives not detrimental to plant growth the fibers will form a homogeneous slurry when hydraulically sprayed on the soil. The fibers shall form a blotter-like ground cover which readily absorbs water and allows infiltration. Complete coverage of the surface shall be attained.

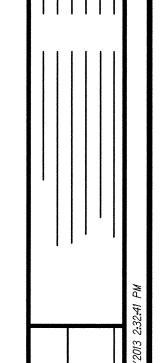


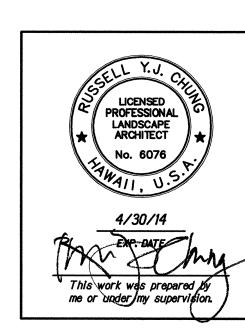
Prepared Soil/ Existing Soil

HYDRO-SEED/SPRIG DETAIL 3

Scale: Not to Scale

LP-04LP-04





STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LANDSCAPE DETAILS

ALA WAI WATERSHED STORM WATER
BEST MANAGEMENT PRACTICES ON OAHU

Project No. H1I-01-14M
Scale: As Shown Date: January 2014

SHEET No. LP-04 OF 5

LP-04 OF 5 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	H1I-01-14M	2014	35	42

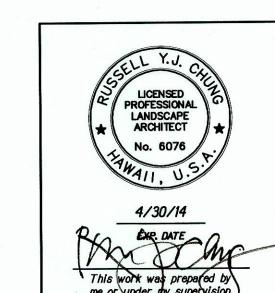
PLANT SCHEDULE UNIVERSITY CLOVERLEAF WEST

GROUND COVERS	BOTANICAL NAME	COMMON NAME	<u>CONT</u>
	-Cladium jamaicense	<i>-Uki Grass-</i> Mau Aki Aki	6" Pots @ 12" OC
	-Plumbago zeylanica	='Hie'e Mau Aki Aki	-1 Gal. @ 12" OC
<u>HYDROSEED</u>	BOTANICAL NAME	COMMON NAME	<u>CONT</u>
	-Pennisetum clandestinum	Common Bermida Grass	-Seed

PLANT SCHEDULE UNIVERSITY CLOVERLEAF EAST

GROUND COVERS BOTANICAL NAME COMMON NAME CONT -Uki Grass Mau Aki Aki -6" Pots @ 12" OC -Cladium jamaicense *='Hie'e* Mau Aki Aki -1 Gal. @ 12" OC Plumbago zeylanica <u>CONT</u> COMMON NAME BOTANICAL NAME <u>HYDROSEED</u> Common Bermuda Grass Pennisetum clandestinum

Per RFI 05,07 and Change Order #7



STATE OF HAWAII DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LANDSCAPE PLANT

<u>LIST</u>

ALA WAI WATERSHED STORM WATER
BEST MANAGEMENT PRACTICES ON OAHU

Project No. H1I-01-14M
Scale: None Date: January 2014

Scale: None

SHEET No. LP-05 OF 5 SHEETS 35