

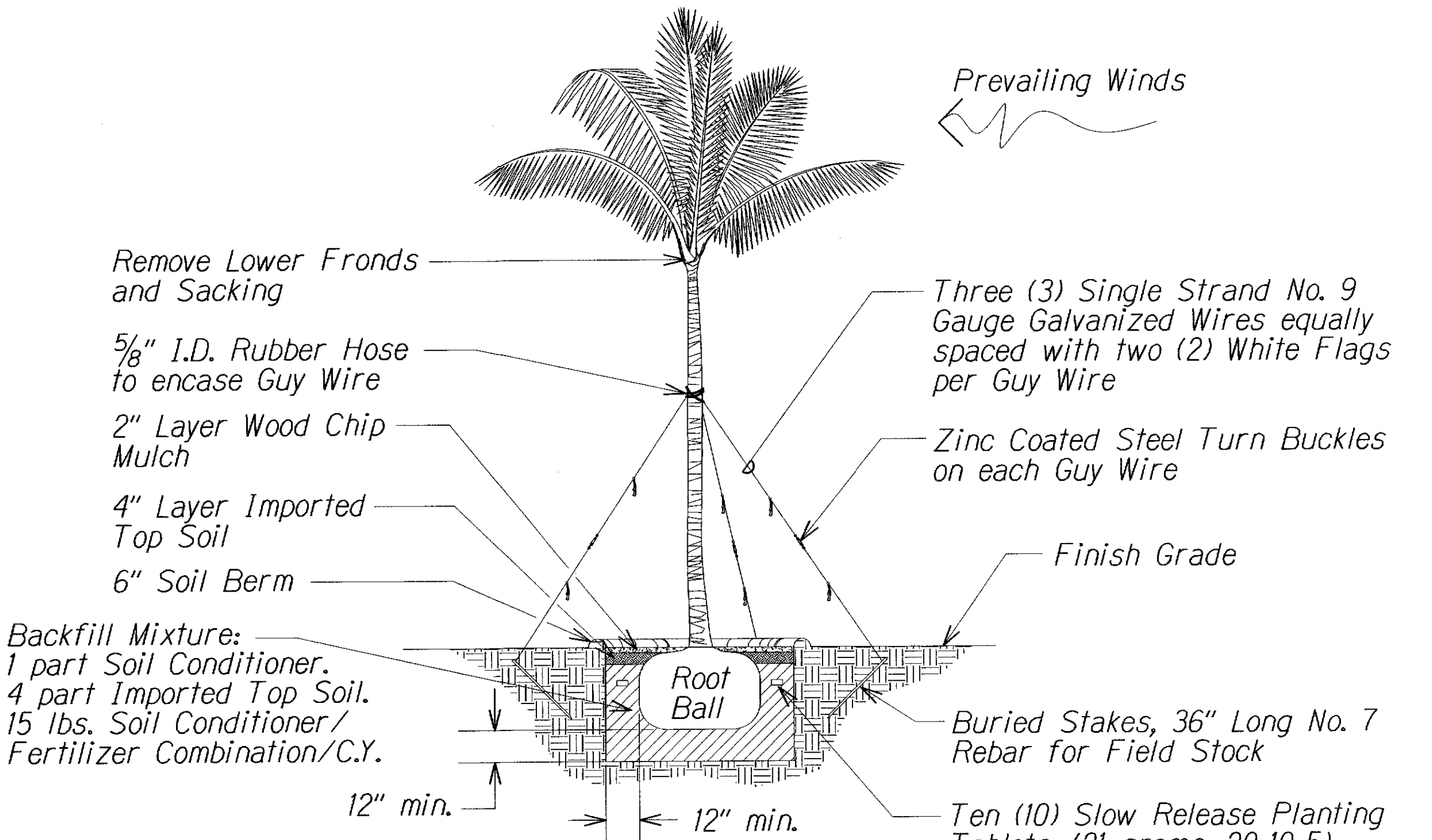
PLANT NOTES:

- Landscape Contractor shall field verify all plant quantities and dimensions prior to installation. Quantities shown on plant list are for reference only, verify actual quantities as shown on plan. If there is a discrepancy, the planting plan shall take precedence. Plans shall govern.
- Landscape Contractor shall be responsible for location and protecting existing utilities.
- Prior to tree hole excavation, all planting locations shall be staked out by Contractor for approval by Engineer. Do not plant until ground has been prepared and free of stones greater than 1/2" diameter, site is neat, orderly, and the Engineer accepts site for planting.
- Notify Engineer of any discrepancies in plant locations or insufficient plant quantities due to difference in plans and actual field conditions.
- Notify Engineer 30 days prior to planting operations for approval of all plant material at place of growth. All plant material not approved by the Engineer will be subject to rejection.
- The Engineer will inspect plants at the place of growth and after the delivery to the project. Each tree shall be tagged by the Engineer with a consecutively numbered plastic tamper-resistant and self-locking seal. Seals shall remain on trees and only be removed by the Engineer at the completion of the plant establishment period. Trees delivered to the project without Engineers seal will be rejected.
- Plants shall meet size indicated by minimum height and spread. 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.
- 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:l or the 'Federal Noxious Weed List' as defined in Title 7 of the code of Federal Regulations (CFR), parts 360 and 361.
- All tree work must adhere to American National Standard Institute (or ANSI)-A300 tree care standards and ANSI-Z133.1-2006 safety standards for tree work. Work shall be contracted to Arborists that have been certified in good standings as an ISA certified Arborist for at least 6 years in Hawaii 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 if 6 years to the Engineer minimum 14 days prior to tree pruning.
- If trees other than those specifically designated for removal are damaged beyond survival conditions as determined by the Engineer, the Contractor shall remove such trees and replace the tree with a same species and size and maintain for the duration of construction or 12 months whichever is greater at no cost to the State.
- Guy wires, flagging, stakes, windbreakers, etc. shall be maintained and replaced if necessary by the Contractor until the tree or shrub is able to stand by itself. The Contractor shall remove and dispose at the end of plant establishment period.
- Any planting that obstructs sight distance, signs or traffic lights shall be relocated or removed as determined by the Engineer at no cost to the State.
- Native Loulu Palms are available at Glenn's Flower of Plants (259-9625), Akamzi Landscape & Maintenance Service, Inc. (737-9228), Ladybug Plants LLC. (259-8484) and Hui Ku Maoli Oia (295-7777), Loulu Palms shall be verified by an botanist approved by the Engineer. No substitutions for Loulu Palms will be allowed.

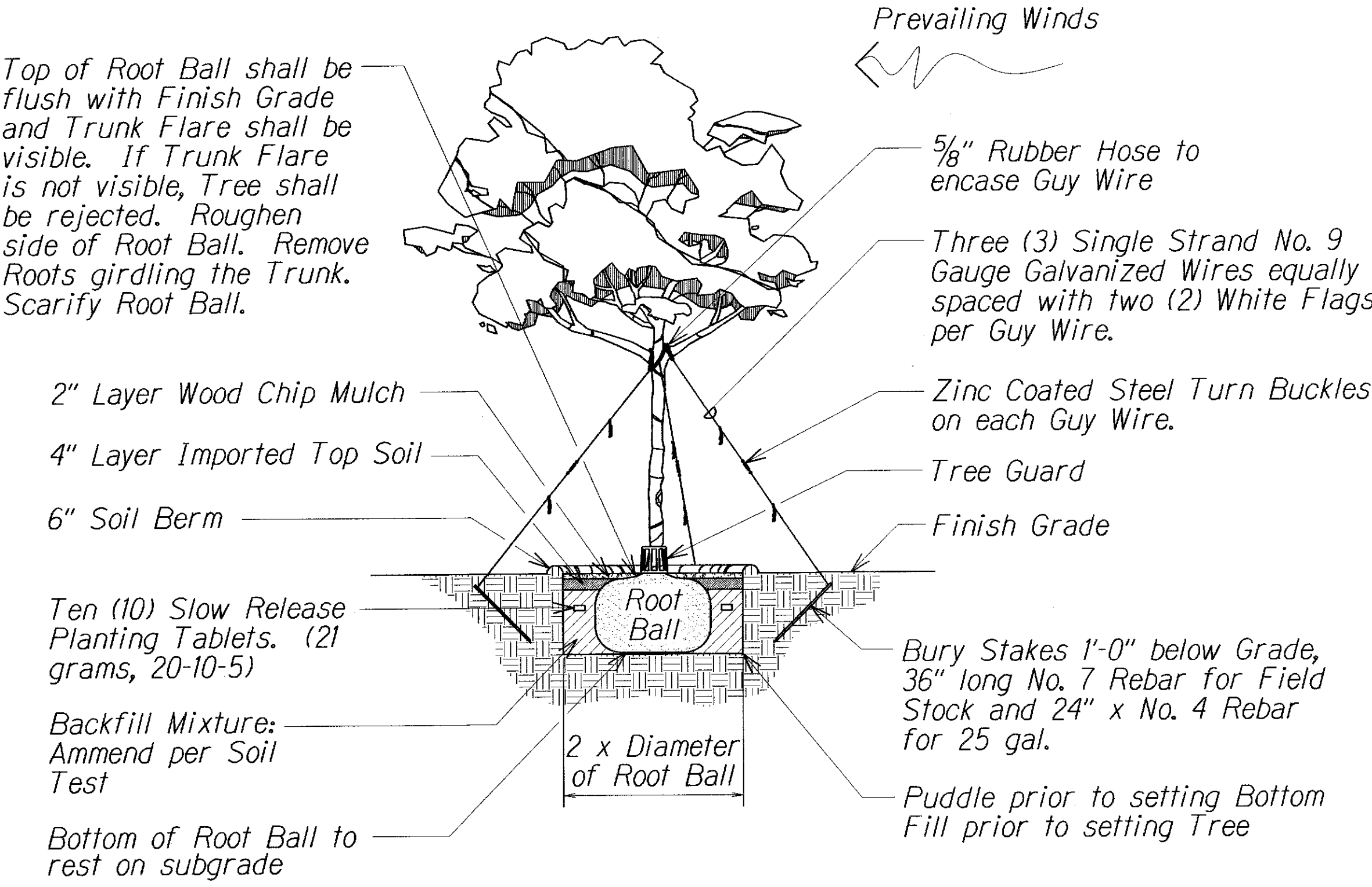
PLANT LIST			
QUANTITY	COMMON NAME	BOTANICAL NAME	SIZE & REMARKS
14 <del>=3</del>	Rainbow Shower Tree	Cassia x nealiae	12'-15' ht., 6-8 spd., 6" cal.
<del>=11</del>	<del>Monkeypod Tree</del>	<del>Samanea saman</del>	<del>12'-15' ht., 6-8 spd., 6" cal.</del>
26	Loulu Palm	Pritchardia 'Hillebrandii' or 'remota'	6-8' ht., 4-6' ht. brown trunk
10,000 S.F.	Saint Augustine Grass	Stenotaphrum secundatum	Sod, Square Feet

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-065-1(010)	2011	39	52

Instead of Monkeypod Trees  
Install Rainbow Shower Trees.



PALM PLANTING DETAIL  
Not to Scale



FIELD STOCK TREE PLANTING DETAIL  
Not to Scale

- Notes:
- Trunk must be protected from Rope Sling Burns and abrasions during moving.
  - Water heavily to ensure soil settles around roots.
  - Tree shall be plumb, if there is leaning at the end of the Plant Establishment Period, the Tree shall be rejected.
  - Protect Heart and Tip from damage and breakage during transporting and transplanting.

LEGEND FOR AS-BUILT POSTINGS	
	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

LANDSCAPING DETAILS & NOTES

MOKAPU SADDLE ROAD AND  
MOKAPU BOULEVARD RESURFACING  
Kapaa Quarry Road to North Kalaheo Avenue  
M.P. 2.97 to M.P. 4.15  
Federal Aid Project No. STP-065-1(010)  
Scale: Not to Scale      Date: April, 2011

SHEET No. 1 OF 1 SHEETS

SURVEY PLOTTED BY \_\_\_\_\_ DATE \_\_\_\_\_

PLAN DESIGNED BY \_\_\_\_\_

NOTE BOOK DESIGNED BY \_\_\_\_\_

THESE QUANTITIES BY \_\_\_\_\_

NO. \_\_\_\_\_ CHECKED BY \_\_\_\_\_

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-065-1(010)	2011	40	52

SOIL PREPARATION NOTES:

1. Install orange construction fence around existing palms to remain. Temporary fence shall be five(5) feet from trunk of palm. Do not disturb soil within fence. Remove fence after grass sod is installed.
2. Contractor shall utilize existing soil for the project. Finish grade of the completed project shall remain the same as existing grade. Preserve existing drainage patterns. Soil Preparation notes apply to all planting areas.
3. Do not screen existing soil.
4. Use locally available compost such as Hawaiian Earth Products compost.
5. Do not work the soil when air or soil is so moist that excessive compaction occurs or so dry that dust forms. Apply water if necessary to bring soil to optimal moisture content for tilling, planting and dust control.
6. Remove and dispose of plastics, glass, trash and stones greater than 2 inches diameter: as a result of soil preparation.
7. The contractor shall only perform soil preparation to the extent that can be completed by the end of work day. Any exposed soils at the end of the work day shall be covered with compost.

PHASE I

8. Prior to construction, uniformly spread two inches of compost over entire median to be planted.
9. Scarify the top 12 inches of existing soil.
10. Apply generous amounts of water to break soil clumps to between one inch and six inches in diameter

PHASE II

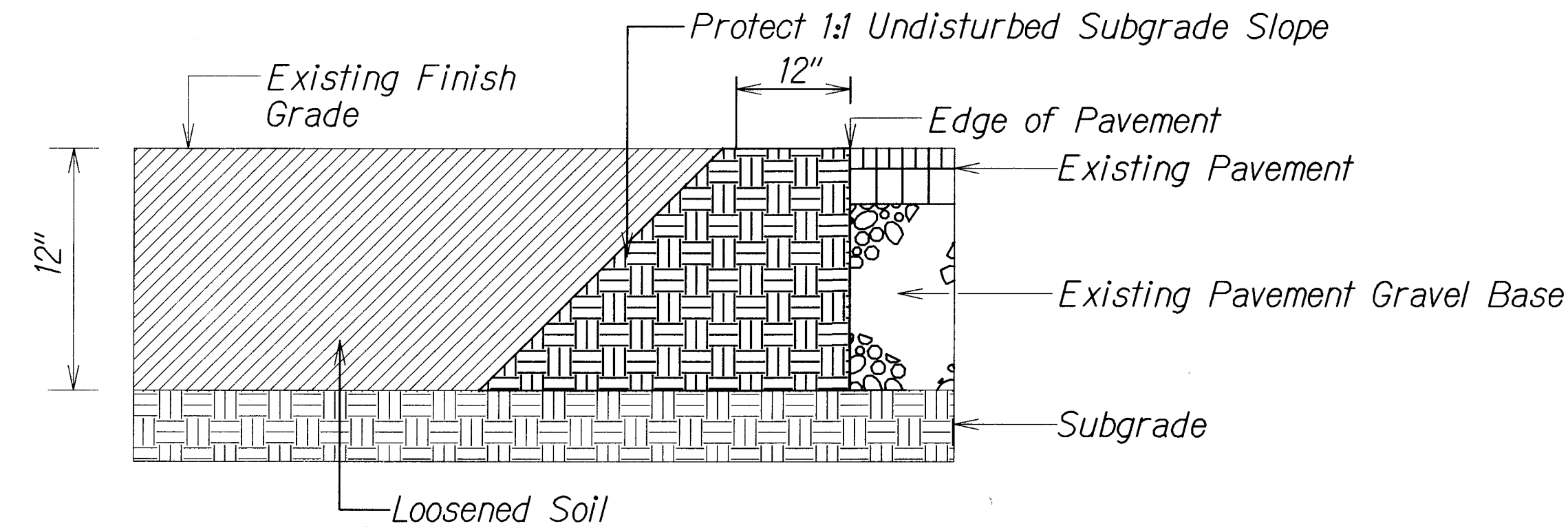
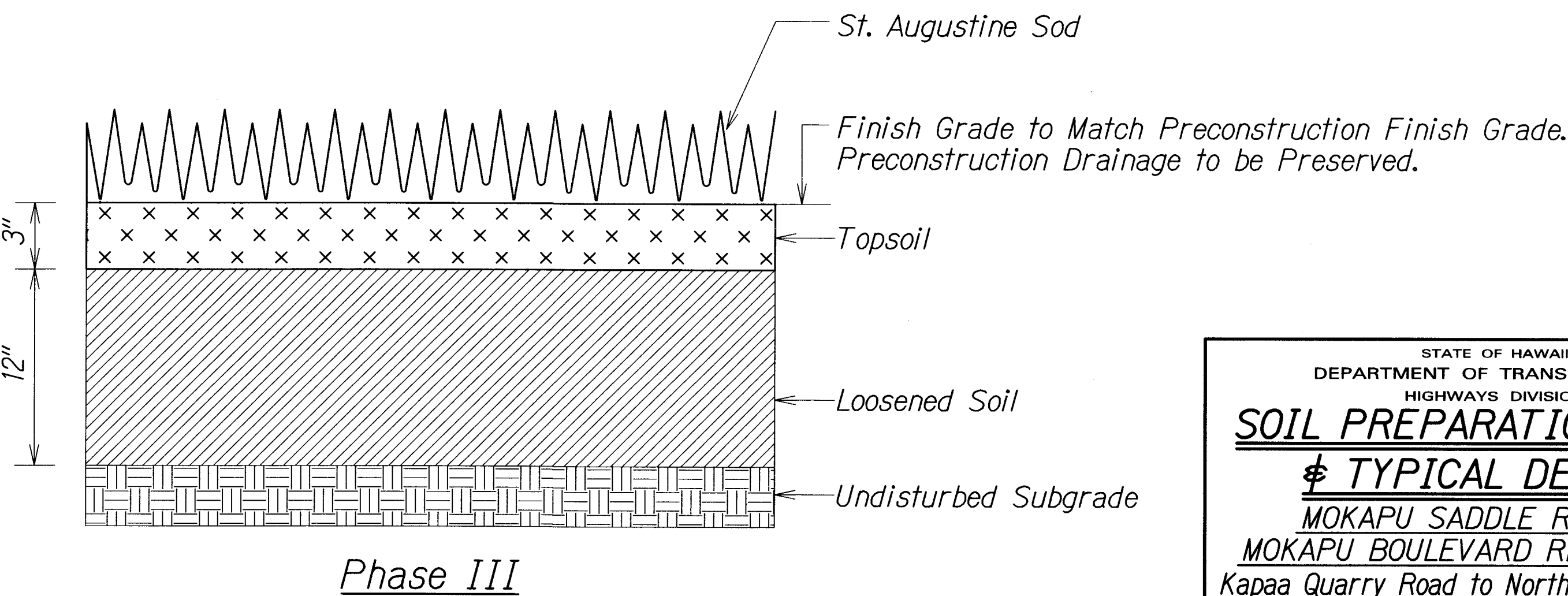
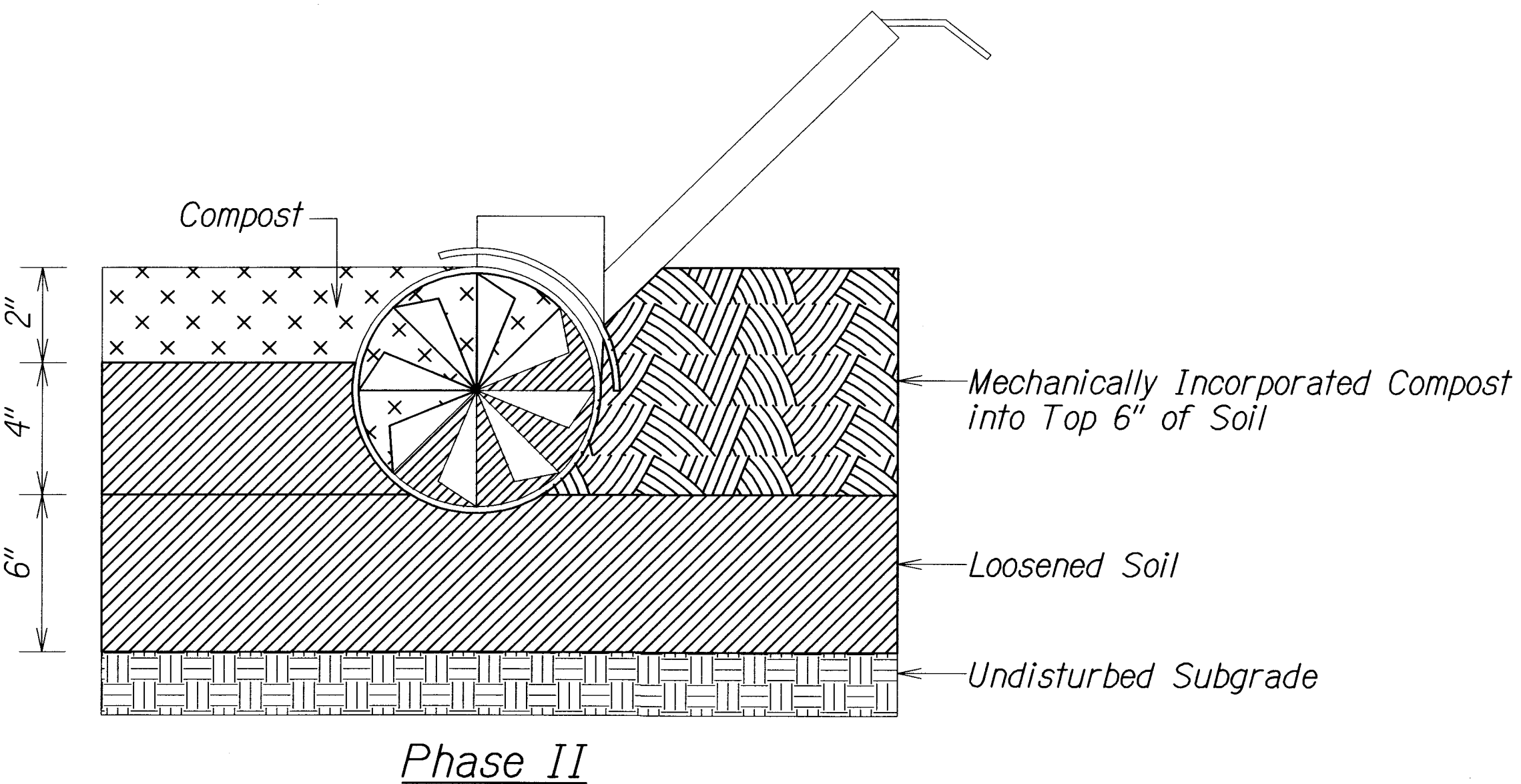
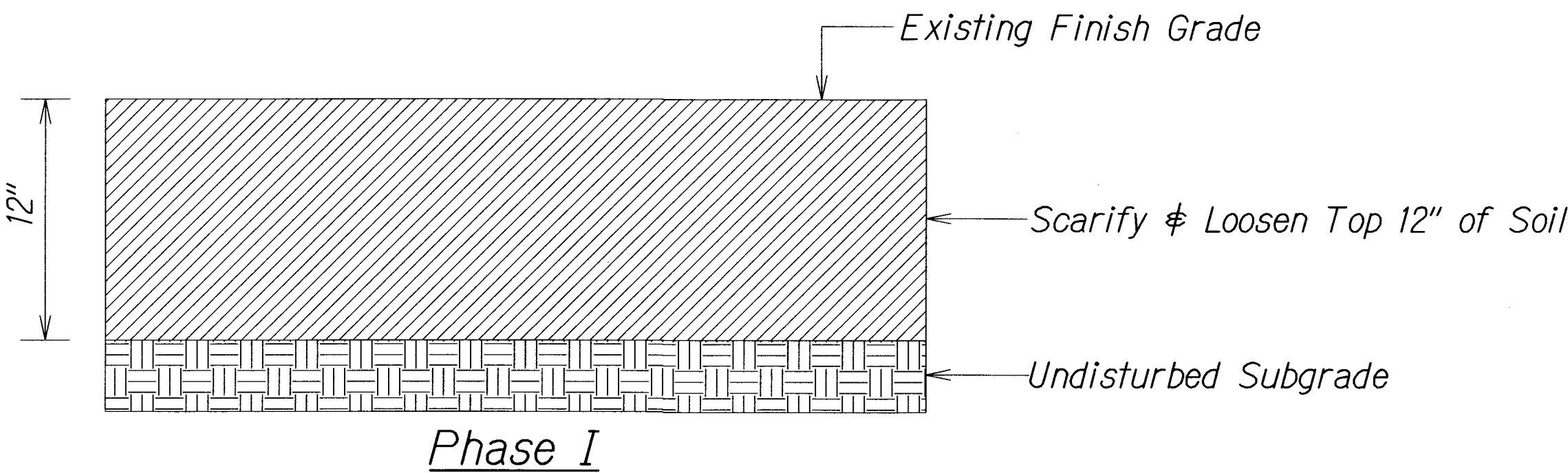
11. Apply 2 inches of compost and mechanically incorporate into the top 6 inches of soil. Afterwards do not allow vehicles or equipment on median.

PHASE III

12. Grade soil to a smooth and even finish without abrupt changes or pockets. Evenly apply 3 inches of topsoil

SOIL PREPARATION PROCESS

Note: Soil Preparation Process applies only to the median between ~~to~~ STA. 51+93 to ~~to~~ STA. 43+50.



Note: After the completion of the soil preparation, remove the top two inches of soil within 12 inches of the pavement edge careful not to damage the pavement and install two inches of bark mulch. Repair all damaged pavement as a result of construction activity as directed by the Engineer at the contractor's expense.

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
<b>SOIL PREPARATION NOTES</b>
<b>&amp; TYPICAL DETAILS</b>
MOKAPU SADDLE ROAD and MOKAPU BOULEVARD RESURFACING Kapaa Quarry Road to North Kalaheo Avenue Federal Aid Project No. STP-065-1(010) Scale: N.T.S. Date: April, 2011
SHEET No. 1 OF 1 SHEETS