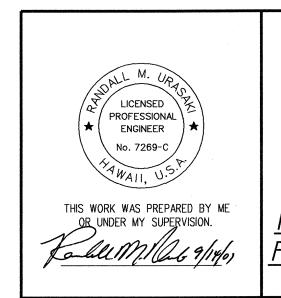
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0380(9)	2000	109	380

GRADING NOTES:

- 1. All grading work shall be done in accordance with Chapter 23, Grading, Soil Erosion and Sediment Control of the Revised Ordinances of Maui and the Soils Report, "Geotechnical Engineering Exploration, Kuihelani Highway Widening, Honoapiilani Highway to Puunene Avenue, Wailuku, Maui, Hawaii, September 18, 2000."
- 2. The Contractor shall remove all silt and debris resulting from his work and deposited in drainage facilities, roadways and other areas. The costs incurred for any necessary remedial action by the Chief Engineer shall be payable by the Contractor.
- 3. The Contractor, at his own expense, shall keep the project area and surrounding area free from dust and other nuisance. The work shall be in conformance with the air pollution standards and regulations of the State Department of Health.
- 4. All slopes and exposed areas shall be hydro-mulch seeded as soon as final grades have been established in accordance with the Specification \$\psi\$ Grading Plan. Planting shall not be delayed until all grading work has been completed. Grading to final grade shall be continuous, and any area within which work has been interrupted or delayed shall be planted.
- 5. Fills on slopes steeper than 5:1 shall be benched.
- 6. No grading work shall be done on Saturdays, Sundays and Holidays at any time without prior written notice to the Chief Engineer or District Engineer, State of Hawaii.
- 7. The limits of the area to be graded shall be flagged by the Contractor before the commencement of the grading work.
- 8. The County shall be informed of the location of the borrow/disposal site for the project when the application for a grading permit is made. The borrow/disposal site must also fulfill the requirements of the grading ordinance.
- 9. All grading operations shall be performed in conformance with the applicable provisions of Chapter 54, Water Quality Standards, and Chapter 55, Water Pollution Control, of Title 11, Administrative Rules of the State Department of Health.
- 10. Temporary Erosion Control Plan and procedures shall be submitted by the Contractor for approval prior to the start of actual grading operations.
- 11. Silt fence shall be installed along the edges of open channels \$ ditches in order to filter sediment from runoff, before water enters the channel.
- 12. Temporary erosion controls shall not be removed before permanent erosion controls are in-place and established.
- 13. All slopes and exposed areas steeper than 3H:1V shall be hydro-mulch seeded and covered with erosion control matting as soon as final grades have been established in accordance with the specification and grading plan. Planting shall not be delayed until all grading work has been completed. Grading to final grade shall be continuous, and any area within which work has been interrupted or delayed shall be planted.

DRAINAGE NOTES:

- 1. Drainage pipes to be abandoned shall be removed as necessary to facilitate construction. Remaining pipes shall be plugged.
- 2. Contractor shall sequence construction such that existing facilities remain in service until new facilities are in service or shall provide and maintain, as is necessary, temporary drainage diversion facilities.
- 3. The Contractor shall verify locations and elevations of all existing utility lines and notify respective owners before commencing excavation work for drainlines.
- 4. Existing drainage facilities to remain and located within project limits shall be cleaned of silt and debris.
- Except in areas where new pavement structure is being constructed, existing pavement damaged by trenching or other activities shall be restored.
- 6. Steel plates for covering trenches shall have skid resistant surface.
- 7. Contractor shall submit shop drawings of pre-cast drainage structures to the Engineer for approval. Contractor shall verify location of exist. utilities prior to manufacturing pre-cast box culverts to ensure conflicts with proposed drainage structures do not exist.
- 8. The reference point for locating CRM structures and CRM Headwalls by station and offsets is at the centerline of the structure at the inside edge, except for GDI's, the reference point is at the center of the main body.
- 9. When excavating in close proximity of walls, fences, utility poles, and other improvements, the Contractor shall protect, support, secure and take all other necessary precautions to prevent damaging these facilities and improvements.
- 10. All materials for drainage pipe extensions shall match existing pipe material, unless otherwise specified on plans.
- 11. For pipe locations that are to be extended, Contractor shall verify dimensions of existing pipes prior to purchasing new pipes.
- 12. Contractor shall stake out and verify locations of proposed box culvert prior to casting of box culverts.



STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE & GRADING NOTES

KUIHELANI HIGHWAY WIDENING
HONOAPIILANI HIGHWAY TO PUUNENE AVENUE
FEDERAL-AID PROJECT NO. NH-0380(9)
Scale: None Date: Sept. 14, 2001

SHEET No. D1 OF 50 SHEETS