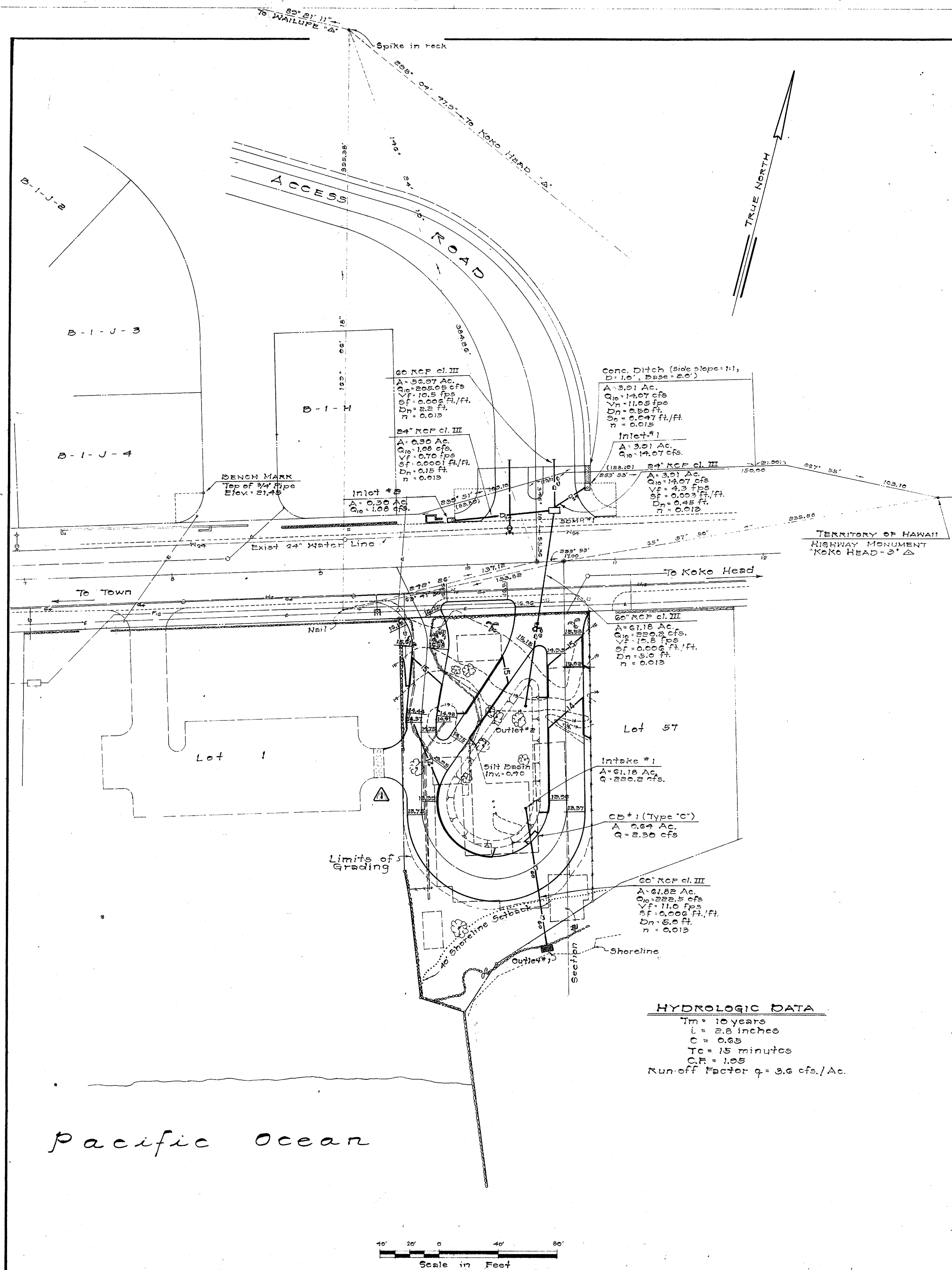




NOTES FOR CONSTRUCTION WITHIN STATE RIGHT-OF-WAY

- The Contractor shall obtain a construction permit from the State Highway District Engineer at 727 Koko St. prior to the commencement of work within the State Highway right-of-way.
- Construction and restoration of existing highway facilities within the State's right-of-way shall be done in accordance with all applicable Sections of the Standard Specification for Roads and Bridge Construction, dated 1976, and the Specifications for Installation of Miscellaneous Improvements Within State Highways, dated April 1, 1974, of the State Highway Division.
- All lanes shall be opened to traffic during the morning peak hours from 6:00 a.m. to 9:00 a.m. and during the afternoon peak hours from 3:00 p.m. to 6:00 p.m., and during off-work hours. Only one lane of Kalia Highway shall be closed at any other time.
- The Contractor shall provide, install, and maintain all necessary signs, lights, flares, barricades, markers, cones and other protective facilities and shall take all necessary precautions for the protection and for the convenience and safety of public traffic. All such protective facilities and precautions to be taken shall conform with the Rule and Regulations Governing the Use of Traffic Control Devices at the Work Sites on or adjacent to Public Streets and Highways, adopted by the Highway Safety Coordinator, and the U.S. Federal Highway Administration's Manual on Uniform Traffic Control Devices for Streets and Highways, Part VI, Traffic Controls for Highways, Construction and Maintenance Operations, dated 1971.
- The minimum pavement structure shall consist of 2 1/2" asphaltic concrete, 4" base course and 1/2" select borrow.
- Pavement striping shall be done by the Contractor.
- Prior to commencing trench excavation work, the contractor shall take a profile along the 60' culvert and this information shall be used in verifying restoration work of the roadway to its original condition. A copy of the profile shall be submitted to the Oahu District Engineer at 727 Koko Street.

GENERAL NOTES

- All construction work shall be done in accordance with the STANDARD DETAILS, February 1973, and the STANDARD Specifications, November 1968, of the Department of Public Works, City and County of Honolulu.
- All existing utilities, whether or not shown on the plans, shall be protected at all times by the Contractor unless specified on the plans to be abandoned.
- Wherever connections to existing utilities are shown on the plans, the Contractor shall expose the existing lines prior to excavation of the main trenches to verify their location and depth.
- Utilities shall be installed pursuant to the provisions of Ordinances 2875 and 3375 (Underground Utilities).
- Street lights shall be installed in accordance with Ordinance 1638, as amended by Ordinances 1770, 2875, 3035 and 3357.
- Bench mark elevations to be established on new street survey monuments after construction and data are submitted to the Division of Engineering, Department of Public Works, City and County of Honolulu.
- Street name signs shall be installed in accordance with the standards of the Department of Transportation Services. In lieu of the standard embossed signs, reflectorized street name signs with sign brackets identical to that presently used by the Department of Transportation Services may be used.
- All work in the shoreline setback area shall conform to the shoreline setback rules and regulation.
- Maintenance shall be by Developer until acceptance and dedication upon completion to City and County of Honolulu.

WATER NOTES

- Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the Honolulu Board of Water Supply's WATER SYSTEM STANDARDS dated July, 1969, and all subsequent amendments and additions.
- All plans approved by the Board of Water Supply are based solely on the adequacy of the water supply. All other features of the water system such as lines, grades, fittings, etc., shall be the responsibility of the engineer who prepared the plans. Drainage and other features of the improvements shall not be the responsibility of the Board of Water Supply.
- Prior to excavating for new drain, sewer and other utility lines, the Contractor shall verify in the field the location of existing water mains and appurtenances. Where the installation of new drain, sewer or other utility lines are to cross over or under existing water mains, the Contractor shall expose the existing water mains prior to trenching. Excavation around water mains shall be done by hand.
- The Contractor shall notify the Board of Water Supply in writing one week prior to commencing work on the main.
- In the event that water mains other than cast iron pipe is to be used, the plans shall be resubmitted for approval.

NOTE:
 JUGHANDLE INTERSECTION AND UTILITIES WILL BE DEDICATED UPON COMPLETION TO CITY AND COUNTY OF HONOLULU.

GRADING NOTES

- All grading work shall conform to Chapter 23, revised Ordinances of Honolulu 1969, as amended. (Ordinance No. 3068.)
- 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.
- The Contractor, at his own expense, shall keep the project area free from dust nuisance. The work shall be in conformance with the air pollution control standards and regulations of the State Department of Health.
- All grading operations shall be performed in conformance with the applicable provisions of the Water Pollution Control and Water Quality Standards contained in the Public Health Regulations, State Department of Health, on Water Pollution Control and Water Quality Standards.
- All slopes and exposed areas shall be sodded or planted immediately after the grading work has been completed.
- Fills on slopes steeper than 3:1 shall be keyed.
- Prior to issuance of a grading permit, the permittee shall obtain a certification by the State Department of Health on the acceptability of the proposed erosion control.
- No grading work shall be done on Saturdays, Sundays and holidays at any time without prior notice to the Chief Engineer.
- The limits of the graded area shall be flagged before the commencement of the grading work.

SEWER NOTES

- All construction work and material shall conform to the shall STANDARD DETAILS dated Feb. 1973 and Specifications dated November 1968 of the Department of Public Works, City and County of Honolulu and the revised Ordinance of Honolulu, 1969.
- In the event that any changes in alignment or grade for the proposed sewers are required due to unforeseen conflict with other underground utilities, the Subdivision Engineer shall be responsible for the required changes which are to be presented to the Division of Sewers for approval.
- Crush rock cradle is permitted where the soil is stable. In areas of unstable soil, the maker of plans and the Construction Engineer will discuss and determine the pipe support required.
- The Contractor shall notify the Division of Sewers seven (7) days prior to commencement of sewer work.

NOTES FOR CONSTRUCTION WITHIN STATE RIGHT-OF-WAY (CON'T.)

- Trench backfill of utility and drainage lines within the pavement area of the State Right-of-Way shall consist of 4" of asphalt concrete and 8" of plant mix asphalt treated base course or asphalt concrete.
- One (1) compaction test shall be taken in accordance with the Specifications for Installation of Miscellaneous Improvements Within State Highways, dated April 1, 1974 for each of the following items of work:
 - 60-inch culvert crossing
 - 12-inch sewer line crossing
 - Jughandle - mauka side
 - Jughandle - makai side

REVISION	DATE	DESCRIPTION	BY	APPR'D.
	12/10/75	Driveway connection to 60" dia. Aiea Hina Beach Park	GRTA	12/23/75

GRAY, RHEE & ASSOCIATES, INC.
 CONSULTING ENGINEERS
 116 S. KING ST. RM. 508

HAWAII LOA RIDGE
JUGHANDLE INTERSECTION
AND DRAIN OUTLET
 WAILUPE AND NUI, HONOLULU, OAHU, HAWAII

SITE AND GRADING PLAN

ENGINEER: KH. DRAWN BY: D.N. CHECKED BY: B.G.

APPROVED BY: *[Signature]* 7/10/76
 CHIEF, DIV. OF ENGINEERING
 DATE: 7/10/76
 ASSIST. CHIEF ENGINEER, DWS (WATER DATE)

SHEET 2 OF 16 SHEETS