

CONSTRUCTION NOTES

- Origin of azimuth and coordinates referred to "North Base" Triangulation Station.
- Elevation datum - Due to the use of different datum by surrounding projects, this project will use two elevation datums.
 - Mean Sea Level = 0.81 Feet MLLW
 - Mean Low Low Water = 0.00 Feet
- All work related to the sewage pump station and its Force Main.
- All work related to the Parkway, and to the sewer, drainage, and water systems.
- Subsurface investigation reports, which include boring logs, were prepared by F.G.E. Ltd. for the Parkway and the sewage pump station. These reports are available for examination by prospective bidders at the Division of Water and Land Development 2nd Floor, Rm. 227, Kalanimoku Building, Honolulu, Hawaii. The bidder must form his own opinion of the character of the material to be excavated and shall not hold the State responsible for the accuracy of the boring logs, its actual location in the field, and the type of material encountered.
- All grading work shall conform to Chapter 23, Revised Ordinances of Honolulu 1969, as amended (Ordinance No. 3268, 4234, & 4538) and Soils Report by F.G.E. Ltd. dated 9/24/79. Pertinent soil recommendations pertaining to grading are as follows:
 - Prior to filling operations the existing ground shall be compacted with a moderate-sized vibratory roller such as a TAMPO RS 100A or its equivalent. The compaction operation shall consist of not less than 10 passes over the embankment area and shall extend at least 15 feet beyond the edge of the pavement. Localized soft spots encountered shall be overexcavated and the resulting depression properly backfilled and compacted.
 - Fill slopes shall be limited to 2 Horizontal to 1 Vertical (2H:1V) for slope heights of up to 10 feet.
 - The fill shall be allowed to settle for a period of one month prior to construction of settlement-sensitive elements to allow sufficient time for the consolidation of the subsurface soils. The estimated settlements anticipated is 4 to 5 inches. It should be noted that the one-month waiting period may be somewhat conservative. Monitoring of the settlement rate of the fill may result in a reduced waiting period should the actual field measurements indicate a shorter consolidation period.
- 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 and surrounding 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 5:1 shall be keyed.
- The City shall be informed of the location of the disposal site for the excess material from the project when the application for a grading permit is made. The disposal site must also fulfill the requirements of the grading ordinance.
- The City shall be informed of the location of the borrow site for the borrow required for this project when the application for a grading permit is made. The borrow site must also fulfill the requirements of the grading ordinance.
- No grading work shall be done on Saturdays, Sundays and holidays at anytime without prior notice to the Chief Engineer.
- The Contractor shall conduct his operations in such a manner as to not cause any unnecessary delay or hindrance to the other contractors working in the area. Conflicts arising along the project boundaries shall be immediately brought to the attention of the engineer.
- The Contractor shall confine all construction operations to the immediate vicinity of the project and shall place all building materials and equipment in such a manner and location that there will be minimum of interference with or inconvenience to the public or other contractors within the area.
- The limits of the area to be graded shall be flagged prior to commencement of the grading work.
- Temporary erosion control procedures shall be submitted prior to application for a grading permit.
- Organically contaminated near-surface soils shall be removed as part of clearing and grubbing operations.

Area to be graded = 4.54 Acs.
Excavation = 2256 C.Y.
Embankment = 6823 C.Y.

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 March 1977, 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., and drainage and other features of improvements shall not be the responsibility of the Board of Water Supply.
- Unless otherwise specified, connections to existing water mains and chlorination of new mains shall be done by the Contractor with the BWS Inspector coordinating the work. For details, contact BWS Planning and Engineering Division, Engineering Branch, Construction Section.
- All meter boxes shall be Type _____ unless otherwise specified and shall be furnished, installed, and paid for by the Contractor, including the frames and covers.
- Copper service laterals shall be _____ inches with Type _____ copper service connections unless otherwise noted.
- Test pressure shall be 150 psi.
- All cast iron (gray or ductile) pipes, fittings, and valves shall be enclosed in plastic material in accordance with ANSI specifications A.21.5-1972 or AWWA specifications C105-72 "Polyethylene Encasement for Gray and Ductile Cast Iron Piping for Water and Other Liquids."
- 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 main.
- In the event that water mains other than A.C. pipe is to be used, the plans shall be resubmitted for approval.
- * Water pipeline easements shall be granted to the Board of Water Supply for all lines to be conveyed to the BWS which are located within private property and roadways that will not be dedicated to the City.
- Valve ID tags shall be affixed on the underside of all new manhole and valve box covers. See detail.
- Reapproval shall be required if this project is not under construction within a period of one year. (See Rules and Regulations of the Board of Water Supply).
- * Fire hydrants shall be East Bay Model 5 as specified in the Water System Standards, James-Jones Model J-3740, or approved equal. Break off bolts shall be drilled 11/32 x 1-3/8 inches.
- * Maintenance of water lines beyond water meters shall be the responsibility of the owners.
- Contractor shall furnish and install additional fittings if necessary to meet field conditions.
- * After installation of tapping sleeve and valve, the assembly shall be tested with prevailing line pressure prior to actual tapping operations.
- * Adequate interim fire protection meeting the Board of Water Supply standards shall be installed and completed prior to construction of homes, including model homes.

*if applicable

SEWER NOTES

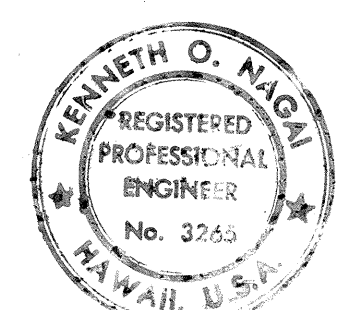
- The Contractor shall notify the Division of Wastewater Management seven(7) days prior to commencement of sewer work and submit 4 sets of approved construction plans.
- All sewer work shall be done in accordance with the City and County Standard Specifications for Public Works Construction, May 1975, the Department of Public Works Standard Details, Aug. 1976, and the Revised Ordinances of Honolulu, 1969.
- In the event that any changes in alignment or grade for the proposed sewer are required due to unforeseen conflict with underground utilities, the maker of the plans shall be responsible for the required changes which are to be presented to the Division of Wastewater Management for approval.
- The construction of the sewer should not be started until one month following the fill placements to permit the subsurface soils to consolidate under the fill loadings.
- Ground water will probably be encountered between Elev. 0.0 and Elev. 3.0. It is anticipated that the water level will vary with tidal fluctuations and precipitation rates. Trenches and other excavations below the water table will require dewatering. The excavation and dewatering methods should minimize the disturbance of the sewer subgrade. The water should be prevented from "piping" or "boiling" through the subgrade soils. The selection and design of the shoring and dewatering methods and equipment is the responsibility of the Contractor.
- Sewer bedding shall be in accordance with the special details furnished herein.
- The Contractor shall break into the USCG existing manhole in accordance with the City & County Standards Specifications. The city will only perform the necessary channelization to effectuate the connection to the new system.
- All sewer manholes shall be constructed with type SA frame and cover, and type SC rungs.

PIPE FIELD SUPPORT FOR SEWER

18" V.C. Pipe (SPS #2 to SMH #6)	Concrete cradle and bedding (STD detail S-2)
18" V.C. Pipe (SMH #6 to SMH #10)	Concrete cradle and bedding or crush rock cradle.*
15" V.C. Pipe	Concrete cradle and bedding or crush rock cradle.*
*Detail of crush rock cradle depend on location of Trench Grade.	
Above coral level: special detail.	
Within coral level: STD detail S-1.	
(See sheet C-18 for Trench Bedding)	

U.S. COAST GUARD

- The Contractor shall obtain a work permit for the work within the U.S. Coast Guard Station and shall give an advance notice (7 calendar days) to the Base Commanding Officer (546-7123) before proceeding with the work.

WILSON OKAMOTO & ASSOC. ENGINEERS-ARCHITECTS-PLANNERS HONOLULU HAWAII		CHANGED D.I. TO A.C. PIPE SYMBOL DESCRIPTION DATE 8-22-80 APP'D	
APPROVED: <i>[Signature]</i> 7/11/80 CHIEF, DIV. OF ENGR. & W. DATE (FOR GRADING ONLY) <i>[Signature]</i> 6/24/80 CHIEF DIV. OF WASTEWATER DATE MANAGEMENT <i>[Signature]</i> 7/14/80 CHIEF, PLANNING & ENGINEERING, B.W.S.		 THIS WORK WAS PREPARED BY MAJOR UNDER MY SUPERVISION. <i>[Signature]</i> <i>[Signature]</i> Signature	
REVISIONS STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES DIVISION OF WATER AND LAND DEVELOPMENT SAND ISLAND PARKWAY INCREMENT II, PHASE I & SEWAGE PUMP STATION SAND ISLAND, OAHU, HAWAII			
DESIGNED: K.N. DRAWN: R.N. CHECKED: K.O.N. APPROVED: Robert H. Churche DATE: 5/21/80		SUBMITTED: <i>[Signature]</i> CHIEF DESIGN & CONSTR. ENGINEER FILE NO.	

As Built

JOB NO 46-0L-17 SHEET NO. C-2 OF 75 SHEETS