STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HONOLULU, HAWAII

SPECIAL PROVISIONS, PROPOSAL, CONTRACT, BOND AND PLANS

FOR

ALA MOANA BOULEVARD, SEALING OF WELL
AT ALA MOANA MINI-PARK
PROJECT NO. 92A-03-81
DISTRICT OF HONOLULU
ISLAND OF OAHU
1981
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HONOLULU, HAWAII

SPECIAL PROVISIONS, PROPOSAL, CONTRACT, BOND AND PLANS

FOR

ALA MOANA BOULEVARD, SEALING OF WELL

AT ALA MOANA MINI-PARK

PROJECT NO. 92A-03-81

DISTRICT OF HONOLULU

ISLAND OF OAHU

1981

Improvements consist of sealing existing Well No. 1851-22 with sand cement or neat cement grout, and is located at Ala Moana Mini-Park, near the intersection of Ala Moana Boulevard and Richards Street.

The existing well is 8 inches in diameter with a total depth of about 1152 feet and cased to a depth of 986 feet.
Seal well outside of casing
No centralizers
gate valve
packers
1/2" pipe instead of 1 1/4"
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NOTICE TO BIDDERS

SEALED PROPOSALS for ALA MOANA BOULEVARD, SEALING OF WELL AT ALA MOANA MINI-PARK, PROJECT NO. 92A-03-81, District of Honolulu, Island of Oahu, will be received at the Programs and Contracts Office, Department of Transportation, 869 Punchbowl Street, Honolulu, Hawaii 96813, until 2:00 P.M., June 12, 1981, at which time and place they will be publicly opened and read.

The project entails sealing an 8-inch diameter, 1152 feet deep well with sand cement or neat cement grout.

Plans and specifications may be examined at the above office or obtained therefrom upon the deposit of TWENTY DOLLARS ($20.00) in currency or a check made payable to the Director of Finance, State of Hawaii.

Each proposal shall be on a form furnished by said Department.

Notice of intention to bid must be received at said Programs and Contracts Office no later than six (6) calendar days prior to the bid opening date.

The State reserves the right to reject any or all proposals and to waive any defects in said proposals for the best interest of the public.

JACK K. SUWA
Deputy Director

Advertised: Honolulu Advertiser
May 29, June 1 & 3, 1981

DOT 2634
INSTRUCTIONS TO BIDDERS

1. QUALIFICATIONS OF BIDDERS - Pursuant to Section 103-25, Hawaii Revised Statutes, each bidder shall file at the Programs and Contracts Office, Department of Transportation, 869 Punchbowl Street, Honolulu, Hawaii 96813, a written notice of his intention to bid at least six (6) calendar days prior to the date designated for the opening of bids. A form letter, in duplicate, of the intention to bid is furnished herewith. The bidder shall date, sign, and mail or deliver one copy of the form letter if he intends to bid. The other copy is for the bidder's files.

In accordance with said Section 103-25, the Programs and Contracts Officer may require any prospective bidder to fill out a questionnaire regarding his qualifications.

2. DEPOSIT REFUND - The full amount of the deposit will be refunded upon the return of the contract documents, including plans and specifications, in good condition within thirty (30) calendar days after the opening of bids. Deductions will be made for any damaged or missing portions. No refund will be made after the expiration of said period.

3. ADDENDA - Any addenda issued prior to the opening of bids shall be binding upon the bidder and shall be made a part of the contract.

4. BID REQUIREMENTS - The bidder's attention is directed to Section 102 - Bidding Requirements and Conditions.

5. AWARD OF CONTRACT - The bidder's attention is directed to Section 103 - Award and Execution of Contract.

6. EMPLOYMENT OF CONTRACTORS SUSPENDED BY THE DEPARTMENT OF TRANSPORTATION - The bidder shall not be permitted to subcontract to or submit a bid on behalf of any Contractor who has been suspended by the Department of Transportation; neither shall the bidder employ temporarily any persons employed by a suspended Contractor for the purpose of circumventing the intent of this paragraph. Violation of any of the foregoing provisions may result in the annulment of the contract pursuant to Section 108 - Prosecution and Progress of the Hawaii "Standard Specifications for Road and Bridge Construction, 1976".

7. CONTRACTOR'S LICENSE - If the contractor's license is required by law for the performance of the work which is called for in this bid, then the bidder must have the required license:

(a) before the submission of his proposal in the case of a non-federal-aid project; or

(b) before the contract is awarded by the State in the case of a federal-aid project.

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Instructions to Bidders (continued)

Questions as to whether a contractor's license is required for this project should be directed to said Programs and Contracts Office, Department of Transportation.

8. LISTING OF JOINT CONTRACTORS AND/OR SUBCONTRACTORS - The bidder's attention is directed to the Proposal where the names of all joint Contractors and/or subcontractors to be engaged in the work and the nature of work involved must be indicated by completing the forms provided. Failure to comply will result in the rejection of the bid. If no joint Contractor or subcontractor is to be engaged, the form must be completed by writing "none" on the form.

9. AFFIDAVIT OF NON-COLLUSION - In compliance with 23 United States Code (U.S.C.) Section 112(c), the successful bidder on a Federal-aid project shall execute the attached Affidavit of Non-Collusion.

The Department may reject a bid if the bidder fails to execute said affidavit.

10. PENALTY FOR FRAUD, BRIBERY AND OTHER VIOLATIONS - The bidder's attention is directed to 23 Code of Federal Regulations (C.F.R.), Chapter 1, Section 2.4, whereby a Contractor shall be unacceptable for employment on any future highway project requiring Federal Highway Administration approval or concurrence for a period of three (3) months to three (3) years where there is clear and convincing evidence of fraud, bribery, collusion, conspiracy or other serious offense involving violation of State or Federal criminal statutes in connection with said project.

11. FEDERAL-AID REQUIRED CONTRACT PROVISIONS - The bidder's attention is directed to the applicable Required Federal-Aid Contract Provisions, Form PR 1273, Federal Aid Proposal Notices, Direct Federal Proposal Notice, Direct Federal Certification, and Specific Equal Employment Opportunity Responsibilities, which forms are attached hereto and made a part of the special provisions.
12. MINORITY BUSINESS ENTERPRISE PARTICIPATION REQUIREMENTS

The bidder's attention is directed to the Notice of Requirements for Participation by Minority Business Enterprises (49 CFR Part 23) incorporated hereinafter as part of the contract document for compliance.

Prospective prime bidders (sole bidders or joint venture bidders) who have not previously submitted to the State Department of Transportation MBE Eligibility Determination forms (see Schedule A and Schedule B enclosed hereinafter) must complete and submit said schedule, as may be appropriate, not less than 6 days prior to the bid opening date. Prime bidders are advised to encourage their prospective subcontractors and vendors to submit their Schedule A for certification as eligible MBE as early as possible, preferably before bid opening. Additional schedule forms may be obtained from any office where plans and specifications for the project are made available, as indicated in the Notice to Bidders.

Such schedule forms are to be completed, properly executed, and returned to the Business Management Office, Department of Transportation, 869 Punchbowl Street, Honolulu, Hawaii 96813.

13. APPLICABILITY OF PROVISIONS - Paragraphs 9 through 12 hereinabove shall be applicable only if this is a Federal-aid project.
14. PREFERENCES FOR HAWAII PRODUCTS. The bidder's attention is directed to Sections 103-41 through 103-48, Hawaii Revised Statutes (HRS) and the Rules and Regulations adopted December 26, 1969, which provide preferences for Hawaii Products. The Hawaii Products List pursuant to Section 101-42, HRS, may be examined at the Comptroller's Office, State Office Building, 1151 Punchbowl Street, Honolulu, Hawaii 96813.

If a product listed in the Hawaii Products List is available and meet project specifications, such product will be designated in the contract documents as a qualified product which may be used in the performance of the project. Bidders shall declare their intentions on forms furnished by the State for projects when non-Hawaii products will be used instead of the designated qualified Hawaii products. For the purpose of determining the lowest bid price only, the provisions of Section 103-43, HRS, shall apply. Any contract awarded or executed in violation of Sections 103-41 through 103-45, HRS, shall be void and no payment shall be made on account of such contract.

If the bidder intends to claim preference for any product on the Hawaii Products List and such is not listed in the Proposal section, the bidder shall immediately notify the Programs and Contracts Office, Department of Transportation, so that corrective or other appropriate action may be taken.

This Section shall not apply to contracts when its application will disqualify the State from receiving Federal funds or aid.
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HONOLULU, HAWAII

SPECIAL PROVISIONS

These Special Provisions shall supplement and/or amend the applicable provisions of the Hawaii Standard Specifications for Road and Bridge Construction, 1976, hereinafter referred to as the "Standard Specifications".

5/20/77
SECTION 101 - DEFINITIONS AND TERMS

The following amendments shall be made to said Section:

101.01 Abbreviations shall be amended by adding the following:

"AISC - American Institute of Steel Construction

APA - American Plywood Association

CRSI - Concrete Reinforcing Steel Institute

NFPA - National Forest Products Association"

101.11 Contract Change Order. The first sentence shall be amended to read as follows:

"A written order issued by the Engineer to the Contractor, covering changes in the plans or quantities or both, establishing the basis of payment and time adjustments for the work affected by the changes."

101.28 Major and Minor Contract Items shall be amended to read as follows:

"Major contract items are listed as such in the special provisions; all other original contract items shall be considered as minor items; or in cases where the major contract items are not listed as such, a major item shall be defined as any item of which the total cost, determined by multiplying the proposal quantity and contract price, is equal to or greater than $25,000 or 5 per cent of the total original contract cost, whichever is less.

When the total cost of any item as determined by multiplying the proposal quantity and contract price is less than the lesser of $25,000 or 5 per cent of the total contract price, it shall be considered a minor item. Items appearing as minor items in the original proposal shall be construed as becoming major items when increased to the extent that the total cost of the item is equal to or greater than $25,000 or 5 per cent of the total original contract cost whichever is less."
The following amendment shall be made to said Section:

102.08 Proposal Guaranty shall be amended to read as follows:

"No proposal will be considered unless accompanied by (1) a deposit of legal tender; (2) a certificate of deposit, cashier's check or certified check on a bank that is insured by the Federal Deposit Insurance Corporation; or (3) by a surety bond conforming to the requirements of Section 103-31, H.R.S., in a sum not less than 5 per cent of the amount bid; provided that when the amount bid exceeds $50,000, the sum shall not be less than $2,500 plus 2 per cent of the amount bid in excess of $50,000. A certificate of deposit, cashier's check or certified check may be utilized only when the required deposit does not exceed $40,000.

A bid deposit for a bid requiring a deposit in excess of $40,000 shall only be in the form of legal tender or a surety bond conforming to the requirements of Section 103-31, H.R.S.

Certificates of deposit and certified checks shall be made payable on sight to the Department."
The following amendment shall be made to said Section:

103.03 Award of Contract. The second sentence of the second paragraph shall be amended to read as follows:

"Such data will include: List of Supervisory Personnel; Name of person(s) authorized to sign in behalf of the Contractor; Work Schedule; Tax Rates; Insurance Rates and Insurance Certificate; Progress Schedule; Subcontractor's Form; List of Suppliers; and, in addition, for Federal-aid contracts, a list of all subcontractors, material suppliers, and lessors, with the ethnic identity and sex of the owner(s) and policy-making official(s) with the dollar amount of each subcontract or agreement; an up-to-date written affirmative action plan including current employment data for each occupation by sex and ethnic identity for all Contractors and subcontractors with 50 or more employees and with a contract of $50,000 or more."
SECTION 103 - AWARD AND EXECUTION OF CONTRACT

The following amendment shall be made to said Section:

103.06 Requirement of Contract Bond shall be amended to read as follows:

"At the time of the execution of the contract, the successful bidder shall file a good and sufficient surety bond on the form furnished by the Department conditioned for the full and faithful performance of the contract in accordance with terms and intent hereof and also for the prompt payment to all others for all labor and materials furnished by them to him and used in the prosecution of the work provided for in the contract, in the manner, form and amount required by Sections 78-20, 103-34 and 103-35, H.R.S., which bond shall be in an amount equal to 50 per cent of the contract price, including amounts estimated to be required for extra work, or in the case of price-term, open-end, or requirements contract under which the total amount to be paid to the Contractor cannot be accurately estimated at the time the contract is to be awarded, the bond amount shall be as designated in the bid documents. Such bond shall also by the terms inure to the benefit of any and all persons entitled to file claims for labor performed or materials furnished in the work so as to give them a right of action as contemplated by Section 507-17, H.R.S."
SECTION 104 - SCOPE OF WORK

The following amendments shall be made to said Section:

104.02 Alterations of Plans or Type of Work shall be amended by deleting the fourth paragraph.

104-1 9/7/76
SECTION 105 - CONTROL OF WORK

The following amendment shall be made to said Section:

105.01 Authority of the Engineer. The third paragraph shall be amended to read as follows:

"He will have the authority to suspend the work wholly or in part and to suspend progress payment wholly or in part due to the failure of the Contractor to correct conditions unsafe for the workmen or the general public; for failure to carry out provisions of the contract; for failure to carry out orders; for such periods as he may deem necessary due to unsuitable weather; for conditions considered unsuitable for the prosecution of the work or for any other condition or reason deemed to be in the public interest."

105.01-1 4/6/76
The following amendment shall be made to said Section:

105.07 Construction Stakes, Lines and Grades shall be amended to read as follows:

"The Contractor shall be responsible for locating and marking the existing well. In case the existing mark has been removed, the Contractor shall establish control points, place adequate ties and perform other reference staking necessary for locating and marking the well.

Locating and marking the existing well shall include furnishing of all equipment, labor, materials and other incidental items necessary to the completion of this work. This work shall be considered incidental to the various contract items and no separate or additional payment will be made therefor."
105.13 Load Restrictions shall be amended to read as follows:

"The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the project. A special permit will not relieve the Contractor of liability for damage which may result from the moving of material or equipment.

The operation of equipment of such weight or so loaded as to cause damage to structures or the roadway or to any other type of construction will not be permitted. Hauling of materials over the base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base or structure before the expiration of the curing period. In no case shall legal load limits be exceeded unless permitted in writing. The Contractor shall be responsible for all damage done by his hauling equipment."
105.17 (A) Partial Acceptance shall be amended by adding the following:

"Any unit which becomes damaged by the Contractor through his use thereof shall be repaired, replaced, or restored at his expense to the satisfaction of the Engineer."

105.17 (B) Final Acceptance shall be amended by adding the following:

"Pending written notification of acceptance, the Contractor may be given relief of further responsibility for maintenance."
The following amendments shall be made to said Section:

106.01 Source of Supply and Quality Requirements. The second sentence shall be amended to read as follows:

"In order to expedite the inspection and testing of materials, the Contractor shall furnish a list of his proposed sources of materials in accordance with the format prescribed by the Engineer."

106.03 Samples, Tests, Cited Specifications shall be amended as follows:

The first paragraph shall be amended by adding the following:

"When requested by the Engineer, the Contractor shall furnish Certified Test Results stating that the materials used in the work conform to the requirements of these Specifications."

The following shall be added:

"The following is a listing of the AASHTO and ASTM Standards in use by the Department:


106.09 Special Test Methods shall be amended by adding the following:

"(K) Testing of Bridge-Bearing Pads. Tests for determining coefficient of friction, fatigue life, peel strength and physical properties of bridge-bearing pads shall be performed in accordance with Hawaii Test Method HWY-TC-13.

(L) Verification and Calibration of Hydraulic Jacks and Pressure Gages. The test procedures for verifying and calibrating hydraulic jacks and pressure gages used in prestressing operations shall be in accordance with Hawaii Test Method HWY-TQ-14.

(M) Helical Lock Seam Corrugated Pipe. The test procedure for ascertaining the quality of the seam of a helical corrugated pipe shall be in accordance with Hawaii Test Method LT-TQ-15.

(N) Nuclear Gage Density Test. The nuclear gage density test to determine the in-place density of bituminous concrete shall be performed in accordance with Hawaii Test Method HWY-TQ-16."
SECTION 107 LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

The following amendments shall be made to said Section:

107.02 (B) Rate of Wages shall be amended as follows:

The third paragraph shall be amended by adding the following:

"For watchmen and guards engaged on Federal-aid construction contracts, the 'Basic Rate' upon which overtime must be computed shall be the greater of (1) the minimum rate under the Fair Labor Standards Act of 1938, as amended (now $3.35) or (2) the straight time hourly rate actually being received by the employee. While engaged on Federal-aid projects, watchmen and guards shall be paid on a weekly basis."

The following shall be added:

"The following applicable wage rate schedule or schedules shall be appended to the said Subsection:"

107.02 (D) Withholding of Wages shall be amended by adding the following:

"In addition, the Department may withhold an additional equal amount as liquidated damages as provided for in HRS 104-5(d)."
## WAGE RATE SCHEDULE

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<th>Fringe Benefit Hourly Rate</th>
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<td></td>
<td>Total</td>
<td>Health &amp; Welfare</td>
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<td>Paid Vacation</td>
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<td><strong>ASBESTOS WORKER:</strong></td>
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<td>Asbestos Worker</td>
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<td>7.22</td>
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<td>Asbestos Worker Improver: 3rd year</td>
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<td>Asbestos Worker Improver: 4th year</td>
<td>10.83</td>
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<td>Asphalt Spreader Operator</td>
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<tr>
<td>Roller Operator (5 tons and under)</td>
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<td>Roller Operator (over 5 tons)</td>
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<td>Loader (over 2-1/2 yds. to &amp; including 5 cu. yds)</td>
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*Plus $150.00 per dive (when diving).

See page h for footnotes.

5/15/81
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<td>12.69</td>
<td>5.15</td>
<td>1.70</td>
<td>2.45</td>
<td>.95</td>
<td>.05</td>
<td></td>
</tr>
<tr>
<td>Semi-Trailer, Rock Cans, or Semi-Dump</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slip-in or Pup</td>
<td>12.58</td>
<td>5.15</td>
<td>1.70</td>
<td>2.45</td>
<td>.95</td>
<td>.05</td>
<td></td>
</tr>
<tr>
<td>Tandem Dump Truck, over 8 yds.</td>
<td>11.61</td>
<td>5.15</td>
<td>1.70</td>
<td>2.45</td>
<td>.95</td>
<td>.05</td>
<td></td>
</tr>
<tr>
<td>(water level); Water Truck (over</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2,000 gallons)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* The basic hourly rates for the Roofer (coal tar pitch) classification are double that of the Roofer (shingle, tile, built-up roofing) classifications. See page h for footnotes.
### WATER FRONT CONSTRUCTION (DREDGING)

#### Boat Operators:
- **Boat Deckhand**: $11.03 5.15 $1.70 $2.45 .95 .05
- **Boat Operator**: 13.20 5.15 1.70 2.45 .95 .05
- **Master Boat Operator**: 13.50 5.15 1.70 2.45 .95 .05

#### Clamshell Dredge:
- **Assistant Engineer; Mechanic; Welder**: 13.24 5.15 1.70 2.45 .95 .05
- **Barge Worker**: 11.03 5.15 1.70 2.45 .95 .05
- **Barge Mate (seagoing); Deckmate**: 12.69 5.15 1.70 2.45 .95 .05
- **Clamshell or Dipper Operator**: 13.75 5.15 1.70 2.45 .95 .05
- **Deckhand; Oiler**: 11.03 5.15 1.70 2.45 .95 .05
- **Stoker**: 11.03 5.15 1.70 2.45 .95 .05

#### Derrick:
- **Deckhand; Oiler**: 11.03 5.15 1.70 2.45 .95 .05
- **Deckmate**: 12.69 5.15 1.70 2.45 .95 .05
- **Operator: Derrick, Piledriver, Crane**: 13.75 5.15 1.70 2.45 .95 .05
- **Stoker**: 11.03 5.15 1.70 2.45 .95 .05

#### Hydraulic Suction Dredge:
- **Assistant Engineer (steam or electric); Mechanic; Welder**: 13.24 5.15 1.70 2.45 .95 .05
- **Deckhand (can operate anchor scow under direction of deckmate); Oiler**: 11.03 5.15 1.70 2.45 .95 .05
- **Deckmate**: 12.69 5.15 1.70 2.45 .95 .05
- **Levee Operator**: 11.03 5.15 1.70 2.45 .95 .05
- **Levee Operator**: 13.50 5.15 1.70 2.45 .95 .05
- **Stoker**: 11.03 5.15 1.70 2.45 .95 .05
- **Winch Operator (stern winch on dredge)**: 12.58 5.15 1.70 2.45 .95 .05

**WELDER:** Same wage scale as craft to which welding is incidental.

**WELL DRILLER:**
- **Well Driller**: 9.14 3.05 1.00 1.33 .62 .10
- **Well Driller Helper**: 7.83 2.04 .73 .81 .41 .09

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See page h for footnotes.

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5/15/81
EQUIPMENT OPERATOR

Fringe Benefit Hourly Rate for:
Health & Welfare $1.705
Pension Fund 2.45
Paid Vacation .952
Apprenticeship Training .05
Total $5.15

<table>
<thead>
<tr>
<th>Classification</th>
<th>Basic Hourly Rate</th>
<th>Classification</th>
<th>Basic Hourly Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>$10.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parts Clerk; Repairer Helper.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 2</td>
<td>$10.86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compressor, electrically, diesel or gas powered, etc, Grout Pump, Mayco or similar; Hydraulic Monitor; Material Loader and/or Conveyor Operator (handling building material); Mixer Box Operator (Concrete Plant); Pump Operator; Spreader Box Operator (with screeds); Tar Pot Tender (power agitated).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 3</td>
<td>$11.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assistant to Engineer (Oiler, Stoker, Switch Operator, Signal, Brake Operator, Deckhand, Tar Pot Tender); Box Operator (Runker); Locomotive (up to and including 30 tons); Surveyor Assistant, (Rod or Chain); Roller (5 tons and under); Screed Worker; Self-propelled, automatically applied concrete Curing Machine, Tugger Hoist, single drum.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 4</td>
<td>$11.30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boom Truck or dual purpose &quot;A&quot; Frame Truck; Dinky Operator; Fork Lift or Lumber Stacker; Material Hoist (1 drum); Hoist Carrier and similar (jobeite); Straddle Truck.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 5</td>
<td>$11.61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agri-Cat (mini-cat); Asphalt Plant Stoker; Concrete Mixer (up to 2 yds); Concrete Pumps or Pumpcrete Guns; Generators, gasoline or diesel driven (100 K.W.); Lubrication &amp; Service Engineer (Mobile &amp; Grease rack); Towersmobile; Welding Machines (gasoline or diesel).</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Group 6
Combination Loader and Backhoe including Hopto (up to & including 1/2 yd); Concrete Batch Plants (wet or dry); Concrete Pump, Truck or Equipment Mounted; Concrete Saws and/or Grinder (self-propelled) Drilling Machinery (not to apply to waterliners, wagon drills or jack hammers); Highline Cableway Signaler; Loader (up to & including 2-1/2 cu. yd); Lull High Lift; Maginnis Internal Full Slab Vibrator; Mechanical Finishers (concrete) (Large Clary, Johnson Bidwell Bridge Deck or similar types); Mobile Truck Crane Driver; Pavement Breaker; Portable Crushers; Power Jumbo Operator (setting slip form, etc, in tunnels); Rollers (over 5 tons); Self-propelled Compactor (single engine); Slip Form Pumps (power driven by hydraulic, electric, air, gas, etc, lifting device for concrete forms); Small Rubber Tire Tractors; Trencher (up to & incl. 6 ft).

Group 7
Crusher Plant Engineer; Dual Drum Mixer; Grademeter (mechanical or otherwise); Hoist (2 drums); Instrument Operator; Loader (over 2-1/2 cu. yds up to & including 5 cu. yds); Mechanical Finishers or Spreader Machine Asphalt (Barber Greene & similar); Mine or Shaft Hoist; Mixmobiles (over 5 tons); Pavement Breaker with Compressor Combination (operators 1 or 2); Paver Breaker, Truck Mounted, with Compressor Combination, Pipe Bending Machine (pipelines only); Pipe Cleaning Machine (tractor propelled and supported); Pipe Wrapping Machine (tractor propelled and supported); Roller Operator (asphalt); Self-propelled Elevating Grade Plane; Slusher Operator; Small Truck (with boom D-6, or similar); Trencher (over 6 feet); Water Tanker (pulled by Euclid, T-Pulls, DW-10, -20, -21, or similar).

See page h for footnotes.

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5/15/81
### EQUIPMENT OPERATOR

**Fringe Benefit Hourly Rate**
- Health & Welfare: $1.705
- Pension Fund: 2.45
t- Paid Vacation: .952
- Apprenticeship Training: .05
- Total: $5.15

<table>
<thead>
<tr>
<th>Classification</th>
<th>Basic Hrly. Rate</th>
<th>Classification</th>
<th>Basic Hrly. Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group 8</strong></td>
<td></td>
<td><strong>Group 10 (continued)</strong></td>
<td></td>
</tr>
<tr>
<td>Asphalt Plant Operator; Boring Machine Operator; Cast-in-place Pipe Laying Machine; Combination Loader &amp; Hydraulic Backhoe (over 1/2 yd up to 6 incl. 3/4 yd); Concrete Batch Plant (multiple units); Conveyor Operator (tunnel); Engineer, Locomotive (over 30 tons up to 6 incl. 10 tons); Pintating Machine Operator; Hydraulic Backhoe (over 1/2 yd up to 6 incl. 3/4 yd); Kolsman Loader; Mechanical Trench Shield; Mucking Machine; No-Joint Pipe Laying Machine; Portable Crushing &amp; Screening Plants; Sauman type Dragline (under 7 yd); Self-propelled Boom Type Lifting Device (under 15 tons m.r.c.); Stationary Pipe Wrapping, Cleaning &amp; Bending Machine; Surface Heater &amp; Planer Operator; Tri-Batch Paver; Tunnel Bagger.</td>
<td>$12.69</td>
<td>Tractor, Compresseur, Drill combination; Tractors (D-9 or equivalent, all attachments); Tractor (Tandem Scrapper).</td>
<td></td>
</tr>
<tr>
<td><strong>Group 9</strong></td>
<td></td>
<td><strong>Group 10A</strong></td>
<td></td>
</tr>
<tr>
<td>Boom Type Backfilling Machine; Combi- nation Mixer &amp; Compessor (grinite); Do-Mor Loader &amp; Adams Liegreder; Lull High-Lift (40 ft or over); Rubber Tire Earthmoving Equipment (up to 12 cu. yds); Wheel Trencher (over 6 ft).</td>
<td>$12.80</td>
<td>Cranes (not over 25 tons); HD41 or equivalent, all attachments); Mobile Truck Crane Operator (not over 25 tons); Dozer Blade Operator; Power Shovels, Claussells, Draglines, Backhoes, Gradealls (up to 6 incl. 1 cu. yd); Self-propelled Boom Type Lifting Device (Center Mount) (15 tons up to 6 incl. 25 tons).</td>
<td></td>
</tr>
<tr>
<td><strong>Group 9A</strong></td>
<td></td>
<td><strong>Group 11</strong></td>
<td></td>
</tr>
<tr>
<td>Dozers; Push Cats; Scrapers, Self- Propelled Compactor with Dozer; Sheep Foot; Tractors; Tractors (with boom, larger than D-6 and similar.</td>
<td>$13.03</td>
<td>Automatic Slip Form Paver (concrete or asphalt); Band Wagon (in conjunction with Wheel Excavator); Cranes (over 25 tons); DW-10, 20 etc (Tandem); Earthmoving Machines (multiple propulsion power units &amp; 2 or more Scrapers) (up to &amp; incl. 35 cu. yds &quot;struck&quot; m.r.c.); Highline Cableway; Lift Slab Machine; Loader (over 12 yd); Mobile Truck Crane Operator (over 25 tons); Power Blade Operator (16 or over); Power Shovels, Claussells, Draglines, Backhoes, Gradealls (over 1 yd &amp; up to 7 yd); Pre-stress Wire Wrapping Machine; Self-Propelled Boom Type Lifting Device (Center Mount) (over 25 tons m.r.c.); Self-Propelled Compactor (with multiple-propulsion power units); Single Engine Rubber Tire Earthmoving Machine (with Tandem Scrapper); Tandem Cats; Tower Cranes, Mobile; Trencher (pulling attached shield); Universal, Liebher, Linden &amp; similar types of tower cranes.</td>
<td></td>
</tr>
<tr>
<td><strong>Group 10</strong></td>
<td></td>
<td><strong>Group 12</strong></td>
<td></td>
</tr>
<tr>
<td>Chicago Booms; Chief of Party; Heavy Duty Repairer or Welder (3 drums); Kneeling Skooter; Loader (over 5 yd up to 6 incl. 12 yd.); Locomotive (over 100 tons) (single or multiple units); Rubber Tire Earthmoving Equipment (up to 6 incl. 35 cu. yds, Euclids, T-Pulls, DW-10, -20, -21 &amp; similar); Sauman type Dragline (5 yd or over); Soil Stabilizer (F &amp; H equal); Sub-Grader (Surries or other automatic type); Track-Laying type Earthmoving Machine (single engine with Tandem Scrapper);</td>
<td>$13.09</td>
<td>Derrick; Drill Rigs; Multi-Propulsion Earthmoving Machines (2 or more Scrapers) (over 35 cu yds &quot;struck&quot; m.r.c.); Power Shovels &amp; Draglines (7 cu. yds m.r.c. &amp; over); Rubber Tire Earthmoving Equipment (over 35 cu. yds, Euclids, T-Pulls, DW-10, 20, 21 &amp; similar); Wheel Excavator (up to 6 incl. 750 cu. yds per hour); Wheel Excavator (over 750 cu. yds per hour).</td>
<td></td>
</tr>
</tbody>
</table>

See page 9 for footnotes.

5/15/81
### LABORER

#### Fringe Benefit Hourly Rate for:

<table>
<thead>
<tr>
<th>Classification</th>
<th>Health &amp; Welfare</th>
<th>Pension Fund</th>
<th>Paid Vacation</th>
<th>Apprenticeship Training</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Hrly. Rate</td>
<td>$1.12</td>
<td>1.60/</td>
<td>.65/</td>
<td>.16</td>
<td>$3.53</td>
</tr>
</tbody>
</table>

#### Laborer I

<table>
<thead>
<tr>
<th>Classification</th>
<th>Basic Hrly. Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laborer I</td>
<td>$10.16</td>
</tr>
</tbody>
</table>

- Asphalt ironer, raker & hand roller;
- Barko & similar type tamper; Buggymobile;
- Chainsaw, faller, logloader & bucker;
- Concrete & magnesite mixer under 1/2 yd;
- Concrete grinder; Concrete pan work;
- Concrete saw (walking or hand type);
- Cribber; Oit granite curb setter; Form raiser; Header board; Mortar mixer (block-brick-masonry); Jackhammer operator;
- Jackson & similar type compactor;
- Concrete laborer (wet or dry) incl. bucket tender for concrete; Lagging, sheeting, whaling bracing, trench-jacking, hand-guided lagging hammer; magnesite & mastic worker (wet or dry); Mechanical driller not covered elsewhere; Pavement breaker; Pipelayer, caulkler, bander;
- Pipewrapper, kettle tender, pot carrier & applicator of asphalt, Lay-Kold, cresote & similar type materials; Post hole digger (hand held—gas, air & electric);
- Riprap, stonemover & rocksetter, incl. placing of sacked concrete (wet or dry);
- Rotary scarifier; Rottotiller; Sandblaster;
- Tank cleaner; Tree climber; Vibra-screed (bull-float in connection with laborer’s work); Vibrator; Burning, welding, signaling & rigging in connection with laborer’s work; Concrete pump machine; Joy Drill

#### Laborer I (continued)

<table>
<thead>
<tr>
<th>Classification</th>
<th>Basic Hrly. Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laborer I</td>
<td>$10.16</td>
</tr>
</tbody>
</table>

- Model 5AM-2A, Gardner Denver DM-143 & similar type drills (in accordance with the memorandum of understanding between the Laborers & Operating Engineers dated at Miami Florida, February 3, 1954), Track Driller, Diamond Core & Wagon Driller; Davis Trencher T-66 or similar type.

#### Laborer II

<table>
<thead>
<tr>
<th>Classification</th>
<th>Basic Hrly. Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laborer II</td>
<td>$9.76</td>
</tr>
</tbody>
</table>

- Asphalt shoveler; Cement dumper; Choke-setter & rigger (clearing work); Concrete chipping; Driller’s helper, chuck tender outside nipper; Guinea chaser; High pressure nozzle operator-hydraulic monitor (over 100$ pressure) excluding levee work;
- Loading & unloading, carrying & handling of all rods & materials for use in reinforcing concrete construction; Mucker (underground); Sloper; All pneumatic, gas & electric tools not listed in Group I.

#### Laborer III

<table>
<thead>
<tr>
<th>Classification</th>
<th>Basic Hrly. Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laborer III</td>
<td>$9.71</td>
</tr>
</tbody>
</table>

- All cleanup work of debris, grounds & buildings; Bridge laborer; Construction laborer; Spotter, Traffic Controller, Asphalt Plant laborer; General laborer;
- Limber, brush loader & piler; Maintenance repair (track & roadbeds); Tool room attendant (job site).

#### Footnotes

1/ Fringe benefit rate is only applicable to non-overtime hours. However, this does not preclude a contractor from complying with provisions of a collective bargaining agreement which requires payment on all hours worked including overtime.

2/ Includes Holiday Pay Plan.

3/ Includes Pre-Paid Legal Plans.

4/ Includes Annuity Plan or Supplemental Pension Benefit Plan.


6/ Includes Employee Benefit Plan.

7/ Includes Supplemental Unemployment Benefit Plan.

8/ Operators, Assistants to Engineer, and Indentured Apprentices on cranes with booms of eighty feet or more, including jib, shall receive additional premium according to the following schedule: (not applicable to climbing tower cranes)

<table>
<thead>
<tr>
<th>Per Hour</th>
<th>Booms of 80 feet up to, but not including 130 feet</th>
<th>.25</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Booms of 130 feet up to, but not including 180 feet</td>
<td>.40</td>
</tr>
<tr>
<td></td>
<td>Booms of 180 feet up to and including 250 feet</td>
<td>.80</td>
</tr>
<tr>
<td></td>
<td>Booms over 250 feet</td>
<td>1.25</td>
</tr>
</tbody>
</table>

In the application of the above, the length of the boom shall be measured from the center of the heel pin to the center of the boom or jib point sheave.

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5/15/81
**APPRENTICE SCHEDULE**

The apprentice prevailing minimum wage rate is the full fringe benefits furnished plus the applicable percentage of the journeyman's basic hourly rate. Apprentices must be registered with the State Department of Labor and Industrial Relations.

<table>
<thead>
<tr>
<th>Craft</th>
<th>Interval</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>6th</th>
<th>7th</th>
<th>8th</th>
<th>9th</th>
<th>10th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asbestos Worker</td>
<td>2000 hrs.</td>
<td>50%</td>
<td>60%</td>
<td>70%</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
<td>95%</td>
<td>100%</td>
<td>105%</td>
<td>110%</td>
</tr>
<tr>
<td>Boilermaker</td>
<td>1000 hrs.</td>
<td>60%</td>
<td>65%</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
<td>95%</td>
<td>100%</td>
<td>105%</td>
</tr>
<tr>
<td>Bricklayer</td>
<td>1000 hrs.</td>
<td>60%</td>
<td>65%</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
<td>95%</td>
<td>100%</td>
<td>105%</td>
</tr>
<tr>
<td>Carpenter</td>
<td>1000 hrs.</td>
<td>60%</td>
<td>65%</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
<td>95%</td>
<td>100%</td>
<td>105%</td>
</tr>
<tr>
<td>Cement Finisher</td>
<td>1000 hrs.</td>
<td>60%</td>
<td>65%</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
<td>95%</td>
<td>100%</td>
<td>105%</td>
</tr>
<tr>
<td>Cement Finisher</td>
<td>1000 hrs.</td>
<td>60%</td>
<td>65%</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
<td>95%</td>
<td>100%</td>
<td>105%</td>
</tr>
<tr>
<td>Construction Equipment Operator</td>
<td>1000 hrs.</td>
<td>60%</td>
<td>67%</td>
<td>74%</td>
<td>82%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrician (Wire Installer)</td>
<td>1000 hrs.</td>
<td>55%</td>
<td>60%</td>
<td>65%</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
<td>95%</td>
<td>100%</td>
</tr>
<tr>
<td>Electrician (Line Installer)</td>
<td>1000 hrs.</td>
<td>55%</td>
<td>60%</td>
<td>65%</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
<td>95%</td>
<td>100%</td>
</tr>
<tr>
<td>Floor Layer (carpet, linoleum and soft tile)</td>
<td>1000 hrs.</td>
<td>55%</td>
<td>60%</td>
<td>65%</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
<td>95%</td>
<td>100%</td>
</tr>
<tr>
<td>Glazier</td>
<td>1000 hrs.</td>
<td>50%</td>
<td>55%</td>
<td>60%</td>
<td>65%</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
<td>95%</td>
</tr>
<tr>
<td>Grading &amp; Paving Equipment Operator</td>
<td>1000 hrs.</td>
<td>55%</td>
<td>60%</td>
<td>65%</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
<td>95%</td>
<td>100%</td>
</tr>
<tr>
<td>Heavy Duty Repairer &amp; Welder</td>
<td>1000 hrs.</td>
<td>50%</td>
<td>55%</td>
<td>60%</td>
<td>65%</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
<td>95%</td>
</tr>
<tr>
<td>Ironworker (Structural)</td>
<td>1000 hrs.</td>
<td>50%</td>
<td>55%</td>
<td>60%</td>
<td>65%</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
<td>95%</td>
</tr>
<tr>
<td>Lather</td>
<td>(1000 hrs.)</td>
<td>55%</td>
<td>60%</td>
<td>65%</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
<td>95%</td>
<td>100%</td>
</tr>
<tr>
<td>Painter</td>
<td>1000 hrs.</td>
<td>45%</td>
<td>55%</td>
<td>65%</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
<td>95%</td>
<td>100%</td>
<td>105%</td>
</tr>
<tr>
<td>Piledriver Operator</td>
<td>1000 hrs.</td>
<td>60%</td>
<td>67%</td>
<td>74%</td>
<td>82%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumber</td>
<td>1000 hrs.</td>
<td>55%</td>
<td>60%</td>
<td>65%</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
<td>95%</td>
<td>100%</td>
</tr>
<tr>
<td>Plumber</td>
<td>1000 hrs.</td>
<td>35%</td>
<td>40%</td>
<td>45%</td>
<td>50%</td>
<td>55%</td>
<td>60%</td>
<td>65%</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
</tr>
<tr>
<td>Refrigeration (Pipefitter)</td>
<td>1000 hrs.</td>
<td>35%</td>
<td>40%</td>
<td>45%</td>
<td>50%</td>
<td>55%</td>
<td>60%</td>
<td>65%</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
</tr>
<tr>
<td>Roofer1</td>
<td>700 hrs.</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
<td>95%</td>
<td>100%</td>
<td>105%</td>
<td>110%</td>
<td>115%</td>
</tr>
<tr>
<td>Roofer2</td>
<td>700 hrs.</td>
<td>50%</td>
<td>55%</td>
<td>60%</td>
<td>65%</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
<td>95%</td>
</tr>
<tr>
<td>Sheetmetal Worker</td>
<td>1000 hrs.</td>
<td>45%</td>
<td>50%</td>
<td>55%</td>
<td>60%</td>
<td>65%</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
</tr>
<tr>
<td>Steel Erection Equipment Operator</td>
<td>1000 hrs.</td>
<td>60%</td>
<td>67%</td>
<td>74%</td>
<td>82%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stonemason</td>
<td>1000 hrs.</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
<td>95%</td>
<td>100%</td>
<td>105%</td>
<td>110%</td>
<td>115%</td>
</tr>
<tr>
<td>Tile Setter (ceramic)</td>
<td>1000 hrs.</td>
<td>60%</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
<td>95%</td>
<td>100%</td>
<td>105%</td>
<td>110%</td>
</tr>
<tr>
<td>Universal Equipment Operator</td>
<td>1000 hrs.</td>
<td>60%</td>
<td>67%</td>
<td>74%</td>
<td>82%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1/ A minimum of 750 hours of on-the-job training is required to qualify for each six-month pay increment.

2/ This apprentice schedule shall apply to apprentices indentured or reinstated prior to January 1, 1978.

3/ This apprentice schedule shall apply to apprentices indentured or reinstated on or after January 1, 1978.

4/ This schedule affects apprentices indentured or reinstated on or after February 25, 1978.

5/ Apprentices indentured or reinstated prior to December 10, 1977 shall follow the percentage wage schedule in effect at the time of their registration or reinstatement.

6/ This schedule affects apprentices indentured or reinstated on or after August 15, 1976.

7/ Apprentices indentured prior to August 15, 1976 shall follow the percentage schedule in effect at the time of their registration or reinstatement.

8/ Apprentices indentured or reinstated on or after May 1, 1976 shall follow the percentage wage schedule in effect at the time of their registration or reinstatement.

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5/15/81
The trainee prevailing minimum wage rate is the full fringe benefits furnished plus the applicable percentage of the journeyman's basic hourly rate. Trainees must be registered with the State Department of Labor and Industrial Relations.

<table>
<thead>
<tr>
<th>Craft</th>
<th>Interval</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>6th</th>
<th>7th</th>
<th>8th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drywall Installer</td>
<td>1000 hrs.</td>
<td>60%</td>
<td>70%</td>
<td>80%</td>
<td>90%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marble Setter (Imitation or Synthetic)</td>
<td>500 hrs.</td>
<td>60%</td>
<td>65%</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
<td>95%</td>
</tr>
<tr>
<td>Pointer-Caulker-Cleaner/</td>
<td>1000 hrs.</td>
<td>55%</td>
<td>65%</td>
<td>75%</td>
<td>80%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taper</td>
<td>500 hrs.</td>
<td>50%</td>
<td>60%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Truck Operator</td>
<td>1000 hrs.</td>
<td>70%</td>
<td>80%</td>
<td>90%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1/ Trainees indentured or reinstated prior to February 27, 1978 shall follow the percentage wage schedule in effect at the time of registration or reinstatement.

- j -

5/15/81
The following amendments shall be made to said Section:

107.14 Barricades and Warning Signs. The third paragraph shall be amended by adding the following:

"Reflectorization for all barricades, delineators, warning signs, and other protective devices shall conform to the requirements of Subsection 712.20 - Signs."

107.20 Contractor's Responsibility for Work. The second sentence of the first paragraph shall be amended to read as follows:

"The Contractor shall rebuild, repair, restore, and make good all damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God such as earthquake, seismic waves, tornado, hurricane or other cataclysmic phenomena of nature, or acts of the public enemy or of governmental authorities."
SECTION 108 - PROSECUTION AND PROGRESS

The following amendments shall be made to said Section:

108.02 Notice to Proceed. The first paragraph shall be amended by adding the following:

"The date specified in the Notice to Proceed will be no later than 45 days from the date of award."

108.03 Prosecution and Progress shall be amended as follows:

The following shall be added at the beginning of the first paragraph:

"For contracts of less than One Million Dollars or calling for contract time of less than one hundred working days, the following shall apply:"

The following paragraph shall be added after the first paragraph:

"For contracts which have both a contract amount of One Million Dollars or more and call for contract time of one hundred working days or more, the following shall apply: The Contractor shall submit within 60 days from the date of award of the contract a progress schedule for the Engineer's approval. The progress schedule shall be prepared on the basis of a critical path method of scheduling acceptable to the Engineer. It shall show the order in which the Contractor proposes to carry out the work within the contract time and the beginning times and completion times for the salient features of the work provided in the contract. The progress schedule shall also include a graphical representation of the relationship of working days to total earnings."

The following paragraph shall be added before the last paragraph:

"Approval of any schedule submitted by the Contractor shall not be construed to assign responsibility of performance or contingencies to the State or relieve the Contractor of his responsibility to adjust his forces, equipment and work schedules as may be necessary to insure completion of the work within the prescribed contract time."
108.05 Character of Workmen, Methods and Equipment. The fifth paragraph shall be amended to read as follows:

"When the methods and equipment to be used by the Contractor in accomplishing the construction are not prescribed in the contract, the Contractor may use any methods or equipment that will accomplish the contract work in conformity with the requirements of the contract."

108.06 Temporary Suspension of Work. The first sentence of the first paragraph shall be amended to read as follows:

"The Engineer shall have the authority to suspend the work wholly or in part for such period as he may deem necessary for any cause, including but not being limited to: unsuitable weather or such other conditions which may prevent proper prosecution of the work or; failure on the part of the Contractor to prosecute or perform the work in strict compliance with the contract or; non-compliance with non-discrimination, EEO Affirmative Action, and wage and hour contract provisions."

108.07 Determination and Extension of Contract Time shall be amended as follows:

The first sentence of the fifth paragraph shall be deleted and the following added in lieu thereof:

"If the Contractor finds it impossible for reasons beyond his control to complete the work within the contract time as specified or as extended in accordance with the provisions of this subsection or elsewhere in these specifications and, therefore, deems it necessary to request for an extension of time, he shall, within 10 days from the beginning of each delay, notify the Engineer in writing of the nature and extent of the delay. As soon as practicable after the ending of such delay and prior to the expiration of the contract time as extended, the Contractor shall make a written request to the Engineer for an extension of time setting forth therein the reasons which he believes will justify the granting of his request."

The last paragraph shall be amended to read as follows:

"When final acceptance has been duly made or when relief of maintenance has been given by the Engineer as prescribed in Subsection 105.17 - Acceptance, the daily time charge will cease."
108.10 Emergency and Legally Justifiable Cause for Termination of Contract. The first two paragraphs shall be deleted and the following added in lieu thereof:

"The Engineer may terminate any construction contract at any stage of completion, without fault of the Contractor, when a national emergency or other reasons beyond the control of the Engineer, makes the termination necessary to promote the best interest of the State. Written notice of termination will be given the Contractor. Upon termination, the Contractor will be paid for work actually performed, at contract unit prices (or at agreed prices when no unit price is specified in the contract) for any particular item of work. The Contractor will be reimbursed for any expenditures the Engineer determines were required in preparing for and moving to and from the project site and which he determines are not otherwise compensated for, it being the intent that an equitable settlement be made with the Contractor. No claim for interest cost and loss of anticipated profits for work not done will be considered."
SECTION 109 - MEASUREMENT AND PAYMENT

The following amendments shall be made to said Section:

109.01 Measurement of Quantities shall be amended as follows:

The second sentence of the 10th paragraph shall be amended to read as follows:

"All materials which are measured or proportioned by weight shall be weighed on scales certified by the Weights and Measures Division of the Department of Agriculture or from any agency or firm certified by the Department of Agriculture to perform such services."

The formula in the 11th paragraph shall be amended to read as follows:

\[ \frac{2.8}{\text{Actual Specific Gravity}} \times \frac{\text{Weighed Tonnage}}{\text{Tonnage}} \text{ (Corrected for Moisture)} = \text{Payment Tonnage} \]
SECTION 109 - MEASUREMENT AND PAYMENT

The following amendment shall be made to said Section:

109.04 (D) Equipment shall be amended to read as follows:

"(1) All machinery and equipment shall be in good working condition and suitable for the purpose for which the machinery and equipment are to be used.

(2) Individual pieces of equipment or tools having a replacement value of $25.00 or less, whether or not consumed by use, shall be considered to be small tools and no payment will be made therefor.

(3) Rental Rate

(a) For any machinery or special equipment (other than small tools as herein defined in paragraph (2)), the use of which has been authorized by the Engineer, the Contractor will be paid at the per-hour rental rates based on the per-day, week or monthly rate (determined pursuant to paragraph (4) hereof) established for said machinery or equipment in the then-current edition of the Rental Rate Blue Book for Construction Equipment including the estimated operating cost per hour, and regional correction provided therein.

(b) If no rate is listed for a particular kind, type or size of machinery or equipment, then the per-day, weekly, monthly, hourly rates shall be as agreed upon in writing by the Contractor and the Engineer prior to the use of said machinery or equipment.

(c) Rental rates for Contractor-owned trucks not listed in the Rental Rate Blue Book shall be agreed upon in writing by the Contractor and Engineer prior to the use of said trucks.

(d) The rental rate for trucks not owned by the Contractor shall be those as established under the Hawaii State Public Utilities Commission, which will be paid for as a material item pursuant to Subsection 109.04(C).

(e) Rental rates which are higher than those specified in the aforesaid Rental Rate Blue Book publication may be allowed where such higher
rates can be justified by job conditions, such as work in water and work on lava, etc. Requests for such higher rates shall be submitted in writing to the Engineer for approval prior to the use of the machinery or equipment in question.

(f) All rental rates for machinery and equipment shall include the cost of fuel, oil, lubricants, supplies, small tools, necessary attachments, repairs, maintenance, tire wear, depreciation, storage and all other incidentals.

(4) Determination of Hourly Rental Rate

(a) For the purpose of determining the rental period, the continuous and consecutive number of working days shall be the normal 8-hour shift work day, Monday through Friday, excluding holidays. Any work day to be paid less than 8 hours shall not be considered as continuous, except for equipment removed from rental for fuel and lubrication.

(b) Machinery or equipment which is credited under the above paragraph 4(a) with more than 32 hours to be paid (computed over a continuous and consecutive number of working days), will be paid for on the basis of a per-week hourly rental rate.

(c) Machinery or equipment which is credited under the above paragraph 4(a) with more than 120 hours to be paid (computed over a continuous and consecutive number of working days), will be paid for on the basis of a per-month hourly rental rate.

(d) Overtime will be paid for each hour in excess of the normal 8-hour shift work day at the corresponding hourly rate for daily, weekly, and monthly rates.

(5) The hours to be paid for equipment which is operated less than 8 hours due to breakdowns, will be paid for only for actual hours worked.

(6) Less than 30 minutes of operation shall be considered to be 1/2 hour of operation.
(7) The cost of transporting the equipment shall not exceed the rates established by the Hawaii State Public Utilities Commission. If such rates are non-existent, then the rates will be determined by the Engineer, based upon the prevailing rates charged by established haulers within the locale.

(8) Payment

(a) Equipment on the Project Site.

1. The rental time to be paid shall be the time the equipment is in operation on the force account work being performed and in addition, shall include the time required to move the equipment to the location of the force account work and return it to the original location or to another location requiring no more time than that required to return it to its original location. Moving time will not be paid for if the equipment is used at the site of the force account work on other than such force account work.

2. Loading and transporting costs will be allowed, in lieu of moving time, when the equipment is moved by means other than its own power. No payment will be made if the equipment is used at the site of the force account work on other than such force account work.

(b) Equipment Not on the Project Site.

1. The location from which the equipment is to be moved or transported shall be approved by the Engineer.

2. Where the equipment must be transported to the site of the force account work for the exclusive use of the force account work, the Department will pay all costs of mobilizing and transporting the equipment, including its loading and unloading, from its original location to site of the force account work. Upon completion of the work, the Department will pay the cost of demobilizing and transporting the equipment back to its original location or to another location, whichever cost is less.

109.04-3 2/26/79
3. Where the equipment is self-propelled, the Department will pay the cost of moving the equipment by its own power from its original location to the site of the force account work. Upon completion of the work the Department will pay the cost of moving the equipment back to its original location or to another location, whichever cost is less.

4. Should the Contractor desire the return of the equipment to a location other than its original location, the State will pay the cost of transportation in accordance with the above provisions, provided such payment shall not exceed the cost of moving the equipment to the project site.

5. If the equipment is used on the project site in any way other than on force account work, the State will pay the cost of transporting the equipment to the job site. The Contractor shall bear the cost of returning the equipment.

6. The rental period shall begin at the time the equipment is unloaded at the site of work or at the time specified, whichever is later, shall include each day that the machinery or equipment is at the site of the work, and shall terminate at the end of the day on which the Engineer directs the Contractor to discontinue the use of the machinery or equipment.

(9) In the event the equipment must stand-by due to the work being delayed or halted by reasons of design, traffic, or other related problems uncontrollable by the Contractor, but excluding Saturdays, Sundays, and legal holidays, unless the equipment is used to perform work on such days, the rental shall continue as set forth in the following schedule until the Engineer orders the equipment removed from the work site:
<table>
<thead>
<tr>
<th>Hours Equipment is in Operation</th>
<th>Hours to be Paid</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>0.5</td>
<td>4.25</td>
</tr>
<tr>
<td>1</td>
<td>4.5</td>
</tr>
<tr>
<td>1.5</td>
<td>4.75</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>2.5</td>
<td>5.25</td>
</tr>
<tr>
<td>3</td>
<td>5.5</td>
</tr>
<tr>
<td>3.5</td>
<td>5.75</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>4.5</td>
<td>6.25</td>
</tr>
<tr>
<td>5</td>
<td>6.5</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>6.5</td>
<td>7.25</td>
</tr>
<tr>
<td>7</td>
<td>7.5</td>
</tr>
<tr>
<td>7.5</td>
<td>7.75</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Over 8</td>
<td>hours in operation*</td>
</tr>
</tbody>
</table>

*Any hours of operation in excess of 8 hours in any one day must be approved by the Engineer prior to the performance of such work."
SECTION 109 - MEASUREMENT AND PAYMENT

The following amendments shall be made to said section:

109.04 Extra Work and Force Account Work shall be amended as follows:

109.04 (E) State Excise Tax shall be revised to become Subsection "(F)" and shall read as follows:

"(F) State Excise Tax. On the total sum determined in (A), (B), (C), (D), and (E) shall be added the total State excise tax due as compensation to the Contractor.

The compensation as determined in (A), (B), (C), (D), (E) and (F) above shall be deemed to be payment in full for work done on a force account basis, including superintendence, overhead, use of tools and equipment for which no rental is allowed, profit, all taxes, subcontracting and other costs in connection therewith which are not provided for herein."

109.04 (F) Records shall be revised to become Subsection "(G)".

109.04 (G) Statements shall be revised to become Subsection "(H)".

A new Subsection shall be added:

"(E) Subcontracting. When work is performed on a force account basis by subcontractors who are approved pursuant to Section 108.01, the Contractor will receive an additional amount equal to 5 per cent of the total cost of such work computed as set forth above."
The following amendments shall be made to said Section:

109.06  **Deduction from Payment** shall be amended to read as follows:

"The Department may at any time retain or deduct out of any sums due the Contractor, claims of the State against the Contractor, without any liability for damages, interest or otherwise to the Contractor for such retention or deduction."
The following amendments shall be made to said Section:

109.09 Progress Payments shall be amended as follows:

The fourth paragraph shall be amended to read as follows:

"If the Engineer finds that unsatisfactory progress is being made, the Department will, from the beginning of such unsatisfactory progress, withhold 5 per cent of any subsequent progress payments."

The following shall be added:

"The Department may, in the event of non-compliance with equal employment opportunity and affirmative action requirements, to non-discrimination requirements, and with labor compliance contract provisions, and by written notice to the Contractor, withhold monthly progress payments or a portion thereof."
The following amendments shall be made to said Section:

109.10 Acceptance and Final Payment. The fourth paragraph shall be amended to read as follows:

"Sums necessary to meet the claims of the State may be retained from the sums due the Contractor until said claims have been fully and completely discharged or otherwise satisfied."
The following amendment shall be made to said Section:

109.11 Records, Accounts and Documents shall be amended to read as follows:

"All records, accounts and documents of the Contractor and his subcontractors, if any, in connection with the work performed under the terms of the contract, shall be retained and preserved for a period of not less than 3 years from the date of final payment to the Contractor for the project, provided that if any litigation, claim or audit is started before the expiration of the 3-year period, the records shall be retained until said litigation, claim or audit has been resolved and shall be available for inspection and auditing by representatives of the Department and other participating agency or agencies, if any, at the respective offices of the Contractor and his subcontractors. During such inspection and auditing of the records, accounts and documents, the Contractor shall assist in every way possible without cost to the Department."
The following amendments shall be made to said Section:

206.03 (E) Structure Backfill shall be amended as follows:

The title of this Subsection shall be amended to read as follows:

"Structure and Trench Backfill."

The fifth paragraph shall be amended to read as follows:

"Water containing an excessive quantity of salt or other deleterious substances, as determined by the Engineer, shall not be used for compaction of structure and trench backfill for metal pipes."

206.04 (B) (2) Structural Plate Culverts shall be amended by deleting the fourth paragraph.

206.04 (C) Filter Material. This Subsection shall be revised to become Subsection "(D)".

206.04 Method of Measurement shall be amended by adding the following after (B):

"(C) Structure and Trench Backfill. All structure and trench backfill not covered by the provisions herein or the plans, or otherwise ordered or specified, shall be considered incidental to structure excavation and no measurement for payment nor payment will be made therefor."
SECTION 601 - STRUCTURAL CONCRETE

The following amendments shall be made to said Section:

Table 601-1 - Class of Concrete shall be deleted and the following added in lieu thereof:

<table>
<thead>
<tr>
<th>CLASS OF CONCRETE</th>
<th>CEMENT CONTENT</th>
<th>MAXIMUM WATER CEMENT RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hundred Pounds Per Cubic Yard (Kilograms per Cubic Meter)</td>
<td>Weight Per Weight</td>
</tr>
<tr>
<td>A</td>
<td>5.6 (335)</td>
<td>0.55</td>
</tr>
<tr>
<td>B</td>
<td>5.0 (296)</td>
<td>0.62</td>
</tr>
<tr>
<td>C</td>
<td>4.4 (262)</td>
<td>0.71</td>
</tr>
<tr>
<td>D</td>
<td>4.0 (234)</td>
<td>0.80</td>
</tr>
<tr>
<td>E</td>
<td>7.1 (418)</td>
<td>0.47</td>
</tr>
<tr>
<td>BD</td>
<td>6.1 (362)</td>
<td>0.49</td>
</tr>
</tbody>
</table>

601.02 Classification shall be amended as follows:

The second paragraph shall be amended by adding the following:

"Additional cement may be required when coarse aggregate size No. 67 is used."

The fourth paragraph shall be amended to read as follows:

"All concrete placed in bridge decks shall be class BD. A water-reducing and retarding admixture and an air entraining admixture shall be incorporated into the concrete. The water reducing and retarding admixture shall have the capability of varying the degree of retardation by varying the amount of admixture without adversely affecting the other characteristics of the concrete. The concrete shall be designed with an air content of 3 per cent which includes entrapped and entrained air. The air content for plastic concrete shall be maintained within a tolerance of plus or minus one per cent during the work. Air content shall be determined in accordance with the requirements of AASHTO T 152."
SECTION 618 - GRASSED SURFACES

The following amendments shall be made to said Section:

618.02 **Materials** shall be amended by adding the following:

"Bagasse 712.45(B)"

618.03 (A) **Ground Preparation** shall be amended by adding the following:

"Soil conditioners shall be introduced into the soil when specified. Unless otherwise specified, soil conditioners shall be thoroughly mixed into the soil at a ratio of one part soil conditioner to 4 parts soil. Areas to be conditioned with burnt bagasse shall be scarified to a depth of not less than 6 inches until the soil is loose and fine textured and free from stones greater than 1/2 inch in diameter."

618.04 **Method of Measurement** shall be amended by adding the following:

"Soil conditioners added to soil will not be measured but shall be considered incidental to grassed surfaces."
The following Section shall be made a part of the Standard Specifications:

"SECTION 645A - SEALING OF WELL (ALTERNATE I)

645A.01 Description. This work shall consist of sealing an existing well No. 1851-22 in the area as shown on the plan in accordance to the requirements of the contract. Sealing of well shall be made of sand cement grout or neat cement grout in place. The well is 8 inches in diameter with a total depth of about 1152 feet and cased to a depth of about 986 feet.

645A.02 Materials.

(A) Portland Cement Concrete. The concrete shall be Class B and shall conform to the requirements of Section 601 - Structural Concrete.

(B) Neat Cement Grout. The grout shall consist of neat cement mixed with not more than 5 and not less than 4 gallons of water per sack of cement.

(C) Sand Cement Grout. The grout shall be composed of 2 parts of Portland Cement to one part of fine aggregate by volume.

Materials shall meet the requirements specified in the following Subsections of Division 700 - Materials.

<table>
<thead>
<tr>
<th>Material</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portland Cement</td>
<td>701.01</td>
</tr>
<tr>
<td>Fine Aggregate for Concrete</td>
<td>703.01</td>
</tr>
<tr>
<td>Admixtures</td>
<td>711.03</td>
</tr>
<tr>
<td>Water</td>
<td>712.01</td>
</tr>
</tbody>
</table>

645A.03 Construction Requirements. All works shall be accomplished in accordance with the Board of Water Supply Rules and Regulations.

The Contractor shall carefully examine the proposed work site and make the necessary arrangements with the proper authorities or private agencies for the proper disposal of water arising from his operation.
The Contractor shall proceed in the order specified hereinafter. The depths as called for are approximate and reflect accurately the last known measurements. The order of work for the well sealing shall be as follows:

(A) Clear well site, expose well and remove all appurtenances in the area.

(B) Install stand pipe as an extension to the well. The top of the stand pipe shall extend above the water head for the area.

(C) Clear and remove all obstructions from the well casing and well bore. Clearing of well casing and bore shall be to a depth extending from the top of the casing to the bottom of the well and shall be judged by the unimpeded passage of a 7 1/2-inch diameter drilling bit to the bottom of the well and acceptance by the Engineer.

(D) Electric logging shall be performed by the Board of Water Supply upon completion of clearing of well casing and well bore. One full working day shall be allowed to permit electric logging of the well. The Contractor shall give 2 days advance notification.

(E) Sealing of the well shall be performed by the tremie method. The tremie pipe shall be a minimum of 1-1/4 inches in diameter. The neat cement or sand cement grout shall be pumped through the tremie pipe which shall be placed within 5 feet from the bottom of the well and withdrawn as the grout rises in the well. The Contractor shall submit grouting procedure and no method of placing will be approved by the Engineer that does not specify the forcing of grout from the bottom of the well to be grouted toward the surface. The grouting shall be done in a continuous operation and in such a manner as will insure the entire filling of the well in one operation. Sealing of the well shall be considered complete when the well is grouted to the top of the casing and at the approval of the Engineer.

(F) After the seal has been approved by the Engineer, the casing shall be cut off at least 18 inches below ground level and shall be covered with concrete as specified by the Engineer.
MEMORANDUM

TO: Robert T. Chuck, Manager-Chief Engineer
   Water and Land Development Division
   Department of Land and Natural Resources

FROM: T. Harano, Chief, Highways Division

SUBJECT: ALA MOANA BOULEVARD, SEALING OF WELL AT
         ALA MOANA MINI-PARK, PROJECT NO. 92A-03-81

Attached is one (1) set of plans and specifications of subject project for your information.

If you have any questions, please call Mr. Albert Yamaguchi at 548-4125.

T. HARANO

Enclosure
\[
\begin{align*}
\text{MnO}_2 + & 5 \text{H}_2\text{O} \rightarrow 8.5 \text{MnO}_2 \cdot \text{H}_2\text{O} \\
& \text{Vol.} = 1.14 \text{ ft}^3
\end{align*}
\]

\[
\text{Vol.} = \frac{2.67}{5.5} = 0.485 \text{ m}^3
\]
(G) The area shall be backfilled, compacted level to the existing ground and grassed. Backfilling shall only proceed as ordered by the Engineer.

(H) The Contractor shall remove all blocks, pipes and other materials not incorporated in or necessary to the completed well. The work shall be left in a neat and presentable condition satisfactory to the Engineer.

645A.04 Method of Measurement. Clearing of the well bore will be measured by the linear foot of the actual depth of well cleared. The depth through which the drill bit passes freely and when no drilling effort is required and no materials are bailed out shall not be included in the measurement.

The sealing of well will be measured by the cubic foot of the actual amount of grout placed in the well. Concrete shall be included in the volume measurement for the sealing of well.

645A.05 Basis of Payment. The Contractor understands no compensation will be paid to him due to any difficulty he may have incidental to the disposal of waste water and all damages resulting therefrom shall be the responsibility of the Contractor.

The accepted quantities of clearing of the well bore will be paid for at the contract unit price per linear foot of the actual depth of well cleared, which price shall include all cost, labor, equipment, tools and materials necessary to clear the well bore. No payment will be made for the depth through which the drill bit passes freely and no drilling effort is required and no materials are bailed out.

The accepted quantities of the sealing of well will be paid for at the contract unit price per cubic foot as specified in the proposal, which price shall include all cost, labor, equipment, tools and materials necessary to complete the sealing of well. Concrete will be paid for at the same contract unit price as the sealing of well.

Excavation and backfilling required in the sealing of well, cutting of the top of well casing to a minimum depth and planting of grass as required will not be paid for separately and shall be considered incidental to sealing of well.

The furnishing, installing and removing of stand pipe and tremie pipe, removing appurtenances and final clean up shall be considered incidental to the various contract items, and no separate and additional payment will be made therefor.
Payment will be made under:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearing of Well Bore</td>
<td>Linear foot</td>
</tr>
<tr>
<td>Sealing of Well, Neat Cement Grout</td>
<td>Cubic foot</td>
</tr>
<tr>
<td>Sealing of Well, Sand Cement Grout</td>
<td>Cubic foot.</td>
</tr>
</tbody>
</table>

92A-03-81
645A-4a
r5/12/81
The following Sections shall be made a part of the Standard Specifications:

"SECTION 645B - SEALING OF WELL (ALTERNATE II)"

645B.01 Description. This work shall consist of sealing an existing well No. 1851-22 in the area as shown on the plan in accordance to the requirements of the contract. Sealing of well shall be made of neat cement grout in place. The well is 8 inches in diameter with a total depth of about 1152 feet and cased to a depth of about 986 feet.

645B.02 Materials.

(A) Neat Cement Grout. The grout shall consist of neat cement mixed with not more than 5 and not less than 4 gallons of water per sack of cement. Admixtures shall be used to accelerate gain in strength of the grout.

Materials shall meet the requirements specified in the following Subsections of Division 700 - Materials.

<table>
<thead>
<tr>
<th>Material</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portland Cement</td>
<td>701.01</td>
</tr>
<tr>
<td>Admixtures</td>
<td>711.03</td>
</tr>
<tr>
<td>Water</td>
<td>712.01</td>
</tr>
</tbody>
</table>

(B) Fine Sand shall conform to the requirements of Section 703.22 - Blending Sand.

(C) Coarse Basalt Sand shall be well graded between 1/8-inch to 1/4-inch in size and shall be approved by the Engineer.

645B.03 Construction Requirements. All works shall be accomplished in accordance with the Board of Water Supply Rules and Regulations.

The Contractor shall carefully examine the proposed work site and make the necessary arrangements with the proper authorities or private agencies for the proper disposal of water arising from his operation.
The Contractor shall proceed in the order specified hereinafter. The depths as called for are approximate and reflect accurately the last known measurements. The order of work for the well sealing shall be as follows:

(A) Clear well site, expose well and remove all appurtenances in the area.

(B) Install stand pipe as an extension to the well. The top of the stand pipe shall extend above the water head for the area.

(C) Clear and remove all obstructions from the well casing and well bore. Clearing of well casing and bore shall be to a depth extending from the top of the casing to the bottom of the well and shall be judged by the unimpeded passage of a 7 1/2-inch diameter drilling bit to the bottom of the well and acceptance by the Engineer.

(D) Electric logging shall be performed by the Board of Water Supply upon completion of clearing of well casing and well bore. One full working day shall be allowed to permit electric logging of the well. The Contractor shall give 2 days advance notification.

(E) Sealing of the well shall be performed by the tremie method. The tremie pipe shall be a minimum of 1-1/4 inches in diameter. The sand in the open hole and neat cement grout shall be pumped through the tremie pipe which shall be placed within 5 feet from the bottom of the well and withdrawn as the sand or grout rises in the well. No method of placing will be approved by the Engineer that does not specify the forcing of sand and grout from the bottom of the well to be placed toward the surface. The grouting shall be done in such a manner and rate as not to collapse the PVC casing and will insure the entire filling of the well between the PVC and steel casing. Sealing of the well shall be considered complete when the well is grouted to the top of the casing and at the approval of the Engineer.

(F) After the seal has been approved by the Engineer, the steel casing shall be covered with a cap as shown on the plans. A Board of Water Supply Meter Box, Type III, shall be constructed over the steel casing.
(G) The area shall be backfilled, compacted level to the existing ground and grassed. Backfilling shall only proceed as ordered by the Engineer.

(H) The Contractor shall remove all blocks, pipes and other materials not incorporated in or necessary to the completed well. The work shall be left in a neat and presentable condition satisfactory to the Engineer.

645B.04 Method of Measurement. Clearing of the well bore will be measured by the linear foot of the actual depth of well cleared. The depth through which the drill bit passes freely and when no drilling effort is required and no materials are bailed out shall not be included in the measurement.

The sealing of well will be measured by the cubic foot of the actual amount of sand and grout placed in the well.

645B.05 Basis of Payment. The Contractor understands no compensation will be paid to him due to any difficulty he may have incidental to the disposal of waste water and all damages resulting therefrom shall be the responsibility of the Contractor.

The accepted quantities of clearing of the well bore will be paid for at the contract unit price per linear foot of the actual depth of well cleared, which price shall include all cost, labor, equipment, tools and materials necessary to clear the well bore. No payment will be made for the depth through which the drill bit passes freely and no drilling effort is required and no materials are bailed out.

The accepted quantities of the sealing of well will be paid for at the contract unit price per cubic foot as specified in the proposal, which price shall include all cost, labor, equipment, tools and materials necessary to complete the sealing of well.

Excavation, backfilling and planting of grass required in the sealing of well, and capping the top of well casing as required will not be paid for separately and shall be considered incidental to sealing of well.

The furnishing, installing and removing of stand pipe and tremie pipe, removing appurtenances and final clean up shall be considered incidental to the various contract items, and no separate and additional payment will be made therefor.
Payment will be made under:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearing of Well Bore</td>
<td>Linear foot</td>
</tr>
<tr>
<td>Sealing of Well, Neat Cement Grout</td>
<td>Cubic foot</td>
</tr>
<tr>
<td>Sand Packing of Well</td>
<td>Cubic foot</td>
</tr>
<tr>
<td>Furnishing and Installing Type III Meter Box Including Cast Iron Frame and Cover</td>
<td>Each.&quot;</td>
</tr>
</tbody>
</table>

92A-03-81
645B-4a
r5/12/81
SECTION 646 - FURNISHING AND INSTALLING THE WELL CASING

646.01 Description. This work shall consist of installing complete in place PVC (polyvinyl chloride) casing in the well in accordance with the requirements of the contract.

646.02 Materials. PVC casing to be furnished and installed in the well shall be new, rigid unplasticized polyvinyl chloride pipe conforming to ASTM D 1784, D 2241 and D 1785 Schedule 80, with solvent-weld fittings secured with brass screws. The casing shall be clean and straight. PVC casing below grouted level shall be perforated as shown on the plans.

646.03 Construction Requirements. The casing shall be installed in the presence of and as directed by the Engineer. Every precaution shall be taken to prevent the casing from dropping into the hole. Installation shall be made only during normal daylight working hours.

PVC solvent cement shall be used in joining all PVC casing and fittings. Eight screws per coupling shall be installed to secure the joints. Screws shall not penetrate through the casing. Ends being fitted shall be cut square and smooth, and if necessary, they shall be smoothed with a fine file. All connecting surfaces shall be cleaned and free of dirt, grease and other foreign materials, and shall be wiped lightly with a brush moistened with PVC primer. Solvent cement shall then be applied liberally to all connecting surfaces with a non-synthetic brush. After the cement is applied, the connection shall be made as quickly as possible by pressing it into the seat, then giving a 1/4 turn to dispel air and to distribute the cement uniformly, and pressed together for 15 seconds. This joint shall not be disturbed for 10 minutes until initial set takes place.

During the installation of well casing, the Contractor shall furnish and install casing guides at 20 feet on centers as shown on the plans. The casing guide shall be installed with care as not to crush the pipe.

646.04 Method of Measurement. The furnishing and installing of well casing will be measured per linear foot acceptably installed in the well.

92A-03-81
646-1a

r5/12/81
646.05 Basis of Payment. The accepted quantities of furnishing and installing of well casing will be paid for at the contract unit price per linear foot complete in place. The unit price paid shall be full compensation for furnishing and hauling the casing to the well site; for perforating the casing; for unloading, handling, cutting, aligning, welding, solvent cementing and setting the casing; and for all labor, equipment, tools, materials and incidentals necessary to complete the work.

Payment will be made under:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furnishing and Installing 3-Inch PVC well casing, Schedule 80</td>
<td>Linear Foot</td>
</tr>
<tr>
<td>Furnishing and Installing 3-Inch Perforated PVC well casing, Schedule 80</td>
<td>Linear Foot</td>
</tr>
</tbody>
</table>

92A-03-81 646-2a r5/12/81
SECTION 701 - HYDRAULIC CEMENT

The following amendment shall be made to said Section:

701.01 Portland Cement shall be amended by deleting the first paragraph and inserting the following in lieu thereof:

"Unless otherwise required, portland cement shall conform to AASHTO M 85, Type I and the 28-day strength requirement cited in Table 2A shall apply.

A prestress grade portland cement, conforming to the requirements of AASHTO M 85, Type I and the following modifications, may be used for precast prestressed concrete members.

(A) The 28-day compressive strength requirement shall apply.

(B) Mortar, containing the portland cement to be used and Ottawa sand, when tested in accordance with Test Method No. California 527, shall not contract in air more than 0.053 per cent.

(C) The maximum fineness value of any individual sample of cement as determined by AASHTO T 153 shall not exceed 5000. The average value shall not exceed 4800."
SECTION 703 - AGGREGATES

The following amendments shall be made to said Section:

703.01 Fine Aggregate for Concrete. The last paragraph shall be amended to read as follows:

"In lieu of the gradation requirements of Table 703-I, fine aggregate meeting the gradation requirements of ASTM C 33, paragraph 4.1 will be allowed by the Engineer provided all other requirements of this Subsection are met. With the approval of the Engineer, the sand equivalent requirement may be waived provided material finer than No. 200 sieve does not exceed 5 per cent."

703.03 Aggregate for Plant Mix Asphalt Treated Base Course. The title of this subsection shall be amended to read as follows:

"Aggregate for Asphalt Concrete Base Course"

703.09 Aggregate for Hot Plant Mix Bituminous Pavement. The Table shall be amended as follows:

Under "Test", "K-Factor - Kc and Kf" shall be amended to read "K-Factor".

Under "Los Angeles abrasion", the requirement "40% Maximum" shall be amended to read "30% Maximum".

In Table 703-V, the grading requirement "40-52" on the No. 4 sieve for Mix III shall be amended to read "40-57".
The following amendments shall be made to said Section:

703.20 Structure Backfill Material shall be amended as follows:

The second and third paragraphs shall be deleted and the following added in lieu thereof:

"(A) Structure Backfill Material A. When tested in accordance with AASHTO T 176, the sand equivalent value shall not be less than 20.

(B) Structure Backfill Material B. When tested in accordance with AASHTO T 176, the sand equivalent value shall not be less than that of the area being filled and in no case shall the sand equivalent be less than 2 regardless of where it is used."

The first sentence of the fourth paragraph shall be amended to read as follows:

"Structure fill or backfill material placed behind bridge abutments, wingwalls and retaining walls shall be structure backfill material A."

703.21 Trench Backfill Material shall be amended to read as follows:

"Trench backfill material shall be black sand-soil mixture, finely graded coral or sandy materials which shall pass a one-inch square mesh screen or crusher screening S4C which shall pass a half (1/2) inch square mesh screen and is free from all deleterious substances.

For water system trench backfill, no crusher screening S4C shall be used in areas where the invert of the pipe is at or lower than the 4-foot elevation, USGS Datum, or in swampy area or in area where the ground is continuously wet.

Trench backfill material placed against corrugated metal pipe, when tested in accordance with the Hawaii Test Method HWY-TC 8, shall have a field resistivity and pH value which shall result in a service life of 40 years or more using the gage of the specified pipe undergoing backfill.

(A) Trench Backfill Material A. When tested in accordance with AASHTO T 176, the sand equivalent value shall not be less than 20.
(B) Trench Backfill Material B. When tested in accordance with AASHTO T 176, the sand equivalent value shall not be less than that of the area being filled and in no case shall the sand equivalent be less than 2 regardless of where it is used."
The following amendments shall be made to said Section:

712.07 (B) Frames and Grates. The second sentence of the second paragraph shall be amended to read as follows:

"Frames and grates shall be galvanized in accordance with the requirements of ASTM A 123."

712.07 (C) (1) Water Valve Manholes shall be amended to read as follows:

"Water valve manhole rungs shall be fabricated from wrought iron bars or steel bars conforming to the requirements of ASTM A 207-68 or ASTM A 36, respectively. Rungs shall be made in accordance with the dimensions and notes shown on the standard details and shall be cadmium-plated or hot-dipped galvanized after fabrication."

712.07 (C) (2) Sanitary Sewer Manholes. The first sentence shall be amended to read as follows:

"The top rungs of sewer manholes shall be fabricated from one-inch diameter wrought iron bars or steel bars conforming to the requirements of ASTM A 207-68 or ASTM A 36, respectively."

712.07-1  r3/25/81
STATE OF HAWAI'I
DEPARTMENT OF TRANSPORTATION
HONOLULU, HAWAI'I

PROPOSAL
PROPOSAL TO STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PROJECT ALA MOANA BOULEVARD, SEALING OF WELL AT
ALA MOANA MINI-PARK

PROJECT NO.: 92A-03-81

COMPLETION TIME: EIGHTEEN (18) Working Days from the date
indicated in the Notice to Proceed from
the Department.
Director of Transportation
Aliiamoku Hale
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Sir:

The undersigned, as bidder, declares that this proposal is made without collusion with any other person, firm or corporation; that he has carefully examined the job site and that he has studied the proposed scope of work contemplated, the annexed proposed form of contract, and the plans therein referred to.

The undersigned agrees that if this proposal is accepted, he shall execute a contract with the State of Hawaii, similar to a copy of the same annexed hereto, to provide all necessary labor, machinery, tools, equipment, apparatus and any other means of construction, to do all the work and to furnish all the materials specified in the contract in the manner and within the time therein prescribed in the contract, and that he shall accept in full payment therefor the sum of the unit and/or lump sum prices as set forth in the attached proposal schedule for the actual quantities of work performed and materials furnished.

It is understood that the quantities given in the attached proposal schedule are approximate only and are intended principally to serve as a guide in determining and comparing the bids. It is further understood that the Department of Transportation does not, expressly or by implication, agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any class or portion of the work, or to omit portions of the work, as may be deemed necessary or advisable by the Director of Transportation, and that all increased or decreased quantities of work shall be performed at the unit prices set forth in the attached proposal schedule except as provided for in the specifications.

It is further understood that in case of discrepancy between the unit prices and the totals in said schedule, the unit prices shall prevail.
The undersigned further proposes to execute the contract agreement and to furnish satisfactory security pursuant to Sections 103-34 to 103-36, inclusive, Hawaii Revised Statutes, within ten (10) days after the award of the contract or within such further time as the Director of Transportation may allow after the undersigned has received the contract documents for execution.

The undersigned agrees that he shall begin the work within fifteen (15) calendar days after the date he is notified to commence with the work which date is indicated in the notice to proceed and shall finish the entire project within the time prescribed.

It is understood that the Director of Transportation reserves the right to reject any or all bids and to waive any defects when in his opinion such rejections or waiver will be for the best interest of the public.

Receipt is hereby acknowledged and complete examination is hereby expressly guaranteed of the following listed items: Hawaii Standard Specifications for Road and Bridge Construction, 1976, or such other standard specifications as provided for by the Department of Transportation, the notice to bidders, the instructions to bidders, the special provisions, the amendments to special provisions, if any, the proposal, the contract and bond forms, and the project plans.

The undersigned further agrees that if this proposal is accepted and the contract awarded, he shall, prior to payment of the final estimate, execute the attached non-gratuity affidavit form.

Accompanying this proposal is

- bidder's bond
- cash
- cashier's check
- certified check

in the amount of ________________________________ DOLLARS ($_________), pursuant to Sections 103-28, 103-30 and 103-31, Hawaii Revised Statutes.

P-3  12/1/75
The undersigned acknowledges receipt of any addendum issued by the Department of Transportation by recording in the space below the date of receipt.

Addendum No. 1 ________  Addendum No. 3 ________
Addendum No. 2 ________  Addendum No. 4 ________

In compliance with the provisions of Section 103-29, Hawaii Revised Statutes, the bidder shall include in his bid the name of each person or firm to be engaged by the bidder on the project as joint contractor or subcontractor and shall also indicate the nature and scope of the work to be performed by said joint contractor or subcontractor. All bids which do not comply with this requirement shall be rejected.

<table>
<thead>
<tr>
<th>Name of Subcontractor</th>
<th>Nature and Scope of Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name of Joint Contractor</th>
<th>Nature and Scope of Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
</tbody>
</table>

("None" indicates no Subcontractor or Joint Contractor.)
The undersigned hereby certifies that the bid prices contained in the attached proposal schedule have been carefully checked and are submitted as correct and final.

Name of Corporation, Partnership or Individual

Signature and Title of Signer (Corporate Seal)

NOTE:

If bidder is a CORPORATION, the legal name of the corporation shall be set forth above, together with the signature(s) of the officer(s) authorized to sign contracts on behalf of the corporation. The word "By" should be placed before the signature(s) and the title of each signer placed under his signature. Please attach to this page evidence of the authority of the officer(s) to sign on behalf of the corporation.

If bidder is a PARTNERSHIP, the true name of the firm shall be set forth above, together with the signature(s) of the partnership(s) authorized to sign contracts on behalf of the partnership. Please attach to this page evidence of the authority of the partner(s) to sign on behalf of the partnership.

If bidder is an INDIVIDUAL, his signature shall be placed above.

If signature is by an agent, other than an officer of a corporation or a member of a partnership, a POWER OF ATTORNEY must be on file with the Department prior to opening bids or submitted with the bid; otherwise, the bid may be rejected as irregular and unauthorized.

Business Address

Business Telephone

Dated ________________, 19____.
PROPOSAL SCHEDULES

(A) PROPOSAL SCHEDULE I

The following is the itemized Proposal:

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item</th>
<th>Quantity</th>
<th>Unit</th>
<th>Unit Price</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>645A.0100</td>
<td>Clearing of Well Bore</td>
<td>475</td>
<td>Lin.Ft.</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>645A.0200</td>
<td>(A) Sealing of Well, Neat Cement Grout</td>
<td>1,200</td>
<td>Cu. Ft.</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>645A.0300</td>
<td>(B) Sealing of Well, Sand Cement Grout</td>
<td>1,000</td>
<td>Cu. Ft.</td>
<td>$</td>
<td></td>
</tr>
</tbody>
</table>

NOTE:

Based on the above Proposal Schedule, the bidder shall complete the following table using the AMOUNTS indicated in said Proposal Schedule. The Director of Transportation reserves the right to correct said AMOUNTS if they are inconsistent with those indicated in the Proposal Schedule.

From the SUM OF ALL ITEMS as shown on the Proposal Schedule, deduct the most expensive sealing of well alternative. The net amount of the proposal after the above deduction will be used for the determination of the lowest bidder.

SUM OF ALL ITEMS (From Proposal Schedule) .... $__________

DEDUCT THE MOST EXPENSIVE SEALING OF WELL ALTERNATIVE 645A.0200 OR 645A.0300) .... $__________

AMOUNT FOR DETERMINATION OF LOWEST BIDDER .... $__________
(B) PROPOSAL SCHEDULE II

The following is the itemized Proposal:

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item</th>
<th>Quantity</th>
<th>Unit</th>
<th>Unit Price</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>624.1781</td>
<td>Furnishing and Installing Type III Meter Box Including Cast Iron Frame and Cover</td>
<td>1</td>
<td>Each</td>
<td>$2800</td>
<td>$2800</td>
</tr>
<tr>
<td>645B.0100</td>
<td>Clearing of Well Bore</td>
<td>475</td>
<td>Lin.Ft.</td>
<td>$42</td>
<td>$19950</td>
</tr>
<tr>
<td>645B.0200</td>
<td>Sealing of Well, Neat Cement Grout</td>
<td>300</td>
<td>Cu.Ft.</td>
<td>$1200</td>
<td>$36000</td>
</tr>
<tr>
<td>645B.0300</td>
<td>Basaltic Sand Pack</td>
<td>50</td>
<td>Cu.Ft.</td>
<td>$200</td>
<td>$10000</td>
</tr>
<tr>
<td>646.0100</td>
<td>Furnishing and Installing 3-inch PVC Well Casing, Schedule 80</td>
<td>1,005</td>
<td>Lin.Ft.</td>
<td>$20</td>
<td>$20150</td>
</tr>
<tr>
<td>646.0200</td>
<td>Furnishing and Installing 3-inch Perforated PVC Well Casing, Schedule 80</td>
<td>147</td>
<td>Lin.Ft.</td>
<td>$40</td>
<td>$5880</td>
</tr>
</tbody>
</table>

**SUM OF ALL ITEMS**

$94730

NOTE:

Based on the aforementioned Proposal Schedules, the Department's preferred choice is Proposal II provided the Sum of All Items is within that amount budgeted for this project. If the amount bid for Proposal II is beyond the budgeted amount, the Amount for Determination of Lowest Bidder for Proposal I will be considered.
DECLARATION OF STATE EMPLOYMENT

In compliance with Section 84-15, Hawaii Revised Statutes, individuals or business entities entering or proposing to enter into a contract with the Department of Transportation, State of Hawaii, must fill in the appropriate Form A or Form B below before entering into such contract. Place X in applicable □ shown on form to be used.

FORM A - DECLARATION FOR INDIVIDUALS ON STATE CONTRACT

SUBJECT: ____________________________________________

1. I declare that I am □ am not □ a Legislator, elected or appointed Officer of the State, compensated or uncompensated, member of a State board or commission, or other employee of the State of Hawaii.

2. I declare that I have not participated in a State capacity in the past two years in the subject matter of this contract.

__________________________________________________
Date                                               Signature of Individual

FORM B - DECLARATION FOR BUSINESS ENTITIES ON STATE CONTRACT

SUBJECT: ____________________________________________

1. I declare that this firm is □ is not □ owned or controlled by any Legislator, elected or appointed Officer of the State, compensated or uncompensated, member of a State board or commission, or other employee of the State of Hawaii.

2. I further declare that we have not been assisted or represented on this matter by an individual who has, in a State capacity, been involved in the subject matter of this contract in the past two years.

__________________________________________________
Name of Firm

__________________________________________________
Date                                               Signature and Title of Officer
or Corporation or Business Entity

3/11/77
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HONOLULU, HAWAII

FORMS

Contents
Contract
Bond
Non-Gratuity Affidavit
CONTRACT

THIS AGREEMENT, made this _____ day of ________________, 19____, by and between the STATE OF HAWAII, by its Director of Transportation, hereinafter referred to as "STATE", and

________________________________________________________

whose business and/or post office address is ________________

________________________________________________________

hereinafter referred to as "CONTRACTOR";

WITNESSETH: That for and in consideration of the payments hereinafter mentioned, the CONTRACTOR hereby covenants and agrees with the STATE to complete in place, furnish and pay for all labor and materials necessary for

or such a part thereof as shall be required by the STATE, the total amount of which labor, material and construction shall be computed at the unit and/or lump sum prices set forth in the attached proposal schedule and shall be the sum of ____________

_________________________ DOLLARS ($____________) as follows:

K-1

r5/15/67
which sum shall be provided from the following fund(s):

all in accordance with the Hawaii Standard Specifications for Road and Bridge Construction, 1976, or such other standard specifications as may be provided for specifically herein, the special provisions, the amendments to special provisions, if any, all of which are hereinafter referred to as "specifications", the notice to bidders, the instructions to bidders, the proposal and plans for Project No(s). ____________________________, on file in the office of the Director of Transportation. These documents, together with all alterations, amendments, additions and deductions thereto or therefrom, are attached hereto and/or
incorporated herein by reference and made a part of this contract.

The CONTRACTOR hereby covenants and agrees to complete such construction within ____________________ (__________) working days from the date indicated in the notice to proceed from the STATE subject, however, to such extensions as may be provided for under the specifications.

For and in consideration of the covenants, undertakings and agreements of the CONTRACTOR herein set forth and upon the full and faithful performance thereof by the CONTRACTOR, the STATE hereby agrees to pay the CONTRACTOR the sum of ____________

DOLLARS ($__________) in lawful money, but not more than such part of the same as is actually earned according to the STATE's determination of the actual quantities of work performed and materials furnished by the CONTRACTOR at the unit or lump sum prices set forth in the attached proposal schedule. Such payment, including any extras, shall be made, subject to such additions or deductions hereto or hereafter made in the manner and at the time prescribed in the specifications and this contract. In any event, extras shall not exceed ____________________

_____________________________ DOLLARS ($__________)
in lawful money and shall be provided from the following fund(s)
The CONTRACTOR further agrees to execute the attached non-gratuity affidavit form prior to payment of the final estimate by the STATE.

All words used herein in the singular number shall extend to and include the plural. All words used in the plural number shall extend to and include the singular. The use of any gender shall extend to and include all genders.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be duly executed the day and year first above written.

STATE OF HAWAII

By ______________________________ 

Director of Transportation

By ______________________________ 

By ______________________________ 

APPROVED AS TO FORM

Deputy Attorney General

K-5 r2/7/73
PERFORMANCE AND PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS, that ______________________

________________________

________________________

as Principal, and ______________________

________________________

as Surety, are held and firmly bound unto the State of Hawaii, its successors or assigns, in the full and just sum of ______

________________________

DOLLARS ($______________) in lawful money of the United States of America, for the payment of which to the State of Hawaii, its successors or assigns well and truly to be made, we do hereby bind ourselves and our respective heirs, executors or administrators and successors, jointly and severally, firmly by these presents.

The condition of this obligation is such that if the above bounden Principal shall fully and faithfully perform and fulfill that certain contract dated ______________________, entered into by said Principal with the State of Hawaii for the furnishing and paying for ______________________

________________________

________________________

________________________

________________________

________________________

________________________

________________________

B-1 r7/30/76
conforming in all respects to the stipulations, agreements, covenants and conditions of said contract as it now exists or may be modified according to its terms, and shall promptly pay all just claims for labor and materials used in the prosecution of the work provided for in the aforesaid contract, and shall deliver said work to the State of Hawaii, or to its successors or assigns, fully completed as specified and free from all liens and claims and without further cost, expense or charge to the State of Hawaii, its successors or assigns, and shall save and hold harmless the State of Hawaii, its officers, agents, successors or assigns from all suits or actions of every nature and kind which may be brought for or on account of any injury or damage, direct or indirect, arising or growing out of the doing of said work or the repair or maintenance thereof, then this obligation shall be void; otherwise, it shall be and remain in full force and effect.

AND IT IS HEREBY STIPULATED AND AGREED:

1) that no change, extension, alteration, deduction or addition, permitted by said contract, in or to the terms of said contract, including the plans or specifications pertaining thereto, shall in any way affect the
obligation of said Surety on this bond; and that said Surety does hereby waive notice of any such change, extension, alteration, deduction or addition in or to the terms of said contract or the plans or specifications pertaining thereto or in or to said work.

2) that suit on this bond may be brought before a court of competent jurisdiction without a jury, and that the sum or sums specified in said contract as liquidated damages shall be considered as, and held to be, fixed and liquidated damages which shall be forfeited to the State of Hawaii, its successors or assigns, in the event of a breach of any, or all, or any part of, the stipulations, agreements, covenants or conditions contained in said contract or in this bond, in accordance with the terms thereof.

3) that this bond shall inure to the benefit of any and all persons entitled to file claims for labor performed or materials furnished in said work so as to give any and all such persons a right of action as contemplated in Section 507-17, Hawaii Revised Statutes.
WITNESS our hands and seals at ______________________,
State of ____________, this ______ day of ____________,
A.D. 19

PRINCIPAL:

By ____________________________
Its

By ____________________________
Its

SURETY:

By ____________________________
Its

By ____________________________
Its

APPROVED AS TO FORM

Deputy Attorney General

B-4 x12/31/69
NON-GRATUITY AFFIDAVIT

A Release Form to be Executed and Filed
by the Contractor before the Final Payment is Made

Name of Project _______________________

Project No. ___________________________
Contract No. ___________________________
District of _____________________________
Island of _______________________________

STATE OF HAWAII )
) SS.
)

The undersigned hereby certifies that he is the _________________

_________________________ of _______________________
(Name of individual, partnership or corporation)

that in connection with the aforesaid project, he or its officers, representatives, agents, subcontractors or employees has (have) not given or made any agreement to give to any Department of Transportation employee, his relatives or agents, any gift of money or any other gift; or gratuity in any form whatsoever; has (have) not loaned any money or anything of value to any Department of Transportation employee, his relatives or agents; has (have) not rented or purchased any equipment, or any form thereof, or supplies of any nature whatsoever from any Department of Transportation employee, his relatives or agents.

_____________________________________

Subscribed and sworn to before me
this ___ day of _____________, 19___.

Notary Public, __________ Judicial
Circuit, State of Hawaii

My Commission Expires: ____________

NGA
The Honorable Manabu Tagomori  
Deputy Director  
Department of Land and Natural Resources  
Commission on Water Resource Management  
P. O. Box 621  
Honolulu, Hawaii  
96809

Registration of Wells and Declaration of Water Use; Your Letter Dated January 31, 1989

Dear Mr. Tagomori,

In response to the telephone conversation with a representative of your office on February 8, 1989, I understand that State Well No. 1851-27, located in landscaped area of the parking area near Pier 5 at Honolulu Harbor is an observation well operated by the U. S. Geological Survey office.

Therefore, I am returning the registration form and map.

Very truly yours,

Edward Y. Hirata  
Director of Transportation

Enclosures
Item a. Flow test well 3-1851-22  
December 16, 1982

<table>
<thead>
<tr>
<th>Time</th>
<th>pH</th>
<th>Temp</th>
<th>Sp.Cond</th>
<th>DO</th>
</tr>
</thead>
<tbody>
<tr>
<td>0845</td>
<td>7.6</td>
<td>22.2</td>
<td>10,970</td>
<td>3.0</td>
</tr>
<tr>
<td>0854</td>
<td>8.7</td>
<td>23.2</td>
<td>11,270</td>
<td>3.3</td>
</tr>
<tr>
<td>0855</td>
<td>7.7</td>
<td>22.6</td>
<td>9,580</td>
<td>3.4</td>
</tr>
<tr>
<td>0858</td>
<td>7.7</td>
<td>22.8</td>
<td>9,440</td>
<td>3.0</td>
</tr>
<tr>
<td>0900</td>
<td>7.7</td>
<td>22.8</td>
<td>9,590</td>
<td>2.0</td>
</tr>
<tr>
<td>0910</td>
<td>7.7</td>
<td>22.8</td>
<td>9,660</td>
<td>1.7</td>
</tr>
<tr>
<td>0945</td>
<td>7.7</td>
<td>22.8</td>
<td>9,660</td>
<td>1.7</td>
</tr>
<tr>
<td>0945</td>
<td>7.7</td>
<td>22.8</td>
<td>9,660</td>
<td>1.7</td>
</tr>
<tr>
<td>1000</td>
<td>7.7</td>
<td>22.8</td>
<td>9,820</td>
<td>2.5</td>
</tr>
<tr>
<td>1015</td>
<td>7.7</td>
<td>22.8</td>
<td>9,680</td>
<td>2.0</td>
</tr>
<tr>
<td>1020</td>
<td>7.6</td>
<td>22.5</td>
<td>9,910</td>
<td>3.3</td>
</tr>
</tbody>
</table>

Remarks
- Static head 23.0 ft.
- Open valve
- Flow rate=37.5 gpm
- Sample taken for lab analysis
- Flow rate=32 gpm
- Flow rate=33 gpm
- Valve closed

Readings of pH, Temp, SpCond., and DO made with HydroLab 4-probe instrument.
Item b. Head recovery test, well 3-1851-22  
December 16, 1982

<table>
<thead>
<tr>
<th>Elapsed Time, mins.</th>
<th>Head, ft.</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>16.85</td>
<td>Valve shut, 1035</td>
</tr>
<tr>
<td>0:50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:00</td>
<td>17.7</td>
<td></td>
</tr>
<tr>
<td>3:00</td>
<td>18.2</td>
<td></td>
</tr>
<tr>
<td>4:00</td>
<td>18.6</td>
<td></td>
</tr>
<tr>
<td>5:00</td>
<td>18.9</td>
<td></td>
</tr>
<tr>
<td>6:30</td>
<td>19.45</td>
<td></td>
</tr>
<tr>
<td>8:00</td>
<td>19.75</td>
<td></td>
</tr>
<tr>
<td>10:00</td>
<td>20.15</td>
<td></td>
</tr>
<tr>
<td>12:00</td>
<td>20.7</td>
<td></td>
</tr>
<tr>
<td>14:00</td>
<td>21.1</td>
<td></td>
</tr>
<tr>
<td>16:00</td>
<td>21.3</td>
<td></td>
</tr>
<tr>
<td>20:00</td>
<td>21.7</td>
<td></td>
</tr>
<tr>
<td>26:00</td>
<td>22.45</td>
<td></td>
</tr>
<tr>
<td>30:00</td>
<td>22.65</td>
<td></td>
</tr>
<tr>
<td>40:00</td>
<td>23.05</td>
<td></td>
</tr>
<tr>
<td>50:00</td>
<td>23.2</td>
<td></td>
</tr>
<tr>
<td>60:00</td>
<td>23.4</td>
<td></td>
</tr>
<tr>
<td>120:00</td>
<td>23.7</td>
<td>Test completed.</td>
</tr>
</tbody>
</table>

Measurements obtained with mercury manometer.
Mr. Robert T. Chuck  
Manager-Chief Engineer  
Division of Water and Land Development  
Dept. of Land and Natural Resources  
P.O. Box 373  
Honolulu, Hawaii 96809

Attention: Dan Lum

Dear Bob:

Enclosed is an "as built" sketch of the Ala Moana Mini Park observation well (3-1851-22). The well was completed in January 1982 and was the result of a cooperative effort by the State of Hawaii, Department of Land and Natural Resources, Division of Water and Land Development, the Department of Transportation, Highways Division, the Honolulu Board of Water Supply and the U.S. Geological Survey. We believe that this deep observation well will prove to be a very useful data point in the Honolulu area.

A pressure transducer and magnetic tape recorder are presently being tested by our staff for installation on the well. We plan to have this unit installed by November 30, 1982.

The enclosed table summarizes the water level and chloride concentration data collected thus far. A water quality analysis made on a sample obtained on May 5, 1982, is also enclosed for your information.

Sincerely,

[Signature]

Benjamin L. Jones  
District Chief

Enclosures
Ala Moana Mini Park

Well 3-1851-22
Ala Moana Mini Park
Observation well
Old number 181

"As built" Sketch
not to scale
**ALA MOANA MINI PARK WELL**

3-1851-22

<table>
<thead>
<tr>
<th>Date</th>
<th>Water Level (ft. above ms1)</th>
<th>Rate (gpm)</th>
<th>Volume (gal)</th>
<th>Chloride Concentration mg/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>02/12/82(P)</td>
<td>a 5.6</td>
<td>b 17.9</td>
<td>34</td>
<td>1800</td>
</tr>
<tr>
<td>02/16/82(F)</td>
<td>18.1</td>
<td>17.2</td>
<td>1.5</td>
<td>200</td>
</tr>
<tr>
<td>02/19/82(F)</td>
<td>16.9</td>
<td>15.4</td>
<td>22</td>
<td>1500</td>
</tr>
<tr>
<td>04/21/82(F)</td>
<td>20.2</td>
<td>15.5</td>
<td>30</td>
<td>1800</td>
</tr>
<tr>
<td>05/05/82(P)</td>
<td>19.8</td>
<td>14.8*</td>
<td>35</td>
<td>9500</td>
</tr>
</tbody>
</table>

(P) Pumped

(F) Flowing

a W.L. before pumping or flowing

b W.L. after pumping or flowing

* W.L. recovered to 19.7 ft. 45 minutes after pumping stopped.
<table>
<thead>
<tr>
<th>Date</th>
<th>Type</th>
<th>Time</th>
<th>Silica</th>
<th>SODIUM</th>
<th>SULFATE</th>
<th>SPECIFIC</th>
<th>ALKALINE</th>
<th>WATER</th>
<th>HARDNESS</th>
<th>NONCARBONATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAY</td>
<td>05...</td>
<td>2</td>
<td>0920</td>
<td>300</td>
<td>4200</td>
<td>12500</td>
<td>7330</td>
<td>0.2</td>
<td>2500</td>
<td>430</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>00915</td>
<td>00940</td>
<td>00095</td>
<td>7H301</td>
<td>00950</td>
<td>00900</td>
<td>00925</td>
<td>01056</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>00400</td>
<td>00935</td>
<td>00950</td>
<td>00931</td>
<td>00930</td>
<td>00932</td>
<td>00945</td>
<td>00010</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>00043</td>
<td>00040</td>
<td>00928</td>
<td>01046</td>
<td>00631</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>MAY</td>
<td>05...</td>
<td>17</td>
<td>1800</td>
<td>60</td>
<td>480</td>
<td>23.0</td>
<td>8.0</td>
<td>12600</td>
<td>47</td>
<td>80020</td>
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<td>00403</td>
<td>00028</td>
<td>01046</td>
<td>00631</td>
<td></td>
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<td></td>
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<tr>
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<td></td>
<td></td>
<td>95902</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Station Number:** 211828157515801
- **Local Identifier:** 3-1851-22
- **State:** 11
- **County:** 003
- **District:** 15
- **Processing Date:** 82/05/29
- **WATER YEAR:** 1982
- **Type of Station:** WELL
- **Latitude-Longitude:** 211828, 1575158.01

**COMPOSITION OF WATER**

<table>
<thead>
<tr>
<th>Component</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium</td>
<td>mg/L</td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>mg/L</td>
<td></td>
</tr>
<tr>
<td>Solids</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magnesium</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>mg/L</td>
<td></td>
</tr>
<tr>
<td>Potassium</td>
<td>mg/L</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH Buffer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium</td>
<td>mg/L</td>
<td></td>
</tr>
<tr>
<td>Sulfide</td>
<td>mg/L</td>
<td></td>
</tr>
<tr>
<td>Nitrate</td>
<td>mg/L</td>
<td></td>
</tr>
<tr>
<td>Ammonia</td>
<td>mg/L</td>
<td></td>
</tr>
<tr>
<td>Nitrite</td>
<td>mg/L</td>
<td></td>
</tr>
<tr>
<td>Hardness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NonCarbonate</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Date:**

- **MAY 05...**: 2500

**Time:**

- **MAY 05...**: 2

**Values:**

- **Silica**: 0.2
- **SODIUM**: 2500
- **SULFATE**: 430
- **SPECIFIC**: 8.0
- **ALKALINE**: 76
- **WATER**: 500
- **HARDNESS**: 0
- **NONCARBONATE**: 0
- **NITROGEN**: 0

**Units:**

- **mg/L**: 2500
- **mg/L**: 430
- **mg/L**: 8.0
- **mg/L**: 500
Procedure for Grouting Well #1651-22

1. The annulus between the 3-inch Schedule 80 PVC casing and the bottom end of the existing 8-inch casing shall be sealed off with either a cement basket or a series of no less than 4 cup packers.

2. Grout shall be applied by forcing into the annulus from the bottom upwards to ground surface. The grout shall consist of neat cement containing no more than 5 gallons of water per cubic foot. The grout pipe shall be not less than 1\% inches in diameter.

An initial slug of grout of not less than 10 cubic feet of quick setting cement may be used to insure a good initial plug before continuous grouting. After a 24-hour setting period, grouting to ground surface will continue the following day.

3. Grouting of the well annulus will be considered complete when cement appears at ground surface. After the cement has set for 24-hours, work on the valve and meter box to be placed over the casing may proceed for conversion of the well for monitoring purposes.

August 25, 1981
MEMO: FOR THE RECORD

SUBJECT: ALA MOANA MINI PARK WELL (1851-22)

WATER SAMPLE TAKEN ON 10-29-81 - DATA FROM ANALYSIS
1) CHLORIDE CONTENTS 15,500 PPM.
2) CONDUCTANCE 45,500 MICROMOHS
3) DEPTH AT 928 FT.

SAMPLE 82% SEAWATER

M. Chyn.
CALIPER LOG
ALA MOANA MINI PARK (1851-22)

10-21-21
BLK 411
UP-TO-TOE LOG
Logging speed 25 fpm

T.D. = 201' (DRILLER)

CALIBRATION
8" 12"

854'
808
September 17, 1981

Department of Transportation
State of Hawaii
Honolulu, Hawaii

Attention: Mr. Albert Yamaguchi, Project Manager,
Highway Design Unit

Gentlemen:

Ala Moana Mini Park Well 1851-22

With regard to the sealing of the Ala Moana Mini Park Well No. 1851-22 located Ewa of the Hawaiian Electric Power Plant, we understand that the present contract allows for conversion of the well for monitoring purposes subject to availability of additional funds of $10,000.

Accordingly, our Division will cooperate in this project through the continuing DLNR-USGS Water Resources Cooperative Program.

Very truly yours,

Robert T. Chuck
Manager-Chief Engineer

DL:ey
cc: USGS
Dr. Ryokichi Higashionna, Director
State of Hawaii
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Attention: Mr. Al Yamaguchi

Dear Dr. Higashionna:

We have been informed by Mr. Chester Lao of the Honolulu Board of Water Supply that artesian well 3-1851-22 (101) located just Ewa of the Hawaiian Electric Power Plant in the small park adjoining the parking lot at Pier 5 will be sealed by your agency.

Mr. Lao further informed us that specifications were provided for converting the well for observation use, and that the State Department of Transportation would be willing to convert the well, provided the increased cost of conversion over sealing be paid by others. It is our understanding that the increase amounted to $10,000. The U.S. Geological Survey is very interested in converting this well to observation use. We contacted the State of Hawaii, Department of Land and Natural Resources, Division of Water and Land Development, and they also expressed a strong interest in retaining the well for observation purposes. Further discussion between USGS and DOWALD resulted in an agreement that the two agencies would share the increase ($10,000) equally.

Accordingly, the U.S. Geological Survey agrees to pay $5,000 to the Department of Transportation for the conversion of well 3-1851-22 to observation use.

Please be advised that the USGS funds in this amount will be available October 1, 1981.

We hope this arrangement meets with your approval.

Thank you very much for your cooperation.

Sincerely,

Benjamin L. Jones
District Chief

cc: Mr. Robert T. Chuck, Manager-Chief Engineer, Division of Water & Land Development
Mr. Kazu Hayashida, Manager & Chief Engineer, Board of Water Supply
September 17, 1981

Department of Transportation
State of Hawaii
Honolulu, Hawaii

Attention: Mr. Albert Yamaguchi, Project Manager,
Highway Design Unit

Gentlemen:

Ala Moana Mini Park Well 1851-22

With regard to the sealing of the Ala Moana Mini Park
Well No. 1851-22 located Ewa of the Hawaiian Electric Power
Plant, we understand that the present contract allows for
conversion of the well for monitoring purposes subject to
availability of additional funds of $10,000.

Accordingly, our Division will cooperate in this project
through the continuing DLNR-USGS Water Resources Cooperative
Program.

Very truly yours,

Robert T. Chuck
Manager-Chief Engineer

DL:ey
cc: USGS
August 18, 1981

Dr. Ryokichi Higashionna, Director
State of Hawaii
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Attention: Mr. Al Yamaguchi

Dear Dr. Higashionna:

We have been informed by Mr. Chester Lao of the Honolulu Board of Water Supply that artesian well 3-1851-22 (101) located just Ewa of the Hawaiian Electric Power Plant in the small park adjoining the parking lot at Pier 5 will be sealed by your agency.

Mr. Lao further informed us that specifications were provided for converting the well for observation use, and that the State Department of Transportation would be willing to convert the well, provided the increased cost of conversion over sealing be paid by others. It is our understanding that the increase amounted to $10,000. The U.S. Geological Survey is very interested in converting this well to observation use. We contacted the State of Hawaii, Department of Land and Natural Resources, Division of Water and Land Development, and they also expressed a strong interest in retaining the well for observation purposes. Further discussion between USGS and DOWALD resulted in an agreement that the two agencies would share the increase ($10,000) equally.

Accordingly, the U.S. Geological Survey agrees to pay $5,000 to the Department of Transportation for the conversion of well 3-1851-22 to observation use.

Please be advised that the USGS funds in this amount will be available October 1, 1981.

We hope this arrangement meets with your approval.

Thank you very much for your cooperation.

Sincerely,

Benjamin L. Jones
District Chief

cc: Mr. Robert T. Chuck, Manager-Chief Engineer, Division of Water & Land Development
Mr. Kazu Hayashida, Manager & Chief Engineer, Board of Water Supply
October 30, 1981

State of Hawaii
Dept. of Transportation
727 Kakoi Street
Honolulu, Hawaii 96819

SUBJECT: Ala Moana Blvd. Sealing of Well at Ala Moana Mini-Park,
Contract No. 13083

Gentlemen:

We hope to cooperate and comply in any reasonable manner with the State
for subject project well sealing.

However, we feel that since alternate II was taken initially under the
agreement and direction of the Board of Water Supply, (the State's Engineer);
at which time all parties were committed to cup packers and or cement baskets,
we feel we should not take any added responsibility nor added liabilities for
the revised use of rock for sealing. The problems of bridging, voids, sounding,
etc. were discussed at our meeting on October 23, 1981.

We plan to halt work on or about November 5, 1981 to repair a crack on the
existing casing and wait for further information and direction.

Items to settle:
1. Top of well cap - without 3" valve?
2. Type of smooth stones (source if possible)
3. We hope that we can be reasonably compensated for any hardships and
   changes beyond what was initially expected at our pre-construction
   conference under which alternate II was accepted.

Very respectfully,

[Signature]

C. J. Kurisu
President

Copy: P & R Drilling
November 20, 1981

State of Hawaii
Dept. of Transportation
727 Kakoi Street
Honolulu, Hawaii 96819

Subject: Ala Moana Blvd. Sealing of Well at Ala Moana Mini-Park, Project No. 92A-03-81

Gentlemen:

We are encountering extreme difficulty with the existing galvanized water pipe in subject project well casing......which we had not expected prior to our bid......these pipes are not shown on the well plans. Apparently the condition of this well, with its many holes and leaks, makes drilling and cutting of these pipes much more difficult because all of the pipe cuttings can not be washed-out with natural water pressures.

We feel that if these pipes were not in the well, we would have completed this project within the original contract time of 18 working days. Therefore, we ask for a reasonable time extension and additional payment for our sub-contractor who has over-run significantly on his drilling time.

Very respectfully,

G. Y. Kimura
President

dk
copy: Roscoe Moss, Inc.
Route Slip
WATER RESOURCES & FLOOD CONTROL BRANCH

From: [Signature] Date: [Blank] File in: [Blank]

To: [Signature] Manabu Tagomori

- Albert Ching
- Daniel Lum
- George Matsumoto
- Nobu Kaneshiro
- Tom Nakama
- Paul Matsuo
- Edwin Sakoda
- Milton Yamasaki
- Randall Kurashige
- Neal Imada
- Joe Menor
- Mitchell Ohye
- Doris Hamada

Please
- See me
- Call
- Take action by [Blank]
- Review & comment
- Draft reply by [Blank]
- Type draft
- Type final
- Xerox [Blank] copies
- Mail

For: [Blank] Approval
- Signature
- Information

[Signature]

Robert Chuck  Jane Sakai  Bill Koyanagi
Takeo Fujii  Elsie Yonamine  Richard Jinnai
James Yoshimoto
**AUA MAKAI MINIRAD WELL**

**EXISTING PLAN**

**Elevation**

- **WELL**

- **6" casing**

- **10" casing**

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**Note:** Depth to water was 1.5' below top of well.

**Depth to obstruction was 712'** (measured by State).

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**Proposed Work**

- **701'**

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**Note:** First cement shall be no more than 60' until cement is set and cured.

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**-97' Top of No. 3 crushed rock**

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**-1050' 16\% End of casing**

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**-1,100' Silt bed of 3\% pipe**

---

**-1,150' Bottom of 3\% pipe**

---

**-1,190' Bottom of well**

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ALLUANA MINIPARK WELL

POSSIBLE LEAKAGE ZONES

Caliper
Flourometer

305'-307'
297'-301'
237'-240'
229'-230'
213'
182'-196'
100'-130'
95'-100'
12'-15'

High & Low
Low
High

Geologic log
6'-118' Coral
118'-153' Coral & blades

RPM
Mr. Robert T. Chuck  
Manager-Chief Engineer  
Water and Land  
Development Division  
Department of Land  
and Natural Resources  
State Office Building  
1151 Punchbowl Street  
Honolulu, Hawaii 96813

Attention Mr. Daniel Lum, Chief  
Geology-Hydrology Section

Dear Mr. Chuck:

Ala Moana Boulevard, Sealing of Well at  
Ala Moana Mini-Park, Project No. 92A-03-81

This is to inform you that the contractor was given  
notice to proceed as of September 14, 1981 and to complete  
the subject project on or before October 7, 1981.

We have received a purchase order of $5,000.00 from  
U. S. Geodetic Survey which presumably is your share of the  
additional $10,000.00 funds required in the conversion of  
the well for monitoring purposes. The remaining USGS share  
balance will be available after October 1, 1981.

The continuing cooperation of your Division is highly  
appreciated.

Very truly yours,

T. HARANO  
Chief  
Highways Division
Please
See me
Call
Take action by
Review & comment
Draft reply by
Type draft
Type final
Xerox ___ copies
Mail

For: ___ Approval
___ Signature
___ Information

Read copy to Char Grant
not costing our additional
I hope 12/7/8
November 18, 1981

MEMORANDUM FOR THE RECORD

FROM: Dan Lum

SUBJECT: Ala Moana Minipark Well

On November 9, 1981, 1:30 pm, a meeting was called by D.O.T. (Virgil Gonzales), and attended by Virgil, Charles Ewart (USGS), George Caruso (GeoEngineering Corp.) and myself. Subject covered were:

1. Rock-packing - George indicated that rounded stream gravel (Chatahoochie) was available at $25±/cu. ft. vs less than $1/cu. ft. of "basalt sand" specified in contract. We indicated that rounded pebbles gave a better chance of job completion, but that basalt sand specified was O.K., so George plans to use basalt sand.

2. Gate Valve: We indicated that PVC or bronzed-lined gate valve is O.K.

3. Manhole - We indicated that drawing by BWS is O.K. and that height of hollow tile box about 1 foot above existing ground is O.K.

4. Tremieing - We suggested that basalt sand be tremied through the grout pipe with a continuous circulation of water and that water might be obtained from the well itself. A screw-type pump with hopper feed was recommended. We suggested installation of grout pipe at the same time as the installation of the 3" PVC pipe, unstrapped. We indicated that installation of two grout pipes (set at 100 to 200 ft. depth difference) would give added assurance of job completion.

5. Soundings - DOWALD's fishing reel sounder with appropriate lead probe furnished by USGS would be made available to the contractor to determine depths of rock packing, sand, and cement grout.

6. Logging - DOWALD will log the well for ground water leakage, temperature, salinity and caliper.

[Signature]

DAN LUM

DL: ko

cc: C. Ewart
    V. Gonzales