

GENERAL CONSTRUCTION NOTES

1. The Standard Specifications of the Board of Water Supply with all amendments and the Standard Specifications for Public Works Construction of the County of Kauai, City and County of Honolulu, County of Maui and County of Hawaii, dated Sept. 1986, are referred to and hereby made a part of this Contract. They shall apply in all cases except when modified below or in the Special Provision.
2. Prior to construction the Contractor shall contact the various utility agencies for location of existing utilities within the project limits. The Contractor shall locate and protect all existing utilities whether or not shown on the plans. Any costs incurred by damages to existing utilities will be borne by the Contractor.
3. All shoulders shall be sodded in accordance with the Standard Specifications.
4. Any damaged pavement section shall be restored with a minimum of 2" Asphalt Concrete pavement and 8" base course. Damaged shoulders shall be restored to a condition equal to or better than existing.
5. Provide smooth riding connection to all existing A. C. pavement and driveways.
6. Maintain all existing drainage flow conditions.
7. All embankments for lot grading shall be compacted to 90% of maximum density.
8. The Contractor shall obtain a grading permit from the County of Kauai.
9. The Contractor shall notify the Department of Public Works five (5) calendar days prior to commencing any clearing, grubbing, or grading work.
10. The Contractor shall provide, install and maintain all necessary signs, lights, flares, barricades and protective devices for the protection, safety and convenience of the Public in accordance with the Manual on Uniform Traffic Control Devices for Streets and Highways, 1978.
11. All sign locations to be verified by Officer-in-Charge.
12. Cut slopes shall be 1-1/2 to 1 or flatter. Fill slopes shall be 2 to 1 of flatter.
13. When no details are shown, the Contractor shall use the Standard Details for Public Works Construction, County of Kauai, September 1984.
14. The finished subgrade upon which the base course is placed shall not be higher than the theoretical grade. The finished surface of the base course, where not controlled by structures, shall not vary more than 0.04 feet above or below the theoretical grade. The thickness of the finished base section shall not be less than 0.02 feet of the planned thickness at any point of the cross-section.
15. The finished surface of the asphaltic concrete or concrete pavement shall be within 0.02 feet above or below the theoretical grade. The thickness of the finished pavement shall not be less than 0.02 feet of the planned thickness at any point of the cross-section.
16. Repair of damaged pavement and shoulders shall be inspected and approved by the Department of Public Works. All unapproved work shall be considered unacceptable and shall be reworked and corrected as directed by the Department of Public Works.
17. A permit shall be obtained from the Department of Public Works, County of Kauai, before work on any portion of a public street or highway may begin.
18. Work on any public street area may be performed only between the hours of 8:00 a.m. to 3:30 p.m., Monday through Friday, unless otherwise permitted by the Department of Public Works, County of Kauai.
19. During working hours, the Contractor shall provide one lane in each direction for local traffic. During non-working hours, all trenches shall be covered with a safe non-skid bridging material.
20. Driveways shall be kept open unless owners of the property using these rights-of-way are otherwise provided for satisfactorily.
21. The Contractor shall reference, to the satisfaction of the Department of Public Works, all existing traffic signs, posts and pavement markings prior to the commencement of construction. The Contractor shall replace or repair all traffic signs, posts and pavement markings disturbed by his activities.
22. The Department of Public Works shall be contacted at 245-4751 one week prior to any signing or striping work.
23. Repair of damaged pavement and shoulders shall be inspected and approved by the D.P.W. All unapproved work shall be considered unacceptable and shall be reworked and corrected as directed by the D.P.W.

NOTES FOR ENVIRONMENTAL PROTECTION

1. The Contractor shall remove all silt and debris resulting from his work and deposited in drainage facilities, roadways and other areas. The cost incurred for any necessary remedial action by the Chief Engineer shall be payable by the Contractor.
2. The Contractor, at his own expense, shall provide effective measures for the control of fugitive dust emissions from the project and surrounding areas caused by his operations. These measures shall meet the requirements of State Administrative Rules, Department of Health, Air Pollution Control (11-60)
3. All grading operations shall be performed in conformance with the applicable provisions of the grading ordinance to prevent violation of the State Administrative Rules, Department of Health, Water Pollution Control and Water Quality Standards. (11-54, 11-55) due to erosion and run off to State Waters.
4. All slopes and exposed areas shall be sodded or planted immediately after the grading work has been completed.
5. Grub material, demolition wastes, and construction wastes shall be disposed of at an authorized site having a Department of Health Solid Waste Management Permit. Open burning is prohibited. The contractor shall inform the County Engineer of the location of the disposal sites. The disposal site must also fulfill the requirements of the grading ordinances.
6. All excess material shall be removed from the project site.
7. The project site shall be kept damp with water for seven (7) days a week. At the end of each day, the site shall be sufficiently dampened so that the site will remain moistened during the night.
8. The Contractor shall conduct his operations so that excavation, embankment and imported material shall be dampened with water during the grading operation.
9. Temporary vegetative cover shall be planted within a period of 30 calendar days after the site has been graded or bared of vegetation or if final grading of the site will be suspended for more than 30 calendar days. Temporary vegetative cover shall consist of 40 lbs. common rye grass seed per acre, 400 lbs. per acre of 10-10-10 or equivalent fertilizer worked into seed bed before planting. Planting and maintenance of grass shall conform to the "Standards Specifications for Public Works Construction", September 1986.
10. The Contractor shall maintain a suitable water system and dampen the project site during the grading/grubbing operations.
11. When applying for a grading permit, the Contractor shall submit plans, schedules, and/or written measures which provide for dust control. The dust control measures shall contain positive statements which require action or work that prevent dust problems. No permits will be issued unless the County is assured that dust problems will be minimized.

TEMPORARY DUST CONTROL

1. The graded or project site that is cleared of vegetation shall be damp for seven (7) days a week. At the end of each day, the site shall be sufficiently dampened so that the site will remain moistened during the night.
2. The Contractor shall conduct his operations so that excavation, embankment, and imported material shall be dampened to prevent dust problems.
3. In applying for a grading permit, the Contractor shall submit plans, schedules and/or written measures which provide for dust control. The dust control measures shall contain positive statements which require actions or work that prevent dust problems. No permits will be issued unless the County is assured that dust problems will be minimized.

TEMPORARY EROSION CONTROL MEASURES

1. Temporary vegetative cover shall be planted within a period of 30 calendar days after the site has been graded or bared of vegetation or if final grading of the site will be suspended for more than 30 calendar days.
2. Temporary vegetative cover shall consist of 40 lbs. common rye grass seed per acre, 400 lbs. per acre 10-10-10 or equivalent fertilizer worked into the seed bed before planting. Temporary sprinkler system is to be installed concurrently with all plantings. Planting and maintenance of grass shall conform to the "Standard Specifications for Public Works Construction", September, 1986.

PERMANENT EROSION CONTROL MEASURES (IF APPLICABLE)

1. The Contractor shall grass all exposed areas that have been constructed to final grades within a period of 30 calendar days.
2. The Contractor shall grass the entire project site, except paved areas, with bermuda grass. The grass shall be planted, fertilized, and maintained in accordance with the "Standard Specifications for Public Works Construction", dated September, 1986.
3. In Lieu of grass sprigs (note 2), the Contractor may use hydro-mulch with seeds

SPECIAL PROVISIONS FOR WATERWORKS CONSTRUCTION

The Water System Standards, Volume 1 and 2, 1985, adopted by the Department of Water, County of Kauai; Board of Water Supply, City and County of Honolulu; Department of Water Supply, County of Maui; and Department of Water Supply, County of Hawaii, for use in the design and construction of the departments' water system facilities, are referred to and hereby made a part of the Contract and shall apply in all cases except when modified below or as called for otherwise in the plans or in the proposal.

1. The Contractor shall submit the name of its authorized superintendent on the job
2. The Contractor shall arrange a pre-construction conference at least 10 days before construction and shall notify the Department at least three (3) working days prior to start of construction.
3. The Contractor/Developer shall submit the Contractor's bid tabulation for the itemized water facilities at the time of the scheduled pre-construction meeting.
4. The Contractor shall notify the Department of Water at least 24 hours prior to any pipe laying, backfilling, testing or chlorination to insure that inspectional services will be available.
5. In order to prevent unapproved materials from being ordered, the Contractor is invited to submit his material list description to the Department of Water for cross-check before ordering any materials from the supplier.
6. All fire hydrants shall be cleaned after installation and painted with two coats of paint. Paint shall be Dupont "Dolox High Visibility Yellow or Kem Lustre Enamel Light Yellow #F65Y12.
7. Prior to the connection of any pipeline installed under this job to the existing main of the Department of Water, the pipeline installed shall be thoroughly cleaned, flushed and chlorinated.

Cleaning shall be by the use of "pigs" introduced into the pipeline and run completely through all installed pipelines excluding branch lines for fire hydrants and service laterals. "Pigs" shall consist of a cylindrical piece of polyurethane foam with density range of 1.25 to 1.45 pounds per cubic foot with a diameter 2" larger than the pipe to be cleaned and 18" long.
8. Metalized tape shall be blue an imprinted with the following "CAUTION WATER LINE BELOW." Tape shall be two inches in width and shall be readily detectable with any standard pipe or cable locator. An acceptable metalized tape is Metalized Terra Tape, Type D, manufactured by the Griffolyn Company, Incorporated.

All metalized tape shall be installed a maximum of 24" inches and a minimum of 12" below finished grade. In no instance will the tape be installed in the roadway structure including select borrow, base course or wearing surface. The tape shall be installed on top of a compacted layer of trench backfill prior to the installation of a succeeding layer of trench backfill material and placed as close as practical to a position directly above the installed pipeline.

9. All excavation, backfilling and Pavement Restoration shall conform to the Standards Specifications for Public Works Construction, September 1986.
10. There shall be no physical connection between a public or private potable water supply system and a sewer, or appurtenance thereto which could permit the passage of any sewage of polluted water into the potable supply.

Sewers shall be laid at least 6 ft., horizontally, from any existing or proposed water main. Where conditions prevent a lateral separation of 6 ft., a sewer may be laid as close as 3 feet to the water main if it is laid in a separate trench and the elevation of the top (crown) of the sewer is at least 12 inches below the bottom (invert) of the water main.

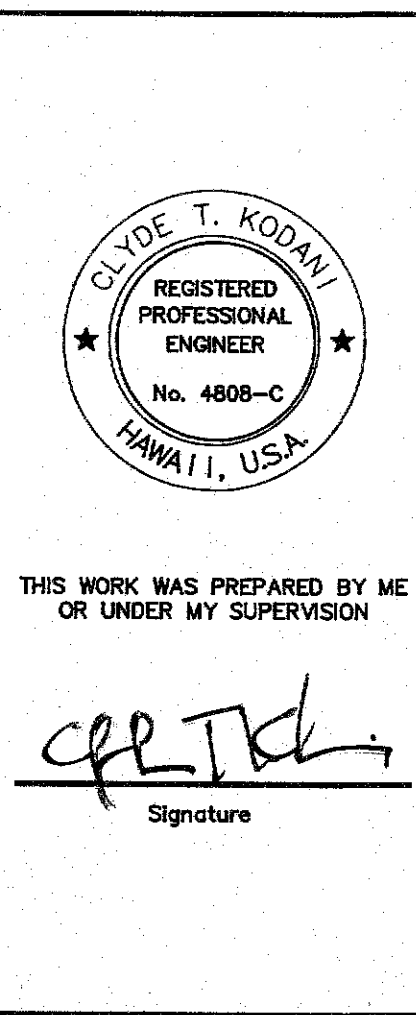
Whenever a sewer line crosses water mains, the sewer line must be jacketed with reinforced concrete for a minimum of 5 feet on both sides of the point of crossing if the sewer is above the water main and for 3 feet on both sides if the sewer line is below the water main. However, jacketing may be eliminated if the sewer line is below the water main and the separation is greater than 18 inches.

11. All materials (pipe, pipe lubricants, paints, sealants, form oil, concrete, admixtures, etc.) in direct contact with the portable water shall obtain National Sanitation Foundation (NSF) approvals. The contractor shall submit these approvals to the Department of Water for review and approval prior to its application.

APPROVED

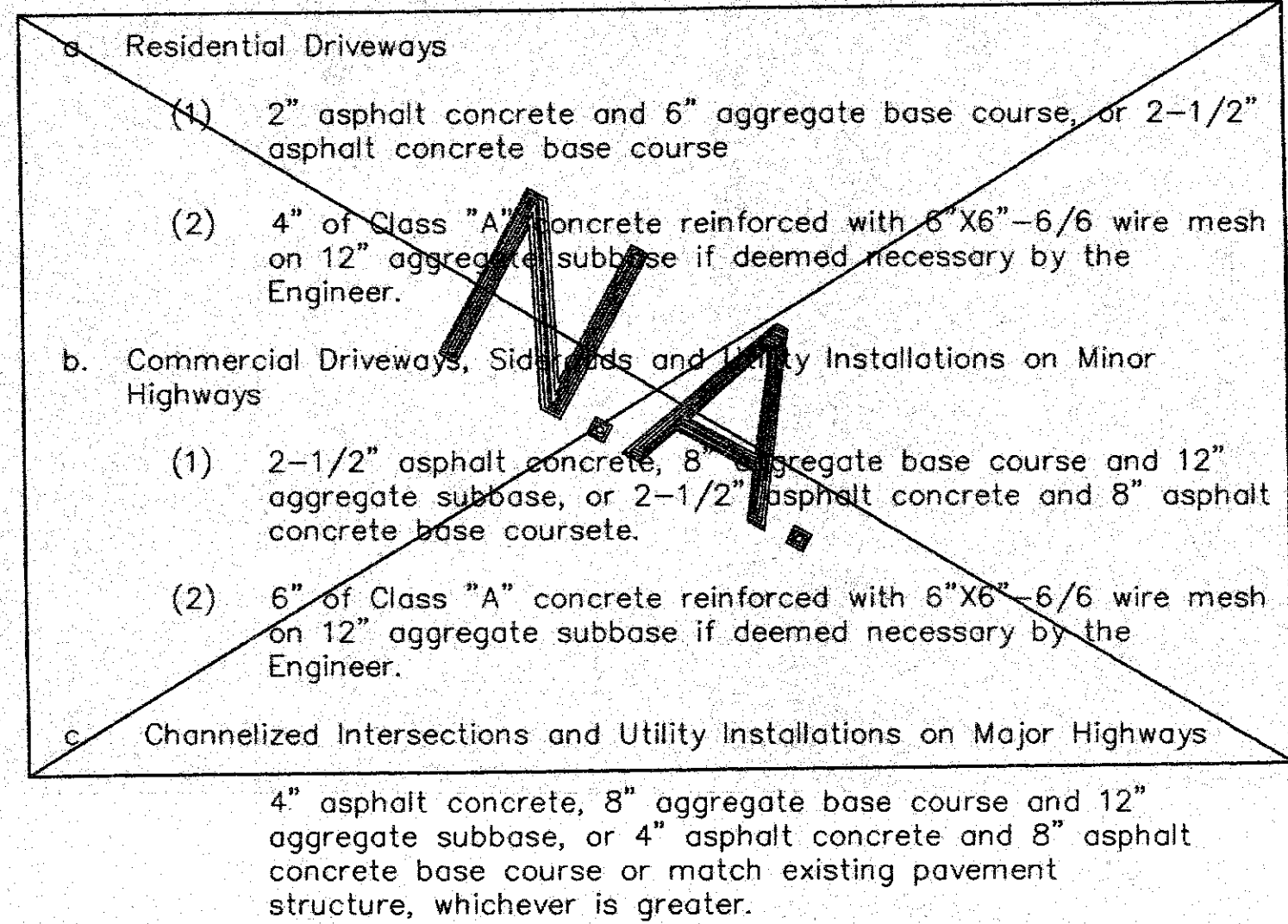
MANAGER AND CHIEF ENGINEER, DEPT. OF WATER
COUNTY OF KAUAI

DATE

					
	REVISION	DATE	DESCRIPTION	BY	APPROVED
	STATE OF HAWAII				
	HOUSING AND FINANCE DEVELOPMENT CORPORATION				
	HANAPEPE DRAINAGE IMPROVEMENT PROJECT				
GENERAL CONSTRUCTION NOTES					
KODANI AND ASSOCIATES, INC. LIHUE, KAUAI, HAWAII 96766					
DESIGNED BY:	DRAWN BY:	CHECKED BY:	SHEET 2 OF 20 SHEETS		

NOTES FOR CONSTRUCTION WITHIN STATE RIGHT-OF-WAY

1. The Contractor shall obtain a construction permit from the State's Highway District Engineer at 3060 Ewa Street, Lihue, Kauai, Hawaii, prior to commencement of work within State Highway right-of-way.
2. Construction and restoration of all existing highway facilities within State right-of-way shall be done in accordance with all applicable sections of the current Standard Specifications for Road and Bridge Construction, and the Specification for Installation of Miscellaneous Improvements Within State Highways, of the State Highways Division.
3. All lanes shall be open to traffic during the morning peak hours from 6:00 a.m. to 8:30 a.m. and during the afternoon peak hours from 3:30 p.m. to 5:30 p.m., and during off-work hours. Only one lane of Kaunualii Highway shall be traffic shall be closed at any other time.
4. The Contractor shall provide, install, and maintain all necessary signs, lights, flares, barricades, markers, cones, and other protective facilities and shall take all necessary precautions for the protection and for the convenience and safety of public traffic. All such protective facilities and precautions to be taken shall conform with the "Administrative Rules of Hawaii Governing the Use of Traffic Control Devices at Work Sites on or Adjacent to Public Streets and Highways" adopted by the Director of Transportation, and the current U.S. Federal Highway Administration "Manual on Uniform Traffic Control Devices for Streets and Highways, Part VI - Traffic Control for Highway Construction and Maintenance Operations". If lane closures are required during construction, a traffic control plan shall be incorporated into the construction plans and must be approved by the Division prior to the issuance of the permit.
5. The minimum pavement structure shall consist of:



6. No material and/or equipment shall be stockpiled or otherwise stored within highway right-of-way except at locations designated in writing and approved by the District Engineer.
7. Compaction tests shall be taken in accordance with the Specifications for Installation of Miscellaneous Improvements Within State Highways, as follows:
- a. Subbase: one compaction test(s) compacted to not less than 95% relative compaction every 300 lf.
- b. Base Course: one compaction test(s) compacted to not less than 95% relative compaction every 200 lf.
- c. one compaction test(s) for each 300 lf. lined feet of trench.
- A copy of the test results shall be submitted to the Engineer.
8. Prior to commencing trench excavation work, the Contractor shall take a profile along the new centerline of utility trench and that such information shall be used in the verification of restoring the roadway to its original condition. A copy of the profile shall be submitted to the District Engineer.
9. The Contractor shall be required to provide adequate, safe, non-skid bridging material over the trench, including shoring, when trenching in pavement areas to handle all types of vehicular traffic.
10. No trench shall be opened more than 100 feet in advance of the installed and tested pipe and/or ductline.
11. Longitudinal drainage along the highway shall be maintained.
12. Pavement striping shall be done by the Contractor.
13. Approval of permit construction plans shall be valid for a period of one year thereof from the date of notification of approval to the applicant. In the event construction does not commence within this one-year period, the applicant will be required to resubmit his construction plans for Division's review and approval.
14. All regulatory, guide and construction signs and barricades shall be of high intensity reflective sheeting.

15. All existing facilities within the State Right-of-way damaged by the Contractor's operations shall be immediately repaired to the satisfaction of the District Engineer at no cost to the State. On any unreasonable delay by the Contractor, the State shall repair such damages and bill the Contractor.
16. An advertisement will be required to be placed in the newspaper by the Contractor for any lane closure. The advertisement shall be made one (1) week before any lane closure and shall contain the following information:
- (a) Map of traffic pattern change limits;
- (b) Map to show lane closure;
- (c) Notice of starting and ending dates, times and duration; and
- (d) Explanation of lane closure, "Notice to Motorist".

Also the Contractor will be required to have any lane closure announced daily over the Radio two (2) days before the starting date until the work is completed.

Both advertisements in the newspaper and over the radio shall be paid for by the Contractor.

17. Construction work within the State right-of-way shall be phased as follows:
- (a) Phase I: Work area shown on sheet 16b.
- (b) Phase II: Work area shown on sheet 16a.

18. Contractor shall inform the state Permit office (241-3461) at least two (2) days prior to closing any lanes.
19. Driveway shall be kept open unless the owners of the property using these right-of-ways are otherwise provided for satisfactorily.
20. Where pedestrian walkways exist, they shall be maintained in passable condition or other facilities for pedestrians shall be provided. passage between walkways at intersections shall likewise be provided.
21. The contractor shall reference to the satisfaction of the District Engineer, all existing traffic signs, posts, and pavement markings prior to the commencement of construction. The contractor shall replace or repair all traffic signs, posts, and pavement markings distributed by his activities, unless directed otherwise by the District Engineer or his representative.
22. The contractor shall exercise care when excavating in this area. Damages to the existing facilities shall be immediately reported to the respective utility companies, City or State agency. The repair work shall be done at the Contractor's expense.
23. The contractor shall notify the Highway Lighting and Traffic Signal Supervisor, SDOT, three (3) working days prior to commencing work in this area. (241-3461)

NOTES FOR CONSTRUCTION IN COUNTY RIGHT-OF-WAY

1. A PERMIT SHALL BE OBTAINED FROM THE DEPARTMENT OF PUBLIC WORKS, COUNTY OF KAUAI BEFORE WORK ON ANY PORTION OF PUBLIC STREET OR HIGHWAY MAY BEGIN.
2. DRIVEWAYS SHALL BE KEPT OPEN UNLESS OWNERS OF THE PROPERTY USING THESE RIGHTS-OF-WAYS ARE OTHERWISE PROVIDED FOR SATISFACTORILY.
3. THE CONTRACTOR SHALL PROVIDE, INSTALL, MAINTAIN ALL NECESSARY SIGNS, LIGHTS, FLARES, BARRICADES, MARKERS, CONES AND OTHER PROTECTIVE FACILITIES AND SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION AND FOR THE CONVENIENCE AND SAFETY OF PUBLIC TRAFFIC. ALL SUCH PROTECTIVE FACILITIES, AND PRECAUTIONS TO BE TAKEN SHALL CONFORM WITH "RULES AND REGULATIONS GOVERNING THE USE OF TRAFFIC CONTROL DEVICES AT WORK SITES ON OR ADJACENT TO PUBLIC STREETS AND HIGHWAYS OF THE STATE OF HAWAII" AND U.S. FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" DATED 1988 AND ITS AMENDMENTS.
4. THE CONTRACTOR'S HOURS OF OPERATION SHALL BE BETWEEN 8:30 A.M. AND 3:00 P.M. UNLESS OTHERWISE APPROVED BY TH DEPARTMENT OF PUBLIC WORKS, COUNTY OF KAUAI. THE CONTRACTOR SHALL ALSO NOTIFY THE VARIOUS BUSINESSES AND PUBLIC THAT WILL BE AFFECTED BY THE ROAD BEING CLOSED.
5. EMERGENCY ORGANIZATIONS, SUCH AS POLICE, FIRE AND AMBULANCE SERVICES SHALL BE NOTIFIED PRIOR TO THE START OF ANY WORK. THIS WILL ALLOW THEM TO ADJUST THEIR ROUTES AND WORK SCHEDULES ACCORDINGLY.
6. THE CONTRACTOR SHALL REFERENCE, TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS, ALL EXISTING TRAFFIC SIGNS, POSTS, AND PAVEMENT MARKINGS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNS, POSTS, AND PAVEMENT MARKINGS DISTURBED BY HIS ACTIVITIES.
7. THE DEPARTMENT OF PUBLIC WORKS SHALL BE CONTACTED AT 241-6616 ONE WEEK PRIOR TO ANY SIGNING AND STRIPING WORK.
8. THE CONTRACTOR SHALL PROVIDE THE DEPARTMENT OF PUBLIC WORKS WITH A COPY OF THE FINAL AS-BUILT TRACINGS FOR THE DRAINAGE IMPROVEMENT WORK.
9. AN ADVERTISEMENT WILL BE REQUIRED TO BE PLACED IN THE NEWSPAPER BY THE CONTRACTOR FOR THE TEMPORARY ROAD CLOSURE. THE ADVERTISEMENT SHALL BE MADE ONE (1) WEEK BEFORE THE CLOSURE AND SHALL CONTAIN THE FOLLOWING INFORMATION.
- (A) MAP OF TRAFFIC CHANGE LIMITS;
- (B) MAP TO SHOW LANE CLOSURE;
- (C) NOTICE OF STARTING AND ENDING DATES, TIMES, AND DURATION; AND
- (D) EXPLANATION OF LANE CLOSURE, "NOTICE TO MOTORIST" AS FOLLOWS:
- (1) EAST BOUND MOTORIST ON HANAPEPE ROAD WISHING TO TURN LEFT INTO MOI ROAD WILL NEED TO YIELD TO NORTH BOUND TRAFFIC ON MOI ROAD.
- (2) EAST BOUND MOTORIST CONTINUING ON HANAPEPE ROAD WILL NEED TO YIELD TO NORTH BOUND MOTORIST ON MOI ROAD.

ALSO THE CONTRACTOR WILL BE REQUIRED TO HAVE THE ROAD CLOSURE ANNOUNCED DAILY OVER THE RADIO TWO (2) DAYS BEFORE THE STARTING DATE UNTIL THE WORK IS COMPLETED. BOTH ADVERTISEMENTS IN THE NEWSPAPER AND OVER THE RADIO SHALL BE PAID BY THE CONTRACTOR.

<p>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION</p> <p><i>CPL TKL</i></p> <p>Signature</p> <p>May 24, 1995</p>					
	STATE OF HAWAII				
	HOUSING FINANCE AND DEVELOPMENT CORPORATION				
	HANAPEPE DRAINAGE IMPROVEMENT PROJECT				
STATE HIGHWAY CONSTRUCTION NOTES					
KODANI AND ASSOCIATES, INC.					
LIHUE, KAUAI, HAWAII 96766					
DESIGNED BY:	DRAWN BY:	CHECKED BY:	SHEET <u>3</u> OF <u>22</u> SHEETS		