COUNTY OF KAUA'I

DEPARTMENT OF PUBLIC WORKS

BUILDING DIVISION

LIHUE, HAWAII

PLANS FOR

HARDY STREET IMPROVEMENTS

DESIGN-BUILD

KUHIO HIGHWAY TO RICE STREET

FEDERAL AID PROJECT NO. STP 05720(1)

DISTRICT OF LIHUE

ISLAND OF KAUA'I

LIMITS OF PROJECT

PROJECT NO. STP 05720(1)

LENGTH OF PROJECT = 0.68 MILES

LAYOUT PLAN

NOT TO SCALE

100% SUBMITTAL
NOTES:
1. Hatched areas at the intersections of Kuhio Highway / Hardy Street, Elwa Street / Hardy Street, and along Hardy Street are not included for construction. Final design and approval is still pending. Approved design and plans to be provided as part of change order.
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<th>STANDARD PLANS SUMMARY</th>
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<td><strong>STANDARD PLAN NO.</strong></td>
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Notes: Standard plans applicable to this project are indicated by "**" next to the standard plan no. (for example D-1)
GENERAL CONSTRUCTION NOTES:

I. All construction work except as noted in the plans, is to be in accordance with the publications "Hawaii Standard Specifications for Road and Bridge Construction, 2005" and its amendments and "Standard Details for Public Works Construction, September 1998", as amended by the Department of Public Works, City and County of Honolulu, and The Counties of Kauai, Maui and Hawaii. The Standard Details are available at The County of Kauai's clerk's office.

II. No grading between 7 p.m. to 7 a.m. on any given day or on Saturdays, Sundays and holidays without written permission from the county engineer and the State Department of Health.

III. Contractor to notify Public Works Department five (5) business days prior to commencing any grading work. When completed and ready for Final Inspection notify Public Works Department Inspection section.

IV. Construction plans are valid for a period of one year from the date of approval. If construction does not commence within this one-year time frame from the date of approval, the construction plans shall be resubmitted to all approving agencies for review, approval and rerecognition of the plans.

V. All grading, grubbling and stockpiling work shall be performed in accordance with County of Kauai Ordinance No. 868.

VI. 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 County Engineer shall be payable by the Contractor.

VII. During cleaning operations, the contractor shall supply a water truck for dust control purposes until vegetation has re-established itself. Excess water, including silt and dirt shall not be allowed to run-off the property.

VIII. Best Management Practices (BMPs) shall be employed at all times to the maximum extent practicable to prevent damage by sedimentation, erosion or dust to streams, watercourses, natural areas and property of others.

IX. Surveys shall be done under the supervision of a Land Surveyor licensed in the State of Hawaii.

X. Topographical Survey was completed on December 2003 by Esaki Surveying and Mapping, Inc.

XI. Prior to starting any excavation activities, the Contractor shall contact the Hawai'i One Call Center at 1-866-423-7287.

NOTES FOR WORK WITHIN THE COUNTY RIGHT-OF-WAY:

I. All damaged pavement shall be restored to its original condition in accordance with County of Kauai, "Hawaii Standard Specifications for Road and Bridge Construction (2005)" and its Amendments and the "Standard Details for Public Works Construction, September 1998", as amended by the Department for Public Works, City and County of Honolulu, and the Counties of Kauai, Maui and Hawaii, with 3" minimum A.C. pavement and 10" aggregate base course (Unil Street to 225 minimum A.C. pavement and 8" aggregate base course (Unil Street to Rice Street).

II. 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 the 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 adopted by the Highway Safety Coordinator and U.S. Federal Highway Administration Manual on Uniform Traffic Control Devices for Streets and Highways dated 2009 and its amendments.

III. The Contractor shall, whenever necessary, properly shield and brace all excavations to render it secure and shall remove all such sheeting and bracing before completion of the backfill for water mains. The minimum cover requirements (from top of pipe to finished grade over pipe) is three (3) feet.

IV. A. Permit shall be obtained by the Contractor from the Department of Public Works, County of Kauai before work on any portion of public street or highway may begin. Permit fees shall be at the contractor's expense when applicable to project.

B. Driveways shall be kept open unless owners of the building lots using the right-of-way object thereto.

C. All work including 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, at the Contractor's expense.

D. Damaged shoulders shall be restored to a condition equal to or better than existing condition.

E. Work within the County right-of-way area may be performed only between the hours of 6:00 a.m. to 3:00 p.m. Monday through Friday except on holidays recognized by the County of Kauai, unless otherwise permitted in writing by the County Engineer.

F. During non-working hours, all trenches shall be covered with a safe non-skid bridging material and lanes shall be opened to public vehicular and pedestrian traffic. See Traffic Management Plans.

G. No material and/or equipment shall be stockpiled or otherwise stored within County right-of-way except at locations designated in writing and approved by the County Engineer.

H. The Contractor shall conduct his operations so as to offer the least possible obstructions and inconvenience to the public and he shall have under construction no greater length or amount of work that he can execute properly with due regard to the rights of the public.

I. All existing drainage flow conditions shall be maintained.

J. The Contractor shall retain the services of a Geotechnical Engineer for quantity control. Certification from the Geotechnical Engineer shall be submitted to the Department of Public Works at the completion of the construction work. The Geotechnical Engineer shall certify that the construction work meets "Standard Specifications". The Geotechnical Engineer shall also submit test results as requested by the Department of Public Works.

K. The Contractor shall hold a pre-construction meeting with the construction/design section of the Department of Public Works before commencing any work.

L. The Contractor shall exercise extreme caution to preserve benchmarks (survey monuments) whenever the center of a survey monument is less than three (3) feet from the edge of construction. The Contractor shall retain a licensed surveyor to reference the location of said survey monument.

M. Benches that are disturbed or destroyed shall be restored under a licensed land surveyor's direction. Copies of filed notes, descriptions and new values of the new bench mark shall be sent to the Department of Public Works Survey Section for review and approval prior to final acceptance of the Project.

N. The Contractor shall be responsible for all overtime or night work payments for County's staff and inspection personnel including consultants when the contract requires overtime or night work to be performed, or directs the contractor to work additional shifts or overtime for County's convenience.

O. If system conditions require non-emergency nighttime work during the annual seabird fall season (September 15 through December 15), use of lighting shall be restricted between 9:00pm to 4:30am. If lighting of the work area is required in such situation, all light shall be shielded (minimum light spread towards the sky) and directed downwards to the maximum extent practicable. Minimum requirements for lighting by Hiohl and Osha shall be provided and assured by the Contractor. The Contractor shall train all employees working at night (including those retained by the Contractor) in any safety precautions. Any downed birds and shall have appropriate equipment as approved by our sharewater (SDS) on site to hold and transport any retrieved birds to an SDS facility. This requirement does not allow lighting as may be restricted by other Government Agencies.
WATER CONSTRUCTION NOTES:

1. Unless otherwise specified, all materials and construction of water facilities and appurtenances shall be in accordance with the ‘Water System Standards, 2002’ as adopted by the Department of Water, County of Kalawao, including all subsequent amendments and additions.

2. The contractor shall arrange a pre-construction conference at least ten (10) calendar days before construction and shall notify the Department of Water at least three (3) working days prior to the start of construction.

3. The contractor shall submit the names and telephone numbers of its authorized job superintendent and at least three (3) additional persons to contact in case of an emergency during non-working hours.

4. The contractor shall notify the Department of Water at least 24 hours prior to any trenching, pipe laying, backfilling, testing or disconnection activities to ensure that inspection services will be available.

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

6. The location of existing water mains and appurtenances shown on the plans are approximate only. The contractor shall verify the exact locations in the field. Excavation around any existing water main shall be done by hand.

7. The contractor shall provide unobstructed access to existing hydrants, valves and water meters at all times.

8. The contractor shall secure all excavations in accordance with OSHA regulations.

9. There shall be no physical connection between a public or private potable water system and a non-potable water system, sewer, or appurtenance thereto which could permit the passage of any sewage or polluted water into the potable water supply.

10. Trench excavation, backfilling in lifts, and repaving shall conform to the “Hawaii Standard Specifications for Road and Bridge Construction, 2005” as amended.

11. Warning tape shall be in accordance with Division 200, Section 212.28 of the Water System Standards. The warning tape shall be four mil thick, non-metallic, acid and alkali resistant polyethylene and 6-inches wide with minimum strength of 1750 psi lengthwise and 1500 psi crosswise. Tape color shall be ‘safety precaution blue’ and shall bear a continuous printed inscription “Caution water line buried below.” Inscription shall be 2-inches high, black text.

12. All hydrants shall receive a minimum SSPC SP3 surface preparation and coated in accordance with Division 200, Section 206.03 of the “Water System Standards.”

13. Unless otherwise directed, prior to the connection of any pipelines and/or laterals to the existing mains, the pipelines/ laterals installed shall be cleaned, pressure tested, chlorinated, flushed, and sampled in accordance with Division 300, Sections 302.21 to 302.29 of the “Water System Standards.”

Water samples shall be tested for total coliform by a laboratory certified by the State of Hawaii to perform coliform analysis. Presence of coliform bacteria is unacceptable.

In addition to the test for coliforms, a separate test for Heterotrophic Plate Count (HPC) shall be conducted. The HPC count shall be less than 300 cfu/ml.

Prior to chlorination, a water chlorination and sanitation contractor with a C-STD license shall submit a chlorination plan with water sources, injection points, sampling points and procedure clearly defined for approval by the DW.

The tested pipelines and/or laterals must be connected to the existing DW system within 14 calendar days of pulling the first disconnection sample tested by a certified laboratory. The Department of Water will require the contractor to redo the cleaning, pressure testing, and disconnection of the pipelines and/or laterals at the contractor’s expense if the connection is not completed within these 14 calendar days.

14. Polyurethane foam “pipe” shall be “pushed” through the length of the installed pipeline using pressurized water.

15. All connections shall be scheduled in coordination with the Department of Water.

(a) An advance deposit is required for operating valves, flushing lines and notifying consumers affected by a water shutdown during connections. The contractor will be charged the actual cost.

(b) The contractor shall place the deposit prior to scheduling the connection date.

(c) Connections shall be scheduled on Tuesdays through Thursdays. No connections shall be scheduled on Mondays, Fridays, weekends, and holidays.

(d) All materials shall be on hand and approved by the Engineer prior to scheduling the connection date.

(e) Pumps used to dewater the connection area shall be operated in the presence of the Engineer prior to scheduling the connection date.

(f) All connections shall be performed in the presence of the Engineer.

16. In order to prevent damage to the polyethylene excavation from excessive handling, the polywrap shall be installed around the base of the ductile iron pipe at its final location along the trenchline. The polyethylene wrapped pipe shall be lifted using a fabric type sling or a sufficiently padded cable or chain that is labeled "use caution—do not damage." A “Caution do not damage” label shall be attached to the pipe to prevent damage to the polyethylene wrapping.

17. The contractor shall take all necessary compaction tests while the waterline trench is being backfilled and while the subbase/basecourse is being placed. If the test results indicate that additional compaction is required, the corrective work shall be completed before any additional trench excavation or placing of subbase/basecourse is allowed.

The contractor shall retain the services of a registered geotechnical engineer for quality control. The compaction test results shall be certified by the geotechnical engineer and submitted to the Department of Water, State Highways Division (for work done within State R/W) and the Department of Public Works (for work done within County R/W). The geotechnical engineer shall certify that the compaction tests meet the requirements of the current Standard Specifications for Road and Bridge Construction.

18. The contractor shall connect all existing consumer piping to the new service laterals. The Department of Water will transfer the existing water meters only.

19. All fittings shall be mechanical Joint (MJ) at each end unless otherwise noted. "Megapol" retainer glands shall be used with all mechanical joint fittings and valves used in connecting new water mains to existing water mains unless otherwise noted.

20. All water valves that will be abandoned in place shall be placed in the “Closed” position, remove top section of valve box and core out valve box slab. Fill remainder of valve box with concrete, place backfill and repair pavement section to applicable State or County standards. Backfill to finish grade in road shoulder area.

21. The contractor shall obtain all applicable Department of Health permits prior to the start of construction. Permits include, but are not limited to, National Pollution Discharge Elimination System (NPDES) permits for storm water, hydrostatic test, dewatering, and for construction activities, including clearing, grading, and excavation, that result in the disturbance of equal to or greater than one (1) acre of total land area.

The contractor shall be responsible for the proper disposal of storm water discharges and effluent associated with construction activities including hydrating and disconnection of operational public health and safety in accordance with applicable Department of Health requirements. All permits and licenses for storm water and construction water disposal, including all applications, charges, fees, and taxes, are the responsibility of the contractor.

22. The contractor is responsible for dewatering trench as necessary where groundwater is encountered. All associated costs for dewatering shall be borne by the contractor.

23. The use of known sewer pump trucks is prohibited for DWI projects for any use, including but not limited to dewatering and testing of new facilities.
WATER CONSTRUCTION NOTES (Cont'd):

24. The contractor shall verify outside diameter of all existing asbestos-cement (AC) waterlines to be connected. Contractor shall verify use of proper gaskets prior to connection. AC pipe and gasket information shall be submitted to Engineer for approval.

25. All connections to existing AC pipe shall be at the nearest AC pipe joint. AC pipe shall be removed by entire length(s) to facilitate the connection. Cutting of AC pipe is prohibited.

26. The contractor shall follow all applicable OSHA, HIOSH, and federal regulations in handling and disposal of asbestos-cement pipe. Disposal of the pipe shall be at an approved asbestos material disposal site.

27. All waterworks brass fittings shall be in compliance with the Amended Section 1107 of Safe Drinking Water Act (SDWA) which takes effect on January 4, 2014. The amendment includes a change to the definition of "lead-free" by reducing lead content from 8% to a weighted average of not more than 0.25% in the wetted surface material. All waterworks brass fittings installed for potable water service on January 4, 2014 and beyond shall conform to the amended definition of "lead-free."

As indicated in Section 211 of Water System Standards - Brass Products, all brass fittings shall conform to NSF Standard 61 and Section 1111 of the Safe Drinking Water Act (SDWA). In addition, all brass fittings shall conform to NSF Standard 372.

DOW SPECIAL NOTES:

Certification of Completion for these water system facilities will not be issued until:

1. All water improvements are complete and dedicated to the Department of Water.

2. As-built drawings are submitted to the Department of Water.

3. Final cost breakdown for the water improvements are submitted and approved by the Department of Water. The owner shall certify costs.

4. Roadway and pipeline easements are conveyed to the Department of Water, if applicable.

5. Payment of all applicable fees for the development have been received by the Department of Water.

6. Other required conditions are completed, if applicable.

HISTORICAL PRESERVATION NOTES:

1. Should historic remains such as artifacts, burials, concentrations of shell or charcoal be encountered during construction activities, work shall cease immediately in the immediate vicinity of the find and the find shall be protected from further damage. The Contractor shall cordoon off the area and immediately notify the Planning Department at (808) 248-6050 and State Historic Preservation Division at (808) 692-9095, which will assess the significance of the find and recommend the appropriate mitigation measures if necessary. If human burials are found, the Contractor shall immediately notify the County of Maui Police Department at (808) 241-1111.

PAVEMENT AND TRENCH RESTORATION NOTES:

1. Trench repairing shall be a minimum 8-inches thick base course and 2-inches minimum asphalt concrete (State Mix IV). If the existing pavement structure is greater in thickness and quality, the repairing shall match the existing pavement structure.

2. Pavement resurfacing work shall include 2-inch thickness of existing AC, to be cold planned and construction of minimum of 2-inch of new AC. (State Mix V) layer.

3. Road restoration for trenches aligned along the longitudinal direction shall include pavement resurfacing as follows:

A. Roads with pavement widths of less than 12 feet wide shall be repaired the entire width.

B. Roadways between 12 feet and 20 feet wide with no striping shall be paved for half of the roadway.

C. Roadways with no striping and pavement widths greater than 28 feet shall have a 12-foot wide travel way resurfaced.

4. Road restoration for trenches aligned perpendicular to the roadway shall include road resurfacing for a minimum of 6 feet beyond the trench edges.

5. The entire road intersection shall be resurfaced whenever trench repairing is required within any portion of an intersection. The limits of resurfacing shall be the curve returns of the roadways of the intersections.

6. All existing pavement striping disturbed by this project shall be restored. The striping materials shall be thermoplastic tape or thermoplastic extrusion. Painting is not acceptable.

7. The limits of road restoration work may be revised by the engineering division of the County Department of Public Works during processing of road permits for this project.
NOTES FOR CONSTRUCTION WITHIN STATE RIGHT-OF-WAY

1. The Contractor shall obtain a Construction Permit from the State’s Highway District Engineer at 770 Hauula Street, Hauula, Hawaii prior to commencement of work within State Highway right-of-way (Ph. 808-241-3000).

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 “Hawaii Standard Specifications for Road and Bridge Construction 2005,” and the “Specification for Installation of Miscellaneous Improvements within State Highways,” of the State Highway Division.

3. All lanes shall be open to traffic during the morning peak hours from 6:30 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.

4. The Contractor shall provide, install, and maintain all necessary signs, light, flares, barricades, markers, cones, and other protective facilities and shall take all necessary precautions for the protection and for the convenience and safety of all such protective facilities 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 2009. 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:
   a. Commercial driveways, side roads and utility installations on minor highways
      (1) 2 1/2" asphalt concrete, 8" aggregate base course and 12" aggregate base subbase, or 2" asphalt concrete and 8" aggregate base course.
      (2) 8" of class “A” concrete reinforced with 6'x6" - 2%2"x5" wire mesh on 12" aggregate base, if deemed necessary by the Engineer.

6. No material and/or equipment shall be stockpiled or otherwise stored within highway rights-of-way, except at locations designated in writing and approved by the District Engineer. If use of location is approved by the engineer, the contractor shall obtain a permit to use the property within the highway right of way from the State Highways Division, Ph. 241-3000.

7. Compaction tests shall be taken in accordance with the specifications for installation of miscellaneous improvements within state highways, as follows:
   a. subbase one (1) compaction test for every 300 lineal feet of travel way.
   b. base course one (1) compaction test for every 300 lineal feet of travel way.
   c. one (1) compaction test for each 300 lineal feet of travel way.

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 sharing, when trenching in pavement areas to handle all types of vehicular traffic.

10. No trench shall be opened more than 200 feet in advance of the installed and tested pipe and/or ductile.

11. Longitudinal drainage along the highway shall be maintained at all times.

12. Pavement striping and marking shall be done by Contractor at no cost to the State.

13. Approval of permit construction plans shall be valid for a period of one (1) year from the date of notification of approval to the applicant. In the event the permit construction does not commence within this one year period, the applicant will be required to resubmit his construction plans for District’s review and approval.

14. All regulatory, guide and construction signs and barricades shall be of high intensity reflective sheeting.

15. Contractor shall inform the State Highways Office (Ph. 808-241-3000) at least 2 days prior to closing any lanes.

16. The Contractor shall reference 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 disturbed by his activities unless directed otherwise by the District Engineer or his Representative.

17. The Contractor shall exercise care when excavating in areas with utilities, streetlights, signals, etc. Damage to these existing facilities shall be immediately reported to the respective utility companies, county, or state agency. The repair work shall be done at the Contractor’s expense.

18. The permit to perform work upon State Highways may be revoked because of default in any of the following:
   a. Work performed before or after permitted hours.
   b. Failure to maintain roadway surfaces in a smooth and safe condition.
   c. Failure to clear up construction debris generated from project work.
   d. Failure to provide proper traffic control.
   e. Failure to replace damaged pavement marking and signs.

19. Where applicable, the Contractor shall comply with the traffic control plans and sign spacing table.

20. Contractor shall implement Best Management Practices (BMP) for erosion and silt control for work within the State ROW.

21. Prior to construction, the contractor shall contact the various agencies for the 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. Contractor shall request toning of utilities from One-Call Center, phone 1-866-423-7281. The Contractor shall also call the County of Kauai Department of Water, Phone 808-245-5411 and The Wastewater Division, Phone 808-244-6624 for toning waterlines and sewers accordingly.

22. Work within the State right of way may be performed from 7:00 a.m. Monday to 5:30 p.m. Friday, except State holidays, unless otherwise permitted by the District Engineer.

23. The Contractor shall notify the State Highways Division, Kauai District Office, Area Engineer three (3) days prior to commencing work.

24. Unless otherwise requested in writing by the Contractor and approved in writing by the District Engineer, use of steel plates within the travel way will not be permitted at any time. When permitted, only one steel plate will be used within the travel way at any time.

25. Any work that disrupts, damages, or destroys existing traffic loop detectors shall be followed with re-establishment of the traffic loops before reopening the lanes to traffic. The Contractor may also use traffic flow monitored loop detectors to replace any loops taken out of service. The cost for the temporary detectors shall be considered incidental to pavement work.

26. Night work shall not be done during the period from September 15 to December 31 of each year.

27. All workers within the state right of way who are exposed to either vehicles using the roadway or to construction equipment shall wear high visibility safety apparel that meets the performance class 2 or 3 requirements of ANSI/SEA 107-2004. "Workers" is defined as people on foot whose clothes place them within the state right-of-way such as but not limited to construction and maintenance forces, equipment operators, survey crews, utility crews, responders to incidents (e.g. EMT and Firemen) and law enforcement personnel directing traffic, investigating accidents, and handling lane closures and obstructed roadways.

28. This work was prepared by STATE OF HAWAI‘I and will be undergoing aili inspection. A LEVEL II INSPECTION WILL BE UNDERWAY IN AUGUST 2020.

CONSTRUCTION NOTES
HARDY STREET IMPROVEMENTS
Federal Aid Project No. STP 0572001

DEPARTMENT OF PUBLIC WORKS
COUNTY OF KA‘UAN

APPROVED:

CHIEF ENGINEER

DEPARTMENT OF PUBLIC WORKS
COUNTY OF KA‘UAN

CONSTRUCTION NOTES
WATER POLLUTION AND EROSION CONTROL NOTES

A. GENERAL:

1. See Section 209 of the Hawaii Standard Specifications for Road and Bridge Construction dated 2006 and applicable Special Provisions. Section 209 describes but is not limited to the following requirements for the water pollution and erosion control conference with the Engineer; construction specifications, method of measurements and basis of payment.

2. Follow the guidelines in the current HDOH Construction Best Management Practices Field Manual for developing, installing and maintaining the Best Management Practices (BMP) for the project. For an conflicting requirements between the Manual and applicable contract documents, the contract documents will govern. Should a requirement not be clearly described within the applicable bid documents, the Contractor shall notify the Engineer immediately for interpretation. For the purpose of clarification under Note 4, "applicable contract documents" include the construction plans, standard specifications, Special Provisions, Permits, and the Storm Water Pollution Prevention Plan (SWPPP) when applicable.

3. Follow the guidelines in the Honolulu City County "Rules Relating to Soil Erosion Standards and Guidelines" along with applicable Soil Erosion Guidelines for projects in Kauai.

4. The Engineer may assess the liquidated damages of up to $27,500 for non-compliance of each BMP requirement and each requirement stated in Section 209, for every day of non-compliance. There is no maximum limit on the amount assessed per day.

5. The County Engineer may deduct from the progress payment for all citations received by the Department for non-compliance, or the contractor shall reimburse the state and/or county for the full amount of the outstanding cost incurred by the state and/or county.

6. If necessary, install a rain gage prior to any field work including the installation of any site-specific best management practices. The rain gage shall have a tolerance of at least 0.05 inches of rainfall. Install the rain gage on the project site in an area that will not deter rainfall from entering the gage opening. Do not install in a location where rainwater may splash into rain gage. The rain gage installation shall be stable and plumb. Do not begin field work until the rain gage is installed and site-specific best management practices are in-place.

B. WASTE DISPOSAL:

1. Waste Materials

Collect and store all waste materials in a securely lidded metal dumpster or roll off container with cover to keep rain out or loss of waste during windy conditions. The dumpster shall meet all local and State solid waste management regulations. Dispose all trash and construction debris from the site in the dumpster. Empty the dumpster weekly or when the container is two-thirds full, whichever is sooner. Do not bury construction waste materials onsite. The Contractor's supervisory personnel shall be instructed regarding the correct procedure for waste disposal. Post notices stating these procedures in the office trailer, on a weatherproof bulletin board, or other accessible location acceptable to the Engineer. The Contractor shall be responsible for seeing that these procedures are followed. Submit the Solid Waste Disposal Form for Construction Sites to the Engineer within 30 calendar days of contract execution. Provide a copy of all the disposal receipts from the facility permitted by the Department of Health to receive solid waste to the Engineer monthly. This shall also include documentation from any intermediary facility where solid waste is handled or processed.

2. Hazardous Waste

Dispose all hazardous waste materials in the manner specified by local or State regulations and by the manufacturer. The Contractor's site personnel shall be instructed in these practices and shall be responsible for seeing that these practices are followed.

3. Sanitary Waste

Collect all sanitary waste from the portable units a minimum of once per week, or as required. Position sanitary waste facilities where they are secure and will not be trampled over or knocked down.

C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PROCEDURES

1. For projects with an NPDES Permit for Construction Activities, inspect at the following intervals. For construction areas discharging to waters not impaired for nutrient or sediments, inspect all control measures weekly. Inspections are only required during the projects normal working hours. The discharge point water classification may be found in the SWPPP.

2. All measures shall be maintained in good working order. If repair is necessary, it shall be initiated within 24 hours after the inspection.

3. Maintain all erosion and sediment control measures in good working order. If repair is necessary, initiate repair immediately and complete by the close of the next working day. If repair does not require significant repairs or replacements or if the problem can be corrected through routine maintenance. When installation of a new erosion or sediment control or significant repair is needed, install the new or modified control or complete the repair no later than 7 calendar days from the time of discovery. "Immediately" means the Contractor shall take all reasonable measures to minimize or prevent discharge of pollutants until a permanent solution is installed that is in good working order and operational. If a problem is identified at a time in the day in which it is too late to initiate repair, initiation of repair shall begin on the following working day.

4. Remove built-up sediment from silt fence when it has reached one-third the height of the fence. Remove sediment from other perimeter sediment control devices when it has reached one-half the height of the device.

5. Inspect silt screen or fence for depth of sediment, tears, to verify that the fabric is securely attached to the fence posts or concrete slab and to verify that the fence posts are firmly in the ground. Inspect and verify the bottom of the silt screen is buried a minimum of 6 inches below the existing ground.

6. Inspect temporary and permanent seeding and planting for bare spots, washouts and healthy growth.

7. Complete and submit to the engineer a project inspection report within 24 hours after each inspection.

8. Provide a stabilized construction entrance at all points of exit onto paved roads to reduce vehicle tracking. Include stabilized construction entrance in the Water Pollution and Erosion Control submittals. Minimum length shall be 50 feet. Minimum width shall be 30 feet. Minimum depth shall be 12 inches as recommended by the soils engineer and underneath geotextile fabric. Clear the paved street adjacent to the site entrance daily or as required to remove any excess mud, clay, or loose material that could track onto the site. Clear any trash and debris, including any construction debris from the construction site and remove. Silt fence, both sides of streets, or other paved area by the end of the day in which track-out occurs.

9. Include designated Concrete Washout Areas in the Water Pollution, Dust, and Erosion Control submittals.

10. Submit the name of a specific individual designated responsible for inspections, maintenance and repair activities and filling out the inspection and maintenance report.

11. Personnel selected for the inspection and maintenance activities shall receive training from the Contractor. They shall be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.

12. Contains, remove, and dispose of slurry generated from saw cutting of pavement in accordance with approved BMP practices. Pay attention to confinement, removal, and disposal of slurry shall be considered incidental to the various construction items.
WATER POLLUTION AND EROSION CONTROL NOTES (Cont.)

13. For projects with an NPDES Permit for Construction Activities, immediately initiate stabilizing exposed soil areas upon completion of earth-disturbing activities for areas where earth-disturbing activities have permanently or temporarily ceased. Earth-disturbing activities have permanently ceased when clearing and excavation within any area of the construction site that will not include permanent structures has been completed. Earth-disturbing activities have temporarily ceased when clearing, grading, and excavation within any area of the site that will not include permanent structures will not resume (i.e., the land will be idle for a period of 14 or more calendar days, but such activities will resume in the future). For construction areas discharging into waters not impaired for nutrients, sediments, complete initial stabilization within 14 calendar days after the temporary or permanent cessation of earth-disturbing activities. For construction areas discharging into nutrient or sediment impaired waters, complete initial stabilization within 7 calendar days after the temporary or permanent cessation of earth-disturbing activities. Classification of water at the discharge point may be found in the SWPPP.

D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:

1. Material Pollution Prevention Plan
   a. Applicable materials or substances listed below are expected to be present onsite during construction. Other materials and substances not listed below shall be added to the inventory.
   - Concrete
   - Detergents
   - Paints (temper or latex)
   - Metal Studs
   - Tar
   - Fertilizers
   - Petroleum Based Products

   b. Use Material Management Practices to reduce the risk of spills or other accidental exposure of materials and substances to storm runoff. An effort to be made to store only enough products as is required to do the job.

   c. Store all materials onsite in a neat, orderly manner in their appropriate containers and it is possible under a roof or other enclosure.

   d. Keep products in their original containers with the original manufacturer's label.

   e. Do not mix substances with one another unless recommended by the manufacturer.

   f. Whenever possible, use a product up completely before disposing of the container.

   g. Follow Manufacturer's recommendations for proper use and disposal.

   h. Conduct a daily inspection to ensure proper use and disposal of materials onsite.

2. HAZARDOUS MATERIAL POLLUTION PREVENTION PLAN
   a. Keep products in original containers unless they are resealable.

   b. Retain original labels and material safety data sheets (MSDS).

   c. Dispose surplus products according to manufacturer's instructions or local and State regulations.

3. OSITE AND OFFSET PRODUCTS SPECIFIC PLANS:

   a. The following product specific practices shall be followed onsite:

   b. Petroleum based products

      Monitor all onsite vehicles for leaks and perform regular preventive maintenance to reduce the chance of leakage. Store petroleum products in tightly sealed containers which are clearly labeled. Apply asphalt substances used onsite according to the manufacturer's recommendations.

b. Fertilizers

Apply fertilizers only in the minimum amounts recommended by the manufacturer, and federal, state, and local requirements. Avoid applying just before a heavy rain event. Apply at the appropriate time of year for the location and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth. Once applied, work fertilizer into the soil to limit exposure to storm water. Do not apply to storm conveyance channels with flowing water. Storage shall be in a covered shed or in an area where fertilizer will not come into contact with precipitation or stormwater. Transfer the contents of any partially used bags of fertilizer to a sealable plastic bin to avoid spills.

c. Paints

Seal and store all containers when not required for use. Do not discharge excess paint to the drainage system, sanitary sewer system, or State waters. Dispose properly according to the manufacturer's instructions or State and Local regulations.

d. Concrete Trucks

Wash out or discharge concrete truck drum wash water only at a designated site. Do not discharge water into the roadway drainage system or waters of the United States. Contact Department of Health, Drinking Water Branch at (808) 586-4258 to receive permission to designate a disposal site. Clean disposal site as required or as requested by the Owner's representative.

4. SPILL CONTROL PLAN:

   a. Post a spill prevention plan to include measures to prevent and clean up each spill.

   b. The Contractor shall be the spill prevention and cleanup coordinator. Designate at least three site personnel who shall receive spill prevention and cleanup training. These individuals shall each become responsible for a particular phase of prevention and cleanup. Post the names of responsible personnel in the material storage area on a weatherproof bulletin board or other accessible location acceptable to the Engineer and in the office trailer onsite.

   c. Clearly post manufacturer's recommended methods for spill cleanup. Make site personnel aware of the procedures and the location of information and cleanup supplies.

   d. Keep ample materials and equipment necessary for spill cleanup in the material storage area onsite.

   e. Clean up all spill immediately after discovery.

   f. Keep the spill area well ventilated. Personnel shall wear appropriate protective clothing to prevent injury from contact with a hazardous substance.

   g. Report spills of toxic hazardous material to the appropriate state or local government agency, regardless of size.

E. PERMIT REQUIREMENTS:

1. A National Pollutant Discharge Elimination System (NPDES) Permit for Construction Activities of one acre or more of disturbed area is required for this project. If the Contractor requires extra land disturbances, including staging and storage areas, that is not covered by the NPDES permit obtained for the project, the Contractor shall be responsible for obtaining the alternate NPDES Construction Activities Permit to cover this additional disturbed area. See Hawaii Administrative Rules Chapter 5-55, Appendix C for definition of disturbed area. The Contractor's attention is directed to the applicable NPDES Permit documents.
2. The Contractor shall obtain and comply with the NPDES requirements for Kauai District Permit projects. This is available at the Kauai District Office at 3060 Elia Street, Suite 205. Due to the potential cost impacts, the Contractor needs to be aware of these requirements.

3. The Contractor shall complete and submit a Contractor’s certification of NPDES compliance, including completion of the Best Management Practices (BMP) checklist and submittal of a written BMP plan and drawings, prior to issuance of a grading permit.

F. SITE-SPECIFIC BMP REQUIREMENTS:

Each BMP below is referenced to the corresponding section of the current HDOT Construction Best Management Practices Field Manual and appropriate Supplemental Sheets. The Manual may be obtained from the HDOT Statewide Stormwater Management Program Website at http://www.state.hawaii.gov/environmental/Stormwater. Supplemental BMP sheets are located at http://www.state.hawaii.gov/environmental/Stormwater/BMPmanual.aspx under Concrete Curing and Irrigation Water.

The requirements for Water Pollution, Dust, and Erosion Control submittals are included in Section 209 of the Hawaii Standard Specifications for Road and Bridge Construction dated 2005 and applicable Special Provisions.

Follow the requirements below:

1. Protect all Drainage Inlets receiving runoff from disturbed areas (SC-2).

2. Contain on-site runoff using Perimeter Sediment Controls
   a. SC-8 Compost Filter Berm
   b. SC-14 Brush or Rock Filter

3. Control offsite runoff from entering Construction Area

4. Incorporate applicable Site Management BMP
   a. SM-1 Employee Training
   b. SM-2 Material Delivery and Storage
   c. SM-3 Material Use
   d. SM-4 Protection of Stockpiles
   e. SM-5 Solid Waste Management
   f. SM-7 Sanitary/Septic Waste Management
   g. SM-9 Hazardous Waste Management
   h. SM-10 Spill Prevention Management
   i. SM-11 Vehicle and Equipment Cleaning
   j. SM-12 Vehicle and Equipment Maintenance
   k. SM-13 Vehicle and Equipment Refueling
   l. SM-14 Scheduling
   m. SM-15 Location of Potential Sources of Sediment
   n. SM-16 Preservation of Existing Vegetation
   o. SM-18 Dust Control

5. Contain pollutants within the Construction Staging/Storage Area BMP with applicable Perimeter Sediment Controls and Site Management BMP. Include a Stabilized Construction Entrance/Exit (EC-2) for all areas which exit onto a paved street. Restrict vehicle access to these points.

6. Manage Concrete Waste Including installing a Concrete Washout Area (SM-5) and properly disposing of Concrete Curing Water (California Stormwater BMP Handbook WS-12 Concrete Curing).

7. Remove saw cut slurry and hydrodemolition water from the site by vacuuming. Provide storm drain protection and/or perimeter sediment controls during saw cutting and hydrodemolition work.
ENRVIOMNTAL NOTES

1. In accordance with Chapter 9-60L, Air Pollution Control, Title II, Hawaii Administrative Rules, the Contractor shall be responsible for ensuring that effective control measures are provided to minimize or prevent any visible dust emission caused by the construction work from impacting the surrounding areas including the off-site roadways used to enter/exit the project. These measures include but are not limited to the use of water wagons, sprinkler systems, dust fences, etc.

2. In accordance with Chapter 9-55, Water Pollution Control and Chapter 9-54, Water Quality Standards, Title II, Hawaii Administrative Rules, the Contractor shall be responsible for ensuring that the Best Management Practices (BMP) to minimize or prevent discharge of sediments, debris, and other water pollutants into state waters is provided at all times.

3. In accordance with Chapter 9-58, Solid Waste Management Control, Title II, Hawaii Administrative Rules, the Contractor shall be responsible for ensuring that grub material, demolition waste and construction waste generated by the project are disposed of in a manner or at a site approved by the State Department of Health. Disposal of any of these wastes by burning is prohibited.

4. The Contractor shall be responsible for determining and paying for all applicable permits from the Department of Health including but not limited to National Pollutant Discharge Elimination System (NPDES), Notice of Intent and general permit for storm water, hydrostatic test and dewatering discharges prior to commencing construction. NPDES permit shall be required prior to grading or grubbing work over an area of one acre or more.

5. After each rainfall event, the Contractor shall remove all sliff and debris resulting from this work and deposited in drainage facilities, roadways and other areas. The cost incurred for any necessary remedial action by the County engineer shall be payable by the Contractor.

6. Best Management Practices (BMPs) shall be employed at all times to the maximum extent practicable prevent damage by sedimentation, Erosion or dust to stream, water courses, natural areas and the property of others.

7. The Contractor shall obtain and comply with National Pollution Discharge Elimination System (NPDES) permit requirements for all projects which will disturb one (1) acre or more of land. The Contractor shall not start construction until notice of General Permit Coverage (NGPC) is received from the Department of Health, State of Hawaii, and has satisfied any other permitting requirements of the NPDES permit program.

8. In accordance with Chapter 9-46, Community Noise, Hawaii Administrative Rules, the Contractor and the Property Owner/Developer shall be responsible for providing the effective control measures to minimize or prevent construction related noise from impacting the residents in the immediate area. If required, noise reduction measures shall be implemented by the contractor during construction work.

9. The Property may harbor rodents which will be dispersed to the surrounding areas when the site is cleared. In accordance with Chapter 9-25, entitled Vector Control of Title II, HARP, the applicant shall ascertain the presence or absence of rodents on the property. Should the presence of rodents be determined, the applicant shall eradicate the rodents prior to clearing the site.

10. A copy of the plans, construction schedule and/or written measures that is required to be submitted by the Contractor (dust control measures/plans) should be sent to the Department of Health for monitoring purposes.

EROSION CONTROL NOTES AND BEST MANAGEMENT PRACTICES (BMP)

1. Measures to control erosion and other pollutants shall be in place before any construction work is initiated. These measures shall be properly constructed and maintained throughout the construction period.

2. All control measures shall be checked and repaired as necessary.

3. Install site specific BMPs as shown per plans.

4. All storm drain inlets that may receive runoff as a result of the construction work shall use an inlet filter device (under grate drain guard or curb inlet guard as shown on plans) shall remain until completion of construction work. Contractor shall periodically inspect inlet filters, especially during heavy rainfall, to ensure drainage through material is maintained.

5. At the end of grading operation, existing storm drain inlets surrounding the project site shall be inspected and any accumulated sediment and debris found in the storm drain inlets shall be removed. Flushing into the the storm drains is prohibited.

6. Good housekeeping shall be utilized to ensure protection of roadways from mud, dirt, and debris.

7. The contractor shall ensure that all tires of construction vehicles are sufficiently cleaned off so that dirt and debris is not tracked off the construction site. Washing off tires with water will not be acceptable unless the runoff is contained and does not enter the storm drain system or into State's right of way.

8. The contractor shall ensure that existing roadways used to access the project are cleaned of all debris, trash, dirt, mud, etc, throughout the working day.

9. All grading work shall be done in accordance with local agency standards and the project's Geotechnical Soils Report by Hirata and Associates dated February 10, 2014.

10. The contractor shall maintain all temporary BMP measures until the entire area is completely stabilized. All BMP measures shall be removed immediately after the area is completely stabilized.

DEPARTMENT OF PUBLIC WORKS
COUNTY OF KAILUA
APPROVED:
HEAD ENGINEER DATE

COUNTY OF KAILUA
DEPARTMENT OF PUBLIC WORKS
BUILDING DIVISION

WATER POLLUTION AND
EROSION CONTROL NOTES
HARDY STREET IMPROVEMENTS
Federal Aid Project No. STP 0572001
SHEET NO. 4 OF 5 SHEETS

100% SUBMITTAL
ENVIRONMENTAL CONTROL NOTES FOR GRADING

1. In accordance with Chapter H-60J, Air Pollution Control, Title II, Hawaii Administrative Rules, the property owner/developer shall be responsible for ensuring that effective control measures are provided to minimize or prevent any visible dust emulsion caused by the construction work from impacting the surrounding areas including the off-site roadways used to enter/exit the project. These measures include but are not limited to the use of water wagons, sprinkler system, dust fences, etc.

2. In accordance with Chapter H-55, Water Pollution Control and Chapter H-54, Water Quality Standards, Title II, Hawaii Administrative Rules, the property owner/developer shall be responsible for ensuring that the Best Management Practices (BMP) to minimize or prevent the discharge of sediments, debris and other water pollutants into state waters is provided at all times.

3. In accordance with Chapter H-55, Solid Waste Management Control, Title II, Hawaii Administrative Rules, the property owner/developer shall be responsible for ensuring that yard waste and construction waste generated by the project are disposed of in a manner or at a site approved by the State Department of Health. Disposal of any of these wastes by burning is prohibited.

4. The property owner/developer shall be responsible for obtaining and paying for all applicable permits from the department of health including but not limited to National Pollution Discharge Elimination System (NPDES), notice of intent and general permit for storm water, hydrostatic test and de-watering of construction requires prior to commencing construction. NPDES permit shall be required prior to grading or grouting work over an area of one acre or more.

5. After each rainfall event, the Contractor shall remove all silt and debris resulting from this work and deposited in drainage facilities, roadways and other areas. The cost incurred for any necessary remedial action by the county engineer shall be payable by the Contractor.

6. Best Management Practices (BMP's) shall be employed at all times to the maximum extent practicable to prevent damage by sedimentation, erosion or dust to streams, water courses, natural areas and the property of others.

7. The Contractor shall obtain and comply with National Pollution Discharge Elimination System (NPDES) permit requirements for all projects which will disturb one (1) acre of more of land. The Contractor shall notify the project manager prior to construction to minimize the effect of General Permit Coverage (NESC) is received from the Department of Health, state of Hawaii and has satisfied any other permitting requirements of the NPDES permit program.

8. In accordance with Chapter H-46, Community Noise, Hawaii Administrative Rules, the Contractor and the property owner/developer shall be responsible for providing effective control measures to minimize or prevent construction related noise's impacting the residents in the immediate area. If required, noise reduction measures shall be implemented by the Contractor during the construction work.

9. The property may harbor rodents which will be dispersed to the surrounding areas when the site is cleared. In accordance with Chapter H-25, entitled Vector Control of Title II, HAR, the applicant shall ascertain the presence or absence of rodents on the property. Should the presence of rodents be determined, the applicant shall eradicate the rodents prior to clearing the site.

10. A copy of the plans, construction schedule and/or written measures that is required to be submitted by the Contractor (dust control measures/plans) should also be sent to the Department of Health for monitoring purposes.
Hardy Street - Kuhio Highway to Akahi Street (Sta. 0+00 to Sta. 1+85±)

Scale Not to Scale

NOTE:
Hatched areas at the intersection of Kuhio Highway, and along Hardy Street are not included for construction. Final design and approval is still pending. Approved design and plans to be provided as part of change order.
Hardy Street - Elua Street to Umi Street (Sta. 8+64+ to Sta. 9+45+)

Scale: Not to Scale

NOTE:
Hatched areas along Hardy Street are not included for construction. Final design and approval is still pending. Approved design and plans to be provided as part of change order.
LEGEND:
Approximate limits of demolition include removal of existing pavement, curbs, gutter, sidewalks, landscaping and structures. Limits also include clearings, grubbing, grading, and other site preparations.

NOTES:
1. See Striping and Signage Plans for signs that will be removed, relocated and reused.
2. See Repaving Plans for limits of pavement to be treated and proposed improvements.
3. See Water and Sewer Plans, Irrigation Plans, Drainage Plans and Electrical Plans for utilities that will be removed, relocated and reused.
4. Hatched areas along Hardy Street are not included for construction. Final design and approval is still pending. Approved design and plans to be provided as part of change order.
NOTES:
1. See Striping and Signage Plans for signs that will be removed, relocated and re-used.
2. See Paving Plans for limits of pavement to be treated and proposed improvements.
3. See Water and Sewer Plans, Irrigation Plans, Drainage Plans and Electrical Plans for utilities that will be removed, relocated and re-used.
4. Hatched areas along Hardy Street are not included for construction. Final design and approval is still pending. Approved design and plans to be provided as part of change order.
LEGEND:
Approximate limits of demolition include removal of existing pavement, curb, gutter, sidewalk, landscaping and structures. Limits also include clearing, grubbing, grading, and other site preparations.

NOTE:
1. See Striping and Signage Plans for signs that will be removed, relocated and re-used.
2. See Paving Plans for limits of pavement to be treated and proposed improvements.
3. See Water and Sewer Plans, Irrigation Plans, Drainage Plans and Electrical Plans for utilities that will be removed, relocated and re-used.
HARDY STREET (COUNTY)

TAW: 3-6-18: 04
Lot 146

TAW: 3-6-18: 05
Lot 147

TAW: 3-6-18: 06
Lot 150

TAW: 3-6-18: 07
Lot 151

TAW: 3-6-18: 08
Lot 155

TAW: 3-6-18: 09
Lot 156

Project Sta. 29 + 00

To Kahio Highway

To Rice Street

To Kahio Highway

Project Sta. 29 + 00

Project Sta. 34 + 50

NOTE:
1. See Striping and Signage Plans for signs that will be removed, relocated and re-used.
2. See Repaving Plans for limits of pavement to be treated and proposed improvements.
3. See Water and Sewer Plans, Irrigation Plans, Drainage Plans and Electrical Plans for utilities that will be removed, relocated and re-used.

LEGEND:
Approximate limits of demolition include removal of existing pavement, curbs, gutters, sidewalks, landscaping and structures. Limits also include clearing, grubbing, grading, and other site preparations.
NOTE:
1. See Striping and Signage Plans for signs that will be removed, relocated and reused.
2. See Repaving Plans for limits of pavement to be treated and proposed improvements.
3. See Water and Sewer Plans, Irrigation Plans, Drainage Plans and Electrical Plans for utilities that will be removed, relocated and re-used.
END PROJECT
FAP No. STP 0572001
@ Sta. 36+2930

PROJECT
HARDY STREET (COUNTY)

To Kuhio Highway

Drainage structure to remain
existing tree to be removed
existing concrete slab to be removed

existing bushes to be removed

Project Baseline
eXisting right of way

TMR: 3-6-03: 17
Lot B

NOTE:
1. See Striping and Signage Plans for signs that will be removed, relocated and reused.
2. See Repaving Plans for limits of pavement to be treated and proposed improvements.
3. See Water and Sewer Plans, Irrigation Plans, Drainage Plans and Electrical Plans for utilities that will be removed, relocated and reused.

LEGEND:
Approximate limits of demolition include removal of existing pavement, curb, gutter, sidewalk, landscaping and structures. Limits also include clearing, grubbing, grading, and other site preparations.

GRAPHICAL SCALES:
20’ 10’ 0’ 20’ 47’
Scale: 1” = 20’

DEPARTMENT OF PUBLIC WORKS
COUNTY OF KAUAI

EXISTING CONDITION AND
DESTRUCTION PLAN
HARDY STREET IMPROVEMENTS
Federal Aid Project No. STP 0572001
Scale As Shown
Date: September, 2014

APPROVED:
COUNTY ENGINEER
DATE

100% SUBMITTAL
NOTES:
1. Hatched areas along Hardy Street are not included for construction. Final design and approval is still pending. Approved design and plans to be provided as part of change order.


LEGEND:

- Project Baseline
- Property Line
- existing grade
- Biosack (Compost Filter Sock)
- Under Grate Drain Guard (Witches Hat)
- Prowaffle (Curb Inlet Guard) with Biosack (Compost Filter Sock) as needed to prevent sediment from leaving the limits of disturbance.
LEGEND:

- Project Baseline
- Property Line
- Existing grade
- Biopsock (Compost Filter Sock)
- Under Grate Drain Guard (Witches Hat)
- Prowattle (Curb Inlet Guard) with Biopsock (Compost Filter Sock) as needed to prevent sediment from leaving the limits of disturbance

NOTE:


GRAPHICAL SCALES:

Scale 1" = 20'

DEPARTMENT OF PUBLIC WORKS
COUNTY OF KAUA‘I

EROSION CONTROL PLAN
HARDY STREET IMPROVEMENTS
Federal Aid Project No. STP 05720(D)
Scale As Shown: September, 2014
Sheet No. 3 of 7 SHEETS

100% SUBMITTAL
LEGEND:

- Project Baseline
- Property Line
- Existing Grade
- Bloosock (Compost Filter Sock)
- Prowattle (Curb Inlet Guard) with Bloosock (Compost Filter Sock)

NOTE:


GRAPHICAL SCALES:

20' 10' 0' 20' 40'
Scale: 1' = 20'

DEPARTMENT OF PUBLIC WORKS
COUNTY OF KAUA'I
APPROVED:

COUNTY ENGINEER DATE

EROSION CONTROL PLAN

HARDY STREET IMPROVEMENTS
Federal Aid Project No. STP 0572001
Scale: As Shown
Date: September, 2004

SHEET NO. 4 OF 7 SHEETS
100% SUBMITTAL
NOTE:

Construction Staging Area

LEGEND:
- Project Baseline
- Property Line
- existing grade
- Bioblock (Compost Filter Sock)
- Erosion Control Plan
- Biowall (Curb Inlet Guard) with Bioblock (Compost Filter Sock) as needed to prevent sediment from leaving the limits of disturbance

DEPARTMENT OF PUBLIC WORKS
COUNTY OF KAUNA

EROSION CONTROL PLAN

HARDY STREET IMPROVEMENTS
Federal Aid Project No. STP 0572001

Scale @ 1:100
Date: September 2021

100% SUBMITTAL
Sheet No. 5 of 7
END PROJECT
FAP No. STP 0572001
& Sta. 36+29.30

TWM: 36-02.09
Lot B

Install Prowattle
(Curb Inlet Guard)
with Biosock
(Compost Filter Sock)

HARDY STREET (COUNTY)

Project Baseline

existing right of way

Install Under
Grate Drain Guard
(Witches Hat)

To Kuhio Highway

Prowattle (Curb Inlet Guard) with Biosock
(Compost Filter Sock) as needed to prevent
sediment from leaving the limits of disturbance

TWM: 36-06.11
Lot B

LEGEND:

Project Baseline

Property Line

existing grade

Biosock (Compost Filter Sock)

Under Grate Drain Guard (Witches Hat)

NOTE:

1. Erosion Control Plan based on the approved National Pollutant Discharge Elimination System
(NPDES) permit. Please refer to the Notice of General Permit Coverage (NGPC) document dated

DEPARTMENT OF PUBLIC WORKS
COUNTY OF KAUA'I

APPROVED:
COUNTY ENGINEER

DATE

EROSION CONTROL PLAN

TWM: 36-02.17
Lot B

To Rice Street

To Kukui Highway

To Kapolei Highway

Rice Street (County)

Biosock (Compost Filter Sock)
1" x 2" Wood Stake (required on sloped surfaces greater than 4%)—Protected Area

10" Sock Barrier (Multi-filament Polypropylene) Limits of Grading and/or Grubbling Work Area—Runoff Flow

Wood Stake, Typ. (required on sloped surfaces greater than 4%)—Protected Area

SLOPE GRADIENT

ANCHOR SPACING

<table>
<thead>
<tr>
<th>%</th>
<th>4% to 32%</th>
<th>32% to 60%</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAX</td>
<td>10&quot; to 15&quot;</td>
<td>15&quot; to 20&quot;</td>
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</tbody>
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NOTES:
1. Sock Barrier fill composition is wood mulch.
2. Sock Barrier fill shall not contain biosolids and should be consistent with EPA Guidelines.

OVERLAP

COMPOST FILTER Sock DETAILS

Scale: NTS

OVERFLOW (TO Bypass PEAK STORM VOLUMES)

PLACE GEOTEXTILE FABRIC UNDER ADAPTER SKIRT

Sediment Accumulation

INLET GRATE

GEOTEXTILE FABRIC

 Retrieved Strap
 ADAPTER SKIRT

RETENTION STRAP—ADAPTER SKIRT—GEOTEXTILE FABRIC UNDER INLET GRATE

NOTE: IN THE EVENT OF ABOVE NORMAL RAINFALL, CONTRACTOR SHALL REMOVE INLET PROTECTION AND REPLACE AFTER EVENT HAS PASSED.

Grate Drain Guard Detail

Scale: NTS

Department of Public Works
County of Kauai

EROSION CONTROL DETAILS

Hardy Street Improvements
Federal Aid Project No. STP (052001)

Sheet No. 1 of 2 SHEETS

100% SUBMITTAL

30A
Construction Details
* Minimum 2 Integrated "L" Brackets
* Minimum 2 variable-height pins for curb
* Filter height = 2 inches
* UV resistant HDPE outer jacket
* Under-seal gasket to prevent underflow
* CIG height = 8 inches
* CIG length = 6.25 feet

Installation Details
* Placement, place CIG tightly against drain opening with metal variable height pins at top.
* Change height for high openings; extend variable height pins upward if necessary.
* Interconnecting for long curb openings, overlap segments so the bottom gasket provides a continuous seal; one side has a cut-out. Each 6.25" segment fits a 5 foot opening or smaller. Use 2 segments for 8 to 10 feet. Use 3 segments for 15 feet, etc.
* Anchoring. Install gravel bags at each end and at overlaps. Use ½ full gravel bags for low profile and best traffic avoidance. Use clean gravel at drain inlets - not sand. Select bags with long term UV exposure and toughness for resistance to traffic. Where not possible to install gravel bags due to traffic proximity, it is acceptable to anchor with concrete anchors, or masonry nails - one at each end. Anchor Curb Inlet Guard so that water cannot flow behind it. Use 1 washer.

Curb Inlet Guard with BioSock Detail
Scale: 1/50

Erosion Control Details

County of Kauai
Department of Public Works
Building Division

Hardy Street Improvements
Federal Aid Project No. STP 052101

Sheet No. 2 of 3 Sheets