GENERAL NOTES:

- The scope of work for this project includes widening a portion of Keaau-Pahoa Road by removing the temporary northbound shoulder lane and installing an additional northbound lane; installing an additional temporary southbound shoulder lane; installing a new traffic signal at the intersection with Shower Drive; removing existing and installing new water system facilities; relocating utility poles; and installing pavement markings, striping and signing.
- 2. The Contractor is reminded of the requirements of Subsection 105.16 (A) Subcontract Requirements, which requires him to perform work amounting to not less than 30 percent of the total contract cost less deductible items. Non-compliance with this Subsection may be grounds for rejection of bid.
- 3. The Contractor's attention is directed to the following Sections of the Standard Specifications: Subsection 107.06 - Contractor Duty Regarding Public Convenience; Subsection 104.11 - Utilities And Services; and Section 645 - Work Zone Traffic Control.
- 4. At the end of each day's work, the Contractor shall remove all equipment and other obstructions to permit free and safe passage of public traffic.
- 5. The existence and location of underground utilities, manholes, monuments, buried railroad tracks, and concrete pavements, and other structures as shown on the plans are from the latest available data but the accuracy is not guaranteed. The Contractor shall make an independent check on the ground by probing and/or with the various utility companies and governmental agencies to verify the exact locations and depths of the existing utilities and obstructions. The Contractor shall exercise proper care in excavating in the area. Whenever connections of new utilities to existing utilities are shown on the plans, the Contractor shall expose the existing lines at the proposed connection to verify their location and depth prior to excavating for the new lines. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations.
- 6. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting paving operations.
- 7. Existing drainage system will be functional at all times during construction. The Contractor is to furnish material, equipment, labor, tools and incidentals necessary to maintain flow. This work shall be considered incidental to the various contract items.
- 8. The Contractor shall provide and maintain for access to and from all existing driveways, sidewalks and ADA access routes, and side streets and cross streets at all times. This work shall be considered incidental to the various contract items and will not be paid for separately.
- 9. All saw cutting work shall be considered incidental to Roadway Excavation.
- 10. Smooth riding connections shall be constructed at all times on the project, including the beginning and end of the project, connecting approaches, side streets, walkways and driveways as shown on the plans and/or as directed by the Engineer.
- 11. The Contractor shall be solely responsible for the protection of adjacent properties, utilities and existing structures from the damages due to construction. Repairing of any damage shall be at the Contractor's own expense, to the satisfaction of the owner.
- 12. The Contractor shall clean and remove all accumulation of aggregates along the roadside within 10 feet of the edge of pavement. This work shall be considered incidental to the various contract items and will not be paid for separately.
- 13. Removal and disposal of existing curb and gutter, curb, sidewalk and asphalt concrete pavement, curb, sidewalk and any debris shall be considered incidental to Roadway Excavation and will not be paid for separately.
- 14. The Contractor shall provide and maintain a temporary pedestrian-safe and easily accessible route or detour with barricades in or near the work zone. This temporary route or detour shall be stable, firm and slip-resistant and shall be Americans With Disabilities Act compliant (This only applies if existing surface is non-ADA compliant). This work shall be incidental to all contract items and will not be paid for separately.

- FISCAL YEAR SHEET NO. FED. ROAD DIST. NO. FED. AID PROJ. NO. STATE
- 15. The Contractor shall remove and dispose of all existing raised pavement markers, thermo line markings, traffic tapes, and epoxy adhesives prior to the overlaying of Asphalt Concrete Pavement, Mix No. IV and will not be paid for separately. These work items shall be considered incidental to Roadway Excavation.
- 16. The Contractor shall adjust flush to finish grade all manhole, valve, pullbox, and handhole frames and covers, including those not shown on the plans, if there is a change in grade due to construction of the project. If the proposal does not show a contract item, the Engineer will consider them incidental to the various contract items.
- 17. Two lanes of traffic, one lane in each direction, shall be provided at all times. Lane closures, narrowing of lanes, or detours that slow down traffic shall not occur during peak hours 5:30 a.m. to 8:30 a.m. and 2:30 p.m. to 6:00 p.m. The Contractor shall continue to provide two Northbound lanes to weekday (Monday to Friday, excluding State holidays) traffic between 5:30 a.m. and 8:30 a.m. for the duration of construction. Night work may be permitted, and shall be at no additional cost to the State. If the Contractor elects to perform work at night, a noise variance permit shall be obtained at his cost with no additional time added to the contract.
- 18. Drop-off at edge-of-pavement is not allowed. Provide asphalt concrete pavement taper at 6:1 slope, unless approved in writing by the Engineer.
- 19. No material and/or equipment shall be stockpiled or otherwise stored within the highway right-of-way except at locations designated in writing and approved by the Engineer.
- 20. After the project is completed, the Contractor shall restore grades and ground cover disturbed as a result of the project to a condition equal or better than existing before such damage or injury was done.
- 21. Existing utilities shall remain in service and in place at all times. If relocation of the existing utilities is required by the Contract Documents or for the Contractor's convenience, interruption of service shall be kept to a minimum and shall be done at the Contractor's expense with the approval of the affected utility company.
- 22. The Contractor shall verify all dimensions and details shown on the drawings prior to the start of construction. Any discrepancy shall be immediately brought to the attention of the Engineer.
- 23. All construction work shall be done in accordance with the standards and specifications of the HDOT as amended, unless otherwise specified by the contract plans and specifications.
- 24. Contractor shall be aware of the following Utility Agreements located in the contract documents:
 - a. Hawaiian Electric Light Company, Inc. (HELCO) UA No. 2205, dated May 6, 2015
 - b. Hawaiian Telcom, Inc. UA No. 2218, dated September 3, 2015
 - c. Department of Water Supply UA No. 2219, dated April 11, 2016
 - d. Contractor shall coordinate with Oceanic Time Warner Cable for overhead cable relocation after new utility poles are installed. Utility Agreement not required.
 - e. The Contractor shall plan for multiple mobilization/demobilization to accommodate the Utilities' work and shall incorporate this cost in his bid. The State will not pay for additional cost for this work.
 - f. The number of working days in the Utility Agreements for the Utilities to do their work is only an estimate, will not necessarily be consecutive, and is included in the project contract time. The Contractor shall coordinate their work and the Utilities work with the Utility companies. Coordination and scheduling by the Contractor shall be considered incidental to various contract items.

LEGEND FOR **AS-BUILT POSTINGS**

as-built deletion

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Text for as-built Roadway posting



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WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII **DEPARTMENT OF TRANSPORTATION** HIGHWAYS DIVISION

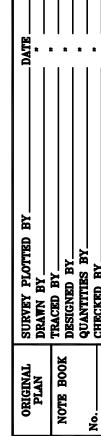
GENERAL NOTES

KEAAU-PAHOA ROAD, SHOULDER LANE CONVERSION, PHASE 2

Shower Drive Intersection Improvements Fed. Aid Proj. No. STP-0130(33)

March 2016 Date:

SHEET No. N-1 OF



SHEETS

GENERAL NOTES (Cont.)

- 25. No Contractor shall perform any construction operation so as to cause falling rocks, soil or debris in any form to fall, slide or flow into existing County drainage systems, or adjoining properties, streets or natural watercourses. Should such violations occur, the Contractor may be cited and the Contractor shall immediately make all remedial actions necessary.
- 26. Tack coat shall be incidental to the various asphalt concrete pavement items. The Contractor shall be held liable for any damages incurred to the existing landscaping as a result of his operations.
- 27. The Contractor shall be held liable for any damages incurred to the existing landscaping as a result of his operations.
- 28. Contractor shall notify the State construction inspector before commencement of work on any site with trees in close proximity (15'±).
- 29. Contractor shall comply with conditions as stated in the project NPDES Notice of General Permit Coverage (NGPC).
- 30. The Contractor must notify the Cadastral Section prior to removal of any State Survey Monument (Brass Disk) so that Cadastral can reference the monument prior to demolition of the existing monument. The Contractor shall bear all costs involved in restoring the State Survey Monuments which are affected by their work.
- 31. For lane closure and working hours see Special Provisions Sections 107-Legal Relations and Responsibility to the Public and Section 645 - Work Zone Traffic Control.
- 32. All necessary permits for work within the jurisdiction of the County of Hawaii shall be obtained by the Contractor at his own cost.
- 33. Contractor shall provide access for utility companies by constructing a gravel truck access along/under new overhead line alignment and to new utility pole locations. Contractor shall coordinate with utility companies for points of access from the highway shoulder. Work shall be considered incidental to Section 201-Clearing and Grubbing and Section 203-Excavation and Embankment, respectively. Access shall remain within State right-of-way. Utility companies shall be able to access utility poles and overhead lines at all times throughout construction. Provide Erosion Control measures in accordance with Section 209-Temporary Water Pollution, Dust, and Erosion Control.
- 34. Hot Mix Asphalt from cold planed material may be used for dressing of shoulders, see Section 210 - Dressing of Shoulders. Excess material shall be delivered to the Hilo baseyard (50 Makaala Street) by the Contractor.
- 35. Use of steel plates to cover excavated areas shall require a drawing stamped by a structural engineer licensed in the State of Hawaii and shall have a non-skid surface.

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<u>LEGENU</u>			
	Tavollioni Straoraroo 1300	96	Existing 6" Gas Line
	Typical Sections for Pavement Structures)	gu	Existing Gas Valve Box
4 4	New P.C.C.	$^{\circ}gmh$	Existing Gas Manhole
E	New Electrical Line		New Monument
e	Existing Electrical Line	${\displaystyle \mathop{\mathbb{O}}_{mon.}}$	Existing Monument
◦ JP	Relocated Joint Pole	24" RCP	New 24" RCP Drain Line
°jp	Existing Joint Pole	d24	Existing 24" Drain Line
° PP	Relocated Power Pole	•SDMH	New Storm Drain Man hole Frame
opp	Existing Power Pole	\circ , ,	<i>♦ Cover</i>
$^{\circ}$ emh	Existing Electrical Manhole	sdmh	Existing Storm Drain Manhole
t	Existing Telephone Line	\exists_{GDI}	New Grated Drop Inlet
°tp	Existing Telephone Pole	∃gdi	Existing Grated Drop Inlet
$^{\circ}tmh$	Existing Telephone Manhole	<u>CB</u>	New Catch Basin
SC	New Signal Corps Line		Existing Catch Basin
sc	Existing Signal Corps Line	þ	New Traffic Sign
□ cpb	Existing Cable TV Pullbox	þ	Existing Traffic Sign
c	Existing Cable TV Line	Q	New Highway Lighting Standard
w12	Existing 12" Water Line		Existing Highway Lighting Standard
$^{\circ}wmh$	Existing Water Manhole		New Traffic Signal Pullbox
o av	Existing Water Air Valve		Existing Traffic Signal Pullbox
o wv	Existing Water Valve Box		Existing Traffic Signal Control Box
$\Box wm$	Existing Water Meter	\otimes	Existing Traffic Signal Pole
-\to-fh	Existing Fire Hydrant		New Loop Detector
	New Guard Rail		Existing Loop Detector
	Existing Guard Rail	14.50/	New Pavement Grade
	New Right-of-Way	14.50/	Existing Pavement Grade
	Existing Right-of-Way		
S12	New 12" Sewer Line		<u>LEGEND FOR</u> AS-BUILT POSTINGS
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$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	Existing Sewer Manhole		Roadway Text for as-built

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<u>ABBREVIATIONS</u>						
A.C.,	a.c.	Asphalt Cond	crete			

FED. AID PROJ. NO.

FISCAL YEAR

SHEET TOTAL NO. SHEETS

FED. ROAD DIST. NO.

HAWAII

STATE

Baseline New Edge Of Pavement New Edge Of Shoulder New Edge Of Travelway Existing Edge Of Pavement Existing Edge Of Shoulder *e.s.* Existing Edge Of Travelway e.t.w. N.B., n.b. Northbound Point Of Curvature Point Of Compound Curvature Portland Cement Concrete Point Of Intersection Point On Curvature Point Of Tangency Radius ting Highway Lighting Standard S.B., s.b. Southbound Superelevation



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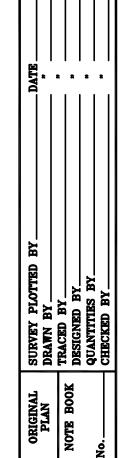
STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION GENERAL NOTES

KEAAU-PAHOA ROAD, SHOULDER LANE CONVERSION, PHASE 2

Shower Drive Intersection Improvements Fed. Aid Proj. No. STP-0130(33)

> March 2016 Date: SHEET No. N-2 OF SHEETS



Scale:

posting

NOTES FOR GENERAL CONSTRUCTION (COUNTY)

- All construction work is to be constructed in accordance with the publications "Hawaii Standard Specifications for Road, Bridge and Public Works Construction 2005" and its amendments and "Standard Details for Public Works Construction" and its amendments.
- 2. 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 State Department of Health.
- Construction shall start within a period of one year from the date of approval of construction plans; if construction does not commence within this one-year time from the date of approval, the construction plans will need to be resubmitted to all County of Hawaii agencies for review and approval.
- All grading, grubbing and stockpiling work shall be performed in accordance with County of Hawaii.
- 5. 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-offthe project

WATER NOTES

- All work shall be done according to the Water System Standards, State of Hawaii, dated 2002 as amended.
- 2. The Contractor shall inform the Department of Water Supply (DWS) Engineer 72 hours prior to the beginning of any waterline work and two weeks prior to any connection, chlorination, shut-off or relocation work.
- 3. The Contractor shall pay for all work, equipment and materials furnished by the DWS.
- All existing waterlines, waterline appurtenances and other utility locations shown on the plans are obtained from the latest reliable sources. The contractor shall be responsible to verify the exact location of all utilities in the field and shall bear all cost for damages done to the water system.
- 5. All connections to existing waterlines shall be done by the DWS. Contractor shall perform all excavation, backfill, road repair, traffic control, and provide equipment necessary to complete the connection.

WATER NOTES (Cont.)

- 6. Where water shut-off of more than 3 hours becomes necessary, the contractor, at his own expense, shall provide a temporary by-pass line. The DWS Engineer shall determine the by-pass line size. If necessary, the DWS Engineer may require a by-pass line, regardless of the expected shut-off period.
- 7. Minimum horizontal clearance between waterline and other utilities shall be 8 feet unless otherwise specified. Minimum vertical clearance between waterlines and other utilities shall be 12" provided concrete jackets are used, and 18" if no concrete jackets are used. In all applicable instances, the waterlines shall be at a grade higher than other utilities.
- 8. All fittings (class 250 minimum) and all gate valves (class 200) shall be ductile iron, with mechanical joints unless otherwise specified. Butterfly valves shall be class 250 with epoxy-coated interior unless otherwise specified.
- 9. The waterline shall be tested at a minimum of 225 psi or one and a half times the static pressure at the low point, whichever is greater, under DWS supervision just prior to paving.
- 10. The Contractor shall be responsible for the chlorination of the water system and shall bear all costs. The person(s) engaged to do the chlorination work must have the appropriate license to perform the work in the State of Hawaii.
- 11. Existing valves, F.H. units, valve boxes, frames and covers designated "remove and salvage" shall be cleaned of all dirt, scabs, and concrete and delivered to the respective DWS baseyard. This work shall be considered incidental to the various bid items, unless specified otherwise.
- 12. Existing waterlines, valves, fittings and appurtenances not designated "remove and salvage" shall be abandoned in place. All exposed valve boxes, valves, pipes and appurtenances shall be removed and disposed of properly at no cost to the DWS.
- 13. Relocation of existing meters shall be done by or under DWS supervision. Relocations of customer service lines to relocated meters shall be copper and done by the contractor. All work and materials required shall be provided by the contractor and considered incidental to the relocation work. Existing meter boxes damaged by the contractor shall be replaced at the contractor's cost. A dielectric union shall be used to connect the copper pipe to the customer's G.I. Pipe (if applicable).

WATER NOTES (Cont.)

14. The DWS will not assume ownership of nor grant any water service until the water system is dedicated to the DWS along with all necessary easements and documents.

FED. ROAD DIST. NO.

FED. AID PROJ. NO.

- 15. When compaction tests are required, the contractor shall be responsible to provide the DWS with proctor results of materials to be used for that portion of work requiring compaction. These results shall be certified and shall be furnished to the DWS one week prior to commencement of work. Cost for compaction tests shall be incidental to pipeline installation.
- 16. All newly installed waterlines shall have a blue warning tape labeled "waterline" placed directly over the compacted cushion material.
- 17. Construction projects requiring temporary water service shall be metered and paid for by the Contractor.
- 18. The Contractor shall be responsible for record drawings (as-built drawings) and the licensed engineer shall certify the drawings as to accuracy and submit the drawings and as-built tracings to the DWS.
- 19. All waterline 4-inch and larger shall be ductile iron class 52, and all waterlines smaller than flinch shall be soft copper type k unless otherwise specified.
- 20. Lots requiring a Dept. of Water Supply approved backflow prevention assembly shall have one. Its installation is not required for final subdivision approval. The installation shall be the responsibility of the service owner, in accordance with DWS Standard Detail V-9. The owner shall make provisions for the water during the time the backflow is being tested or maintained. As protection to the consumer plumbing system, a suitable pressure relief valve shall be installed and maintained by the service owner.

LEGEND FOR

AS-BUILT POSTINGS

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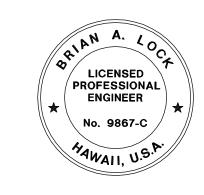
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STATE OF HAWAII **DEPARTMENT OF TRANSPORTATION** HIGHWAYS DIVISION

NOTES

KEAAU-PAHOA ROAD, SHOULDER LANE CONVERSION, PHASE 2

Shower Drive Intersection Improvements Fed. Aid Proj. No. STP-0130(33)

> Date: March 2016 SHEET No. N-3 OF SHEETS

<u>APPROVED</u>

Manager-Chief Engineer Department of Water Supply County of Hawaii

Date

SURVEY PLOTTE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY ORIGINAL PLAN NOTE BOOK

Scale:

FED. ROAD	STATE	FED. AID	FISCAL	SHEET	TOTAL
DIST. NO.		PROJ. NO.	YEAR	NO.	SHEETS
HAWAII	HAW.	STP-0130(33)	2016	6	99

CONSTRUCTION NOTES FOR TRAFFIC CONTROL PLAN

- 1. The permittee shall make adjustments at intersections, driveways, bridges, structures, etc. To fit field conditions.
- 2. Cones or delineators shall be extended to a point where they are visible to approaching traffic.
- 3. Traffic control devices shall be installed such that the sign or device farthest from the work area shall be placed first. The others shall then be placed progressively toward the work area.
- 4. Regulatory and warnings signs within the construction zone that are in conflict with the traffic control plans shall be removed or covered. All signs shall be restored upon completion of the work.
- 5. Flaggers and/or police officers shall be in sight of each other or in direct communication at all times.
- 6. When required by the issuing office, the permittee shall install a flashing arrow signal as shown on the traffic control plans.
- 7. Sign spacing (d), taper lengths (t) and spacing of cones or delineators shall be as shown in table 1, unless otherwise noted on the traffic control
- 8. All traffic lanes shall be a minimum of 10 feet wide.
- 9. All construction warning signs shall be promptly removed or covered whenever the message is not applicable or not in use.
- 10. The backs of all signs shall be promptly removed or covered to preclude the display of inapplicable sign messages (i.e., when signs have messages on both faces), whenever the messages is not applicable or not in use.
- 11. At the end of each day's work or as soon as the work is completed, the permittee shall remove all traffic control devices no longer needed to permit free and safe passage of public traffic. Removal shall be in reverse order of installation.
- 12. Replace permanent pavement markings and traffic signs upon completion of each phase of work.
- 13. Police officer/flagmen shall be present at all times.
- 14. The Contractor shall make a flyer showing the changes in traffic patterns and estimated times of use. Sufficient copies of the flyer shall be provided to each business for distribution to its employees and guests.
- 15. Contractor to provide access and/or directional signs to reroute pedestrian traffic. See General Notes No. 14 on sheet N-1.
- 16. The Contractor shall comply with FHWA Final Rule on Work Zone Safety and Mobility, 23 CFR 630, Subpart J.

GRADING NOTES

- 1. All grading work shall conform to Chapter 10 of the Hawaii County Code. Should a grading permit be required, no work shall commence until the Department of Public Works approves a grading permit.
- 2. No contractor shall perform any grading operation so as to cause falling rocks, soil or debris in any form to fall, slide or flow onto adjoining properties, streets or natural watercourses. Should such violations occur, the costs incurred for any remedial action by the County Engineer shall be payable by the contractor.
- 3. The contractor, at his own expense, shall keep the project and surrounding area free from dust nuisance. The work shall be in conformance with The Air Pollution Control Standards and Regulations of the State Department of Health.
- 4. The underground pipes, cables or ductlines known to exist by the Engineer from his search of records are indicated on the plans. The contractor shall verify the locations and depths of the facilities and exercise proper care in excavating in the area. Wherever connections of new utilities are shown on the plans, the contractor shall expose the existing lines at the proposed connections to verify their locations and depths prior to excavation for the new lines.
- 5. Adequate provisions shall be made to prevent surface waters from damaging the cut face of an excavation or the sloped surfaces of a fill. Furthermore, adequate provisions shall be made to prevent sediment-laden runoff from leaving the site.
- 6. All slopes and exposed areas shall be hydro-mulched as soon as final grades have been established. Planting shall not be delayed until all grading work has been completed. Grading to final grade shall be continuous, and any area within which work has been interrupted or delayed shall be planted. Plant species shall be submitted to the Engineer for approval prior to ordering, purchasing and installation.
- 7. The county shall be informed of the location of the borrow/disposal site for the project when the application for a grading permit is made. The borrow/disposal site must also fulfill the requirements of the grading ordinance.
- 8. Fill slope banks shall not exceed 2:1 and cut slope banks shall not exceed 1:1 unless otherwise noted.

EARTHWORK SUMMARY

Excavation = 2,402 cy 939 cv Embankment = Graded area = 1.55 acres

NOTES:

- Quantities are shown for permit purpose only and are not to be used for bidding purposes.
- 2. Contractor is responsible to complete the grading work to the grades and dimension shown on the plans. Grades shown are finished grades. Contractor to coordinate with landscape drawings to allow for placement of topsoil.
- 3. If imported materials are required to obtain finished grades, Contractor is required to import suitable material as specified at the Contractor's expense.

GRADING NOTES (Cont.)

- 9. The Contractor shall remove all vegetation before placing fills on natural ground surface.
- 10. Fills shall be compacted to 90 percent (90%) of the maximum density per ASTM D-1557 test.
- 11. No grading work shall be done on Saturdays, Sundays and holidays at any time without prior notice to the County of Hawaii Department of Public
- 12. The limits of the area to be graded shall be flagged before the commencement of the grading work.
- 13. All grading operations shall be performed in conformance with the applicable provisions of the Water Pollution Control and Water Quality Standards contained in Hawai'i Administrative Rules, Chapter 11-55, "Water Pollution Control" and Chapter 11-54, "Water Quality Standards" and the "Erosion and Sedimentation Control Standards and Guidelines" of the Department of Public Works County of Hawaii, and if applicable, the NPDES permit for the project.
- 14. If the grading work involves contaminated soil, then all grading work shall be done in conformance with applicable state and federal requirements.
- 15. Non-compliance to any of the above requirements shall mean immediate suspension of all work, and remedial work shall commence immediately. All costs incurred shall be billed to the contractor and/or grading permit applicant. Furthermore, violators shall be subjected to administrative, civil and/or criminal penalties.
- 16. The Contractor shall comply with Section 671-Protection of Endangered Species, in regards to grading and clearing and grubbing.



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WILSON OKAMOTO CORPORATION LIC. EXP. DATE

LEGEND FOR **AS-BUILT POSTINGS**

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STATE OF HAWAII **DEPARTMENT OF TRANSPORTATION** HIGHWAYS DIVISION

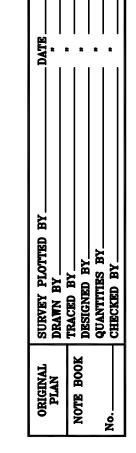
NOTES

KEAAU-PAHOA ROAD, SHOULDER LANE CONVERSION, PHASE 2 Shower Drive Intersection Improvements

Fed. Aid Proj. No. STP-0130(33) Scale: Date: March 2016

SHEETS

SHEET No. $\sqrt{-4}$ OF



WATER POLLUTION AND EROSION CONTROL NOTES:

A. GENERAL:

- See Special Provisions Section 209 Water Pollution and Erosion Control. Section 209 describes but is not limited to: submittal requirements; scheduling of a water pollution and erosion control conference with the Engineer; construction requirements; method of measurement; and basis of payment. In addition, Appendix A lists potential pollutant sources and corresponding BMPs used to mitigate the pollutants.
- 2. Follow the guidelines in the current HDOT Construction Best Management Practices Field Manual in developing, installing and maintaining the Best Management Practices (BMP) for the project. For any conflicting requirements between the Manual and applicable bid documents, the applicable bid 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 purposes of clarification under Note A.2, "applicable bid 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's City ♦ County "Rules" Relating to Soil Erosion Standards and Guidelines" along with applicable Soil Erosion Guidelines for projects on Maui, Molokai, Kauai, and Hawaii.
- 4. The Engineer may assess liquidated damages of up to \$27,500 for non-compliance of each BMP requirement and each requirement stated in Section 209 and special provisions, for every day of non-compliance. There is no maximum limit on the amount assessed per day.
- 5. The Engineer will deduct the cost from the progress payment for all citations received by the Department for non-compliance, or the Contractor shall reimburse the State for the full amount of the outstanding cost incurred by the State.
- 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 rain water may splash into rain gage. The rain gage installation shall be stable and plumbed. Do not begin field work until the rain gage is installed and site-specific best management practices are in-place.
- 7. Submit Site-Specific BMP Plan to the Engineer along with a completed Site-Specific BMP Review Checklist within 30 calendar days of contract execution. The Site-Specific BMP Review Checklist may be obtained from http://www.stormwaterhawaii.com.

B. WASTE DISPOSAL:

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. Deposit 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 practices 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 Disclosure 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 should 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 facilities where they are secure and will not be tipped over or knocked down.

C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

- 1. For projects with an NPDES Permit for Construction Activities, inspect at the following intervals. For construction areas discharging to nutrient or sediment impaired waters, inspect all control measures at least once each week and within 24 hours of any rainfall event of 0.25 inches or greater within a 24 hour period. For construction areas discharging to waters not impaired for nutrient or sediments, inspect all control measures weekly. Inspections are only required during the project's normal working hours. The discharge point water classification may be found in the SWPPP.
- 2. For projects without an NPDES Permit for Construction Activities, inspect all control measures weekly.

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 work day if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance. When installation of a new erosion or sediment control or a 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 and made 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 work day.

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- 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 maintenance inspection report within 24 hours after each inspection.

*See Sht. No. N-6 for Water Pollution and Erosion Control Notes cont.



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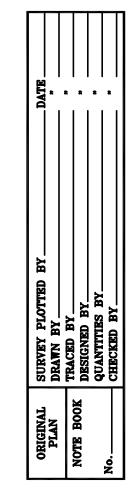
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STATE OF HAWAII **DEPARTMENT OF TRANSPORTATION** WATER POLLUTION AND EROSION CONTROLL NOTES KEAAU-PAHOA ROAD, SHOULDER LANE CONVERSION, PHASE 2 Shower Drive Intersection Improvements

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> SHEET No. N-5 OF SHEETS



WATER POLLUTION AND EROSION CONTROL NOTES: (CONT.)

C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES: (Cont.)

- 8. Provide a stabilized construction entrance at all points of exit onto paved roads to reduce vehicle tracking of sediments. Include stabilized construction entrance in the Water Pollution, Dust, and Erosion Control submittals. Minimum length should be 50 feet. Minimum width should be 30 feet. Minimum depth should be 12 inches or as recommended by the soils engineer and underlain with geo-textile fabric. If minimum dimensions cannot be met, provide other stabilization techniques that remove sediment prior to exit. Clean the paved street adjacent to the site entrance daily or as required to remove any excess mud, cold-planed materials, dirt or rock tracked from the site. Do not hose down the street without containing or vacuuming wash water. Cover dump trucks hauling material from the construction site with a tarpaulin. Remove sediment tracked onto the street, sidewalk, or other paved area by the end of the day in which the track-out occurs.
- 9. Include designated Concrete Washout Area(s) 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 responsibilities 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. Contain, remove, and dispose slurry generated from saw cutting of pavement in accordance with approved BMP practices. Do not allow discharge into the drainage system or State waters.
- 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.

14. For projects without an NPDES Permit for Construction Activities, complete initial stabilization within 14 calendar days after the temporary or permanent cessation of earth-disturbing activities.

D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:

- 1. Materials 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 Cleaning Solvents Wood

Derergents
Paints (enamel and latex)

Masonry Block

Metal Studs

Tar

Herbicides and Pesticides
Curing Compounds

Fertilizers Adhesives

Petroleum Based Products

- b. Use Material Management Practices to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff. Make an effort to store only enough product as is required to do the job.
- c. Store all materials stored onsite in a neat, orderly manner in their appropriate containers and if 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.
- . 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 not resealable.
 - b. Retain original labels and Safety Data Sheets (SDS), formerly Material Safety Data Sheets (MSDS).
 - c. Dispose of surplus products according to manufacturers' instructions and local and State regulations.

3. Onsite and Offsite Product Specific Plan

The following product specific practices shall be followed onsite

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a. 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 recommendation.

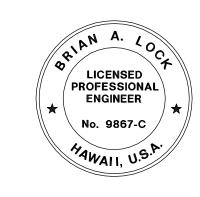
b. Fertilizers:

Apply fertilizers used 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 manufacturers' instructions and State and local regulations.

*See Sht. No. N-7 for Water Pollution and Erosion Control Notes cont.



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DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

WATER POLLUTION AND

EROSION CONTROLL NOTES

KEAAU-PAHOA ROAD, SHOULDER

LANE CONVERSION, PHASE 2

Shower Drive Intersection Improvements

Fed. Aid Proj. No. STP-0130(33)

Date: March 2016

SHEET No. N-6 OF 7 SHEETS

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FED. ROAD DIST. NO. FISCAL YEAR SHEET NO. FED. AID PROJ. NO. TOTAL SHEETS STATE 2016 HAWAII

WATER POLLUTION AND EROSION CONTROL NOTES: (CONT.)

D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES: (Cont.)

d. Concrete Trucks:

Washout or discharge concrete truck drum wash water only at a designated site as far as practicable from storm drain inlets or State waters. Do not discharge water in the drainage system or State waters. Disposal by percolation is prohibited. Clean disposal site as required or as requested by the Engineer.

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 spill 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.
- Clearly post manufacturers' recommended methods for spill cleanup. Make site personnel aware of the procedures and the location of the information and cleanup supplies.
- d. Keep ample materials and equipment necessary for spill cleanup in the material storage area onsite.
- e. Clean up all spills 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.
- Report spills of toxic hazardous material to the appropriate State or local government agency, regardless of the size. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 occurs during a 24-hour period, the Contractor shall notify the Engineer as soon as the Contractor has knowledge of the discharge. The Engineer will notify the National Response Center (NRC) at (800) 424-8802, the Clean Water Branch during regular business hours at 586-4309, and the Hawaii State Hospital Operator at 247-2191 and the Clean Water Branch (DOH-CWB) via email at <u>cleanwaterbranch@doh.hawaii.gov</u> during non-business hours immediately. The Contractor shall also provide to the Engineer, within 7 calendar days of knowledge of the release, a description of the release, the circumstances leading to the release, and the date of the release. The Engineer will provide this information to the DOH-CWB. The Engineer will provide information to the NRC if requested.

E. PERMIT REQUIREMENTS:

ORIGINAL
PLAN
NOTE BOOK

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 disturbance, including staging and storage areas, that is not covered by the NPDES Permit obtained by the State, the Contractor shall be responsible for obtaining the required NPDÉS Construction Activities Permit to cover this additional disturbed area. See Hawaii Administrative Rules Chapter 11-55,

Appendix C for definition of land disturbance. The Contractor's attention is directed to the applicable NPDES Permit documents on the bid package compact disc.

- 2. Comply with all applicable State and Federal Permit conditions. Permits may include, but not limited to the following:
 - a. NPDES Permit for Construction Activities
 - NPDES Permit for Construction Dewatering
 - NPDES Permit for Hydrotesting Waters
 - Other permits as required

F. SITE-SPECIFIC BMP REQUIREMENTS:

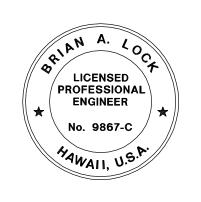
Each BMP below is referenced to the corresponding section of the current HDOT Construction Best Management Practices Field Manual and appropriate Supplemental Sheets. The Manual may be obtained from the HDOT Statewide Stormwater Management Program Website at http://www.stormwaterhawaii.com/resources/contractors-and-consultants/ under Construction Best Management Practices Field Manual. Supplemental BMP sheets are located at http://stormwaterhawaii.com/resources/contractors-and-consultants/ storm-water-pollution-prevention-plan-swppp/ 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. A list of pollutant sources and corresponding BMP used to mitigate the pollutants are included in Section 209 of the Special Provisions under

- 1. Protect all Drainage Inlets receiving runoff from disturbed areas
- 2. Contain on-site runoff using Perimeter Sediment Controls
 - a. SC-1 Silt Fence
 - b. SC-5 Vegetated Filter Strips and Buffers
 - c. SC-8 Compost Filter Berm
 - d. SC-13 Sandbag Barrier
 - e. SC-14 Brush or Rock Filter

Appendix A. Follow the requirements below:

- 3. Control offsite runoff from entering construction area
 - a. EC-8 Run-On Diversion
 - b. SC-6 Earth Dike
 - c. SC-7 Temporary Drains and Swales
- 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-6 Solid Waste Management
 - f. SM-7 Sanitary/Septic Waste Management
 - g. SM-9 Hazardous Waste Management
 - h. SM-10 Spill Prevention and Control
 - i. SM-11 Vehicle and Equipment Cleaning
 - j. SM-12 Vehicle and Equipment Maintenance
 - k. SM-13 Vehicle and Equipment Refueling
 - I. 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 NS-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.



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EROSION CONTROLL NOTES KEAAU-PAHOA ROAD, SHOULDER LANE CONVERSION, PHASE 2 Shower Drive Intersection Improvements Fed. Aid Proj. No. STP-0130(33)

SHEET No. N-7 OF

March 2016 Scale: Date:

STATE OF HAWAII **DEPARTMENT OF TRANSPORTATION**

WATER POLLUTION AND

SHEETS