## STRUCTURAL GENERAL NOTES

- 1. The Contractor shall coordinate all work.
- 2. The Contractor is responsible for scaffolding, barricades, work platforms, and safety at the job site. Temporary bracing and shoring of elements under repair as required for structural stability shall be the responsibilty of the Contractor. Contractor's structural engineer licensed in Hawaii shall be responsible for shoring.
- 3. Details shown on the drawings shall be typical for all similar conditions. Modify details for special conditions as directed by the Engineer.
- 4. Information shown on the drawings has been obtained from field observations conducted from June 2010 and record drawings of the original construction. The accuracy and completeness of the drawings, including as-built dimension, are not guaranteed. Dimensions shown on the drawings may not be exact. Contractor shall verify all existing conditions and dimensions before commencing work. Notify the Engineer of any discrepancies.
- 5. Contractor's suppliers and Manufacturer's representative shall visit the site to instruct all Contractor's personnel performing the work, before work begins, on the proper mixing, surface preparation and application of the repair material and shall be available on an on-call basis throughout the extent of the project. Any cost associated with this requirement shall be included in the bid price.
- 6. Contractor shall protect existing surfaces and objects to remain from damage. Any item to remain that is damaged by the Contractor shall be replaced or repaired to match existing adjacent surfaces at no additional cost.
- 7. The Contractor shall provide all necessary measures to protect the new work and existing structures during the construction.
- 8. No penetrations shall be allowed through any concrete member unless shown on the drawings or approved by the Engineer and Contractor's structural engineer licensed in Hawaii.
- 9. Omissions and/or conflicts with the Drawings and Specifications shall be brought to the attention of the Engineer for resolution before proceeding with the work.
- 10. The Contractor shall be responsible for damage to any Government utility system resulting from construction operations; any damage shall be reported immediately to the Engineer or appropriate Government representative.

# CONCRETE REPAIR NOTES

- 1. High early strength concrete shall be a mixture of cement, fine aggregate, coarse aggregate, plasticizing admixture, corrosion inhibitor admixture, fiber, and water. It shall have a minimum compressive strength of 3,000 PSI when opened to traffic and no later than 2 hours after casting. Minimum compressive strength of concrete shall be 8,000 PSI at 7 days. Manufacturer's representative shall be present on site during the first 14 days of casting concrete. See specifications for additional requirements.
- 2. Aggregates shall be basalt, no larger than  $\frac{378}{}$ " and otherwise conform to the State Standard Specification.
- 3. Unless otherwise indicated, plasticizer admixtures shall be used at the Contractor's option subject to approval of the Engineer.
- 4. Do not feather edge repairs.
- 5. All exposed rebars shall be cleaned of all scale, rust, dirt, oil and other deleterious materials.
- 6. All forms shall be water tight, concrete and water with cementitious particles shall not overflow formwork. Formwork and joints shall be sealed to prevent concrete and water with cementitious particles from leaking.
- 7. The existing deck reinforcing steel shall not be removed or damaged. The steel shall be re-used in the new deck and placed in the same orientation and location as originally shown on the existing drawings.
- 8. If there is any loss of reinforcing steel section found which exceeds 10% of steel cross section, it shall be repaired by adding additional new steel in the new deck casting. Lap splicing is preferred where possible. Use ASTM A615 steel, grade 60. If welding is required, ASTM A706 steel shall be used.
- 9. Contractor shall hire a certified independent testing lab and take a minimum of five 6"x12" test cylinders per 300 SF of deck per day. Two cylinders shall be tested before opening deck to traffic, two cylinders tested at 7 days, and one held as reserve. See specifications for additional requirements. Cost is incidental.
- 10. Contractor option to use Schmidt hammer test results prior to opening deck to traffic providing it has been shown by site tests that for 5 consecutive days of work, Schmidt hammer tests are within 10% of actual tests. Reverification is required every 75 days. Schmidt hammer shall not be allowed for the 7 day test results.

# <u>WATER POLLUTION</u> **≢** EROSION CONTROL NOTES

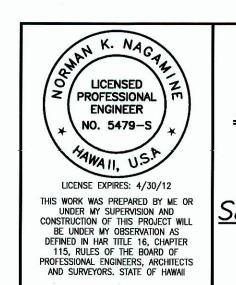
### A. GENERAL

- 1. See 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.
- 2. Effective October 1, 2008, follow the guidelines in the "Construction Best Management Practices Field Manual", dated January 2008 in developing, installing and maintaining the Best Management Practices (BMP) for the project.
- 3. Follow the guidelines in the Honolulu's City & County "Rules Relating to Soil Erosion Standards and Guidelines".
- 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, 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. For projects that require an NPDES Permit from the Department of Health, 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, and have an opening of at least one-inch in diameter. Install the rain gage on the project site in an area that will not deter rainfall from entering the gage opening. 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.

# FED. ROAD DIST. NO. STATE FED. AID PROJ. NO. FISCAL YEAR NO. SHEETS HAWAII HAW. IM-H1-1(265) 2011 3 23

#### B. WASTE DISPOSAL

- Waste Materials: Collect and store all waste materials in a securely lidded metal dumpster. 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 a minimum of twice per week or as often as is deemed necessary. 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 and the Contractor shall be responsible for seeing that these procedures are followed.
- 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.
- C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES
- 1. Inspect all control measures at least once each week and within 24 hours of any rainfall event of 0.5 inches or greater within a 24 hour period.
- 2. Maintain all measures in good working order. If repair is necessary, it shall be initiated within 24 hours after the inspection.
- 3. Remove built-up sediment from silt fence when it has reached one-third the height of the fence.
- 4. 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.



STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

Salt Lake Viaduct Deck Repair, Eastbound Federal Aid Project No. IM-H1-1(265)

Morman K Magamme Scale: None

Date: May 2011

SHEET No. S-2 OF 23 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-1(265)	2011	4	23

# WATER POLLUTION ♦ EROSION CONTROL NOTES (CONT.)

- EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES (CONT.)
- 5. Inspect temporary and permanent seeding and planting for bare spots, washouts and healthy growth.
- 6. Make a maintenance inspection report promptly after each inspection. Submit a copy to the Engineer no later than one week from the date of the inspection.
- 7. Provide a stabilized construction entrance 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. 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. Cover dump trucks hauling material from the construction site with a tarpaulin.
- 8. Include designated Concrete Washout Area(s) in the Water Pollution, Dust, and Erosion Control submittals.
- 9. Submit the name of a specific individual designated responsible for inspections, maintenance and repair activities and filling out the inspection and maintenance report.
- 10. 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.
- 11. Contain, remove, and dispose slurry generated from saw cutting of pavement in accordance with approved BMP practices. Payment for confinement, removal, and disposal of slurry shall be considered incidental to the various contract
- D. GOOD HOUSEKEEPING BEST MANAGEMENT **PRACTICES**
- 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 Metal Studs Tar

Fertilizers Petroleum Based Products Cleaning Solvents Paints (enamel \ atex) Wood Masonry Block

- 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.
- 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 not resealable.
  - b. Retain original labels and all material safety data sheets (MSDS) onsite.
  - 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:
  - 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. Once applied, work fertilizer into the soil to limit exposure to storm water. Storage shall be in a covered shed. 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 highway drainage system. Dispose properly according to manufacturers' 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 in the highway drainage system or waters of the United States. Contact Drinking Water Branch, Department of Health at 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 at the project site 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 and in the office trailer onsite.
  - c. 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 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.
  - g. Report spills of toxic hazardous material to the appropriate State or local government agency, regardless of the size.

### E. PERMIT REQUIREMENTS

- 1. If a National Pollutant Discharge Elimination System (NPDES) Permit is required for Construction Activities of one acre or more, submit to the Engineer six sets of the Water Pollution and Erosion Control Submittals as detailed in Subsection 209.03 of the specifications.
- 2. If an NPDES Permit for Construction Dewatering is required, the Contractor shall be responsible to obtain the Permit from the Department of Health, Clean Water Branch.
- 3. Comply with all applicable State and Federal Permit conditions. Permits may include but are not limited to the following: a. Solid Waste Disposal Plan: Contractor's attention is directed to all requirements of the Solid Waste Disposal Plan/Permit including but not limited to the capture, proper handling and disposal of solid and liquid wastes generated from construction activities.

### **ABBREVIATIONS**

approximate approx baseline

Best Management Practices

CONC concrete continuous cont diameter

drive expansion joint

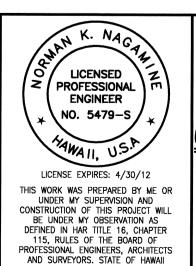
existing exist exp expansion inbound joint

angle maximum max minimum

outbound on centers reinf reinforcing

req'd required sheet station line

street typical vertical



norman K Nagamme

STATE OF HAWAII **DEPARTMENT OF TRANSPORTATION** HIGHWAYS DIVISION <u>WATER POLLUTION</u> **♦** EROSION <u>CONTROL NOTES & ABBREVIATIONS</u> INTERSTATE ROUTE H-1

Salt Lake Viaduct Deck Repair, Eastbound Federal Aid Project No. IM-H1-1(265)

Scale: None

Date: May 2011

SHEET No. S-3 OF 23 SHEETS

