GENERAL NOTES

- 1. The Project Scope of Work involves construction of a new roadway, a drainage channel and a drainage basin in Ewa, Oahu, Hawaii between the vicinity of Ewa Villages and Farrington Highway. Work includes cleaning, grubbing, demolition, grading, installation of PCC pavement, AC pavement, curbs, gutters, sidewalks, storm drainage system, pavement underdrain system, lighting system, grassing, temporary irrigation system, erosion controls and fencing.
- 2. All construction work shall be done in accordance with the standards and specifications of the State Department of Transportation as amended, unless otherwise specified by the contract plans and specifications.
- 3. Construction outside the State Department of Transportation right-of-way and State acquired parcels are subject to approval by the Engineer and the affected owner.
- 4. 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.
- 5. The existence and location of utilities, manholes, monuments, pavements, and other features as shown on the plans are from the latest available data but the accuracy is not guaranteed. The encountering of other obstacles during the course of work is possible. The Contractor shall make an independent check to verify the exact locations and depths of the existing utilities and obstructions.
- 6. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting paving operations.
- 7. Contractor shall dispose or deliver any removed material, as described in Section 201 -Clearing and Grubbing, at no cost to the State.
- 8. The Contractor shall be held liable for any damages incurred to the existing facilities, utilities and other features as a result of his operations. All damaged portions shall be replaced in accordance with the requirements of the affected owner or user at the Contractor's expense.
- 9. All existing utilities, whether or not shown on the plans, shall be protected at all times by the Contractor during construction unless specified on the plans to be abandoned. Any damage to the existing utilities shall be repaired and paid for by the Contractor.
- 10. 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.
- 11. The Contractor shall field verify the operational status of all existing utilities to be removed or abandoned in place. Any discrepancy shall be brought to the attention of the Engineer.
- 12. The Contractor shall notify the Engineer upon uncovering any potential historical artifacts or items of archaeological significance.
- 13. The existing improvements on the premises and in adjacent areas that are not to be removed shall be preserved and protected. Any and all damages resulting from the Contractor's construction operations shall be replaced and repaired to original condition, to the satisfaction of the owner.
- 14. For benchmarks see sheets C2.1.
- 15. Azimuths and coordinates are referred to Hawaii State Plane Coordinate System (Zone 3).
- 16. Elevations shown on these plans are referenced to Mean Sea Level (MSL).

GENERAL NOTES (Cont.)

FED. ROAD	STATE	FED. AID	FISCAL	SHEET	TOTAL
DIST. NO.		PROJ. NO.	YEAR	NO.	SHEETS
HAWAII	HAW.	STP-8930(1)	2005	6	144

- 17. The Contractor shall adjust centerline and reference survey monuments to the finished pavement grade.
- 18. The Contractor shall coordinate, if applicable, construction of electrical, telephone, cable television, water, sewer and gas line relocation work with Hawaiian Electric Company, Verizon, Oceanic Cable, Board of Water Supply, Department of Environmental Services, and The Gas Co., respectively. All coordination shall be considered incidental to Roadway Excavation work.
- 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. If use of a location is approved by the Engineer, a permit to use the property within the highway right-of-way shall be obtained from the State Highways.



North-South Road Phase 1A F.A.I. Proj. No. STP-8930(1)

Date: Dec 22, 2004

SHEET No. CO.5 OF 59 SHEETS

DEPARTMENT OF TRANSPORTATION

CONSTRUCTION NOTES - 1

Ë. SURVEY PLOTTED
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY ORIGINAL PLAN NOTE BOOK



DRAINAGE NOTES

- 1. The Contractor shall verify the locations of all existing culverts and drainage facilities in the field. Any existing culverts and drainage facilities damaged during construction shall be repaired or replaced by the contractor at his/her own expense.
- 2. Storm drain pipes shall be high density polyethylene (HDPE) Type S or reinforced concrete pipe (RCP), Class III, or aluminum spiral rib pipe, Sht. "t"=0.105, unless noted otherwise.
- All drainlines under paved areas shall have 2 feet minimum cover or be below the pavement structure, whichever is greater. Drainlines in other areas shall have a minimum 2 foot cover.

WATER POLLUTION AND EROSION CONTROL NOTES

1. General:

The Contractor is reminded of the requirements of Section 209 — Water Pollution and Erosion Control, in the "Hawaii Standard Specifications for Road, Bridge and Public Works Construction." as amended. 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. No work shall commence without a BMP plan approved by the Department of Health.

The Contractor shall follow the guidelines in the "Best Management Practices Manual for Construction Sites in Honolulu," dated May 1999 in developing, installing and maintaining the best management practices (BMPs) for the project. The Contractor may submit alternate methods to the Engineer for acceptance.

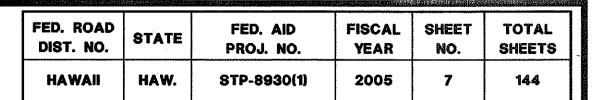
The Contractor shall keep a copy of the approved BMP, NOI, etc. on the project site. The BMP shall be updated to reflect any changes made during the course of construction for the duration of the project.

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.

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, whichever is greater.

2. Waste Disposal:

- A. Waste Materials: All waste materials shall be collected and stored in a securely lidded metal dumpster that does not leak. The dumpster shall meet all local and State solid waste management regulations. All trash and construction debris from the site shall be deposited in the dumpster. The dumpster shall be emptied a minimum of twice per week or as often as is deemed necessary. No construction waste materials shall be buried onsite. The Contractor's supervisory personnel shall be instructed regarding the correct procedure for waste disposal. Notices stating these practices shall be posted in the office trailer and the Contractor shall be responsible for seeing that these procedures are followed.
- B. Hazardous Waste: All hazardous waste materials shall be disposed of in the manner specified by local or State regulation or 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.
- C. Sanitary Waste: All sanitary waste shall be collected from the portable units a minimum of once per week, or as required.





SIGNATURE FYMUS APR 30, 2006

DATE OF
LICENSE EXPIRY

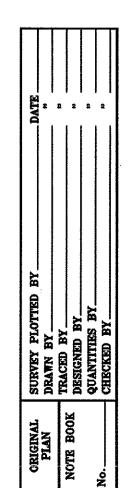
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

<u>CONSTRUCTION NOTES - 2</u>

North-South Road Phase 1A F.A.I. Proj. No. STP-8930(1)

Date: Dec 22, 2004

SHEET No. CO.6 OF 59 SHEETS



WATER POLLUTION AND EROSION CONTROL NOTES (Cont.)

- 3. Erosion and Sediment Control Inspection and Maintenance Practices:
 - A. All control measures shall be inspected at least once each week and within 24 hours following any rainfall event of 0.5 inches or greater. The Contractor shall provide and maintain a rain gauge and install it at a location agreed to by the State. The Engineer will choose the type of rain gauge.
 - B. All measures shall be maintained in good working order. If repair is necessary, it shall be initiated within 24 hours after the inspection.
 - C. Built-up sediment shall be removed from silt fence when it has reached one-third the height of the fence.
 - D. Silt screen or fence shall be inspected 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.
 - E. Temporary and permanent seeding and planting shall be inspected for bare spots, washouts and healthy growth.
 - F. The Contractor shall submit to the Engineer a maintenance inspection report promptly after each weekly inspection.
 - G. The Contractor shall select a minimum of three personnel who shall be responsible for inspections, maintenance and repair activities and filling out the inspection and maintenance report.
 - H. 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.
 - All slopes and exposed areas shall be grassed as soon as final grades have been established. Grading to final grade shall be continuous, and any area in which work has been interrupted or delayed or exposed for more than 15 days shall be grassed in order to prevent dust, erosion and silt runoff. Areas with imported soils shall be grassed not more than 5 working days after final grades have been established.
 - J. Temporary erosion controls shall not be removed before permanent erosion controls are in-place and established.
 - K. Dust screeen, 15' high, shall be installed along the makai perimeter of the project site. (approximately 6,000 LF)



My LI Ling of APR 30, 2006
SIGNATURE 12/20/04 DATE OF LICENSE EXPIRY

FED. ROAD

DIST. NO.

HAWAH

HAW.

FISCAL SHEET

YEAR

2005

FED. AID PROJ. NO.

STP-8930(1)

TOTAL

SHEETS

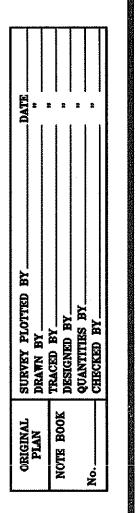
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONSTRUCTION NOTES - 3

North-South Road Phase 1A F.A.I. Proj. No. STP-8930(1)

Date: Dec 22, 2004

SHEET No. CO.7 OF 59 SHEETS



WATER POLLUTION AND EROSION CONTROL NOTES (Cont.)

- 4. Good Housekeeping Best Management Practices:
 - A. Materials Pollution Prevention Plan:
 - (1) 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 of the Construction Contractor's site—specific BMP plan.

Concrete
Detergents
Paints (enamel and latex)

Fertilizers
Petroleum Based Products
Cleaning Solvents

Metal Studs

Wood Masonry Block

- (2) Material management practices shall be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff. An effort shall be made to store only enough product as is required to do the job.
- (3) All materials stored onsite shall be stored in a neat, orderly manner in their appropriate containers and if possible under a roof or other enclosure.
- (4) Products shall be kept in their original containers with the original manufacturer's label.
- (5) Substances shall not be mixed with one another unless recommended by the manufacturer.
- (6) A product shall be used up completely before disposing of the container.
- (7) Manufacturer's recommendations for proper use and disposal shall be followed.
- (8) The Contractor shall conduct a daily inspection to ensure proper use and disposal of materials onsite.
- B. Hazardous Material Pollution Prevention Plan
- (1) Products shall be kept in original containers unless they are not resealable.
- (2) Original labels and Material Safety Data Sheets (MSDS) shall be retained and made available to the Engineer upon request.
- (3) Surplus products shall be disposed of according to manufacturers' instructions or local and state recommended methods.
- C. Onsite and Offsite Products Specific Plan
- (1) The following product specific practices shall be followed onsite:
 - a. Petroleum Based Products: All onsite vehicles shall be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products shall be stored in tightly sealed containers which are clearly labeled. Any asphalt substances used onsite shall be applied according to the manufacturer's recommendation.
 - b. Fertilizers: Fertilizers used shall be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer shall be worked into the soil to limit exposure to storm water. Storage shall be in a covered shed. The contents of any partially used bags of fertilizer shall be transferred to a sealable plastic bin to avoid spills.
 - c. Paints: All containers shall be tightly sealed and stored when not required for use. Excess paint shall not be discharged to the highway drainage system but shall be properly disposed of according to manufacturers' instructions or State and local regulations.

WATER POLLUTION	AND	EROSION	CONTROL	NOTES	(Cont.)

FED. ROAD	STATE	FED. AID	FISCAL	SHEET	TOTAL
DIST. NO.		PROJ. NO.	YEAR	NO.	SHEETS
HAWAII	HAW.	STP-8930(1)	2005	9	144

- d. Concrete Trucks: Concrete trucks shall be allowed to wash out or drum wash water only at designated site. Water shall not be discharged in the highway drainage system or waters of the United States (i.e. streams, rivers, harbors). The Contractor shall contact Drinking Water Branch, Department of Health at 586–4258 to receive permission to designate a disposal site. The Contractor shall clean the disposal site as required or as requested by the Engineer at no cost to the owner or the State.
- (2) Offsite Vehicle Tracking: A stabilized construction entrance shall be provided to help reduce vehicle tracking of sediments. The paved street adjacent to the site entrance shall be cleaned daily or as required to remove any excess mud, cold planed materials, dirt or rock tracked from the site. Pollutants shall not be discharged to the drainage system. Dump trucks hauling material from the construction site shall be covered with a tarpaulin.
- D. Spill Control Plan:
- (1) The Contractor shall have a spill prevention plan which shall be posted and adjusted to include a description and cause of each spill, measures to prevent and clean up each spill.
- 2) The Contractor shall be the spill prevention and cleanup coordinator. The Contractor shall 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. The names of responsible spill personnel shall be posted in the material storage area and in the office trailer onsite.
- (3) Manufacturers' recommended methods for spill cleanup shall be clearly posted and site personnel shall be made aware of the procedures and the location of the information and cleanup supplies.
- (4) Materials and equipment necessary for spill cleanup shall be kept in the material storage area onsite.
- (5) All spills shall be cleaned up immediately after discovery.
- (6) The spill area shall be kept well ventilated and personnel shall wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- (7) Spills of toxic hazardous material shall be reported to the appropriate State or local government agency, regardless of the size.
- 5. Permit Requirements:
 - A. The Contractor shall submit to the Engineer six (6) sets of the water pollution and erosion control submittals as detailed in Subsection 209.04 of the specifications. No work shall begin until the submittal has been reviewed and approved by the Engineer.
 - B. The Contractor shall comply with all applicable State and Federal permit conditions.

 Permits may include but are not limited to the following:

NPDES Permit for Construction Activities

- 6. The Contractor shall be responsible for conformance with the applicable provisions of Chapter 54, Water Quality Standards, and Chapter 55, Water Pollution Control of Title 11, Administrative Rules of the State Department of Health.
- 7. The Contractor, at the Contractor's own expense, shall keep the project area and surrounding areas free from dust nuisance and any material tracked on to the roadways. The work shall be in conformance with the Air and Water Pollution Control Standards and Regulations of the State Department of Health.



APR 30, 2006

SIGNATURE 12/12/4 DATE OF LICENSE EXPIRY

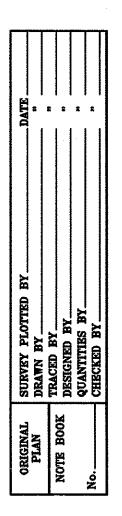
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION NOTES - 4

<u>North-South Road</u> <u>Phase 1A</u> <u>F.A.I. Proj. No. STP-8930(1)</u>

Date: Dec 22, 2004

SHEET No. CO.8 OF 59 SHEETS



CONSTRUCTION NOTES FOR WORK WITHIN STATE R/W

- All construction work shall be done in accordance with the Standard Plans and Specifications of the State Department of Transportation as amended, unless otherwise specified by the contract plans and specifications.
- 2. Confined Space

For entry by SDOT personnel, including inspectors, into a permit required confined space as defined in 29 CFR part 1910.146(b), the Contractor shall be responsible for providing:

- 1. All safety equipment required by the confined space regulations applicable to all parties other than the construction industry, to include, but not limited to, the following:
 - Full body harnesses for up to two personnel.
 - Lifeline and associated clips.
 - Ingress/egress and fall protection equipment.
 - Two-way radios (walkie-talkies) if out of line-of-sight.
 - Emergency (escape) respirator (10 minute duration).
 - Cellular telephone to call for emergency assistance.
 - Continuous gas detector (calibrated) to measure oxygen, hydrogen sulfide, carbon monoxide and flammable (capable of monitoring at a distance at least 20-feet away).
 - Personal multi-gas detector to be carried by the inspector.
- Continuous forced air ventilation adequate to provide safe entry conditions.
- One attendant/rescue personnel topside (two, if conditions warrant it)

FREE SERVICE FOR LOCATING UNDERGROUND UTILITIES

A free service is available to Contractors for locating underground utilities. Service is provided by Underground Service Alert North, at toll free telephone no. 1—800—227—2600. Call Underground Service Alert North at least two days prior to the start of any excavation work.

	•		
			Y.
SIDEWALK NOTES			3,744 5
SIDEWALK NOTES		•	

FED. ROAD	STATE	FED. AID	FISCAL	SHEET	TOTAL
DIST. NO.		PROJ. NO.	YEAR	NO.	SHEETS
HAWAII	HAW.	STP-8930(1)	2005	10	144

- 1. All sidewalks shall provide a minimum clear width of 3'-0" (excluding curb) for pedestrian circulation. If this cannot be met, a minimum 32-inch clear width is allowed for a maximum distance of 24 inches.
- 2. Narrow sidewalks (3'-0" min. width, excluding curb) may prohibit the installation of any sign posts, utility poles, fire hydrants, traffic signal standards, light poles, etc. in the sidewalk.
- Passing spaces along new sidewalks with 5' clear width or less shall be provided at maximum 200' intervals as required by ADA guidelines. The passing area shall be a minimum 5' wide by 5' long as feasible.
- 4. For new construction, the minimum sidewalk width shall be 6'-0" (excluding curb). The cross slope shall not exceed 2%.
- If possible, install utility poles, fire hydrants, light poles, sign posts, pullboxes, etc. off of sidewalk but within the right—of—way.
- Objects protruding from utility poles and walls adjacent to the sidewalks (i.e. wall mounted fire hydrants, telephones, meters on poles, etc.) shall be mounted to meet the current Americans with Disabilities Act Accessibility Guidelines (ADAAG) and will be subject to Engineer's approval.
- All new wheelchair—accessible curb ramps and flares shall be no steeper than 12H:1V. Ramps and flares shall be lengthened as required to achieve this maximum slope.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE (2/22/04 DATE OF LICENSE EXPIRY

DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONSTRUCTION NOTES - 5

<u>North-South Road</u> <u>Phase 1A</u> <u>F.A.I. Proj. No. STP-8930(1)</u>

Date: Dec 22, 2004

SHEET No. CO.9 OF 59 SHEETS

GRADING NOTES

- 1. All grading work shall be done in accordance with State of Hawaii Standard Specifications for Road, Bridge, and Public Works Construction.
- 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 Contractor may be cited and the Contractor shall immediately make all remedial actions necessary.
- 3. The Contractor, at the Contractor's own expense, shall keep the project area and surrounding area free from dust nuisance. The work shall be in conformance with the air pollution control standards contained in the Hawaii Administrative Rules, Title 11, Chapter 60.1, "Air Pollution Control."
- 4. The underground pipes, cables or ductlines known to exist by the Design Engineer from his/her 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. Surface waters shall not damage the cut face of an excavation or the sloped surfaces of a fill. Furthermore, sediment—laden runoff shall not leave the site.
- 6. All slopes and exposed areas shall be sodded, planted, or hydromulched, 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.
- 7. Fills on slopes steeper than 5:1 shall be keyed.
- 8. No grading work shall be done on Saturdays, Sundays and holidays at any time without prior notice and acceptance by the Engineer, provided such grading work is also in conformance with the community noise control standards contained in the Hawaii Administrative Rules, Title 11, Chapter 46, "Community Noise Control."
- 9. The limits of the area to be graded shall be flagged before the commencement of the grading work.
- 10. All grading operations shall be performed in conformance with the applicable provisions of the water quality and water pollution control standards contained in Hawaii Administrative Rules, Title 11, Chapter 54, "Water Quality Standards," and Title 11, Chapter 55, "Water Pollution Control" and if applicable, the NPDES permit for the project.
- 11. The measures to control erosion and other pollutants shall be in place before any earth-moving phase of the grading is initiated.
- 12. Temporary erosion controls shall not be removed before permanent erosion controls are in-place and established.

GRADING NOTES (Cont.)

FED. ROAD	STATE	FED. AID	FISCAL	SHEET	TOTAL
DIST. NO.		PROJ. NO.	YEAR	No.	SHEETS
HAWAII	HAW.	STP-8930(1)	2005	11	144

- 14. Temporary erosion control procedures shall be submitted for approval prior to application for permit.
- 15. If the grading work involves contaminated soil, then all grading work shall be done in conformance with applicable State and Federal requirements.
- 16. Building permit for retaining walls shall be obtained prior to commencement of grading work on site.
- 17. In the event any artifacts or human remains are uncovered during construction operations, the contractor shall immediately suspend work and notify SDOT, the Honolulu Police Department, the State Department of Land and Natural Resources—Historic Preservation Division (692—8015).
- 18. 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 violator. Furthermore, violators shall be subjected to administrative, civil and/or criminal penalties.
- 19. Place topsoil and irrigation system prior to placement of erosion control matting, in accordance with the requirements of Section 617—Topsoil, 616—Sprinkler System, and Section 663—Erosion Control Matting.
- 20. Any loose/soft soils encountered shall be removed and backfilled with proper compacted fill prior to mass grading



DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONSTRUCTION NOTES - 6

<u>North-South Road</u> <u>Phase 1A</u> <u>F.A.I. Proj. No. STP-8930(1)</u>

Date: Dec 22, 2004

SHEET No. CO.10 OF 59 SHEETS