Attachment 6
Construction Drawings

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	901A–01–19	2019	1	35

INDEX TO DRAWINGS	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2 – 3	GENERAL NOTES AND LEGEND
4 – 6	WATER POLLUTION & EROSION CONTROL NOTES
7 – 10	TYPICAL SECTIONS
11	RECONSTRUCTION SCHEDULE
12 – 13	CURBRAMP DETAILS
14 – 21	ROADWAY PLANS
22	SUPERELEVATION PLANS
23 – 32	TRAFFIC PLANS
33 – 35	CROSS SECTIONS

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

HONOLULU, HAWAII

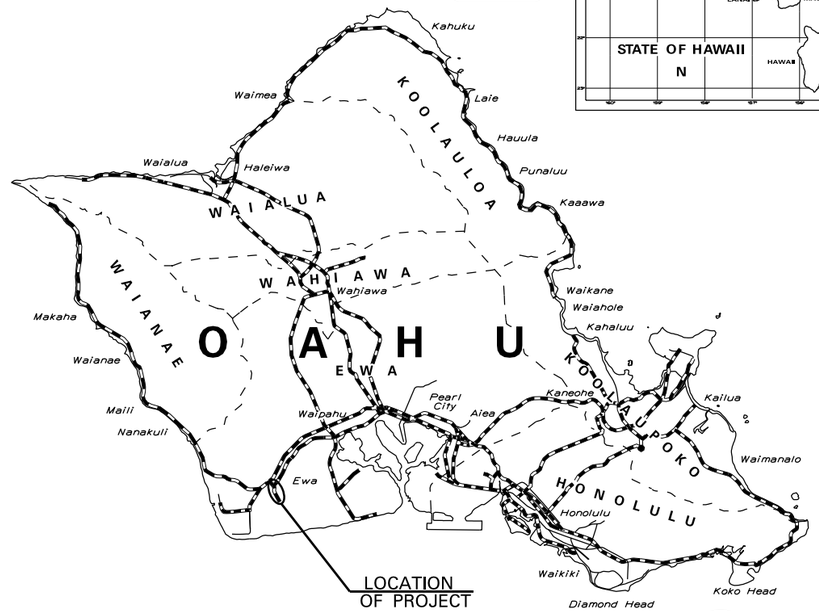
PLANS FOR

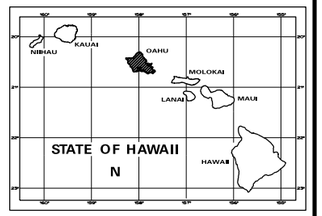
FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS

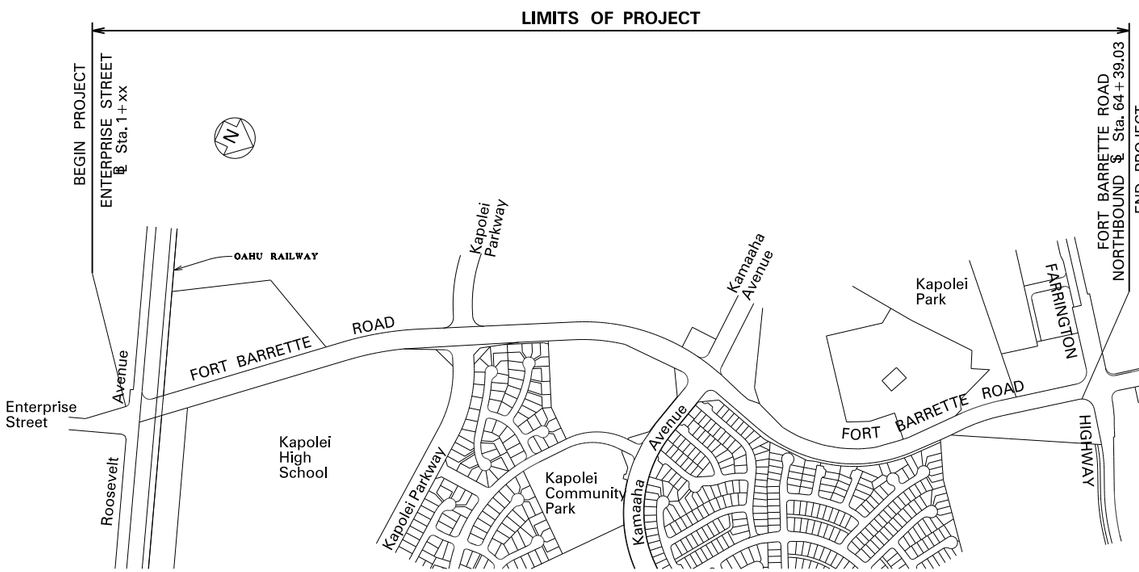
ROOSEVELT AVENUE TO FARRINGTON HIGHWAY

PROJECT NO. 901A–01–19 (DRAFT PLANS)

DISTRICT OF EWA
ISLAND OF OAHU







LAYOUT PLAN

5 0 5 10 15

SCALE IN HUNDRED FEET

N

4 0 4 8

SCALE IN MILES

RTE 901 MILE POST 0.00 TO RTE 901 MILE POST 1.22

HWY–DD MANAGED BY _____ PHONE _____ DATE _____

HWY–D DESIGNED BY _____

DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

APPROVED:

DIR. OF TRANSPORTATION _____ DATE _____

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	901A-01-19	2019	2	35

GENERAL NOTES

1. The existence and location of underground utilities, manholes, monuments and structures 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 be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations. All damaged portions shall be replaced in accordance with the standards and specifications of the affected utility company at no cost to the State.
2. 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. The Contractor shall be held liable for any damages incurred to the existing utilities as a result of his operations. All damaged portions shall be replaced in accordance with the Standards and Specifications of the affected utility company at no cost to the State.
3. The Contractor shall verify the presence of existing aerial and underground utilities which may conflict with construction activities and shall coordinate with the utility company for temporary relocations, as necessary. All costs associated with temporary relocations shall be borne by the Contractor.
4. The Contractor shall indemnify and be solely responsible for the protection of adjacent properties, utilities and existing structures from damages due to construction. Repairing any damage shall be at the Contractor's own expense, to the satisfaction of the Engineer.
5. Prior to resurfacing operations, the Contractor shall be responsible for locating, preserving and marking all utility and highway facilities that will require adjustments to the new finished pavement grade. Additionally, the Contractor shall submit to the Engineer a list of all items, including water, drainage, sewer, electrical, telephone, and cable utilities to be adjusted to the new finished grade.
6. The exact locations and limits of areas to be reconstructed and cold planed shall be determined in the field by the Engineer.
7. The Contractor shall notify the Department of Transportation Services, Public Transit Division at ph. #768-8396 and the Oahu Transit Services, Inc. Bus Operations (ph. #848-4578 or 852-6016) and Paratransit Operations (ph. #454-5041 or 454-5020) of the scope of work, location, proposed closure of any street, traffic lane, sidewalk, or bus stop, and duration of project at least two (2) weeks prior to starting construction operations.
8. The Contractor shall obtain all necessary permits prior to start of work at his own cost.
9. 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.
10. The Contractor shall remove and dispose of all existing raised pavement markers and traffic tapes prior to the overlaying of Asphalt Concrete.
11. All holes, depressions and wheel ruts shall be filled and compacted with Hot Mix Asphalt Pavement, Mix No. V prior to resurfacing.
12. The existing drainage system shall be kept functional at all times during construction. The Contractor shall furnish materials, equipment, labor, tools and incidentals necessary to maintain flow.
13. Smooth riding connections shall be constructed at all limits of resurfacing including the beginning and end of project, connecting approaches, side streets, walkways and driveways as shown on the plans and/or as directed by the Engineer.
14. The Contractor shall clean and remove any accumulation of aggregates along the roadside within 10 feet of the edge of pavement.
15. The Contractor shall provide for vehicular and pedestrian access to and from all existing side streets and driveways at all times.
16. Existing facilities and/or pavement to remain which has been damaged by the Contractor shall be restored to its original condition at no cost to the State.
17. The Contractor shall be held liable for any damages incurred to the existing landscaping as a result of his operations.
18. Contractor shall dispose or deliver any removed material at no cost to the State.
19. The Contractor shall provide and maintain for access to and from all existing driveways, sidewalks, ADA access routes complying with 2010 ADAAG Section 206.1, side streets, and cross streets at all times. This work shall be considered incidental to various contract items and will not be paid for separately.
20. After completion of resurfacing, the Contractor and the Engineer will test for and determine ponding areas (i.e. low spots within resurfaced area). It shall be the responsibility of the Contractor to correct and resurface and/or repair all such ponding areas. Corrective measures shall be approved by the Engineer.
21. The Contractor is to take special measures to reduce dust from cold planing operations including but not limited to use of water misters on cold planing equipment and vacuum sweepers. Use of power brooms to sweep road is not allowed if a dust nuisance is created.
22. The vertical riding surface drop-off between adjacent surfaces shall not exceed 3-inches. This shall include differences in height between adjacent pavement surfaces, cold planed surfaces, bridge decks and new concrete slabs. If a vertical riding surface drop-off exists at the end of each day's work, the Contractor shall provide temporary transition tapers with maximum slopes of 48:1 for travel in the longitudinal direction and 6:1 for transverse movements.
23. The Contractor shall not perform any construction work during periods of heavy rainfall.
24. The Contractor shall use the Traffic Control setup included in the 2005 Hawaii Standard Specifications for Road and Bridge Construction Section 645, and/or develop a site specific Traffic Control Plan where warranted.
25. The Contractor shall coordinate with the Honolulu Police Department Special Duty Section to hire police officers for traffic control operations and transporting of project equipment to ensure minimal delay due to lane closures.
26. Any Survey Monuments that are disturbed shall be restored under the supervision of a licensed land surveyor registered in the State of Hawaii at no cost to the State. All survey data shall be certified by the surveyor and submitted to the Engineer.

PAVING AROUND MANHOLES

1. The Contractor shall first lower manholes more than cold planing thickness indicated on typical sections prior to cold planing. The work shall be considered incidental to the various paving contract items. Upon final paving, the manhole shall be raised and paid under the various contract items pertaining to manhole adjustments.
2. The Contractor shall place hot asphalt concrete around manholes and compact properly with a vibrating plate compactor.
3. If a plate compactor is not used, the Contractor shall use a pneumatic roller to roll the area around the manhole which is not rolled by the steel roller.
4. The Contractor shall fog seal or brush emulsion seal on the material placed as backfill on the area around the manhole that was not compacted by the roller. Black sand shall be used to blot our the area if the fog is too heavy.

DIVISION OF FORESTRY AND WILDLIFE NOTES

1. If nighttime lighting is required, any lights used shall be fully shielded to minimize impacts to native seabirds.

ORIGINAL PLAN
NOTE BOOK
No.
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES AND LEGEND

FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS
ROOSEVELT AVENUE TO FARRINGTON HIGHWAY
PROJECT NO. 901A-01-19 (DRAFT PLANS)

Date: September, 2019

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	901A-01-19	2019	3	35

LEGEND

- Reconstruction Areas
- Resurfacing Limits
- —e— Existing Electrical Line
- jp Existing Joint Pole
- pp Existing Power Pole
- hecomh Existing Hawaiian Electric Manhole
- HECOMH Adjusted Elec. MH Frame/Cover
- hecohh Existing Hawaiian Electric Hand Hole
- hecopb Existing Hawaiian Electric Pullbox
- —t(u)— Existing Underground Telephone Line
- —t(o)— Existing Overhead Telephone Line
- tp Existing Telephone Pole
- tmh Existing Telephone Manhole
- TMH Adjusted Telphone Manhole Frame/Cover
- thh Existing Telephone Hand Hole
- htcomh Existing Hawaiian Telcom Manhole
- HTCOMH Adjusted Hawaiian Telcom Manhole Frame/Cover
- htcopb Existing Hawaiian Telcom Pullbox
- —sc— Existing Signal Corps Line
- —tv— Existing TV Cable
- —w—30— Existing 30" Water Line
- —w—24— Existing 24" Water Line
- —w—12— Existing 12" Water Line
- —w—8— Existing 8" Water Line
- —w—6— Existing 6" Water Line
- —w—4— Existing 4" Water Line
- —w—2½— Existing 2½" Water Line
- —w—2— Existing 2" Water Line
- —w—1½— Existing 1½" Water Line
- —w—1— Existing 1" Water Line
- wmh Existing Water Manhole
- WMH Adjusted Water MH Frame/Cover
- av Existing Water Air Valve
- AV Adjusted Water Air Valve
- wv Existing Water Valve Box
- WV Adjusted Water Valve Box
- wm Existing Water Meter
- WM Adjusted Water Meter
- fh Existing Fire Hydrant
- FH Adjusted Fire Hydrant
- arv Existing Air Relief Valve
- 42" rcp Existing 42" Reinforced Concrete Pipe
- 30" rcp Existing 30" Reinforced Concrete Pipe

- —s—30— Existing 30" Sewer Line
- —s—18— Existing 18" Sewer Line
- —s—12— Existing 12" Sewer Line
- —s—10— Existing 10" Sewer Line
- —s—8— Existing 8" Sewer Line
- smh Existing Sewer Manhole
- SMH Adjusted Sewer MH Frame/Cover

- —g—6— Existing 6" Gas Line
- —g—4— Existing 4" Gas Line
- —g—2— Existing 2" Gas Line
- —g—1— Existing 1" Gas Line
- —g—¾— Existing ¾" Gas Line
- gv Existing Gas Valve Box
- GV Adjusted Gas Valve Box
- gmh Existing Gas Manhole
- GMH Adjusted Gas MH Frame/Cover

- mon. Existing Monument
- MON. Adjusted Monument

- ---d--24--- Existing 24" Drain Line
- sdmh Existing Storm Drain Manhole
- SDMH Adjusted Storm Drain MH Frame/Cover
- gdi Existing Grated Drop Inlet
- cb Existing Catch Basin

- sl Existing Highway Lighting Standard
- slpb Existing Highway Lighting Standard Pullbox

- tsp Existing Traffic Signal Pole
- tspb Existing Traffic Signal Pullbox

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE 6-29-99
NOTE BOOK	DRAWN BY	
No.	TRACED BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES AND LEGEND

FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS
ROOSEVELT AVENUE TO FARRINGTON HIGHWAY
PROJECT NO. 901A-01-19 (DRAFT PLANS)

Date: September, 2019

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	901A-01-19	2019	4	35

WATER POLLUTION AND EROSION CONTROL NOTES:

A. GENERAL:

1. 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:

1. Waste Materials
Collect and store all waste materials in a securely lidded metal dumpster or roll off container with cover to keep rain out or loss of waste during windy conditions. The dumpster shall meet all local and State solid waste management regulations. 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.

3. Maintain all erosion and sediment control measures in good working order. If repair is necessary, initiate repair immediately and complete by the close of the next 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.

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.

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.

ORIGINAL PLAN
SURVEY PLOTTED BY ____ DATE
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DESIGNED BY
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No.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER POLLUTION & EROSION CONTROL NOTES

FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS
ROOSEVELT AVENUE TO FARRINGTON HIGHWAY
PROJECT NO. 901A-01-19 (DRAFT PLANS)

Date: September, 2019

SHEET No. 1 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	901A-01-19	2019	5	35

WATER POLLUTION AND EROSION CONTROL NOTES (Cont.):

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	Cleaning Solvents
Detergents	Wood
Paints (enamel and latex)	Masonry Block
Metal Studs	Herbicides and Pesticides
Tar	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.
   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 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:

   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.

   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.
   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 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.

   g. 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 cleanwaterbranch@doh.hawaii.gov 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.

ORIGINAL PLAT
NOTE BOOK N.
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER POLLUTION & EROSION CONTROL NOTES

FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS
ROOSEVELT AVENUE TO FARRINGTON HIGHWAY
PROJECT NO. 901A-01-19 (DRAFT PLANS)

Date: September, 2019

SHEET No. 2 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	901A-01-19	2019	6	35

WATER POLLUTION AND EROSION CONTROL NOTES (Cont.):

E. PERMIT REQUIREMENTS:

1. The calculated land disturbance area for this project based on the construction plans is 0.12 acres not including Contractor Staging and Storage areas. If the total of the distrubed area and the Contractor Staging and Storage area is one acre or greater, the Contractor shall obtain the NPDES construction Activities Permit using HDOT's latest SWPPP template. See Hawaii Administrative Rules Chapter 11-55, Appendix C for the definition of land distrubance. The Contractor shall be responsible for obtaining the required NPDES Construction Activities Permit and complying with the requirements of HAR 11-55 including, but not limited to:
   a. Deadlines for initiating and completing initial stabilization
   b. Increased inspection frequency and installation of rain gage if applicable
   c. Deadlines to initiate and complete repairs to BMPs
   d. Reporting requirements and corrective action reports

2. Comply with all applicable State and Federal Permit conditions.

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://www.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 Appendix A.

Follow the requirements below:

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

2. Contain on-site runoff using Perimeter Sediment Controls
   a. SC-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

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
   l. SM-14 Scheduling
   m. SM-15 Location of Potential Sources of Sediment
   n. SM-16 Preservation of Existing Vegetation
   o. SM-18 Dust Control

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

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

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY ... DATE
DRAWN BY ...
TRACED BY ...
DESIGNED BY ...
QUANTITIES BY ...
CHECKED BY ...

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

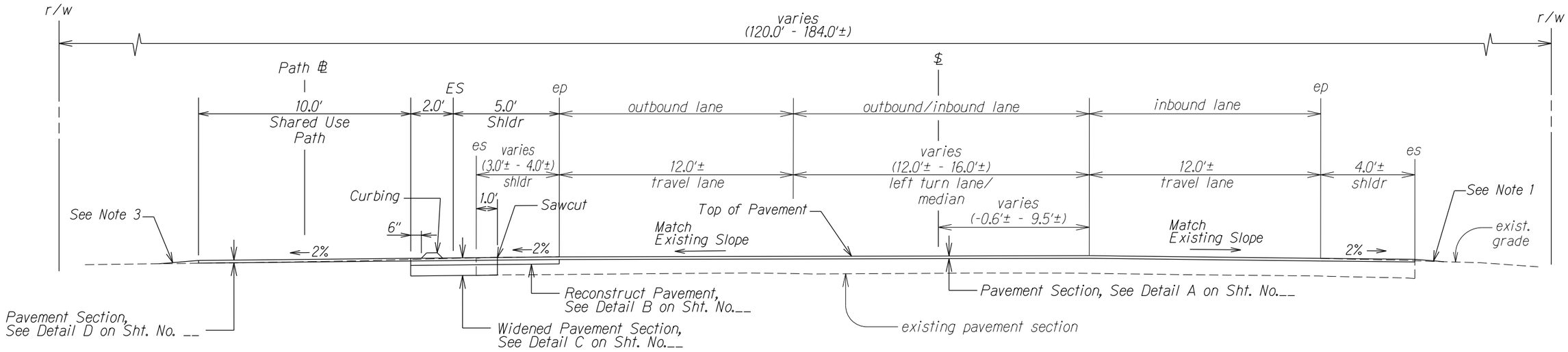
WATER POLLUTION & EROSION CONTROL NOTES

FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS
ROOSEVELT AVENUE TO FARRINGTON HIGHWAY
PROJECT NO. 901A-01-19 (DRAFT PLANS)

Date: September, 2019

SHEET No. 3 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	901A-01-19	2019	7	35

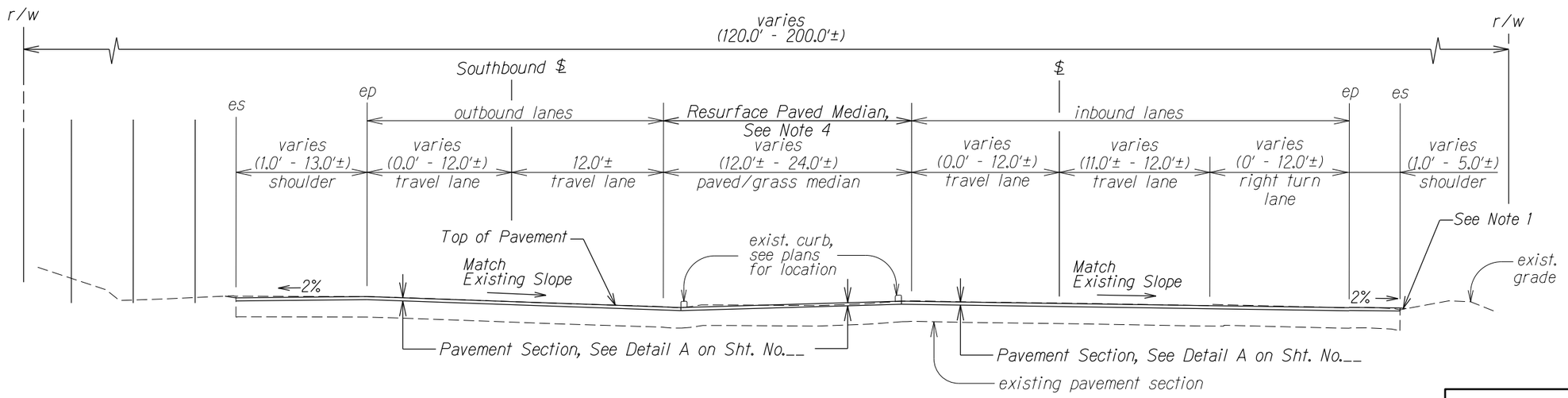


TYPICAL SECTION ON TANGENT
℄ STA. 8+00.0± TO KAPOLEI PARKWAY (℄ STA. 20+56±)

Scale: N.T.S.

Notes:

1. Safety Edge/Shoulder Dressing. See typical pavement edge detail on sht. no. __
2. For limits of reconstruction, see Roadway Plans.
3. See Shared Use Path Cross Sections.
4. Resurface paved median where there is no existing curb.



TYPICAL SECTION
NORTHBOUND ℄ STA. 0+00.0± TO ℄ STA. 8+00.0±

Scale: N.T.S.

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE
NOTE BOOK dtl Mileage No.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

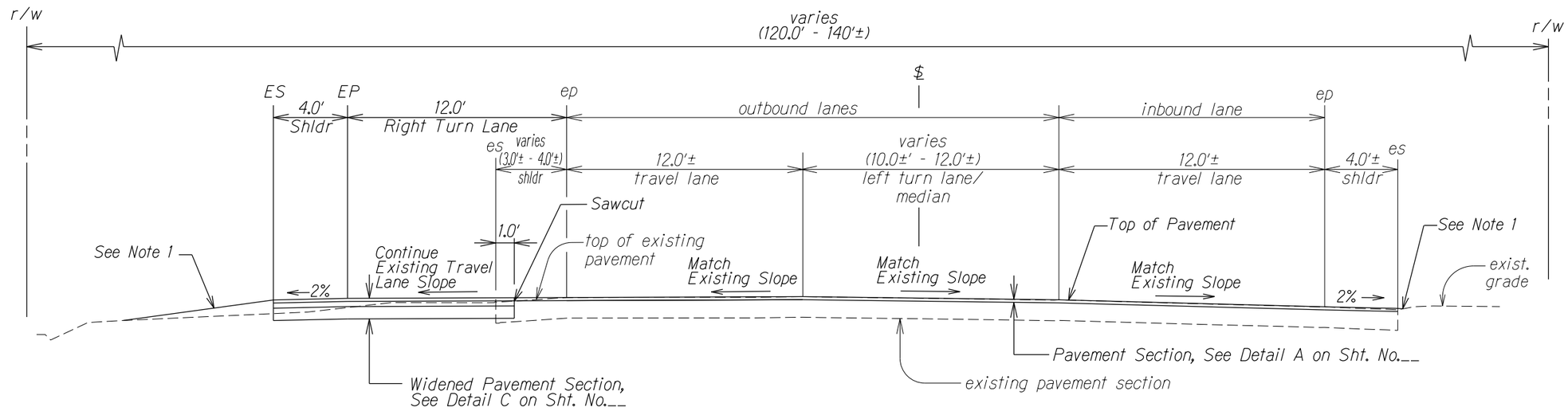
TYPICAL SECTION

FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS
ROOSEVELT AVENUE TO FARRINGTON HIGHWAY
PROJECT NO. 901A-01-19 (DRAFT PLANS)

Scale: Not to Scale Date: September, 2019

SHEET No. 1 OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	901A-01-19	2019	8	35

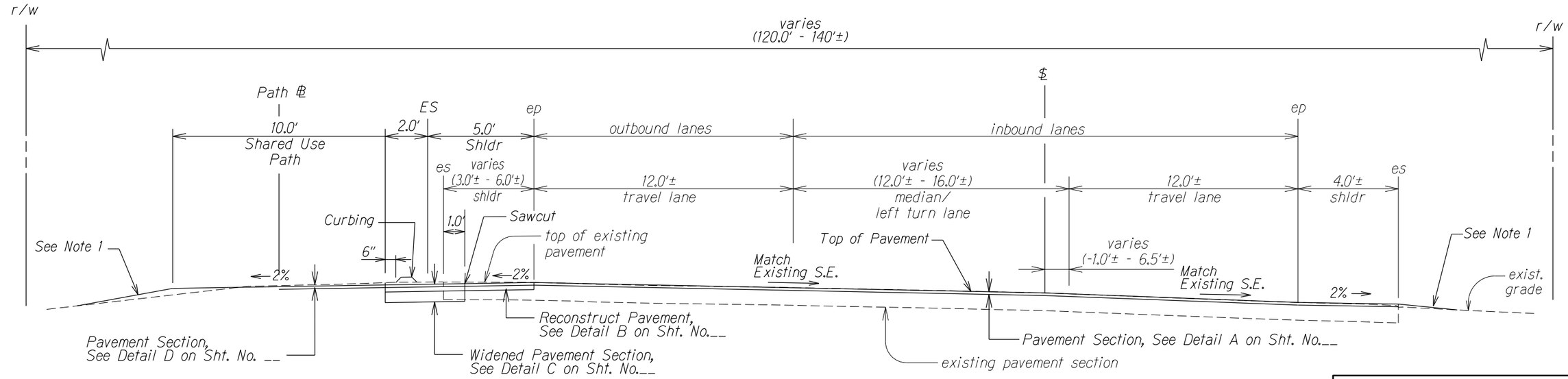


TYPICAL SECTION
KAPOLEI PARKWAY (℄ STA. 21+81±) TO ℄ STA. 26+00.0±

Scale: N.T.S.

Notes:

1. Safety Edge/Shoulder Dressing. See typical pavement edge detail on sht. no. __
2. For limits of reconstruction, see Roadway Plans.
3. See Shared Use Path Cross Sections.



TYPICAL SECTION ON CURVE
℄ STA. 8+00.0± TO KAPOLEI PARKWAY (℄ STA. 20+56±)

Scale: N.T.S.

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE
NOTE BOOK dd Mileage No.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

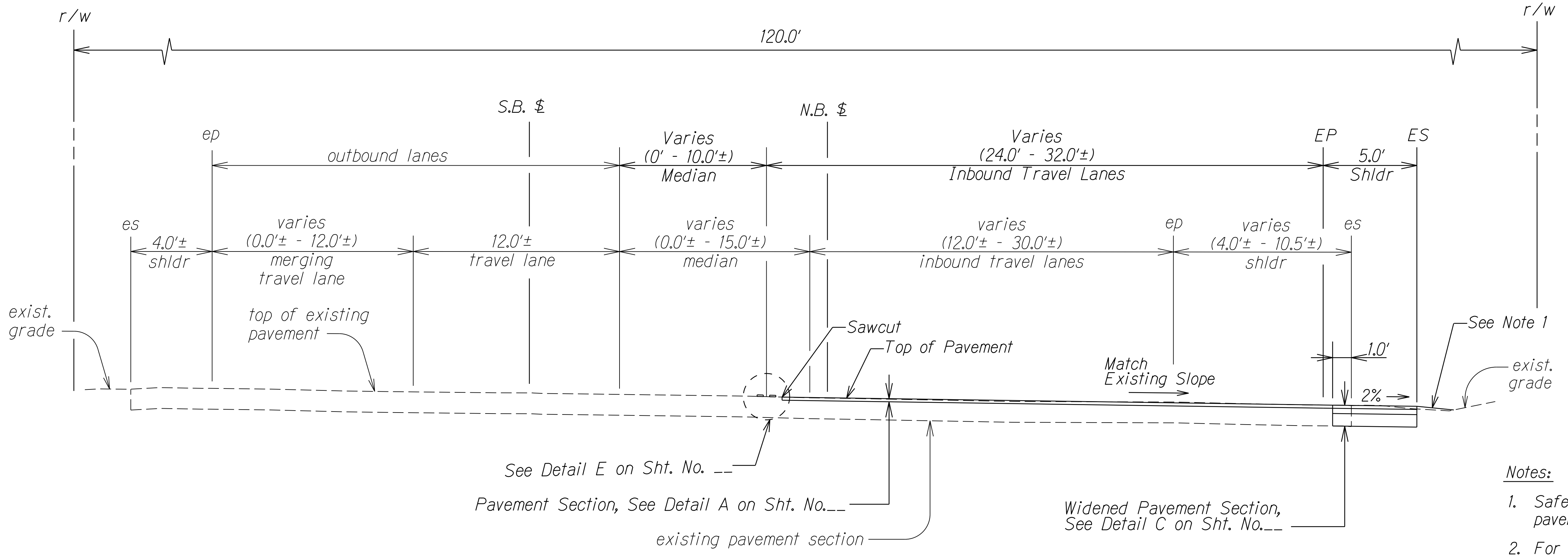
TYPICAL SECTION

FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS
ROOSEVELT AVENUE TO FARRINGTON HIGHWAY
PROJECT NO. 901A-01-19 (DRAFT PLANS)

Scale: Not to Scale Date: September, 2019

SHEET No. 2 OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	901A-01-19	2019	9	35

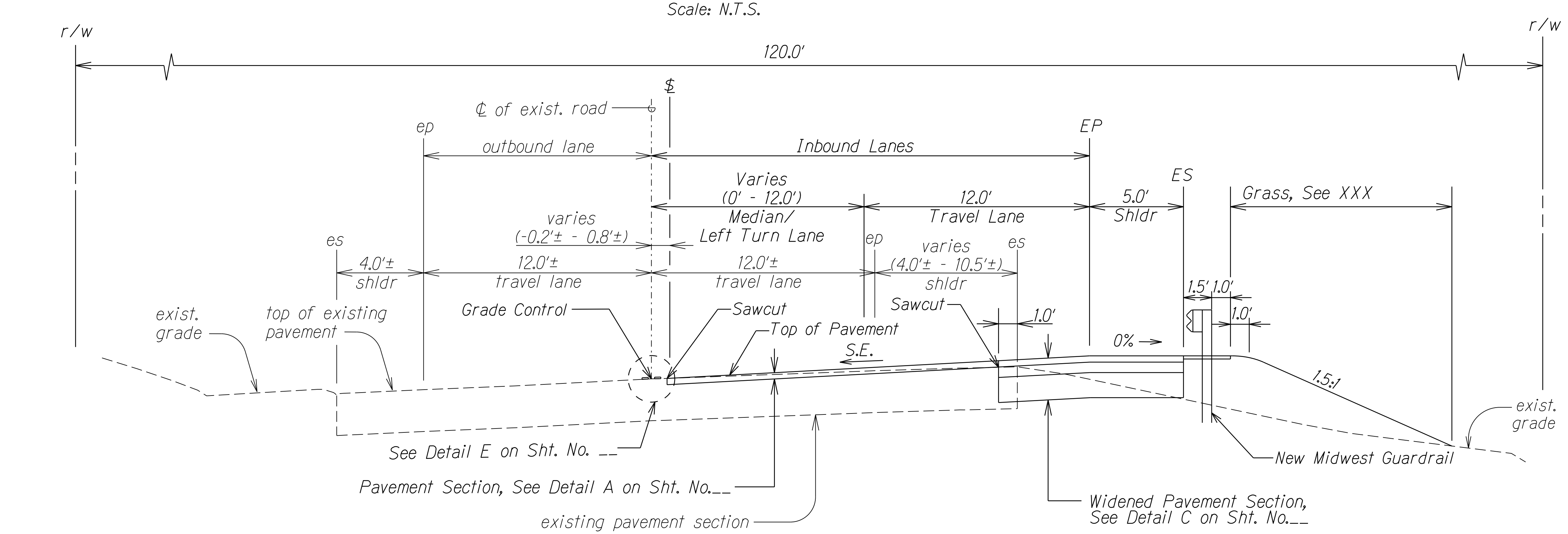


TYPICAL SECTION ON TANGENT
℄ STA. 45+30.0± TO SOUTHBOUND ℄ STA. 61+17.0±

Scale: N.T.S.

Notes:

1. Safety Edge/Shoulder Dressing. See typical pavement edge detail on sht. no. __
2. For limits of Midwest Guardrail, see Roadway Plans. For details, see Guardrail Details sheets.
3. See Shared Use Path Cross Sections.



TYPICAL SECTION ON CURVE
℄ STA. 45+30.0± TO SOUTHBOUND ℄ STA. 61+17.0±

Scale: N.T.S.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
No.	TRACED BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

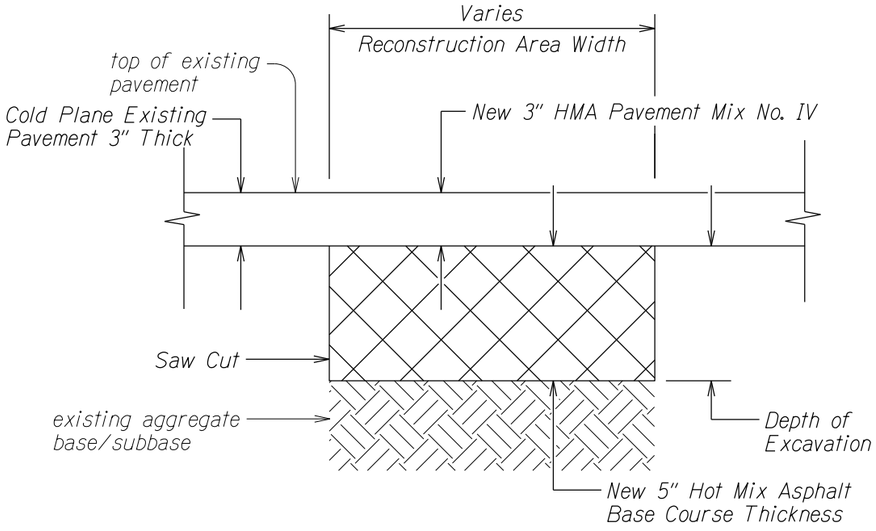
TYPICAL SECTION

FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS
ROOSEVELT AVENUE TO FARRINGTON HIGHWAY
PROJECT NO. 901A-01-19 (DRAFT PLANS)

Scale: Not to Scale | Date: September, 2019

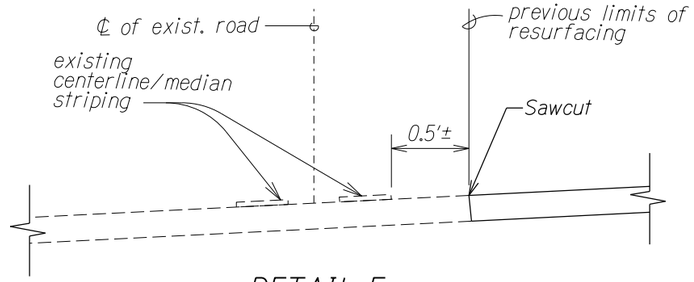
SHEET No. 3 OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	901A-01-19	2019	10	35



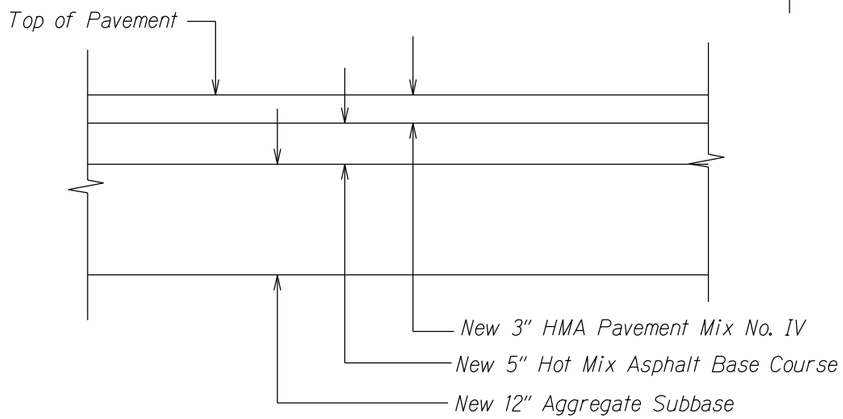
DETAIL B - AC PAVEMENT RECONSTRUCTION DETAIL

Scale: N.T.S.



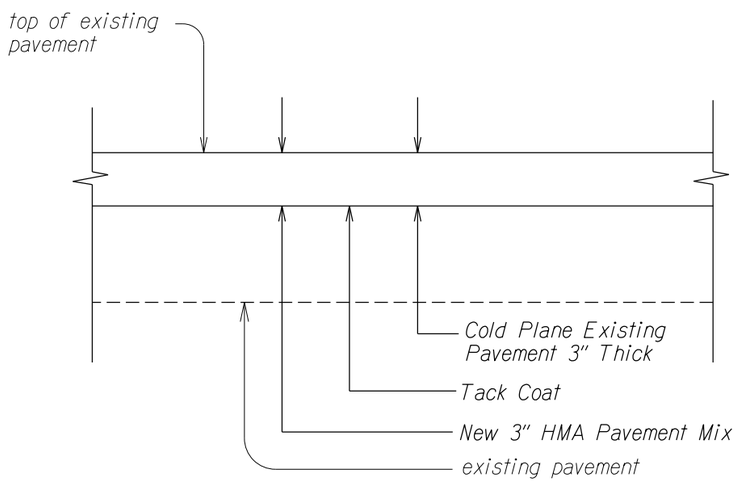
DETAIL E

Scale: N.T.S.



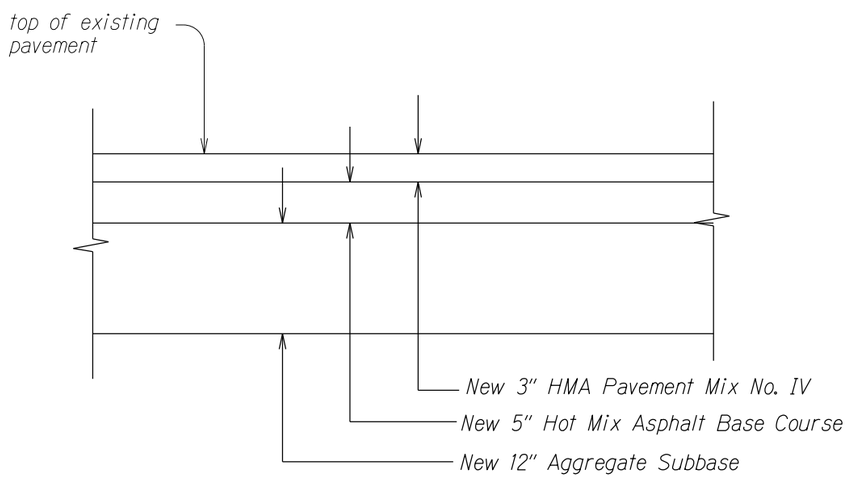
DETAIL D - SHARED USE PATH PAVEMENT SECTION

Scale: N.T.S.



DETAIL A - AC PAVEMENT SECTION FOR RESURFACING

Scale: N.T.S.



DETAIL C - AC PAVEMENT SECTION FOR WIDENING

Scale: N.T.S.

ORIGINAL PLANS	SURVEY PLOTTED BY	DATE
	DRAWN BY	
	TRACED BY	
NOTE BOOK dd Wilson	DESIGNED BY	
	QUANTITIES BY	
No.	CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

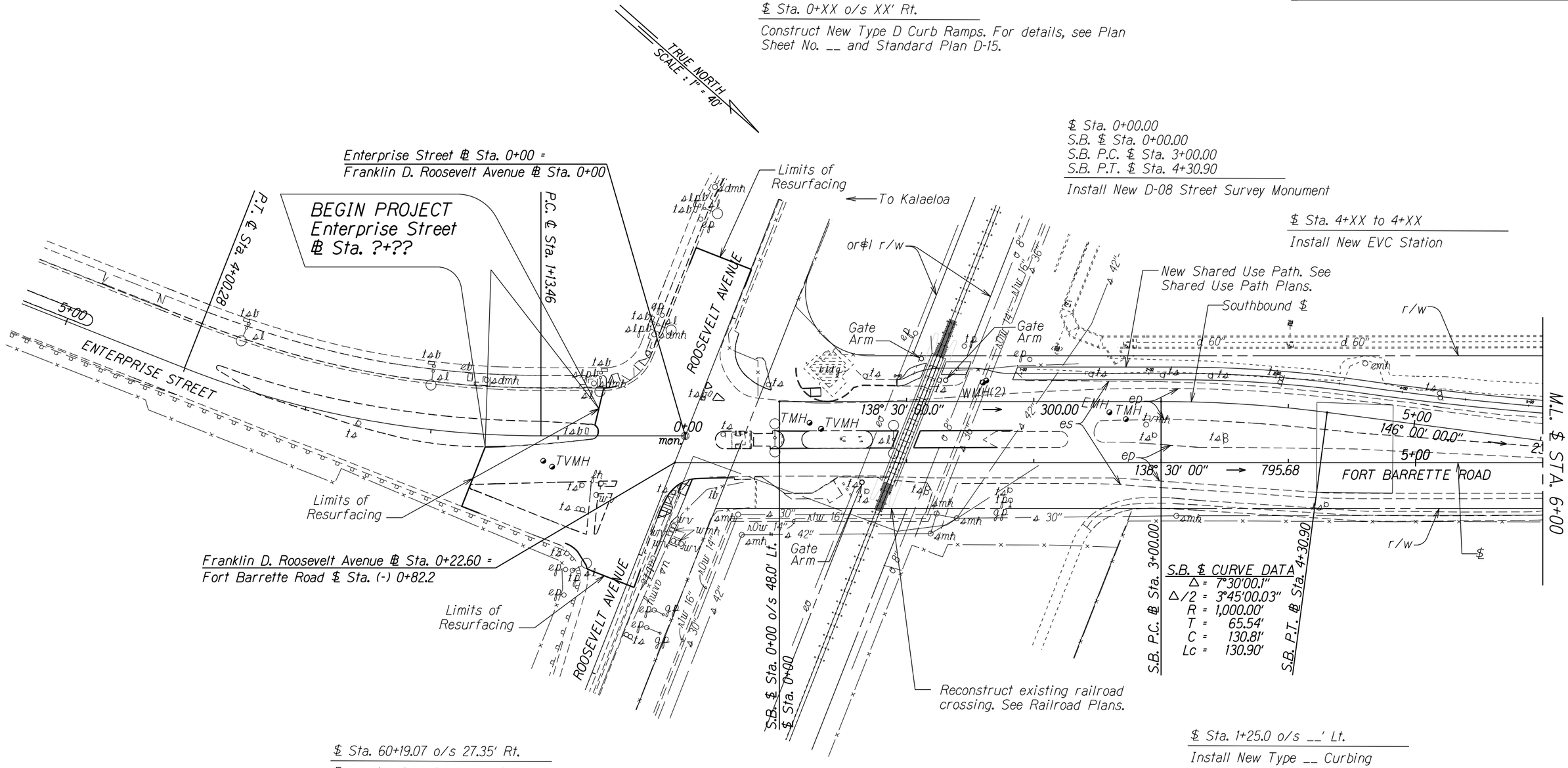
TYPICAL SECTION

FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS
ROOSEVELT AVENUE TO FARRINGTON HIGHWAY
PROJECT NO. 901A-01-19 (DRAFT PLANS)

Scale: Not to Scale Date: September, 2019

SHEET No. 4 OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	901A-01-19	2019	14	35



ORIGINAL PLAN
NOTE BOOK
No.

SURVEY PLOTTED BY ____ DATE
DRAWN BY ____
TRACED BY ____
DESIGNED BY ____
QUANTITIES BY ____
CHECKED BY ____

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

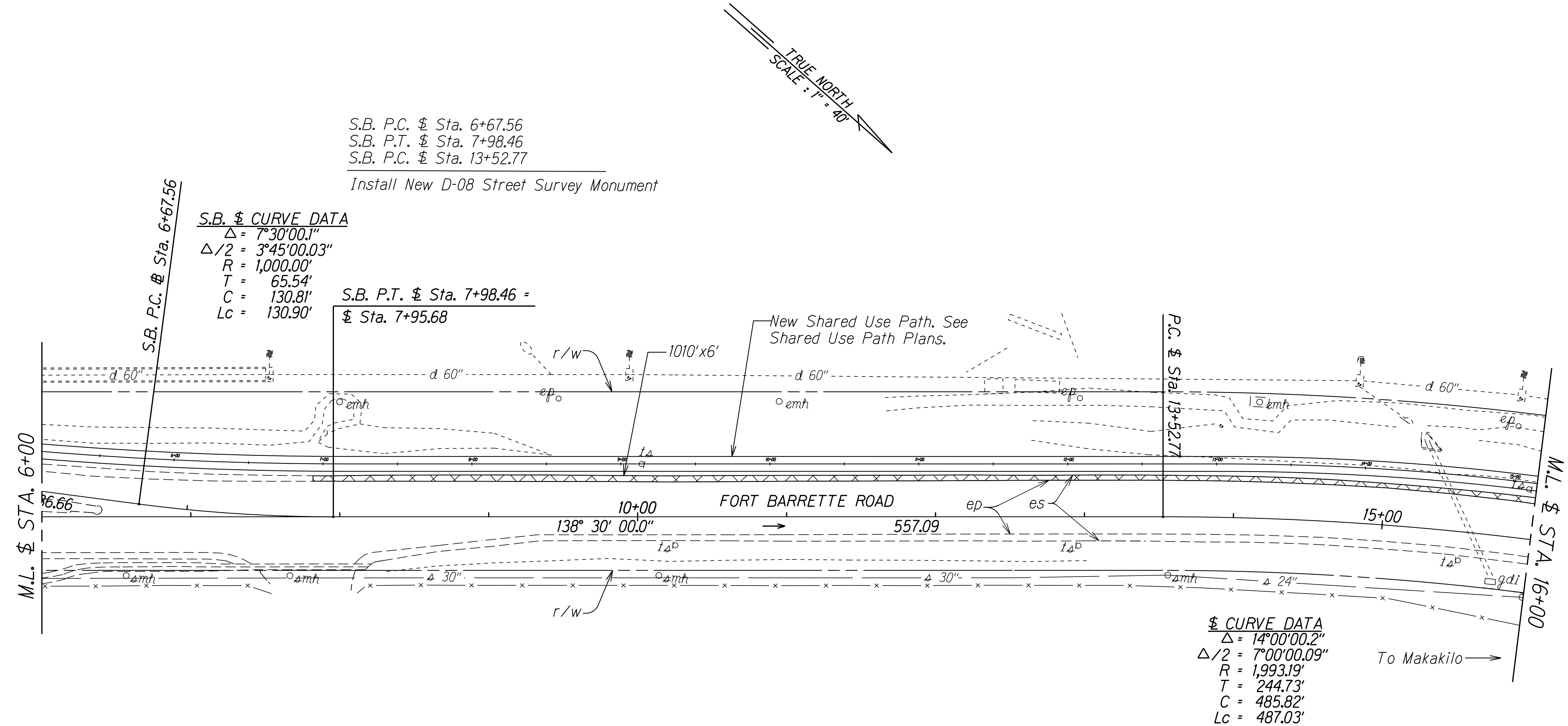
ROADWAY PLANS

FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS
ROOSEVELT AVENUE TO FARRINGTON HIGHWAY
PROJECT NO. 901A-01-19 (DRAFT PLANS)

Scale: 1" = 40.0' Date: September, 2019

SHEET No. 1 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	901A-01-19	2019	15	35



ORIGINAL PLAN | NOTE BOOK | No.
SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLANS

FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS
ROOSEVELT AVENUE TO FARRINGTON HIGHWAY
PROJECT NO. 901A-01-19 (DRAFT PLANS)

Scale: 1" = 40.0' Date: September, 2019

SHEET No. 2 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	901A-01-19	2019	16	35

S.B. P.C. ℄ Sta. 6+67.56
S.B. P.T. ℄ Sta. 7+98.46
S.B. P.C. ℄ Sta. 13+52.77

Install New D-08 Street Survey Monument

TRUE NORTH
SCALE : 1" = 40'

℄ CURVE DATA
Δ = 23°00'00"
Δ/2 = 11°30'00"
R = 1,004.00'
T = 204.27'
C = 400.33'
Lc = 403.03'

℄ Sta. 21+65.7± o/s 74.0' Lt. to ℄ Sta. 26+00± o/s 18.0' Lt.

Widen existing roadway

Kapolei Parkway
℄ P.C. Sta. 1+86.61

Kapolei Parkway ℄ Sta. 0+00 =
Fort Barrette Road ℄ Sta. 21+19

To Kalaeloa

New Shared Use Path. See Shared Use Path Plans.

Limits of Resurfacing

P.T. ℄ Sta. 18+39.80

1010'x6'

70'x12'

KAPOLEI PARKWAY

WMH

TSP

TSB

FORT BARRETTE ROAD

152° 30' 00.0"

1,006.27

M.L. ℄ STA. 16+00

M.L. ℄ STA. 26+00

20+00

00+0

SMH

SDMH

r/w

To Makakilo

℄ CURVE DATA
Δ = 14°00'00.2"
Δ/2 = 7°00'00.09"
R = 1,993.19'
T = 244.73'
C = 485.82'
Lc = 487.03'

Kapolei Parkway
℄ P.C. Sta. 1+23.37

℄ CURVE DATA
Δ = 31°00'00"
Δ/2 = 15°30'00"
R = 850.00'
T = 235.73'
C = 454.31'
Lc = 459.89'

ORIGINAL PLAN
SURVEY PLOTTED BY ____ DATE
DRAWN BY ____
TRACED BY ____
DESIGNED BY ____
NOTE BOOK ____
QUANTITIES BY ____
No. ____
CHECKED BY ____

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLANS

FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS
ROOSEVELT AVENUE TO FARRINGTON HIGHWAY
PROJECT NO. 901A-01-19 (DRAFT PLANS)

Scale: 1" = 40.0' Date: September, 2019

SHEET No. 3 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	901A-01-19	2019	17	35

℄ Sta. 26+50.0
End Resurfacing Southbound Lanes.
Begin Resurfacing Exception
Northbound Lanes

To Kalaeloa

TRUE NORTH
SCALE : 1" = 40'

M.L. ℄ STA. 26+00

30+00

FORT BARRETTE ROAD

M.L. ℄ STA. 35+00

Limits of Resurfacing

P.C. ℄ Sta. 28+46.07

℄ CURVE DATA
Δ = 38°00'59.9"
Δ/2 = 19°00'29.95"
R = 1,226.00'
T = 422.34'
C = 798.63'
Lc = 813.47'

New Shared Use Path. See Shared Use Path Plans.

℄ Sta. 29+91± o/s 18.4' Lt. to ℄ Sta. 31+03± o/s 24.2' Lt.
℄ Sta. 29+59± o/s 21.8' Rt. to ℄ Sta. 30+91± o/s 17.6' Rt.

Remove 231'± existing guardrail. Removal and disposal shall be considered incidental to guardrail installation.

TRUE NORTH
SCALE : 1" = 40'

℄ CURVE DATA
Δ = 59°50'00.7"
Δ/2 = 29°55'00.37"
R = 876.00'
T = 504.06'
C = 873.79'
Lc = 914.80'

Limits of Resurfacing

M.L. ℄ STA. 35+00

M.L. ℄ STA. 46+00

FORT BARRETTE ROAD

190° 31' 00.0"

40+00

640.25

45+00

KAMAAHA AVE.

P.T. ℄ Sta. 36+59.54

P.C. ℄ Sta. 42+99.79

℄ Sta. 45+30.0
End Resurfacing Exception

To Makakilo

New Shared Use Path. See Shared Use Path Plans.

New Shared Use Path. See Shared Use Path Plans.

℄ Sta. 40+25.3± o/s 24.7' Rt. to ℄ Sta. 53+52.6± o/s 29.0' Rt.

Install 1,350'± New MGS Guardrail with MGS End Treatment each end.

Resurfacing Limits

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
	TRACED BY	
NOTE BOOK	DESIGNED BY	
	QUANTITIES BY	
No.	CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLANS

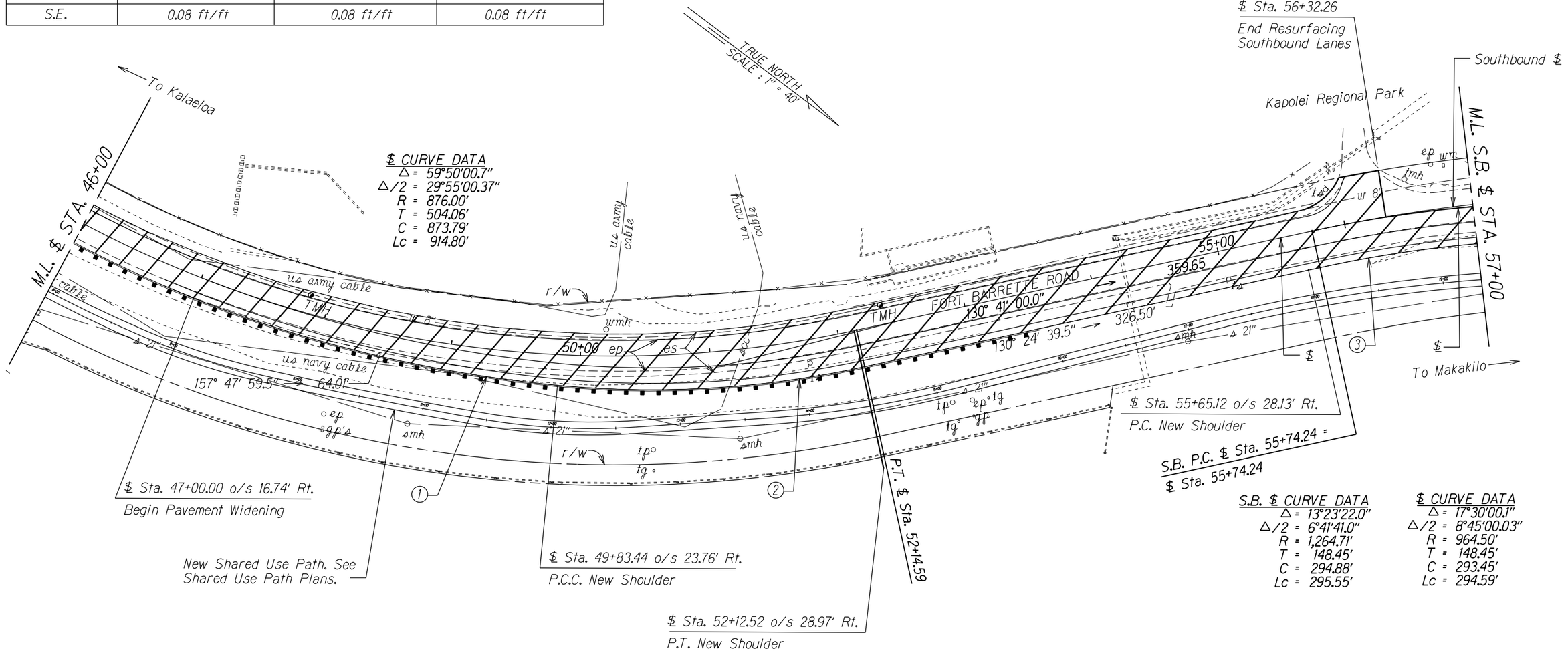
FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS
ROOSEVELT AVENUE TO FARRINGTON HIGHWAY
PROJECT NO. 901A-01-19 (DRAFT PLANS)

Scale: 1" = 40.0' Date: September, 2019

SHEET No. 4 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	901A-01-19	2019	18	35

CURVE DATA FOR NEW ES			
	①	②	③
△	15°53'19"	18°02'27"	15°21'43"
△/2	7°56'39.4"	9°01'13.7"	7°40'51.5"
R	1,045.00'	783.00'	971.00'
T	145.83'	124.30'	130.96'
C	288.86'	245.53'	259.56'
Lc	289.79'	246.55'	260.34'
S.E.	0.08 ft/ft	0.08 ft/ft	0.08 ft/ft



* For Resurfacing Exception Details, See Sheet No. 7.

Resurfacing Limits

Note: Adjustment of Utility Manhole Covers to be verified in the field.

ORIGINAL PLAT | NOTE BOOK | No.
SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLANS

FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS
ROOSEVELT AVENUE TO FARRINGTON HIGHWAY
PROJECT NO. 901A-01-19 (DRAFT PLANS)

Scale: 1" = 40.0' Date: September, 2019

SHEET No. 5 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	901A-01-19	2019	19	35

CURVE DATA FOR NEW ES	
	③
△	15°21'43"
△/2	7°40'51.5"
R	971.00'
T	130.96'
C	259.56'
Lc	260.34'

TRUE NORTH
SCALE : 1" = 40'

END PROJECT
Fort Barette Road N.B. ℄ Sta. 64+39.03

S.B. ℄ CURVE DATA
△ = 13°23'22.0"
△/2 = 6°41'41.0"
R = 1,264.71'
T = 148.45'
C = 294.88'
Lc = 295.55'

EQ. S.B. ℄ Sta. 64+55.67 BK. =
Makakilo Drive ℄ Sta. (-) 0+36.21 AH.
o/s 12.48' Rt.

To Kalaeloa

M.L. S.B. ℄ STA. 57+00

S.B. P.T. ℄ Sta. 58+69.79

Southbound ℄

FORT BARRETTE ROAD

60+00
60+00
144° 04' 22.0"
585.88

0+00

③ 145° 46' 22.5" → 186.90'

N.B. ℄ CURVE DATA
△ = 17°30'00.1"
△/2 = 8°45'00.03"
R = 964.50'
T = 148.45'
C = 293.45'
Lc = 294.59'

P.R.C. ℄ Sta. 58+68.83

N.B. ℄ CURVE DATA
△ = 4°06'38.3"
△/2 = 2°03'19.16"
R = 1,694.35'
T = 60.81'
C = 121.53'
Lc = 121.56'

P.T. ℄ Sta. 59+90.39

℄ Sta. 58+32.92 o/s 28.09' Rt.
P.T. New Shoulder

New Shared Use Path. See Shared Use Path Plans.

Limits of Resurfacing

℄ Sta. 61+16.5
End Resurfacing Northbound Lanes

EQ. ℄ Sta. 64+55.49 BK. =
Makakilo Drive ℄ Sta. (-) 0+36.21 AH.
o/s 2.52' Lt.

℄ Sta. 60+19.07 o/s 27.35' Rt.
End Pavement Widening

FARRINGTON HIGHWAY

40+00

Makakilo Drive P.C. ℄ Sta. 2+20.94

Makakilo Drive ℄

gas valve
manhole
box

To Makakilo →

℄ Sta. 59+XX± o/s 26' Rt. to ℄ Sta. 59+XX± o/s 26' Rt.
Install Grouted Rubble Paving over existing headwall structure.

* For Resurfacing Exception Details, See Sheet No. 7.

Resurfacing Limits

Note: Adjustment of Utility Manhole Covers to be verified in the field.

ORIGINAL PLAN
SURVEY PLOTTED BY ..... DATE
DRAWN BY .....
TRACED BY .....
NOTE BOOK DESIGNED BY .....
QUANTITIES BY .....
CHECKED BY .....
No. .....

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLANS

FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS
ROOSEVELT AVENUE TO FARRINGTON HIGHWAY
PROJECT NO. 901A-01-19 (DRAFT PLANS)

Scale: 1" = 40.0' Date: September, 2019

SHEET No. 6 OF 8 SHEETS