Make this section part of the standard specifications: **PM shall review and modify as required**

**“SECTION 110 – INSTALLATION OF PAVEMENT PRESERVATION STRATEGIES AND SURFACE TREATMENTS AT VARIOUS LOCATIONS**

**110.01 Scope of Work.** The work shall consist of furnishing all labor, necessary equipment, materials and traffic control, to repair pavement at various locations as requested. All work shall be performed within the existing pavement structure. All work shall be performed in a professional manner in accordance with current practices and this document. All asphalt and asphalt concrete base debris shall be removed daily at all locations. See Subsection 110.03 – Area of Coverage.

The Contractor shall work as directed by the Engineer or by the Highways Division’s Oahu District Engineer.

The Department agrees to provide at least two weeks of pavement repair work for each request.

The Contractor shall possess an “A” General Engineering Contractor’s license, or “C-3” Asphalt Paving and Surfacing Contractor’s license, or “C-3a” Asphalt Concrete Patching, Sealing, and Striping Contractor’s license for the full term of the contract, and shall have possessed the license prior to the award of the contract. Failure to meet this requirement shall be cause for disqualification.

Pavement repair shall consist of one of the following:

**1. 2” Asphalt Pavement Overlay.** Resurface pavement with new 2 inches Hot Mix Asphalt (HMA) Pavement, Mix No. IV.

**2. 2” Cold Planing and Resurfacing with Asphalt Pavement.** Cold-plane damaged or deteriorated pavement areas at a depth of two (2) inches and resurface with new 2 inches HMA Pavement, Mix No. IV or Stone Matrix Asphalt (SMA) Pavement or Polymer Modified Asphalt (PMA). The minimum width of the cold planed area shall be nine (9) feet wide to include both vehicle wheel ruts in the reconstructed area. The new resurfaced finish grade shall be the existing road grade. Pavement surface that varies more than 3/16 inch from testing edge of straightedge between two contacts exceeds surface tolerance.

Schedule the work so that the areas are resurfaced before the completion of the day's work.

**3.** **3” Cold Planing and Resurfacing with Asphalt Pavement.** Cold-plane damaged or deteriorated pavement areas at a depth of three (3) inches and resurface with new 3 inches HMA Pavement, Mix No. IV or SMA Pavement. The minimum width of the cold planed area shall be nine (9) feet wide to include both vehicle wheel ruts in the reconstructed area. The new resurfaced finish grade shall be the existing road grade. Pavement surface that varies more than 3/16 inch from testing edge of straightedge between two contacts exceeds surface tolerance.

Schedule the work so that the areas are resurfaced before the completion of the day's work.

**4. 4” Cold Planing and Resurfacing with Asphalt Pavement.** Cold-plane damaged or deteriorated pavement areas at a depth of four (4) inches and resurface with new 4 inches HMA Pavement, Mix No. IV or SMA Pavement. The minimum width of the cold planed area shall be nine (9) feet wide to include both vehicle wheel ruts in the reconstructed area. The new resurfaced finish grade shall be the existing road grade. Pavement surface that varies more than 3/16 inch from testing edge of straightedge between two contacts exceeds surface tolerance.

Schedule the work so that the areas are resurfaced before the completion of the day's work.

**5. Reconstruction of Weakened Pavement Areas.** Excavate to the depth shown in the appropriate Typical Reconstruction Section (Figures 1 to 3), backfill the excavated weakened pavement areas with Hot Mix Asphalt Base Course, and resurface with HMA Pavement, Mix No. IV. The new resurfaced finish grade shall be the existing road grade. Pavement surface that varies more than 3/16 inch from testing edge of straightedge between two contacts exceeds surface tolerance.

Prior to placement of the asphalt base course, the exposed subbase or subgrade shall be recompacted to a dense and unyielding condition.

The Contractor may elect to reconstruct the entire depth of the pavement reconstruction with HMA base course in preparation of cold planing as a separate operation, but the State will not pay for the extra HMA base course and excavation.

Schedule the work so that the excavated areas are backfilled before the completion of the day's work.

**6. Scarify Existing Pavement.** Scarify pavement as directed. The intention of this work is to enhance skid resistance on the highway. Scarifying shall be parallel to the direction of traffic flow, shall be accomplished with a cold planer, and at an amplitude not to exceed one-quarter inch (1/4”) or as directed by the Engineer. The pavement shall be scarified as a width of 10 feet or as directed by the Engineer on the travel way only, and all existing pavement markings shall be preserved (in other words, scarify between the yellow and white stripes only). A seal coat of emulsified asphalt, diluted with water at a ratio of 1:1, shall be applied to the scarified areas.

**7. Cut Cores in Existing Pavement.** Cut four-inch (4”) diameter sample cores to the full depth of the existing pavement. The intention of this work is to determine the condition of the underlying pavement structure and base. The number of cores and the location of the sampling shall be as directed. The core holes shall be filled with hot mix AC of the type used in the paving of the section being repaired.

**8. Leveling of Existing Pavement.** Install HMA Concrete Pavement to level dips, sags, and depressions as directed by the Engineer. The new leveled surface finish grade shall be the existing road grade. Pavement surface that varies more than 3/16 inch from testing edge of straightedge between two contacts exceeds surface tolerance.

**9. Slurry Seal.** See Section 404 – Slurry Seal.

**10. Crack Seal.** See Section 408 – Crack Seal.

If the existing pavement marking is required to be removed during pavement repair or other work done under this contract, the Contractor shall install temporary pavement markings. This work shall be considered incidental to the appropriate pavement repairs.

**110.02 Contract Period and Option to Extend**. The period of the contract shall be for 12 months commencing from the Start Work Date indicated from the Department. There is an option to extend for 4 additional 12 month periods, without re-bidding, upon mutual agreement in writing prior to the contract expiration date, provided the initial bid price remains the same. The maximum contract period is 60 months.

Failure by the Contractor to execute the amendment to extend the contract within the number of days specified under Section 103.07 - Failure to Execute Contract may be cause for cancellation of the written agreement to extend the contract and may be subject to disqualification from bidding future projects for a two-year period in accordance with Section 102.12 - Disqualification of Bidders.

To compensate for escalation during the maximum contract period the Department will adjust the Unit Prices of all items on the Proposal Schedule by 2% on the start date of an extension period. The price adjustment shall not be applied to contract change orders issued within the current contract year or work orders that have already been issued to the contractor.

**110.03 Area of Coverage.** The project requires the Contractor to repair pavement at various locations on the Island of Oahu. Work shall be grouped into four areas along with the corresponding routes as shown on the attached map of the island of Oahu (Figure 4). Note: There are numerous side streets with or without route numbers along State highways where State Jurisdiction extends various distances into side streets. The four areas are:

1. **Area 1:**

Route 64, Sand Island Access Road/ Sand Island Parkway

Nimitz Highway (92) to Coast Guard Station Gate

Route 78, Moanalua Freeway

Kamehameha Highway (99) On-Ramp to Moanalua Freeway to Moanalua Freeway Overpass (Structure over H-1)

Route 92, Nimitz Highway

Main Gates at Pearl Harbor and Hickam AFB to Richards Street

Route 92, Ala Moana Boulevard

Richards Street to 135 feet South of Kalakaua Avenue

Route 99, Kamehameha Highway (Keehi Interchange)

Middle Street (7415) to Kalihi Stream Bridge

Route 99, Kamehameha Highway

Waiawa Interchange to Pearl Harbor Interchange

Route 7239, Ulune Extension/ Halawa Valley Road

North East of Kahuapaani Street to Iwaiwa Street

Route 7241, Kahuapaani Street

Salt Lake Boulevard to Halawa Heights Road

Route 7241, Halawa Heights Road

Kikania Street to Fernridge Place

Route 7310, Puuloa Road

Nimitz Highway (92) to Mahiole Street

Route 7345, Jarrette White Road

Mahiole Street to Tripler Hospital Gate

Route 7350, Bougainville Drive

Radford Drive (7351) to Vicinity of Radford High School

Route 7351, Radford Drive

Kamehameha Highway (99) to Bougainville Drive (7350)

Route 7413, Liliha Street

North King Street to School Street

Route 7415, Middle Street

Kamehameha Highway (99) to Mauka of H-1 Freeway

\*Route H-1, Waiawa Interchange to Kahauiki Interchange

Pearl City/ Waipahu to Middle Street

Route H-3, Halawa Interchange to Halawa Portal of Harano Tunnels

Route H201, Moanalua Freeway

Moanalua Freeway Overpass (Structure over H-1) to Kahauiki Interchange

Ala Ike Street (Leeward Community College)

Kaua Street

Middle Street (7415) to Pineapple Place

Lagoon Drive

Nimitz Highway (92) to Koapaka Street

Moanalua Road (Waiau Interchange)

Ewa of Kaulike Drive to Kokohead of Hoomalu Street

North King Street

Middle Street (7415) to Ola Lane Overpass

Pacific Street

425 feet West of Nimitz Highway Outbound Centerline and Inbound lanes in Iwilei

Salt Lake Boulevard

Kahuapaani Street (7241) to Luapele Drive

Sumner Street

Between Nimitz Highway (92) Outbound and Inbound lanes in Iwilei

Waiawa Road (Near Leeward Community College)

Farrington Highway (99) to Ala Ike Street

1. **Area 2:**

Route 76, Fort Weaver Road

Navy Reservation Gate to Interstate Route H-1

Route 93, Farrington Highway

Palailai Interchange to Kaena Point State Park

Route 93, Farrington Highway (Makakilo Interchange)

Intersection of Fort Barrette Road (901) and Makakilo Drive, 500 feet on both sides of intersection

Route 99, Farrington Highway

Waiawa Interchange

Route 750, Kunia Road

Interstate Route H-1 to Wilikina Drive (99)

Route 901, Fort Barrette Road

Barbers Point Naval Reservation to Makakilo Drive Overpass

Route 7101, Farrington Highway

Fort Weaver Road (76) to Waiawa Interchange

Route 7110, Farrington Highway

Fort Weaver Road (76) to Old Fort Weaver Road

Route 7141, Iroquois Road

Fort Weaver Road (76) to West Loch Ammunition Depot

Route 7142, Waipahu Street

Kamehameha Highway (99) to Makai End of H-1 Overpass

Route H-1, Kalaeloa Boulevard to Waiawa Interchange

1. **Area 3:**

Route 80, Kamehameha Highway

Wilikina Drive (99) to Kamananui Road (99)

Route 83, Joseph P. Leong Highway

Kamehameha Highway (99) to Kamehameha Highway (83)

Route 83, Kamehameha Highway

Kahalewai Place to Kahaluu Bridge

Route 83, Kahekili Highway

Kahaluu Bridge to Intersection of Kahekili Highway (83) and Likelike Highway (63)

Route 83, Likelike Highway

Intersection of Likelike Hwy (63) and Kamehameha Hwy (83) to Kaneohe Bay Drive (65)

Route 83, Kamehameha Highway

Intersection of Likelike Hwy (63) & Kaneohe Bay Drive (65) to Pali Hwy (61)

Route 99, Kamehameha Highway

Weed Junction (Haleiwa) to Kamananui Road (99)

Route 99, Kamananui Road

Kamehameha Highway (99) to Wilikina Drive (99)

Route 99, Wilikina Drive

Kamananui Road (99) to Kamehameha Hwy (99) at Wahiawa Interchange

Route 930, Farrington Highway

Dillingham Airfield to Kaukonahua Road at Thompson Corner

Route 930, Kaukonahua Road

Kaukonahua Road at Thompson Corner to South of Paukauila Stream

Route 7012, Whitmore Avenue

Kamehameha Highway (99) to Helemano Naval Reservation

Route 7013, Meheula Parkway (Mililani Interchange)

Beginning of Northbound On-Ramp to End of Southbound Off-Ramp

Route 7160, Ka Uka Boulevard (Waipio Interchange)

Moaniani Street to the beginning of Mililani Memorial Park Road

Route H-2, Wahiawa Interchange to Waiawa Interchange

Leilehua Golf Course Road (Leilehua Interchange)

Kamehameha Highway (99) to Northbound Off-Ramp (H-2)

1. **Area 4:**

Route 61, Pali Highway

Vineyard Boulevard (98) to Castle Junction

Route 61, Kalanianaole Highway

Castle Junction to Waimanalo Junction

Route 61, Kailua Road

Waimanalo Junction to Kawainui Bridge

Route 63, Kalihi Street

Nimitz Highway (92) to School Street

Route 63, Likelike Highway

School Street to Intersection of Kahekili Hwy (83) & Likelike Hwy (83)

Route 65, Kaneohe Bay Drive

Kamehameha Highway (83) to Vicinity of Kaimalu Place

Route 65, Kaneohe Bay Drive

Malae Place to Kailua Interchange (H-3)

Route 65, Mokapu Saddle Road

Kaneohe Bay Drive (65) to Ilipilio Street

Route 65, Mokapu Boulevard

Ilipilio Street to North Kalaheo Avenue

Route 72, Kalanianaole Highway

Waimanalo Junction to Ainakoa Avenue

Route 98, Vineyard Boulevard

H-1 Off-Ramp & Olomea Street to H-1 On-Ramp (Pedestrian Overpass)

Route 98, Halona Street

Houghtailing Street to Palama Street

Route 98, Olomea Street

Houghtailing Street to Palama Street

Route 7601, Old Waialae Road (Kapiolani Interchange)

Kapiolani Boulevard to North King Street

Route 7801, Waialae Avenue

17th Avenue to Kilauea Avenue

\*Route H-1, Middle Street (7415) to Ainakoa Avenue

Route H-3, Haiku Portal of Harano Tunnel to Kaneohe Marine Corp Base

Bingham Street

Punahou Street to Vicinity of Isenberg Street

Funchal Street

Pauoa Road to Pali Highway (61)

Kapahulu Avenue

Harding Avenue to Kapiolani Boulevard

Keeaumoku Street

Kinau Street to Kaihee Street

Kokohead Avenue

Harding Avenue to Pahoa Avenue

Lunalilo Street

Ernest Street to Keeaumoku Street

McCully Street

Beretania Street to Dole Street

Metcalf Street

Dole Street to Alexander Street

Papaku Place

Near Piikoi/H-1 On-Ramp (East)

South King/ Harding Avenue

Waialae Avenue (near Humane Society) to Second Avenue

Waiaka Road

Waiaka Place to Kapiolani Boulevard

Waokanaka Street

\*Note: Night work is required. Refer to Section 110.04 – Safety and Convenience.

**110.04 safety and Convenience.** The Contractor shall at all times conduct his work to assure the least possible obstruction to public traffic. The Safety and convenience of the general public and the protection of persons and property is of utmost importance, and the Contractor shall provide appropriate traffic control and safety measures. The Contractor and his employees shall treat members of the public in a fair and polite manner. Workers shall present a professional appearance and conduct themselves in a professional manner at all times.

All Traffic Control and safety measures shall be done in Conformance with the “Administrative Rules of Hawaii Governing the Use of Traffic Control Devices at Work Sites on or Adjacent to Public Streets and Highways” adopted by the Director of Transportation, and the current U.S. Federal Highway Administration “Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition. Costs for traffic control shall include set-up and removal of all signs, cones, delineators, barricades, flag persons, police officers, arrow boards, etc., and shall be included in the sign replacement proposal price. See Section 645 – Work Zone Traffic Control.

Do not close traffic lanes or slow down traffic during the following peak hours (unless otherwise approved by the engineer):

Morning Peak Hours 6:00 A.M. to 8:30 A.M.

Afternoon Peak Hours 3:00 P.M. to 6:00 P.M.

Above peak hours are daily except Saturdays, Sundays and holidays.

Morning Peak Hours from 6:00 A.M. to 9:00 A.M. shall be observed for Interstate Routes H-2 and H-3, Likelike and Pali Highways, Nimitz Highway/ Ala Moana Boulevard, and Fort Weaver Road.

Night work is required for Interstate Route H-1 (from Palailai Interchange to Ainakoa Avenue). Areas 1 and 4 are affected. A noise variance permit is required.

The Contractor must notify all private property owners in the vicinity where pavement repair is performed in the event that the work may hinder access to their property. The Contractor must also secure permission prior to entering private property to do pavement repair, if any.

The Contractor shall remove debris daily and shall leave the work site in a condition equal to or cleaner than prior to commencing work. The Contractor shall be responsible for all hauling and lawful disposal of debris. Any unauthorized or illegal disposal is grounds for termination of the contract.

**110.05 Hours of Operation.** The Contractor shall be available to provide the specified services during normal working hours and complete the services within the period specified in the work order or as directed by the Engineer. Normal working days and hours for the project are defined as Monday through Friday, 8:30 A.M. to 3:00 P.M., except for State holidays. Refer to Section 645 – Work Zone Traffic Control. Authorized Highways personnel will contact the Contractor to schedule work, as needed. All services requested after normal work hours may be charged in accordance with Subsection 107.04 – Overtime and Night Work.

**110.06 Disposal of Debris.** The Contractor shall be responsible for all hauling and dump fees and shall include the cost of these items in his bid. Any unauthorized or illegal disposal is grounds for termination of the contract.

**110.07 Work Orders.** The Engineer or his representative shall prepare a work order (Figure 5) for each pavement repair or group of pavement repairs in the same location. Within 48 hours of receiving a work order, the Contractor shall submit a proposed work schedule that demonstrates that work will begin within 2 weeks and be completed by the date indicated on the work order. At certain work sites, erosion control plans or BMP plans will be requested by the Engineer. Submit the signed work order, proposed schedule and BMP plans for approval to the Oahu District Office, 727 Kakoi Street, Honolulu, Hawaii 96819. Work shall not be performed unless the Contractor receives an approval from the Engineer. The Engineer or his representative shall authorize any increases in the total price.

**110.08 Basis of Payment.** Pavement repairs will be made through work orders placed with the Contractor during the contract period for which payment will be based on the quantities placed and the unit bid prices in the proposal schedule which prices shall include payment for all materials, equipment, tools, labor, and incidentals necessary to complete the pavement repairs.

The Contractor shall submit monthly invoices to the Oahu District Office, 727 Kakoi Street, Honolulu, Hawaii 96819, if services are rendered. (See Subsection 109.08 - Progress Payments).

The contract unit prices shall be full compensation for furnishing all labor, materials (as listed in Section 104 SCOPE OF WORK), tools, equipment, trucks, traffic control, applicable taxes and incidentals to complete the work.”

**END OF SECTION 110**