SECTION 02101 - PREPARATION/REMOVAL OF EXISTING PAVEMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The General Provision of the contract, including the General Provisions for Construction Projects (2016), Special Provisions, and General Requirements of the Specifications, apply to the work specified in this section. This Section shall be in accordance with FAA Specification Item P-101: Preparation / Removal of Existing Pavements, as included as an attachment to this Section.

1.2 DESCRIPTION OF WORK

A. This Section shall consist of preparation of existing pavement surfaces for paving, surface treatments, removal and processing of existing pavements, and other miscellaneous items. The work shall be accomplished in accordance with these specifications and the applicable plans.

1.3 RELATED WORK SPECIFIED ELSEWHERE

A. Section 01300 – Submittals.

1.4 REFERENCES

A. Federal Aviation Administration (FAA)

1. Item P-101: Preparation / Removal of Existing Pavements.

1.5 SUBMITTALS

A. Prior to commencing work in this Section, the Contractor must submit a Pavement Removal Plan in accordance with Section 01300 – Submittals.

1. Description of the proposed method of accomplishing pavement removals.
2. Descriptions of the proposed equipment.

PART 2 - PRODUCTS

2.1 All materials and equipment required for this item shall be in accordance with FAA Specification Item P-101.

PART 3 - EXECUTION

3.1 Preparation of joints and cracks prior to overlay/surface treatment shall be in accordance with FAA Specification Item P-101.

3.2 Concrete spall or failed asphaltic concrete pavement repair shall be in accordance with FAA Specification Item P-101.

3.3 Cold milling shall be in accordance with FAA Specification Item P-101.

3.4 Maintenance shall be in accordance with FAA Specification Item P-101.

3.5 Preparation of Cracks in Flexible Pavement Prior to Sealing shall be in accordance with FAA Specification Item P-101.

PART 4 - MEASUREMENT AND PAYMENT

4.1 METHOD OF MEASUREMENT

A. Method of measurement and payment shall be in accordance with FAA Specification Item P-101, paragraph 101-4.1, 101-4.2, and 101-4.3.

4.2 BASIS OF PAYMENT

A. Basis for payment shall be in accordance with FAA Specification Item P-101, paragraph 101-5.1.

PART 5 - ATTACHMENTS

5.1 FAA Specification Item P-101 Preparation/Removal of Existing Pavements

Item P-101 Preparation/Removal of Existing Pavements

DESCRIPTION

101-1 This item shall consist of preparation of existing pavement surfaces for overlay, surface treatments, and other miscellaneous items. The work shall be accomplished in accordance with these specifications and the applicable plans.

EQUIPMENT AND MATERIALS

101-2 All equipment and materials shall be specified here and in the following paragraphs or approved by the Resident Project Representative (RPR). The equipment shall not cause damage to the pavement to remain in place.

CONSTRUCTION

101-3.1 Removal of existing pavement.

The Contractor's removal operation shall be controlled to not damage adjacent pavement structure, and base material, cables, utility ducts, pipelines, or drainage structures which are to remain under the pavement.

a. Concrete pavement removal. Not Used.

b. Asphalt pavement removal. Asphalt pavement to be removed, as directed by the RPR, shall be sawcut to the depth shown on the plans around the perimeter of the area to be removed.

c. Repair or removal of Base, Subbase, and/or Subgrade. Not Used.

101-3.2 Preparation of joints and cracks on milled surface prior to overlay/surface treatment. For the preparation of joints and cracks on asphalt concrete surface after cold milling, remove all loose debris from cracks and joints to a minimum depth of 1 inch.

Wide cracks (over 1-1/2 inch wide), shall be filled with approved P-401 material and compacted in place prior to paving operations.

All waste and loose materials from preparation and crack filling to be removed and disposed off Airport property or as directed by the RPR.

101-3.3 Removal of Foreign Substances/contaminates prior to remarking. Removal of foreign substances/contaminates from existing pavement that will affect the bond of the new treatment shall consist of removal of rubber, fuel spills, oil, crack sealer, at least 90% of paint, and other foreign substances from the surface of the pavement. Areas that require removal are designated on the plans and as directed by the RPR in the field during construction.

High-pressure water, cold milling, and rotary grinding may be used. If chemicals are used, they shall comply with the state's environmental protection regulations. Removal methods used shall not cause major damage to the pavement, or to any structure or utility within or adjacent to the work area. Major damage is defined as changing the properties of the pavement, removal of asphalt causing the aggregate to ravel, or removing pavement over 1/8 inch deep. If it is deemed by the RPR that damage to the existing pavement is caused by operational error, such as permitting the

application method to dwell in one location for too long, the Contractor shall repair the damaged area without compensation and as directed by the RPR.

Removal of foreign substances shall not proceed until approved by the RPR. Water used for high-pressure water equipment shall be provided by the Contractor at the Contractor's expense. No material shall be deposited on the pavement shoulders. All wastes shall be disposed of off-site.

101-3.4 Concrete spall or failed asphaltic concrete pavement repair.

a. Repair of concrete spalls in areas to be overlaid with asphalt. Not Used.

b. Asphalt Pavement Repair. The Contractor shall repair all spalled asphalt concrete as shown on the plans or as directed by the RPR. The failed areas shall be removed as specified in paragraph 101-3.1b. All failed material including surface, base course, subbase course, and subgrade shall be removed. Materials and methods of construction shall comply with the applicable sections of these specifications.

The entire application area must be prepared, chipped of loose and fragmented pavement and wire wheel and/or water blasted clean including one inch outside the repair area. Secondary blasting may be needed if contamination, dampness, etc. occurs. Blow area (including a wide portion of pavement surface area) with high pressure air free of oil and moisture. Contractor must continuously vacuum to contain dust caused by air blowing. All waste from spall repairs to be removed and disposed off Airport property or as directed by the RPR.

Upon completion of asphaltic concrete spall repair, prepare joints and cracks in accordance with Specification Section 101-3.9.

101-3.5 Cold milling. Milling shall be performed with a power-operated milling machine or grinder, capable of producing a uniform finished surface. The milling machine or grinder shall operate without tearing or gouging the underlaying surface. The milling machine or grinder shall be equipped with grade and slope controls, and a positive means of dust control. All millings shall be removed and disposed off Airport property. If the Contractor mills or grinds deeper or wider than the plans specify, the Contractor shall replace the material removed with new material at the Contractor’s Expense.

The milled surface shall be inspected and accepted by the RPR prior to overlay. Any areas with scabbing and delamination as identified by the RPR, shall be corrected by milling or other methods approved by the RPR. Correction of scabbing with delamination shall be at the Contractor’s expense.

a. Patching. The milling machine shall be capable of cutting a vertical edge without chipping or spalling the edges of the remaining pavement and it shall have a positive method of controlling the depth of cut. The RPR shall layout the area to be milled with a straightedge in increments of 1-foot widths. The area to be milled shall cover only the failed area. Any excessive area that is milled because the Contractor doesn’t have the appropriate milling machine, or areas that are damaged because of his negligence, shall be repaired by the Contractor at the Contractor’s Expense.

b. Profiling, grade correction, or surface correction. The milling machine shall have a minimum width of 7 feet and it shall be equipped with electronic grade control devices that will cut the surface to the grade specified. The tolerances shall be maintained within +0 inch and -1/4 inch of the specified grade. The machine must cut vertical edges and have a positive method of dust control. The machine must have the ability to remove the millings or cuttings from the

pavement and load them into a truck. All millings shall be removed and disposed of off the airport or as directed by the RPR.

c. Clean-up. The Contractor shall sweep the milled surface daily and immediately after the milling until all residual materials are removed from the pavement surface. Prior to paving, the Contractor shall wet down the milled pavement and thoroughly sweep and/or blow the surface to remove loose residual material. Waste materials shall be collected and removed from the pavement surface and adjacent areas by sweeping or vacuuming. Waste materials shall be removed and disposed off Airport property or as directed by the RPR.

101-3.6. Preparation of asphalt pavement surfaces prior to surface treatment. Not Used.

101-3.7 Maintenance. The Contractor shall perform all maintenance work necessary to keep the pavement in a satisfactory condition until the full section is complete and accepted by the RPR. The surface shall be kept clean and free from foreign material. The pavement shall be properly drained at all times. If cleaning is necessary or if the pavement becomes disturbed, any work repairs necessary shall be performed at the Contractor's expense.

101-3.8 Preparation of Joints in Rigid Pavement prior to resealing. Not Used.

101-3.9 Preparation of cracks in Flexible Pavement prior to sealing. Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the cracks and does not damage the pavement. For the preparation of joints and cracks on existing asphalt concrete surface greater than or equal to 3/8 inch wide, remove all vegetation and debris from cracks.

101-3.9.1 Preparation of Crack. Widen crack with random crack saw by removing a minimum of 1/16 inch (2 mm) from each side of crack. Immediately before sealing, cracks will be blown out with a hot air lance combined with oil and water-free compressed air. Do not apply sealant if moisture is observed in the crack. The field precautions in ASTM D6690 shall be considered mandatory and supplement this specification.

All cracks shall be widened using a diamond blade saw with a small-diameter blade. The reservoir will be a minimum ½ inch wide and 1/8" wider that the existing width. Meandering cracks may be widened using a spindle router if approved by the RPR and no spalling occurs.

Sawing of cracks to be performed in accordance with specifications and plan details. Immediately after sawing the joints and cracks, the resulting slurry and debris shall be completely removed from the crack and adjacent area by flushing with a jet of water, and by use of other tools as necessary. Water and slurry are to be continuously vacuumed up and contained and hauled offsite. Routing with a spindle router will only be permitted for meandering cracks if there is no spalling of the edges.

101-3.9.2 Removal of Existing Crack Sealant. Existing sealants will be removed by random crack saw. Following sawing any remaining debris will be removed by use of water blasting. The cracks shall be cleaned with a high-pressure water stream to remove debris created by the saw. It is important to remove all of the old sealant, if applicable, that is in the crack. After the crack has been widened, the crack shall be cleaned to prevent any debris from contaminating the crack.

Water blasting equipment to include a trailer-mounted water tank, pumps, high-pressure hose, wand with safety release cutoff control, nozzle, and auxiliary water resupply equipment. Provide

water tank and auxiliary resupply equipment of sufficient capacity to permit continuous operations. The nozzle shall have an adjustable guide that will hold the nozzle aligned with the crack approximately one inch (25 mm) above the pavement surface. Adjust the height, angle of inclination and the size of the nozzle as necessary to obtain satisfactory results. A pressure gauge mounted at the pump shall show at all times the pressure in psi (kPa) at which the equipment is operating.

All waste from joint and crack repairs to be removed and disposed off Airport property or as directed by the RPR.

101-3.9.3 Crack Sealant. Crack sealant material and installation will be in accordance with Section 02605.

METHOD OF MEASUREMENT

101-4.1 Cold milling. Cold milling shall be up to 4-inches in depth of milling per square yard. The location of the cold milling shall be as shown on the plans and as approved on the Contractors' submitted milling plan.

101-4.2 Preparation of cracks in Flexible Pavement prior to sealing. Work under this section shall not be measured nor paid for separately and shall be considered incidental to and included in the bid prices for Specification Item 02605.1 Joint and Crack Sealants for Pavement.

101-4.3 Concrete spall or failed asphaltic concrete pavement repair. Work under this section shall not be measured nor paid for separately and shall be considered incidental to and included in the bid prices for Specification Item 02605.2 Asphalt Concrete Pavement Spall Repair

BASIS OF PAYMENT

101-5.1 Cold milling. Payment for cold milling of asphalt concrete pavement shall be made at the contract unit price per square yard accepted by the RPR. This price shall be full compensation for furnishing all materials and for all preparation, milling, hauling and wasting off the Airport Property at an authorized waste facility, and sweeping, and for all labor, equipment, tools, and incidentals necessary to complete this item per this specification.

Payment will be made under:

Item No.	Description	Unit
02101.1	Cold Milling	Square Yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5380-6 Guidelines and Procedures for Maintenance of Airport Pavements.

ASTM International (ASTM)

ASTM D6690 Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements

END OF ITEM P-101

--------END OF SECTION 02101--------