CITY OF ALBANY

Standard Specifications
Technical Provisions

Section 9

Asphalt Concrete

9-1 General — This work shall consist of furnishing and placing asphalt concrete as specified in Section 39, "Asphalt Concrete," of the State Standard Specifications, and as modified herein.

Unless otherwise specified in the plans or in the Special Provisions, and as modified herein, asphalt concrete shall be Type B, half-inch maximum for surface course and Type B, three-quarter inch maximum, medium grading, for base course. Asphalt binder shall be paving asphalt, Grade AR-4000.

9-2 Temperature — At the time of delivery to the site of the work, the temperature of the mixture shall not be lower than 250 degrees F, or higher than 320 degrees F. Asphalt concrete shall not be placed when the atmospheric temperature is below 40 degrees F, or during unsuitable weather. When feather-edging asphalt concrete between atmospheric temperatures of 40 degrees F to 65 degrees F, any combination of the following methods may be required by the Engineer:

A. Heat existing asphalt.
B. Use ¼" to ⅜" maximum aggregate asphalt.
C. Change paving asphalt viscosity grade.
D. Prohibit traffic on the feather-edge to prevent damage.
E. Other methods as approved by the Engineer.

9-3 Tolerances — The asphalt concrete shall be evenly spread upon the subgrade or base to such a depth that, after rolling, it will be specified cross section and grade of the course being constructed. Upon completion, the pavement shall be true to grade and cross section. When a 10-foot straightedge is laid on the finished surface parallel to the center line of the roadway, the surface shall not vary from the edge of the straightedge more than one-eighth inch, except at intersections or at change of grade. Any ares that are not within this tolerance shall be brought to grade immediately following the initial rolling.

However, if the paving material has been cooled below the lower limits of the

spreading temperatures specified, the surface of the pavement shall be brought to a true grade and cross sectioned by removing the paving material in the area to be repaired by an approved method to provide a minimum laying depth of one inch or new pavement material at the join line. Repairs shall not be made to pavement surfaces by feather-edging at the joining. Cost of this work shall be entirely at the Contractor's expense.

9-4 Asphalt Binder — Asphalt binder to be mixed with aggregate shall have a paving asphalt viscosity of AR4000 and conform to the applicable provisions of Sections 39 and 92 of the State Standard Specifications.

MIX DESCRIPTION	PERCENTAGE ASPHALT RANGE
(A) ¾" Max. Size Materials	4.5 to 6.0
(B) ½" Max. Size Materials	5.0 to 7.0

The amount specified by the Engineer shall be within the general range of percentages of the total mixed material as shown above. The actual amount, however, will be determined through a complete asphalt concrete mix design performed on materials intended for use on this project.

The allowable tolerance in percentage of asphalt content from that percentage specified by the Engineer shall be ± 0.3 percent.

9-5 Aggregates — Mineral aggregate shall conform to the following requirements:

Percentage Passing Sieve for		
Sieve Size	¾" Maximum	½" Maximum
1"	100	—
¾"	95-100	100
½"	85-100	95-100
⅜"	65-85	80-95
No. 4	45-65	50-75
No. 8	30-50	35-60
No. 30	15-30	20-35
No. 200	3-8	3-8

Note: The amount of asphalt shall be the optimum as determined by Calif. Test No. 367. The exact proportions of asphalt binder and mineral aggregates shall be approved by the Engineer.

9-6 Asphaltic Concrete Placement — A surface course of asphaltic concrete consisting of a mixture of aggregate and asphalt that has been mixed at a central mixing plant shall be spread and compacted on the prepared subgrade to the specified thickness.

The Contractor shall protect all building foundations, planters, screens, etc., form splash, roller scrape, or overspray.

Vegetation between the edge of pavement and gutter lip shall be removed and the area treated with an approved weed killer.

Any surface to be overlaid shall be cleaned by sweeping, flushing or other means necessary to remove all loose particles of paving, all dirt, and all other extraneous material. Pavements impregnated with grease, oil, or fuel shall be thoroughly scrubbed and then flushed and swept clean.

The asphalt concrete shall be placed in a compacted thickness as indicated on the plans.

If the pavement is constructed in lifts using an asphalt concrete base in the first lift, the base shall be thoroughly cleaned by whatever means necessary prior to the application of tach coat and the placement of the surface layer.

Initial rolling shall be performed when the sum of the air temperature and the temperature of the asphaltic concrete is between 300 and 375 degrees F.

Finish rolling shall be started after the pavement has cooled sufficiently to permit removal of the roller marks, and shall be continued in whatever direction is necessary to produce a pavement surface free of indentations.

Asphalt density is to be measured through use of a nuclear density gauge, or core tests. the nuclear gauge is preferred since results can be more conveniently determined at the time of paving.

Asphalt concrete shall be compacted to 95% relative compaction and shall be finished to the lines, grades, and cross section shown on the plans. In-place density of asphalt concrete will be determined prior to opening the pavement to public traffic.

Relative compaction will be determined by California Test 375. Laboratory specimens will be compacted in conformance with California Test 304. Lots will be established for asphalt concrete areas to be tested as specified in California Test 375.

If the test results for any lot of asphalt concrete indicates that the relative compaction is below 95.0 percent, but above 92.9 percent, the Contractor will be advised that he is not attaining the required relative compaction and that his materials or his

procedures, or both, need adjustment. Asphalt concrete spreading operations shall not continue until the Contractor has notified the Engineer of the adjustment that will be made in order to meet the required compaction.

If the test results for any lot of asphalt concrete indicate that the relative compaction is less than 93.0 percent, the asphalt concrete represented by that lot shall be removed and replaced or deducted from contract payments at the discretion of the City. Asphalt concrete spreading operations shall not continue until the Contractor makes significant adjustments to his materials or procedure or both in order to meet the required compaction. The adjustments will be agreed to by the Engineer.

Areas inaccessible to spreading and compaction equipment may be placed and compacted by such procedures as may be approved by the Engineer. Relative density requirements may be reduced to 90 percent in such areas provided they will not be subjected to vehicular traffic. Any compaction less than 90% in such areas shall be cause for rejection.

The pavement surface, when completed, shall be smooth, dense and of uniform texture and appearance. All areas shall drain and be free of standing water. The compacted thickness shall not be less than 0.02 feet of that shown on the plans. The finished surface shall not vary more than 0.02 feet in a 10-foot distance as determined by a straightedge placed in any position on the finished surface, except across flow lines.

9-7 Certificates of Compliance — The Contractor shall furnish the Engineer, at least two (2) weeks prior to the start of work, with a list of material sources together with Certificates of Compliance, indicating that materials to be incorporated in the work fulfill the requirements of these specifications. The Certificates of Compliance shall be signed by the material supplier or representative. The Engineer may permit the use of paving materials, aggregate, cement, lime, anti-strip agents, asphalt, or any combination thereof prior to sampling and testing when accompanied by a Certificate of Compliance.

9-8 Equipment — All equipment used shall be in good working condition and shall be capable of performing the work intended in a safe and satisfactory manner.

Paving Equipment: Asphalt concrete surfacing shall be placed with a self-propelled (vibrator type) asphalt paving machine, except where inaccessibility precludes its use. When approved by the Engineer, surfacing may be spread by means of a spreader box and, where necessary, by hand.

Rollers: Self-propelled compacting rollers shall comply with applicable requirements of the State Standard Specifications.

9-9 Adjustment of Utility and Manhole Covers — The Contractor shall adjust all City-owned (sewer, storm drain, and some street lighting) manhole and utility

covers (and all other similar structures) to finished grade in accordance with the provisions of Section 301-1.6 and Section 302-5.7 of the Standard Specifications for Public Works Construction, except as modified herein.

The Contractor shall locate and reference all manholes, valve covers, and survey monuments prior to construction.

All manholes, survey monuments and water valve covers shall be thoroughly cleaned of any construction debris resulting from the Contractor's operations.

Survey monument covers shall be adjusted as directed by the Engineer. The survey monument shall be protected in place by the Contractor. For monuments requiring resetting, the work shall be performed by a licensed land surveyor and all costs shall be at the Contractor's expense.

Manholes, meters and valve covers not owned by the City shall be adjusted to grade by the utility owner involved and at the utility company's expense. It shall be the responsibility of the Contractor to notify affected utility companies and coordinate their work with his/hers.

9-10 Prime Coat — The prime coat shall be liquid asphalt grade MC-70 in conformance with Sections 38-4 and 93 of the State Standard Specifications. A prime coat shall be applied to the finish surface of aggregate base at a rated of 0.25 gallons pe square yard prior to asphalt concrete pavement construction.

9-11 Tack Coat — The tack coat shall be asphalt grade RS-1 in accordance with Section 94 of the State Standard Specifications. A tack coat shall be applied to all vertical surfaces abutting the asphalt concrete paving, to all surfaces upon which asphalt concrete overlay or resurfacing is to be constructed and to such other areas as may be directed by the Director of Public Works, at the rate of 0.02 to 0.10 gallons per square yard. The exact rate shall be as approved by the Engineer and shall provide a thorough coating of the area to receive asphalt concrete leveling course. Surfaces to receive tack coat shall be clean and free of loose and foreign material before application.

9-12 Measurement — Asphalt concrete shall be measured by the ton. Measurement by tons will be based on certified weighmeters, certificates showing gross, tare and net weight, and plant source; and the type and grading of the mix for each load. No measurement shall be made, regardless of acceptance of certifications, for any surfacing not meeting requirements, placed outside the lines shown, or rejected for any reason. Certificates must be given to the City at the time of delivery of the asphalt concrete. Certificates will not be accepted after the fact. When payment is by the ton, no payment for asphalt quantities exceeding five percent of the contract bid amount plus extra quantities added by contract change order will be made; such excess material shall be at no expense to the City.

9-13 Payment — Shall be at the unit price bid, which price and payment shall be full compensation for furnishing and placing the surfacing, complete in place, in accordance with the plans and specifications, including all labor, materials, equipment, compacting, prime coat, tack coat, and incidentals, and no additional compensation shall be made therefor.