APPENDIX A-5
REQUIREMENTS FOR ASPHALT MIX DESIGN LABORATORIES
SUPERPAVE METHODS (TYPE A)

A Superpave Asphalt Mix Design Laboratory is involved in designing (Superpave Method) and testing of HMA.

Staff

A Superpave Asphalt Mix Design Laboratory shall be under the direction and control of a person charged with engineering-management responsibility. This designated person shall be a Professional Engineer (or equivalent as approved by CPAC) and a full-time employee of the asphalt laboratory, and have at least five years experience in the inspection and testing of construction materials. All Superpave mix designs submitted to clients shall be approved by this person.

The direct testing services of a Superpave Asphalt Mix Design Laboratory shall be supervised by a supervisory laboratory technician with at least five years experience performing tests on construction materials. This designated person shall be able to demonstrate the ability to perform all tests required in the manner stipulated under governing procedures. This person shall keep up with developments in asphalt technology and have C.E.T. designation (or equivalent as approved by CPAC).

Technicians employed in a Superpave Asphalt Mix Design Laboratory shall have the necessary experience to complete the required tests under the direct supervision of the supervisory laboratory technician. There shall be at least one laboratory technician who has met the requirements of the CCIL Superpave Asphalt Technician Certification Program working in the laboratory while that laboratory is in operation.

Equipment, Manuals and Reporting Procedures

A Superpave Asphalt Mix Design Laboratory must have the necessary equipment, manuals and reporting procedures in accordance with current Ministry of Transportation of Ontario Laboratory Testing Manual (LS), AASHTO (MP, M, R, T) and ASTM (C, D, E) Methods:

LS309/M323	Superpave Volumetric Mix Design
R30	Mixture Conditioning of Hot Asphalt
R35	Superpave Volumetric Design for Hot Mix Asphalt
LS262/D2726	Bulk Specific Gravity of Compacted Asphalt Mixes Using Saturated Surface-Dry Specimens

OR

LS-306/D1188	Bulk Relative Density of Compacted Bituminous Mixtures using Paraffin Coated Specimens

OR

D6752	Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Automatic Vacuum Sealing Equipment
T283	Resistance of Compacted Asphalt Mixtures to Moisture-Induced Damage
LS310/T305	Draindown Characteristics in Uncompacted Asphalt Mixtures, Characteristics of (If Required)
LS313/T312	Preparing and Determining the Density of Hot-Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor
LS264/D2041	Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
LS-265/D3203	Percent Air Voids in Compacted Dense Bituminous Pavement Mixtures, Determination of
LS-266	V.M.A. in Compacted Bituminous Mixtures, Determination of
LS-281	Percent Compaction of Compacted Bituminous Pavement Mixtures, Determination of

OR

LS-287	Determination of Percent Compaction of Compacted Bituminous Paving Mixture (MRD Method), Method of Test for the
LS-282/D2172	Quantitative Extraction of Asphalt Cement and Analysis of Extracted Aggregate from Bituminous Paving Mixtures, Method of Test for

OR

LS-292/D6307	Quantitative Determination of Asphalt Cement Content by Ignition and Analysis of the Remaining Aggregate from the Bituminous Paving Mixtures,
LS-600/C702	Dry Preparation of Aggregates for Determination of Physical Constants, Method of
LS-601/C117	Material Finer than 75 μm Sieve in Mineral Aggregates by Washing, Method of Test for
LS-602/C136	Sieve Analysis of Aggregates, Method of Test for
LS-604/C127	Relative Density and Absorption of Coarse Aggregate, Method of Test for

LS-605/C128 Relative Density and Absorption of Fine Aggregate, Method of Test for

LS-607/D5821 Determination of Percent Crushed Particles in Processed Coarse Aggregate, Method of Test for the

LS-608/D4791 Percent Flat and Elongated Particles in Coarse Aggregate, Determination of

In addition to these tests, a Superpave Mix Design Asphalt Laboratory must be able to complete, or have documented access to a CCIL certified laboratory able to complete the following Superpave mix design related work in accordance with current LS, AASHTO and ASTM Methods:

LS-606/C88 Soundness of Aggregate by Use of Magnesium Sulphate, Method of Test for

LS-609/C294 Petrographic Analysis of Coarse Aggregate, Procedure for

LS-618/D6928 Resistance of Coarse Aggregate to the Degradation by Abrasion in the Micro-Deval Apparatus, Method of Test for

LS-619/ D7428 Resistance of Fine Aggregate to the Degradation by Abrasion in the Micro-Deval Apparatus, Method of Test for the

A Superpave Asphalt Mix Design Laboratory must keep up with any changes to the LS, AASHTO and ASTM methods and procedures, and only complete designs to other methods as requested (Transport Canada, etc.) if the laboratory has the necessary additional and/or modified equipment, manuals and reporting procedures.