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Materials requiring written certification conforming to Section 1.06.07 are as follows:

a) Concrete (including required admixtures) – submittals in accordance with requirements of Section M.03 of FORM 817.

b) Reinforcing Steel – submittals in accordance with requirements of Section M.06.01 of FORM 817.

c) Structural Steel – submittals in accordance with requirements of Section M.06.02 of FORM 817.

d) Rapid Set D.O.T. Cement – notarized Materials Certificate.

e) Joint Sealant – notarized Materials Certificate.

f) Backer Rod – notarized Materials Certificate and Certified Test Report (type 3 only).

Section M.03

1. Where Class 'S' Concrete is required, the Contractor shall comply with the Standard Specifications FORM 817, Section M.03 a*s supplemented herewith to provide a super-plasticized concrete.*

a) General Composition of Concrete Mix (4,000psi required):

TYPE	PROPERTY BY WT. APPROX.	WATER PER BAG MAX	GEM. FACTOR
Class "S"	1 : 2.16 : 2.20	5.7 (Gals.)	7.0 (Bags/C.Y.)

b) Coarse Aggregate: The required grading shall be obtained by using 100 percent 3/8" coarse aggregate.

c) Cement: Type I or II Portland Cement shall be used for Class "S" Concrete.

d) Admixtures: The superplasticizer admixture shall be a high-range water reducer (HRWR) capable of increasing the slump of the mix from approximately 2-½ inches to 6-½ inches upon the addition of the amount recommended by the respective manufacturer. The HRWR shall conform to ASTM C494 Type F or Type G and shall be approved by the Client Agency Engineer. The use of this material shall be in strict accordance with the respective manufacturer's written instructions and procedures.

e) Composition: Class "S" concrete shall contain not less than 5.5 percent and not more than 8.5 percent entrained air at the time of placement.

f) Compressive Strength: The Class "S" concrete shall have a minimum 4,000 psi compressive strength at twenty-eight (28) days.

g) Consistency: Class "S" concrete shall have a slump range of 2 inches to 4 inches prior to the addition of the HRWR and from 6 inches to 8 inches of slump after the addition of the HRWR. The addition rates of the air-entraining admixture (A.E.A.) and the HRWR will vary. Frequent field testing of the air content and slump prior to and after addition of the HRWR will be the determining factor of actual addition rates for each admixture.

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NOTE: The Contractor shall also have measuring graduates marked for the proportioning of the A.E.A. and the HRWR. Do not mix the A.E.A. and the HRWR together before adding to the mix; the resultant solution will not work. Do Not add the A.E.A. and the HRWR at the mixer simultaneously; these admixtures must be added separately in the mixing cycle. All manufactured materials shall be stored, mixed and used in strict accordance with the written recommendations of the respective manufacturers

2. Where Rapid Set (no substitutions allowed) is required, the Contractor shall provide the following material:

a) Rapid Set D.O.T. Cement (Industrial Grade Fast Setting Cement): a calcium sulfoaluminate based hydraulic cement blend mixed at a 1-2-2 ratio (cement, sand, and stone).

(Notarized Materials Certificate must accompany each Purchase Order usage)

Manufactured by: CTS Cement Mfg. Corp.
11065 Knott Ave., Suite A
Cypress, CA 90630
Ph. 800.929.3030

3. Where a Controlled Low Strength Material (CLSM) is required, the Contractor shall supply the following material and a contractor-designed mix:

a) General Composition of Concrete Mix
The composition of the CLSM shall be in accordance with the requirements set forth in Article M.03.01-General Composition of Concrete Mixes, as well as the applicable sections of ACI 229R. The Contractor shall submit each proposed mix design, with all supporting data, to the Client Agency Engineer for review and approval at least two weeks prior to its use. The setting time of CLSM materials shall be designed so as to achieve the strength necessary to comply with the time constraints called for under the Maintenance and Protection of Traffic requirements of the purchase order. The use of chloride accelerators is not permitted.

b) Compressive Strength: The minimum compressive strength of the CLSM material shall be 30 pounds per square inch (psi) and the maximum compressive strength of the CLSM shall be 150 pounds per square inch (psi) when tested in accordance with ASTM D4832 after 52 days.

c) Aggregate: The CLSM mix Design shall utilize a nominal maximum size of No. 8 aggregate as specified in M.01.01.

d) Consistency: The CLSM mix Design shall have a minimum of 20% entrained air when tested in accordance with AASHTO T152.

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Under Item No.8

1. Where Self-Leveling Cold Applied Sealant (no substitutions allowed) material is required, the Contractor shall provide one of the following materials (including manufacturers recommended cleaners, primers, etc.) as designated by the Client Agency Engineer:

a) Dow Corning 888 Silicone Joint Sealant: a low-modulus silicone sealant.

(Notarized Materials Certificate must accompany each Purchase Order usage)

Manufactured by: Dow Corning Corporation
South Saginaw Road
Midland, Michigan 48686-0994
Ph. 517.496.6000

b) Dow Corning 902RCS Joint Sealant: a rapid-cure, self leveling, two-part silicone rubber sealant.

(Notarized Materials Certificate must accompany each Purchase Order usage)

Manufactured by: Dow Corning Corporation
South Saginaw Road
Midland, Michigan 48686-0994
Ph. 517.496.6000

c) Backer Rod, Type 3 Cold: polyethylene rod, for bridge expansion joints, must conform to requirements of ASTM D5249. (Rod diameter shall be 25% larger than joint opening at 50 degrees F.

(Notarized Materials Certificate and a Certified Test Report must accompany each Purchase Order usage)

2. Where Hot-Tar Pourable Sealant material is required, the Contractor shall provide the following material:

a) Joint Sealing Compound, Tar Kettle Type: Rubber compound of the hot poured type that shall conform to the requirements of AASHTO M173 of the latest issue. (Notarized Materials Certificate must accompany Purchase Order usage)

b) Backer Rod, Type 1 Hot: polyethylene rod, for bridge expansion joints, must conform to requirements of ASTM D5249. (Rod diameter shall be 25% larger than joint opening at 50 degrees F.

(Notarized Materials Certificate must accompany each Purchase Order usage)

Section M.04

M.04.01—Bituminous Concrete Materials
M.04.02—Mix Design and Job Mix Formula (JMF)
M.04.03—Quality Control (QC) Testing and Control of Mixture

M.04.01—Bituminous Concrete Materials: All facilities producing and testing bituminous concrete materials must be approved on an annual basis by the Client Agency Director of Research and Materials

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("DRM"). The basis of approval for plant machinery, materials processing & controls, and field laboratory requirements is set forth in the "Materials Testing Manual" published by the Client Ageny's Division of Materials Testing. Asphalt test modifications are also included in the Materials Testing Manual.

Materials: Each source of material used for the production of bituminous concrete materials must be approved by the DRM prior to their use. Such materials shall include coarse aggregate, fine aggregate, mineral filler and designated bitumen combined to meet the composition limits by weight and other requirements stated in Table M.04.01. The Contractor shall submit to the Client Agency Engineer a request for approval of each material sources of supply on a project basis. The Contractor shall also submit a Material Safety Data Sheet ("MSDS") for each grade of binder to be used on the Project. The Contractor shall not change between previously approved material sources of supply without approval by the Client Agency DRM.

An adequate quantity of each size aggregate, mineral filler and bitumen shall be maintained at the bituminous concrete plant site at all times while the plant is in operation to ensure that the plant can consistently produce bituminous concrete materials that meet the job mix formula (JMF) as specified in M.04.02. The quantity of such material shall be approved by the Client Agency Engineer on an individual plant basis and is dependent upon the plant's daily production capacity, but shall never be less than one day's production capacity.

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1. Coarse Aggregate:

a. Requirements: The coarse aggregate shall consist of clean, hard, tough, durable fragments of crushed stone or crushed gravel of uniform quality. Aggregates from multiple sources of supply shall not be mixed or stored in the same stockpile.

b. Basis of Acceptance: The request for approval of the source of supply shall include a washed sieve analysis in accordance with AASHTO T-27. The apparent specific gravity (Gsa), bulk specific gravity (Gsb) and percent absorption (Pa_w) shall be determined in accordance with AASHTO T-85. The coarse aggregate shall not contain more than 1% crusher dust, sand, soft disintegrated pieces, mud, dirt, organic and other injurious materials. When tested for abrasion using AASHTO T-96, the aggregate loss shall not exceed 40.0%. When tested for soundness using AASHTO T-104 with a magnesium sulfate solution, the coarse aggregate shall not have a loss exceeding 10.0% at the end of 5 cycles.

2. Fine Aggregate:

a. Requirements: The fine aggregate shall consist of clean, hard, tough, rough-surfaced and angular grains of natural sand; manufactured sand prepared from washed stone screenings; stone screenings, slag or gravel; or combinations thereof.. Fine aggregates from multiple sources shall not be mixed or stored in the same stockpile.

b. Basis of Acceptance: The request for approval of the source of supply must include the location, manufacturing and processing methods. The request for approval shall also include a washed sieve analysis in accordance with AASHTO T-27. Any fine aggregate component or final combined product shall have 100% passing the 3/8 inch (9.5 millimeter) sieve. The apparent specific gravity (Gsa), bulk specific gravity (Gsb) and percent absorption (Paw) shall be determined in accordance with AASHTO T-84. The fine aggregates shall be free from injurious amounts of clay, loam, and other deleterious substances.

3. Mineral Filler:

a. Requirements: Mineral filler shall consist of finely divided mineral matter such as rock dust, including limestone dust, slag dust, hydrated lime, hydraulic cement, or other approved mineral matter. At the time of use it shall be freely flowing and devoid of agglomerations.

b. Basis of Acceptance: The request for approval of the source of supply shall include the location, manufacturing process, handling and storage methods for the material. Mineral filler shall conform to the requirements of AASHTO M-17

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4. Liquid Bituminous Materials:

a. Performance grade (PG) binder

i. Requirements: Materials for this item shall have uniformly mixed and blended liquid bituminous materials that are free of contaminants such as fuel oils and other solvents. Such materials shall be properly heated and stored to prevent damage or separation. All PG binders used in the production of bituminous materials shall be approved by the Client Agency DRM. PG binders that are modified with fillers, extenders, reinforcing agents, adhesion promoters, additives, and thermoplastic polymers shall be approved for use only with the prior written approval from the Client Agency DRM.

ii. Basis of Acceptance: The request for approval of the source of supply shall list the location where the materials will be produced, and manufacturing, processing, handling and storage methods along with necessary certification in accordance with AASHTO R-26, and as stated herein. The PG binder utilized for the production of bituminous materials shall consist of the grade specified in the Contract when tested in accordance with AASHTO M-320 and AASHTO R-29.

b. Cut-backs (medium cure type)

i. Requirements: The liquid petroleum materials for this item shall be produced by fluxing an asphalt base with appropriate petroleum distillates to produce the grade specified.

ii. Basis of Acceptance: The request for approval of the source of supply shall be submitted at least seven days prior to its use listing the location where the materials will be produced, and manufacturing, processing, handling and storage methods. The liquid asphalt shall be MC-250 conforming to AASHTO M-82.

c. Emulsions

i. Requirements: The emulsified asphalt shall be homogeneous and not be used if exposed to freezing temperatures.

ii. Basis of Acceptance**:** The request for approval of the source of supply must include the location where the materials will be produced, and manufacturing, processing, handling and storage methods.

1. Emulsified asphalts shall conform to the requirements of AASHTO M-140. Materials used for tack coat shall not be diluted and meet grade RS-1. When ambient temperatures are 80˚F and rising, grade SS-1 or SS-lh may be substituted if approved by the Client Agency Engineer.

2. Cationic emulsified asphalt shall conform to the requirements of AASHTO M-208. Materials used for tack coat shall not be diluted and meet grade CRS-1. The settlement and demulsibility test will not be performed unless deemed necessary by the Client Agency DRM. When ambient temperatures are 80˚F and rising, grade CSS-1 or CSS-lh may be substituted if approved by the Client Agency Engineer.

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5. Reclaimed Asphalt Pavement (RAP):

a. Requirements: RAP shall consist of asphalt pavement constructed with asphalt and aggregate reclaimed by cold milling or other removal techniques approved by the Client Agency DRM. For bituminous mixtures containing RAP, the Contractor shall submit a JMF in accordance with M.04.02 to the Client Agency Engineer for advance approval.

b. Basis of Acceptance: The RAP material will be accepted on the basis of one of the following criteria:

i. When the source of all RAP material is from pavements previously constructed in accordance with Department specifications, the Contractor shall provide certification that the RAP is only from such pavements and that the binder is substantially free of solvents, tars and other contaminants. Stockpiles of such materials shall be continuously labeled with a sign reading **"ConnDOT RAP"** and remain separate from all other materials. A request for approval for the RAP material shall include the stockpile location and estimated quantities to be used.

ii. When the RAP material source or quality is not known, the Contractor shall test the material and provide the following information along with a request for approval to the Client Agency DRM at least 30 calendar days prior to the start of the paving operation. The request shall include a material certificate stating that the RAP consists of aggregates that meet the specification requirements of M.04.01-1 through 3 and that the binder in the RAP is substantially free of solvents, tars and other contaminants. Stockpiles of such material shall remain separate from all other RAP materials at all times. The request for approval shall include the following:

1. A 5-pound sample of the RAP to be incorporated into the recycled mixture.
2. A 5-pound sample of the extracted aggregate from the RAP.
3. After recovery of binder from the RAP by AASHTO T-170, the viscosity test results shall be reported when tested at 140°F by AASHTO T-202.
4. A statement that RAP material has been crushed to 100% passing the ½ inch sieve and remains free from contaminants such as joint compound, wood, plastic, and metals.

6. Crushed Recycled Container Glass ("CRCG"):

a. Requirements: The Contractor must use clean and environmentally-acceptable CRCG in an amount not greater than 5% by weight of total aggregate.

b. Basis of Acceptance: The Contractor shall submit to the Client Agency Engineer a request for approval to use CRCG. The request shall state that the CRCG contains no more than 1% by weight of contaminants such as paper, plastic and metal and conform to the following gradation:

CRCG Grading Requirements	
Sieve Size	Percent Passing
3/8-inch	100
No. 4	35-100
No. 200	0-10

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7. Joint Seal Material:

a. Requirements: Joint seal material shall be a hot-poured rubber compound.

b. Basis of Acceptance: Joint seal material will be tested in accordance with the requirements of AASHTO M-324 Type 2.

M.04.02—Mix design and Job Mix Formula ("JMF")

1. Marshall Method - Class 1, 2, 3, 4 and 12:

a. Requirements: When specified, the Marshall method shall be employed to develop a bituminous concrete mix design that includes a JMF consisting of target values for gradation and bitumen content for each class of bituminous concrete designated for the project in accordance with the latest Asphalt Institute's MS-2 manual. Each class of bituminous concrete must meet the requirements as shown in Table M.04.02-1.

b. Basis of Acceptance: The Contractor shall submit to the Client Agency Engineer a request for approval of the JMF in accordance with one of the methods described herein. Prior to the start of any paving operations, the JMF and production percentage of bitumen must be approved by the Client Agency Engineer, and the Contractor must demonstrate the ability to meet the approved JMF and production percentage of bitumen for each class of material. Additionally, the fraction of material retained between any two consecutive sieves shall not be less than 4%.

The Client Agency Engineer will test each class of material for compliance with the submitted JMF and Table M.04.02-1. The maximum theoretical density (Gmm) will be determined by AASHTO T-209 (modified). If the material does not meet the requirements, the JMF shall be adjusted within the ranges shown in Table M.04.02-1 until an acceptable material is produced. All equipment, tests and computations shall conform to the Marshall method in accordance with AASHTO T-245 (modified).

An approved JMF from the previous operating season may be acceptable to the Client Agency Engineer provided that there are no changes in the sources of supply for the coarse aggregate, fine aggregate, recycled material (if applicable) and the plant operation had been consistently producing acceptable material.

The Contractor shall not change sources of supply after a JMF has been approved. Before a new source of supply for materials is used, a new JMF shall be submitted to the Client Agency Engineer for approval.

c. Marshall mixture (virgin): For Bituminous concrete materials that contain no recycled material, the limits prescribed in Table M.04.02-1 govern. The Contractor shall submit to the Client Agency Engineer for approval, a JMF with the individual fractions of the aggregate expressed as percentages of the total weight of the mix and the source(s) of all materials. The JMF shall indicate two bitumen contents; the JMF target percentage and a production percentage (actual amount added to mix) of bitumen for each mix class by total weight. For surface course Class 1, a 0.45 power gradation chart shall also be submitted on which is plotted the percentage passing each sieve. The JMF shall also indicate the target temperature of completed mixture as it is dumped from the mixer and tested in accordance with M.04.03.

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d. Marshall mixtures with RAP: In addition to M.04.02 – 1a through c, RAP in bituminous concrete shall comply with requirements stated in M.04.01, and as stated herein. Upon approval by the Client Agency Engineer, a maximum of 10% RAP may be used with no binder grade modification. RAP material shall not be used with any other recycling option.

The Contractor may increase the RAP percentage in 5% increments up to a maximum of 30% provided a new JMF is approved by the Client Agency Engineer. The following information shall be included in the JMF submittal:

- Gradation and asphalt content of the RAP.
- Percentage of RAP to be used.
- Virgin aggregate source(s).
- Total binder content based on total mixture weight.
- Production pull percentage of added virgin binder based on total mixture weight.
- Gradation of combined bituminous concrete mixture (including RAP).
- Grade of virgin added, if greater than 10% of total mix weight.

e. Marshall mixture with CRCG: In addition to M.04.02 – 1a through c, for Bituminous concrete that contains CRCG, the Contractor shall submit a materials certificate to the Engineer stating that the mixture and its components comply with requirements stated in M.04.01 - (6). Additionally, 1% hydrated lime, or other approved non-stripping agent, shall be added to all mixtures containing CRCG. CRCG material shall not be used with any other recycling option.

2. Cold Patch Method - Class 5, 5A, 5B:

a. Requirements: This material must be capable of being stockpiled and workable at all times. A non-stripping agent approved by the Client Agency Engineer shall be used in accordance with manufacturer's recommendations. The Contractor shall take necessary steps to ensure that this material is mixed with aggregate containing no more than 1% moisture and is not exposed to any rain or standing water for a period of 6 hours after being mixed.

i. Class 5A material shall have 3/8 to ½ inch polypropylene fibers that have been previously approved by the DRM added at a minimum rate of 6 pounds per ton of mixture.

ii. Class 5B mixture shall have ¼ inch polyester fibers that have been previously approved by the Client Agency DRM added at the minimum rate of 2 1/2 pounds per ton of mixture

b. Basis of Acceptance: The Contractor shall submit to the Client Agency Engineer a materials certificate for this material. The aggregates, fibers and binder (MC-250) shall meet the requirements as specified in M.04.01-1 through 4 and in Table M.04.02-1. The use of recycled material is not permitted with this class of bituminous concrete.

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TABLE M.04.02 – 1 MASTER RANGES FOR BITUMINOUS CONCRETE HOT MIX ASPHALT MIXTURES

Notes: (a) 300° F minimum after October 1. **(b)** 75 blow (Marshall Criteria). **(c)** 3-6% when used for a roadway wearing surface. **(d**) For divided highways with 4 or more lanes, a stability of 1500 lbs is required. **(e)** Contains an approved non-stripping compound. **(f)** To help prevent stripping, the mixed material will be stockpiled on a paved surface and at a height not greater than 4 feet during the first 48 hours. **(g)** As determined by AASHTO T- 245(modified). **(h)** The percent passing the #200 sieve shall not exceed the percentage of bituminous asphalt binder determined by AASHTO T-164(modified). **(i)** Mixture with 5% or more aggregate retained on ¾" sieve. **(j)** Mixtures finer than condition (i) above.

CLASS	1	2	3	4	12	5 (f)	5A (f)	5B (f)	JMF % Tol. ±
Grade of PG Binder content %	PG 64-28 5.0 – 6.5	PG 64-28 5.0 - 8.0	PG 64-28 6.5 - 9.0	PG 64-28 4.0 - 6.0	PG 64-28 7.5 - 10.0	MC-250 (e) 6.0 - 7.5	MC-250 (e) 6.0 - 7.5	MC-250 (e) 6.0 - 7.5	0.4
Sieve Size	Percent Passing (%)								
# 200	3 – 8 (h)	3 – 8 (h)	3 – 8 (h)	0 – 5 (h)	3 – 10 (h)	0 - 2.5	0 - 2.5	0 - 2.5	2
# 50	6 – 26	8 - 26	10 - 30	5 - 18	10 - 40				4
# 30	10 - 32	16 - 36	20 - 40		20 - 60	2 - 15	2 – 15	2 - 15	5
# 8	28 - 50	40 - 64	40 - 70	20 - 40	60 - 95	10 - 45	10 – 45	10 - 45	6
# 4	40 - 65	55 - 80	65 - 87	30 - 55	80 - 95	40 - 100	40 – 100	40 - 100	7
¼"									
3/8 "	60 - 82	90 - 100	95 - 100	42 - 66	98 - 100	100	100	100	8
½ "	70 - 100	100	100		100				8
¾"	90 - 100			60 - 80					8
1"	100								
2"				100					
Additionally, the fraction of material retained between any two consecutive sieves shall not be less than 4%									
Material Temperature									
Binder	325°F maximum					140-185° F			
Aggregate	280-350° F					100-175° F			
Mixtures	265-325° F (a)				120-175°F (a)	120-175° F			± 25 °F
Mixture Properties									
VOIDS - %	3.0 – 6.0 (b)	2.0 – 5.0 (c)	0 - 4		0 - 5.0 (b)				
Stability (g) lbs. min.	1200 (d)	1000	1000		1000				
FLOW (g) in.	.08 - .15	.08 - .15	.08 - .18		.08 - .15				
VMA % - min.	15(i) :16 (j)								

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TABLE M.04.02–3

M.04.03 — Quality Control (QC)Testing and Control of Mixture: The requirements of the plant during production, the sampling & testing methods used by the Contractor during production, and the cessation of supply during paving operations are as follows:

1. Plant production requirements

a. Storage Silos:

i. For all classes of mixture sampled from hauling vehicles at the plant after storage in silos (xcept 5, 5A, and 5B) the viscosity of the recovered asphalt shall be no greater than 5,500 poises at 140° F (550 Pa· ·s at 60° C).

ii. A storage silo's usage shall cease and that bin placed "off test" when the results from one production test from a storage silo are not within the tolerances in Table M.04.02-1 or results from two production tests from a silo are not within JMF tolerances. The silo shall remain "off test" until an acceptable trial test result is obtained. The trial test will be performed by the Client Agency Engineer, and if the test results are within the requirements in Table M.04.02-1 and JMF criteria for Marshall and Tables M.04.02-2, the silo use may resume. If the trial test fails, the remaining materials stored in the silo will be rejected.

b. Aggregates: The Contractor shall ensure that aggregate stockpiles are managed to provide uniform gradation and particle shape, prevent segregation and cross contamination in a manner acceptable to the Client Agency Engineer.

c. Mixture: The Contractor shall demonstrate to the Client Agency DRM the dry and wet mix times for each class of materials. The dry and wet mix times shall be sufficient to provide proper coating of all particles with bitumen and produce a uniform mixture. The Contractor shall make necessary adjustments to ensure bituminous concrete materials are free from moisture throughout.

d. RAP: The Contractor shall indicate the percent of RAP, the moisture content, and the net dry weight of RAP added to the mixture on each truck ticket. The Contractor shall make necessary adjustments to ensure bituminous concrete materials contain no more than 1% moisture throughout. For each day of production, the Contractor shall not change from the JMF and RAP percentage without prior approval of the Client Agency DRM.

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2. Sampling & testing methods:

Marshall Mixes: The Contractor shall furnish the Client Agency Engineer a field laboratory approved by the Client Agency DRM to test bituminous materials during production. Material samples will be obtained from the hauling vehicles by the Client Agency Engineer at the plant during each day's production, as indicated in the Client Agency's "Schedule of Minimum Requirements for Sampling Materials for Test.
The following test procedures will be used:

AASHTO T-30 (modified)	Mechanical Analysis of Extracted Aggregate
AASHTO T-40 (modified)	Sampling Bituminous Materials
AASHTO T-164 (modified)	Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
AASHTO T-245 (modified)	Resistance to Plastic Flow of Bituminous Mixtures Using Marshall Apparatus
AASHTO T-209 (modified)	Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
AASHTO T-269 (modified)	Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures

The results of AASHTO T-164 (modified) and T-30 (modified) will be used to determine if the material is within the tolerances shown in Table M.04.02-1.

The Contractor will be notified that a plant is "off test" for a class of material when the test results indicate that any single value for bitumen content or gradation are not within the tolerances shown in Table M.04.02-1 for that class of material. When multiple plants and silos are located at one site, material supplied to one project is considered as coming from one source for the purpose of applying the "off test" adjusted payment.

If a subsequent test indicates that the bitumen content or gradation are outside the tolerances, the Contractor may make a single JMF change on classes 1, 2, 3, 4 and 12 as approved by the Client Agency DRM prior to any additional testing. Consecutive test results outside the requirements of Table M.04.02-1 JMF tolerances may result in rejection of the mixture. Any modification to the JMF shall not exceed 50% of the JMF tolerances indicated in Table M.04.02-1 for any given component of the mixture without approval of the Client Agency DRM. When such an adjustment is made to the bitumen, the corresponding production percentage of bitumen shall be revised accordingly.

3. Cessation of Supply: The Client Agency DRM will cease the supply of material for the Project from any plant that consistently fails to produce material that meets the JMF. The criteria for ceasing the supply of a class of material from any plant are as follows:

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When the test results from three consecutive samples are “off test” and not within the JMF tolerances or the test results from two consecutive samples are “off test” and not within the ranges indicated in Table M.04.02 – 1 or when the percent of material passing the minus #200 sieve material exceeds the percent of extracted bitumen content for three consecutive samples during any production period.

In addition, when the test results from three non-consecutive samples of a class of material not within the JMF tolerances or the test results from two non-consecutive samples not within the range indicated in Table M.04.02-1 during any one production period, the Client Agency Engineer may cease supply of material from the plant due to inconsistent production.

Following cessation, a trial production period will be required at the plant for that class of material. Use of that class of material from that plant will be prohibited on the Project until the plant has demonstrated the ability to consistently produce acceptable material. When the Client Agency DRM has approved the materials from the trial production period, the use of that material on the Project may resume.