

**MINNESOTA Department of Transportation Schedule of Independent Assurance Sampling and Testing  
For Federal Aid Projects (Not S.A.P Projects)**

*Arrangements must be made with District Materials Engineer for scheduling IAST visits to comply with project requirements.*

**A. Grading and Base** (Note: 1)

<b>Type of Construction</b>	<b>Sample or Test</b>	<b>Minimum Tester Review Frequency</b>	<b>Minimum Project IA Gradation</b>
Grading	Compaction – Observe and review results and procedures for moisture, sand cone and Proctor or DCP or LWD for all projects $\geq$ 50,000 cubic yards (CV) for non-granular and/or projects which contain $>$ 10,000 cubic yards (CV) granular.	Review each tester once per year for each type of test.	
All Aggregate Base and Aggregate Shouldering	Compaction – Observe and review results and procedures for moisture, sand cone and Proctor or DCP or LWD for all projects $\geq$ 2,200 cubic yards (CV).	Review each tester once per year for each type of test.	
Granular Grading Materials	Sampling, Splitting and Gradation	Review each tester once per year for each type of test.	1 sample per project per year for projects with more than 10,000 cubic yards of granular grading materials.
All Aggregate Base and Aggregate Shouldering	Random Sampling, Splitting and Gradation	Review each tester once per year for each type of test.  ( Note: 2)	1 sample per project per year for projects with more than 4,000 tons of all classes of aggregate.  (Note: 2)

**B. Bituminous** (Note 1)

<b>Type of Construction</b>	<b>Sample or Test</b>	<b>Minimum Tester / Observer Review Frequency</b>	<b>Minimum Project IA Sample Frequency</b>
All Bituminous Production Over 500 tons	Extraction (Burn or Chemical) Extracted Gradation Rice Test (Max Spg) Bulk Specific Gravity FAA CAA Core Density (max density method)	Review once per year for each type of test.  (Note: 1)	1 sample per Certified Plant every 3 months or when production exceeds 100,000 tons for the contract agency since last checked, whichever occurs first. The equipment shall be reviewed every plant laboratory set up or at least once per year.  (Note: 3)

C. Concrete (Note 1)

Type of Construction	Sample or Test	Minimum Tester/Observer Review	Minimum Equipment Review
Concrete Projects Over 100cy  Plant Inspection	Sampling Procedure Aggregate Gradation Coarse Aggregate -200 Sieve Test (Paving Only) Microwave Oven Test (Paving Only) Unit Weight Test (Paving Only)	1 per year for each type of test.  (Note: 2)	1 gradation sample every plant laboratory set up or at least once per year.  (Note: 3)
Concrete Projects Over 100cy  Field Inspection	Slump Air Content Cylinder/Beam (Fabrication Only)	1 per year for each type of test.	Calibrate all air meters at least once per year.

Notes:

(1) All testers and observers must complete at least one documented Independent Assurance Inspection each year. The Independent Assurance Inspector should monitor the individual tester or observer performing the required sampling and testing during the regular project activities or in the District Laboratory.

*The tester is defined as the individual who actually runs the test.*

*The observer is defined as the inspector who watches the Contractor run the test.*

-(2) The Random Sampling Method samples will be tested in the field laboratory (option 1) or District Laboratory (option 2).

Option 1, the Independent Assurance Inspector should document the testers and observers:

1. Randomly selecting sampling locations.
2. Ensuring all samples and testing equipment is in a safe working order and has required calibration performed.
3. Performing the specified sampling, splitting and testing procedures with appropriate equipment.
4. Properly documenting field test results and labeling the sample as "Independent Assurance Sample".
5. Submitting the companion sample to the District Laboratory for verification of the field test results.

Option 2, the Independent Assurance Inspector should document the testers and observers:

1. Randomly selecting sampling locations.
2. Ensuring all sampling and testing equipment is in safe working order and has required calibration performed.
3. Performing the specified sampling and splitting procedures with appropriate equipment.
4. Properly labeling the companion sample as "Independent Assurance Sample".
5. Submitting the companion sample to another MnDOT Laboratory for verification of the test results.

**Notes (Cont):**

(3) When the Independent Assurance sample is obtained under the observation of the District Materials assurance sampler, the sample may be split into three parts, which can also be used as project samples. One part is the I.A. sample, one part is the verification sample, which may be used by the contract agency to assure compliance of the QC program, and one part is the verification companion sample, which may be used by the contractor for process control (QC).

The sampler shall:

1. Assure location of sampling is selected randomly.
2. Assure proper sample taking equipment.
3. Assure proper sampling procedures.
4. Identify sample as an "Independent Assurance" sample and transport to district laboratory.
5. Identify split sample (from 4 above) as "Verification" sample and transport to district laboratory (if applicable).
6. Identify split sample (from 4 above) as "Verification Companion" sample and give to Contractor (if applicable).
7. All Independent Assurance samples must be tested using different equipment and personnel from Verification testing.

**OPTIONS:**

- A. Central Laboratory
- B. Other District Laboratory
- C. Other Agency (County or Municipal Laboratory)
- D. Consultant