

Administrative and Inspection Activities for Aggregates – Concrete

1002.01 SCOPE

This CAIS covers the construction administration and inspection requirements for aggregates for use in concrete as specified in OPSS 1002, April 2018 and SSP 110S17.

1002.02 REFERENCES

The references listed in OPSS 1002 shall apply to this CAIS, in addition to the following standards, specifications, forms, or publications.

Ontario Provincial Standard Specifications, Material:

OPSS 1002 Aggregates – Concrete

Construction Administration and Inspection Specifications (CAIS):

CAIS 1001 Aggregates – General

MTO Forms:

PH-D-10 Aggregate Sample Data Sheet

1002.03 DEFINITIONS

For the purpose of this CAIS, the definitions shall be as specified in OPSS 1002.

1002.04 DESIGN AND SUBMISSION REQUIREMENTS – Not Used

1002.05 MATERIALS

1002.05.01 GeneralGeneral

Administrative Activities:

1	M	Check if the source of aggregates is listed on CASL.	-
2	-	When applicable, review aggregate reappraisal by the Contractor and provide approval if the reappraisal proves the source to be satisfactory.	-
3	-	Check, in consultation with the Owner, the demonstrated past field performance of aggregates in hydraulic cement concrete.	-

1002.05.02 Fine Aggregate**1002.05.02.02 Grading Requirements**

Administrative Activities:

1	-	Determine if special grading can be allowed.	-
2	M	Check if fineness modulus of fine aggregate from the accepted Form A of the corresponding concrete item meets the specified requirement.	-

1002.05.02.03 Mineral Filler

Administrative Activities:

1	-	Check Mineral fillers as specified when used in self-consolidating concrete.	-
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1002.05.02.04 Physical Property Requirements

Administrative Activities:

1	-	Determine which physical property requirements are applicable.	-
2	-	Determine which physical property requirements can be waived.	-

1002.05.03 Coarse Aggregate**1002.05.03.01 Grading Requirements**

Administrative Activities:

1	-	Check, from the corresponding Form A, if the nominal maximum aggregate size of the aggregate meets the specified requirement for the thickness of the application.	-
2	-	For concrete pavement and concrete base, check the following: • Acceptance shall be based on combined grading requirements. • The grading bands for 19mm and 37.5mm are for general guideline only.	-

1002.05.03.02 Physical Property Requirements

Administrative Activities:

1	-	Determine which physical property requirements are applicable.	-
2	-	Determine which physical property requirements are waived.	-

1002.06 EQUIPMENT – Not Used**1002.07 PRODUCTION****1002.07.01 Aggregate Processing, Handling, and Stockpiling**

Administrative Activities:

1	-	Check if stockpiles are separate as specified.	-
2	M	Check the location of the stockpiles as specified.	-
3	M	When blended fine or coarse aggregates are to be used in the Work, verify if proportions of the aggregate components are provided, or if a stockpile of blended coarse aggregates and/or blended fine aggregates is provided for sampling.	-

1002.08 QUALITY ASSURANCE**1002.08.02 Alternative to LS-614**

Administrative Activities:

1	-	If applicable, receive notification prior to sampling, to replace LS-614 with LS-606 for acceptance.	-
2	-	If applicable, administer charge as specified.	-

1002.08.03 Special Grading for Fine Aggregate

Administrative Activities:

1	-	If applicable, receive written request as specified, prior to samples being taken for QA purposes, to use a fine aggregate with a grading that falls outside the specified limits.	-
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1002.08.04 Sampling

Inspection Activities:

1	M	Monitor QA sampling carried out by the Contractor.	100%
2	M	• Check that the required QA samples are taken as specified and delivered to the appropriate laboratories • Check that duplicate QA samples per lot be taken for testing of physical properties as specified. • Check that duplicate QA samples per subplot of the gradation lot be taken for testing of gradation as specified	100%
3	M	Check if the mass of each QA sample meets the specified requirements.	100%

Administrative Activities:

1	M	- Establish lots for sampling and testing of <u>physical properties</u> as specified. Tender items may be grouped using the definition of “same mix design” in Note 1 of Table 1. - For each <u>physical-property lot</u>, at least one set of duplicate QA samples shall be randomly obtained for each coarse and each fine aggregate component from each individual source. Physical-property sampling is on a lot basis; the requirement for two sublots does NOT apply to <u>physical-property lot</u>.	-
2	M	- Establish separate sets of lots for sampling and testing of <u>gradation</u>. Tender items may be grouped using the definition of “same mix design” in Note 1 of Table 1. - Check that each of the <u>gradation lots</u> be divided into two sublots as specified. - For each aggregate component, or combined aggregate permitted as specified, one set of duplicate QA samples shall be randomly obtained from each subplot. A complete <u>gradation lot</u> therefore requires two duplicate sample sets, one representing each subplot. The provisions for incomplete lots shall apply where applicable.	-
3	M	Sampling shall be carried out at the concrete plant. Where the Contractor proposes sampling at the aggregate source for safety reasons, the Contract Administrator shall assess the reasons provided and may, at the Contract Administrator’s discretion, permit sampling at the aggregate source only where satisfied that the safety risks associated with accessing the sampling location at the concrete plant cannot be adequately mitigated through compliance with the facility’s existing safety protocols or through the development and implementation of additional safety procedures, and that sampling at the aggregate source can be safely accommodated. Where these conditions are not met, sampling shall be carried out at the concrete plant.	-
4	M	Seal each sample container or tag each QA bag at the time and place of sampling.	-

1002.08.05 Acceptance

Administrative Activities:

1	M	Review all test results from the QA laboratory for acceptance based on the gradation and physical property acceptance requirements.	-
2	M	Notify the Contractor of acceptance at full price, acceptance with a payment adjustment or rejected lot.	-

1002.08.06 Referee Testing

Inspection Activities:

1	M	Perform the necessary components of the referee testing process for gradation and physical properties as specified in CAIS General Section 2.	100%
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Administrative Activities:

1	M	Check that a request to invoke referee testing is received as specified.	-
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1002.09 OWNER PURCHASE OF MATERIAL – Not used

WARRANT: Always with OPSS 1002, Materials Specification for Aggregates – Concrete.