

TABLE OF CONTENTS

5.2 SUPPLY OF AGGREGATE 1

5.2.1 GENERAL 1

5.2.2 AGGREGATE CATEGORIES 1

 5.2.2.1 **Aggregate Sources Controlled by the Department** 1

 5.2.2.2 **Aggregate Sources Not Controlled by the Department** 1

5.2.3 GENERAL REQUIREMENTS FOR THE USE OF ALL AGGREGATE SOURCES ... 1

5.2.4 PIT OPERATIONS 2

 5.2.4.1 **General** 2

 5.2.4.2 **Pit Operations in Aggregate Sources Controlled by the Department** 2

 5.2.4.3 **Pit Operations in Aggregate Sources Not Controlled by the Department** .. 3

5.2.5 MEASUREMENT AND PAYMENT 4

 5.2.5.1 **General** 4

 5.2.5.2 **Supply of Aggregate Bid Item** 4

 5.2.5.3 **Payment** 4

S
E
C
T
I
O
N

5

5.2 SUPPLY OF AGGREGATE**5.2.1 GENERAL**

This specification covers the general requirements for the supply of aggregate materials by the Contractor. Aggregate materials are considered the total of the granular portion of construction materials consisting of the coarse and fine gravel splits, blend sand and manufactured fines when required.

5.2.2 AGGREGATE CATEGORIES

For the purposes of administering the operational and payment conditions concerning the supply of aggregate for the Work, aggregate sources are categorized as follows:

5.2.2.1 Aggregate Sources Controlled by the Department

The following are deemed as aggregate sources controlled by the Department:

- (i) a source owned by the Department, or
- (ii) a Crown source for which the Department has a reservation, or
- (iii) a private source for which the Department has a royalty agreement, and holds an approval under the Environmental Protection and Enhancement Act.

5.2.2.2 Aggregate Sources Not Controlled by the Department

The following are deemed as aggregate sources not controlled by the Department:

- (i) a Crown source on undeeded land, operated primarily under lease or license and for which the Department does not have a reservation.
- (ii) a private source for which the Department does not have a royalty agreement, and does not hold an approval under the Environmental Protection and Enhancement Act.

5.2.3 GENERAL REQUIREMENTS FOR THE USE OF ALL AGGREGATE SOURCES

When supplying aggregate from any source, the Contractor shall:

- (i) ensure a Conservation and Reclamation Approval or a lease or license to extract from Alberta Environment and a clearance from the Archaeological Survey of Alberta are in place prior to commencement of the work;
- (ii) assume full responsibility for the quantity and quality of the material in the aggregate source;
- (iii) specify the location of the proposed aggregate source(s) and haul routes, prior to Contract award;
- (iv) acquire the necessary rights to remove materials from all aggregate sources except sources controlled by the Department;
- (v) explore and develop the aggregate sources; and

- (vi) save the Department harmless from any and all claims resulting from the use of the aggregate sources.

The Department will not consider the use of aggregates from existing stockpiles unless the Contractor can satisfy the Department that the aggregate in question meets all required specifications. Agreement by the Department that such pre-prepared aggregates can be used will not constitute acceptance of the material in stockpile. Acceptance of such material will be based on testing done by the Consultant as the material is incorporated into the Work.

5.2.4 PIT OPERATIONS

5.2.4.1 **General**

In all aggregate sources, the Contractor shall comply with the conditions set by Alberta Environment when removing frozen topsoil, subsoil and inorganic overburden. The standards and conditions for appropriate development and reclamation as required by Alberta Environment shall apply to all sources.

5.2.4.2 **Pit Operations in Aggregate Sources Controlled by the Department**

Unless modified by the Pit Operation Plan or the Special Provisions or as directed by the Consultant, pit operations in an aggregate source controlled by the Department shall comply with the requirements detailed in this section.

All reject material produced in an aggregate source controlled by the Department shall be disposed of as directed by the Consultant and the Contractor shall have no claim to the material.

When aggregate is to be produced from a source which has been partially excavated previously, the new excavation shall proceed as an extension of the previous excavation provided that suitable material is obtainable. Overburden or rejected materials from previous operations shall be removed and deposited, as indicated in the Plans and Special Provisions unless otherwise directed by the Consultant. The aggregate exposed shall be processed and used.

Normally, the cleared area shall extend beyond the final position of an open face by a minimum distance of four times the expected depth of excavation. Clearing and timber salvage shall be performed in accordance with Specification 2.1, Clearing.

The Contractor shall erect and maintain such temporary fences and livestock guards as may be required to prevent livestock from straying into the aggregate source.

Overburden shall be removed to a minimum 10 metres beyond the top of the backsloped aggregate face. Topsoil shall be stripped to a minimum distance of 5 metres beyond the top of the backsloped overburden face. The stripped buffers shall be maintained throughout the project.

The full depth of topsoil and subsoil shall be stripped from all temporary work sites including the crusher, plant, camp, parking areas and all access roads unless otherwise directed by the Consultant.

Overburden shall be removed in stages. The first stage shall be the removal and stockpiling of topsoil. The second stage shall be the removal and stockpiling of the subsoil. The final stage shall be the removal and deposition of the inorganic overburden, as indicated in the Plans or Special Provisions, or as directed by the Consultant. The Contractor shall remove topsoil and other overburden materials in a manner that prevents contamination of one material with another. Dozers shall not be allowed to remove overburden

unless authorized by the Consultant in writing. These materials shall be stockpiled uniformly and compactly in separate piles in an area designated by the Consultant. Temporary stockpiling of overburden shall be done in a manner which will minimize surface damage and interruption of natural drainage.

Where stockpiles of topsoil and overburden exist from previous pit operations, the Contractor shall, unless directed otherwise, use the same stockpile locations for deposit of topsoil and overburden.

During the term of the Contract, the Contractor shall prevent erosion of all topsoil and subsoil piles resulting from his operations. In the event such piles are remaining at the completion of construction, they shall be seeded by the Contractor.

All materials required for seeding shall be supplied by the Contractor. Grass seed shall conform to Specification 2.20, Seeding. The composition and application rate of the grass seed mixture will be determined by the Consultant at the time of construction.

The excavation of aggregate shall advance uniformly to obtain maximum yield from the deposit. Under no circumstances will waste of useable material be permitted, and excavations shall be continued to depths below water level if suitable material is available.

The Contractor shall clean-up the areas of pits affected by operations performed under this Contract in accordance with the following:

- (i) All faces with potential future use for the removal of aggregate shall be sloped at a ratio of at least two horizontal to one vertical.
- (ii) Faces designated to be abandoned in a deposit shall be sloped at a ratio of at least four horizontal to one vertical.
- (iii) At boundaries of authorization or property lines, sloping shall be at a ratio of at least four horizontal to one vertical with the top of slopes terminating at a minimum distance of three metres from the boundary.
- (iv) Upon completion of the Work, the site from which material has been removed shall be left in a neat and presentable condition, all fences removed for purposes of entry shall be replaced in a condition equal to or better than they were before being removed, and all debris resulting from the Contractor's operations shall be removed and disposed of as required by the Consultant.

In addition to the foregoing sloping operations, where practical, the Consultant may order that flatter slopes be constructed on selected areas using stockpiled overburden material. The quantity of overburden material available will determine the amount of sloping to be done. This operation may require some site preparation such as ripping of the compacted earth floor.

5.2.4.3 Pit Operations in Aggregate Sources Not Controlled by the Department

All aspects of clearing, removal of overburden, protection and safety of livestock, general pit management and clean up shall be the responsibility of the Contractor.

5.2.5 MEASUREMENT AND PAYMENT5.2.5.1 **General**

"Supply of Aggregate" will not be paid for separately when the applicable specification states that the cost of supplying aggregate is considered incidental to the Work, or included in the unit price bid for the Work for which the aggregate is being produced. If this is the case for all applicable specifications for the Work, the Contract will not contain the bid item "Supply of Aggregate."

In Contracts which contain a bid item for supplying aggregate, payments made for "Supply of Aggregate" will be full compensation for the cost of the aggregate material. Any other costs incurred by the Contractor including but not limited to the cost of obtaining approvals and rights to use a source and the exploration, development and reclamation of the source, clearing, removal of overburden and the erection and removal of temporary fences will be considered included in the Contract item for which the aggregate is being produced.

5.2.5.2 **Supply of Aggregate Bid Item**

The Specification Amendments will indicate whether or not the Contractor has the option of using a specific aggregate source controlled by the Department for the gravel component of the aggregate.

If the Specification Amendments indicate that the Contractor has the option of using a specific aggregate source controlled by the Department, the Department will establish the unit price per tonne for "Supply of Aggregate" and insert the amount in the unit price schedule.

If the Specification Amendments indicate that the Contractor may not use an aggregate source controlled by the Department for the gravel component of the aggregate, the Contractor shall bid a unit price per tonne for "Supply of Aggregate."

5.2.5.3 **Payment**

The payment conditions for supplying aggregate vary depending on the category of the aggregate source used (various categories of aggregate sources are listed in section 5.2.2 of this specification). Further, it is possible that more than one aggregate source may be used for the supply of aggregate for the Work.(eg. Portions or all of the pitrun gravel and/or the blend sand components of the aggregate may be obtained from separate aggregate sources of different categories).

The payment conditions for the various categories of aggregate sources are as follows:

No payment will be made for the quantity of aggregate material obtained from a source controlled by the Department

Payment for the quantity of aggregate obtained from a source not controlled by the Department will be made in accordance with the following:

- (i) For material obtained from crown sources not controlled by the Department, payment will be made at the unit price per tonne established by the Department or bid by the Contractor (as applicable) for the item "Supply of Aggregate", minus \$ 0.48 per tonne. The \$ 0.48 reduction recognizes that royalty payments to Alberta Environment are not applicable to Public Works projects.

- (ii) For material obtained from private sources not controlled by the Department, payment will be made at the unit price per tonne established by the Department or bid by the Contractor (as applicable) for the item "Supply of Aggregate."
- (iii) The quantity for payment will be determined by the Consultant by measuring the material containing the aggregate which has been incorporated into the accepted Work and calculating the quantity of aggregate obtained from sources not controlled by the Department. In the event the material containing the aggregate contains asphalt, no deduction will be made for the asphalt material.
- (iv) When the material measurement is by volume, a conversion factor of 1.632 tonnes per cubic metre will be used to determine the weight of a gravel component and 1.365 tonnes per cubic metre will be used for a blend sand component.