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Montana Department of Transportation
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Memorandum

To: Distribution

From: Paul Ferry, P.E.
           Highways Engineer

Date: January 13, 2010

Subject: Balanced Earthwork

There has been some discussion of what constitutes balanced grading and how do we pay for unclassified borrow when the earthwork is "balanced". A memo, which was distributed to Construction personnel covered these issues and is summarized below.

For a number of reasons including soils characteristics and geotechnical issues (slope changes, subexcavation), attaining a balance of zero is impractical. The Road Design Manual, Section 5.2.4 notes that the grading is considered balanced if the borrow/excess quantity is within 3% of the total excavation quantity.

While it is preferable to have a small amount of excess, there will be situations when a balanced grading project has borrow. For these situations the following note will be included with the grading frame:

    Include the cost of the borrow quantity shown in the cost of other grading items.

This note indicates to the contractor that they must include the borrow quantity shown in the summary in the cost of other grading items. If the borrow quantity overruns due to project conditions, a change order may be pursued. This should eliminate the contractor increasing his unit price bid for grading to cover the risk of the borrow quantity overrunning.

If you have questions concerning this, please contact me at 444-6244.

cc: Damian Krings,   Road Design Engineer
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