



Carol A. McKee – President
Sherry R. Huber – 1st Vice President
Dave Bivens – 2nd Vice President
John S. Franden – Commissioner
Rebecca W. Arnold – Commissioner

MEMORANDUM

Capital Projects Department

Date: December 14, 2007

To: ACHD's Design Consultants

From: Sally Goodell and Kent Brown

Subject: Planned vs. Measured Quantities

The Engineering and Capital Projects Departments have discussed when to use planned or measured quantities for specific materials and bid items. The following summarizes the decisions and key discussion points. These bid methods are to be used for future ACHD projects.

EXCAVATION

- Excavation will be bid as Planned Quantities because the subgrade only has to be checked with a hand level to make sure tolerances are met, and no other measurements or calculations are needed.
 - The Project Inspectors have multiple responsibilities and cannot stay with the excavation crew
 - at all times
 - Some contractors tend to excavate a little deep if measured quantities are used
 - Surveyors are not always available to check excavations for volumes

MINUS ¾" AGGREGATE BASE

- -¾" Aggregate Base is to be paid by the ton, regardless of where it is being used on the project.
- Under sidewalks, a special provision will be drafted to remove -¾" Aggregate Base as an incidental item, and to pay for it by the ton under the contract -¾" item. Any additional labor and equipment required for installation shall be included in the unit bid price for sidewalk.
 - Kent Brown relayed the preference of the AGC to have minus ¾" base paid by the ton and agrees
 - The Project Inspectors will have to collect all weight tickets from the loads then add them up for pay quantities. Temporary employees could be used for this.
 - The effort required to place -¾" base varies with the item it is used with. It is more labor intensive to place 2" of ¾" base in sidewalk areas than in the roadway.

IMPORTED PIT RUN GRAVEL

- Imported Pit Run Gravel (uncrushed aggregate), will be bid and paid by the ton on ACHD projects.
 - The AGC prefers to have imported pit run gravel paid by the ton
 - The Project Inspectors will have to collect all weight tickets from the loads then add them up for pay quantities. Temporary employees could be used for this.
 - Design Planned Quantities are currently being used for pit run gravel and the contractors often find the listed quantities either ambiguous (cubic yard in place) or incorrect.

UNSUITABLE MATERIAL EXCAVATION

- Imported Pit Run Gravel (uncrushed aggregate) used for backfilling unsuitable material excavation is to be paid by the ton under the Uncrushed Aggregate bid item
- The inclusion of subgrade separation geotextile in ACHD contracts for use to limit the depth of unsuitable material excavations is an option. This item is normally paid by the square yard as a separate bid item and is an inexpensive way to bridge unstable subgrade areas. A standard Special Provision will be developed for this item in our contracts.
 - Current specifications call for this item to include both the excavation of soft spots or unsuitable materials and backfilling with imported pit run gravel.
 - Unsuitable Material Excavation is to be done only by authorization of the Project Inspector and measured in place by the Project Inspector.
 - Other agencies pay for the imported pit run gravel backfill separately under the imported pit run bid item, and it was discussed to do the same with ACHD contracts.

TRENCH BACKFILL

- If native soils are used for trench backfill, a special provision is needed to require the contractor to provide testing services, with locations specified by the Project Inspector. The use of independent testing will be decided on a case by case basis by the project manager.
- If imported pit run gravel is used to augment native trench backfill, the imported material should be paid for by the ton under the imported pit run bid item (uncrushed aggregate). Two separate bid items for imported pit run gravel will be necessary if the material is placed more than two feet below road subgrade elevation.
- If imported pit run gravel is to be used exclusively as trench backfill, it should be under a separate bid item. A significantly different level of effort is required to place pit run gravels for trench backfill, as opposed to its use as road sub base.
 - ACHD contracts have required both the use of native trench spoils for backfill, and backfilling with imported pit run gravel.
 - Using native soils for trench backfill requires compaction testing, and the Project Inspectors are already spread too thin to do the necessary testing.
 - Pit locations are moving farther away from Boise.
 - Unsuitable materials often are found in native trench spoils, due to excess moisture, high organics, buried trash etc and unsuitable materials should not be used as trench backfill.
 - If enough of the native trench spoils are found to be unsuitable, imported pit run gravel has to be used to augment the backfill
 - Because of the volume of the pipe and bedding materials, trenching creates excess spoils that have to be hauled away.

HOT PLANT MIX ASPHALT

- Except for special items, HPM Asphalt is to be paid for by the ton.
- Special Items include Asphalt Repair, which often includes the -3/4 Aggregate Base, which is usually paid by the square yard.
- Special Items also include Type P Surface Repair, which includes 8" of -3/4" Aggregate Base, and can be paid by either lineal foot or square yard.
- Another special item may be minor paving locations such as small widening projects which may also be paid by the square yard.

Cc: Dorrell Hansen, Colin Farr, ACHD Project Managers, Central Files