
FW: "Commom Assumptions" for soil volume/Transporation Estimates: Based on ISRA
Soil Excation / Transportation actuals
ISRA Offhaul Evaluation_100914_af.xls

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Subject: "Commom Assumptions" for soil volume/Transporation Estimates: Based on ISRA Soil Excation / Transportation actuals

All:

Per our last Core Team meeting, we agreed to look at the ISRA project to help establish common assumptions for estimating soil excavations, soil weights, etc. Below is a summary of the findings. In addition, I offer suggested common assumptions with some rationale. Let me know if you agree or wish to discuss? Thanks, Art

Art's Proposed Common Assumptions:

- Average weight of a load = 23 Tons. Since the majority of the soil shipped offsite for disposal will be non-hazardous and transported in an End-Dump Trucks we should use the average end dump weight (23 tons). End dumps may also be used to transport HW, except we tend to use roll off bins. For this reason, maybe we should ignore the average weight of a roll off bin load since we will probably not rely on them too much.
- In-situ estimated weight of a cubic yard of soil is 1.55 tons based on the Happy Valley ISRA project. However, published literature estimates damp earth at 1.685 Tons/CY. In light of this estimate, maybe we should assume 1.6 Tons/per yard for in-situ soil. This would be a slight increase over the estimate at Happy Valley, but below the published value.
- "Fluff Factor" /"soil expansion" estimates are unwarranted if we are using in situ cubic yard weight estimates.

Thanks, Art

Soil Excavation/Cubic Yard Common Assumptions Based on ISRA Project

Roll off Bins

Maximum tons per load =
20.7

Average tons per load = 15.7

End Dump Truck

Maximum tons per load =
25.7

Average tons per load = 22.9

Maximum weight for tractor, trailer and load = 80,000 lbs

In-situ weight of a cubic yard of soil = 1.55 tons/cubic yard

1.55 tons/cubic yard estimate based on pre/post topo survey of Happy Valley to determine soil volumes. Wet Lading.

Note: Published document has "wet sand" (in situ) = 1.55 tons/cy and "Damp earth" (in situ) = 1.685 tons/cy