

An Hour's not an Hour, and it's Certainly not a Day

Executive summary. There are differences in an hour: a manhour, a crew hour, a 50-minute hour. And an hour's not a day, so there is another calculation for a manday. Here is a quick explanation of these estimating terms.

Definitions. There are several ways to estimate the cost of construction work. Most heavy/civil companies estimate based off of manhours per unit or units per manhour. Here are the layman definitions:

- Manhour – one person working one hour.
- Crewhour – the entire crew working for one hour.

Common to the trucking industry is a 50-minute hour. It is a measure of trucking efficiency. Some trucking companies calculate haul time figuring that their trucks are only working 50 minutes out of the hour – this is, in essence, saying that their trucking is 83% efficient:

- 50-minute hour – a common trucking unit of measure that assumes 10 minutes of each hour is non-productive.

Lastly, is a day. Also commonly known as a shift. Here's a layman's definition:

- Manday – one person working one shift.

Examples and calculations. For this example, assume that a workday is considered 8 hours:

- One day = one shift = 8 hours.

And, as an example, we have a two-person crew working 1.5 days (say, Monday and half of Tuesday):

- Manhours: 2 people work 8 hours each on Monday and then together they work half a day on Tuesday: 2 people on Monday * 8 hours is 16 manhours + 2 people work from 7am to 11am the next day is 2 people * 4 hours is 8 manhours. Total manhours = 16 manhours + 8 manhours = 24 manhours.
- Crewhours: the crew above worked all day Monday, so that equates to the crew working as a crew for 8 hours on Monday. The crew, together as a crew, worked 4 hours on Tuesday. Total crewhours = 8 crewhours on Monday + 4 crewhours on Tuesday = 12 crewhours.
- Mandays: 2 people worked on Monday, that was 2 people working all day, or 2 mandays. These two people came in on Tuesday and worked half a day which is 2 each half days, which is 1 full manday. Total mandays = 2 mandays on Monday + 1 manday on Tuesday = 3 mandays.



My story. I deal with this regularly. I deal with this in claims work and in training. The concept is simple one, but often times those new to the world of estimating need a helping hand with understanding the terms. Knowing these production rates as an estimator will make you a best of class estimator. The data can be easy to capture, but it takes discipline in capturing the data – whether your sit in your truck and watch a crew produce, or you ask your site management to gather manhours worked and the product installed (which need to be counted and recorded).

Work safe!

