

# The logistics of soil and rock removal



## Truck 3 Truck and Dog



### Haulage:

Capacity: **60m<sup>3</sup>**  
Maximum journeys per day: **3**

### Daily costs:

Fuel: **\$1,050**  
Driver wages: **\$574**  
Maintenance: **\$119**

## Key features

- Biggest capacity - best for large volumes of excavated material over long distances.
- Fewer trucks required to shift the excavated material = less emissions.
- Specialised license required = fewer qualified drivers available and higher wages.
- Can't access built-up areas due to size and weight of truck and huge turning circle.
- Big trucks take more time and distance to both accelerate and slow down, so freeways with less stop-start traffic or sharp bends are better routes.
- Pick up sites close to major highways tend to have bigger entrances and exits. There is usually less residential development, road congestion and pedestrian traffic in these areas.

## Should we use Truck 3?

**1. How much excavated material can this truck remove in one day?**

Truck Capacity x Maximum number of trips in one day  
= Amount of soil and rock for one day

\_\_\_\_\_ x \_\_\_\_\_ = \_\_\_\_\_ m<sup>3</sup>

**2. The project requires 3,000 m<sup>3</sup> of excavated material to be removed per day to meet construction deadlines.**

This truck can remove \_\_\_\_\_ m<sup>3</sup> per day.

How many trucks will you need?

Amount of excavated material to be removed per day ÷  
Amount of soil and rock removed by one truck in one day =  
Number of trucks needed.

\_\_\_\_\_ m<sup>3</sup> ÷ \_\_\_\_\_ m<sup>3</sup> = \_\_\_\_\_ trucks

**3. How much will it cost to run one of these trucks per day?**

Use the information above and the truck facts to answer this question:

Driver wages: \$ \_\_\_\_\_

Truck maintenance cost: \$ \_\_\_\_\_

Fuel cost: \$ \_\_\_\_\_

**Total cost for one truck per day: \$ \_\_\_\_\_**

Total cost to remove the 3,000 m<sup>3</sup> of excavated material per day:

**Cost of one truck x Number of trucks needed each day = Total cost per day**

\$ \_\_\_\_\_ x \_\_\_\_\_ = \$ \_\_\_\_\_