Transportation Plan of River Bed Material from Swarna River

Mine is went connected to NH-72 Chakkarata Road by two roads Bharwala Road and Shashpur Road. Road is wide enough to facilitate easy and smooth movement of vehicles.

Traffic analysis is carried out by understanding the existing carrying capacity of the roads near to the project site and the connecting main roads in the area. Then depending on the capacity of the mine, the number of trucks that will be added to the present scenario will be compared to the carrying capacity.

Table:- Existing Traffic Scenario & LOS

| Road | V | С | Existing V/C Ratio | LOS |
|--------------------------|------|--------|--------------------|-----|
| Bharsiwala Road | 152 | 6,000 | 0.02 | A |
| Shashpur Road | 168 | 6,000 | 0.02 | Λ |
| NH-72 Chakkarata Road | 1973 | 15,000 | 0.13 | A |

V= Volume of Vehicles in PCU's/day & C= Capacity of Road in PCU's/day

The existing Level of Services (LOS) is "A" i.e. excellent.

| V/C | LOS | Performance |
|---------|-----|-------------------|
| 0.0-0.2 | A | Excellent |
| 0.2-0.4 | В | Very Good |
| 0.4-0.6 | C | Good/Average/Fair |
| 0.6-0.8 | . D | Poor |
| 0.8-1.0 | Ê | Very Poor |

Reference: ENVIS Technical Report, IISC, Bangalore.

During Mine operation

Proposed Capacity of mine/annum : 216000

No. of Working days

: 270 days

Proposed capacity of mine/day

:800TPD

Truck Capacity

: 10 tonnes

No. of trucks deployed/ day

:80

No. of trucks trips/day

:160

Considering both loaded & empty trucks

Increase in PCU/ day will be 480 PCUs

Table: - Modified Traffic Scenario & LOS

| Road | V | С | Existing V/C Ratio | LOS |
|--------------------------|------|--------|--------------------|-----|
| Bharsiwala Road | 632 | 6,000 | 0.10 | A |
| Shashpur Road | 648 | 6,000 | 0.10 | A |
| NH-72 Chakkarata Road | 2453 | 15,000 | 0.16 | Α |

Results

From the traffic study it is observed that there is not much load on the existing roads and highways. Therefore, the additional load on the carrying capacity of the concerned roads is not likely to have any adverse affect on the LOS. However, the traffic management has been proposed as given below.

Traffic Management:

- 1. Roads will be repaired regularly and maintained in good conditions.
- 2. A supervisor will be appointed to regulate the traffic movement near the site.
- 3. Speed breakers will be constructed accident prone areas to calm the traffic and its speed
- 4. Signage will be erected at the sensitive & precarious places to caution or provide information to road user.

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