









|      |     |     |     |     |      |    |      |      |
|------|-----|-----|-----|-----|------|----|------|------|
| 02   | 4.9 | 5.4 | 7.9 | 8.6 | 11.8 | 12 | 13.9 | 14.5 |
| Base | 0   | 0   | 0   | 0   | 0    | 0  | 0    | 0    |

Table 9.2 Displacement in Different seismic zones by Static Analysis

Graphs of Displacement in various seismic zones by static analysis

ZONE-II

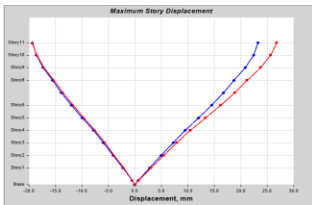


Fig 9.9 Displacement at Zone 2 by Static Analysis

ZONE-III

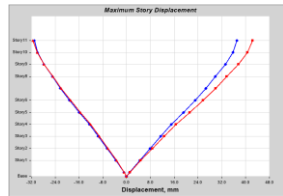


Fig 9.10 Displacement at Zone 3 by Static Analysis

ZONE-IV

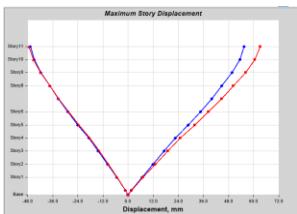


Fig 9.11 Displacement at zone 4 by Static Analysis

ZONE-V

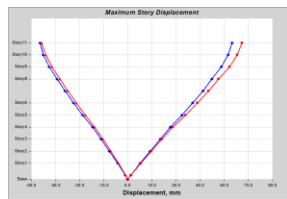


Fig 9.12 Displacement at zone 5 by Static Analysis

ii.Storey Drift for different seismic zones

| Zones | II     |        | III    |        | IV     |        | V      |        |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
|       | X      | Y      | X      | Y      | X      | Y      | X      | Y      |
| 11    | 0.0028 | 0.0038 | 0.0044 | 0.0059 | 0.0066 | 0.0086 | 0.0098 | 0.0127 |
|       | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |

|      |         |         |         |         |         |         |         |         |
|------|---------|---------|---------|---------|---------|---------|---------|---------|
| 08   | 066     | 079     | 0.00106 | 0.00124 | 158     | 184     | 236     | 275     |
| 05   | 0.00085 | 0.00097 | 0.00136 | 0.00154 | 0.00204 | 0.00230 | 0.00306 | 0.00344 |
| 03   | 0.00074 | 0.00083 | 0.00119 | 0.00132 | 0.00178 | 0.00198 | 0.00267 | 0.00296 |
| Base | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |

Table 9.3 Storey Drift values in Different Seismic Zones by Static Analysis

Graphs of Storey Drifts in various seismic zones

ZONE-II

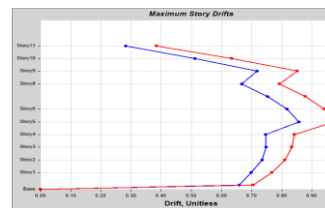


Fig 9.13 Storey Drift at zone 2 by Static Analysis

ZONE-III

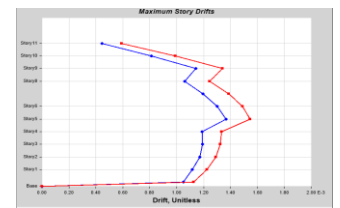


Fig 9.14 Storey Drift at zone 3 by Static Analysis

ZONE-IV

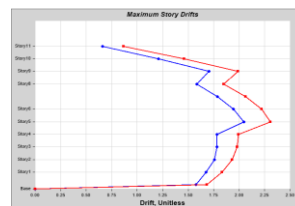


Fig 9.15 Storey Drift in Zone 4 by Static Analysis

ZONE-V

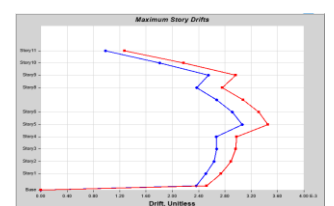


Fig 9.16 Storey Drift in Zone 5 by Static Analysis

**CONCLUSIONS:**

1. From Static Analysis the base shear of structure increases as we go to higher seismic zones. For a similar building the

base shear value of ZONE II is 2520 KN and ZONE V is 9072 KN. This means base shear increases by more than 27.7% if seismic ZONE changes from II to V.

2. From Static Analysis the displacement of building models increases with the increasing of seismic Zones. The displacement is very high at roof and very low at the base. The displacement occur at the ZONE II is 23 mm and ZONE V is 64 mm. This means base shear increases by more than 27% if seismic ZONE changes from II to V.

3. The displacement of building models increases with the increasing of wind pressure. The displacement is very high at roof and very low at the base. The displacement occurs at the wind space 39 m/s is 10 mm and at the wind speed 44m/s is 12 mm. This means the displacement is increases by more than 79.5% from wind speed 39 m/s to 44m/s.

4. From the Static Analysis the storey drift is mainly occurred at the middle of the building structure. From table 9.3 and fig 9.13 to 9.16, it is concluded that the storey drift increases with the increasing of seismic zone factor and the maximum storey drift is available at ZONE V for the max. Load combo at 5th floor. The storey drift for ZONE II is 0.00097 and storey drift for ZONE V is 0.00344 at 5th floor. This means the storey drift is increases by more than 50% when compare to ZONE II to ZONE V.

5 .In Static Analysis from results it is observed that the Storey Shear is decreased as height of the building increased and reduced at top floor in all the building models subjected to seismic loads considered. The storey shear is maximum at the base and the storey shear value for the model in ZONE II is 3779 kN and ZONE V is 10619 kN. This means the storey shear is increases by more than 35% when compare to ZONE II to ZONE V.

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