General Considerations in Locating Highways

The following items can be considered in detecting major and minor control points and will be helpful in selection of highway location.

1- The highway should be able to serve the development of a convenient, continuous, and free-flow of traffic

2- Grades and amount of curvatures should be as low as possible.

3- Avoid sudden changes in the sight distance.

4- Avoid having a horizontal curve on or adjacent to a vertical curve.

5- In urban areas, locate the highway on undeveloped areas rather than highly developed expensive areas.

6- In urban areas, locate the highway as close as possible to the parking terminals.

7- In urban areas, locate the new highway on existing highway to reduce initial and maintenance cost.

8- Locate highway on the edges of private property rather than crossing it in the middle.

9- Avoid the destruction or removal of man-made culture

10- Keep the highway away from cemeteries, places of worship, hospitals, schools and playgrounds.

11- The effect of highway on the development of the adjacent area must be considered so that needs for future changes will not be too costly.

12- Never have too roads intersecting near a horizontal curve or at the top or bottom of a hill.

13- In the case a need for the construction of an interchange, topography must be suitable for such a construction.

14- Avoid intersections at grade with railway lines

15- Try to pass the rivers at right angles

16- Do not have a bridge or tunnel located on or adjacent to a highway curve

17- Avoid the need for deep cuts and expensive tunnel construction

18- Avoid the places where rock is close to surface

19- In hilly terrain, be aware of the possibilities of landslides

20- To minimize drainage problems, select a location on high ground in contrast to one in a valley.

21- Avoid marshes and other low-lying lands subject to flooding

22- Locate the highway on soil which will require least pavement thickness

23- Locate the highway adjacent to the sources of pavement materials

24- Try to balance cut and fills with minimum haul distances

25- In hilly terrain the highway should cross ridges at their lowest points. This usually results in cheaper construction as well as more economical vehicle operating cost.

26- In hilly country, select a location subject to sunlight and avoid areas where snow and ice will accumulate

27- Avoid the unnecessary and expensive destruction of wooded areas

28- Avoid ground subject to mining settlement

29- Avoid placing the highway at right angles to the natural drainage channels

30- The final engineering location should be based on the combined considerations of safety, usefulness, aesthetics and economy. This will normally also be the one which will best satisfy social and political requirements.