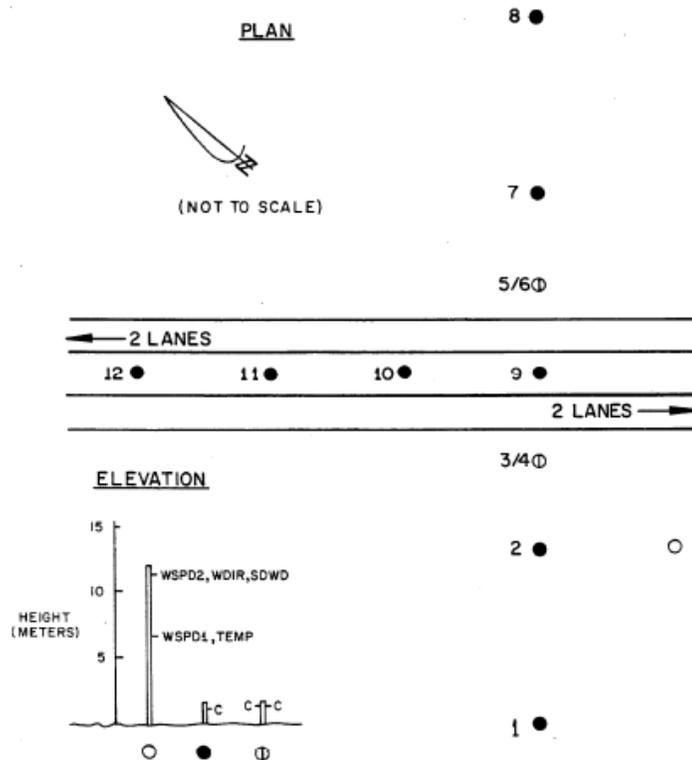


R-LINE Evaluation Database:
CALTRANS Highway 99 Tracer Experiment



SITE LOCATION CODES FOR THE CALTRANS HIGHWAY 99
 TRACER EXPERIMENT

FIGURE 63

Reference

Benson, P. E., 1989: CALINE4 - A Dispersion Model for Predicting Air Pollution Concentration near Roadways. FHWA/CA/TL-84/15, 245 pp.

Files included

- Sources: "CALTRANS_Source.txt"
- Receptors: "CALTRANS99_ALLreceptors.txt"
- Meteorology: "CALTRANS99_met.sfc"
- R-LINE input: "Line_Source_Inputs.txt"
- Data: "CALTRANS99_data.xlsx"

Notes

- The emission factors are slightly different for the northbound (NB) and southbound (SB) lanes, so it is necessary to run the model with northbound lanes in one group and southbound lanes in another.
- The line sources in northbound and southbound lanes are specified with a unit emission rate, thus the varying emission rates must be applied after the model is run.
- Since the line sources are long and the emissions are uniform along the lines, only one median receptor is modeled.

Run R-LINE

Run R-LINE using the provided “Line_Source_inputs.txt” file.

Interpreting Results

1. Use the SF₆ emission factors given in “CALTRANS99_data.xlsx” and multiply the unit-emission concentration by the emission factor for each direction of travel to obtain the concentration resulting from that direction of travel.
2. Sum the concentrations from the two directions of travel at each receptor location. Compare this resulting concentration with the measured concentration at that receptor.
3. Average the four measured median concentrations to compare to the one modeled median concentration.