

## APPENDIX G

### SPEED-FLOW-DENSITY RELATIONSHIPS

This appendix contains the speed-flow-density charts created for the high speed arterial and freeway facilities. As described in Chapter 4, data was separated based on mode. In addition, filters were used to restrict data to near steady-state conditions. A range rate envelope of  $-1$  m/s to  $+1$  m/s was used in addition to an acceleration limit of magnitude  $0.01g$ . The high speed arterial speed-flow-density relationships are presented first followed by the freeway speed-flow-density relationships.

#### G.1 High Speed Arterial Speed-Flow-Density Relationships

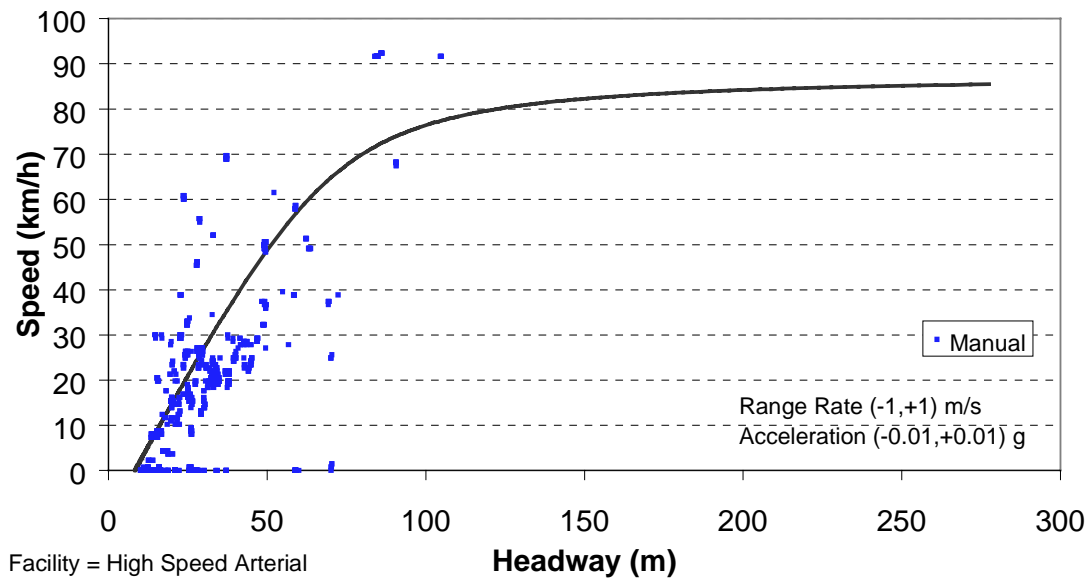


Figure G- 1 High Speed Arterial Manual Speed-Headway Relationship

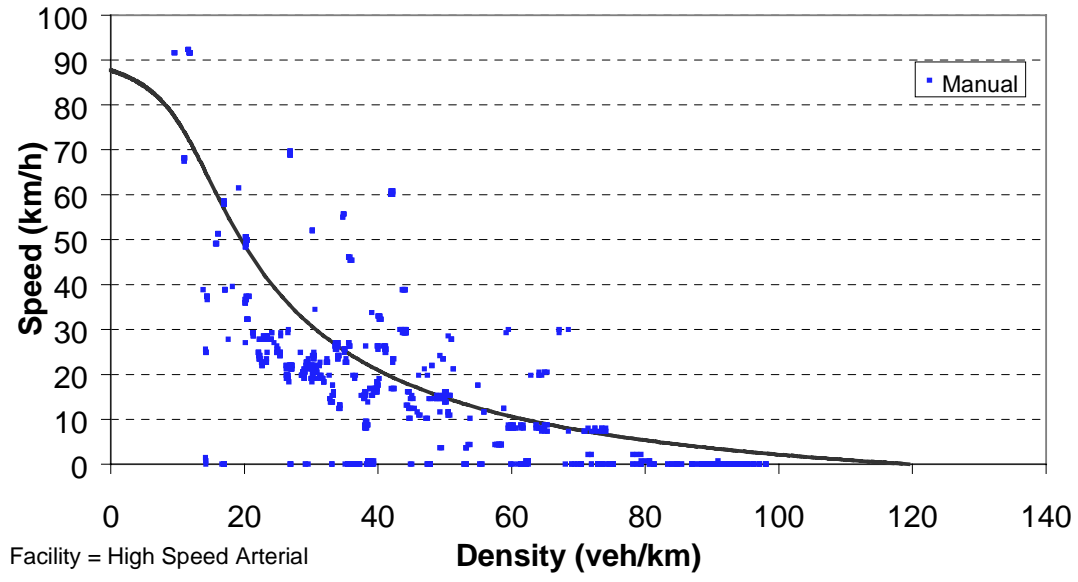


Figure G- 2 High Speed Arterial Manual Speed-Density Relationship

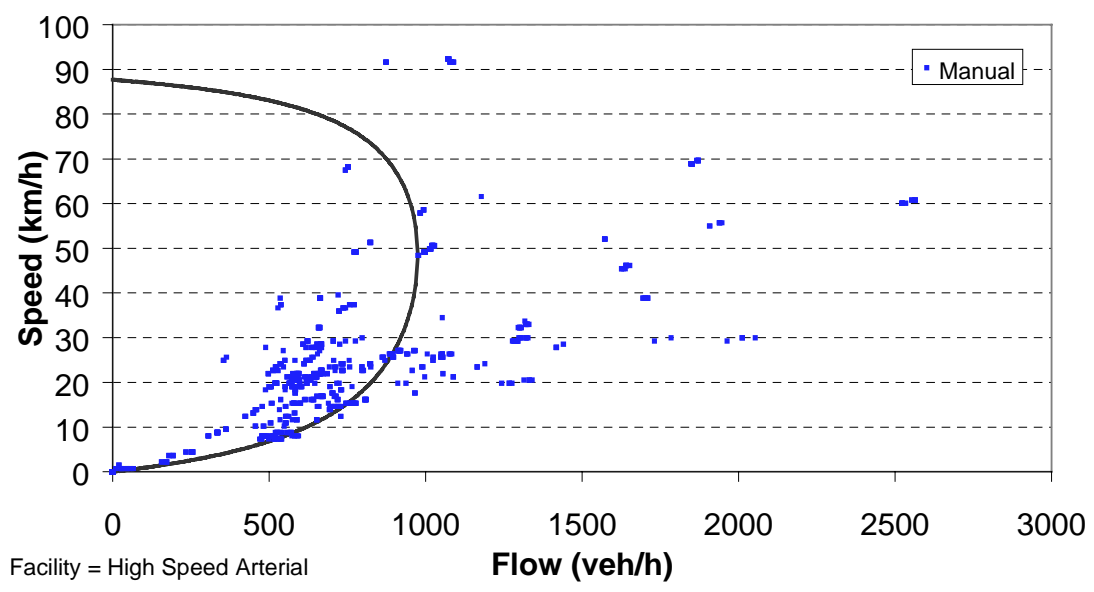


Figure G- 3 High Speed Arterial Manual Speed-Flow Relationship

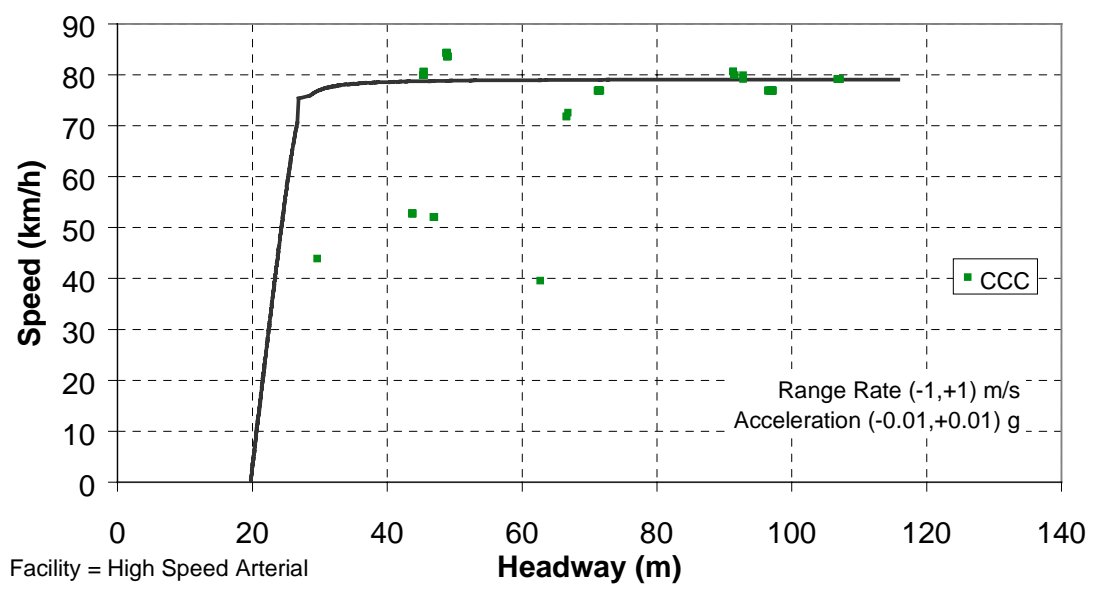


Figure G- 4 High Speed Arterial CCC Speed-Headway Relationship

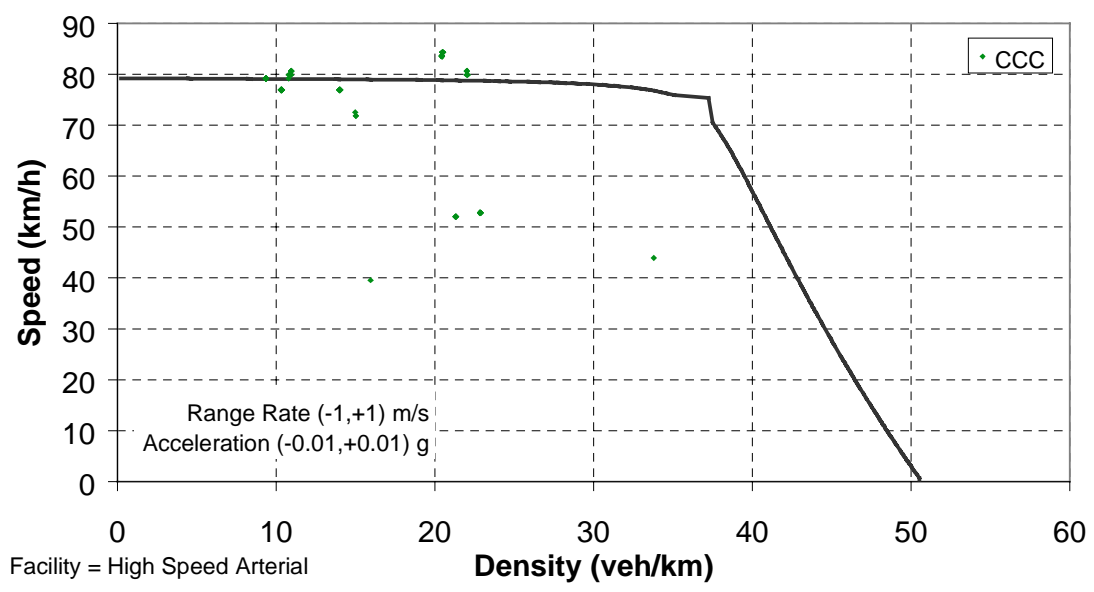


Figure G- 5 High Speed Arterial CCC Speed-Density Relationship

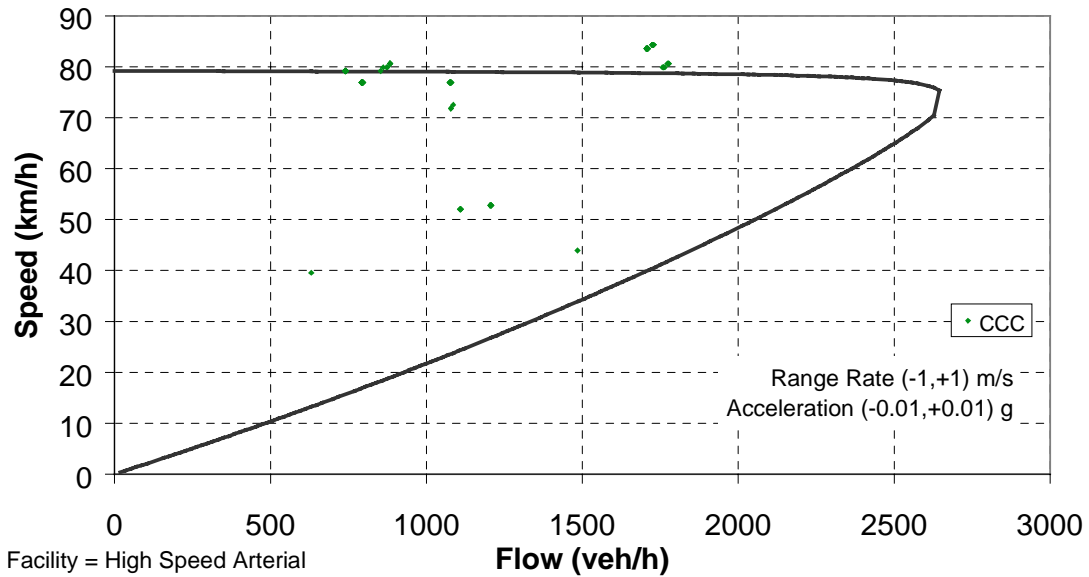


Figure G- 6 High Speed Arterial CCC Speed-Flow Relationship

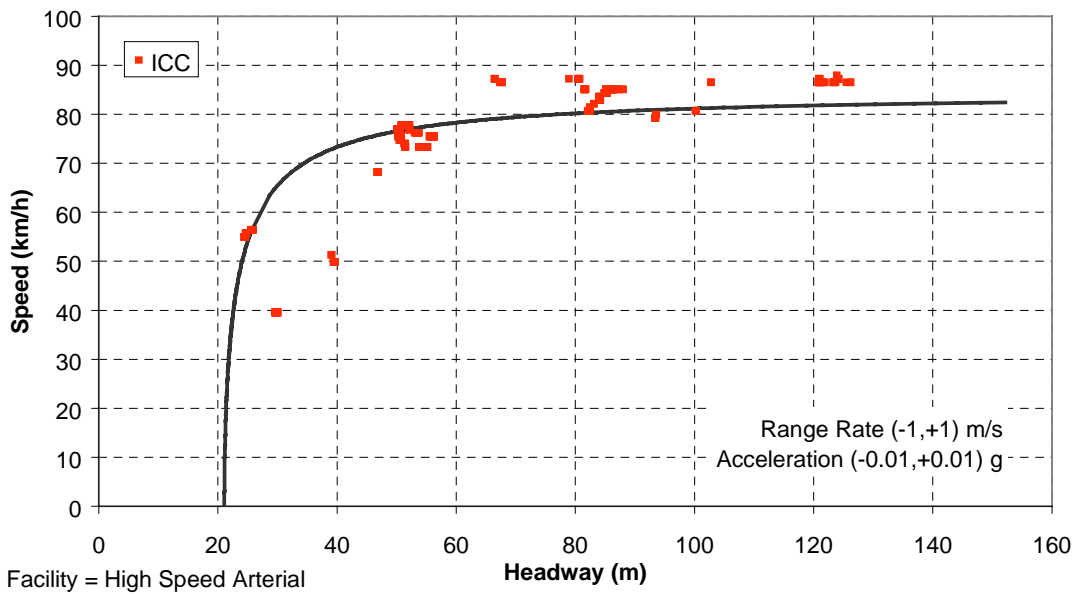


Figure G- 7 High Speed Arterial ICC Speed-Headway Relationship

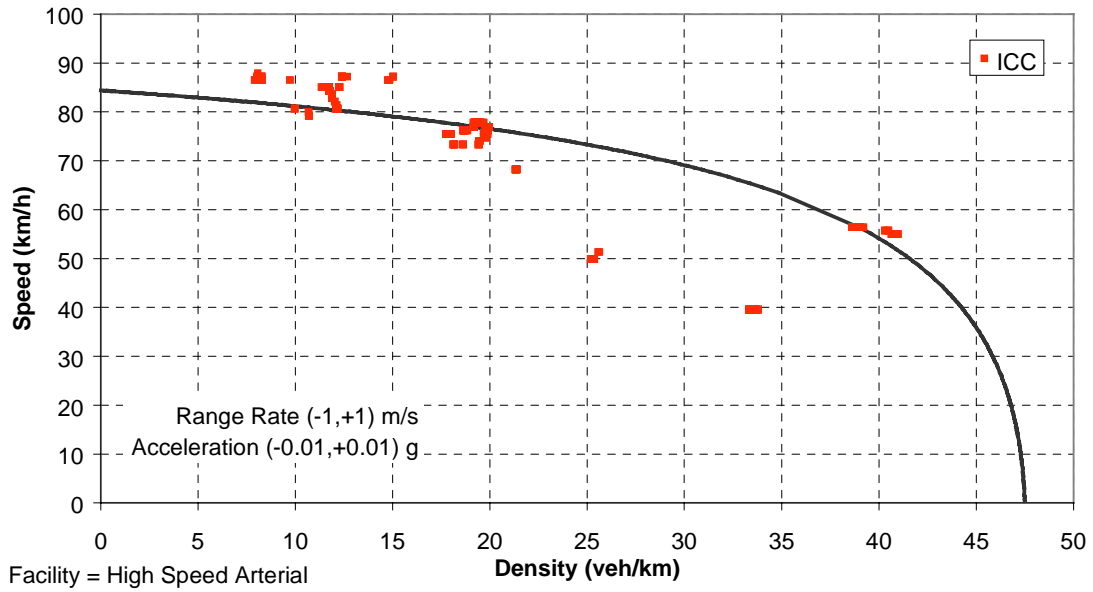


Figure G- 8 High Speed Arterial ICC Speed-Density Relationship

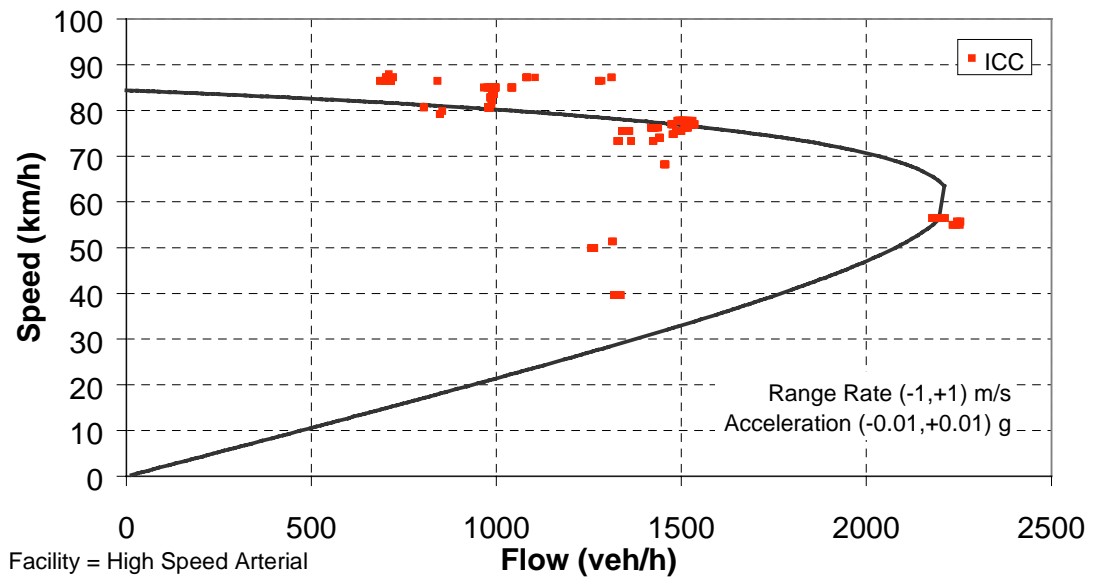


Figure G- 9 High Speed Arterial ICC Speed-Flow Relationship

### G.2 Freeway Speed-Flow-Density Relationships

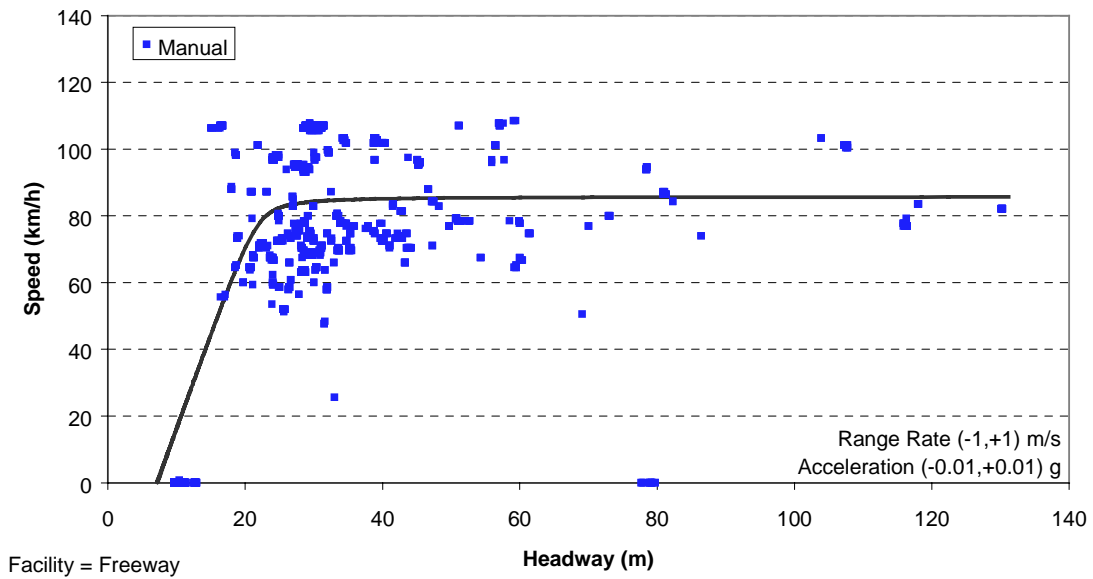


Figure G- 10 Freeway Manual Speed-Headway Relationship

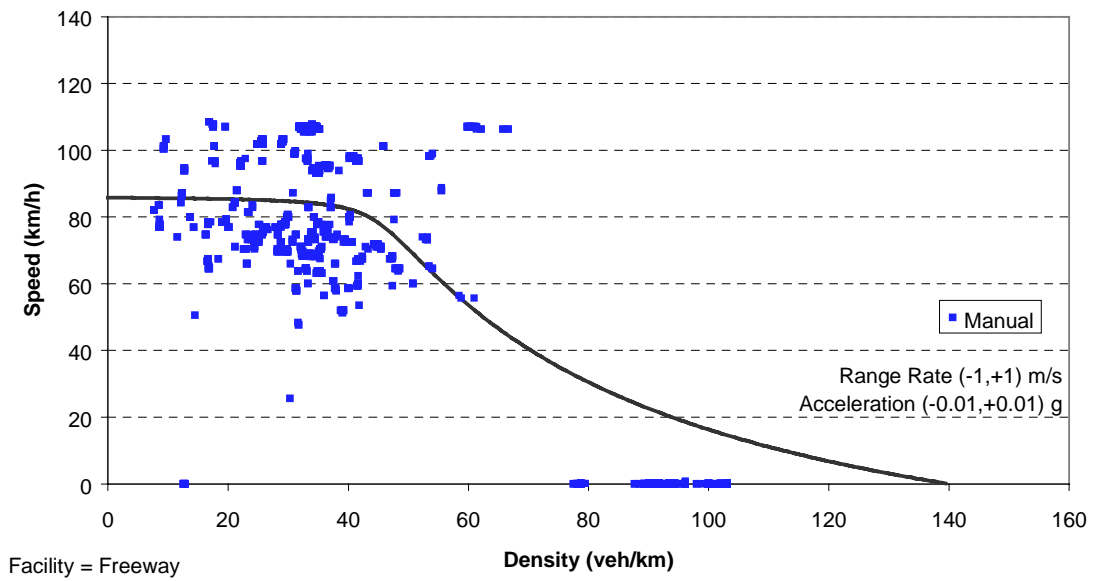
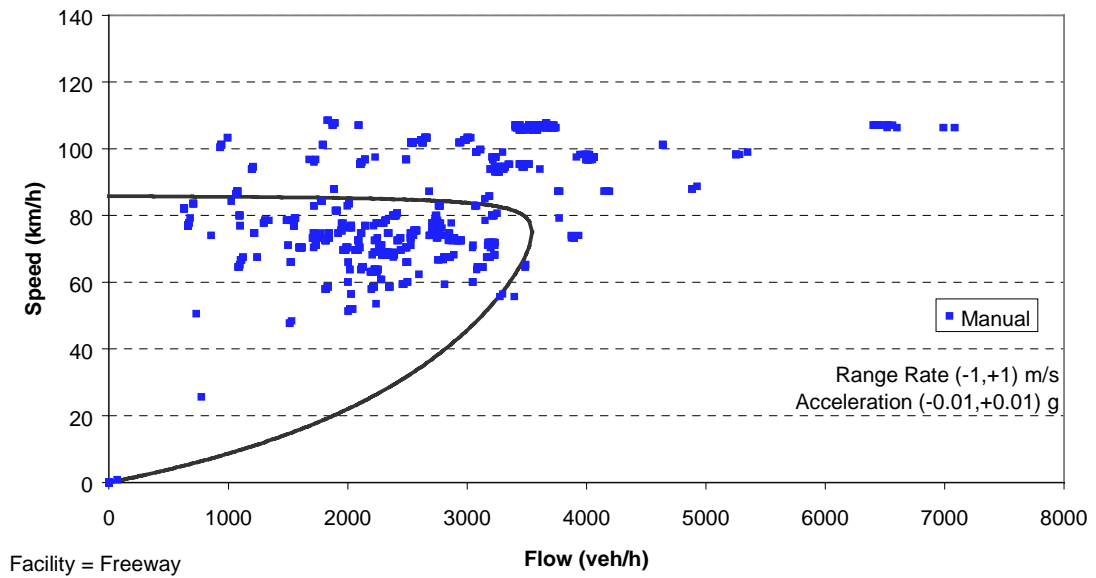
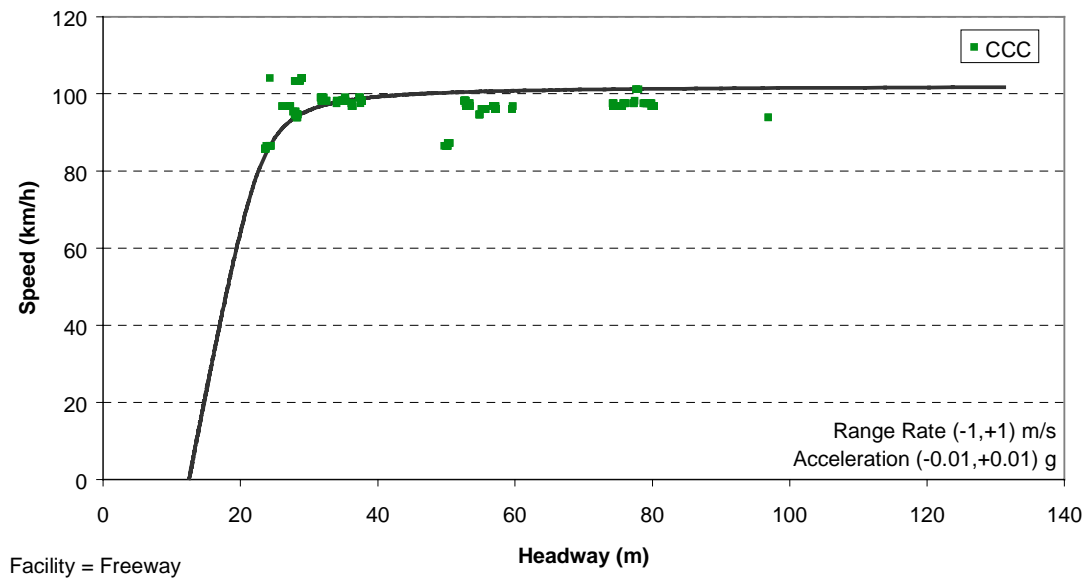


Figure G- 11 Freeway Manual Speed-Density Relationship



**Figure G- 12 Freeway Manual Speed-Flow Relationship**



**Figure G- 13 Freeway CCC Speed-Headway Relationship**

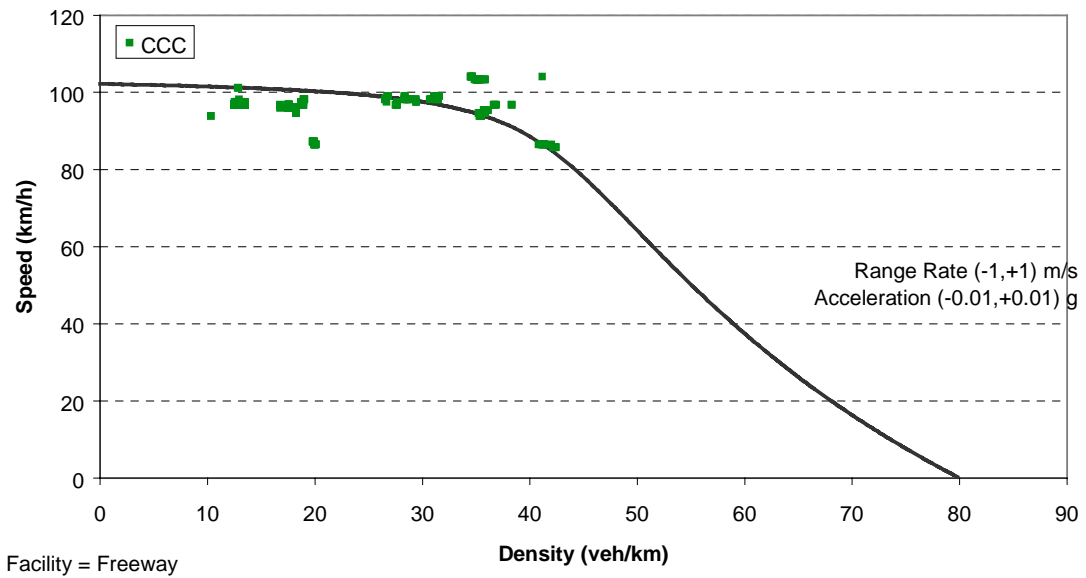


Figure G- 14 Freeway CCC Speed-Density Relationship

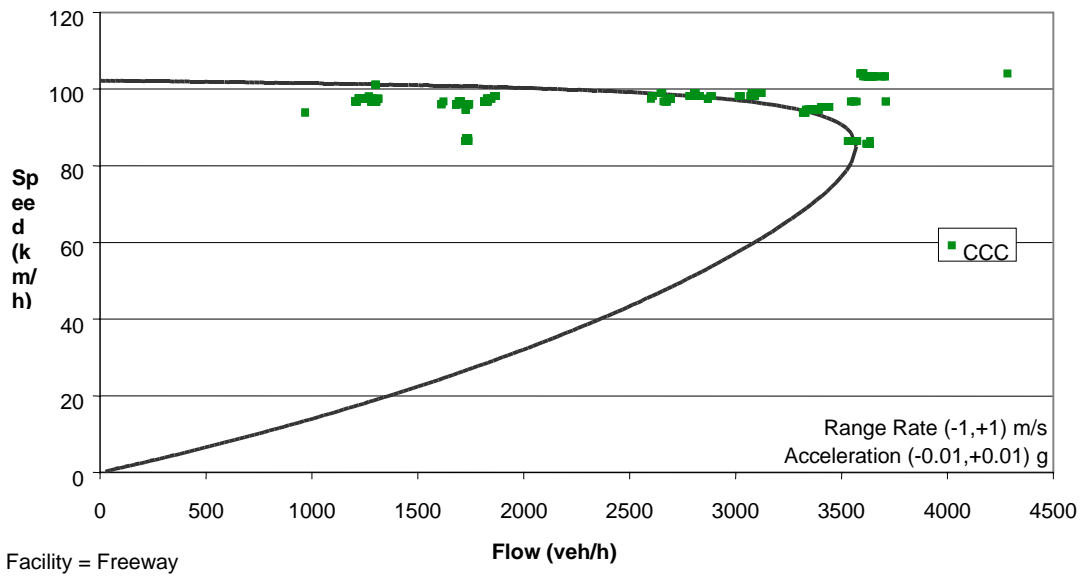
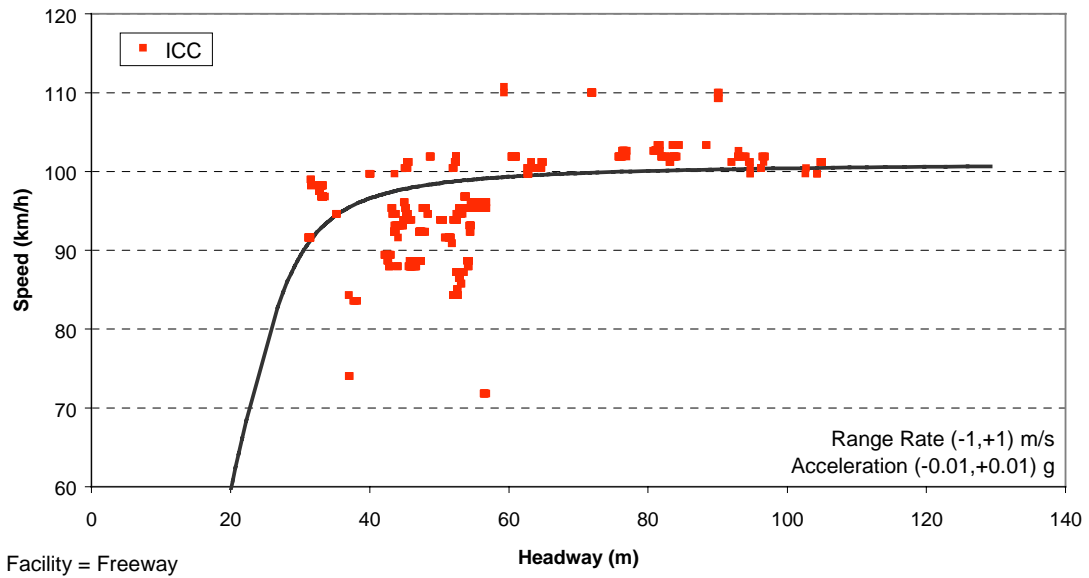
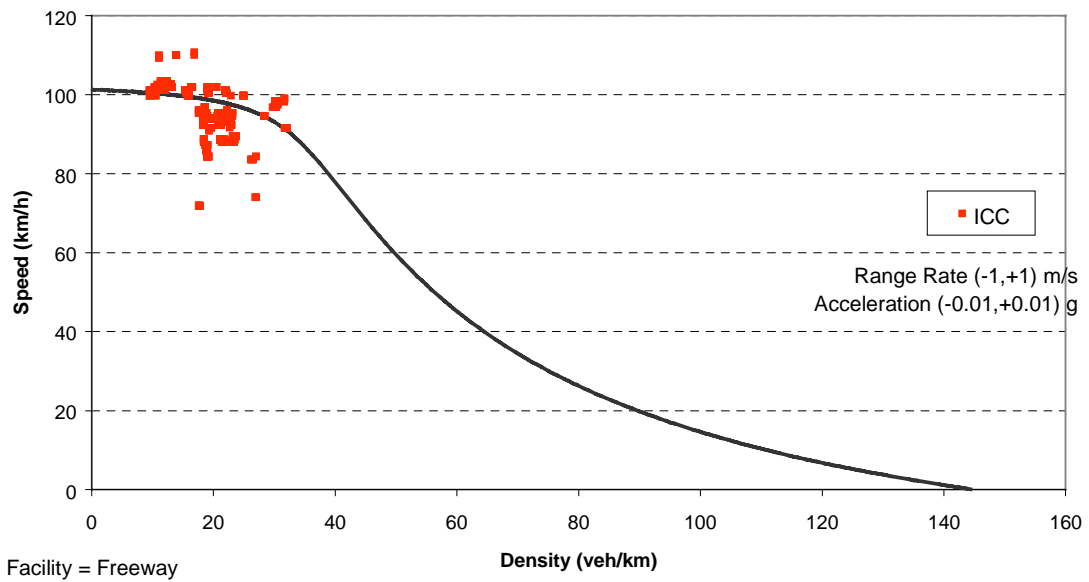


Figure G- 15 Freeway CCC Speed-Flow Relationship

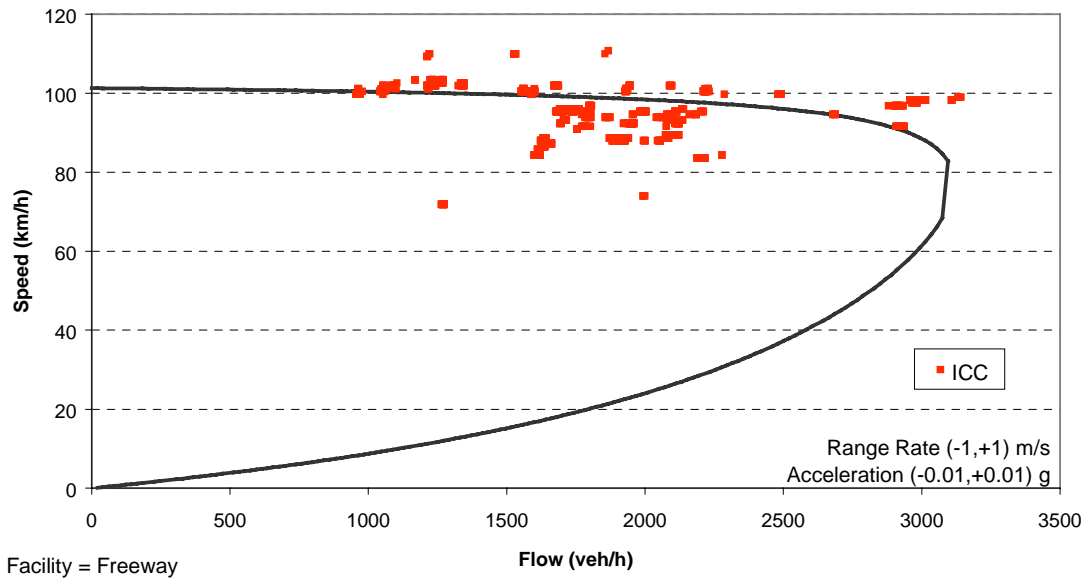




**Figure G- 16 Freeway ICC Speed-Headway Relationship**



**Figure G- 17 Freeway ICC Speed-Density Relationship**



**Figure G- 18 Freeway ICC Speed-Flow Relationship**