APPENDIX D

LEVEL OF SERVICE DISCUSSION

Level-of-Service (LOS) is a concept which attempts to describe the operating conditions that may occur on a lane or roadway according to the quantity of traffic using it. A level-of-service definition generally describes these conditions in terms of such factors as speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs.

Six levels of service are defined for the various types of facility which have been analyzed. They are given letter designations, from A to F, with level of service F the worst. In general, the various levels of service are defined as follows:

Level-of-Service A (LOS A) – describes a condition of free flow, with low volumes and high speeds. Traffic density is low, with speed controlled by driver desires, speed limits, and physical roadway conditions. There is little or no restriction in maneuverability due to the presence of other vehicles, and drivers can maintain their desired speeds with little or no delay.

Level-of-Service B (LOS B) – is in the zone of stable flow, with operating speeds beginning to be restricted somewhat by traffic conditions. Drivers still have reasonable freedom to select their speed and lane of operation. Reductions in speed are not unreasonable, with a low probability of traffic flow being restricted.

Level-of-Service C (LOS C) – is still in the zone of stable flow, but speeds and maneuverability are more closely controlled by the higher volumes. Most of the drivers are restricted in their freedom to select their own speed, change lanes, or pass. A relatively satisfactory operating speed is still obtained, with service volumes perhaps suitable for urban design practice.

Level-of-Service (LOS D) – approaches unstable flow, with tolerable operating speeds being maintained though considerably affected by changes in operating conditions. Fluctuations in volume and temporary restrictions to flow may cause substantial drops in operating speeds. Drivers have little freedom to maneuver, and comfort and convenience are low, but conditions can be tolerated for short periods of time.

Level-of-Service (LOS E) – cannot be described by speed alone, but represents operations at even lower operating speeds than in Level D, with volumes at or near the capacity of the

highway. At capacity, speeds are typically low. Flow is unstable, and there may be stoppages of momentary duration.

Level-of-Service (LOS F) – describes forced flow operation at low speeds, where volumes are below capacity. These conditions usually result from queues of vehicles backing up from a restriction ahead on the roadway. The section under study will be serving as a storage area during parts or all of the peak hour. Speeds are reduced substantially and stoppages may occur for short or long periods of time because of congestion ahead. In the extreme, both speed and volume can drop to zero.