- Structures

Nineteen locations, as represented by model nodes, were identified in the One Mile Branch sub-basin for potential structural flooding for the 100-year event.

Please refer to Figure **4.4.2.2** for a map of Level of Service violations for One Mile Branch sub-basin. Other water quantity problem areas are also shown on this figure.

4.4.6 Alternatives Evaluation

This section describes the alternatives evaluated for the One Mile Branch Sub-basin. Based on the screening process for the alternatives evaluation, the following alternatives representing different levels of service were developed. Detailed public safety options and standards should be considered and used during final design.

- Alternative OM1: Patterson Street Culvert Upgrade and RSF near Patterson Street.
- Alternative OM2: Park Avenue Culvert Improvement and RSF near Lakeland Avenue.
- Alternative OM3: Ashley Street Culvert Improvement and RSF near Vallotton Drive.
- Alternative OM4: End of Pipe Treatment @ Vallotton Drive
- Alternative OM 5: End of Pipe Treatment @ Lee Street
- Alternative OM 6: End of Pipe Treatment @ VSU Parking Lot
- Alternative OM 7: Grade Control structures (South of Gordon Street to confluence with Sugar Creek).

Alternative OM1 – Patterson Street Culvert Upgrade and RSF near Patterson Street

Alternative OM1 proposes to upgrade the capacity of the Patterson Street Culvert from the existing 7 ft H x 7 ft W double box culvert to a 7 ft H x 10 ft W double box culvert. Williams Street and Iola Drive culverts were upgraded as per the recommendation of the 1996 MSMP, which led to a considerable increase in the flow capacity of these culverts. Patterson Street culvert upgrade was also suggested in 1996 but was not implemented. The recent culvert improvement projects upstream of Patterson Street have led to increased flows at the Patterson Street culvert.

This alternative also includes construction of an offline RSF in conjunction with the culvert improvements as shown on **Figure 4.4.3**.