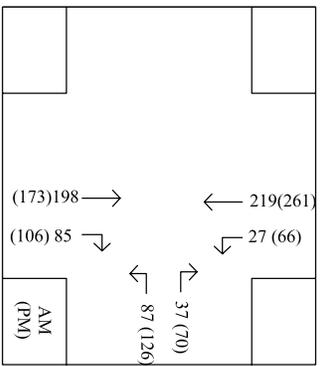
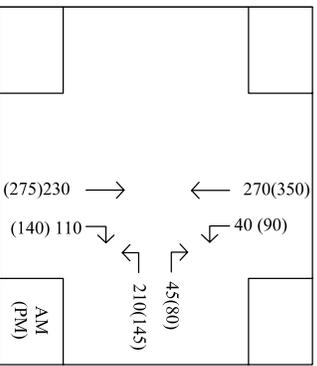


Existing peak hour traffic volumes



2025 peak hour traffic volumes

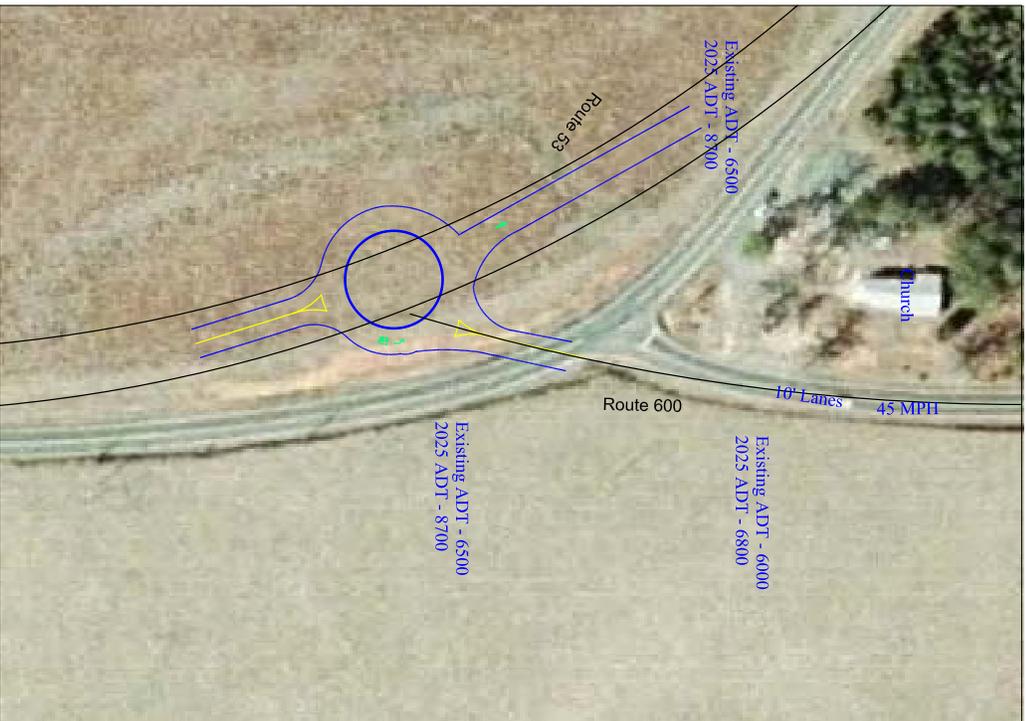


LEGEND

— — — — — Right of way lines



Route 53/600



PROCESS DRAFT 6-13-07

NW Fluvanna / SW Louisa
Multi-modal Corridor Study

SHEET A

Route 53 & Route 600

LOCATION DESCRIPTION

Route 53 is a rural collector facility providing access from Route 15 west to Route 20 in Albemarle County. Route 600 is a rural collector roadway providing access from Route 53 to the Lake Monticello area development and further north to US Route 250. Route 600 is posted 45 mph and has 10' travel lanes at the study intersection. Traffic control is provided by a STOP sign for the Route 600 approach.

DATA COLLECTION & OBSERVATIONS

AM/PM peak hour turning movement counts were gathered from a traffic study performed for Nahor Village / Cunningham Meadows in year 2005. The peak hour volumes and current geometry are summarized within the adjacent graphics. The approach volumes are relatively balanced for both the north and south approaches to the intersection. There does appear to be a prominent movement from Route 600 to and from the south. Overall, there is not a capacity problem at this intersection presently. However, the combination of curvatures from the south and the east (Route 600) creates a difficult scenario for judging approach speeds, driver intentions, and turning movement geometry. The flashing beacon devices currently in place are designed to counteract substandard geometry. Flexible tubular delineators are used in the both corners of the intersection to delineate both a ditch drop-off condition and utilities adjacent to the turn radius.

EXISTING CONDITIONS ANALYSIS

Intersection capacity analyses using the Highway Capacity Software indicate a Level of Service (LOS) of B in the AM and C in the PM for the Route 600 approach. The VDOT warrants for turn lanes are met for both approaches on Route 53.

FEATURE CONDITIONS ANALYSIS

Under the future year scenario, this location will have a LOS E for the Route 600 approach if no improvements are made. Construction of an exclusive right and left turn lane on Route 600 would improve the LOS to C for that approach. Turn lanes on all approaches are warranted per VDOT criteria. The peak hour warrant for signalization is not met. Consideration should be given to realigning all approaches to the intersection to increase the radius of the curve on Route 53. This will improve safety at this location and will create geometry that conforms to national road design standards. As part of a realignment project, additional consideration should be given to constructing a roundabout (vs standard intersection with turn lanes) which could provide good traffic operations and serve as an aesthetic feature at this location.

RECOMMENDATION & ENGINEER'S COST ESTIMATE

Near Term:

Construct intersection turn lanes for all approaches.

Longer Term:

Re-align all three approaches and construct a new intersection to provide geometry conforming to national standards. As an alternative, realign the approaches and construct a roundabout.

Near Term Cost: \$400,000 Longer Term Cost: \$1,200,000 (alternatively re-align all approaches and construct roundabout - same cost)

