



PURPOSE

The purpose of this activity is to give you the opportunity to prepare your final report.

LEARNING OBJECTIVES

- Integrate information into a professional style report and presentation
- Clearly communicate the timing plan design for an isolated actuated signalized intersection based on an analysis of traffic flow quality and intersection performance for a range of timing parameter values and phasing alternatives

REQUIRED RESOURCE

- Results from previous activities

DELIVERABLE

- Final written report using MS Word and an oral presentation using MS PowerPoint

TASKS

Your final report will have two components, a written report and an oral report.

TASK 1

Prepare your written report. Your final report should include the following information:

- Phasing plan shown in ring barrier diagram format
- Timing parameters (minimum green time, maximum green time, passage time, yellow time, and red clearance time), detector location and type, and other relevant controller settings. Justifications for each of your selected parameters including all relevant data should be given in the report.
- Evaluation of your plan using VISSIM with suitable measures of effectiveness and your visual observations of the simulation. Comparisons of the performance of existing or base conditions with each option considered.
- All options that you considered for various parts of your design, including those options that are a part of the final design and those that are not
- Comparison of your results with recommended practice from the *Traffic Signal Timing Manual*

Your report should include the following sections:

1. Title page, including title, authors, date
2. Table of contents
3. Executive summary
4. Introduction

5. Description of intersection (including geometry, demand, performance, base conditions)
6. Description and evaluation of the phasing and timing plans (including justifications for each element of the plan)
7. Appendices including all calculations for timing plan parameters and other supporting data

TASK 2

Prepare your oral report.

- Prepare a set of tables that include the data that you generated as part of Activity #59 and that describe the final signal timing plan
- Prepare a summary of the points that justify the selection of each element of your timing plan. Identify and construct the graphs or charts needed to support your key points
- Prepare a set of slides using PowerPoint that addresses the problem that you were assigned, the analysis that you have done supporting your design choices, a description of both the data analyzed and the observations that you have made, and the elements of your final design
- The presentation should include visualizations from VISSIM (both static and dynamic) that demonstrate the operation and performance of your intersection and how your results compared with recommendations from the *Traffic Signal Timing Manual*