

INTERMEDIATE WORKSHOP

DAY 1 CONTENTS

Introduction to the Workshop

SIDRA INTERSECTION Introduction

Workshop objectives, software status, principles and philosophy.

Example - Roundabout with Bus Slip/Bypass Lane

Modified roundabout geometry and Volume data entry.

"Include Slip/Bypass Lane in Entry Lane Count" parameter.

Discussion

Approach Distance. Lane Control and Lane Type.

Roundabout geometry parameters. Strip Islands and Splitter Islands.

Using SIDRA INTERSECTION:

Signal Timing Analysis in SIDRA INTERSECTION

EQUISAT (Fixed-Time / SCATS) and Actuated timing analysis,

Signal Coordination, Common Control Group (CCG) timing analysis,

Pedestrians, Variable Phasing, Phase Actuation,

Undetected movements, Dummy movements.

Using SIDRA INTERSECTION:

Example - Signalised Intersection EQUISAT (Fixed-Time / SCATS) Timing Analysis

One-way streets. Bus lane. Free Queue.

User-specified Phase Times. Practical and Optimum Cycle Times. Variable Run.

Using SIDRA INTERSECTION:

Example - Stop-Sign Controlled Intersection

Upstream Signal Effect (bunching model). Sensitivity to Driver Behaviour.

Sign-controlled intersection capacity and performance.

Using SIDRA INTERSECTION:

Example - Variable Phase Sequence Analysis

Pedestrian Walk Extension.

Variable Signal Phasing table, Critical Movements display and Saturation Flows report.

Input Comparison, Output Comparison.

Discussion

Short lane model.

Using SIDRA INTERSECTION:

Example - Six-Leg Roundabout

One-way streets and turn bans. U turns. Specifying lane disciplines for multi-lane roundabouts with diagonal legs. Design Life Analysis.

Using SIDRA INTERSECTION:

Example - Signalised Intersection with Two-Segment BUS Lane

Phase Transition. Undetected Movements. Critical Movement Diagram.

Using SIDRA INTERSECTION:

Example - Pedestrian-Only Phase at Signalised Intersections

Diagonal Crossing Movement. Pedestrian Actuation. Staged Pedestrian Crossings.

Other pedestrian analysis features.

End of INTERMEDIATE Workshop Day 1

INTERMEDIATE WORKSHOP

DAY 2 CONTENTS

Introduction to Workshop Day 2

Discussion:

Network Model. Paired (Compound) Intersections. Network Data.

Using SIDRA INTERSECTION:

Example - Two-Site Network (Signals and Roundabout)

Network Configuration. Network output reports and displays.

Network Level of Service and Site Level of Service definitions. Lane blockage, capacity adjustment and capacity constraint effects (arrival flows). Network Flows. Extra Bunching.

Route tab. Network and Route output reports and displays.

Using SIDRA INTERSECTION:

Example - Freeway Diamond Interchange (Signalised)

Special User Movement Classes. Lane Disciplines and Lane Movements.

Operation under a single signal controller (Common Control Group).

Using SIDRA INTERSECTION:

Example - Signalised Intersection Actuated Timing Analysis

Maximum green settings (default, optimum). Critical movement diagram.

Using SIDRA INTERSECTION:

Example - Bus Priority at a Signalised Intersection

Bus Lane and Bus Phase. Design Life.

Using SIDRA INTERSECTION:

Example - Unsignalised Pedestrian Crossing

Gap acceptance analysis; Opposing Pedestrian Factor.

Discussion

Signal Coordination. Signal platoon model and platoon dispersion.

Stoplevel travel time. Effect of midblock inflow and outflow.

Network Timing dialog. Vehicle Movement Data dialog, Signals tab.

Using SIDRA INTERSECTION:

Example - Signal Coordination Model Using Signal Offsets

Analyse Offset = 0, 10, 30, 60 and compare the results.

Using SIDRA INTERSECTION

Tools Tab (Input and Output Comparison, Project Summary, User Reports).

Settings Tab (Output Options. Manage Software Setup).

VOLUMES Utility. Report Preparation. Print All function.

Discussion

Roundabout metering signals.

Using SIDRA INTERSECTION:

Example - An Interchange Roundabout Case

Unbalanced roundabout case. Metering signals option.

Using SIDRA INTERSECTION:

Example - Signalised Intersection

EQUISAT (Fixed-Time / SCATS) and Actuated signal timing analysis

End of INTERMEDIATE Workshop