16-1-1 Overview **April 2025**

1.1 Originator

The Traffic Analysis and Safety Unit (TASU) within the Bureau of Traffic Operations (BTO) is the originator of this chapter. Submit all questions and comments concerning this chapter to the DOT Traffic Analysis & Modeling (DOTTrafficAnalysisModeling@dot.wi.gov) mailbox.

1.2 General

This chapter addresses the methodologies and tools for conducting traffic operations analyses for the evaluation and design of WisDOT facilities. Traffic operations analyses provide an assessment of how traffic demands for all modes of travel and the capacity of the facility affect the overall performance of the transportation system. The results of traffic operations analyses assist WisDOT in determining the best way to meet the department's goal of providing a safe, reliable, and efficient multimodal transportation system.

There are multiple tools and methodologies for completing traffic operations analysis, each having their own set of capabilities and limitations. Selecting the appropriate analysis procedure and tool is not always intuitive and can prove challenging. The primary goal of this chapter is to address this challenge by providing guidance on the uniform and consistent application of the various traffic operations analysis tools, methodologies, and procedures. The policy within this chapter does not cover the travel demand models (TDMs) used to generate traffic forecasts. Refer to the Transportation Planning Manual (TPM) for additional details regarding traffic forecasting protocols.

1.3 Content

Attachment 1.1 outlines the process for the development and review of traffic models. For cost-effective traffic analyses, project managers *should* refer to Attachment 1.1 as they develop the project schedules, budgets, and management plans.

This chapter defines WisDOT's policy pertaining to traffic analysis tools and methodologies. Use the policy within this chapter in conjunction with WisDOT's Facilities Development Manual (FDM).In the event the two documents provide conflicting information, contact BTO-TASU (DOTTrafficAnalysisModeling@dot.wi.gov) to confirm the controlling methodology.

1.4 Acronyms/Terminology

The key terms and acronyms used within this chapter include:

AADT – Annual Average Daily Traffic

BPED – Bureau of Planning and Economic Development

BSHP – Bureau of State Highway Programs

BTO – Bureau of Traffic Operations

CDR – Concept Definition Report

Department – Wisconsin Department of Transportation

DOT – Department of Transportation

DHV – Design Hour Volume

DTA – Dynamic Traffic Assignment

DTIM – Division of Transportation Investment Management

DTSD – Division of Transportation System Development

FDM – Facilities Development Manual

FHWA – Federal Highway Administration

GoF – Goodness of Fit

HCM – Highway Capacity Manual

HCM7 – Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis

LOS – Level of Service

Macroscopic simulation – Macroscopic traffic simulation models (a.k.a. travel demand models)

Mesoscopic simulation – Mesoscopic traffic simulation models (a.k.a. DTA)

Microsimulation – Microscopic traffic simulation models

MOEs – Measures of Effectiveness

O-D Matrix – Origin-Destination Matrix

PDAS – Program Development and Analysis Section (part of BSHP)

PMP – Project Management Plan

RFP – Request for Proposal

RTOR – Right-Turn on Red

TASU – Traffic Analysis and Safety Unit (part of BTO)

TAT III –Traffic Analysis Tool Box Volume III, published by FHWA

TAT IV - Traffic Analysis Tool Box Volume IV, published by FHWA

TDM – Travel demand models used to generate traffic forecasts

TEOpS – Traffic Engineering, Operations and Safety Manual

TFS – Traffic Forecasting Section (part of BPED)

TOPS Lab – University of Wisconsin, Madison Traffic Operations and Safety Laboratory

TSDM – Traffic Signal Design Manual

V-SPOC – WisTransPortal Volume, Speed, and Occupancy Application Suite

WisDOT – Wisconsin Department of Transportation

1.5 Terminology

The key terms used within this chapter include:

DTA – Dynamic Traffic Assignment. DTA is a modeling approach that captures the relationship between dynamic route choice behaviors (path and start time) and transportation network characteristics (travel speeds, signal timings, level of congestion, etc.) It is possible to incorporate DTA into any level of simulation models (macroscopic, mesoscopic, microscopic); however, the most common application of DTA is for mesoscopic simulation models. Therefore; this policy assumes all DTA models are mesoscopic models.

Macroscopic simulation – Tools using this methodology assess the operation/capacity of a facility or network utilizing the deterministic relationships of the flow, speed, and density of the traffic stream. The simulation analyzes the movement of vehicles on a section-by-section basis. Travel demand models (TDMs) are an example of a macroscopic model. This policy does not cover the use of macroscopic simulation models.

Mesoscopic simulation – Tools using this methodology analyze the movement of individual vehicles or vehicle cells as they travel through a simulated network using predefined capacity and speed-density relationships. Mesoscopic models incorporate a level of network and operational detail comparable to microsimulation models with the route choice flexibility of macroscopic simulation models (TDMs). Most mesoscopic simulation models incorporate DTA, thus, this policy utilizes the term DTA model throughout to represent mesoscopic simulation models.

Microsimulation – Microscopic traffic simulation. Tools using this methodology analyze the movement of individual vehicles as they travel through a simulated network. As the simulation progresses, it updates factors such as the vehicle's position and its need to increase/decrease speed or change lanes several times a second.

Traffic Models – the computer models used to carry out traffic operations analysis. These include both the HCM-based traffic analyses and microsimulation analyses. This does not include TDMs.

LIST OF ATTACHMENTS

Attachment 1.1 Traffic Model Development & Review Process

16-1-2 Basic Principles **September 2019**

2.1 Establish Project Purpose, Needs, and Goals

The traffic analysis requirements for a project are highly dependent on the project goals. If the project goal is to provide a preliminary or planning level assessment of the traffic operations, then a higher-level analysis may suffice. If the goal of the project is to define project-specific design requirements, then a detailed analysis is often necessary.

Every project is unique, with its own set of assumptions and applicable methodologies. A clear understanding of the purpose, needs, and goals of the project is critical in determining the necessary level of traffic analysis. When developing the project schedule and budget, consider the traffic analysis and modeling needs, including the associated peer review requirements. Ideally, the traffic analysis and modeling needs *should* dictate the schedule as opposed to having the project schedule dictate the level of traffic analysis. This ensures the appropriate level of traffic analysis is conducted at the most appropriate stage of the project life cycle, reducing the need for any rework. Defining the project schedule without consideration of the traffic analysis needs may compromise the integrity of the traffic models, which in turn may affect the selection of the project alternative.

2.2 Defining the Traffic Analysis Scope/Level of Effort

To provide clear guidance for the project and to ensure that the project goals and objectives are satisfied, the project team *should* address the following questions during the initial project kick-off meeting:

- What agencies/divisions/bureaus need to be involved in the project as it pertains to the traffic analysis (i.e., who are the intended stakeholders)? What will be their intended level of involvement (project resource, project review, traffic analysis, etc.)?
- In general, what is the purpose of the project, specifically as it pertains to the traffic analysis (i.e., what questions does the traffic analysis need to answer)?
- What type of process will the project address (planning, design, construction, etc.)?
- What type of study area will the project consider (corridor, intersection/interchange, highway segment, etc.)?
- What transportation components will the project address (travel modes, traffic control, facility type, etc.)?
- What types of outputs are important for the decision-making process? What are the intended deliverables? Is the purpose of the evaluation detailed technical assessment, visual animation, or both?
- What transportation alternatives does the project need to consider? What evaluation criteria will the project apply?
- Are there any known/key issues about the study area? If so, how will the project address them?
- What are the schedule and budget constraints (including agency review needs) associated with this effort?
- What is the critical path for the project? Does the traffic analysis fall within the critical path? When will changes in the project scope/purpose significantly affect the project schedule?

The facilitator of the kick-off meeting *should* use DT2290 to guide the discussion of the key aspects of the project, specifically as they pertain to the traffic analysis needs. Circulate the completed DT2290 form to the internal stakeholders immediately after the completion of the kick-off meeting and update the form as necessary as the project progresses. Although the DT2290 form *should* remain a fluid document, be cautious of unnecessary changes to the scope of the project or traffic model (i.e., watch out for scope creep).

2.3 Identify Need for Consultant Team

After defining the project goals, objectives, and traffic analysis needs, the internal WisDOT project team *should* coordinate closely with the regional traffic operations staff to assess whether the regional office has the knowledge, time, and resources available to conduct the anticipated level of traffic analysis required for the

project. Oftentimes, the regional traffic operations staff can perform the simpler traffic analyses (such as the deterministic-HCM analyses) in-house while the more complex and demanding traffic analyses (such as the microscopic traffic simulation analyses) typically require outsourcing the work to one or more consultant firms.

If in need of consultant services, the internal WisDOT project team *should* follow the process in FDM 8-5 to select and procure the consultant team(s) to perform the necessary traffic analyses for the project. Historically, BTO has maintained master contracts for general traffic engineering services (BTO01) and traffic modeling and analysis services (BTO03). Coordinate with BTO regarding the potential use of either of these master contracts.

After procuring the consultant team(s), the internal WisDOT stakeholders *should* meet with the selected consultant firm(s) to define/clarify their roles, tasks, and tentative schedule. WisDOT *should* procure the consultant team(s) and host the traffic analysis kick-off meeting early on during the project process to allow the consultant(s) to provide input on the traffic analysis methodologies, including the identification of the appropriate traffic analysis tool(s). Refer to TEOpS 16-10 for details on defining the most appropriate traffic analysis tool(s).

2.4 Initiate Traffic Analyses

Follow the process illustrated in Attachment 1.1 to conduct the necessary traffic analyses. Refer to TEOpS 16-10 for details on defining the most appropriate traffic analysis tool(s) and analysis methodologies, TEOpS 16-20 for guidance on conducting microsimulation analyses, and TEOpS 16-25 for details on conducting peer reviews.

Coordinate with WisDOT regional traffic staff as necessary to address any questions/concerns regarding the traffic analyses tool(s), methodologies, or results. If desired, the WisDOT regional traffic engineer may request additional support or guidance from BTO-TASU.

Attachment 1.1 Traffic Model Development & Review Process

Last Updated: January 2018

List of Abbreviations

FHWA = Federal Highway Administration
BTO = Bureau of Traffic Operations – Traffic Analysis & Safety Unit
BSHP = Bureau of State Highway Programs (Program Development & Analysis
Forecasting = WisDOT Traffic Forecasting Section
DTSD PT = DTSD Project Team
RTO = Region Traffic Operations
RTM = Region Traffic Modeler
PRT = Peer Review Team
CT = Consultant Team
Indep. Consult. = Independent Consultant
CDR = Concept Definition Report
PMP = Project Management Plan
Sim. = Microscopic Simulation

NOTE

The timeline for each task will vary from one project to another depending on the project scope, project limits, & number of alternatives being analyzed. The Project Manager should establish project specific timelines for each task during the project definition/scoping stage.

LEGEND

- DTSD Project Team &/or DTSD Region Leads Task
- Bureau of Traffic Operations (BTO) – Leads Task
- WisDOT Traffic Forecasting Leads Task

1. DEFINE PROJECT

SECTION	ROLE
DTSD PT	Lead Role
DTSD Region	Coordinate with DTSD PT as Needed
FHWA (if applicable)	Review CDR &/or PMP

TASK(S)/GOAL(S)
i. Establish Project Need, Goals & Scope
ii. Identify Project Type & Need for FHWA Involvement
  a) Standard/Routine
  b) High Profile
  c) Mega
iii. Prepare CDR &/or PMP

DELIVERABLE → Project Scope, Project Goals, CDR &/or PMP
TIME LINE → Up to 2 Weeks

Is it a Mega or High Profile Project and/or will it involve FHWA?

- Yes → TRACKS A&B
- No → TRACK C

TRACKS A&B

Statewide Level Review (Requires Early Involvement of Statewide Bureaus)

2A-B. SELECT/PROCURE CONSULTANT TEAM (CT)

SECTION	ROLE
DTSD PT	Lead Role
DTSD Region	Coordinate with DTSD PT as Needed
BTO	Assist DTSD PT as Needed

TASK(S)/GOAL(S)
i. Identify Need for CT to Assist in Analysis of Project
ii. Define Roles/Tasks/Tentative Schedule for CT as applicable
  a) Operational Analysis
  b) Simulation Model Development &/or Review
  c) Other Analysis, Travel Demand Model/Forecast Work, etc.
iii. Select/Procure CT as applicable

DELIVERABLE → Consultant Work Order - Contract
TIME LINE → Up to 6 Weeks

3A-B. DEVELOP DATA COLLECTION PLAN

SECTION	ROLE
DTSD PT	Lead Role
CT From Task 2A (if applicable)	Develop Data Collection Plan/Collect Data
DTSD Region/BTO	Coordinate/Assist DTSD PT as Needed

TASK(S)/GOAL(S)
i. Establish Data Sources & Needs & Define Data Collection Plan
ii. Initiate Data Collection (Data Collection To be Completed By Task 9A/9B)

DELIVERABLE → Data Collection Plan
TIME LINE → Up to 4 Weeks

4A-B. SELECT TRAFFIC ANALYSIS TOOL(S)

SECTION	ROLE
DTSD PT	Lead Role – Coordinate w/RTO & BTO
RTO	Provide Input to DTSD PT
BTO	Provide Input on Analysis Tool(s)
CT From Task 2A (if applicable)	Assist DTSD PT

TASK(S)/GOAL(S)
i. Assess Applicability of Various Analysis Tools
ii. Select Analysis Tool(s) Most Appropriate for Project
iii. DTSD PT/RTO to Prepare Memo on Analysis Tool Selection (To Be Submitted to BTO for Concurrence)

DELIVERABLE → Summary of Analysis Tool Selection Process
TIME LINE → Up to 2 Weeks

Is a Microscopic Simulation Model Proposed for Use?

- Yes → TRACK A
- No → TRACK B

TRACK A

5A. OUTLINE PROJECT PROCESS

SECTION	ROLE
DTSD PT/Region	Lead Role - w/Input from Statewide Bureaus
CT From Task 2A	Assist DTSD PT with Defining Timeline for Traffic Analysis Tool(s)/Model Development
BTO & RTO	Provide Input on Analysis Methodology
BSHP	Provide Input on Design Values
Forecasting	Provide Input on Forecasting Method
SEWRPC (if applicable)	Provide Input on Forecast Schedule/Method
MPOs (if applicable)	Provide Info on Local Concerns
FHWA (if applicable)	Provide Input on Federal Policy/Issues

TASK(S)/GOAL(S)
i. Discuss Timeline, Goals, Analysis Years, Design Hours, Alternatives
ii. Develop Summary/Outline of Proposed Process, Complete DT2290

DELIVERABLE → Defined Project Process & DT2290
TIME LINE → Up to 2 Weeks

6A. ESTABLISH PEER REVIEW TEAM (PRT)

SECTION	ROLE
DTSD PT/Region	Lead Role – Coordinate w/BTO
BTO	Assist With Indep. Consult. Contract, Member of PRT
RTM or Indep. Consult.	Lead PRT
Region Traffic Ops, BSHP, & Forecasting	Member of PRT
MPOs (if applicable)	Provide Input on Local Concerns

TASK(S)/GOAL(S)
i. Identify PRT Members
ii. Select/Procure Independent Consultant (If Needed)
iii. Define Roles/Schedule for Peer Review

DELIVERABLE → Peer Review Members & Process
TIME LINE → Up to 2 Weeks

7B. INITIATE TRAFFIC FORECAST REQUEST

SECTION	ROLE
DTSD PT/Region	Lead Role
Forecasting & SEWRPC (if applicable)	Provide Input on Data Needs & Schedule for Forecast Development

TASK(S)/GOAL(S)
i. Identify Types of Forecasts, Alternatives, Forecast Years, & Design Hours
ii. Request Forecast Results & Trip Tables (Complete/Submit DT1601)

DELIVERABLE → DT1601
TIME LINE → Up to 2 Weeks

8A. DEVELOP WISDOT TRAFFIC FORECAST

SECTION	ROLE
Forecasting – Central Office	Lead Role
Forecasting – SE Region	Lead Role in SE Region
SEWRPC (if applicable)	Develop Forecast - SE Region

TASK(S)/GOAL(S)
i. Develop Forecast per DT1601 or Review/Approve Forecast per DT1594
ii. Provide Trip Tables as Requested/Needed

DELIVERABLE → Completed/ Approved Forecast
TIME LINE → Varies, See DT1601

9A. RUN OPERATIONAL/ALTERNATIVE ANALYSES

SECTION	ROLE
CT From Task 2A	Lead Role
DTSD PT/Region	Oversee CT's Work
RTO	Review CT's Work
BTO & Statewide Bureaus	Provide Assistance as Needed

TASK(S)/GOAL(S)
i. Run Operational Analysis Utilizing Analysis Tool Selected in Task 4A (Paramics, HCS, Synchro, etc.) for Base & Future/Alternative Scenarios
ii. Prepare Report/Memo Summarizing Analysis Results

DELIVERABLE → Summary of Operational Analyses
TIME LINE → Up to 3 Weeks per Alternative

10A. DEVELOP/CALIBRATE SIMULATION MODEL

SECTION	ROLE
CT Selected in Task 2A	Lead Role
RTM or RTO	Review CT's Work
DTSD PT/Region	Provide Project Oversight

TASK(S)/GOAL(S)
i. Run Base Case Using Sim. Model Selected in Task 4A
ii. Calibrate Base Case to Actual Volumes/Validate
iii. Revise Base Case as Needed per Task 11A
iv. Run Future/Alternative Case(s) & Revise as Needed per Task 10A

DELIVERABLE → Calibrated/ Validated Simulation Model(s)
TIME LINE → Up to 6 Weeks per Alternative

Additional Runs

11A. INDEPENDENT PEER REVIEW (TEOpS 16-25)

SECTION	ROLE
RTM or Indep. Consult. From 6A	Lead Review of Simulation Model, Report to PRT
DTSD PT/Region	Oversee Peer Review Process
WisDOT PRT From 5A	Assist in Peer Review as Needed

TASK(S)/GOAL(S)
i. Conduct Independent Peer Review of Analysis Conducted in Task 9A & Task 10A for Base Scenario
ii. After Approval of Base, Review Future/Alt. Scenario Analysis & Model
iii. Complete DT2291 & DT1887 as applicable

DELIVERABLE → DT2291 & DT1887 as applicable
TIME LINE → Up to 8 Weeks per Alternative

12A. DELIVER FINAL ANALYSIS/REPORT

SECTION	ROLE
CT Selected in Task 2A	Lead Role
DTSD PT	Provide Input as Needed

TASK(S)/GOAL(S)
i. Prepare Summary of Analysis/Calibration Method, Assumptions & Results
ii. Save Final Report & Analysis in WisDOT Project File

DELIVERABLE → Final Calibration/ Analysis Report
TIME LINE → Up to 3 Weeks

TRACK B

5B. OUTLINE PROJECT PROCESS

SECTION	ROLE
DTSD PT/Region	Lead Role
CT From Task 2B (if applicable) &/or RTO	Define Timeline for Traffic Analysis Tool(s)/Model Develop., Provide Input on Analysis Methodology
Statewide Bureaus	Provide Input As Needed
SEWRPC (if applicable)	Provide Input on Forecast Schedule/Method
MPOs (if applicable)	Provide Info on Local Concerns
FHWA (if applicable)	Provide Input on Federal Policy/Issues

TASK(S)/GOAL(S)
i. Discuss Timeline, Goals, Analysis Years, Design Hours, Alternatives
ii. Develop Summary/Outline of Proposed Process, Complete DT2290

DELIVERABLE → Defined Project Process & DT2290
TIME LINE → Up to 2 Weeks

6B. ESTABLISH PEER REVIEW TEAM (PRT)

SECTION	ROLE
DTSD PT/Region	Lead Role
BTO	Assist With Indep. Consult. Contract and PRT As Needed
RTM or Indep. Consult.	Lead PRT
RTO	Member of PRT
BSHP & Forecasting	Assist PRT As Needed
MPOs (if applicable)	Provide Input on Local Concerns

TASK(S)/GOAL(S)
i. Identify PRT Members
ii. Select/Procure Independent Consultant (If Needed)
iii. Define Roles/Schedule for Peer Review

DELIVERABLE → Peer Review Members & Process
TIME LINE → Up to 2 Weeks

7B. INITIATE TRAFFIC FORECAST REQUEST

SECTION	ROLE
DTSD PT/Region	Lead Role
Forecasting & SEWRPC (if applicable)	Provide Input on Data Needs & Schedule for Forecast Development

TASK(S)/GOAL(S)
i. Identify Types of Forecasts, Alternatives, Forecast Years, & Design Hours
ii. Request Forecast Results & Trip Tables (Complete/Submit DT1601)

DELIVERABLE → DT1601
TIME LINE → Up to 2 Weeks

8B. DEVELOP WISDOT TRAFFIC FORECAST

SECTION	ROLE
Forecasting – Central Office	Lead Role
Forecasting – SE Region	Lead Role in SE Region
SEWRPC (if applicable)	Develop Forecast - SE Region

TASK(S)/GOAL(S)
i. Develop Forecast per DT1601 or Review/Approve Forecast per DT1594
ii. Provide Trip Tables as Requested/Needed

DELIVERABLE → Completed/ Approved Forecast
TIME LINE → Varies, See DT1601

9B. RUN OPERATIONAL/ALTERNATIVE ANALYSES

SECTION	ROLE
CT From Task 2B	Lead Role
DTSD PT/Region	Oversee CT's Work
RTO	Provide Input on Analysis Methodology
BTO & Statewide Bureaus	Provide Assistance as Needed

TASK(S)/GOAL(S)
i. Run Operational Analysis Utilizing Analysis Tool Selected in Task 4B (HCS, Synchro, Sidra, etc.) for Base & Future/Alternative Scenarios
ii. Prepare Report/Memo Summarizing Analysis Results

DELIVERABLE → Summary of Operational Analyses
TIME LINE → Up to 3 Weeks per Alternative

11B. DTSD PROJECT TEAM/PEER REVIEW (TEOpS 16-25)

SECTION	ROLE
RTM or Indep. Consult. From 6B	Lead Review of Analysis, Report to PRT
DTSD PT/Region	Oversee Peer Review Process
RTO	Assist in Peer Review as Needed
WisDOT PRT From 5B	Provide Input as Needed

TASK(S)/GOAL(S)
i. Conduct Independent Peer Review of Operational Analysis Conducted in Task 9B for Base Scenario
ii. After Approval of Base, Review Future/Alternative Scenario Analysis
iii. Complete DT1887

DELIVERABLE → DT1887
TIME LINE → Up to 4 Weeks per Alternative

12B. DELIVER FINAL ANALYSIS/REPORT

SECTION	ROLE
DTSD PT &/or CT Selected in Task 2B	Lead Role

TASK(S)/GOAL(S)
i. Prepare Summary of Analysis Method, Assumptions & Results
ii. Save Final Report & Analysis in WisDOT Project File

DELIVERABLE → Final Analysis Report
TIME LINE → Up to 3 Weeks

TRACK C

Region Level Review (Obtain Input from Statewide Bureaus as Needed)

2C (Optional). SELECT/PROCURE CONSULTANT TEAM (CT) - AS NEEDED

SECTION	ROLE
DTSD PT	Lead Role
DTSD Region	Coordinate with DTSD PT as Needed
RTO	Assist DTSD PT as Needed

TASK(S)/GOAL(S)
i. Identify Need for CT to Assist in Analysis of Project
ii. Define Roles/Tasks/Tentative Schedule for CT as applicable
  a) Operational Analysis
  b) Simulation Model Development &/or Review
iii. Select/Procure CT as applicable

DELIVERABLE → Consultant Work Order - Contract
TIME LINE → Up to 6 Weeks

3C. DEVELOP DATA COLLECTION PLAN

SECTION	ROLE
DTSD PT	Lead Role
CT From Task 2C (if applicable)	Develop Data Collection Plan/Collect Data
DTSD Region/BTO	Coordinate/Assist DTSD PT as Needed

TASK(S)/GOAL(S)
i. Establish Data Sources & Needs & Define Data Collection Plan
ii. Initiate Data Collection (Data Collection To be Completed By Task 9C)

DELIVERABLE → Data Collection Plan
TIME LINE → Up to 4 Weeks

4C. SELECT TRAFFIC ANALYSIS TOOL(S)

SECTION	ROLE
DTSD PT	Lead Role – Coordinate w/RTO
RTO	Provide Input to DTSD PT
BTO	If Requested, Provide Input on Analysis Tool(s)
CT From 2C (if applicable)	Assist DTSD PT

TASK(S)/GOAL(S)
i. Assess Applicability of Various Analysis Tools
ii. Select Analysis Tool(s) Most Appropriate for Project
iii. DTSD PT/RTO to Prepare Memo on Analysis Tool Selection (To Be Submitted to BTO for Concurrence)

DELIVERABLE → Summary of Analysis Tool Selection Process
TIME LINE → Up to 2 Weeks

5C. OUTLINE PROJECT PROCESS

SECTION	ROLE
DTSD PT/Region	Lead Role
CT From Task 2C (if applicable) &/or RTO	Define Timeline for Traffic Analysis Tool(s)/Model Develop., Provide Input on Analysis Methodology
Statewide Bureaus	Provide Input As Needed
SEWRPC (if applicable)	Provide Input on Forecast Schedule/Method
MPOs (if applicable)	Provide Info on Local Concerns
FHWA (if applicable)	Provide Input on Federal Policy/Issues

TASK(S)/GOAL(S)
i. Discuss Timeline, Goals, Analysis Years, Design Hours, Alternatives
ii. Develop Summary/Outline of Proposed Process, Complete DT2290

DELIVERABLE → Defined Project Process & DT2290
TIME LINE → Up to 2 Weeks

7C. INITIATE TRAFFIC FORECAST REQUEST

SECTION	ROLE
DTSD PT/Region	Lead Role
Forecasting & SEWRPC (if applicable)	Provide Input on Data Needs & Schedule for Forecast Development

TASK(S)/GOAL(S)
i. Identify Types of Forecasts, Alternatives, Forecast Years, & Design Hours
ii. Request Forecast Results & Trip Tables (Complete/Submit DT1601)

DELIVERABLE → DT1601
TIME LINE → Up to 2 Weeks

8C. DEVELOP WISDOT TRAFFIC FORECAST

SECTION	ROLE
Forecasting – Central Office	Lead Role
Forecasting – SE Region	Lead Role in SE Region
SEWRPC (if applicable)	Develop Forecast - SE Region

TASK(S)/GOAL(S)
i. Develop Forecast per DT1601 or Review/Approve Forecast per DT1594
ii. Provide Trip Tables as Requested/Needed

DELIVERABLE → Completed/ Approved Forecast
TIME LINE → Varies, See DT1601

9C. RUN OPERATIONAL/ALTERNATIVE ANALYSES

SECTION	ROLE
RTO &/or CT From Task 2C	Lead Role
DTSD PT/Region	Oversee Analysis
Statewide Bureaus	Provide Assistance as Needed

TASK(S)/GOAL(S)
i. Run Operational Analysis Utilizing Analysis Tool Selected in Task 4C (HCS, Synchro, Sidra, etc.) for Base & Future/Alternative Scenarios
ii. Prepare Report/Memo Summarizing Analysis Results

DELIVERABLE → Summary of Operational Analyses
TIME LINE → Up to 3 Weeks per Alternative

Is a Microscopic Simulation Model Proposed for Use?

- Yes → TRACK A
- No → TRACK B

10C. DEVELOP/CALIBRATE SIMULATION MODEL

SECTION	ROLE
CT Selected in Task 2C	Lead Role
RTM &/or RTO	Oversee CT's Work
DTSD PT/Region	Provide Project Oversight

TASK(S)/GOAL(S)
i. Run Base Case Using Sim. Model Selected in Task 4C
ii. Calibrate Base Case to Actual Volumes/Validate
iii. Revise Base Case as Needed per Task 11C
iv. Run Future/Alternative Case(s) & Revise as Needed per Task 11C

DELIVERABLE → Calibrated/ Validated Simulation Model(s)
TIME LINE → Up to 6 Weeks per Alternative

Additional Runs

11C. DTSD PROJECT TEAM/REGION REVIEW (See TEOpS 16-25)

SECTION	ROLE
RTO	Lead Review of Analysis, Reports to DTSD PT
DTSD PT/Region	Oversees Review
Statewide Bureaus	Assists in Review as Needed

TASK(S)/GOAL(S)
i. Conduct Review of Operational Analysis Developed in Task 9C & if applicable Task 10C for Base Scenario
ii. After Approval of Base, Review Future/Alternative Scenario Analysis & Model (if applicable)
iii. Complete DT2291 & DT1887 as applicable

DELIVERABLE → DT2291 & DT1887 as applicable
TIME LINE → Up to 4 Weeks per Alternative

12C. DELIVER FINAL ANALYSIS/REPORT

SECTION	ROLE
DTSD Project Team &/or CT Selected in Task 2C	Lead Role

TASK(S)/GOAL(S)
i. Prepare Summary of Analysis/Calibration Method, Assumptions & Results
ii. Save Final Report & Analysis in WisDOT Project File

DELIVERABLE → Final Calibration/ Analysis Report
TIME LINE → Up to 3 Weeks