

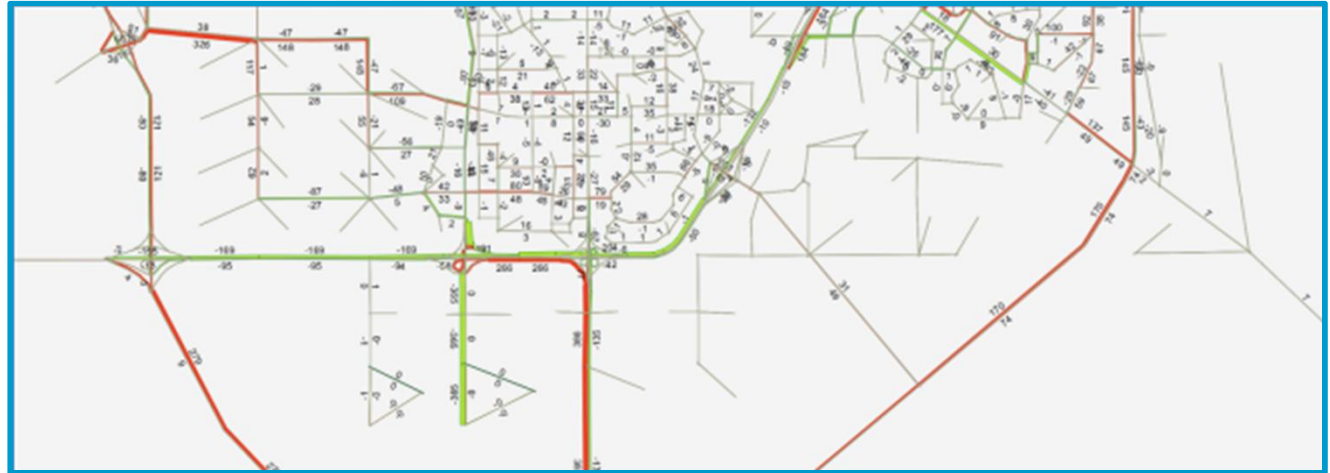


Associated
Engineering

*GLOBAL PERSPECTIVE.
LOCAL FOCUS.*

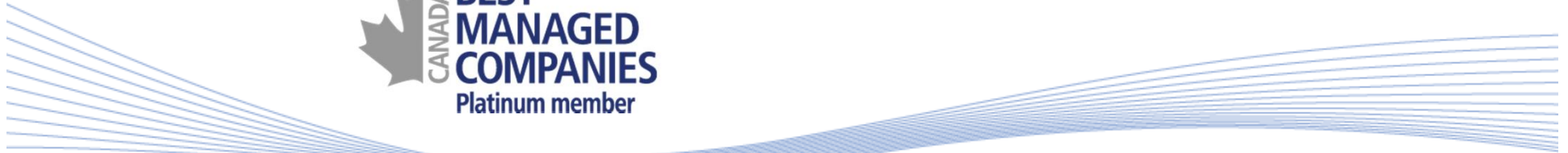
Regina Bypass Project

Traffic Forecast Preparation



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Acknowledgments

- Projects Owner
 - Regina Region TDM update
 - Regina Bypass Planning
- Regina Region TDM Partner
- Sub Consultants



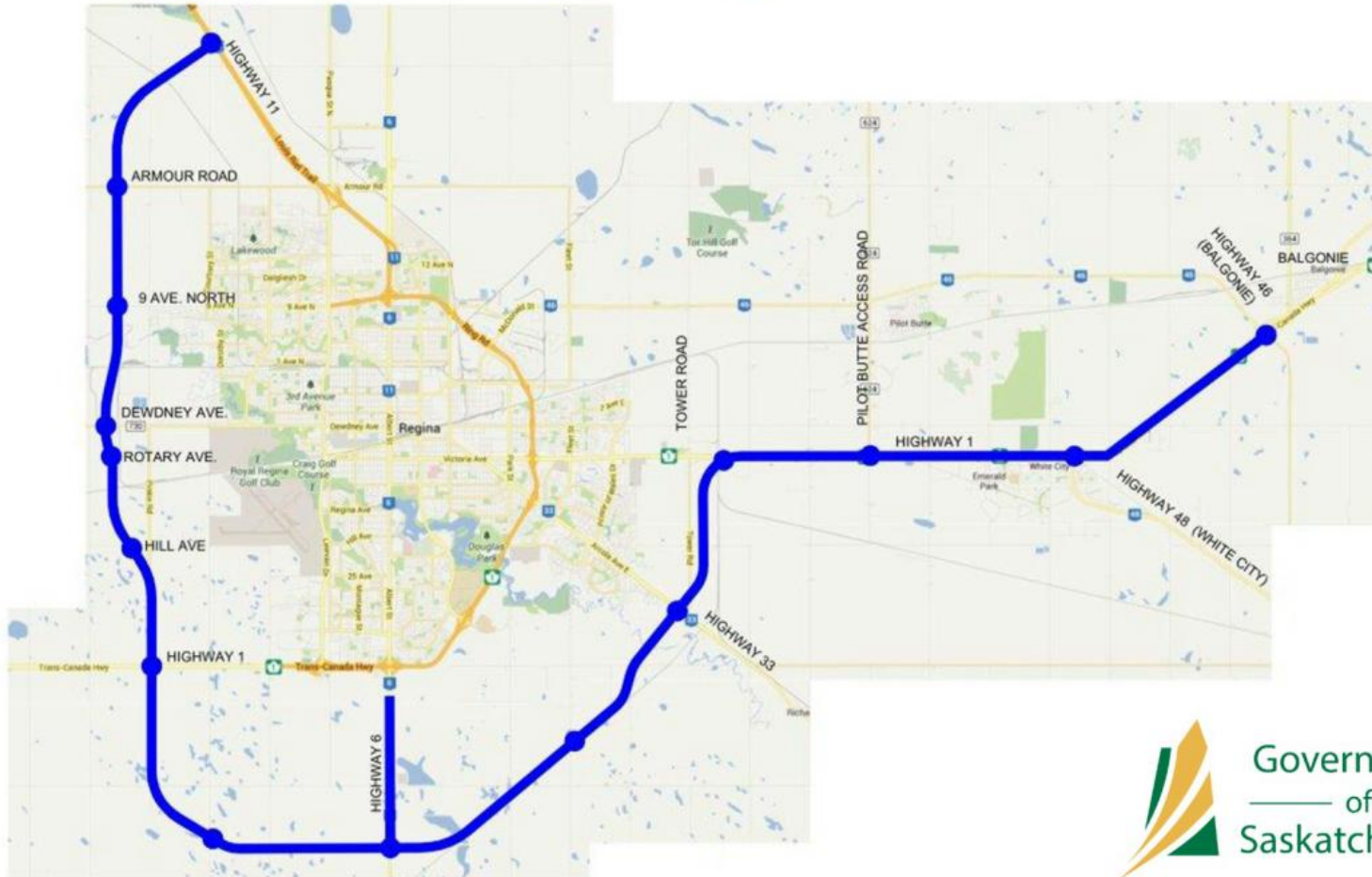
Outline

- Regina Bypass Project Plan
- Regina Region Travel Demand Model
- Regina Bypass Traffic Forecast

Proposed Regina Bypass

LEGEND:

- PROPOSED BYPASS
- PROPOSED CONNECTION TO EXISTING ROADWAYS



Regina Region TDM Update - 2013

- MHI desire to use better forecasting tools for highway planning
 - Recent rapid growth and future demand
 - Key infrastructure planning initiatives



- City of Regina interest in working with MHI
 - Regional impacts on City infrastructure
 - To inform OCP/TMP processes

What is a TDM?

- Simply: A forecast of future travel.
 - Where do people and goods travel to and from
 - What routes do they choose to get there
 - A decision making tool for strategic infrastructure investment
- The Input:
 - Trip characteristics; traffic counts, road network, trip diaries
 - Population and employment (Current and Forecast)
- The Output:
 - Future travel demand in terms of future traffic volumes, travel time
 - User cost savings analysis

Four-Step Modelling Approach

Trip generation

- How many trips? (trips produced by and attracted each TAZ; fcn pop, empl)

Trip distribution

- Where are trips going? (exchange among and within TAZs)

Mode choice

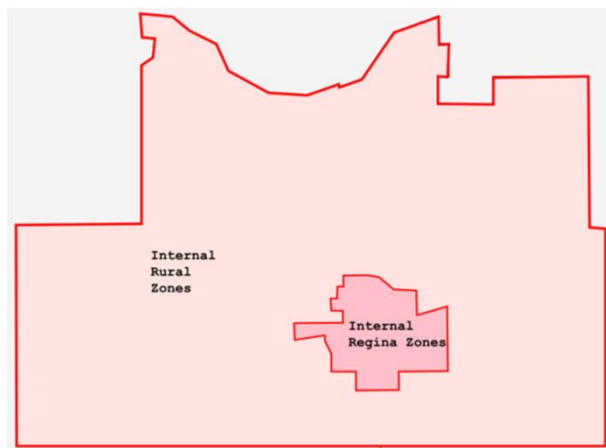
- Which mode(s)? (choice is function of time and cost)

Trip assignment

- Which route is used?

An EMME Foundation to Work With

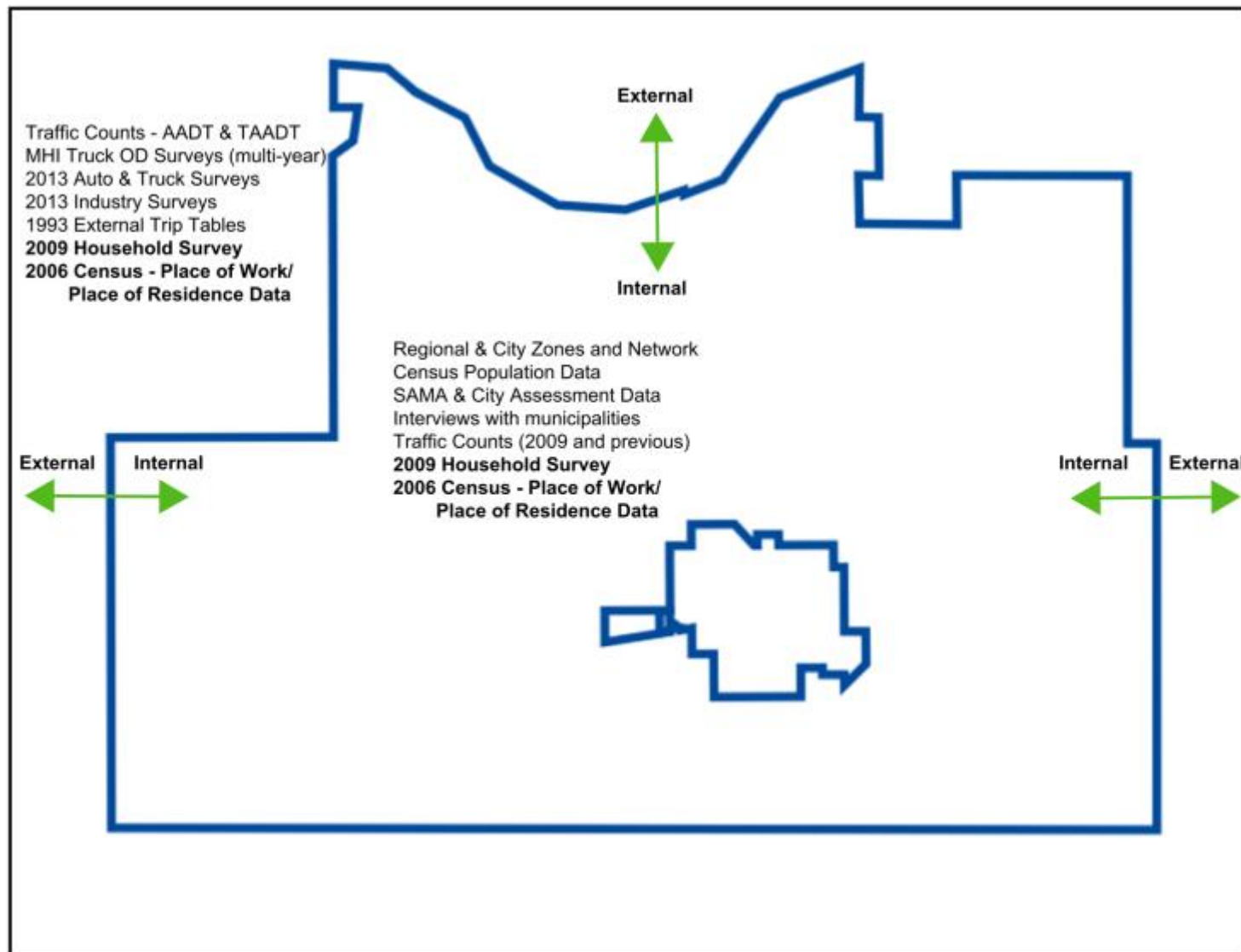
- First developed in 1989 by City of Regina
- Periodic road network and land use updates
- New calibration and forecast in 2010, based on 2006 OCP



Scope of Work

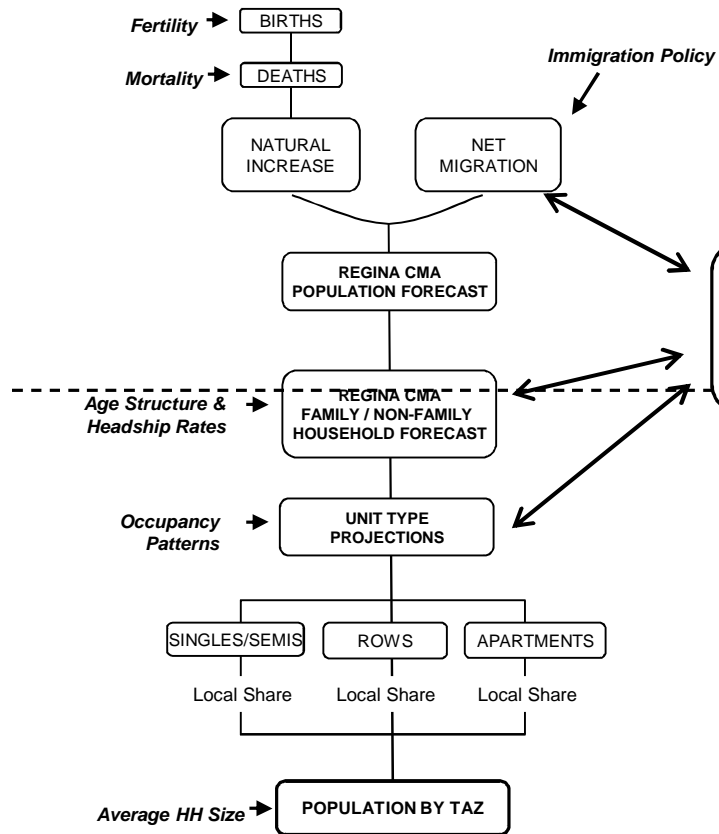
- Update the City of Regina's EMME model to make it more usable for highway planning
 - Auto and truck travel surveys
 - Rural Traffic Analysis Zones and Road Network
 - Base year land use to 2012
 - External trip tables
 - Develop 2020 and 2040 forecast scenarios
 - Training

Data Sources

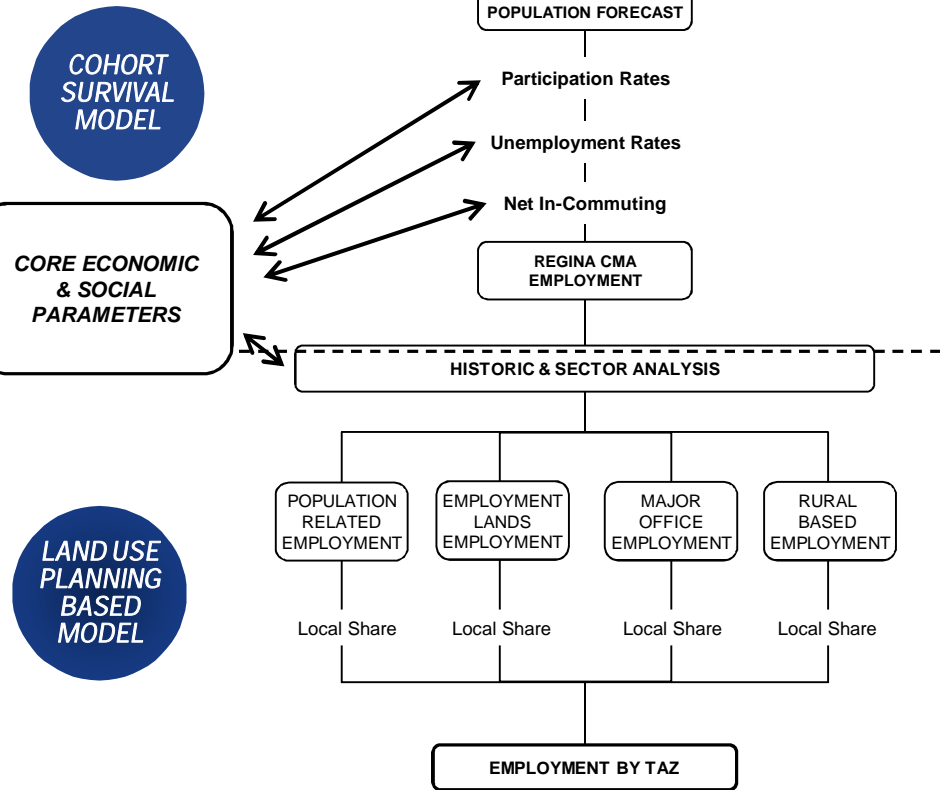


Forecast method – How much growth

POPULATION FORECAST

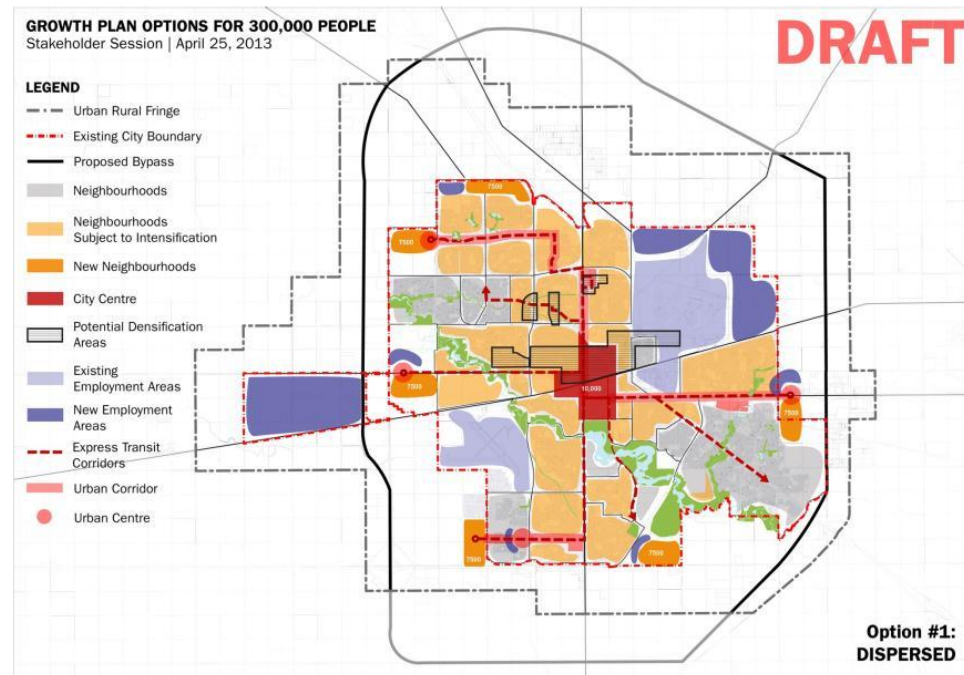


EMPLOYMENT FORECAST



Land Use Forecast

- Overall growth driven mainly by broad economic factors
- Location of growth determined through local planning processes
- In a rapidly growing area, development planning and infrastructure need to be well-coordinated and integrated

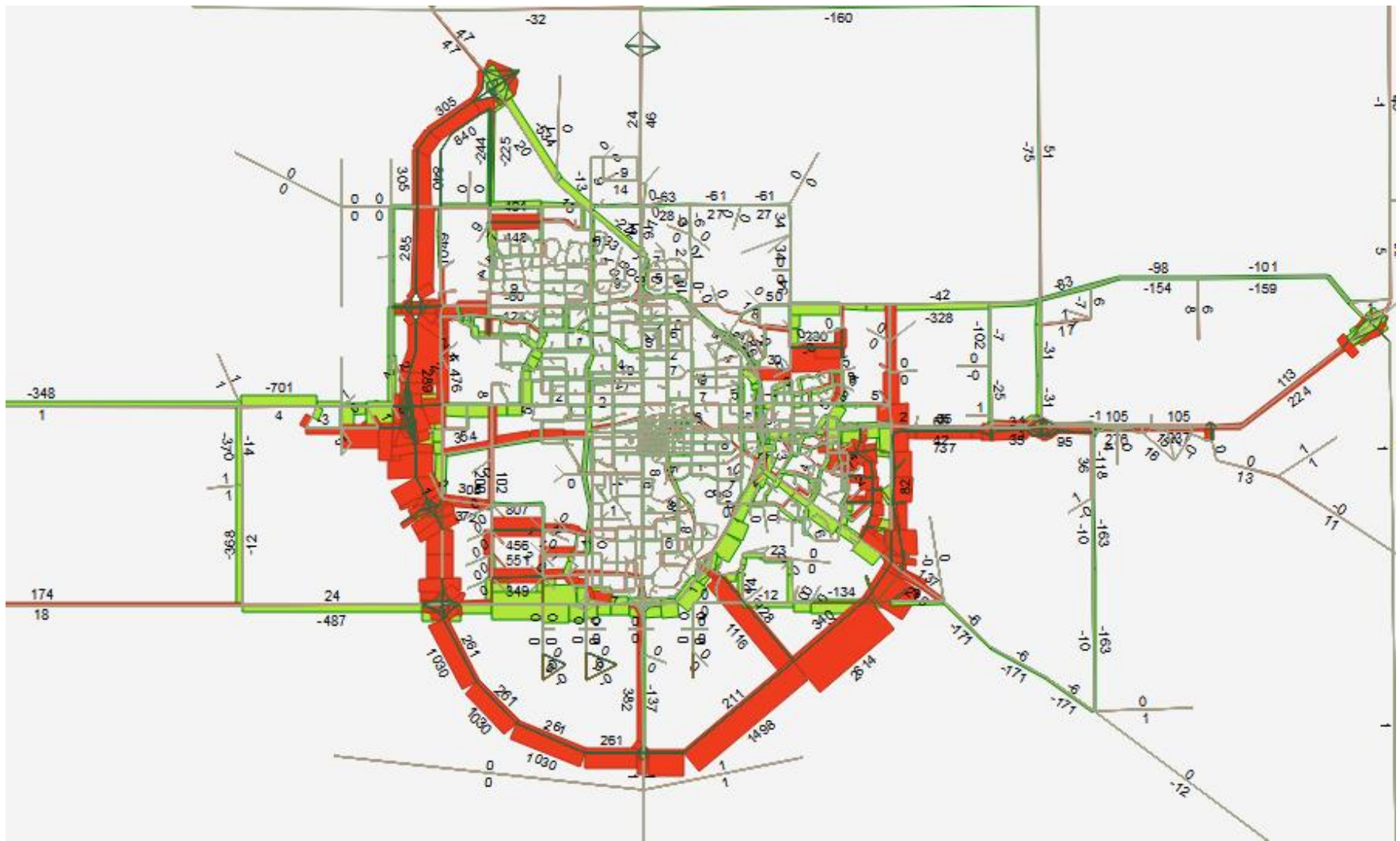


The GTH – *An Inland Port*

- 1800 Acre state-of-the-art transportation and logistics development
- Connect to global markets through direct road and rail transport services



Is it a good investment?

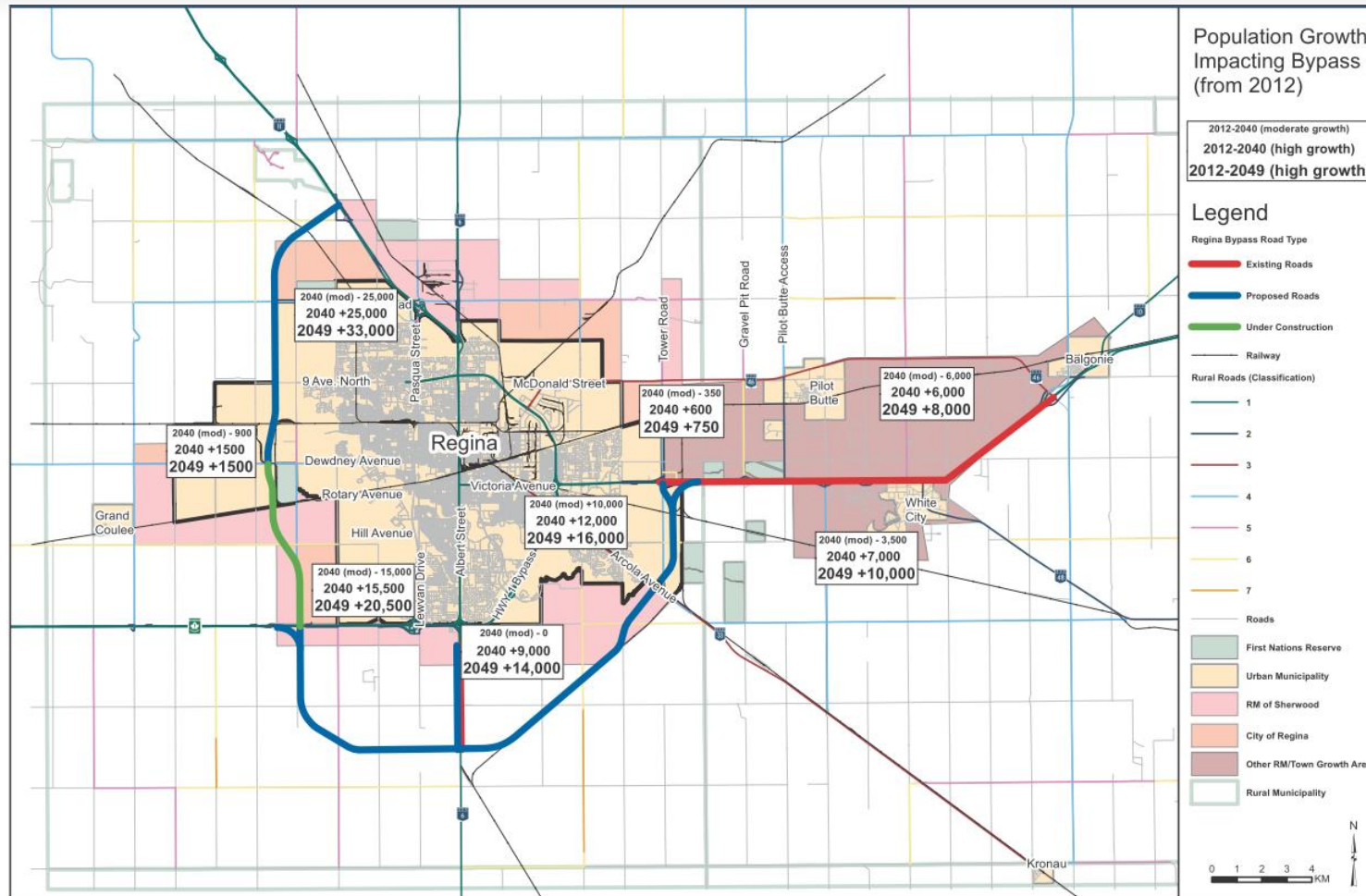


Regina Bypass Traffic Forecast

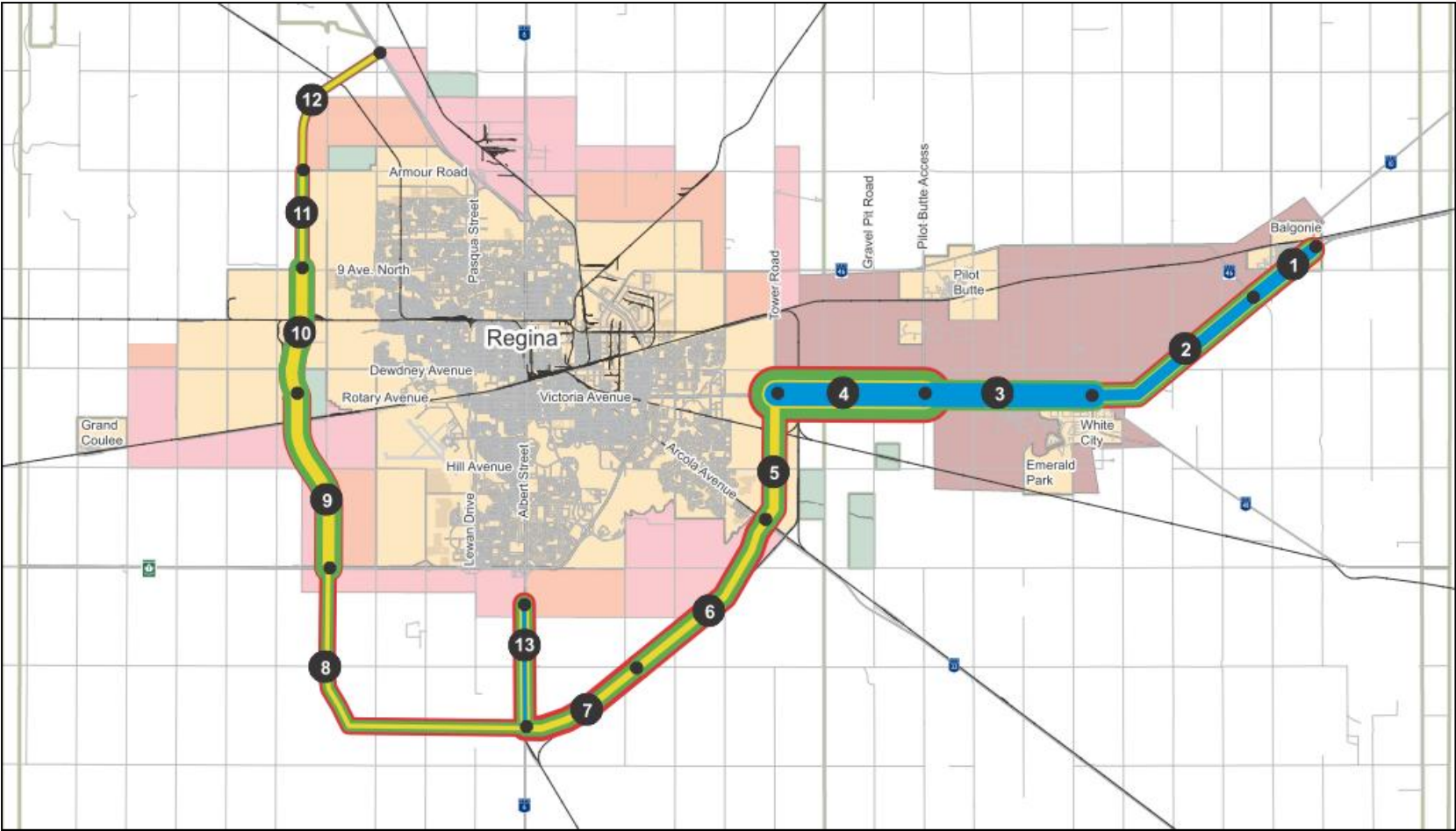
- Regional TDM provided higher-level basis for forecasting
- Micro Level Forecast for Regina Bypass
 - Business Case
 - Turning Movements for design



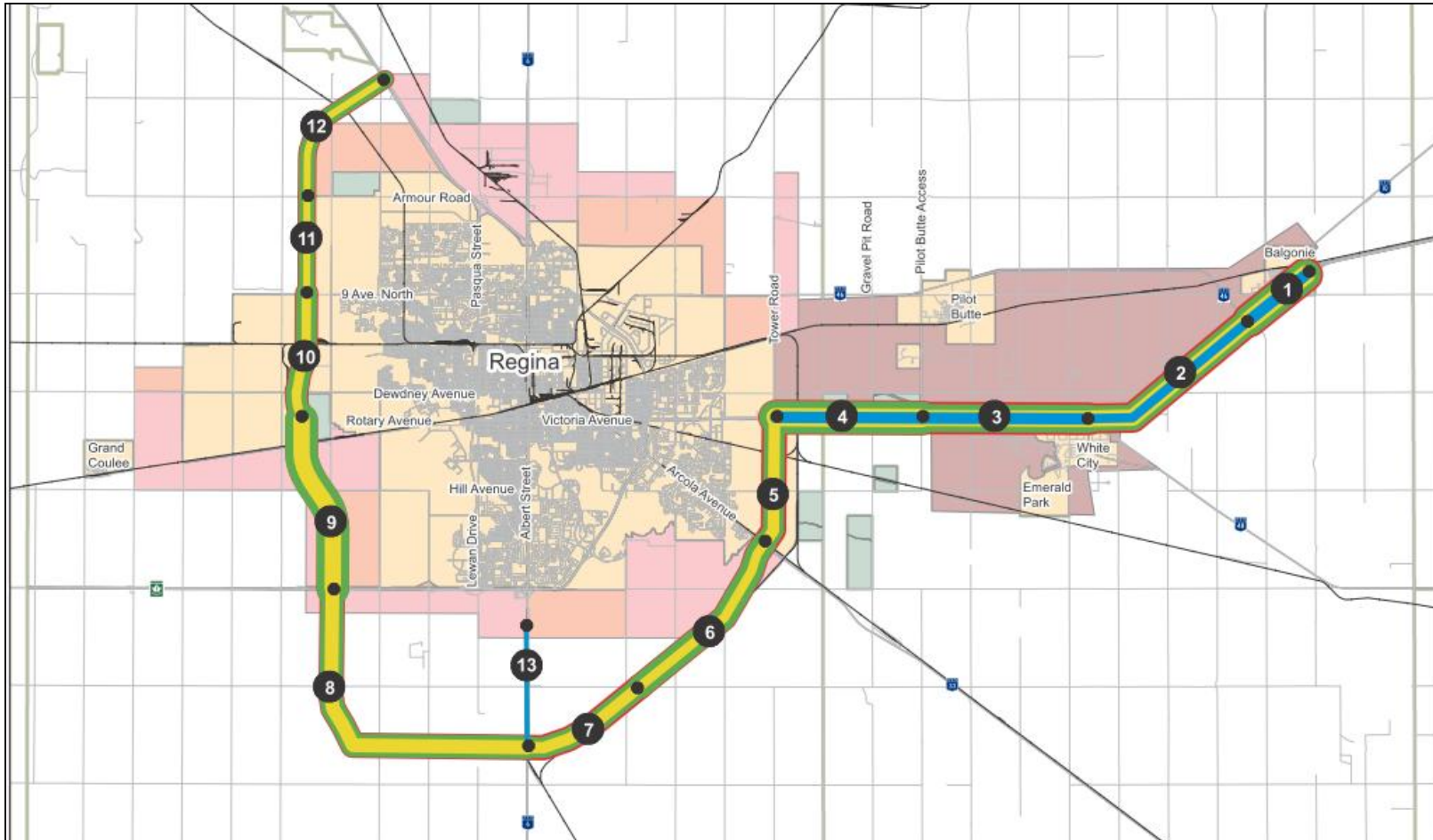
Land Use Forecast - Refinement



Auto Forecast

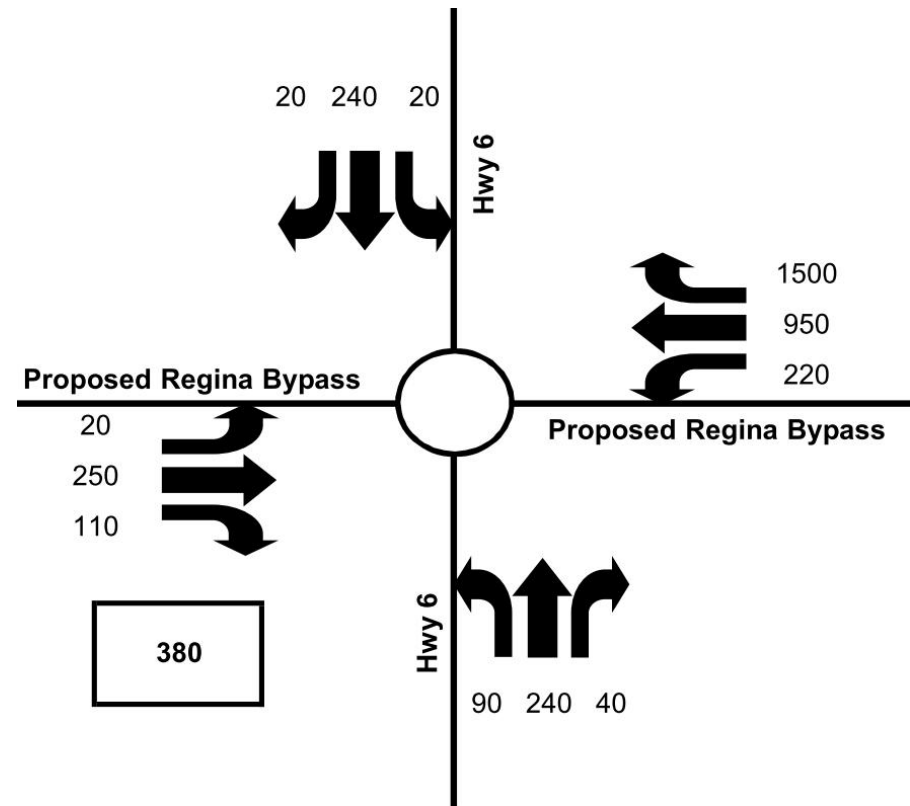


Truck Forecast



Turning Movement Forecast

- 48 turning movement forecasts
 - AM and PM peaks
 - Three forecast horizons
- Transfer from EMME to Excel
- Manual adjustments



Conclusion

- MHI is working closely with municipalities in the Regina Region to plan for continued rapid growth
- Regina Bypass will be a high speed free flow facility
 - Increase Safety
 - High Mobility
 - Limited Access
- Traffic forecast was developed from a recently updated RRTDM and further refined for micro-analysis



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QUESTIONS?

