



TH 36

Highways for Life

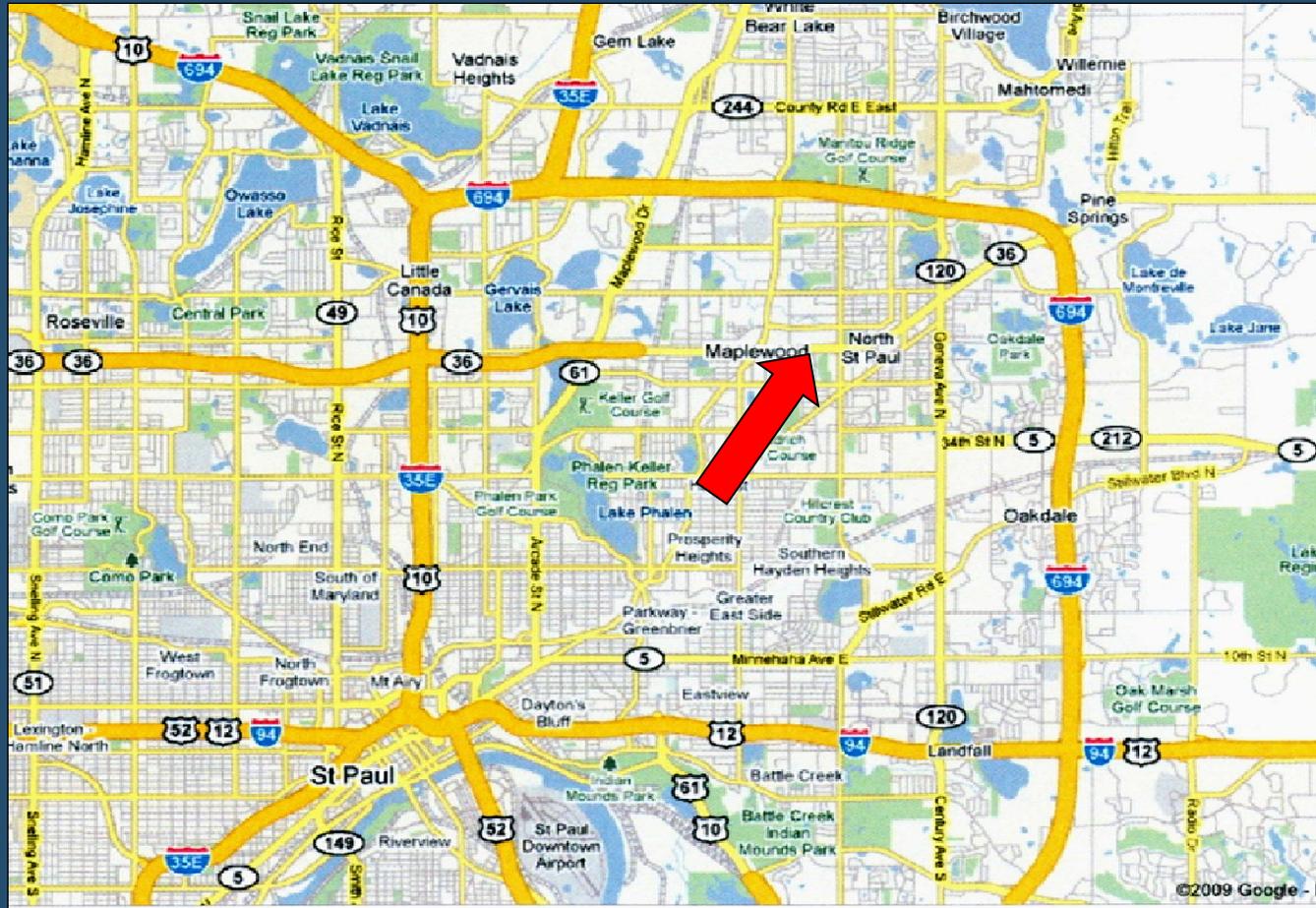
Steve Kordosky
Minnesota DOT

Your Destination...Our Priority





Project Location

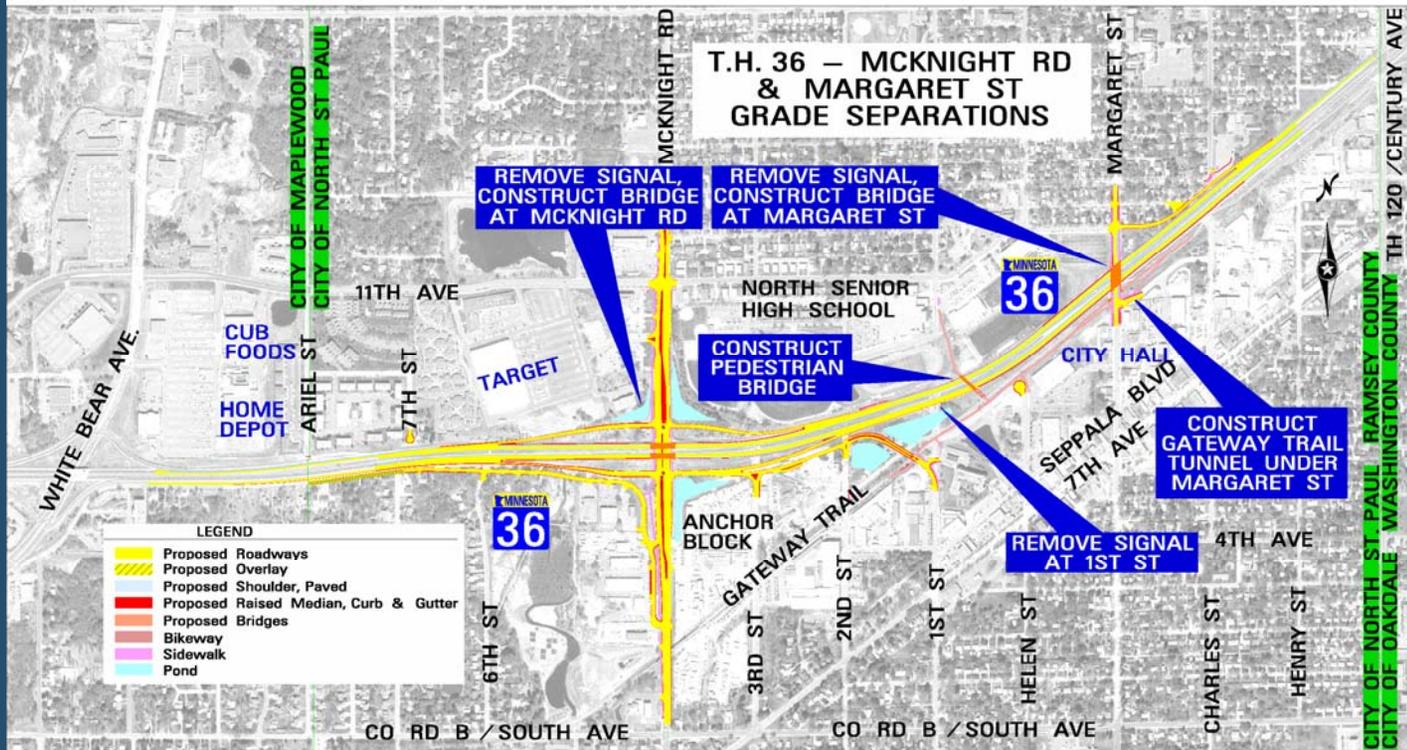


Mpls ←





Project Description



Corridor Background

- 4-Lane Urban Highway
- Commuter Link
- AADT = 57,000
- 3 Signals
- Gateway Trail



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Project Background

- Improve Safety
 - Ped Bridge
 - Trail
- Improve Capacity
 - Convert to freeway
 - Interchanges



Project Challenges

- Limited \$\$
- Traffic Disruption
- Safety
- Public Buy-in



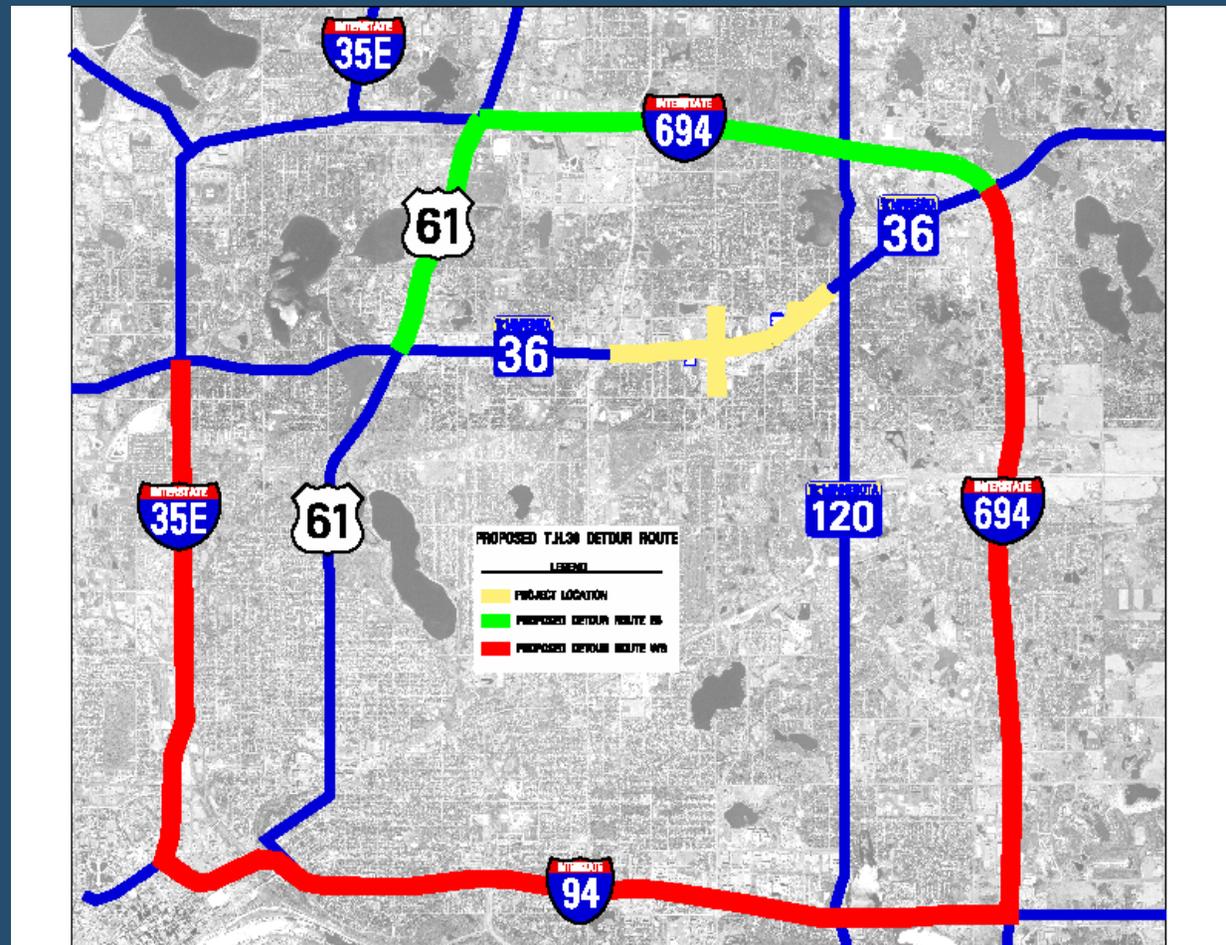
New Idea!!!

- Close TH 36 During Reconstruction
- Detour Traffic to alternative routes
- Are we CRAZY!!



Construction Office Concerns

- Travel Time Study
- Re-Open 1 Lane in Each Direction ASAP
- Un-Weave the Weave



How do we do this?

- Public Buy-in
- Business Impacts
- Congestion
- Construction Efficiency





HFL Performance Goals

- Safety: workzone, worker, facility
- Construction Congestion: Faster, fewer delays
- Quality: Smoothness, noise, user satisfaction



How Long Will it Take?

- 2+ Years w/o closure
- 3-6 Months w/closure
- Constructability Review
 - One-on-one
 - 5 Potential Contractors





Market Research

- Residents/Commuters/Businesses
- Pre-Construction Survey
 - Prefer 2-years construction vs 5 month closure
- Post-Construction Survey





- Residents
 - In favor of construction
 - Likely to be moderately supportive of either
 - Higher percentage preferred 5 month closure
- Through commuters
 - In favor of construction
 - Likely to be moderately supportive of either
 - Slightly more favorable to 2 year off peak delays
 - Split 50-50



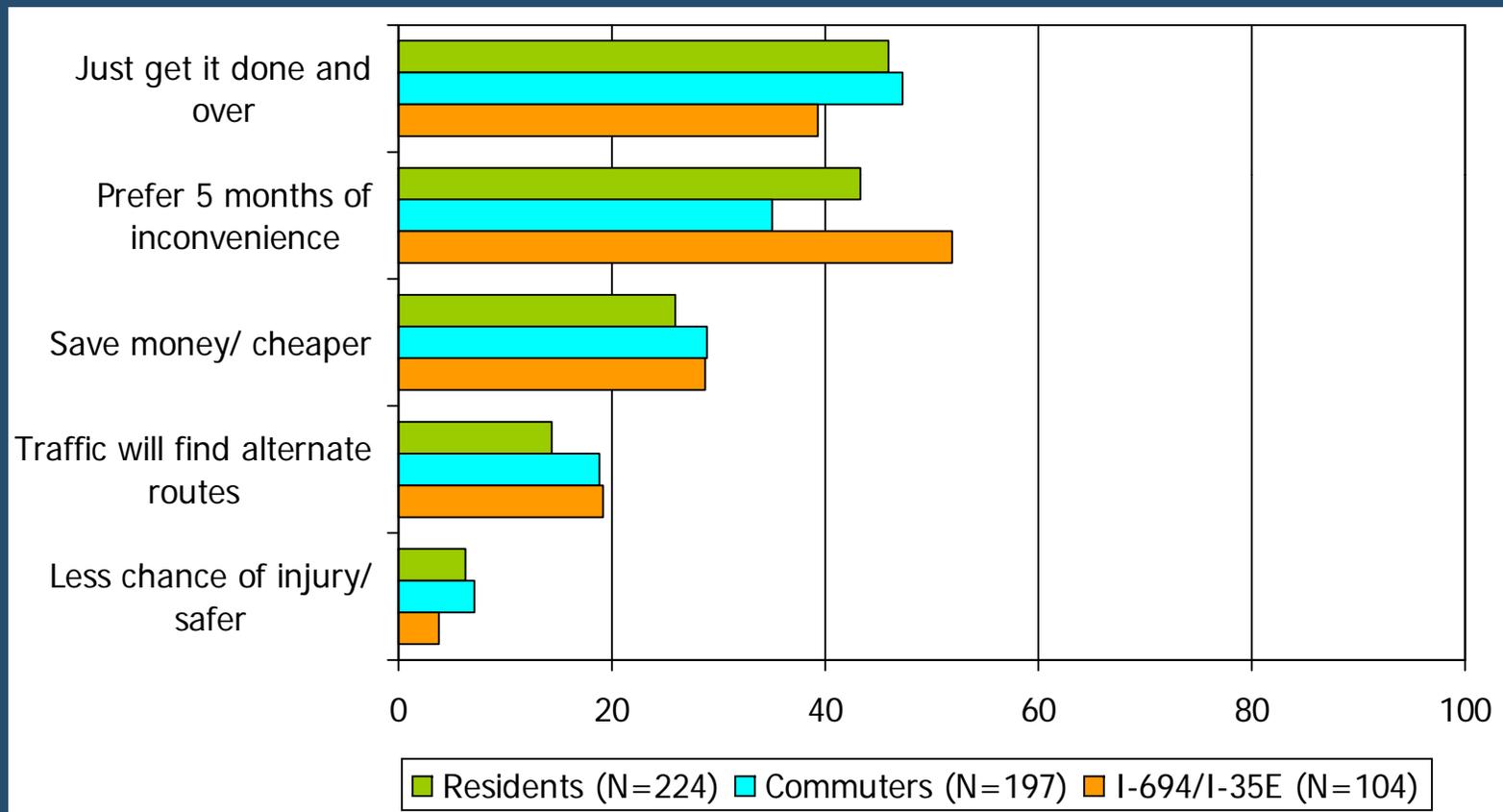


- I694/35E Users
 - Slightly more favorable reaction to 2-year non-peak delays
 - Split 50-50
- Businesses
 - More favorable to 2-year non-peak delays
 - More likely to react negatively to 5-month closure
 - Higher percentage preferred 2-year non-peak delays



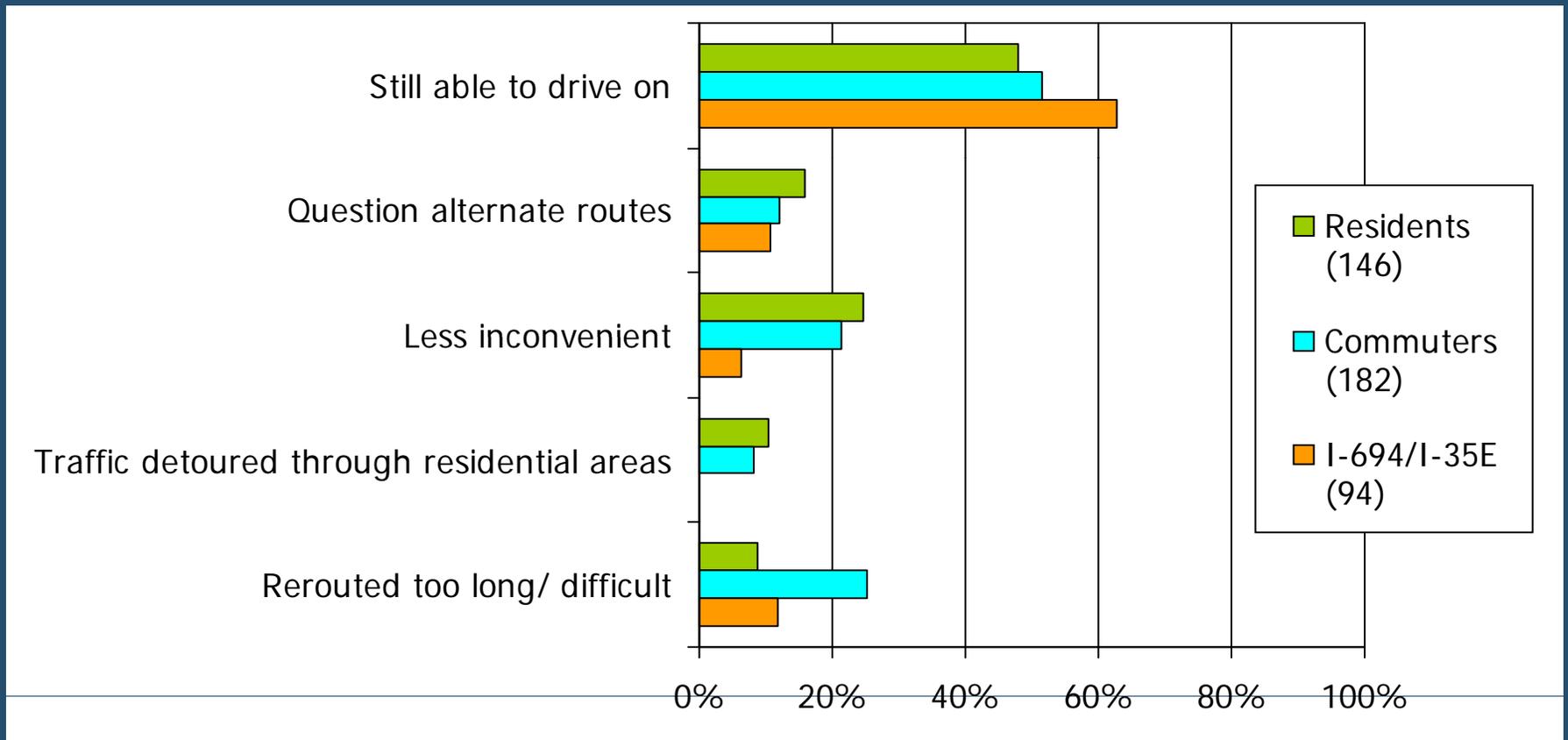


5 Month Closure Reasons for Stated Preference





Reasons for Stated Preference 2 Year Off Peak Delays



Biggest Impacts

- Early Coordination
- “Detour Days”
- “Open for Business – Surviving and Thriving During Construction” Workshop

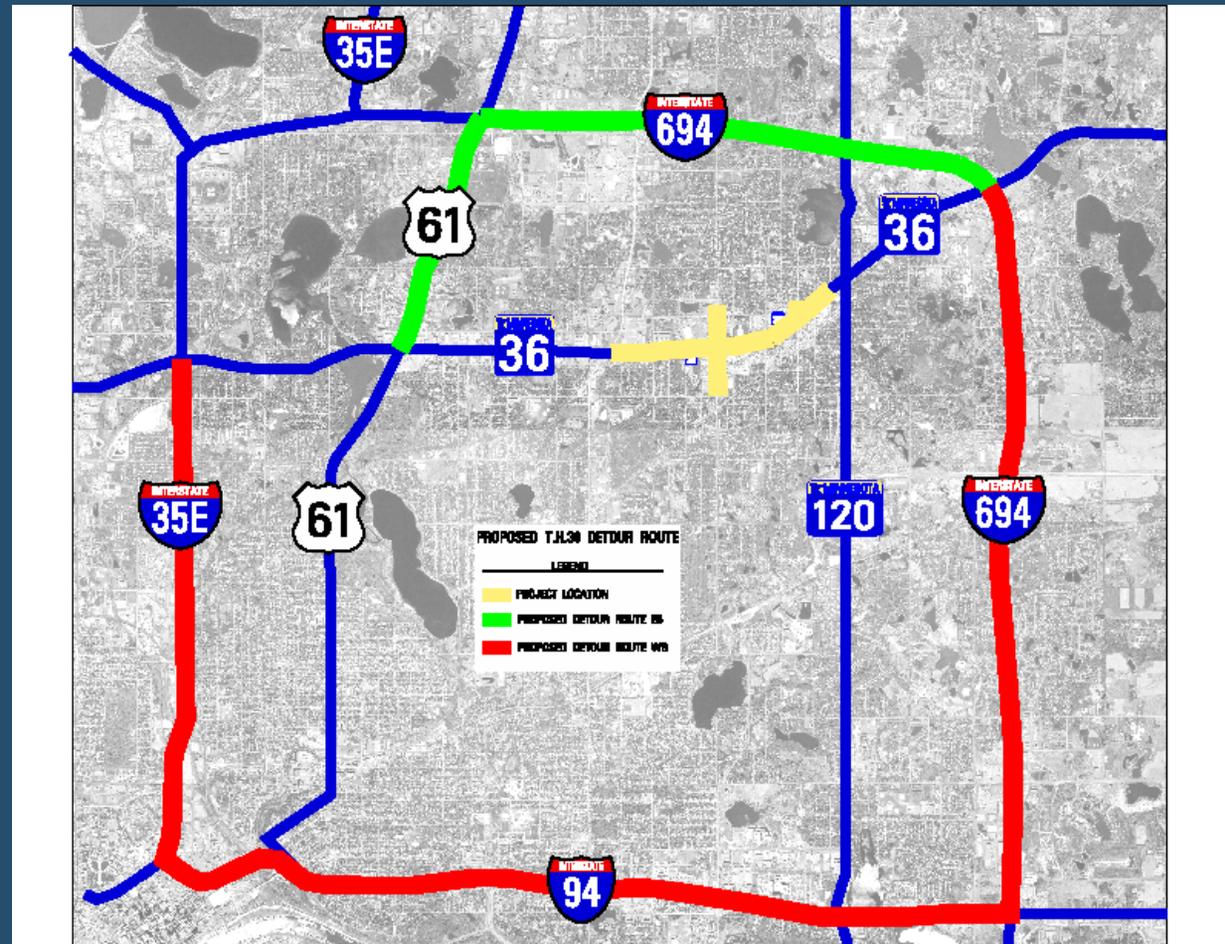


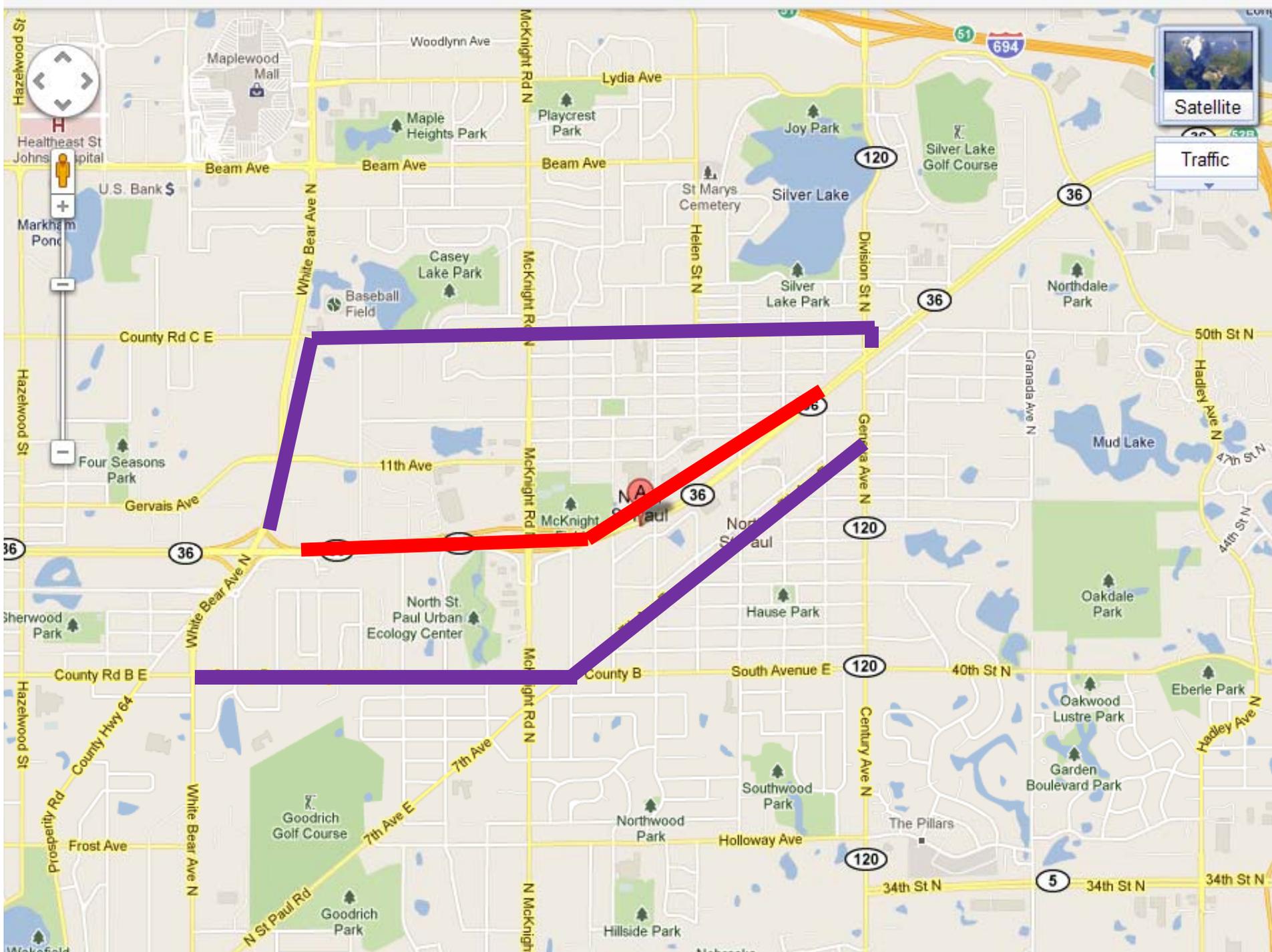
Jan Walczak, North St. Paul, City Council

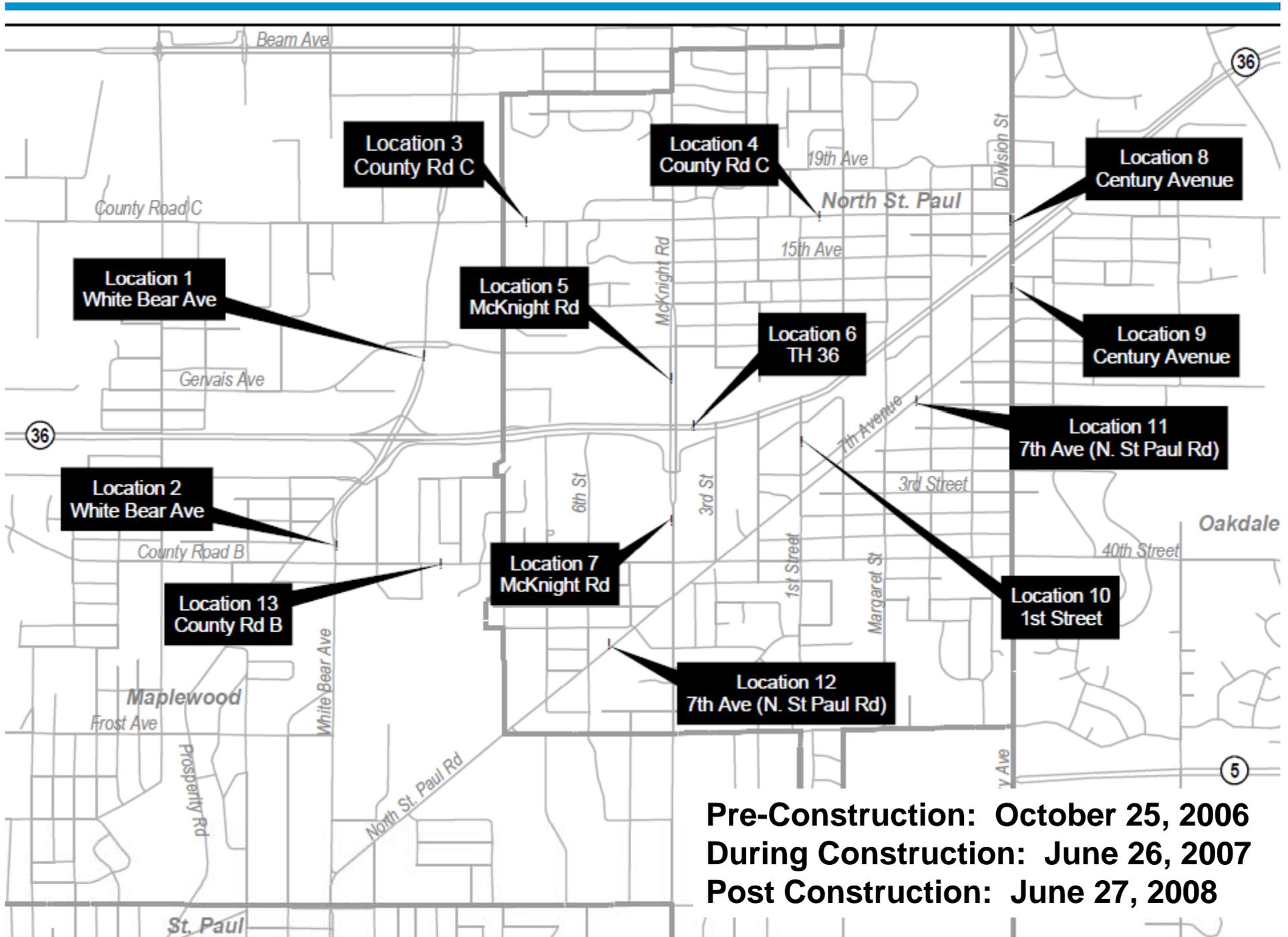


Where will the Traffic Go?

- 1/3 Rule
- Local road System
- EB Detour
- WB Detour







Pre-Construction: October 25, 2006
During Construction: June 26, 2007
Post Construction: June 27, 2008



HOW MANY TRIPS WENT LOCAL?

Westbound AM Peak Hour

- 876 Vehicles needed detour
- 245 went to County Road C (#4)
- 204 went to County Road B (#11)
- 51% of traffic





HOW MANY TRIPS WENT LOCAL?

Eastbound PM Peak Hour

- 1,279 Vehicles needed detour
- 163 went to County Road C (#3)
- 346 went to County Road B (#13)
- 40% of traffic





HOW MANY TRIPS WENT LOCAL?

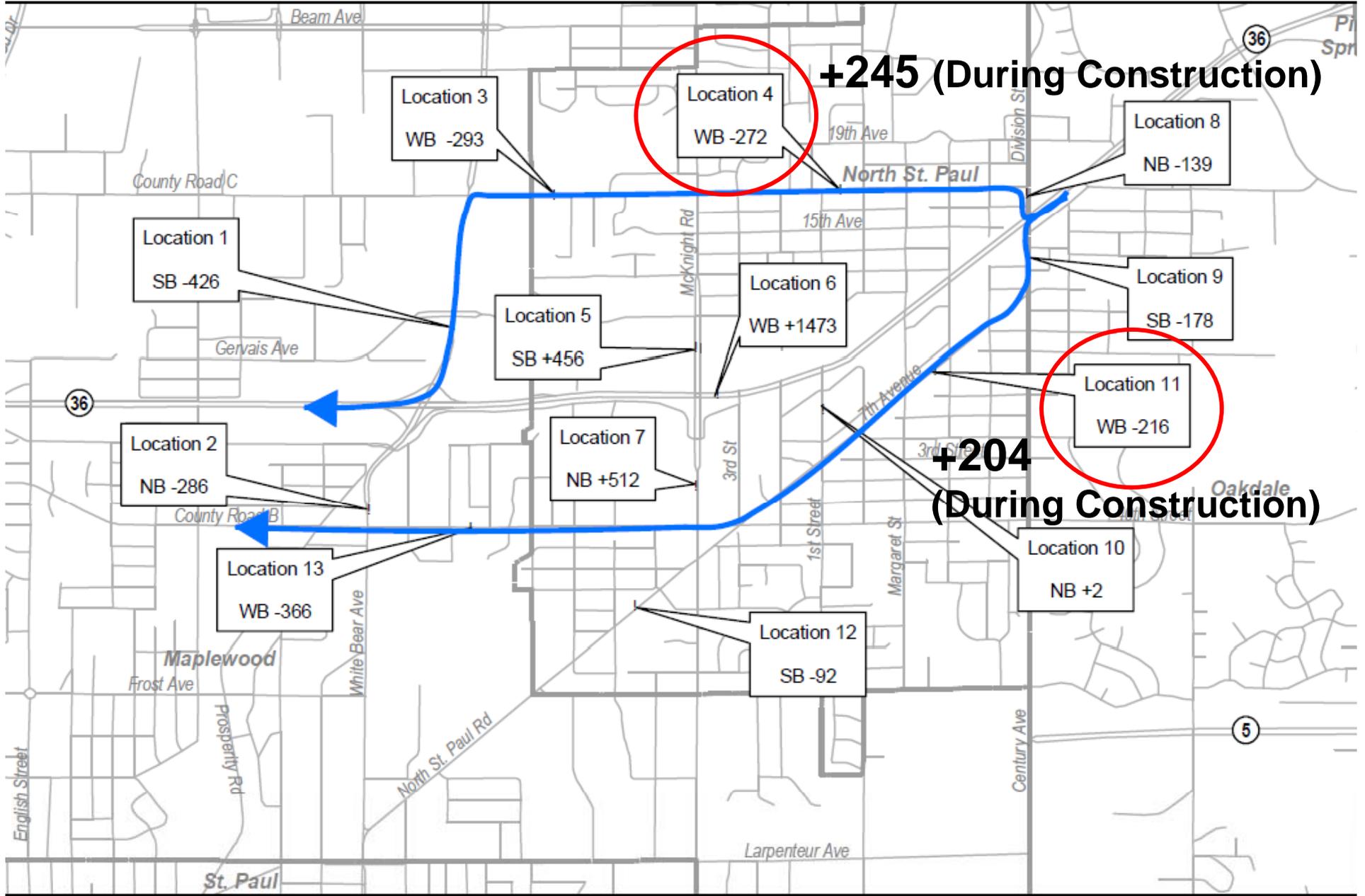
- Not all increase traffic from Detour
- Access closures are redirecting traffic (10-20%)
- AM Peak probably 32-42% (vs 50%)
- PM Peak probably 20-30% (vs 40%)





AFTER CONSTRUCTION LOCAL TRAFFIC





+245 (During Construction)

+204 (During Construction)

+163 (During Construction)

Location 3
EB -191

Location 4
EB -162

Location
SB -16

Location 1
NB +85

Location 5
NB +651

Location 6
EB +1652

Location
NB -10

Location 2
SB -189

Location 7
SB +489

Location 11
EB -140

Location 13
EB -431

+346 (During Construction)

Location 12
NB -103

Location 10
SB +28



Local Trips Summary

- Slight decrease in local trips
- Increase in trips on TH 36 due to improvements
- 1/3 rule to local streets applied
- Heavy commercial traffic on local street

County B experienced 76 heavy commercial vehicles in peak hours and 86 heavy commercial vehicles in a day



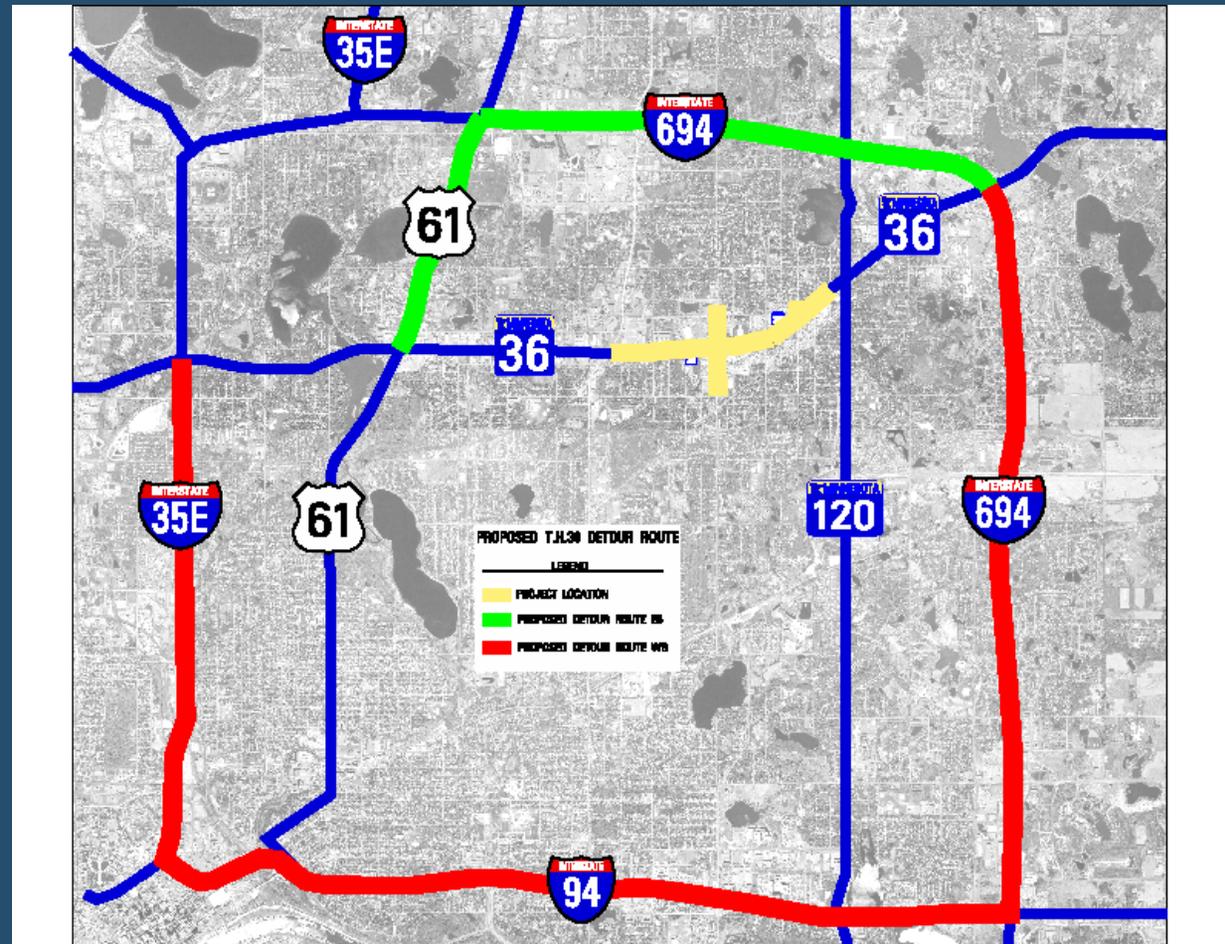


TRAFFIC IMPACTS TO THE STATE TRUNK HIGHWAY SYSTEM



Where will the Traffic Go?

- 1/3 Rule
- Local road System
- EB Detour
- WB Detour



Planning for Detour

- Improve I-94
- Log pre-existing travel times
- Intersection Improvements
- Police Officers at 4-way Stops





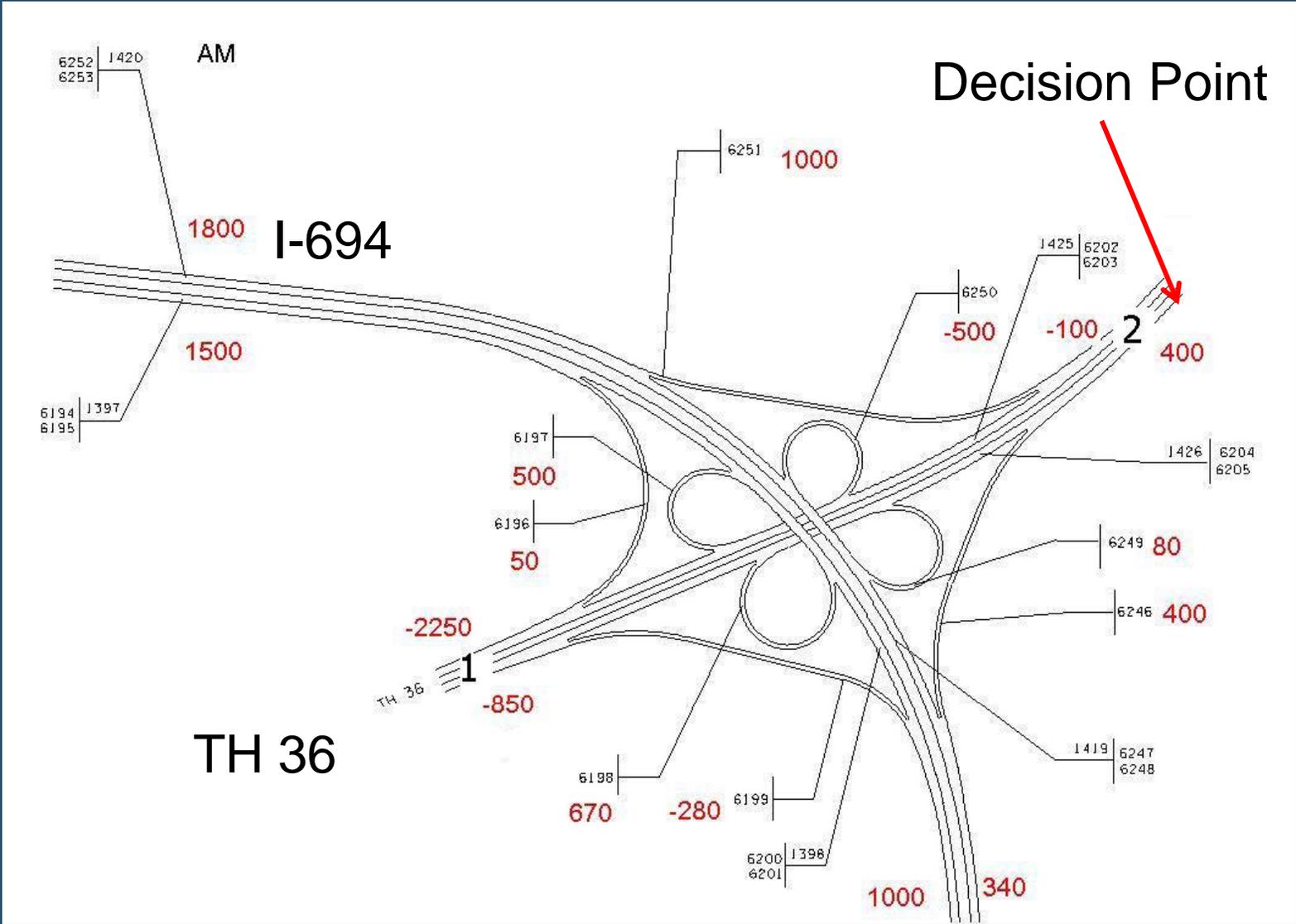
Detours / Alternative Routes

Time Period	TH 36	I-694	I-94	CR C	CR B	Other Routes
6-10 AM	-9740	+3120	+2900	+1300	+2380	+40
2-9 PM	-20050	+5400	+3650	+2060	+3250	+6590

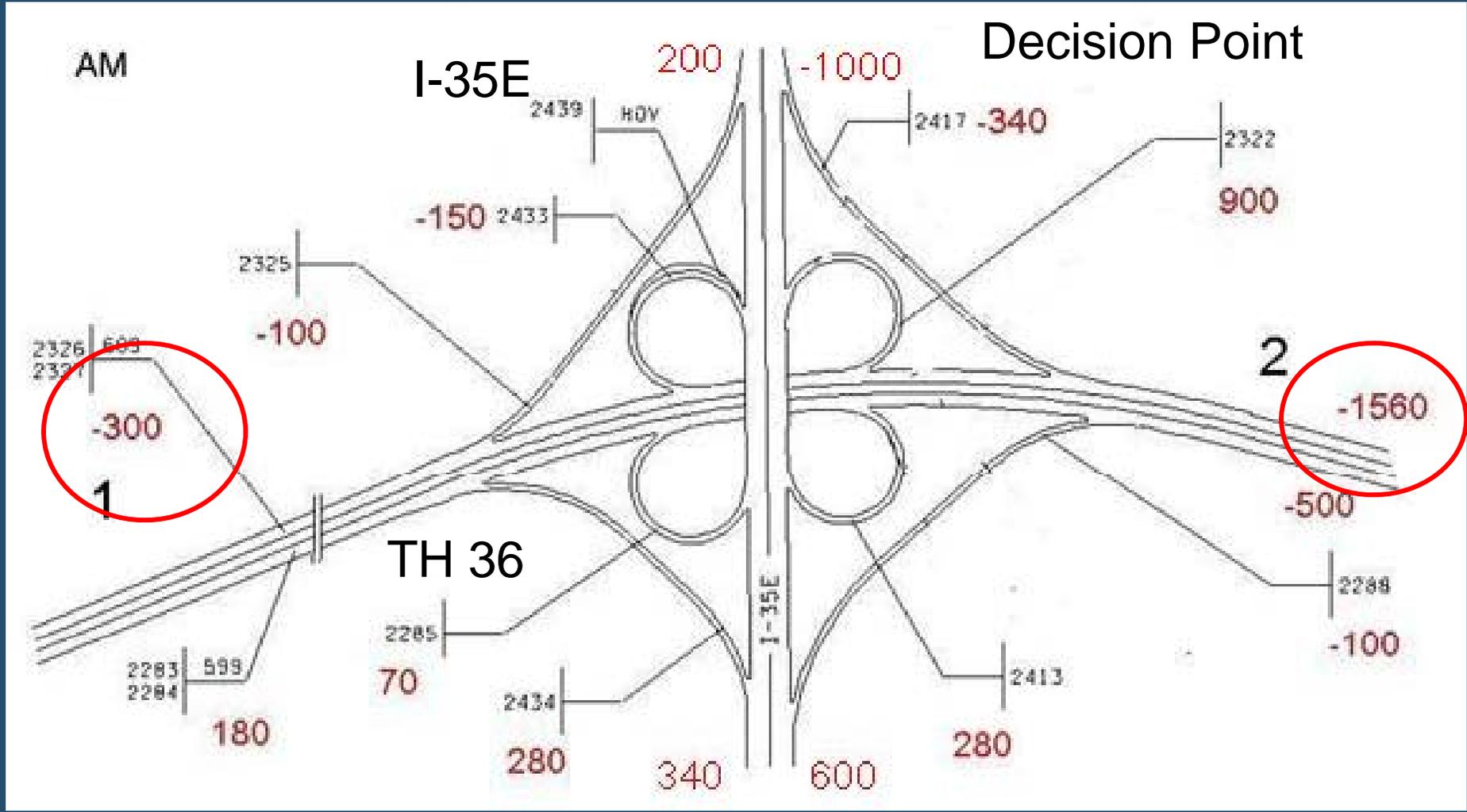
- 694/35E Under Construction
- Minimal impact to travel times and speeds on detour routes



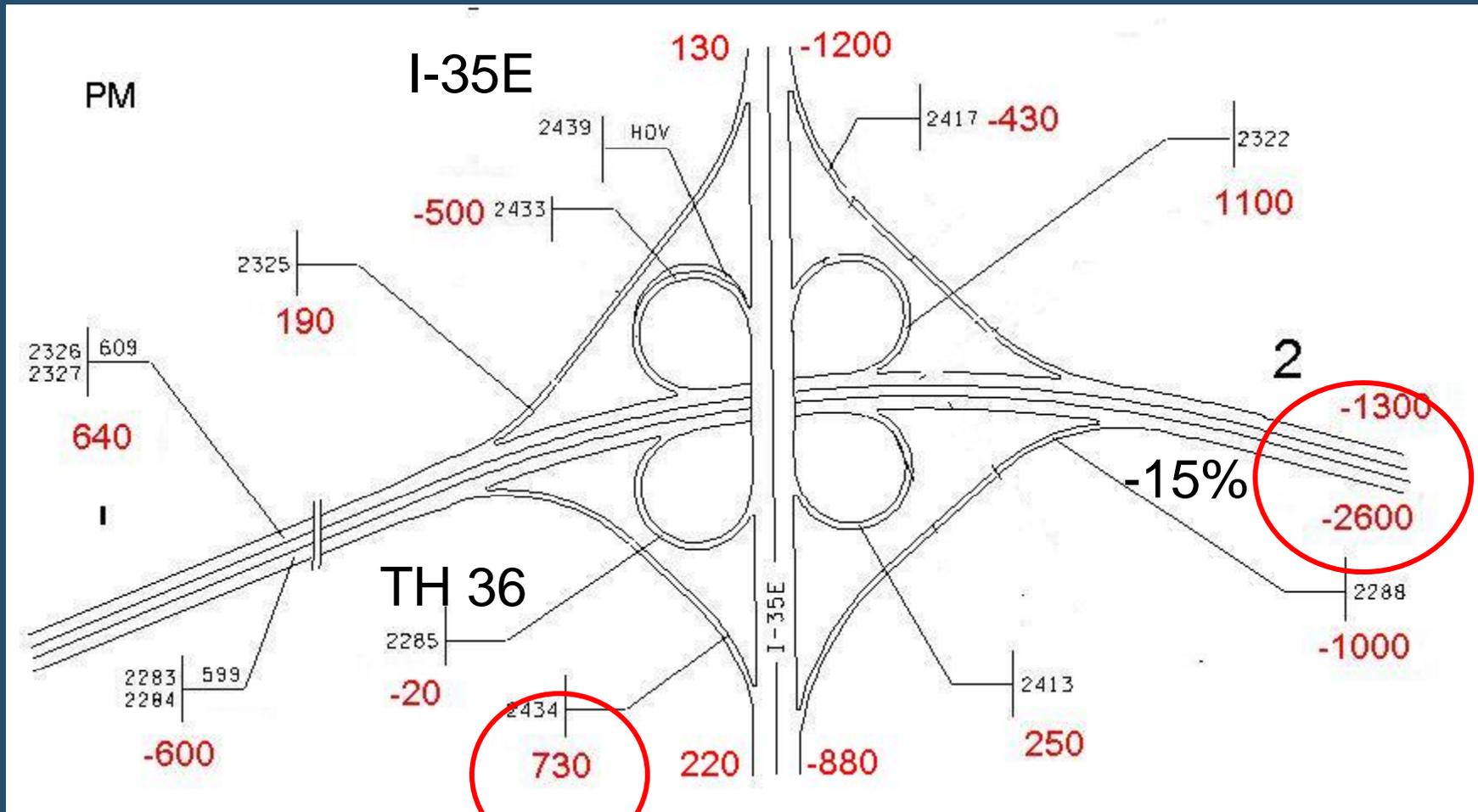
Westbound Detour AM



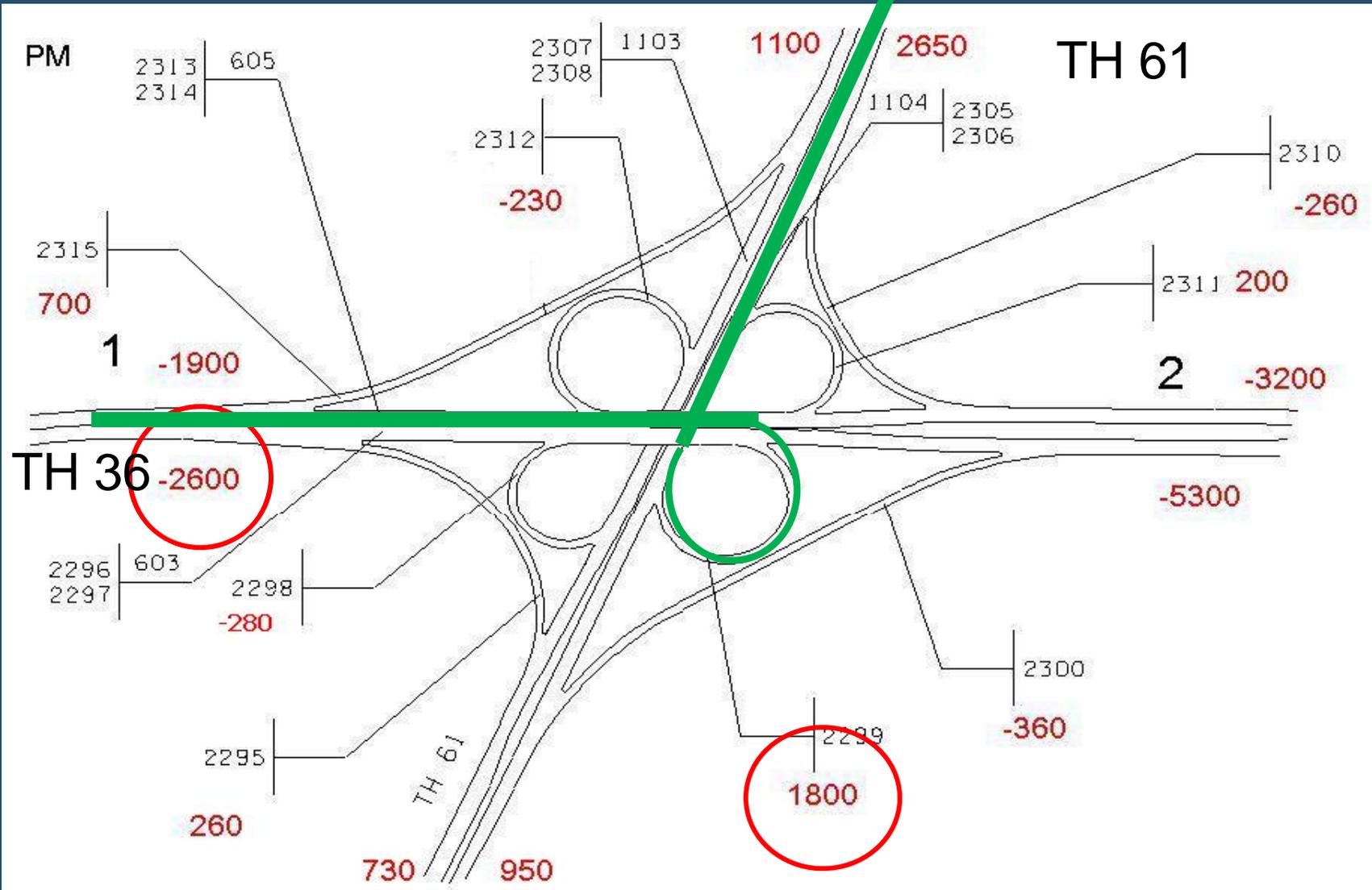
Westbound Detour AM



Eastbound Detour PM



Eastbound Detour PM





Freeway / Detour Summary

- Not everyone followed the signed detours
- Preferred to deal with shorter routes even though there were construction and signal delays
- No major traffic impacts on detour routes



Travel Time Systems

- Goal – Provide travel times for WB TH 36 Traffic on detour routes
- Challenge – Implementing reliable data into the RTMC





REDUCING IMPACTS BY REDUCING CONSTRUCTION TIME





Accelerated Construction

- A+B Contracting
 - Open to 2 Lanes of Traffic
 - Bid Between 145 and 210 Days
 - RUC = \$15,000 per Day
- Awarded Contract – 195 Days
- Range of Bids – 145 to 195 Days



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Accelerated Construction

- Lane Rental
- “No Excuse Bonus”
 - Open to 1 Lane of Traffic
 - 145 Days = \$350,000
 - Addition \$75,000 for every 5 days earlier
 - Capped at \$650,000





Post Closure Market Research

- 92% Residents
- 84% Businesses
- 89% Commuters
- Faster, Safer and Lower Cost
- “Biggest non-event of the year”





Lessons Learned

- Early Discussion (1+ Year)
- Cost Savings ~ 15%
- Time Savings ~ 1+ Year
- Start Detour on Tuesday
- No closure during winter months





Moving Forward

- Closing interchanges “no big deal” anymore
- Full road closures – more receptive
- \$\$ is driving everything
- Tools for full closure:
 - Innovative Contracting
 - Very Early Coordination
 - ITS Systems
- Are we utilizing full closures too much?





Special Thanks

Phil Forst – FHWA Minnesota

Chris Roy – Mn/DOT Area Manager

Steve Kordosky – Mn/DOT Project Manager

Questions?

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