


**Robert Street – Maintaining  
Business Access through  
Innovative Traffic Management**

James Gersema, PE  
Senior Associate, SRF Consulting Group, Inc.  
SRF Consulting Group, Inc.



## Project Background

Robert Street...

- Is MnDOT TH 952A
- Is Approximately 2.4 miles long
- Is the main N-S route in West St. Paul
- Has an ADT ranging from 16,000 to 26,000
- Has crash rates exceeding the critical rate
- Has an access density 3x the MnDOT standard



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## Project Background



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Robert Street is the home to...

- 6 strip malls
- 2 supermarkets
- 4 gas stations
- 6 banks
- 34 restaurants (1/2 fast food)
- 3 discount retail stores
- 2 home improvement warehouses



## Project Challenges

- Robert Street is a Destination, not a thru route.
- 80' ROW width, every inch is accounted for.
- Significant Transit and Pedestrian use



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## Construction Staging Analysis

### Concept A

One lane of traffic in each direction during construction.

### Concept B

Provides two lanes of traffic in one direction during construction. The traffic going in the opposite direction would be diverted to alternate routes

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## Construction Staging Analysis

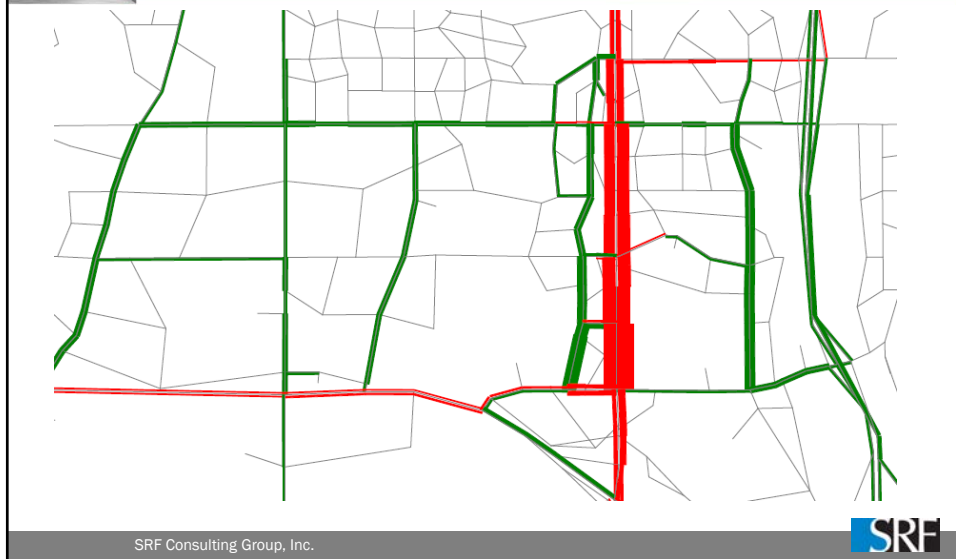
For both Concept A and Concept B, the roadway would be constructed in 3 stages – west 1/3, east 1/3 and the middle (center median) last.

This is necessary to allow the contractor adequate space to work in for safety reasons – both worker safety and motorist safety.

## Construction Staging Analysis

The Regional Travel Demand Model was reviewed to determine the change in travel patterns and amount of traffic diversion for each concept. It was assumed that during construction no traffic was to leave the transportation network.

## Construction Staging Analysis



## Construction Staging Analysis

### Concept A – Advantages

- Traffic can pass through the corridor in both directions.
- Amount of forced traffic diversion off Robert Street is lower with this concept
- Transit service may be possible in both directions, but alternative routes would be desired during construction

## Construction Staging Analysis

### Concept A – Disadvantages

- All left turning movements onto driveways and cross streets would need to be prohibited
- In addition, right turns for delivery trucks would be prohibited
- Vehicle breakdowns would create significant delays until removed
- Emergency vehicles would have difficulty as there is no lane for vehicles to move over to

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## Construction Staging Analysis

### Concept B – Advantages

- Left turns would be allowed
- Right turns for delivery trucks would be allowed.
- Provides better response for emergency service vehicles and breakdowns

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## Construction Staging Analysis

### Concept B - Disadvantages

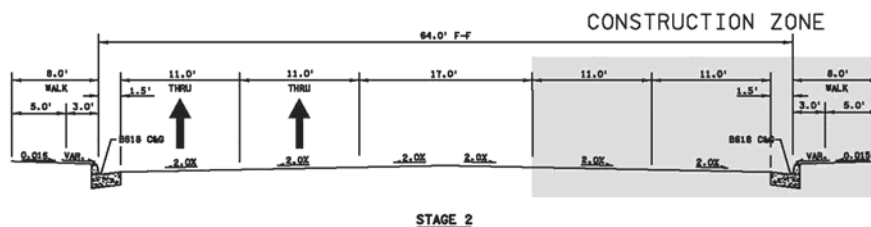
- One direction would be completely re-routed off Robert St. to alternate routes.
- Increases amount of traffic using alternative routes.
- Only provides one direction of traffic for transit.

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## Construction Staging Analysis

Based on the analysis, it was decided to proceed with Concept B, primarily due the improved property access for customers and deliveries.



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## Traffic Control Plan

Two main detour routes will be in effect during construction.

- One that routes the thru traffic around the construction. **“Robert Street Detour Route”**
- One that routes the business traffic to the corridor’s businesses. **“Robert Street Business Access Route”**

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## Traffic Control Plan

20 key off corridor intersections were reviewed to determine how they would be able to handle the additional diverted traffic. All but 1 were non signalized intersections.



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## Traffic Control Plan

Improvements were selected at 5 off corridor intersections.

- One intersection requires restriping for a right turn lanes.
- Two intersections requires temporary traffic control signals.
- Two intersections require permanent widening for new turn lanes and temporary signals.

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## Traffic Control Plan

In addition to the capacity improvements along the business access route, disincentives will be added to minimize the increase in residential street traffic.

- Temporary speed bumps
- Additional stop signs
- Street access closures (temporary dead end)



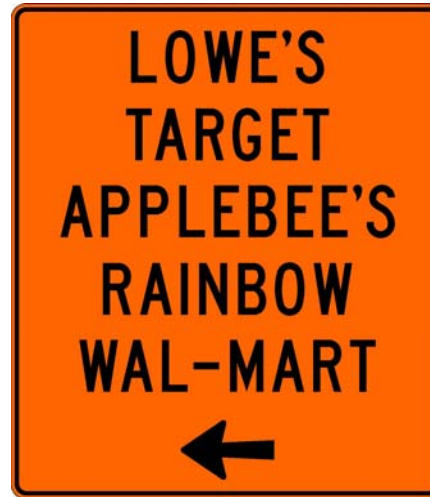
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## Traffic Control Plan

Specialty construction signage will be placed along the business access route.

56 custom business signs will be created.



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## Traffic Control Plan

Pedestrians were not forgotten as part of this process. A pay item for Temporary Pedestrian Access Control (TPAR) has been included, as well as provisions for temporary bituminous walk, APS as part of the temporary traffic control signals, and temporary bus stop amenities in the construction zone.



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