Welcome!

County Road 9 (Rockford Road) Bridge Project

Public Open House
County Road 9 (Rockford Road) Bridge Project

Project Schedule

2018

February | March | April | May | June | July | August | September

PUBLIC AND AGENCY INVOLVEMENT

TRAFFIC ANALYSIS

ENVIRONMENTAL DOCUMENTATION

PRELIMINARY DESIGN

Open House

Agency Meeting

FINAL DESIGN & CONSTRUCTION
(to be determined based on funding)
Project Background

- The City of Plymouth, Hennepin County, and MnDOT are studying improvements for the County Road 9 (Rockford Road) bridge over Interstate 494.
- Built in 1965, the bridge is approaching its life expectancy and does not provide enough capacity to accommodate existing traffic and turning movements.
- While development in Plymouth continues, the County Road 9 (Rockford Road) interchange handles an average of more than 39,000 vehicles per day, approximately 26 times the traffic levels than when initially constructed.
- To address the condition of the bridge, along with existing and future concerns about traffic safety and mobility, the City and its partners are evaluating potential improvements for the bridge and working to secure funding to make the identified improvements.
- This study will identify the improvements that will ultimately be built.

1965

2018

EXISTING INTERCHANGE

Without dedicated left turn lanes, drivers must often wait for breaks in oncoming traffic to turn left onto I-494. Crashes occur when drivers veer from the left lane into the right through lane to avoid waiting. Rear-end and T-bone crashes are also common.

Full funding for the project has not yet been secured. Some funds have been allocated to the project through MnDOT. Timing of construction has not been determined.
A formal environmental document will be completed that describes the need for the project, the alternatives considered, and the preferred alternative. The preferred alternative will have impacts to social, economic and environmental resources documented. Avoidance of these resources will be the first priority, and if they cannot be avoided, will be minimized to the greatest extent practical.

Items to be studied and noted in the environmental document include:

- **Safety:** crash rates, types of crashes and severity of crashes
- **Traffic:** existing and future traffic volumes and existing and future congestion
- **Contamination:** locations of potential contamination or regulated waste (asbestos, lead paint, etc.)
- **Wetlands:** locations of wetlands and types of wetlands as well as potential impacts and mitigation
- **Threatened and Endangered Species:** state and federal species – none anticipated
- **Historic and Archaeological Resources:** none anticipated
- **Environmental Justice:** disproportionate impacts to low income or minority populations – none anticipated
- **Property Impacts:** right of way process
- **Project Costs:** anticipated project costs and potential funding sources
Existing and 2040 No Build (If We Do Nothing)
Traffic Volumes and Intersection Operations

Intersection 1: Annapolis Lane/Berkshire Lane
AM Peak Hour Level of Service
Existing 2040 No Build

PM Peak Hour Level of Service
Existing 2040 No Build

Intersection 2: I-494 East (Southbound) Ramps
AM Peak Hour Level of Service
Existing 2040 No Build

PM Peak Hour Level of Service
Existing 2040 No Build

Intersection 3: I-494 West (Northbound) Ramps
AM Peak Hour Level of Service
Existing 2040 No Build

PM Peak Hour Level of Service
Existing 2040 No Build

Intersection 4: Vinewood Lane
AM Peak Hour Level of Service
Existing 2040 No Build

PM Peak Hour Level of Service
Existing 2040 No Build

Level of Service
Delay (seconds per vehicle)
Description
A ≤ 10 Free Flow
B > 10 - 20 Slight Delay
C > 20 - 35 Acceptable Delay
D > 35 - 55 Tolerable Delay
E > 55 - 80 Intolerable Delay
F > 80 Congested

AM ××× - 2013-2018 Daily Traffic (number of vehicles)

County Road 9 (Rockford Road) Bridge Project
County Road 9 (Rockford Road) Bridge Project

Safety

### Intersection 1: Annapolis Lane/Berkshire Lane

<table>
<thead>
<tr>
<th></th>
<th>Crash Rate</th>
<th>Severity Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statewide Averages</td>
<td>0.43</td>
<td>0.7</td>
</tr>
</tbody>
</table>

- Rear End: 7
- Side: 14
- Swipe: 2
- Left Turn: 1

### Intersection 2: I-494 East (Southbound) Ramps

<table>
<thead>
<tr>
<th></th>
<th>Crash Rate</th>
<th>Severity Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statewide Averages</td>
<td>1.18</td>
<td>0.7</td>
</tr>
</tbody>
</table>

- Rear End: 18
- Side: 38
- Swipe: 6
- Left Turn: 5

### Intersection 3: I-494 West (Northbound) Ramps

<table>
<thead>
<tr>
<th></th>
<th>Crash Rate</th>
<th>Severity Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statewide Averages</td>
<td>2.61</td>
<td>0.7</td>
</tr>
</tbody>
</table>

- Rear End: 64
- Side: 44
- Swipe: 11
- Left Turn: 4

### Intersection 4: Vinewood Lane

<table>
<thead>
<tr>
<th></th>
<th>Crash Rate</th>
<th>Severity Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statewide Averages</td>
<td>0.52</td>
<td>0.7</td>
</tr>
</tbody>
</table>

- Rear End: 7
- Side: 15
- Swipe: 3
- Left Turn: 3

### Crash Rates

- Crash rates at intersections are determined by calculating the number of crashes occurring per million entering vehicles per year.
- Severity rates refer to crash rates that are weighted by the severity of crashes that occur at an intersection.

### Statewide Averages

- Statewide average crash rates and severity rates represent an average of rates for similar types of intersections (signalized intersections with similar volumes and speeds) throughout the state.

### Size of Circle

- Size of circle is reflective of number of crashes from 2011-2015 (listed inside the circle).
- Orange circles represent intersections with crash rates and critical crash rates higher than the statewide averages.
**Alternative 1: Diamond Interchange**

**PROS**
- Similar design to existing bridge with additional dedicated dual left turn lanes in each direction
- Provides for acceptable traffic operations
- Minimal wetland impacts
- Limited right of way impacts
- Significant crash reduction compared to existing

**CONS**
- Wider bridge than a Diverging Diamond (Alternative 2)

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### Intersection 1: Annapolis Lane/Berkshire Lane

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<thead>
<tr>
<th>AM Peak Hour Level of Service</th>
<th>PM Peak Hour Level of Service</th>
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</thead>
<tbody>
<tr>
<td>2040 No Build</td>
<td>Alternative 1</td>
</tr>
<tr>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

### Intersection 2: I-494 East (Southbound) Ramps

<table>
<thead>
<tr>
<th>AM Peak Hour Level of Service</th>
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<tr>
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<td>Alternative 1</td>
</tr>
<tr>
<td>C</td>
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### Intersection 3: I-494 West (Northbound) Ramps

<table>
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<tr>
<th>AM Peak Hour Level of Service</th>
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<td>2040 No Build</td>
<td>Alternative 1</td>
</tr>
<tr>
<td>D</td>
<td>C</td>
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</tbody>
</table>

### Intersection 4: Vinewood Lane

<table>
<thead>
<tr>
<th>AM Peak Hour Level of Service</th>
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</thead>
<tbody>
<tr>
<td>2040 No Build</td>
<td>Alternative 1</td>
</tr>
<tr>
<td>F</td>
<td>E</td>
</tr>
</tbody>
</table>

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**AM Peak Hour Level of Service for 2040 No Build Alternative 1**

- Intersection 1: Annapolis Lane/Berkshire Lane:
  - BB
- Intersection 2: I-494 East (Southbound) Ramps:
  - CB
- Intersection 3: I-494 West (Northbound) Ramps:
  - DC
- Intersection 4: Vinewood Lane:
  - E
Alternative 2: Diverging Diamond Interchange

**PROS**
- Greater crash reduction than Diamond (Alternative 1) and Single Point (Alternative 3)
- Provides for acceptable traffic operations
- Narrower bridge
- Construction costs lower than Single Point (Alternative 3)
- Significant crash reduction compared to existing

**CONS**
- Potential issues with spacing to and operations at adjacent intersections
- Potential right of way impacts near the southbound ramp intersection
- Potential for wetland impacts
- Construction staging is more complicated than tight diamond; cannot be constructed one half at a time
- Requires closure of Rockford Road for construction
- Less pedestrian-friendly (only crossing on south side of bridge)
Alternative 3: Single Point Interchange

**PROS**
- Significant crash reduction compared to existing
- Provides for acceptable traffic operations
- No wetland impacts

**CONS**
- Wider bridge
- Moderate right of way impacts
- Requires reconstruction of ramps and stormwater ponds
- Construction staging is more complicated than Diamond (Alternative 1); cannot be constructed one half at a time
- Requires closure of Rockford Road for construction
- Requires removal of pedestrian bridge; pedestrians would be routed onto new bridge
- Highest construction costs

### Intersection 1: Annapolis Lane/Berkshire Lane

<table>
<thead>
<tr>
<th>AM Peak Hour Level of Service</th>
<th>2040 No Build</th>
<th>Alternative 3</th>
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</thead>
<tbody>
<tr>
<td>B</td>
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<td></td>
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</tbody>
</table>

### Intersection 2/3: I-494 East and West Ramps

<table>
<thead>
<tr>
<th>AM Peak Hour Level of Service</th>
<th>2040 No Build</th>
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</thead>
<tbody>
<tr>
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### Intersection 4: Vinewood Lane

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<tbody>
<tr>
<td>E</td>
<td>C</td>
<td></td>
</tr>
</tbody>
</table>
## Summary of Alternatives

<table>
<thead>
<tr>
<th></th>
<th>Alternative 1: Diamond Interchange</th>
<th>Alternative 2: Diverging Diamond Interchange</th>
<th>Alternative 3: Single Point Interchange</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Safety</strong></td>
<td>Provides proper crash reduction</td>
<td>Provides proper crash reduction</td>
<td>Provides proper crash reduction</td>
</tr>
<tr>
<td><strong>Operations</strong></td>
<td>Provides acceptable traffic operations</td>
<td>Provides the best traffic operations</td>
<td>Provides acceptable traffic operations</td>
</tr>
<tr>
<td><strong>Pedestrian Accommodations</strong></td>
<td>Pedestrian bridge remains in place; sidewalk added along the north side of County Road 9 (Rockford Road)</td>
<td>Non-standard design for pedestrians, no sidewalk proposed along the north side of County Road 9 (Rockford Road). Alternative 1 is safest option.</td>
<td>Non-standard design for pedestrians, Alternative 1 is safest option.</td>
</tr>
<tr>
<td><strong>Right of Way Impacts</strong></td>
<td>Limited right of way impacts</td>
<td>Some right of way impacts near southbound ramp intersection</td>
<td>Some right of way impacts</td>
</tr>
<tr>
<td><strong>Wetland Impacts</strong></td>
<td>Minimal wetland impacts</td>
<td>Minimal wetland impacts</td>
<td>No wetland impacts</td>
</tr>
<tr>
<td><strong>Construction Costs</strong></td>
<td>Lowest construction costs</td>
<td>Low-medium construction costs</td>
<td>Highest construction costs; requires reconstruction of ramps and stormwater ponds</td>
</tr>
<tr>
<td><strong>Construction Staging</strong></td>
<td>Shortened construction period compared to other alternatives; can be constructed one half at a time if needed</td>
<td>More complicated than Alternative 1; requires closure of County Road 9 (Rockford Road) for construction</td>
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</tr>
</tbody>
</table>

**Legend**

- **Good** outcome relative to other alternatives
- **Fair** outcome relative to other alternatives
- **Poor** outcome relative to other alternatives
Next Steps

1. Refine alternatives based on input
2. Identify a preferred alternative
3. Complete environmental document
4. Conduct a second open house meeting focused on the preferred alternative (Summer 2018)

Visit the City’s website for further information and updates: plymouthmn.gov/CR9BridgeProject