



## County Highway 42 Visioning Study County Planning Commission Meeting

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Transportation Department  
Physical Development Division  
November 18, 2021

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## Presentation Outline

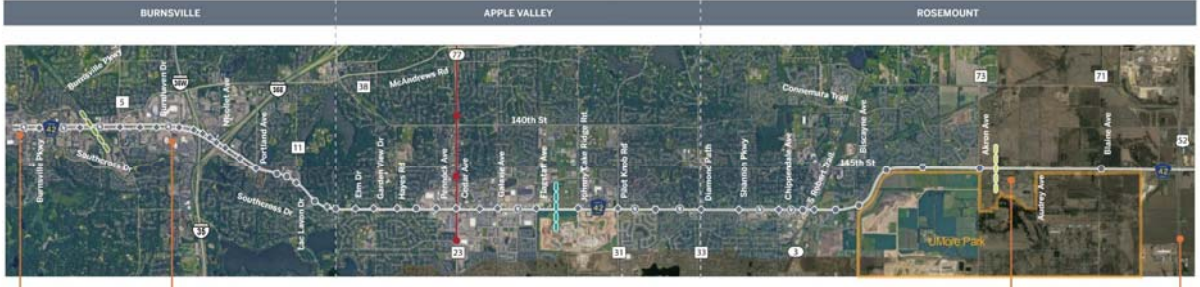


- Study Overview and Process (Review)
- Overall Vision and Management Plan Elements
- Stakeholders and Outreach Update
- Updated Plan Highlights
  - Each City – Burnsville, Apple Valley, & Rosemount
  - Issues and Concepts at Key Locations – Needs / Options
- Next Steps & Discussion

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## Review: Study Overview


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DAKOTA/SCOTT COUNTY LINE
BURNSVILLE CENTER
RED LINE BRT
DCTC
US 52

<ul style="list-style-type: none"> <li> 6 LANE DIVIDED HIGHWAY</li> <li> 4 LANE DIVIDED HIGHWAY</li> <li> CITY BOUNDARY</li> </ul>	<ul style="list-style-type: none"> <li> LAKE MARION GREENWAY TRAIL CROSSING</li> <li> NORTH CREEK GREENWAY TRAIL</li> <li> VERMILLION HIGHLANDS GREENWAY CONCEPT PLAN</li> </ul>	<ul style="list-style-type: none"> <li> EXISTING TRAFFIC SIGNAL (29 TOTAL)</li> <li> FULL ACCESS - NO SIGNAL (13 TOTAL)</li> <li> 1/4 ACCESS (9 TOTAL)</li> </ul>
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- 15.5-mile study corridor – principal arterial (PA) highway
- 29 signalized intersections (+1 in 2021 – CH 73/Akron Ave)
- Previously studied with Scott County in 1999 (Rosemount amended 2007)

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## Review: Study Process and Status


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### Key Study Questions

- What are the needs for Hwy 42 & communities?**
- How does/will the corridor operate?**
- What are the possible problems & solutions?**
- Manage Hwy 42 based on updated vision; invest when & where needed**

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Currently:

- Refining proposed Highway 42 plan updates – the "2040 Management Plan"
- Sharing previews of the 2040 Vision with stakeholders
- Listening to questions & feedback

↑

We are here

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# Review: Overall Corridor Vision



- ✓ *Reduce or defer need for Highway 42 expansion*
- ✓ *Maximize safety and efficient operations*
- ✓ *Maintain & improve corridor functions, serving all travelers*
  - *2040 travel demand forecasts*
  - *All modes – ped, bike, bus transit, & motorists*



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# Review: Common Intersection Types

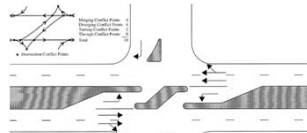


Vehicle Ops/Capacity  
 Safety

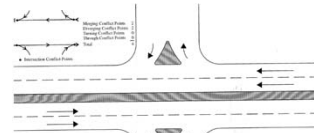
Most locations on Hwy 42 reflect **proven & conventional intersection types**

**Goal: Manage conflict points**

Conflict Types	
Diverge:	8
Merge:	8
Crossing:	16
<b>Total:</b>	<b>32</b>



**3/4 Intersection (no signal)**




**Right-in/Right-Out Intersection (no signal)**




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# Key Updates to 1999 Adopted Plan







**Study considers the roles of existing/future parallel routes and modernized technology to support Highway 42**



**Automated & Connected Vehicles** getting more common




Source: MnDOT


-  **Connected** signal systems (add more fiber)
-  **Cameras** for real-time traffic management
-  **Messaging** to assist drivers; manage traffic
-  **Adaptable** technology to address future needs

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# Key Updates to 1999 Adopted Plan




**Example Crossing Treatments**



**Additional Improvement Options:**

-  Grade-Separated Pedestrian + Bicycle Crossing
-  Signal Enhancements
-  Roadway Restriping
-  Cross-section Modification
-  Grade-Separated Interchange Options
-  Transit Improvements



1. Pedestrian countdown timers
2. High visibility marked crosswalks
3. ADA Compliant detectable warning fields and curb ramps

4. Two-stage crossing with center median push buttons
5. Pedestrian refuge island

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# Key Updates to 1999 Adopted Plan



New perspectives and priorities for bicyclists, pedestrians, & transit riders

## Recommendations



### Build grade-separated crossings

Locations that may benefit from grade-separated crossings (either a pedestrian bridge or tunnel).



### Install bus stop amenities

Locations that may benefit from bus stop amenities such as shelters, benches, lighting, or improvements to sidewalks and trails. This will provide better pedestrian and bicycle access to bus stop locations.



### Close sidewalk and trail gaps

Provide adjacent sidewalk or trail connections for existing gaps in the system. As the map above shows, there are needs throughout the corridor to either provide sidewalk/trails where they don't exist today or improve by widening existing sidewalks to accommodate bicycles.



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# Pedestrian/Bike Structure Locations



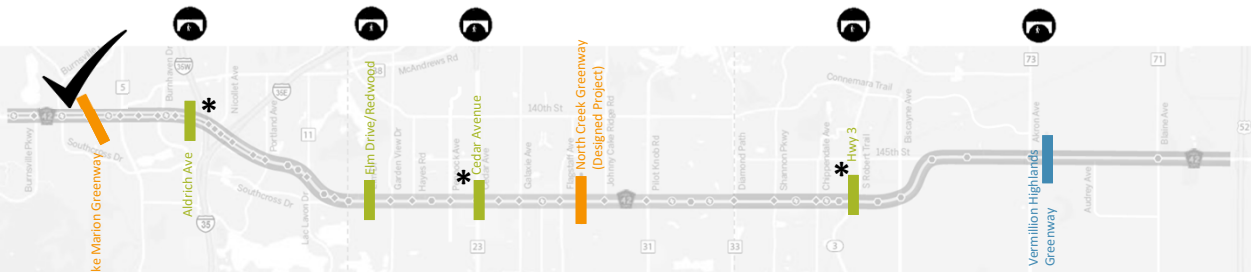

**GOAL:** Improve ability for pedestrians and bicyclists to cross Hwy 42 unimpeded by Hwy 42 traffic.



**Recommendation:** Locations that will benefit from grade-separated crossing (either a pedestrian bridge or tunnel).

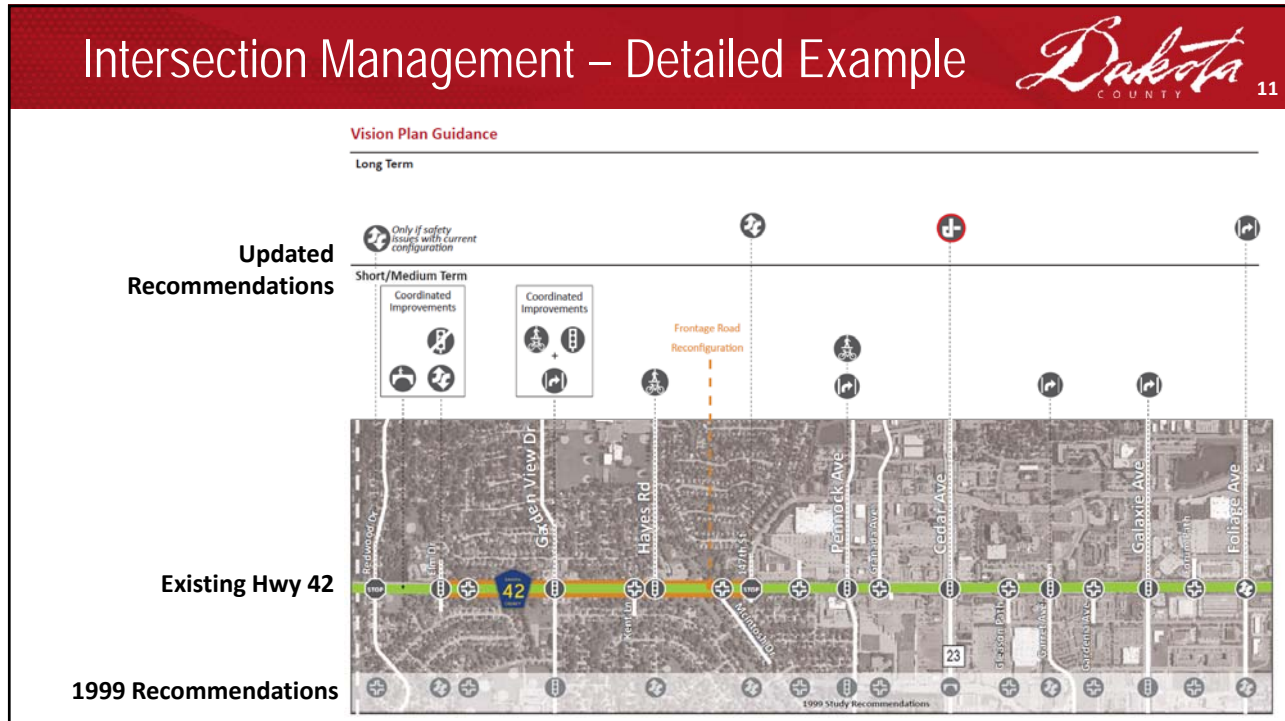
### Recommended Locations:

- █ Existing Crossing or Designed Project
- █ Planned (not designed)
- █ Study Recommended



\* Grade-separated ped-bike crossing improvement could be integral with a roadway bridge

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## Stakeholders and Outreach Update


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### Meetings with Agency Reps

Hwy 42 Stakeholder Groups	Cities	Dakota County	MVTA	MnDOT & Fed Hwy Admin	Business Interests	Met Council & Other
Project Management Team (PMT)	✓	✓	✓			
Study Advisory Committee (SAC)	✓	✓	✓	✓	✓	✓
County Planning Commission		✓				
City Councils	✓					
County Board		✓				

### Online Public Engagement

**Website**



**Emails**



**Social Media**



**Online Meetings**




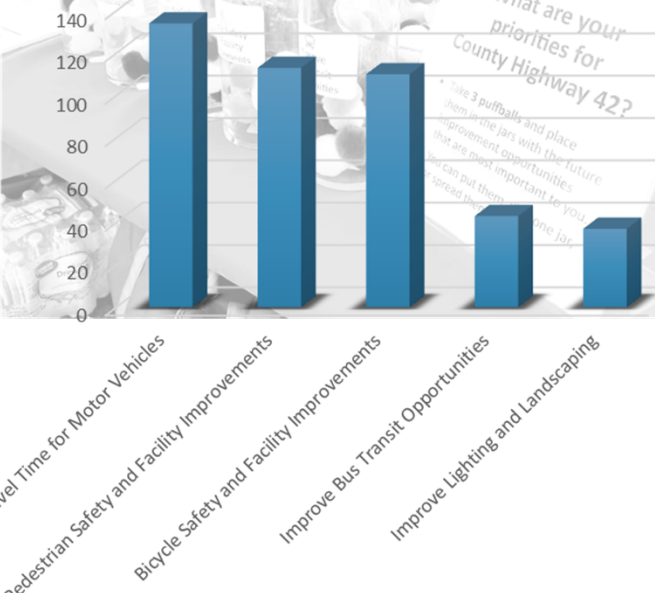
### In-Person Outreach!



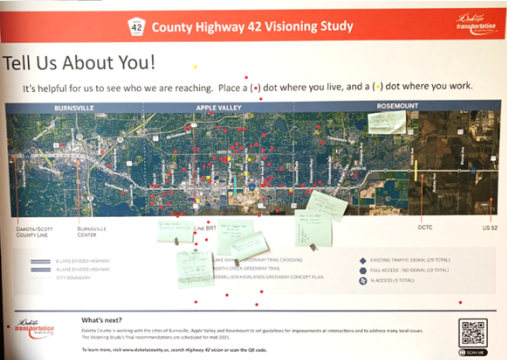
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# Public Feedback on Needs & Priorities


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Priority	Count
Reduced Travel Time for Motor Vehicles	140
Pedestrian Safety and Facility Improvements	120
Bicycle Safety and Facility Improvements	120
Improve Bus Transit Opportunities	50
Improve Lighting and Landscaping	40



**County Highway 42 Visioning Study**

Tell Us About You!

It's helpful for us to see who we are reaching. Place a (+) dot where you live, and a (-) dot where you work.


Map locations: Burnsville, Apple Valley, Rosemount, Dakota County, Burnsville, DACTC, US 52.

What's next? Public meeting with the other 10 councils, Apple Valley and Rosemount to get guidelines for improvements at intersections and to address many local issues. The Steering Board's final recommendations are scheduled for fall 2021.


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# Public Open House – July 15, 2021

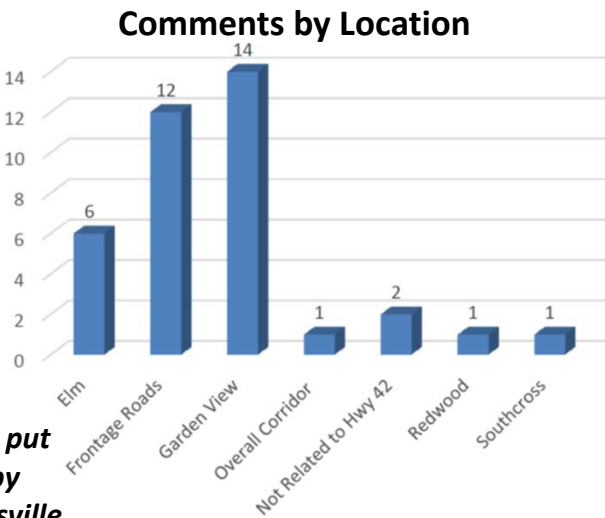

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**Redwood Park Pavilion**



## Comments by Location



Location	Count
Elm	6
Frontage Roads	12
Garden View	14
Overall Corridor	1
Not Related to Hwy 42	2
Redwood	1
Southcross	1

**This meeting helped put some focus on nearby Apple Valley & Burnsville Neighborhoods**

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Dakota
COUNTY 15

## Updated Co Hwy 42 Plan Highlights: Burnsville: Redevelopment & new ideas

Minor changes at many intersections to improve safety for all travelers

- 1 Highway 42 bus-stop improvements at existing stops and transit-station upgrades at Burnsville Center
- 2 Intersection redesigns at and near Aldrich Avenue, allowing traffic and pedestrians/ bicyclists to cross under Highway 42
- 3 Freeway interchange ramp changes to improve land access and Highway 42 connections
- 4 Improvements around Portland Avenue to address the eastbound lane drop and other issues
- 5 Possible bus-stop improvements east of I-35E
- 6 Maintain stop-controlled intersection at Redwood Drive, minimizing traffic diversions in Burnsville

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Dakota
COUNTY 16

## Burnsville Center Village Redevelopment & Network Vision

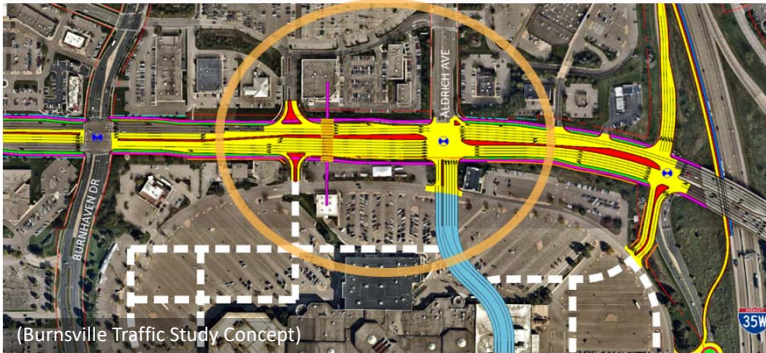
(Base map: Burnsville Center Village Traffic Study)

- **City's Vision**
  - Aldrich is main N-S roadway
  - Ped/Bike underpass west of Aldrich Ave
  - Transit service – Orange Line Extension; other
- **Opportunities**
  - Combine these elements
  - Manage high volumes and traffic issues with redevelopment
  - *Limit need to expand Hwy 42*

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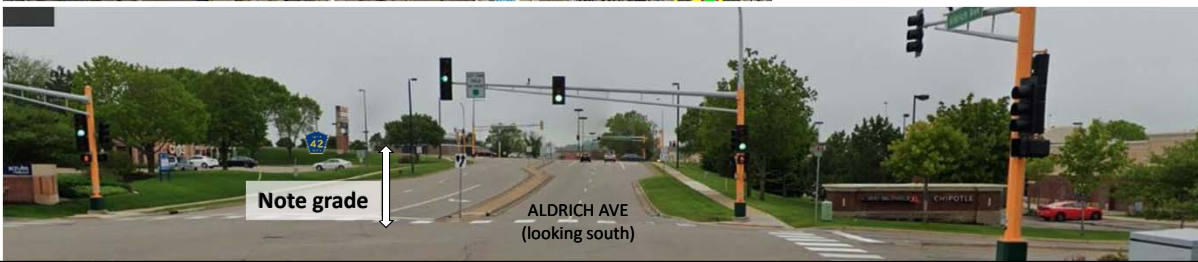


# Grade Separation Near Aldrich Ave



(Burnsville Traffic Study Concept)

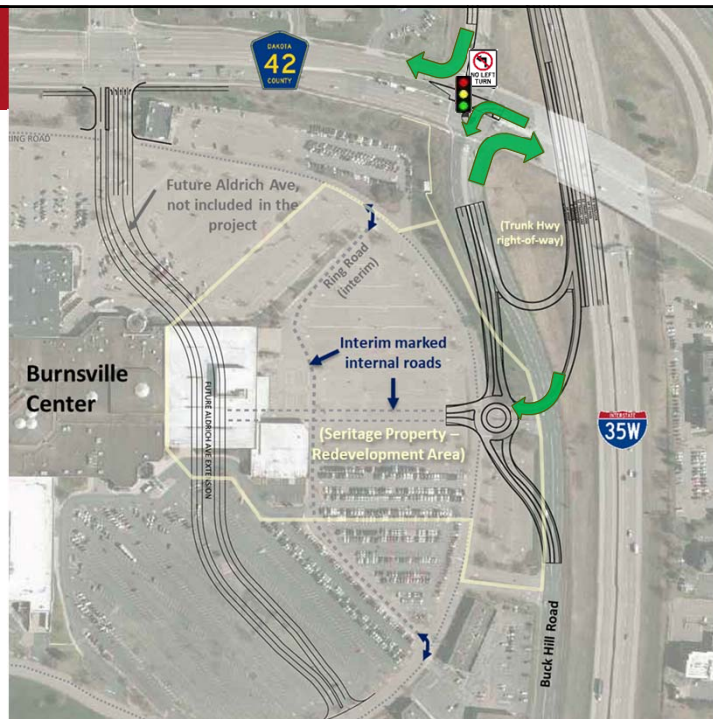
- Consistent with 1999 Adopted Plan
- Hwy 42 on a higher grade than land to north & south
- Burnsville to begin a design study in 2022



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# I-35W & Co Hwy 42 Interchange Concept


- MnDOT Transportation Economic Development (TED) program funding application submitted
- Simplifies heavy SB exit to EB Hwy 42 – makes a right turn vs. left today
- Significantly reduces conflict points and signal phases
- Reduces traffic on Hwy 42 (direct access to the redevelopment area and Buck Hill Road)



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## Updated Co Hwy 42 Plan Highlights: Apple Valley: Residential & park context


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- 1** Coordinated changes with the removal of the signal at Elm Drive concurrent with a new underpass at Redwood Park to accommodate pedestrians and bicyclists
- 2** Improvements at Garden View to address capacity issues with possible one-way frontage road system to provide more space for pedestrians and bicyclists, filling a gap in the trail system
- 3** Potential grade-separated crossings for pedestrians and bicyclists

- 4** Grade-separated crossing of the high-volume intersection of Cedar Ave/Hwy 77
- 5** New intersection configuration options to provide additional capacity at Pilot Knob Road

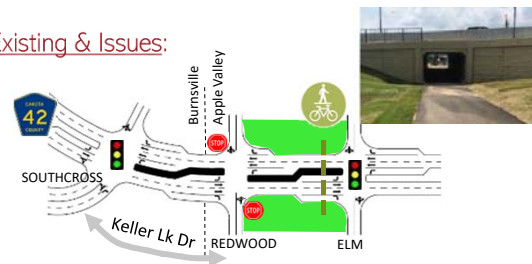
Other changes at many intersections to improve safety for all travelers

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## Redwood Park Neighborhood (with Burnsville)


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Existing & Issues:



- Traffic below signal thresholds; close spacing; traffic delays; full-access at Redwood Dr
- Resident concerns about access and traffic changes (Keller Lake Dr.) and safe crossing for peds/bikes

**Pedestrian and bicycle crossing improvements needed with Elm Dr signal removal – add bridge or tunnel**

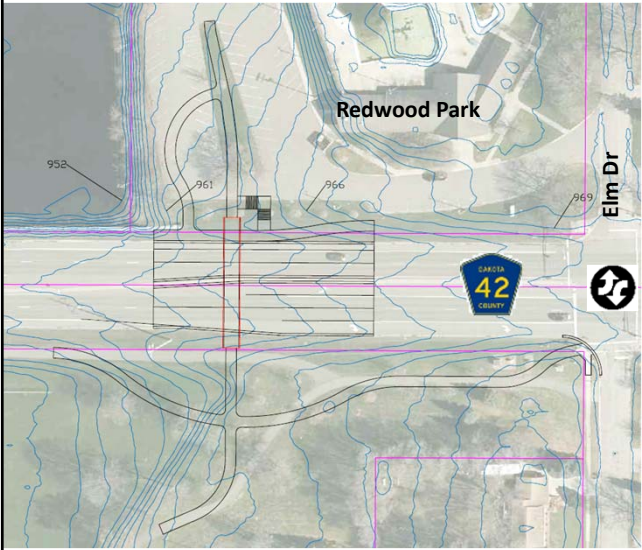
Planning Background & Proposed:

<b>Existing</b>	 SOUTHCROSS DR	 REDWOOD DR	 ELM DR
<b>1999 Adopted</b>			
<b>Vision Study Proposed:</b> remove signal at Elm No change at Southcross & Redwood; ¾-access at Elm	 SOUTHCROSS (maintain signal)	 REDWOOD (maintain stop control; left turns on traffic gaps)	 ELM (remove signal; add ped/bike structure)

**Signal removal is consistent with Adopted 1999 Plan. *Now proposing: the ped/bike structure; monitor traffic and safety.***

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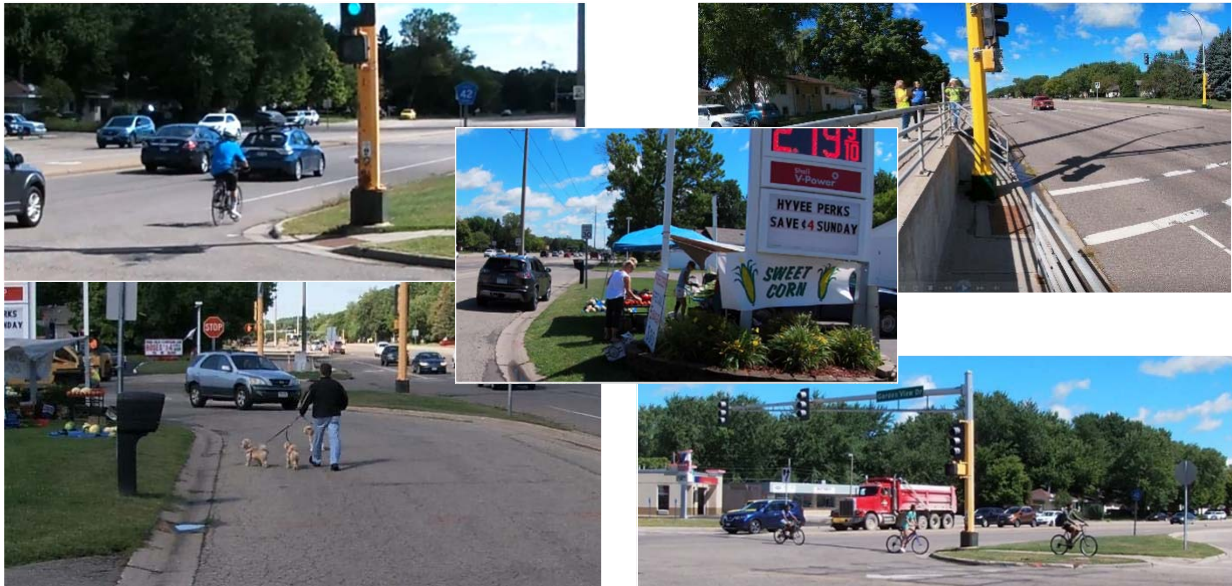
# Redwood Park Ped/Bike Underpass Options



- Concurrent with Elm Dr signal removal
- Options to fit existing or modified park plans

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# Garden View Drive & Frontage Roads



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## Dakota

### 42 at Garden View Drive & Vicinity

- Concepts to adjust intersection turn lanes, access, and other elements
- Address safety and provide more capacity

*Option: one-way frontage road segments?*

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## Dakota COUNTY 24

### One-Way Frontage Road Options

**Existing conditions**


**One-way frontage road**

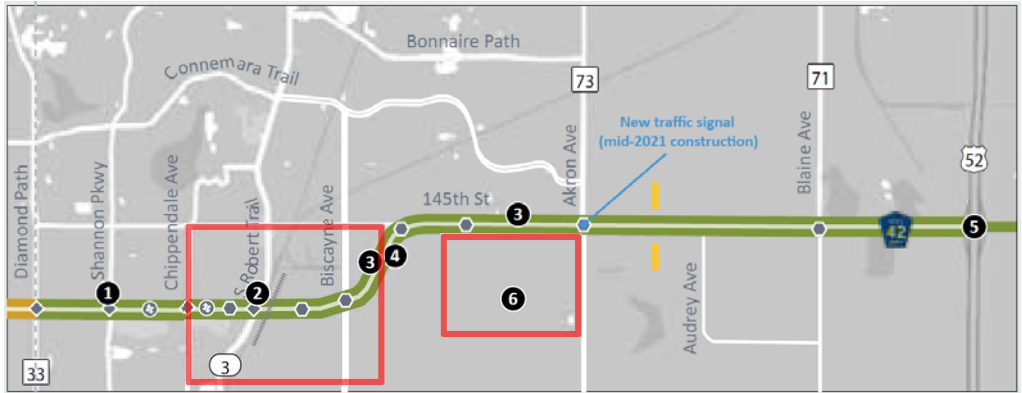
**Potential Benefits**

- Fill pedestrian/bike trail gaps
- Add green space (or provide parking options)
- Increased safety (including the Garden View Dr intersection)

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## Updated Co Hwy 42 Plan Highlights: Rosemount: Growth & changing context


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- 1 Pedestrian and bicycle crossing treatments to address current safety concerns
- 2 Grade-separated crossing of both the S. Robert Trail intersection and the adjacent railroad crossing of Highway 42
- 3 Trails to fill current gaps in the system between S. Robert Trail and Akron Avenue

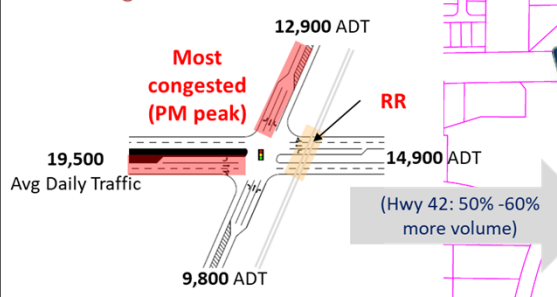
- 4 Future signals planned at Biscayne Ave and 145th St with potential changes to Hwy 42 to reduce skew through intersections
- 5 Possible loop ramps to provide for the heaviest traffic movements at Highway 52 and supporting road systems east of Blaine Avenue to manage direct access
- 6 Planned access along Highway 42 to support future roadway network as area is developed

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## Co 42 at TH 3 – Issues & Feasibility Concept

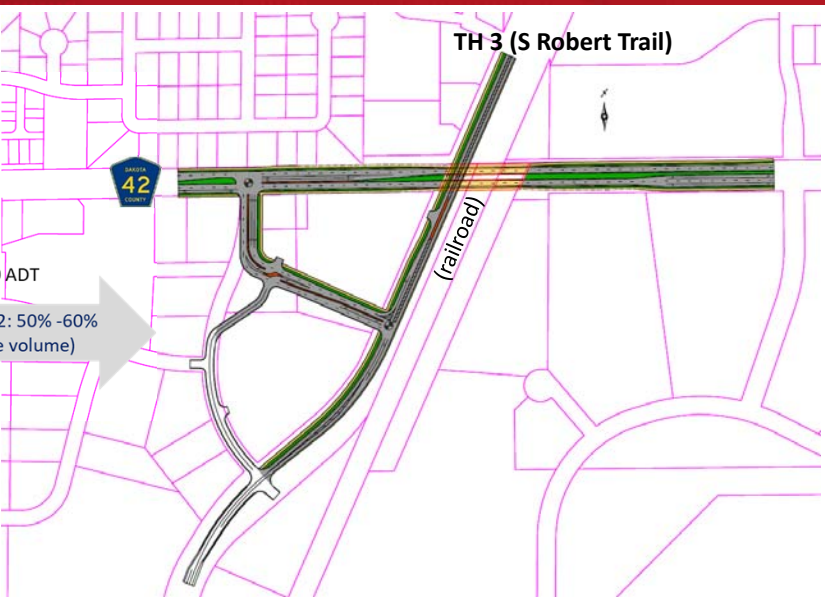


Existing & Forecast:



The 2019 volumes noted here will increase substantially, causing intersection operations to fail (by ~2030).

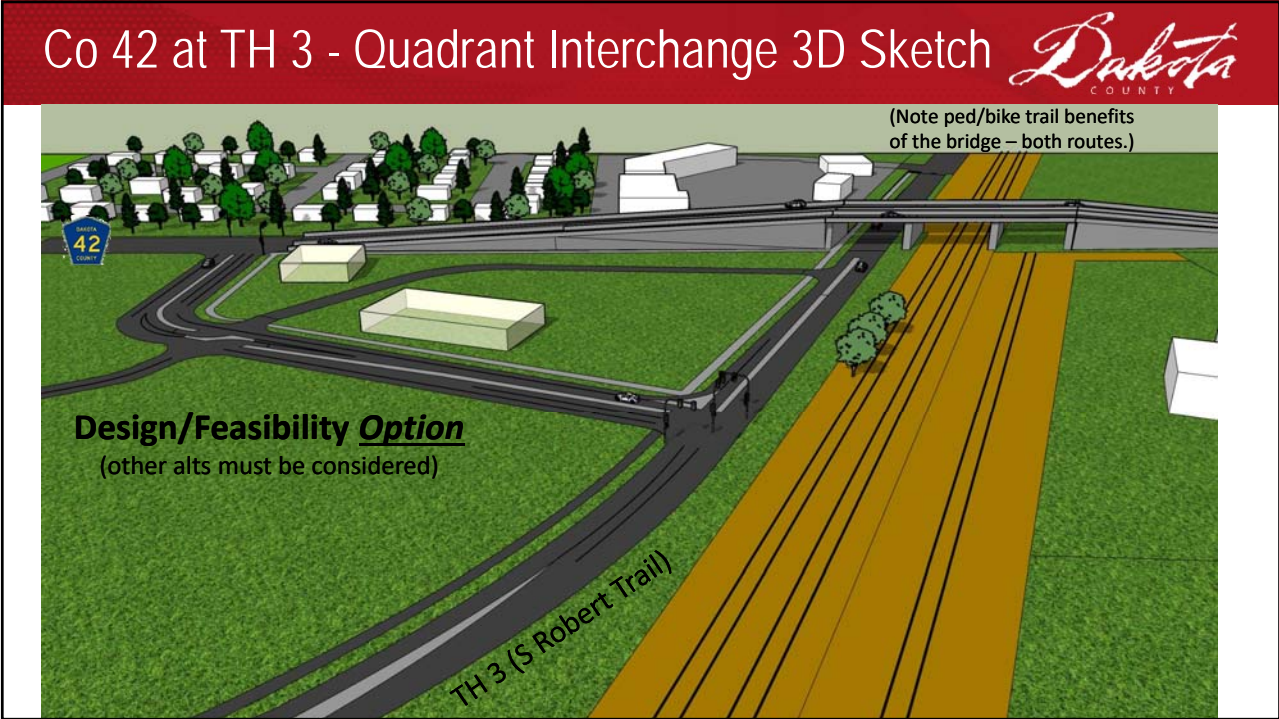
A quadrant interchange is an option, with other alternatives also possible.



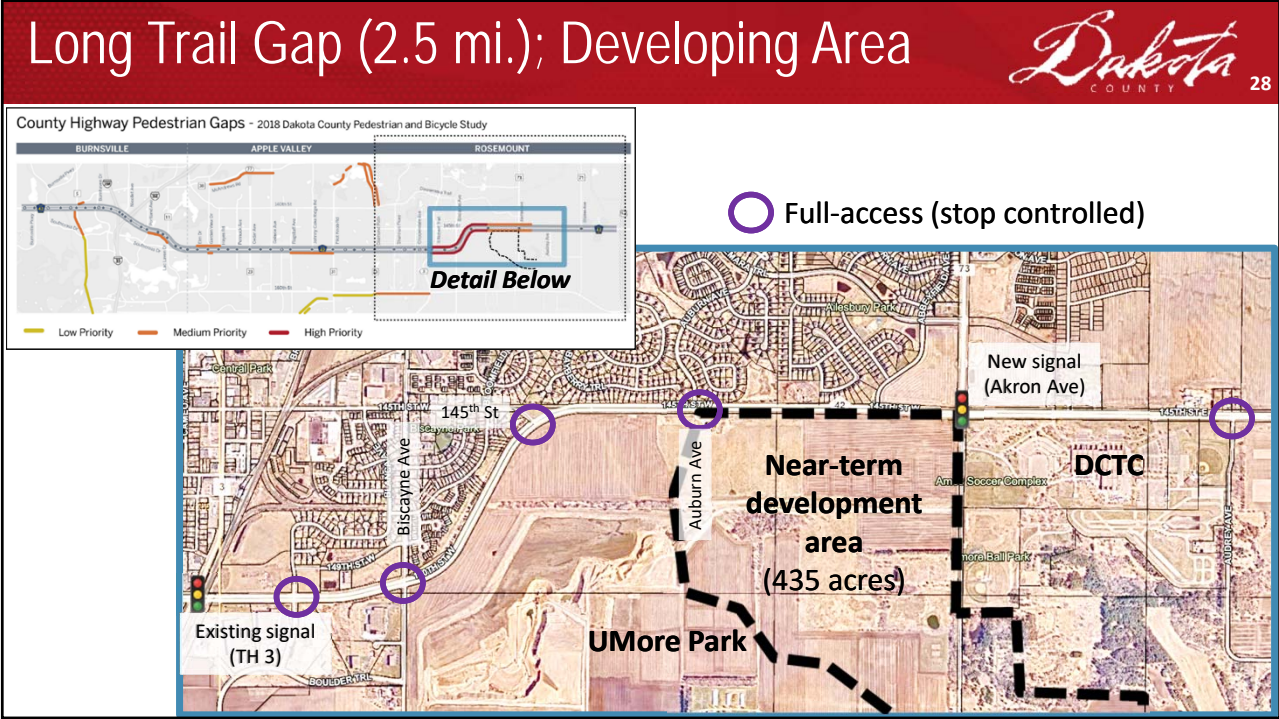
TH 3 (S Robert Trail)

(railroad)

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## Next Steps and Discussion



- Technical Reviews, Final Rounds (County & Cities' staff)
- Concluding Outreach
  - Draft Final Report on website; invite comments
  - Presentations, meetings
- City Council Meetings (January 2022)
- Finalize and Adopt Study (1<sup>st</sup> Quarter 2022)

*Questions?*