

Toolbox of Solutions

At-Grade Intersections

- Right In/Right Out
- Three Quarter
- Acceleration/Deceleration
- Restricted Crossing U-Turn (RCUT)
- Green T
- Displaced Left Turn
- Median U-Turn
- Jughandle
- And more

Grade Separated Intersections

- High T
- Local Road Separation
- Center Turn Overpass
- Flyovers

Segments

- Truck Climbing Lanes
- Shoulder Widening
- Passing Lanes



Toolbox of Solutions

Unconstrained

- \$ = 0.2 to 7.2 million
- \$\$ = 1.5 to 15 million
- \$\$\$ = 4.6 to 17.8 million
- \$\$\$\$ = 7.4 to 25.7 million
- \$\$\$\$\$ = 19.3 to 52.0 million

Constrained

- \$ = **1.0** to 12.6 million
- \$\$ = 4.1 to 28.9 million
- \$\$\$ = 7.4 to 23.9 million
- \$\$\$\$ = 14.7 to 41.1 million
- \$\$\$\$\$ = 36.3 to 80.6 million



At Grade - Right In/ Right Out

Pros

- Eliminates crossing maneuvers
- Continuous flow on mainline
- Access to and from one direction

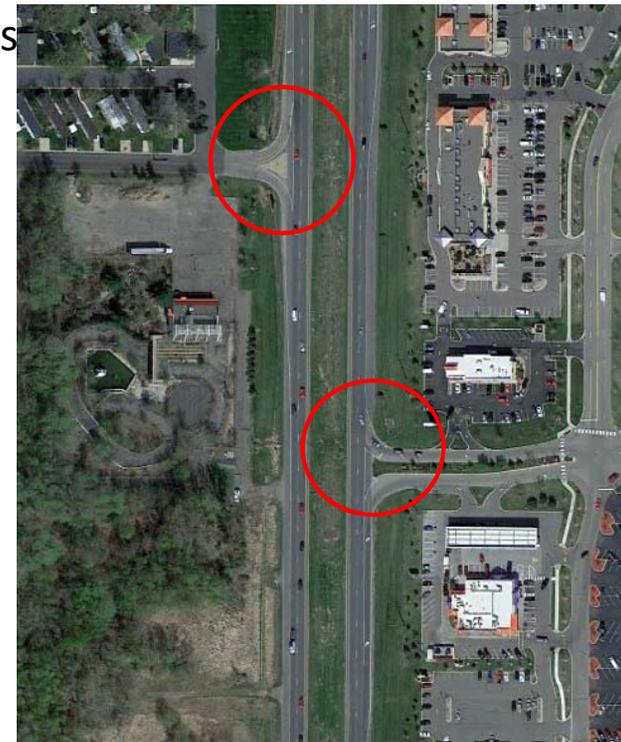
Cons

- Need alternative routes
- Reduce access

Best Applied

- High mainline traffic volumes
- When alternate routes are available

Cost \$



TH 65 south of 105th Avenue in Blaine, MN



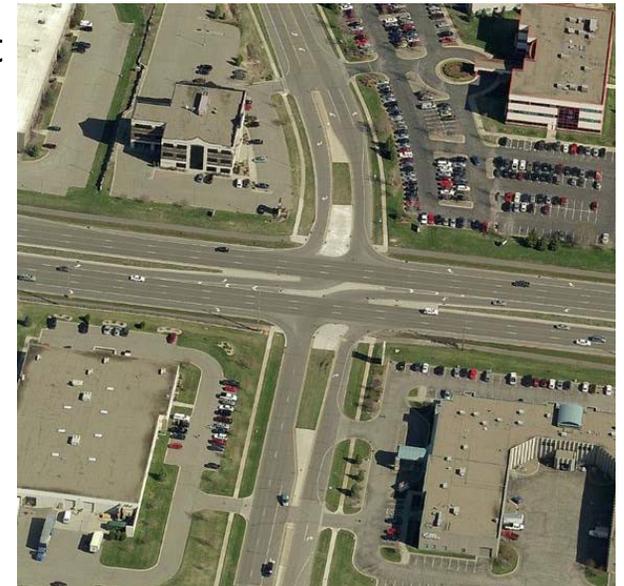
At Grade – Three Quarter

Pros

- Eliminates crossing maneuvers from side street
- Continuous flow on mainline
- Enables access from mainline

Cons

- Need alternative routes
- Reduce access from side street



CSAH 42 at Southcross Drive in Burnsville, MN

Best Applied

- High mainline traffic volumes
- When alternate routes are available

Cost \$



At Grade – Restricted Crossing U-Turn (RCUT)

Pros

- Eliminates left turns into high speed mainline traffic
- Continuous flow on mainline
- Can eliminates need for traffic signal
- Beneficial for heavy vehicles on side street

Cons

- Longer travel
- Reduce access from

Best Applied

- Rural 2-lane divided

Cost \$\$



TH 212 at TH 284 in Cologne, MN



Grade Separated – High T

Pros

- Continuous flow on both mainline directions
- Increase intersection capacity

Cons

- Expense

Best Applied

- High mainline and conflicting left turn volumes



TH 13 at CSAH 101 in Savage, MN

Cost \$\$\$

