



Interchange Project: Powers Boulevard (CO 21) and Research Parkway

This interchange reconstruction project is a part of CDOT's on-going expansion efforts in Southeastern Colorado that have sequentially improved interchanges along the Powers Boulevard corridor due to growth in Northeastern Colorado Springs. The plan follows improvements already made along the Powers Boulevard corridor with new interchanges at Union Boulevard, Old Ranch Road and Briargate Boulevard.

PUBLIC NEED

The initial design of the interchange was approved in 1997 as part of the Powers Boulevard Extension North, Woodmen Road to Interstate-25 Environmental Assessment (EA). CDOT is required to implement the Powers & Research grade separated traffic solution and has completed a re-evaluation including additional screening and analysis of interchange design alternatives. The planning and design process is in compliance with the National Environmental Policy Act (NEPA) during the re-evaluation.

The current configuration is an at-grade signalized intersection.

Key issues at this intersection:

- excessive vehicle wait times
- multimodal movements are not currently well-accommodated
- inadequate left turn lanes
- excessive vehicular congestion
- lack of pedestrian and bicycle access

PROJECT GOALS

- 1 Increase capacity - in and around the reconstructed intersection
- 2 Improve safety
- 3 Higher level of service
- 4 Improve riding surface (smoother and stronger pavement)
- 5 Bridge replacement
- 6 Resurfacing, restoration, rehabilitation
- 7 Reconstruction

FUNDING

CDOT has allocated a portion of the COVID-19 stimulus funding to be invested in this "ready to construct" interchange project. The Pikes Peak Area Council of Governments will add their share of \$8.5 million in sub allocated stimulus funds to the area's highest priority project along with CDOT's \$17 million.

Project Cost: \$42 Million

For more information on CDOT Stimulus Funding:
www.colorado.gov/governor/news/3896-cdot-puts-stimulus-funding-work-coloradans

DESIGN PHASE



PHASE 1: Preliminary Design

Completed Summer 2018

- Re-evaluation and DDI Preliminary Design



Existing at-grade interchange

PHASE 2: Final Design

Completed End of 2019

- Final design of Diverging Diamond Interchange (DDI)
- Right-of-way easement plans
- Geo technical borings
- Road Surveying



Completed Interchange

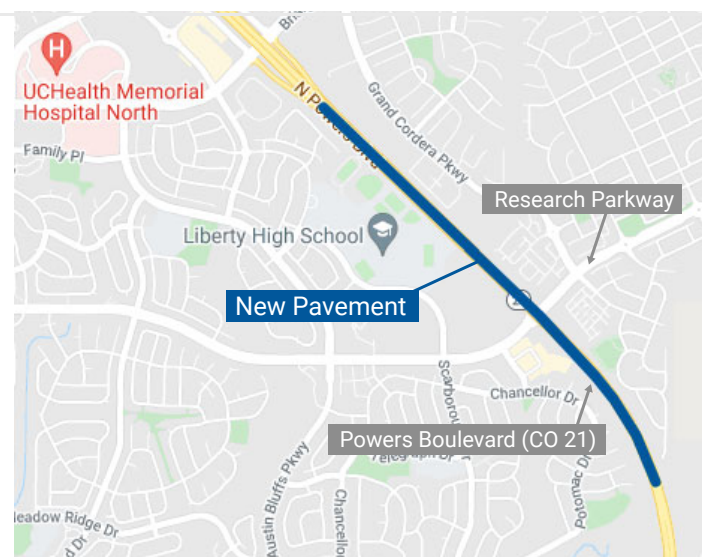
CONSTRUCTION SCHEDULE

► Work will begin June 2021 and be completed in Fall 2022.

CDOT and contractor Kraemer North America will begin work on June 24 to improve the safety and accessibility of Powers Boulevard/Colorado Highway 21 between Mile Markers 149 and 151 at Research Parkway.

Work will consist of replacing the current at-grade intersection with an innovative **Diverging Diamond Interchange** by constructing an overpass for Powers Boulevard/ Colorado Highway 21 traffic to move continuously through the intersection over Research Parkway.

- New pavement on three miles of Powers Blvd (CO 21)
- Addition of pedestrian/bicycle enhancements to improve community access to schools in the area
- Construction of new on- and off-ramps allowing free-flowing turns when entering and exiting Powers Boulevard/Colorado Highway 21 from Research Parkway



DIVERGING DIAMOND INTERCHANGE

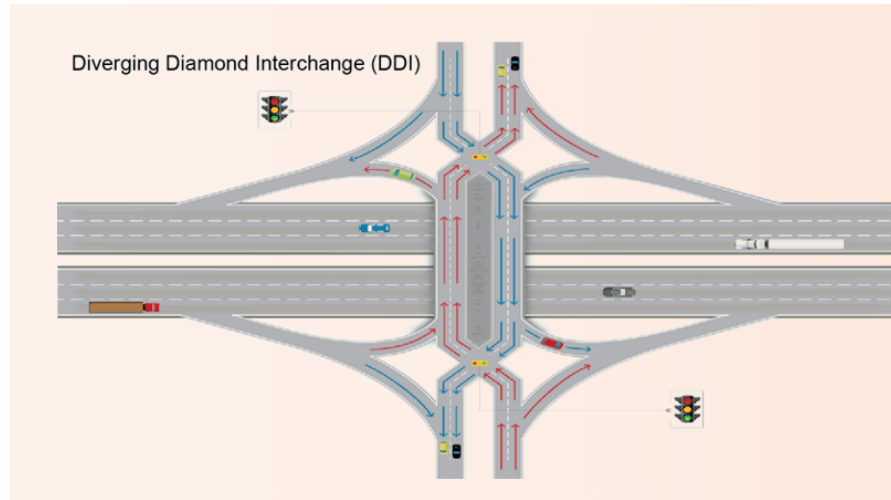


A 2018 Value Engineering study selected a Diverging Diamond Interchange (DDI)

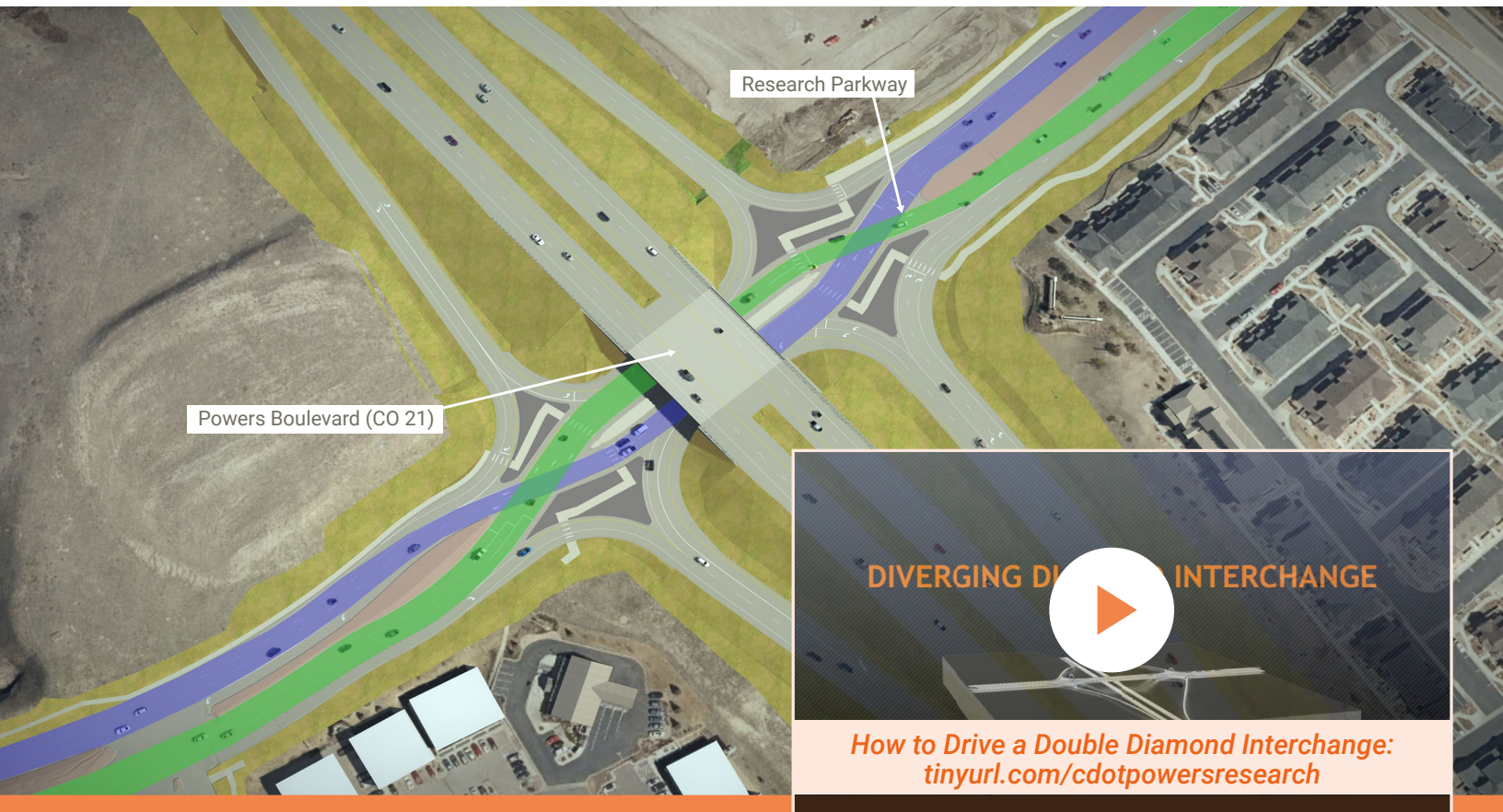
A Diverging Diamond Interchange (DDI) has two directions of traffic on the non-freeway road (Research Parkway) cross to the opposite side on both sides of the bridge at the freeway (Powers Boulevard). This interchange requires traffic on Research Parkway to briefly drive on the opposite side of the road.

Advantages of a Diverging Diamond Interchange:

- Improved peak hour levels of service at ramp intersections
- Reduced traffic delays at ramps
- Substantially shorter traffic queues
- Substantial decrease in crashes due to reduction in congestion and less conflict points
- Meets the needs of all road users - accommodates motorized vehicles including large trucks, pedestrians and bicyclists.
- Additional sidewalks will increase safety and better accommodate pedestrians and bicyclists
- Relatively lower cost improvement



Diverging Double Diamond Interchange Rendering



TRAFFIC IMPACTS



Powers Boulevard (CO 21) Impacts:

- Throughout the project, intermittent nighttime lane restrictions from 9 p.m. until 6 a.m. will be required on Powers Boulevard/Colorado Highway 21 between Mile Markers 149 and 151.
- The speed limit on Powers Boulevard/Colorado Highway 21 will be reduced to 45 MPH in the construction zone for the safety of the travelling public and construction crews.

Research Parkway Impacts:

- Beginning in June and continuing throughout the project, nighttime lane impacts and full closures of Research Parkway between Scarborough Drive and Cross Creek Drive will be required from 8 p.m. until 6 a.m.
- The speed limit on Research Parkway will be reduced to 35 MPH in the construction zone for the safety of the travelling public and construction crews.

► *All closures are subject to weather conditions and will be adjusted as needed to complete construction activities.*

QUESTIONS?

If you have any questions or comments, please contact the project team:

Project Hotline: 720-507-6255

Project Email: powersandreserach@gmail.com

Project Website: www.codot.gov/projects/co-21-research-parkway-interchange

Completed Powers Blvd and Research Pkwy Interchange looking west

