

TDM Strategies & Evaluation Process

- ▶ *Step 1. Develop Memo #1 – Existing Conditions and TDM Background*
- ▶ *Step 2. Develop Memo #2 – Potential TDM Strategies (combined with Memo #1)*
- ▶ Step 3. Develop Memo #3 – TDM Strategies & TDM Strategies Assessment Form
- ▶ Step 4. CDOT Preliminary Approval of TDM Strategies
- ▶ Step 5. Finalize TDM Plan for inclusion in SLS
- ▶ Step 6. 1601 Approval Decision
- ▶ Step 7. Finalize the Operations and Maintenance IGA

Trip Reduction Requirement

- ▶ Forecasted 2030 (Opening Day) Ramp Volumes
 - ▶ 7,660 total ADT
- ▶ Forecasted 2030 (Opening Day) Truck Traffic = 305 trucks
 - ▶ $7,660 - 305 = 7,355$ passenger vehicles
 - ▶ 3% daily trip reduction requirement = *221 trips*

Proposed TDM Strategies

1. Transportation Management Organization/
Association (TMA)
 - Regional Ridesharing Program
 - Business Community Support
 - Car Sharing Program
 - Local Micromobility Service
2. Mobility Hub/Park-and-Ride
3. Bicycle & Pedestrian Facilities
4. Schoolpool Program



Strategy: TMA/TMO

Anticipated ADT Trip Reduction

TMA/TMO Methodology

- Total Population within 1-mile buffer of Interchange and 29 Road to Patterson – 17,687
 - Percent of adult residents – 14,150 (80%)
 - Percent of adults that are commuters – 7,075 (50%)
 - Number of adult commuters in the 1-mile buffer * **2% (new carpooler capture rate)** – **142 rideshare candidates**
- Anticipated number of one-way vehicle trips per commuter – 2 trips
 - Number of daily one-way trips per commuter – **284 trips**
- Annualization factor (250 work days/year) – **192 trips**
- Ramp reduction factor 75% – **48 trips** (annualized for 250 work trips/day and 25% of trips using ramps)

Modified ADT Trip Reduction

- **48 trips (0.8 percent) based on 2 percent new carpooler capture rate**



Strategy: Mobility Hub/Park- and-Ride

Anticipated ADT Trip Reduction

Mobility Hub/Park-and-Ride Methodology

- Parking capacity – 100 spaces
- 50% daily utilization factor
- Potential reduction for 50 round trips daily
- Assumes vehicle occupancy rate of 2 people

Anticipated ADT Trip Reduction (no change from original)

- 100 trips (1.4 percent) based on use of carpooling and use of the Park-and-Ride



Strategy: Bicycle & Pedestrian Facilities

Anticipated ADT Trip Reduction

Bicycle & Pedestrian Facilities Methodology

- Total Population within 1-mile buffer of Interchange at I-70 and south to Patterson: 17,687
 - Percent of adult residents (80%) = 14,150
 - Percent of adults that are commuters (50%) = 7,075
- Number of adult commuters in the 1-mile buffer (7,075) * induced demand for new bicycle facility (0.4) * Grand Junction bicycle commuter mode share (2.7%) = induced demand of 76 adult bicyclists
- Anticipated number of one-way trips per bicyclist - 2 trips
- Number of one-way trips per day - 152
- Ramp reduction factor of 95%
- Modified ADT Trip Reduction
 - 8 trips (0.1 percent)

Trip Reduction Calculations based on *NCHRP Report 552: Guidelines for Analysis of Investments in Bicycle Facilities White Paper* (reflects induced demand from new bicycle infrastructure).



Strategy: Schoolpool

Anticipated ADT Trip Reduction

Schoolpool Trip Reduction Methodology

- Student Enrollment – 800
- Households – 600
- Number of School Days/Year – 160
- Total number of one-way household trips/day (2 roundtrips) – 2400
- Reduction Goal: 15 percent
- Potential Trips Reduced – 158 (normalized to represent 160 school days/year)
- Ramp Reduction Factor of 50 percent
- Modified ADT Trip Reduction
 - 79 trips (1.1 percent)

Proposed I-70/29 Road TDM Strategies

Proposed TDM Strategy	Description	Original Trip Reduction	Modified Trip Reduction
TMO/TMA	Rideshare/Carpool Program	201	48
Mobility Hub/Park-and-Ride	Located on the north side of interchange	100	100
Bicycle and Pedestrian Facilities	Improved facilities at interchange and along 29 Road	38	8
Schoolpool Program	Focused on Independence Academy	27	79
	Trip Reduction	366	235
	Reduction Goal (Passenger Vehicles)	221	221
	<i>Excess</i>	145	14