November 2019 Project Update
Paul Neiman, PE, South Gap Project Director
Larry Quirk, PE, South Gap Project Engineer
Late 2019 was the target to begin construction

Project History 2017

• Jan 2017: held first scoping meeting on E470 to Monument PEL which quickly identified the Castle Rock to Monument issues:
  • Higher-than-average weather-related and wildlife/motor vehicle collisions
  • Small shoulders reduce safety of emergency response
  • Growing traffic volumes: not built to handle an average of 87,000 vpd
• May 2017: CDOT saw SB 267 funding was becoming available
• Oct 2017: Working through our contract selection matrix, Construction Manager/General Contractor (CMGC) delivery method was chosen
Project History 2017

• Nov 2017: El Paso and Douglas Counties made funding available
• Nov 2017: Infra Grant sought after
• Dec 2017: PEL was put on hold and an Environmental Assessment (EA) emerged on this critical section.
• Dec 2017: First EA scoping meeting held
• Dec 2017: Preliminary design began and ran concurrently with the EA
• Dec 2017 Request Proposal (RFP) went out for a CM/GC and Kraemer North America was selected
Project History 2018

• Jan 2018: EA identified top concerns
  • Safety
  • Incident management
  • Reliable trip
  • Mobility (multimodal options)
• Jun 2018: EA concluded
• Jul 2018: $65M INFRA grant awarded
• Sep 2018: Construction Package 1 began
• Sep 2018: E470 to Monument PEL picked back up
• Oct 2019: Original PEL completed
<table>
<thead>
<tr>
<th>Project</th>
<th>Funding</th>
</tr>
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<tbody>
<tr>
<td>INFRA</td>
<td>$65.0 M</td>
</tr>
<tr>
<td>SB267</td>
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<tr>
<td>SB1</td>
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<tr>
<td>Freight</td>
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<tr>
<td>BE</td>
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</tr>
<tr>
<td>Faster Safety</td>
<td>$11.2 M</td>
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<tr>
<td>Resurf</td>
<td>$2.8 M</td>
</tr>
<tr>
<td>CO Prk&amp;Wildlife</td>
<td>$0.05 M</td>
</tr>
<tr>
<td>Local Agencies</td>
<td>$35.0 M</td>
</tr>
</tbody>
</table>

**Funding ~ $374**
The Solution, Our Purpose:

**ENHANCED SAFETY:** wider shoulders for emergency response and wildlife protection through crossings and fencing

**REDUCE DELAYS:** with expansion to six lanes (one Express Lane in each direction) and a new climbing lane for improved truck access

**IMPROVE RELIABILITY:** increased driver choice, Express Lanes, and expedited bus travel
Typical Cross Section

Existing Typical Section

- Shoulder: 4'-8''
- 2 General Purpose Lanes: 12''
- Shoulder: 12''
- Shoulder: 12''
- Median: 4''
- Shoulder: 4''
- 2 General Purpose Lanes: 12''
- Shoulder: 12''
- Shoulder: 4'-8''

Proposed Typical Section

- Shoulder: 12''
- 2 General Purpose Lanes: 12''
- Buffer: 4''
- Express Lane: 12''
- Shoulder: 15''
- Shoulder: 15''
- Express Lane: 4''
- Buffer: 12''
- 2 General Purpose Lanes: 12''
- Shoulder: 12''
- Shoulder: 12''
South of Castle Rock to Sky View Lane (5 miles)
New Express Lanes and pavement

Sky View Lane to Greenland Road (6 miles)
New Express Lanes and pavement
Bridge replacements at Upper Lake Gulch Road, Spruce Mountain Road, and Plum Creek
One wildlife crossing

Greenland Road to Monument (7 miles)
New Express Lanes and pavement
Three new wildlife crossings
Bridge replacements at Greenland and County Line roads
New truck climbing lane on southbound I-25 along Monument Hill to the Port of Entry

County Line/Palmer Divide Bridge
Bridge Replacement
Design Updates

Pkg 1:
Began Construction September 4th, 2018

Pkg 2:
Began Construction December 1st, 2018

Pkg 3:
Began Construction August 7th, 2019

Pkg 4: County Line/Palmer Divide Bridge
- Bridge Enterprise (BE) funded
- Begin Design in January of 2020
- Construction scheduled for 2021

Change Orders:

Pkg 2
• Extended Southbound climbing lane over Monument Hill (Freight Funds)

Pkg 3
• Southbound Auxiliary lane, Skyview to Spruce Mtn Rd
• Final SMA Paving

Overall Schedule completion is not anticipated to change due to these Change Orders as this work was anticipated in the original scope and tracked throughout design.
Construction Update and Schedule
**Construction Update**

**Pkg 1, Milestone Completion: Nov 2020**
- SB Noise wall nearly complete near weigh station
- Greenland CBC Bridge under construction
- Three Wildlife crossing Bridges under construction
- Began installing Deer Fence

**Pkg 2, Milestone Completion: Nov 2021**
- First phase of Drainage completed
- Three Wildlife crossing Bridges under construction
- Began installing Deer Fence

**Pkg 3, Milestone Completion: Summer 2022**
- Portions of Upper Lake Gulch (ULG) Bridge structure demolished
- NB Spruce Mountain on ramp closed until summer of 2020
- Half of the Spruce Mnt Bridge Demolished

**Milestones from Year One**
- 7.2 Miles of Fiber Optic cable installed (12.6 planned)
- 4.2 Miles of Drainage Pipe installed (8.6 planned)
- 44.5 Miles of Temp Barrier installed (45.8 planned)
- 4.5 Miles of Permanent Median Barrier installed (18 planned)
- 0.6 Miles of Retaining Walls complete (5.0 planned)
- 33 of 150 Bridge Girders installed (excluding County Line)
- 6 miles of Deer Fence installed (30 planned)
- 11 miles of erosion logs installed (36.6 planned)
- 6 of 9 bridges under construction
- 150K Tons of Asphalt completed (788K planned)
- 450K CY of Embankment Completed (800K planned)

**Typical Working Hours**
- 7am – 5pm Days
- 8pm – 5am Nights
- Saturday 7am-5pm
- Sunday’s beginning at 8pm

**Project is on schedule for December 2022 completion**
Near Castle Rock: 11 miles of new pavement complete and more than 15,500 linear feet of new pipe installed

Year 1 Milestones - Sept 2018 - Oct 2019
Near Larkspur: Spruce Mountain Road bridge has been demolished; partial demolition of Upper Lake Gulch Road bridge.
Greenland Road: Portion of concrete box culvert has been removed. Crews are working to rebuild the interchange into a new two-lane underpass.
Near Monument: Three wildlife crossings under construction. Work included girder sets, deck pours and earth retaining walls. Nearly 6,000 linear feet of bridge beam will be set in this area this fall. A sound wall is nearly complete along southbound I-25 near the Monument Truck Weigh Station.
## North Section Traffic Shifts

<table>
<thead>
<tr>
<th>PHASE 1</th>
<th>PHASE 2</th>
<th>PHASE 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall 2018 - Fall 2020</strong></td>
<td><strong>Summer 2019-Summer 2020</strong></td>
<td><strong>Summer 2020 - Winter 2020</strong></td>
</tr>
<tr>
<td><strong>Construction Activities:</strong></td>
<td><strong>Construction Activities:</strong></td>
<td><strong>Construction Activities:</strong></td>
</tr>
<tr>
<td>Median widening, earthwork, and asphalt; Storm sewer relocation; Retaining walls</td>
<td>Asphalt overlay; Storm sewer relocation; Guardrail installation</td>
<td>Final asphalt overlay; Tolling infrastructure; Final pavement markings</td>
</tr>
</tbody>
</table>

This phase is now active. Watch for trucks entering and exiting the median.
South Section Traffic Shifts

**MONUMENT TO COUNTY LINE ROAD**

<table>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Construction Activities:</strong></td>
<td><strong>Construction Activities:</strong></td>
</tr>
<tr>
<td>Widening, earthwork and asphalt, storm sewer pipe, wildlife crossing, median barrier and retaining walls, temp pavement to accommodate traffic</td>
<td>Widening earthwork and asphalt, storm sewer pipe, wildlife crossing, outside walls</td>
</tr>
</tbody>
</table>

![Map and diagrams showing traffic shifts for Phase 1 and Phase 2]
South Section Traffic Shifts

SOUTH SECTION CROSSOVER (NEAR WEIGH STATION)

PHASE 2

Construction Activities:
Outside widening earthwork and asphalt, storm sewer pipe, wildlife crossing, outside walls

[Map and diagram of I-25 South Gap Project showing traffic shifts and construction activities]
South Section Traffic Shifts

COUNTY LINE ROAD TO GREENLAND ROAD

<table>
<thead>
<tr>
<th>PHASE 1</th>
<th>PHASE 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Construction Activities:</strong></td>
<td><strong>Construction Activities:</strong></td>
</tr>
<tr>
<td>Outside widening, earthwork and asphalt, storm sewer pipe, wildlife crossing, temporary pavement to accommodate traffic</td>
<td>Inside widening, earthwork and asphalt, storm sewer pipe, wildlife crossing, median barrier and retaining walls</td>
</tr>
</tbody>
</table>

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The diagram illustrates the traffic shifts for Phase 1 and Phase 2, showing the changes in road layout and traffic flow around County Line Road and Greenland Road. The map details the construction activities and traffic management plans for each phase.
Middle Section Traffic Shifts

**GREENLAND Crossover**

**Phase 1**

- Construction Activities:
  - Temporary crossover pavement, temporary NB on/off ramps, shift NB traffic on to SB and temp pavement, NB Greenland Bridge and wildlife crossing, NB earthwork and asphalt, storm sewer pipe

**Phase 2**

- Construction Activities:
  - Temporary pavement for crossovers, temporary SB off ramp, shift SB traffic onto newly constructed NB lanes, SB portion of Greenland Bridge and wildlife crossing, SB earthwork and asphalt, storm sewer pipe, extended closures of SB on/off ramps
Upcoming Work and Traffic Impacts

Before Thanksgiving
• North of Skyview, Move all traffic Northbound and Southbound up against new median barrier
• Shift all traffic West from Upper Lake Gulch to Spruce Mountain Road.
• North of County Line Bridge, move traffic to outside to work in median

Monument Hill Road (Frontage Rd)
• A new wildlife crossing is being built along I-25 near Mile Point 162
• To safely build this new wildlife crossing, crews will close portions of Monument Hill Road near Palmer Ridge High School for about six months, starting early 2020
• Local access will be maintained

Greenland Road
• Crews are working to replace the single-lane box culvert with a two-lane underpass
• Continued removal of the box culvert and crews are working to build the new interchange
• Another major traffic shift is expected in this area next spring
Traffic Safety
Traffic Safety and Smart Work Zone Technology
All CDOT Projects require a Transportation Management Plan (TMP)

Three components of all CDOT TMP:
- Traffic Control Plan (TCP) - Traffic Control Plans & MHT’s
- Traffic Operation (TO) - Region Lane Closure Strategy
- Public Information (PI) - Tier I PR Specification (Highest level)

Additional components for the Gap Project and projected cost:
- Traffic Incident Management Plan (TIMP)
- Courtesy Patrol
- Smart Work Zone System
- Uniformed Traffic Control
- Added Law Enforcement
- Tier I PR Specification
- MyWay (Bustang) Program
- Frontage Road improvements

Entire Transportation Management Plan = $ 35 Million
Safety and Minimizing Impacts to Commuters

- Extensive public relations efforts
- Travel Demand Management program for bus and carpooling
- Lane Closure Strategy
- No detouring of I-25 traffic to alternate routes
- Traffic Incident Management Plan (TIMP)
- Bi-weekly Emergency Responder meetings
- Quick Clearance Strategy and TIM training
- Two Courtesy Patrol Tow vehicles ****
- Quick Response Vehicles (QRV) for Fire Departments
- Equipment Staging for predictable incidents (weather)
- Project Operations Center (POC)
- Two POC Operators (5am to 8pm M-F) ****
- Emergency Pullout Areas
- Frontage Road Improvements
- Portable Traffic Speed monitors
- 6 inch temporary striping
- Uniformed Traffic Control (Lane Closures)
- Smart Work Zone (SWZ) Technologies
  - Portable Variable Speed Limit Signs (PVSLs)
  - Portable Changeable Message Signs (PCMSs)
  - Truck Entering/Exiting System
  - Queue Detection System
  - Travel Time Indicator System
- Law enforcement (CSP & Douglas County Sheriff)
  - 7 Days a week on I-25
  - Colorado Highway 83 enforcement
  - Frontage roads (Larkspur to Castle Rock)
- Speed limit reductions
  - 60 mph MAX (PVSL's) - Standard through work zone
  - 45 - 50 mph during incidents (or lower if warranted)
- Incident tracking

**** Weekend Operator and CDOT Incident Coordinator added
I-25 South Gap Project
Monument–Castle Rock

Traffic Safety - Winter in the Gap

• Stage equipment and project personnel prior to large snow events to assist with operations and response issues
• Drop speed limit using Portable Variable Speed Limit signs
• Double coverage of Monument Hill by CDOT maintenance units/plow team
• Coordination with CSP and Locals agencies for incident management
• Development of key indicators to help aid in decision to close the roadway (for example, high wind and snow at Greenland Road area)
• In advance of larger snow events, encourage motorists to stay home or leave early through VMS, text alert, e-blast and social media
• Share winter driving safety tips through a variety of channels
• Set up a temporary chain station for CMVs
• Quicker closures of I-25 with no detours allowed
I-25 South Gap Project
Monument–Castle Rock

Incident Tracking

Speed Profile - SB MM 176 - October 23-24

Wednesday 23

Thursday 24

Speed Profile - NB MM 176 - October 23-24

Wednesday 23

Thursday 24

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Stay Informed

REACH OUT TO US
Paul Neiman: (303) 907-893 or paul.neiman@state.co.us
Larry Quirk: (720) 838-9137 or larry.quirk@state.co.us

CALL OUR HOTLINE
(720) 745-5434

REGISTER FOR ALERTS
Text I25Gap to 21000

VISIT OUR WEBSITE
i25gap.codot.gov

FOLLOW US ON FACEBOOK
@I25SouthGapProject

EMAIL US
i25gap@codot.us

Note: Icons referenced from various artists featured on flaticon.com
Crashes in 2018 (504 total) represented a roughly 30% increase above the average of the 3 prior years (388 per year). The data provide an interesting example of how this can be misleading / how it can be difficult to attribute crash increases to a cause when looking at it this way, however. Doing the same exercise for the 2015 crash data (393 total) compared to the 3 years prior (222 per year) shows **2015 had a 77% increase over the previous 3 years** despite no change to the roadway over the whole period. This isn’t to say that construction doesn’t create issues but it is very difficult to say how much is a result of it versus the overall trend of rising crash frequency caused by increasing volume.

**Incidents in the Gap**

CDOT Crash Report Data  
MM 160 to 181 from 01/01/2015 to 12/31/2017 (3 Yrs)

- Crash w/o injury: \( \frac{1002}{3} = 334 \) per year
- Crash w injury: \( \frac{568}{3} = 189 \) per year
- Total Crashes Average: \( \frac{1580}{3 \text{ years}} = 1.44 \) Crashes per day

I-25 S Gap Data from Courtesy Patrol Reports  
MM 160 to 181 from Sept 2018 through Oct 2019 (429 Days)

- Total Motorist Assist: \( \frac{1706}{429 \text{ days}} = 3.97 \) incidents/day
- Motorist assist (No Crash): 1143
- Crash w/o injury: 478 (per 429 days)
- Crash w injury: 85 (per 429 days)
- Total Crashes Average: \( \frac{560}{429 \text{ days}} = 1.30 \) Crashes per day
Increasing Safety: Traffic Management Goals

- Improve compliance by harmonizing speeds
- Improve credibility by posting accurate and timely information
- Improve truck egress and ingress into the work zones
- Expand and contract the Smart Work Zone as the working conditions changes
- Adaptability for quick deployments
- Monitor construction activities through portable CCTV’s
- Monitor the varying road conditions between Monument Hill and Castle Rock (climate changes)
- Decrease single occupancy vehicles on Gap through Bustang, vanpools and carpools
- Accurate reporting in real time to all project stakeholders
Commitment to Military Mobility

- More than 40,000 service members and over 100,000 veterans live in the Pikes Peak region, home to five military bases.

- Total economic impact of the Defense Sector in Colorado is $36.6 billion.

- Our nation’s highway system, since its inception, was envisioned as a network to support national defense.
I-25 South Gap Project
Monument–Castle Rock

Construction Update

PKG 1 Area, Completion: Nov 2020
PKG 2 Area, Completion: Nov 2021
PKG 3 Area, Completion: Spring 2022

Bridge to be replaced
Bridge currently under construction

Typical Working Hours
7am – 5pm Days
8pm – 5am Nights
Saturday 7am-5pm
Sunday’s beginning at 8pm