



# March 2023

The Public Works Department operates under the **CAN DO** philosophy – We are committed to doing the job right with a positive attitude while staying dedicated to meeting the needs of our Town values and continually searching for opportunities to improve.

**PW Mission:** To provide outstanding service, safety and support for transportation infrastructure and





 <u>Ridge Road Widening</u> – Ridge Road will be widened from two to four lanes between the Founders Parkway (SH86)/ Fifth Street/Ridge Road intersection and Plum Creek Parkway. The goal is to reduce traffic congestion on the Ridge Road corridor.

#### **Phase: Construction**

- Continue to maintain TESC BMPs
- Winter Shutdown is now over, construction resumed on 3/20/23
- Grading for sidewalk
- Grading for roadway prep
- Surveying
- Budget: \$5,225,000

**ROW Acquisition:** A valuation hearing for the Bertelsen property is scheduled for March 2023

Targeted Construction Completion: Summer 2023

- Founders Parkway (SH86)/Fifth Street Intersection "Four Corners" Improvements – With new traffic studies submitted, the consultant will investigate multiple alternatives to address safety concerns and capacity issues at the intersection. Improvements under evaluation include:
  - Intersection will remain a full movement four-way intersection. Additional turn lanes and acceleration lanes will be added.
  - Traffic signal improvements will be made to incorporate the larger intersection.
  - Pedestrian and bicycle improvements will be constructed on all four sides of the project.
  - Stormwater detention and water quality improvements will be constructed to capture the additional surface volume from the new intersection.

**Phase:** Design — David Evans & Associates (DEA) is the design consultant for this project. The following is a summary of the activities performed this month:

- DEA revised and re-sent PS&E package to CDOT for review
- Once revisions are accepted by CDOT, set will be sent to FHWA
- Final Stages of PS&E package review are being completed
- FHWA review period will be two weeks
- Stormwater Maintenance IGA being completed and sent for Town signature

Budget: \$1,275,676, with DRCOG Grant Reimbursement Targeted Construction Completion: Winter 2023-2024

#### Crystal Valley Interchange – Pre-construction Activities – The purpose of this project is to achieve acquisition of remaining right-of-way, complete design, and set aside future project funding allowing potential funding partnerships to assist with advancing construction.

Phase: Right-of Way Acquisition

 West Side of I-25 – The Town will begin the Notice of Intent (NOI) process and make offer to the new owners of all remaining parcel to be acquired; Westside Investments has purchased all remaining parcel to be acquired from Douglas County Development Company and the MSP Corporation East Side of I-25 – NOI has been sent to the Hyperion Property owner; the Town has completed the full take appraisal of the Hyperion property; Hyperion property owner is electing to have an appraisal done; ownership of the Dawson Ridge Metro District parcel has been transferred to the Douglas County Development Company; Town is in the process of preparing a NOI and offer

**Phase:** Design— Interchange Access Request and Environmental Assessment Reevaluation, and Design

- 90% design plans for package 1 submitted for staff review
- Waiting to receive final direction from CDOT on the TDM strategies
- System Level Study has been submitted to staff for review and comments
- CMGC contractor working on final CAP costs by 4/11 for package 1, and a budgetary cost for package 2
- Design firm continues working on design for package 2, this included the new request for a single point merge on I-25
- Environmental/NEPA working with Army Corps for jurisdictional determination for permitting
- Maintenance IGA with CDOT for package 1 has been submitted to staff for review

Budget: \$6,500,000, and Development Escrow Design Completion: Summer 2023 Targeted Construction Completion: Summer 2025

4.

Plum Creek Parkway Widening and Plum Creek Parkway/ Gilbert Street Roundabout Project - This project will implement the Transportation Master Plan's identified improvements for this corridor. The addition of the remaining two lanes of the master planned four-lane roadway on Plum Creek Parkway between Eaton Street and Ridge Road. Not only will it include the addition of two lanes, but also bicycle and pedestrian multi use lanes. It will also include roundabout modifications at Ridge Road. The improvement has been broken out into three phases in order to meet the department's objectives. Phase 1A included portions of storm sewer improvements between Gilbert and Eaton. Phase 1B includes all roadway/utility/pedestrian access improvements between Gilbert and Eaton, including the implementation of roundabouts at the intersections of Gilbert and Eaton. Phase 2 includes all roadway/utility/pedestrian access improvements between Eaton and Ridge Road.

### Phase 1B: Plum Creek Pkwy Widening and Roundabouts Gilbert to Eaton):

Construction Budget: \$7,507,723 Completion: Complete

<u>Plum Creek Parkway Widening Phase 2</u> – This project will implement the Transportation Master Plan's identified improvements for this corridor. The addition of the remaining two lanes of the master planned four-lane roadway on Plum Creek Parkway between Eaton Street and Ridge Road. Not only will it include the addition of 2 lanes, but also bicycle and pedestrian multi use lanes. It will also include roundabout modifications at Ridge Road.

**Phase 2: Plum Creek Pkwy Widening (Eaton to Ridge): Construction** – The following is a summary of design activities performed this month:

- Completed the installation of the block retaining wall
- Continue the maintenance of erosion control
- Completed the installation of headwall for storm drain
- Started the grading for sidewalks
- Started installation of sidewalks
- Roadway prep

Budget: \$7,530,000

Targeted Construction Completion: Fall 2023

5. Fifth Street Widening Project Design – Fifth Street is a major arterial connecting local and regional travel between the easterly portions of Town and I-25. Roadway and pedestrian improvements for Fifth Street have been identified within the 2017 Transportation Master Plan (TMP) that will maintain adequate capacity and ensure efficient road network connections for future development.

The Fifth Street Widening project will complete all design elements for implementation of the full build-out transportation network from South Gilbert Street to Ridge Road as identified in the TMP. The improvements include:

- Widen to 4-lanes from Woodlands Boulevard to Ridge
  Road
- Add on-street bike lanes between Gilbert Street and Ridge Road
- Add sidewalks from Sixth Street to Ridge Road
- Roundabout and signal light construction at Woodlands Boulevard and Valley Drive respectively.

#### Phase: Design

- Completed 90%/ FOR design
- Working on ROW acquisition legal descriptions
- ROW plans with legal descriptions and exhibits have been submitted to CDOT
- ROWPR meeting to be scheduled in April to proceed with ROW acquisition
- Contract amendment is being processed to cover the additional cost related to design work done as requested by stakeholders and leadership for ultimate design
   Budget: \$1,500,000

Design Completion: February 2023 Right-of-way acquisition: Fall 2023 Targeted Construction Completion: 2024-2025

6. <u>Crowfoot Valley Road Widening</u> – Crowfoot Valley Road will be widened between the Knobcone Drive and Macanta Blvd. Currently, this section of Crowfoot Valley Road is a two lane transition section of asphalt roadway with portions in the Town of Castle Rock and in Douglas County. Recent improvements have been completed at both ends of this project along Crowfoot Valley Road, and the intent of this project is to complete improvements to the "gap" between these improvements. The proposed roadway will be a fourlane section, including painted median/turn lanes, with bike lanes in both directions.

Phase: Design-

- IGA with Douglas County in review, for funding on 5/16 Town Council agenda; 5/1 PWC
- Design proposals under review for selection by 4/6
  Budget: \$2,500,000 (Town contribution to construction funding; IGA to be executed with County)
  ROW Acquisition: Late 2023
  Design Completion: Fall 2023
  Targeted Construction Completion: Fall 2024

#### 7. <u>Relocation of Dawson Ridge Blvd and West Frontage Rd</u> –

The purpose of this project is to relocate the I-25 West Frontage Rd to the west of the BNSF Railroad tracks to provide access to the surrounding neighborhoods and residents after the Crystal Valley Interchange is complete.

**Phase:** Design – CORE Consultants is the design consultant for this project. The following is a summary of the activities performed this month:

- Value engineering conducted and changes were applied
- 100% plans are in review with the Town
- Budget: \$299,000

Design Completion: Summer 2023

**Targeted Construction Completion:** Summer of 2025 in conjunction with Crystal Valley Interchange

#### 8. Crystal Valley Pkwy & Plum Creek Blvd Roundabout Project

This intersection is a major arterial currently controlled by stop signs in two directions. As the traffic volumes increase and with ongoing residential development and future construction of the new Crystal Valley Interchange, this existing traffic control will not be the most efficient and could contribute toward increased accidents. This project will accomplish the design of a two lane roundabout intersection in order to improve the traffic capacity of the intersection, help to manage speeds along Crystal Valley Parkway, and to accommodate the growth in traffic that is expected to increase once the Crystal Valley Intersection has been constructed. This project is scheduled to be designed by June, 2022, bid in June, 2022, and constructed by Summer 2023.

#### Phase – Construction

- Continued importing borrow material
- Water line pipe delivered to project
- Storm drain pipe and structures delivered to project
- Removed curb gutter sidewalk and asphalt for phase one construction
- Started the installation drainage structures
- CORE started relocation of utilities

#### Budget: \$3,500,000

Targeted Construction Completion: Fall 2023

Wolfensberger Widening Improvements Project- Wolfensberger Road is a major arterial connection for local and regional travel between the westerly portions of Town and I-25. Roadway and pedestrian improvements for Wolfensberger have been identified within the 2017 Transportation Master Plan (TMP) that will maintain adequate capacity and ensure efficient road network connections for future development. The Wolfensberger Widening Improvements Project will complete all design elements for the implementation of the full build out transportation network from the western Town limits to Prairie Hawk Drive.

- Widening roadway to a full 4-lane arterial section
- Addition of sidewalk along both sides of Wolfensberger
- Roundabout construction at Red Hawk/Auburn and Wolfensberger Intersection
- Removal of existing traffic signal
- Storm water drainage improvements
- Implementation of on street bike lanes West/East bound

Phase: Planning/Design

- Ongoing design work with adjacent developers to accommodate and incorporate their ingress/egress into project design
- Design efforts to utilize existing Town property for stormwater improvements ongoing
- Utility coordination meetings with CORE and CRW ongoing
- 30% design submittal was received on March 28
- 30% design review meeting is set for April 18
- Project design will be stopped after 30% due to budget constraints

Budget: \$2,500,000 Design Completion: October 2023 Right of Way Acquisition: 2023 Targeted Construction Completion: 2024

10. Downtown Quiet Zone Project - This project is to implement a quiet zone through the downtown Castle Rock area. In order to implement the quiet zone, improvements must be constructed at three railway crossings: Second Street, Third Street and Fifth Street. The scope of the improvements to be constructed with this project include: additional crossing gates, pedestrian crossing improvements, ADA improvements, sign and marking improvements, curb and gutter additions and general railroad (Union Pacific or UP) coordination. The benefits of this project will be improved safety for vehicles and pedestrians and improved quality of life for downtown businesses, residents and patrons.

**Phase:** Construction - The following is a summary of activities performed this month:

- Coordinating construction impacts (closures) with project stakeholders/community
- Construction on the Town's portion of the project is complete
- Punchlist items have been addressed and final invoices are being submitted
- Project team is working to have Union Pacific try and move their gate installation date to spring/summer vs. December timeframe they gave

Budget: \$1,800,000

Targeted Construction Completion: Spring 2023

11. Wolfensberger and Park Street Improvements Project-Wolfensberger Road is a major arterial connection for local and regional travel between the westerly portions of Town and I-25. Roadway and pedestrian improvements for Wolfensberger and Park Street have been identified to increase intersection operations and provide better pedestrian access to the Downtown area.

The Wolfensberger and Park Street Improvements Project will complete all design elements for the implementation of pedestrian and transportation improvements.

- Relocate traffic signal pole
- Increase sidewalk width
- Replace existing ADA ramps
- Construct additional turn lane on Park Street

#### Phase- Planning/Design

- Utility coordination meetings with CORE and Comcast ongoing
- 50% design was submitted in March
- Design team is revising/addressing all comments and progressing the plan set
- ROW/Easement acquisition is under way with Western States
- 90% plans expected in mid-May

Budget: \$600,000

Design Completion: April 2023 Right of Way Acquisition: April-May 2023 Construction: June 2023

**Traffic Signal System Upgrades** – This project is a multi-year signal system upgrade project that began in 2015 and is ongoing as funds are available. The project has included proven technology advances at signalized intersections, for our daily operations, and for communications between the center and each intersection.

- Staff is a part of the CDOT managed, adaptive signal system project that has implemented adaptive signal timing on Founders Parkway, and Meadows Parkway, and Factory Shops Boulevard. Eight abutting Town signals are included in the system. In March, the Kadence system was monitored for successful operation and issues addressed continue to be faster than normal with the system operating. Kimley-Horn and CDOT continue to work quickly to resolve any issues that arise. Acceptance and before and after performance metrics are being collected. Staff will continue training and to monitor speeds, delays, and driver issues.
- Phase II of the Town's ATSPM project includes software development and signal timing. New, longer cycle length timing plans for each corridor during in the PM peak hour are being evaluated for March. ATSPM dashboard is in beta testing still and will continue until we are satisfied with the release.
- The Town is awaiting a draft IGA from CDOT, outlining scope and schedule, before procuring the Connected Vehicle hardware (10 roadside units, 10 onboard units). Once executed this two year project will kickoff in earnest. The Town's project scope focuses on messaging intersection safety and driver awareness of operations

and maintenance at high crash locations. Budget: \$868,700 Construction Completion: End of year 2024

**2023 Safety Projects** – This project includes concrete safety devices in conjunction with the Pavement Maintenance Program, installation of pedestrian crossing beacons at four locations, Intelligent Transportation System on Meadows Blvd to warn drivers of signal changes, intersection safety improvements, and missing sidewalk connections.

- Town is working to select KRM Concrete to complete the concrete work based on their past work performance and competitive bid.
- A public feedback postcard has been sent to residents regarding the Valley Drive improvements, and they will have until the end of April to submit feedback on the project.

Budget: \$410,000 Construction Completion: Winter 2023

Illuminated Street Name Signs – 2023 illuminated street name signs have begun the planning and purchase order process for four locations throughout the Town budget depending, including: Founders Pkwy and Copper Cloud, Founders Pkwy and Ridge Road (Four Corners), Wolfensberger and Park St, and Wolfensberger and Caprice. A

- CDOT is working on re-wiring the entire signal intersection at Meadows Pkwy and Hwy 85. This project will create a power feed for two remaining unlit signs.
- 2022 illuminated street name signs have arrived and are currently being prepared for installation at five locations across Town, including: Plum Creek Pkwy and Plum Creek Blvd, Plum Creek Pkwy and Perry St, Founders Pkwy and Front St, Wilcox St and I25 northbound, and Wolfensberger and I25 southbound.

2022 Budget: \$39,105 Construction Completion: Spring 2023 2023 Budget: \$60,000 Construction Completion: Winter 2023

**Rectangular Rapid Flashing Beacons (RRFB)** – Town staff has determined six locations to install RRFBs for 2023. The RRFBs will be installed in locations in which they are the most effective and beneficial to the traveling public. Supplemental pedestrian refuges are being recommended for three of the locations. Equipment order is being finalized in April.

2023 Total Safety Budget: \$90,000

Construction Completion: Summer 2023



#### 2023 Pavement Maintenance Program (PMP)

The 2023 PMP will focus its efforts in the East PMP areas along with work taking place on several primary streets: (Second Street, Fourth Street, Mikelson Blvd., and Woodlands Blvd.). A section of Mikelson Blvd., as well as certain residential neighborhood streets, will see reconstruction this year. All contracts were presented to the Public Works Commission on March 6, and Town Council on March 21 and were approved. The 2023 PMP Contracts that were approved are:

- Asphalt Overlay
- Full Depth Reclamation
- Curb, Gutter and Sidewalk Replacement
- Slurry Seal
- Town Facilities Parking Lot Improvements

A Public Outreach Open House was held March 23, at the Ridge house at Founder's Village. Staff attended the open house to address each PMP project and answer any questions residents had.

The PMP map (shown below) indicates the approved scheduled treatments for streets within the East PMP area and primary streets. This map may change based on maintenance treatments and resources available



#### **Condition Rating**

Condition rating for the 2024 West area was completed March 2. Staff completed all local streets as well as primary streets for the 2024 PMP maintenance season.

#### 2023 Facilities Parking Lot Improvements Program

Public Works Commission approved the contracts at its March 6 Taxi Voucher Program meeting and made recommendation to Town Council. Town Council, in turn, approved the contracts at March 21 meeting.

This program will see needed improvements to nine (9) Town facilities and parking lots as follows:

Founder's Fire Station #153 Prairie Hawk Fire Station #154 Wrangler Park Parking Lot Weaver II Well Field Butterfield Park (Concrete off Meadows Blvd)

**Gemstone Park Parking Lot Ray Waterman Treatment Plant** Founder's Treatment Plant **Bison Park Parking Lot** 

#### 2023 Bridge Maintenance Program (BMP)

Staff has secured a service agreement with BASIS Partners to provide technical support for the Bridge Maintenance Program. The bridge identified for necessary repairs is the Plum Creek Parkway over Sellars Gulch bridge.

Project is expected to go out for competitive bids in April, with construction beginning in September/October. Repairs consist of maintenance to the superstructure, spray lining of existing Corrugated Metal Pipe and crack repairs in existing concrete structures. Location of this bridge is indicated in the map below:



# **Development Division**

#### **Review and Permitting**

Development Review - All 42 reviews were completed. No late reviews this month.

Permitting & Inspection – 16 right-of-way permits were issued.

# Transportation Planning & Traffic Engineering Division

For the month of March, the Taxi Voucher Program funded 159 rides; which is a 5% increase to last year's March total of 152 and an 8% increase from last month's total rides. Transportation services are provided for Castle Rock citizens who cannot drive, have a disability that prevents them from driving, or do not have access to a vehicle. In March, 24 individuals used the Taxi service. Of those individuals, 74% of the rides were for work, 18% for shopping trips, and 8% for medical appointments. Sixty-six rides were provided for people without access to a vehicle, 42 rides to seniors, and 51 rides to disabled riders.

The Castle Rock Senior Center provided a total of 746 rides in March.

#### **Traffic Engineering and Operations**

#### Traffic Signal Operations and Maintenanc



Most frequently visited signals Meadows Blvd & N Meadows Dr

#### Street Light Operations





#### **Operations**



#### **Street Signs and Pavement Marking Maintenance**

For the month of March, the team completed 723 tasks. Of these tasks, 175 of them were sign work activities related to fabrication, install, repairs, replacements, inspections and investigations. We had 245 beacon related tasks, including windshield inspections, and repairs. There were 194 marking related tasks, including inspections and replacements. Other tasks included 53 small projects, one locate, one special event, one core drill, five liquor license postings, and 53 admin tasks.

Repairs for the Pavement Maintenance Program East and Downtown Development Authority sign inspections are almost complete and the change out of street name signs to blue has begun. The team participated in several snow events this month as well.

#### **Transportation Planning**

#### Castle Rock Downtown Wayfinding Sign Plan:

The list of possible destinations to be included on the different sign types was released for comments in March. The project team is still in the process of reviewing the list and will finalize

the destinations in April. The consultant is still working on the conceptual designs of the three different sign types and is expected to share these designs in April. Presentations will be given to the Downtown Alliance and other stakeholders in April.

#### Neighborhood Traffic Calming Program (NTCP):

The NTCP exists to verify and address quality of life items associated with vehicular traffic on local neighborhood streets and certain residential collector roadways. No new inquiries were received in March. Speed and volume data have been collected for Valley Drive, Black Pine Trail, and N. Meadows. The data shows that Valley Drive and N. Meadows, which are both collectors qualify for the program. Black Pine Trail did not meet the minimum program criteria to qualify. Upon Town Council action on the proposed amendments to the NTCP, staff will reach out to the two residents on Valley Drive and N. Meadows to ask how they would like to proceed given the new policy on residential collectors.

### DRCOG Transportation Improvement Program (TIP) & Federal Grant Applications:

The Crystal Valley Interchange (CVI) TIP grant application was presented to the Douglas County Sub-regional Steering Committee on March 1st. The committee voted to approve \$8.5 million for the CVI project and recommended that it be approved by the DRCOG Board later this summer for final approval. If approved the funds will be available in FY 2024. The Town is still awaiting news on what projects were selected by the Federal Rail Administration for the elimination of at grade crossings grant. Staff has been communicating with the offices of Senator's Bennett and Hickenlooper asking that CVI be included in the next round of Congressional Directed Spending for \$2.5 million. These funds would also be available in FY 2024.



A.B.W.F

AGENCY

Staff Updates:

- Staffing levels remain unchanged 89%. We are delaying posting of our Fleet Technician position to monitor work flows in the shop.
- All technicians continue to work on obtaining their ASE certifications. No changes this month.

Shop Operations:

 Fleet continues to look at in house up fit options to support new vehicle in services. Supply chain and slow vendor responses are making it difficult to get pricing established. We hope to have this done in April.

#### Asset Availability:

• The overall Fleet availability in March was 99%.

#### Shop Productivity:

- The Fleet Division completed 148 work orders for 121 vehicles in March. There was 165 jobs assigned to these work orders.
- We completed 101 PM's during March.
- Technician productivity was below average at 65% during March.
- Total work order charges exceeded \$100k for March.

#### Fuel Usage:

- The Town dispensed 14,703 of fuel in March. 12,061 gallons of unleaded and 2,642 gallons of diesel.
- Fuel cost was unchanged in March with unleaded at \$3.28 and diesel at \$4.14 per gallon.

#### Parts Usage:

- The parts department issued 542 parts at a cost of \$33,904.
- 89% of the total issued parts came from our inventory.

**Objective/Benchmark:** Complete at least 75% of our work orders within 48-hours of coming to shop.

**Outcome:** Fleet team completed 64% of the work orders within 48-hours of opening repair requests or service requests. This benchmark number shows how quickly vehicles and equipment get serviced and repaired and back on the job. This objective fell short of our goal because of the high number of repairs we had for the month.

**Objective/Benchmark:** Town vehicles and equipment available for use 95% of time.

**Outcome:** Town vehicles and equipment were available 99% of the time. This high fleet availability rate means that Town vehicles and equipment are ready when they are called upon to perform.

### **Objective/Benchmark:** Technician productivity percentage of 70% (APWA standard)

**Outcome:** Technician productivity was 65%. This productivity number indicates how often the technician is performing direct labor on work orders during their available time.

## Street Operations & Maintenance Division

During the month of March, the Street Operations & Maintenance Division (SO&MD) performed work in the following maintenance operations:

\*Snow and Ice Control \*Street Sweeping \*Asphalt Pothole Repair \*Ice Breaking Operations \*Road Verge Maintenance

#### Snow and Ice Control

Uncharacteristically March only brought one snow storm which turned into more of an icing event as the roadways were very warm but temperatures were very cold. Typically March is our snowiest month. The crew responded quickly to the event and worked diligently to mitigate the slick conditions created by the event, using just under 55 tons of ice slicer and 300 gallons of Magnesium Chloride.

#### Ice Breaking Operations.

Ice breaking operations were undertaken to clear 1,568 linear feet of ice from the travel lanes of Town roadways. 31 tasks were completed using 108 hours. The unseasonably cold temperatures this season has resulted in an extraordinary amount of icing to occur throughout Town. The temperatures are still colder than average during the storms we are getting but higher temperatures between storms are resulting in rapid road recovery. Streets still keeps ready to respond should the need arise.

#### **Street Sweeping Operations**

March saw the arrival of temperatures that would allow for sweeping operations to resume. During the very cold winter season the potential of freeze damage to the street sweepers prevented safe operations for a large portion of the season. Once the temperatures rose sufficiently crews responded by aggressively cleaning the roadways. The crews worked to clear ADA ramps and sidewalks of debris collected during the winter season. Work then shifted to streets sweeping with 198 lane miles swept.

#### Road Verge Maintenance

The Streets crews also dedicated 170 hours to cleaning the road verge area adjacent to the Town roadways of trash and debris that has accumulated during the winter season. Crews picked up trash from 82.26 edge line miles of roadways all over Town. The crews also used the break in the weather to apply pre-emergent weed control in various areas prone to weed growth but difficult to reach with mowing equipment. Road shouldering operations were also undertaken with crews working to repair 7.99 edge line miles of shoulder along Town roadways.

#### Asphalt Pothole repair

Asphalt and concrete pothole repair was a primary focus for the team with 564 hours having been dedicated to repairing the roads after the cold season. The crews used various materials to execute these repairs. In all, 4,810 pounds of concrete cold patch, 1.25 tons of hot mix asphalt, and 12,350 pounds of asphalt cold patch were used to repair 1,310 potholes.

#### Looking Ahead

Operations for April include the continuation of pothole repair and the beginning of asphalt patching. Sweeping operations will continue with the possible early beginning of the Spring Sweep Operation and the maintenance portion of the Crack Seal program should the weather permit. We are not out of the woods for snow just yet and as such Streets will remain ready to respond to these spring storms as they arrive.