



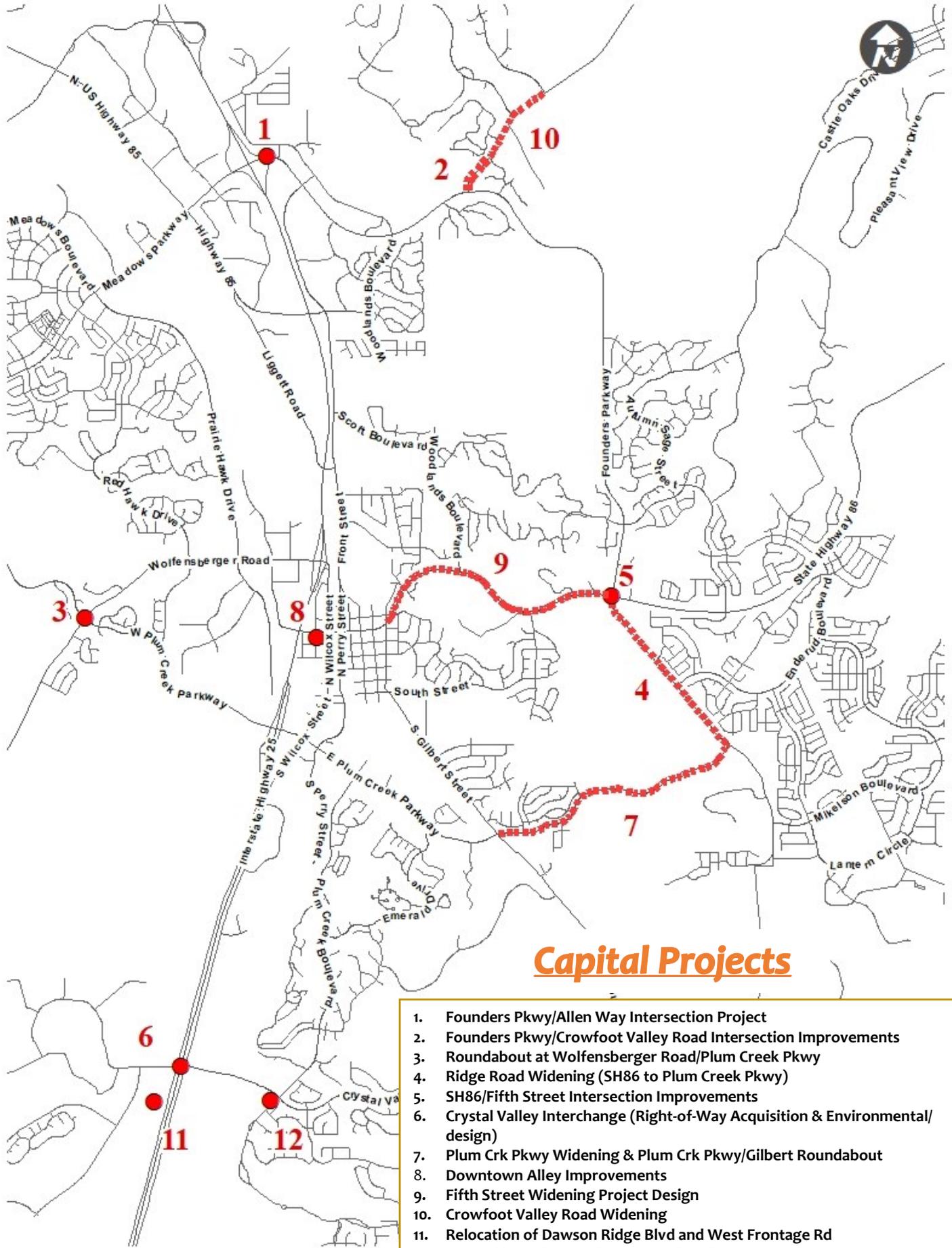
# Monthly Report

December 2021

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 maintenance.





## ***Capital Projects***

1. Founders Pkwy/Allen Way Intersection Project
2. Founders Pkwy/Crowfoot Valley Road Intersection Improvements
3. Roundabout at Wolfensberger Road/Plum Creek Pkwy
4. Ridge Road Widening (SH86 to Plum Creek Pkwy)
5. SH86/Fifth Street Intersection Improvements
6. Crystal Valley Interchange (Right-of-Way Acquisition & Environmental/design)
7. Plum Crk Pkwy Widening & Plum Crk Pkwy/Gilbert Roundabout
8. Downtown Alley Improvements
9. Fifth Street Widening Project Design
10. Crowfoot Valley Road Widening
11. Relocation of Dawson Ridge Blvd and West Frontage Rd
12. Crystal Valley Pkwy & Plum Creek Blvd Roundabout Project

**1. Founders Pkwy/Allen Way Intersection Improvement Project** – This project will address the need for the following improvements:

- An additional eastbound left turn lane from Founders Parkway to Allen Way
- A dedicated right turn lane from Founders Parkway to Allen Way
- An additional southbound right turn lane from Allen Way to westbound Founders Parkway
- An additional I-25 northbound on-ramp lane
- A second through lane at Allen Way and Allen Street

**Phase: Construction** – Closeout— Work continues on the closeout phase with CDOT. All final paperwork was submitted to CDOT by the end of November 2021, and this project is awaiting CDOT acceptance.

**Budget:** \$2.64M

**Close Out:** Complete

**2. Founders Pkwy (SH86)/Crowfoot Valley Road Intersection Improvement Project and Crowfoot Valley Road Widening Project** – This project will address the need for the following improvements:

- An additional eastbound left turn lane from Founders Parkway to Crowfoot Valley Road
- An additional northbound lane on Crowfoot Valley Road between Founders Parkway and Knobcone Drive
- A southbound free right turn lane from Crowfoot Valley Road to westbound Founders Parkway
- Widen Founders Parkway both eastbound and westbound between the Crowfoot Valley Road and Woodlands Boulevard
- Widen Crowfoot Valley Road from Founders Parkway to Knobcone Drive

**Phase: Construction:** Closeout - Awaiting CDOT formal closeout of project. The Grading, Erosion, and Sediment Control permit remains open to monitor vegetation coverage and growth. Inspections will be performed until the requirements of the permit are achieved.

**Budget:** \$3,550,000

**Close Out:** Complete

**3. Wolfensberger Road/Plum Creek Parkway Roundabout Project** - This project will accomplish the design and construction of a roundabout at this intersection to improve operations and minimize accident potential.

**Phase:** Closeout – Substantial completion was issued in Spring 2019. Punch list items are complete. The Town is working with the adjacent property owners to complete the final landscape tie-ins and adjustments. The final landscaping work is anticipated to be complete by Fall 2021. The work completed this month in progression to project closeout is as follows:

Completed irrigation and landscaping work on adjacent property

**Remaining Budget:** \$137,000

**Final Completion:** Complete

**4. Ridge Road Widening** – 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: Design:** Acquisition continues with the property easements. The Town is moving forward with condemnation on the other property.

Stanley Consultants is the design firm for the project. The following is a summary of the activities performed this month:

- Subsurface Utility Engineering (SUE) continues, Consultant is applying the field information to the plans
- Consultant surveyed new pavement on the section between Enderud and north project limits
- Coordination with the Four Corners project and new adjacent developer
- Bertelsen Property – the petition to submit to the Court is being drafted
- McWilliams Property – a revised offer is being submitted to the McWilliams owner

**Budget:** \$900,000

**ROW Acquisition:** Winter 2021-2022

**Targeted Construction Completion:** Fall 2022

**5. 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:

- Southbound traffic – add left turn lane, add a free right turn lane, convert right turn lane to through/right
- Eastbound traffic – convert right turn lane to through right, add free right turn lane
- Northbound traffic – add left turn lane, add second through lane, add a free right lane
- Westbound traffic – add through lane, add a free right turn lane

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

- Continue work on the 90% design of the project
- Bader Court and Emmaus Anglican access off 5<sup>th</sup> street will have ¾ movement
- Continuing working on the utility plan for the entire project
- Continuing to work on environmental clearances and water quality with CDOT
- Continuing to work on right of way plans and prepare for right of way plan review meeting
- Coordination with current design projects on Ridge Road and Fifth Street
- IGA with Douglas County is scheduled to be presented to Town Council in February 2022 for approval. This IGA is for a contribution to the project of 1 million dollars from Douglas County
- Determining the roadway pavement typical section

**Budget:** \$1,200,000 for design in 2021 with DRCOG Grant Reimbursement (Town share \$240,000)

**Design Completion:** 3rd quarter 2022

**ROW Acquisition:** 2nd quarter 2022

**Targeted Construction Completion:** Winter 2023-2024

6. **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

- Acquisition Services
  - East side of I-25 – Town Staff is moving forward with the condemnation process for the Boone Family property. The remaining properties are in various states of negotiation
  - West side of I-25 – The remaining property is in negotiation

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

- Town staff is working with CDOT to begin reimbursement payments
- Jacobs continues working on the traffic analysis. Traffic modeling methods and assumption report was submitted for review. Traffic model was completed
- Environmental/NEPA – environmental field work continues
- Staff has solicited for the Construction Management General Contractor (CMGC) with selection scheduled for Jan 2022 and Town Council approval in March 2022
- Boone Property – Final Stipulation and proposed Order has been submitted to the Courts

**Budget:** \$6,500,000, and Development Escrow

**Completion:** Summer 2023

**Targeted Construction Completion:** Summer 2025

7. **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 Roundabout: Construction** - The following is a summary of activities performed this month:

- Continued contract procurement activities for Baldwin Park restoration
- Contract closeout activities to complete final change orders and final payment

Roadway and roadside improvements are complete. The project continues procurement activities to restore Baldwin Park. Remaining work includes: Baldwin park irrigation and landscaping restoration work

**Budget:** \$7,507,723

**Construction Completion:** Complete

**Phase 2: Design and ROW Acquisition** – The following is a summary of design activities performed this month:

- Executed notice of intent for property acquisitions
- Continued appraisal study for offers
- Completed title research for property interests
- Began final modifications to construction plans/design
- Continued refinement of specifications package
- Began drafting contract with CORE electric for relocation and lights

**Budget:** \$794,375

**Design Completion:** 1 qtr 2022

**ROW Completion:** 1 qtr 2022

**Targeted Construction Completion:** Winter 2022-2023

8. **Downtown Alley Improvements:** Four alleyways in the downtown area are beyond their service life and are not providing an appropriate level of service. Reconstruction of alley pavement in addition to drainage improvements and sanitary sewer system replacement will renew the service life of both the pavement and sanitary sewer in the area.

- 2 Alleys (Westerly Alleys 14 & 17) – Located West of Jerry St. between 5<sup>th</sup> and 3<sup>rd</sup> streets
- 2 Alleys (Easterly Alleys 10 & 11) – Located East of Perry St. between 6<sup>th</sup> and 4<sup>th</sup> streets

**Phase** – Construction

- Final pay request and notice for final payment have been completed. Project was completed on time and under budget. Project is now closed.

**Budget:** \$877,900

**Completion:** Complete

9. **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:

- Implementation of on-street bike lane/shoulder from South Gilbert Street to Ridge Road
- Addition of sidewalk from Woodlands Blvd. to Ridge Road along south side of Fifth Street

**Phase** - Design - The following is a summary of activities

performed this month:

- Progressed roadway design
- Continued geotechnical boring field activities
- Integrated subsurface utility locations into project model
- Completed community engagement for invitation to January 20<sup>th</sup> open house
- Various department coordination to confer design decisions

**Budget:** \$1,500,000

**Design Completion:** December 2022

**Right-of-way acquisition:** Winter 2022-2023

**Targeted Construction Completion:** Winter 2023-2024

10. **Crowfoot Valley Road Widening** – 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 four-lane section, including painted median / turn lanes, with bike lanes in both directions. Project is being managed by Douglas County Staff.

**Phase:** Design - Town submitted IGA comments to Douglas County for review. The consultant continues with data research, including drainage report review and typical section review. The consultant has submitted an engineering decision document with a roll plot for Town review and comments, the Town and Douglas County are in the review process.

**Budget:** \$2,000,000 (Town contribution to construction funding; IGA to be executed with County)

**ROW Acquisition:** Spring 2022

**Design Completion:** Summer 2022

**Targeted Construction Completion:** Spring 2023

11. **Relocation of Dawson Ridge Blvd and West Frontage Rd** – 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** – Contract with CORE Engineering has been executed. Staff and the consultant held the kickoff meeting.

**Budget:** \$299,000

**Design Completion:** December 2022

**Targeted Construction Completion:** Fall 2023

12. **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 roundabout intersection in order to improve the traffic capacity of the intersection, help to man-

age speeds along Crystal Valley Parkway, and to accommodate the growth in traffic that is expected to increase once the Crystal Valley Interchange has been constructed.

This project is scheduled to be designed by June, 2022, bid in June, 2022, and constructed by Summer 2023.

**Phase:** Design - Town Council on December 21, 2021 approved a Resolution Approving a Service Agreement with Short Elliot Hendrickson, Inc., for the design of the Crystal Valley Parkway and Plum Creek Boulevard Roundabout Project.

**Budget:** \$400,000 pending approval of budget amendment

**Design Completion:** June 2022

**Targeted Construction Completion:** Summer 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 will implement adaptive signal timing on Founders and Meadows Parkway, as well as six abutting Town signals. The adaptive system should be operational by February 2022.
- The Town’s ATSPM project is broken into two phases. Phase I includes detection purchase and installation at 15 intersections. Adiona Transportation Solutions will begin installing detection at 15 intersections Townwide beginning January 10<sup>th</sup>. Phase II includes software development and signal timing. The Town is negotiating a scope and fee with the recommended consultant.
- The Town has purchased advance detection for four intersections which include N Meadows and Meadows, Front and Liggett, Front and Sam Walton, and Front and Scott. Detection will be installed by our on call signal maintenance contractor.

**Budget:** \$868,700

**Targeted Construction Completion:** End of year 2023

**2020–2021 Intersection Signalization Construction Project** – Signals were constructed at Meadows Boulevard & Cherokee Drive (mast arm signal) and at Hwy 85 & Liggett Rd (temporary span wire signal).

- Final invoicing is complete and the signals have entered their warranty period.

**Budget:** \$588,000

**Construction Complete:** December 2021

**Rectangular Rapid Flashing Beacon (RRFB) 2021 Project** – This project completes about half of the requested pedestrian beacon crossing locations that staff received in 2019.

- All beacon locations were installed this month. Final concrete work for pedestrian refuges was completed in December 2021. RRFBs will be installed at these locations in the next two weeks.

**Budget:** \$250,000

**Construction Completion:** Winter 2022-2023

# Engineering Division

## 2021 Pavement Maintenance Program (PMP)

**Miscellaneous Concrete Project**— All planned items are complete. The contractor is working to complete added scope.

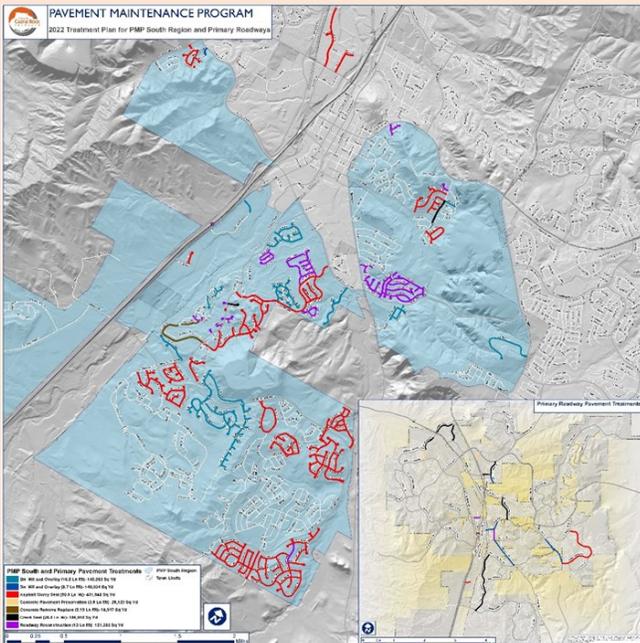
The contractor will be installing a raised crosswalk on Butterfield Crossing Drive, in early January. This is to regulate traffic speeds as well as ensure the safety of local elementary school students. The contractor will complete all repairs by January 10, weather permitting.



## 2022 Pavement Maintenance Program (PMP)

The PMP team has completed the bid packages for the 2022 PMP projects. Six (6) bid packages were sent to Rocky Mountain E-Purchasing on December 20, 2021. The bid packages were for the following project: Asphalt Overlay; Full Depth Reclamation; Curb, Gutter and Sidewalk Replacement; Slurry Seal; Concrete R&R Reconstruction; and, Town Facilities Parking Lot Improvements. All six bid packages have pre-bid meetings set up for January 5 and 6, 2022 with the bid openings for all projects scheduled for January 19 and 20, 2022.

The PMP map indicates the proposed scheduled treatments for street within the south PMP area and primary streets. This map may change based on maintenance treatments and resources available.



## 2022 Facilities Parking Lot Improvements Program

The PMP team has completed field reconnaissance for the 2022 Town Facility Parking Lot Improvements Program. Changes in the proposed facilities may occur due to current evaluation taking place and/or actual bid pricing received that may require some modifications.

Facilities scheduled for 2022 are:

Perry St. Fire Station #151	Meadows Treatment Plant
Police Department	Diamond Ridge Pump Station
Centennial Park (Burgess Pool)	Matney Park
Butterfield Park Parking Lot	Coachline Parking Lot
PCWPF Treatment Plant	

## 2022 Bridge Maintenance Program

Staff is working with new consultants for 2022 for bridge maintenance support and support to the Engineering Division. The new consultant will deliver a Bridge Program to include: bridge program management and administration; expertise in the Town's current asset management system software Cartegraph; and, a staff of bridge experts that are fully experienced in providing bridge construction, planning, assessments, prioritization, and maintenance activity recommendations.

# Development Division

## Review and Permitting

**Development Review** - All 59 reviews were completed. One was late by one day by the PW Development Services Team.

**Permitting & Inspection** – 21 right-of-way permits were issued.

# Transportation Planning & Traffic Engineering Division

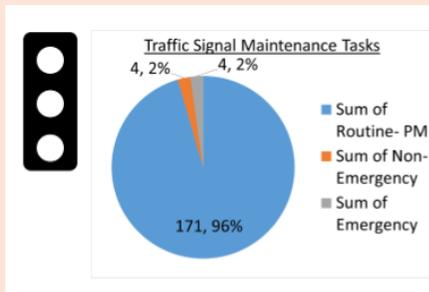
## Taxi Voucher Program

For the month of December, the Taxi Voucher Program funded 191 rides; which is a 30% increase to last year's December total of 149 rides, and a 2% decrease 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 December, 23 individuals used the Taxi service. Of those individuals, 83% of the rides were for work, 14% for shopping trips, and 3% for medical appointments. Sixty-eight rides were provided for people without access to a vehicle, 52 rides to seniors, and 71 rides to disabled riders.

The Castle Rock Senior Center provided a total of 740 rides in December.

## Traffic Engineering and Operations

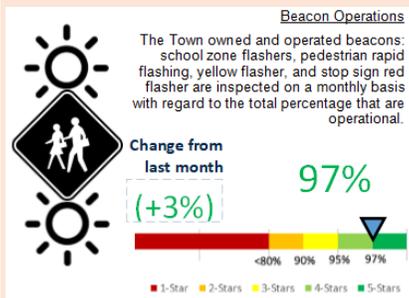
### Traffic Signal Operations and Maintenance



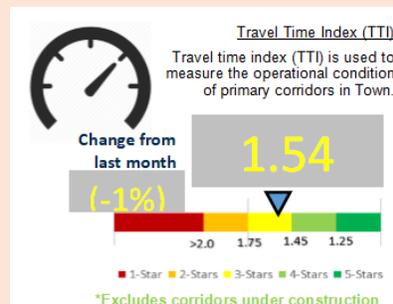
### Street Light Operations



### Beacon



### Operations



### Street Signs and Pavement Marking Maintenance

For the month of December, the crew accomplished 3106 tasks. Of these tasks, 2859 of them were sign work activities related to fabrication, install, repairs, replacements, inspections and investigations. We had 182 RRFB related tasks, including windshield

inspections, new installations, repair tasks and investigations. Other tasks included work zone, special events, and underground locates and traffic count tasks.

## Transportation Planning

### 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 inquiries were received in December. The Town is awaiting initial support petitions from several neighborhoods before they can proceed. The Town did receive an inquiry for Castle Creek Circle about on-street parking and modifying the mini circle on the road. The process was explained to the homeowner and the Town is waiting for the petition to proceed. At this time there are no active projects for traffic calming.

### Castle Rock Downtown Alley Master Plan:

A meeting with other Town department's and stakeholders was held in December to discuss which alleys to move into the design phase. The group decided to move forward with three alley segments.

- Alley 1 – between Wilcox and Perry St. from Festival Park to 4th Street
- Alley 2 – along the west side of the UP railroad line
- Alley 3 – from 6th Street to just south of the Chamber of Commerce

Initial design concepts include the addition of edge elements, such as landscaping or seating, and lighting, enhanced midblock street crossings, a paver confetti design, and eddy space for outdoor activities like dining. The project is still on schedule to be completed this April.

### Downtown Castle Rock Grants:

The downtown pedestrian street light grant project is now programmed into the regional Transportation Improvement Program (TIP). The funds are available in Federal Fiscal Years 2022 and 2023. The project will install roughly 40 new acorn style streetlights along several low lit Downtown streets. The grant award is for \$480,000 with a local match of \$120,000 for a project total of \$600,000. The Town met with CDOT and DRCOG staff in December to discuss the process and procedures of the grant and reimbursement process. Public Works is expected to kick this project off later this year. However, a budget amendment is necessary before the project can move forward.

The CDOT Revitalizing Main Streets grant for \$150,000 with a local match of \$15,000 is still on-going. The Town recently found out the materials for the high visibility crosswalks will not be available until late spring. In the meantime, Town staff is proceeding with the purchase and installation of the benches and trash cans. Town staff has also been working with the DDA on securing bids for the dining parklets. Once the bids have been received they will be discussed with Town staff and adjacent property owners before a preferred bid is selected. Construction of the parklets is planned to occur this spring.

# Fleet Services

*Keeping Castle Rock on the Move*



As you drive around Castle Rock and see many different departments providing first-class service, you will notice how they rely on their Town-issued vehicles. The Fleet Division takes great pride in knowing that those vehicles are reliable and safe to operate.

Fleet Services Division continues to make sure that Town vehicles and equipment are ready for operation. This includes public safety vehicles like Police & Fire but also other department vehicles that need to be in use to provide great service for our residents.

The Fleet Division finished the year 2021 with a very productive month. We completed 96 work orders and processed 118 vehicles for the month of December. Total output for the month was \$85,809 parts and labor produced. Technician productivity was also very good for the month of December coming in at 83.0%. The fleet availability came in at 97.7% which is back to pre-pandemic levels and well above our benchmarks.



Our parts department completed our year end inventory with the help of the Finance Department. The inventory procedure went well and we had an variation percentage under 1%. Fleet technicians completed training for the new hybrid vehicles we are adding to our fleet.

**Objective/Benchmark:** Complete at least 75% of our work orders within 24-hours of coming to shop.

**Outcome:** The Fleet team completed 76.1% of the work orders within 24-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 benchmark number is just under our monthly objective.

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

**Outcome:** Town vehicles and equipment were available 97.7% 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 83%. This productivity number was a very good increase considering the difficulty in getting some parts and some larger jobs that were completed.

## Street Operations & Maintenance Division

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

- \*Road Verge Maintenance
- \*Asphalt and Pothole Repair
- \*Training
- \*Crack Seal

### Road Verge Maintenance

The Streets team spent 40 hours picking up and disposing of 33 bags of garbage from the sides of 31.51 miles of roadway, keeping the Town looking neat and clean.

### Asphalt & Pothole Repair

The Streets Division Supervisors inspected 92 lane miles of roadway within the Town. The Streets crews spent 357 labor hours and placed 33.24 tons of hot mix asphalt in December, performing patches for CR Water as well as filling potholes and patching deteriorated areas.

### Crack Seal

The Streets Division performed crack seal operations on 18 lane miles getting ahead on the 45 miles scheduled to complete in the spring of 2022. The Streets crews spent 520 labor hours and placed 14,000 lbs of material to seal roadways.

### Training

The Streets crews spent 165.5 hours on training in the month of December. Performing annual online trainings as well as hands on job training. Also initial training was provided to two new operators and additional enhanced snow plow operators.

### Looking Ahead

In January, the Division will continue to crack seal as weather permits, and maintain an eye toward snow storms and perform ice mitigation as required.

