

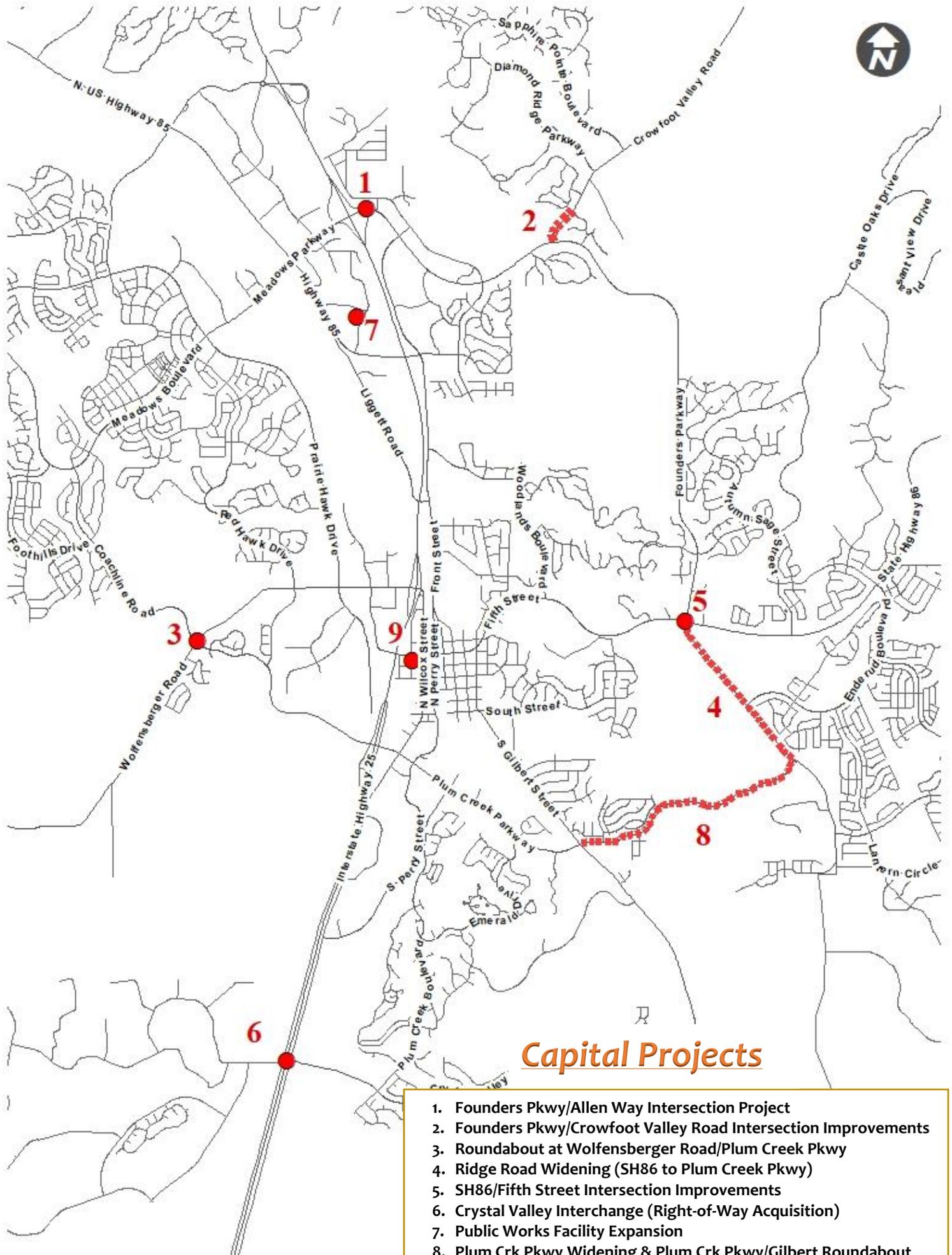
# Monthly Report

February 2020

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)
7. Public Works Facility Expansion
8. Plum Crk Pkwy Widening & Plum Crk Pkwy/Gilbert Roundabout
9. Downtown Alley Improvements

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 – Close out phase. The following is a summary of the construction activities that took place during this month:

- The contractor is working on installing an illuminated Street Sign for Founders Parkway on the north bound off ramp sign pole.
- The contractor works on seeding and soil mitigation as weather allows.

**Budget:** \$2.64M

**Construction Complete:** 4th Quarter 2019

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, Intersection Improvements: The following is a summary of the construction activities performed this month:

- The contractor has completed punch list items until work resumes.
- The contractor is continuing to work on installation of conduit for the permanent street light poles.
- The contractor works on seeding as weather allows.

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

**Construction Completion:** Spring 2020

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 potential accidents.

Phase: Construction – Substantial completion was issued in Spring 2019. Punch list items are complete, with the exception of submitting as-built plans. The Town is working with the adjacent property owners to complete the final landscape tie-ins and adjustments.

**Budget:** \$1.14M

**Construction Completion:** Spring 2020

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 - 100% plans have been provided. The consultant continues to work on ROW acquisition. Staff is working with IREA to initiate agreements to have their facilities relocated.

**Budget:** \$400,000

**ROW Acquisition:** Early 2020

5. **Founders Parkway (SH86)/Fifth Street Intersection “Four Corners” Improvements** – With new traffic studies submitted, the Town, and CDOT will continue to investigate multiple alternatives to address safety concerns and capacity issues at this intersection.

**Phase: Design –**

- The DRCOG grant was awarded to the Town.
- Project will be designed per Federal requirements/standards.
- Town staff is reviewing submitted IGA with CDOT to design and manage the project

**Budget:** \$340,000

**Design Completion:** Pending award

6. **Crystal Valley Interchange – Right-of-Way Acquisition** – The purpose of this project is to achieve acquisition of remaining right-of-way and set aside future project funding allowing potential funding partnerships to assist with advancing construction.

Phase: Right-of Way Acquisition

- Appraisal Services – Working on Appraisals
- Acquisition Services
  - East Side of I-25 – Offers are being sent out. The billboards are being appraised.
  - West Side of I-25 Appraisals are targeted for completion in May and June, 2020.

**Phase:** Interchange Access Request and Environmental Assessment Reevaluation

- Town staff has been meeting with CDOT and FHWA to established priority activities for the interchange approval
- Town staff is requesting proposals from consultants to assist with the development of the documents and report required for the approval process.

**Budget:** Development Escrow

**Completion:** Fall 2020

7. **Public Works Facility Expansion** – This project consists of the addition and renovation of the Service Center building.

**Summary:** The last phase of this project (renovation of the existing space) has been completed and the employees have been relocated into this space.

With all the employees moved into their permanent positions, the only work that remains is punchlist.

**Budget:** \$4,960,349

**Construction Finish:** Spring 2020

8. **Plum Creek Parkway Widening and Plum Creek Parkway/Gilbert Street Roundabout Project** – This project will address the need for the following improvements:
- Convert Plum Creek Parkway/Gilbert Street intersection into a roundabout
  - Reconstruct the existing 2-lane section of Plum Creek Pkwy from Gilbert to Eaton streets
  - Widen Plum Creek Parkway from Gilbert Street to Eaton Street
  - Widen Plum Creek Parkway from Eaton Street to Ridge Road

Phase: Design and ROW Acquisition – Kimley-Horn is the consultant for this project. The following is a summary of design activities performed this month:

- Staff is presenting to the Public Works Commission on March 2, 2020 and Town Council on March 3, 2020. Staff plans to award to Jalisco International, Inc. pending approval of Commission and Town Council. The project is tentatively scheduled to start in mid-March, weather permitting.
- Continued development of construction plans for Phase 2, the widening between Eaton St. and Ridge Rd., and the roundabout at Ridge Rd.
- Continued utility coordination for utility relocations
- Right of Way Acquisition is scheduled to be complete prior to start of construction. The Legal Department continues to move forward with condemnation at the Rolling Hills Apartment property. Hearing is scheduled for March 3, 2020

**Budget:** \$794,375

**Design & ROW Completion:** March 2020

Phase 1A: Drainage package

- The contractor continues installation of improvements along Plum Creek Pkwy. The contractor has mobilized a second crew to begin storm sewer installation in the eastern portion of the project.
- Anticipated completion date is late March 2020.

**Budget:** \$1,158,300

**Construction Completion:** Spring 2020

9. **Downtown Alley Improvements** – This project will address the need for the following improvements:

Four alley ways in the downtown area are beyond their service life and are not providing an appropriate level of service to the Town. 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.

**Status: Design** – Preliminary design (30%) is complete for the Westerly alleys (between 5<sup>th</sup> and 3<sup>rd</sup> Streets,

West of Jerry Street) and is currently in Castle Rock design review. Preliminary design for the Easterly alleys (between 6<sup>th</sup> and 4<sup>th</sup> Streets, East of Perry Street) is underway and will be submitted for Castle Rock design review 2/28/2020.

### **Target Milestones**

Design Completion – March 31<sup>st</sup> 2020

Phase 1 Construction – Summer 2020

Phase 2 Construction – Summer 2021

**Budget:** \$900,000

**Traffic Signal System Upgrades** – This project is a multi-year signal system upgrade project that began in 2015 and is on-going 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.

- Town staff and CDOT have a letter agreement regarding travel time device installations on CDOT signals. Town staff is in the procurement process for the devices, and intends to coordinate the installation with CDOT this winter/spring.
- Detection equipment replacement and upgrades are being scheduled for installation on Wolfensberger, Meadows Parkway, and on Plum Creek.
- We will be trialing a new detection system called GridSmart at Plum Creek Parkway and Plum Creek Boulevard this spring.
- Town staff have been preparing for an upcoming DRCOG traffic signal system call for projects by meeting with local traffic operation partners: CDOT Region 1 and Douglas County, as well as technology partners regarding system upgrade needs.

**Budget:** \$200,000

**Construction Completion:** Spring 2020

### **2020 Intersection Signalization Design / Construction**

**Project** – This project includes the design and construction of one new signal in 2020 at Meadows Boulevard & Cherokee Drive.

- In February, Town staff completed the signal design plans, specifications, and bid documents and posted on BidNet for constructions bids. Bid opening is scheduled for March 13.

- In February, the signal pole order was complete with an expected delivery date July 3 to 17. Signal poles are the longest lead time item and completing this order ensures timely delivery for summer construction.

Staff is working with Finance and IREA to use franchise credits to provide power and remove street lights at this intersection.

**Budget:** \$610,000

**Construction Completion:** Fall 2020

**2019 / 2020 Illuminated Street Name Sign Project** – This project is the 2<sup>nd</sup> year we will be installing illuminated street name signs at several signalized intersections in Town along the major “ring” road that loops around the Town of Castle Rock.

- A sign from the 2019 project remains to be installed by the Allen Way signal contractor at northbound I25 and Founders Parkway. They are scheduling traffic control and waiting to pick up the sign from the Town for installation
- A sign from the 2019 project at I25 southbound and Plum Creek Pkwy, will be installed with the 2020 sign project due to the need for a davit arm to avoid obscuring other traffic signs.
- Intersections to be installed in 2020, include Meadows Pkwy / Factory Shops Blvd, Meadows Pkwy / SH85, and two signs, one each at I25 northbound / Founders Pkwy, and I25 southbound / Meadows Pkwy.

2020 illuminated street name sign installations are included with the Meadows / Cherokee signal construction package and may be installed as a part of that construction contract. Staff will procure the signs for the project.

**Budget:** \$56,000

**Install Completion:** End of 2020

### **Rectangular Rapid Flashing Beacon (RRFB) 2020**

**Project** – This project addresses the 20 requested pedestrian beacon crossing locations that staff received in 2019 at priority locations.

- Staff is preparing design plans and specifications for bid.
- Staff is coordinating with our vendor to ensure timely delivery and best pricing for the high quantity of beacons in this order.

A budget amendment for 2020 is being considered to fund the project.

**Budget:** TBD

**Construction Completion:** End of 2020

# Engineering Division

## Engineering Division Activities in the month of February

- The PMP Program was recognized with the CAPA Award for best project of the year for the 2019 Butterfield pavement replacement which is a huge honor and accomplishment for the Division and Town of Castle Rock! CAPA plans to award this to the Town in an upcoming Town Council meeting with a news release to follow immediately
- Division employees continue to work on rehearsals for the upcoming APWA Re-Accreditation activities
- The team has begun work on preparing the 2021 Budget and 5-year plan for the PMP program
- The division completed the 2020 Report Card for infrastructure condition ratings

## 2020 Pavement Maintenance Program (PMP)

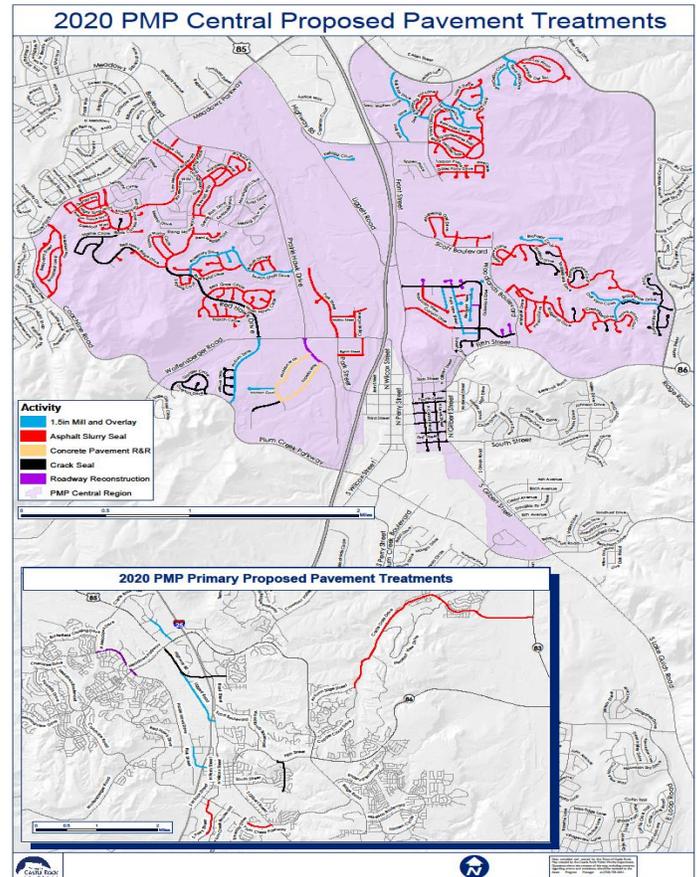
All six PMP contract documents have been prepared and sent to the proposed contractors for signatures. Contracts under consideration this year are:

- Asphalt Overlay
- Full Depth Reclamation
- Slurry Seal
- Mastic and Crack Seal
- Curb, Gutter & Sidewalk Replacement
- Reconstructions (Prairie Hawk Dr. / Meadows Blvd.)

Staff will present the corresponding resolutions and contracts to the Public Works Commission on March 2, and to Town Council at the March 3, meetings respectively.

A Public Outreach Open House will be held March 26, at The Public Work Service Center, 4175 N. Castleton Ct., from 5:30-7:30pm. This open house will provide staff the opportunity to brief residents and businesses on the maintenance activities and schedules, including night work, pending Council approval.

The PMP map (shown below) indicates the proposed scheduled treatments for street within the West PMP area and Primary Streets pending Council approval.



An initial coordination meeting, with various entities, was held to go over the scope of work for the Meadows Blvd/Prairie Hawk Reconstruction project. Those in attendance included representatives from; CRDC, Meadows HOA, Centura Health (Hospital), Arapahoe Community College, Douglas County School District as well as CR Fire and Police Departments. Subsequent meetings will be scheduled in the upcoming weeks.

Staff will set up and conduct coordination meetings with contractors, for all PMP projects, to go over the scope of work and address any questions or concerns they have. Pre-construction meetings will be scheduled over the next few weeks.

## Condition Rating

Condition rating began earlier this month and continues for the next few weeks. Staff is working to complete the North area as well as the Primary streets prior to work beginning in April.

## 2020 Facilities Parking Lot Improvements Program

The bid opening for this program is complete, and low bid was under budget. The contract was sent, and has been returned signed by the contractor. Staff plans to present the contract to the Public Works Commission March 2 and Town Council March 3, with their recommendation to award. This contract will see needed improvements to ten (10) Town facilities and parking lots as follows:

- PW Service Center (front & back lots)
- Red Hawk Maintenance Shop
- Red Hawk Golf Course Parking Lot (North Half)
- Rhyolite Park (Crystal Valley Blvd)
- Rec. Center Parking Lots (upper & lower)
- Milestone Pump Station (Founders Pkwy)
- Miller Treatment Plant (Plum Creek Blvd)
- Prairie Hawk Well Field (A7)
- Castle Oaks Lift Station

## 2020 Bridge Maintenance Program (BMP)

Bids for the 2020 Bridge Rehabilitation for 5<sup>th</sup> Street Bridge over I-25, will be submitted for competitive bids upon Colorado Department of Transportation's completion of the proper paperwork and environmental studies. The project is expected to start in May and be complete by the end of June 2020, pending weather.

### Bridge Painting

- Per Streets Schedule

Treatments and locations may change pending current evaluation taking place and/or actual bid pricing received that may require some modifications.

## Development Review and Permitting

**Development Review** - All 32 reviews were completed on or before the due date by the PW Development Services Team.

**Permitting** – 31 right-of-way permits were issued.

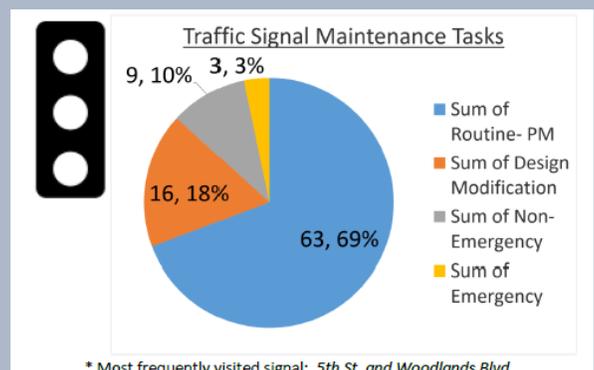
## Transportation Planning & Traffic Engineering Division

### Taxi Voucher Program

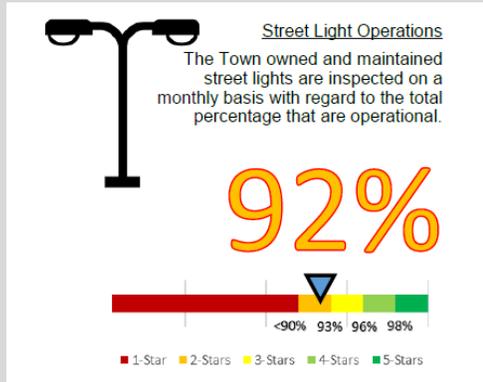
For the month of February, the Taxi Voucher Program funded 106 rides; this was less than last February's total of 140 rides. Ridership this month is down 23 rides from last month most likely due to the snow in February. Transportation services are provided for Castle Rock citizens who cannot drive, have a disability that prevents them from driving, or do not have access to a vehicle. In February, 20 individuals used the Town's Taxi service. Of those that used the service, 69% of the rides were for work, 17% were for shopping trips, and 14% for medical appointments. Two new people registered for the service bringing the total of registered riders to 436 in the Taxi Voucher Program. The Castle Rock Senior Center provided a total of 622 rides in February.

## Traffic Engineering and Operations

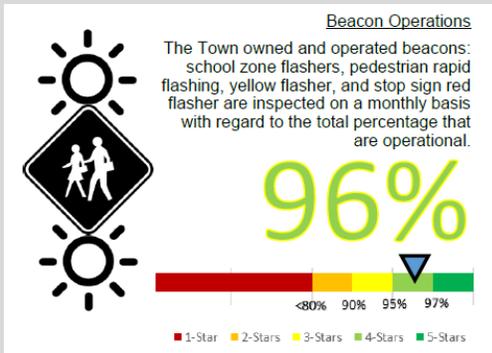
### Traffic Signal Operations and Maintenance



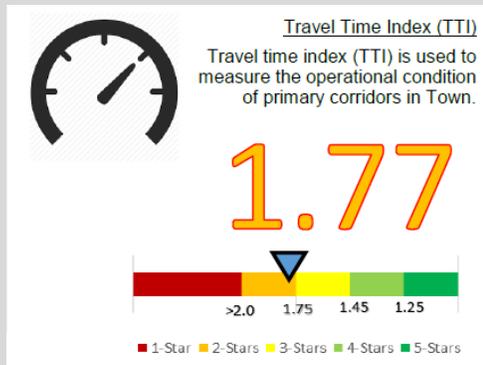
## Street Light Operations



## Beacon



## Operations



## Street Signs and Pavement Marking Maintenance

During the month of February, the crew accomplished 143 tasks. This task total was down from a typical month due to the frequent snow storms during the month. The team assisted with snow plow operations on several occasions in support of the Street Operations Division. Of the completed tasks, 85 of them were sign work activities related to fabrication, install, repairs, replacements during the month. This included the repair of signs knocked down during snow storms. The team also selected the contractor who will complete the long line striping work around Town starting this Spring.

## Transportation Planning

### Neighborhood Traffic Calming Program (NTCP):

The NTCP exists to verify and address resident speeding concerns on local neighborhood streets and certain collector roadways. There was one new speed study inquiry in February. The HOA management company for the Haven neighborhood located just east of Woodlands Blvd inquired about the program for the homeowners. The initial support petition and policy document were sent to the management company. There are two streets that are currently active in the traffic calming program;

- **Diamond Ridge Pkwy:** The results of January's two-week demonstration project were shared with the point of contact for the study area. According to the data collected, the 85<sup>th</sup> percentile speed was reduced 4-5 mph. However, it is still above the posted speed limit of 30 mph. The 85<sup>th</sup> percentile speed during the demonstration project ranged from 35-36 mph. At the next working group meeting Town staff will discuss the results of the study and the goal of the homeowners as well as other traffic calming devices.
- **Bittern Street / Loon Circle:** Back in December a working group for the neighborhood recommended replacing both existing traffic circles with speed cushions. A vote of the residents who live on the streets in question was conducted in February and the proposed

plan was approved. The replacement work is set to occur this summer.

### Castle Rock Transit Feasibility Study:

Town staff closed the public/stakeholder input phase of the project on January 31<sup>st</sup>. While public input is welcomed throughout the study, staff has compiled all the input received as of the end of January. This information was shared with the Focus Group and will be placed on the project website. Based on feedback received at the meeting, the team will identify community needs and begin matching different type of transit service to meet those needs. A technical advisory committee meeting and another Focus Group meeting has been scheduled in March to review and discuss this data.

## Fleet Services



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 was off to a very busy start to 2020 “Keeping Castle Rock on the Move”. Fleet Services had one of our most productive months ever in February ever in 2020.

The Fleet Division billed out \$80,000 of parts and labor and completed 152 work orders. As well as meeting the following objectives and benchmarks:

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

**Outcome:** Fleet team completed 86.7% 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.

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

**Outcome:** Town vehicles and equipment were available 98.8% 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 69.7%. Just short of the benchmark but still very good productivity from fleet technicians. Out of 568 available hours of technician time 396 hours were direct billed time.

Overall we completed 152 work orders and processed \$80,000 in parts and labor and another \$30,000 in fuel transactions. The fleet parts division returned a large number of obsolete parts and received a big credit of \$2,000. Fleet technicians Chris Selheim, Eric Dena, Rod Claassen, and Caleb Wood all went to advanced training classes. Fleet staff now has on order 25 pieces of vehicles or equipment on order for 2020.



Castle Rock Water loader with large snow pusher.

## Street Operations & Maintenance Division

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

- Snow and Ice Control
- Roadway Ice Breaking
- Pothole Repair
- Sweeping

### **Snow and Ice Control Operations**

Streets personnel in conjunction with personnel from the Water Department, Parks Department and

Engineering and Development Services divisions spent the majority of February working to plow the streets of snow. Eight snow events hit the Castle Rock area with a number of them lasting more than two days giving the area an official total of 27.9 inches of snow. During this time the snow plow crews put in 22,455 miles driven plowing snow and put down 1400 tons of de-icers to keep the Town roads passable. Downtown snow was removed within 24 hrs of snow events requiring this service and 265 loads of snow were removed

### **Roadway Icebreaking**

In between snow events crews worked to clear ice buildup from the travel lanes of the roadway. Crews equipped with Icebreakers, Motor Graders, and Dump Trucks cleared ice buildup 20 high priority icing concerns covering .71 lane miles.

### **Pothole repair**

Trying to take advantage of the brief periods of time between storms, Streets crews worked to fill potholes caused by the intense freeze thaw cycle that February brought. The Streets team used a combination of 4.5 tons Hot Mix Asphalt and 4080 lbs. of Cold Mix Perma-Patch to repair the equivalent of 872 potholes.

### **Sweeping**

In February, Crews took advantage of opportunities to sweep up aggregate left on the roads by the plow operations. Crews were able to sweep up 83.25 lane miles of roadways in between snowstorms picking up 62 cubic yards of material. This operation helps mitigate dust and smog buildup by removing sand from plow operations before they are ground up and sent airborne by vehicular traffic.

### **Looking Ahead**

In March, Crews are looking to address pothole and asphalt patching needs, sweeping operations, gravel road maintenance operations are also being scheduled. Crews will remain vigilant for snow operation needs as winter is not over and Colorado weather can turn quickly.