



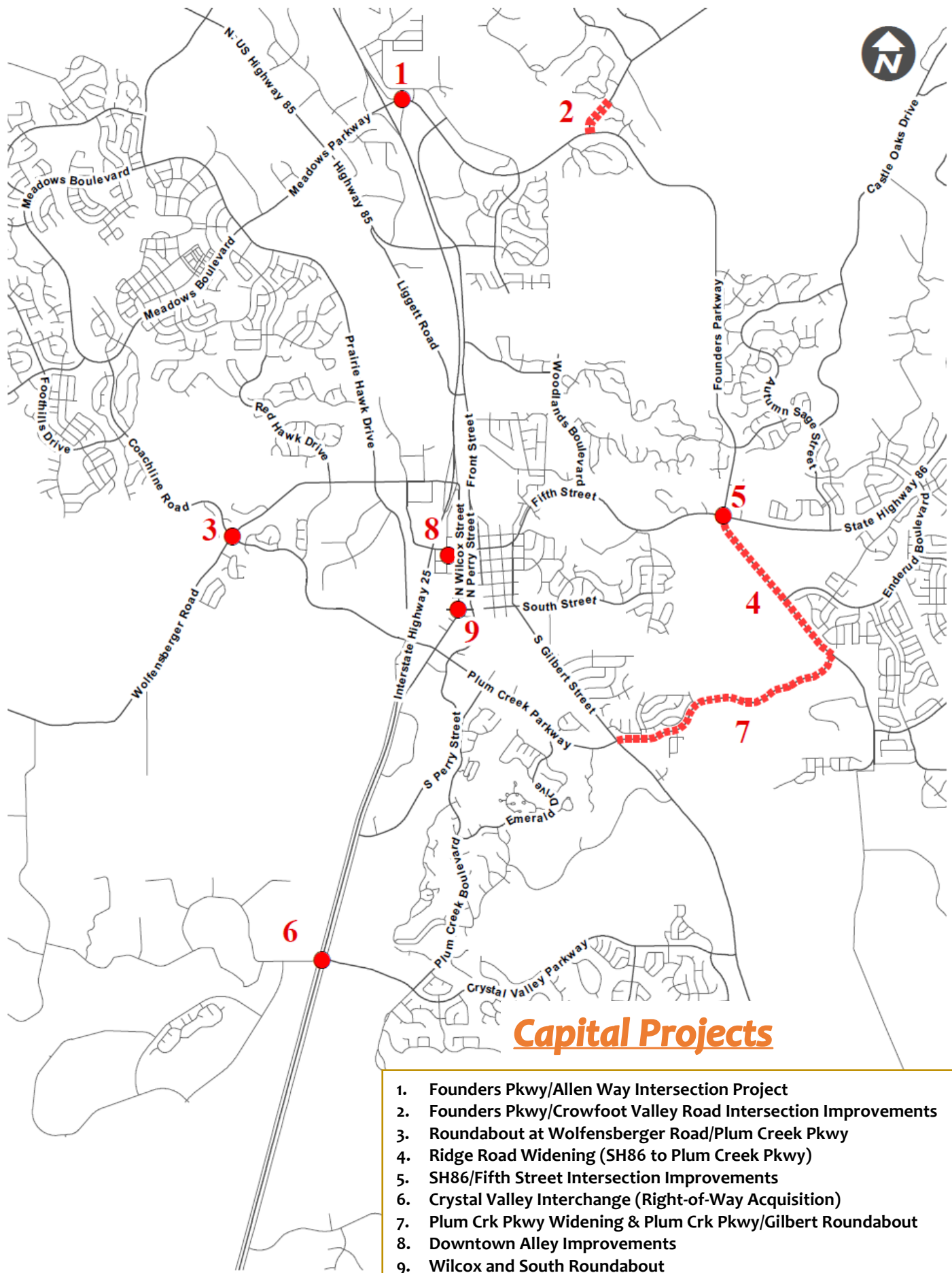
# Monthly Report

October 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.





**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. Town staff, project consultant and the contractor are working to complete required project documents for close out with CDOT.

**Budget:** \$2.64M

**Construction Complete:** Fall 2020

**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:** Close out phase. Town staff, project consultant and the contractor are working to complete required project documents for close out with CDOT. 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

**Construction Completion:** Fall 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 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 close-out is as follows:

- Obtained consensus for landscaping scope with adjacent property owners
- Began drafting final contract agreement for landscaping scope

**Remaining Budget:** \$120,000

**Final Completion:** Spring 2021

**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 consultants continue to work on ROW acquisition. Staff submitted the project construction plans to IREA to initiate their design for relocation of facilities and providing power to the street lights

**Budget:** \$400,000

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

- Town staff and DEA met with FHWA and CDOT to discuss project scoping, which included design alternatives.
- Town staff and DEA held an internal meeting to discuss FHWA and CDOT feedback from the scoping meeting.
- The project team met to discuss the project’s communications plan, which will include soliciting public input. A schedule for public outreach meetings is being developed. **Budget:** \$1,200,000 for design in 2020 with DRC-OG Grant Reimbursement (Town share \$240,000)

**Design Completion:** Fall 2021

**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 partnerships to assist with advancing construction.

**Phase:** Right-of Way Acquisition

- Acquisition Services
  - o East Side of I-25 – Offers continue to be sent out. Several properties are in the negotiation phase.
  - o West Side of I-25 – Appraisals are complete. Town staff and consultants are preparing Notice of Intent for several property owners.

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

- Town staff continues to meet with CDOT and FHWA to establish priority activities for the interchange approval.
- The Town received notice of the federal BUILD Grant award. Staff has been meeting with CDOT and FHWA staff to develop a plan to maximize efficiency’s on getting the grant agreement and the Intergovernmental



Agreement (IGA) done. The IGA is between CDOT and the Town which identifies the general terms of the grant, scope of work, and funding provisions awarded to the Town. Staff is also pursuing an Advanced Pre-Construction application which will allow the Town to get reimbursement for design activities prior to the grant agreement being complete. The funding of the grant is reimbursement of up to \$5.4M with a cost sharing of 45% grant and 55% funded by the Town.

**Budget:** \$4,600,000, and Development Escrow

**Completion:** Winter 2020 (right of way acquisitions)

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 2 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 3 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 1A: Drainage Improvements: Construction (100%)** - The following is a summary of activities performed this month:

- Town staff is inspecting punchlist work for final acceptance
- Staff is compiling final quantities and back charges for the contractor's contract

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

**Construction Completion:** Complete

**Phase 1B: Plum Creek Pkwy Widening and Roundabout: Construction (68% Complete)** - The following is a summary of activities performed this month:

- Paved Plum Creek westbound lanes from Gilbert to Valley Drive
- Installed storm drainage for phase 1 (Southerly half) of the Eaton roundabout
- Poured concrete for pedestrian ramps and sidewalks at the Gilbert intersection
- Electrical conduits installed for street lighting
- Poured structure bases (fore bay & outlet) for water quality pond
- Completed pavement removals and earthwork for Valley Drive and Live Oak accesses

The project continues progressing to substantial completion by the end of 2020 with roadway and pedestrian access improvements completed. Topsoil, seeding and final punch list activities are scheduled to be completed in the spring of

2021 when conditions for seeding and final stabilization are favorable.

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

**Substantial Completion:** Winter 2020

**Construction Completion:** Spring 2021

**Phase 2: Design and ROW Acquisition (30% Complete)** – The following is a summary of design activities performed this month:

- Completed PREAPP process through development services
- Reviewed and provided comments for conceptual design
- Completed QL-D utility mapping
- Completed Wetland delineation/mapping

**Budget:** \$794,375

**Design Completion:** March 2021

**ROW Completion:** ROW – Fall 2021

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

**Phase – Design/Advertisement**

- IREA facility design complete and under review for approval
- Continue public stakeholder outreach/coordination efforts to minimize construction impacts to affected businesses
- Preparing construction contract bid documents, incorporating utility relocation elements

**Budget:** \$900,000

**Completion:** Adjusted to Summer 2021

9. **Wilcox and South Roundabout** – This intersection is currently controlled by stop signs in two directions. As the traffic volumes increase, this existing traffic control will not be the most efficient and could contribute toward increased congestion and accidents. This project is for the design of a roundabout intersection, which will improve operations and minimize accident potential.

**Phase: Design:**

- The consultants continue to work on design, with 90% plans expected mid-December
- Town Staff is continuing to work on ROW acquisition with offer letters sent to owners
- Construction phasing options are being considered and a potential early construction start also being considered in January instead of March pending Town review and acceptance

**Budget:** \$1,850,000

**Design Completion:** End of 2020

# Engineering Division

## 2020 Pavement Maintenance Program (PMP)

The 2020 PMP has focused its efforts in the Central PMP area with additional work taking place on primary streets

2020 PMP projects completed to date are:

- Curb, Gutter & Sidewalk Replacement Project
- Asphalt Overlay Project
- Full Depth Reclamation Project
- Meadows Blvd. & Prairie Hawk Drive Reconstruction Project
- Crack Seal/Mastic Seal Project

The Slurry Seal Project began the week of August 24, with the removal of traffic calming devices on Loon Circle and Bittern Street. Contractor completed asphalt repairs on October 21.

Project will be closed out.



The 2020 Miscellaneous Concrete began August 31, 2020. This contract provides the Town the means to repair concrete infrastructure, such as sidewalk, curb and gutter and crosswalks throughout the Town as well as updating older pedestrian access ramps to ensure they meet Americans with Disabilities Act (ADA) compliance.

Project will be closed out.



## 2020 Facilities Parking Lot Improvements Program

This contract saw improvements to four (4) parking lots. The locations that were completed this year are:

- Milestone Pump Station (Founders Pkwy)
- Miller Treatment Plant (Plum Creek Blvd)
- Prairie Hawk Well Field (A7)

**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.

- Trafficast, the travel time device vendor, connected the CDOT server to Town database. This connection will provide travel time information in Town on CDOT corridor's Meadows and Founders Parkway, and at the Wolfensberger interchange. Staff will be developing "routes" next month that will be incorporated into monthly travel time metrics.
- Vehicle detection equipment replacements are complete at four of five intersections. The new detectors are reporting to the Town's signal performance metric system.
- A detection system trial is still in progress at Front and Black Feather.
- Staff are working on an IGA with CDOT after being awarded a traffic operation technology grant through a DRCOG application process. The project will make automated traffic signal performance metric (ATSPM) system improvements, including installing advance detection equipment and improve ATSPM software dashboard functions.

**Budget:** \$993,700

**Construction Completion:** End of 2022 (for grant project)

**2020 Intersection Signalization Construction Project** – This project will construct two signals in 2020, at Meadows Boulevard & Cherokee Drive and a temporary span wire signal at Hwy 85 and Liggett Rd.

- Delivery date for Liggett Road poles has been confirmed for mid-November. Other Town supplied materials have been ordered and their purchasing process begun. The cabinet manufacture informed us that our order delivery will be delayed, and is now scheduled for late November. Delay is due to COVID issues at their facility. Contractor is updating the project completion schedule.
- Morton Electric completed construction of underground infrastructure at Cherokee in October.

**Budget:** \$588,000

**Construction Completion:** End of 2020

**Rectangular Rapid Flashing Beacon (RRFB) 2020 Project** – This project addresses the requested pedestrian beacon crossing locations that staff received in 2019 at the 10 highest priority locations.

- Punch list items for beacon equipment was completed by the contractor.
- 2020 Project is being finalized and closed.
- 2021 installation location list is being compiled and evaluation process begun for prioritization.

**Budget:** \$170,000

**Construction Completion:** Fall 2020

- Castle Oaks Lift Station



## 2021 PMP

The PMP team began working on the field reconnaissance for the 2021 PMP in September. This consists of the North PMP area, and scheduled primary streets, which include; Promenade Pkwy, Meadows Boulevard between Prairie Hawk Dr. and Coachline Rd., Wolfensberger Rd., Crystal Valley Parkway and S. Wilcox St/ south of Plum Creek Parkway intersection, Front St. and Scott Blvd. The purpose of the field reconnaissance is to quantify curb, gutter, and sidewalk as well as pavement areas, which are in need of repair prior to the application of the final maintenance surface treatments such as slurry seal, asphalt overlay, or asphalt pavement mill and overlay. Changes in the proposed streets may occur due to current evaluation taking place and/or actual bid pricing received that may require some modifications.

## Development Review and Permitting

**Development Review** - All 44 reviews were completed on or before the due date by the PW Development Services Team.

**Permitting & Inspection** – 29 right-of-way permits were issued.

# Transportation Planning &

# Traffic Engineering Division

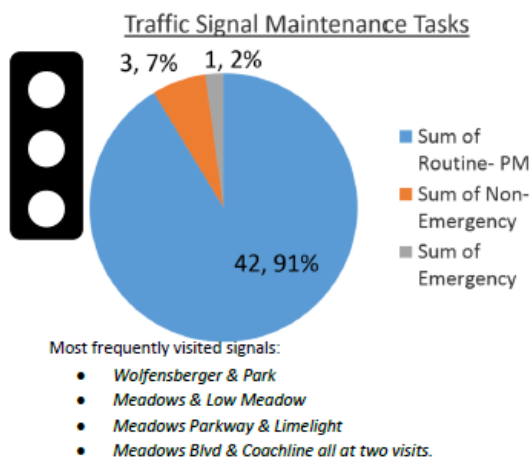
## Taxi Voucher Program

For the month of October, the Taxi Voucher Program funded 100 rides; this was roughly a 20% decrease from last year's October total of 126 rides and an 11% 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 October, 15 individuals used the Town's Taxi service. Of those that used the service, 78% of the rides were for work, 18% were for shopping trips, and 4% for medical appointments.

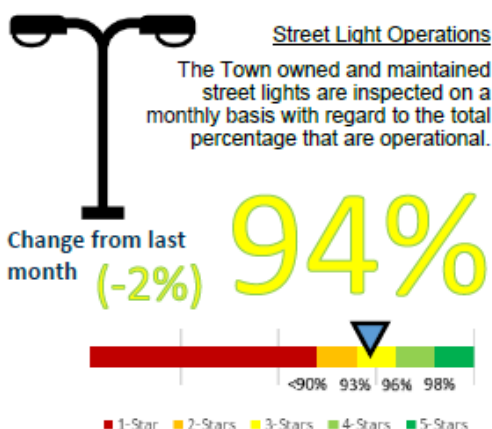
The Castle Rock Senior Center did not report a total number of rides in October.

## Traffic Engineering and Operations

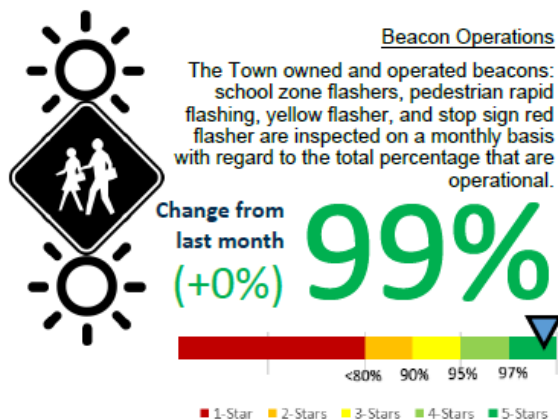
### Traffic Signal Operations and Maintenance



### Street Light Operations

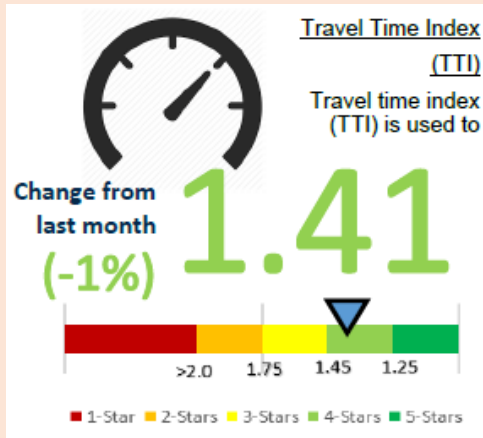


### Beacon





## Operations



## Street Signs and Pavement Marking Maintenance

During the month of October, the crew accomplished 1,636 tasks. Of these tasks 1,393 were sign work activities related to fabrication, install, repairs, replacements, inspections and investigations. 238 of these tasks were markings related to replace long lines for pavement maintenance projects (PMP). There were 18 tasks for new markings installs. The crew provided snowplow support for one storm. The team completed 108 RRFB windshield inspections and two traffic-counting tasks.

## Transportation Planning

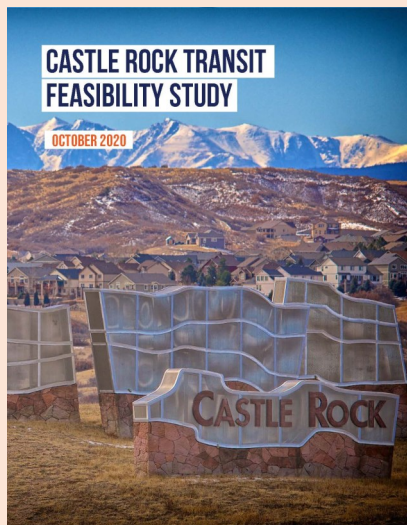
### Neighborhood Traffic Calming Program (NTCP):

There were no new traffic calming inquiries in October.

Draft designs of the traffic-calming plan for Diamond Ridge Pkwy is currently being reviewed by Town staff and should be finalized within the next month. The plan is expected to be constructed this spring with the Town's Pavement Management Program.

### Castle Rock Transit Feasibility Study:

Town staff presented the final report and recommendations to Town Council on October 20th. Town Council approved the study unanimously.



# 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 was very productive and that shows in our benchmark comparisons listed below. The Fleet Division billed out \$83,000 of parts and labor and completed 124 work orders. Technician Rod Claassen was recertified as an ASE Master Technician.

The Fleet Division also put into service this month the first two Hybrid police interceptors. These two new patrol cars are the first ever pursuit rated hybrids and we expect to save thousands of dollars in gas expenses and thousands of pounds of CO2 into our air.



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

**Outcome:** Fleet team completed 79.8% 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 98.2% 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 76.8%. This productivity

number was a very good considering the difficulty in getting some parts.

Overall we completed 124 work orders and processed \$83,000 in parts and labor and another \$28,000 in fuel transactions.

## Street Operations & Maintenance Division

During the month of October, the Street Operations & Maintenance Division (O&MD) carried out operations in a number of core functionalities.

The Streets team performed work in the following maintenance operations:

- |                                    |                          |
|------------------------------------|--------------------------|
| *Asphalt Patching & Pothole Repair | *Sweeping                |
| *Pre PMP Crack Sealing             | *Equipment Maintenance   |
| *Road Shoulder maintenance         | *Snow Plowing Operations |

### Asphalt Patching and Pothole Repair

During October, Streets Division crews completed a number of asphalt roadway repairs. These operations include full depth asphalt patches, asphalt and concrete pothole repair, as well as repairs to large transverse cracks by filling them with asphalt and subsequently crack sealing the repair in most cases. These operations comprised a total of 238 labor hours and utilized approximately 15.12 tons of hot mix asphalt, and 360 pounds of concrete mix.



### Sweeping

Streets Division Crews have been sweeping up the roadways throughout Town in support of a number of programs. One of the primary programs is the Fall sweep, in which every roadway in Town is swept clean. This program is somewhat dependent upon the elements as the trees are still managing to cling to their leaves so crews are trying to work around areas with large trees. Another program is the post storm sweeping program, in which the sweepers are deployed after a snow storm to try to pick up as much sand and salt as possible to try to mitigate air and water pollution. This program is in direct support of the DRCOG (Denver Regional Council of Governments) program which works in conjunction with RAQC (Regional Air Quality Council). As well as maintaining a clean and neat downtown and business area. In total crews swept up over 388 miles of roadways using 163 labor hours.

### Pre PMP Crack Sealing

The month of October saw the completion of 16.44 lane miles for the Pavement Maintenance Program (PMP). These operations enhance the life cycle of the roadways by helping to prevent water from infiltrating the roadway and damaging the pavement or the subgrade. In total, 278 labor hours were dedicated to this task and 19,285 pounds of crack seal material were used.

### Road Shoulder Operations

Crews worked to ensure the aesthetic as well as functional aspects of the roadway shoulders, having completed a total 6.68 edgeline miles of mowing operations as well as shoulder reconstruction. These operations are intrinsic to the proper drainage, visibility, and overall appearance of the roadways. Crews dedicated 44 labor hours to the completion of these tasks.

### Equipment Maintenance

Crews dedicated 393 labor hours to ensure the equipment used in other operations were ready for the tasks ahead. This included preparing plow trucks for the storm that occurred on the 25<sup>th</sup> of October, maintaining the sweeper and replacing filter and broom segments, as well as maintaining mowers, and smaller pieces of powered equipment. These operations are vital to ensuring the tools needed are ready when they are needed.

### Snow Plow Operations

A significant snow storm hit the area on the 25<sup>th</sup> of October bringing with it severe cold and 7.2 inches of snow. Crews put down 255 tons of material and worked 468 labor hours to clear snow from the roadways, mitigate icing, and return the roads to normal operations as soon as possible. Snow operations are by in large the most expensive and visible of all operations and requires a dedicated effort by Town personnel from four Departments. Water, Public Works, and Parks departments all work together to effectively handle snow fall.

### Looking Forward

In the month of November, crews are looking to continue the crack seal operation as weather permits, continue the sweeping programs and begin the Fall Sweep in earnest as the leaves are starting to fall readily. Crews will also maintain vigilance for snow and maintain the equipment needed to respond.