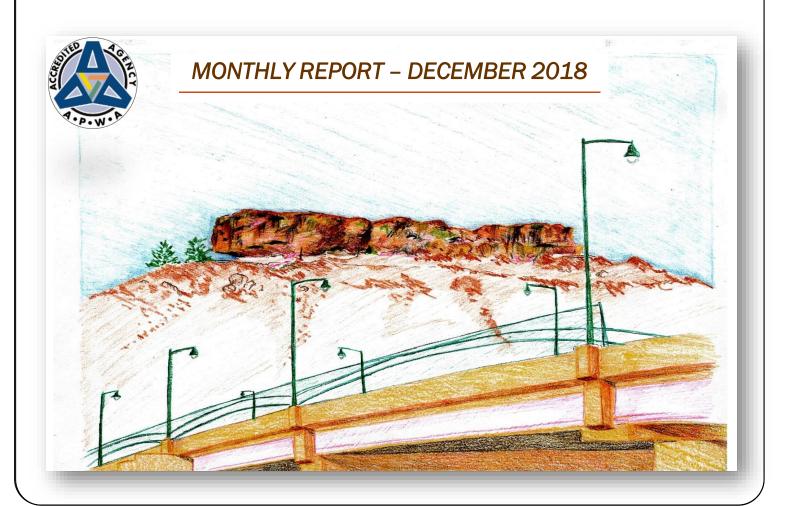
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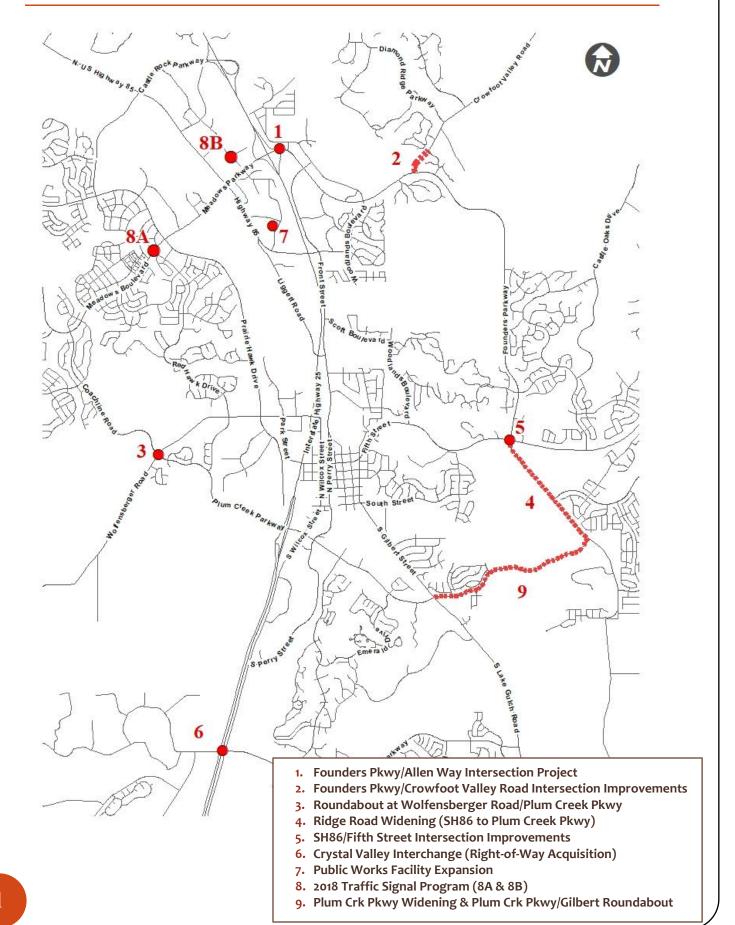
The Public Works Department operates under the CAN DO philosophy - We are committed to doing the job right with a positive attitude while staying dedicated to meeting the needs of our Town values and continually searching for opportunities to improve.

Our Mission: To provide outstanding service, safety and support for transportation infrastructure and maintenance.





CAPITAL PROJECTS



PUBLIC ORKS DEPARTMENT

- 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: Design & ROW Acquisition – Felsburg, Holt & Ullevig is the design consultant for this project. The following is a summary of the design activities that took place during this month:

- Coordinated schedules with CDOT and their Ramp Metering Project
- Considered construction schedule and advertisement date
- Awaiting Final Right-of-Way clearance
- Plans submitted to CDOT for verification of Final Office Review (FOR) comment resolution

Budget: \$760,000 Design Completion: Complete ROW Completion: 1st 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: Design and ROW Acquisition – Kimley-Horn is the design consultant for this project. The following is a summary of the design activities performed this month:

- Design plans at 99% completion. Construction schedule and advertisement date will be early 2019.
- Staff is coordinating tree transplanting and replant plants/shrubs in the ROW areas acquired from the Metzler property. This operation will be completed prior to construction of the roadway.
- A revised ROW agreement has been submitted to CDOT for review.
- Bids were opened for the Crowfoot Detention Pond Improvement Project. The low bid was Premier earthworks & Infrastructure (PEI). This project will fulfill the MS4 requirements for the roadway project. Construction of this pond is scheduled to be completed prior to the construction of the roadway project.

Budget: \$650,000 (2016-19) Design: Complete ROW Completion: Spring 2019



- 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 The
 following construction activities were performed by Rocky
 Mountain Excavating:
- Continue to work on BMP's / GESC
- Continue the installation of curb/gutter
- Continued placement of base course
- Completed the second lift asphalt. Top and final lift to be

placed in Spring 2019

• Temporary striped the roundabout and installed signage making the roundabout operational.

Budget: \$1.14M Construction Completion: Spring 2019

4. <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: Design: Stanley Consultants, Inc., has been awarded the design contract for this project. Design is 90% complete.

Budget: \$400,000 Design Completion: Spring 2019

- 5. Founders Parkway (SH86)/Fifth Street Intersection Improvements The Town's design consultant, Short Elliott Hendrickson, Inc. (SEH) investigated multiple alternatives to address safety concerns and capacity issues at this intersection. A roundabout was the preferred alternative by CDOT, who owns the right-of-way for this intersection. Phase: Design –SEH has begun design. Town staff met with Emmaus Anglican Church and church's neighbor for relocation of driveway access to the church to accommodate the design of the roundabout. SEH is working on a design modification of the roundabout based on the revised AM and PM traffic counts/movements. Design is 30% complete. Budget: \$340,000 Design Completion: Spring 2019
- 6. <u>Crystal Valley Interchange Right-of-Way Acquisition</u> 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 Final Right-of-Way Plan Reviews (ROWPR) has been received from CDOT. This will allow the Town to proceed with Right-of-Way Acquisition.

Budget: Development Escrow ROW Completion: Fall 2019

7. <u>Public Works Facility Expansion</u> – This project consists of the addition and renovation of the Service Center building. Phase: Construction Advertisement - Bids were opened on December 6th and staff is in the process of evaluating all bids received with a recommendation scheduled to go to Public Works Commission and Town Council in February 2019.

Budget: \$220,000 Construction Start: Spring 2019

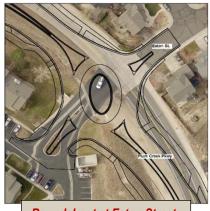


8A&8B. <u>2019 Traffic Signal Program</u> - On-call design consultant, Muller Engineering, is providing design work for two signalized intersections; Meadows Boulevard/Future

Street and the reconstruction of the Factory Shops Boulevard/New Memphis Court span wire signal. In December, Town staff returned stakeholder comments during a 90% construction plan review. Also, signal pole request for quotation was sent out in December and is due in early January. Design completion is scheduled by mid-January. The early design process was necessary to account for the long lead time for signal poles. Staff is able to use the 90% design signal pole lengths and locations to obtain quotes while final design is completed. Budget: \$47,200 Design Completion: Spring 2019

- 9. <u>Plum Creek Parkway Widening and Plum Creek Parkway/Gilbert Street Roundabout Project</u> 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:



Roundabout at Eaton Street

- Continued final roadway, signage, and striping design
- Designed retaining wall profiles and side road tie-ins
- Coordinated water quality pond design with Castle Rock Water
- Conducted analysis for proposed Rectangular Rapid Flashing Beacons (RRFB) pedestrian crossing location
- Continued utility coordination
- Conducted property appraisals and continued property owner discussions for acquisitions
- Submitted construction plans for review and began addressing Town comments

Budget: \$794,375 Design & ROW Completion: Spring 2019

<u>Traffic Signal System Upgrades (Phase 3)</u> – This project is the third phase of a multi-year project that was approved as part of the Town's Strategic Plan early in 2015. The two main components of the Phase 3 project are installation of closed circuit television (CCTV) and travel time monitoring devices at key intersections. In the month of December, 13 of the 36 Axis p-series and q-series pan-tilt-zoom (PTZ) cameras and hardware were installed and incorporated into the existing Town viewing software. The Town's maintenance contractor is assisting with this installation and will continue installing into January until complete. Staff completed all remaining site investigations for optimal placement for the deployment. Camera installation, including becoming operational with video feed to the center, will be completed in early 2019. This portion of the Phase 3 project is on budget and awaiting final installation at some locations.

In December, staff continued collecting historic travel time data from all the Bluetoad devices and are developing reports and analytics that will best serve management plan needs. Staff received information from CDOT on how to proceed with a MOU regarding obtaining a fiber optic access and replicating device data on the Town server from five devices to be installed at CDOT signalized intersections. The details and understanding of operation and maintenance responsibilities, as well as

access to shared resources is being determined. Staff is confident that a successful working arrangement will be established as all parties agreed that this is the best outcome. Staff and COTRIP the Trafficast vendor made contact with the CDOT COTrip managers and exchanged information on how this connection could be complete providing the ability for the Town to share the travel time info to the public via a web based viewer and with CDOT's COTrip information service. This phase of the project installation is complete and within budget with communication and networking to be completed early next year.

A continuation of the Phase 3 project is being considered with the incorporation of Automated Traffic Signal Performance Measures (ATSPM). A proof of concept project using advanced detection and highresolution data acquisition and analysis of signal operation is being evaluated for improved system maintenance, operation, and optimization. Staff has proposed implementing the use of ATSPMs along the Plum Creek Parkway corridor between Emerald and I-25. The Town's Strategic Plan from 2015 recommended signal system detection improvements that provided this type of information along key corridors. The use of ATSPMs would meet this documented need and more, by providing a better understanding of system operation and maintenance needs that would help us better serve our stakeholders in a cost effective manner.

Budget: \$520,000 Project Completion: Spring 2019

2018 Rectangular Rapid Flashing Beacon (RRFB) Project – In 2017, Town Council approved a project to install pedestrian crossing enhancements called, RRFB, around Town. RRFBs consist of a pedestrian activated yellow strobe light which notifies drivers that a pedestrian is at or with in the crosswalk. The lights are solar powered and cost approximately \$10,000 per location for the hardware and



installation. They have proven to be an effective means of enhancing pedestrian safety. In 2018, staff continued to get regular requests to provide pedestrian crossing enhancements around Town. These locations are added to a potential installation list, evaluated, and prioritized for installation as funds are available. The priority is based on pedestrian exposure, and speed of vehicles at the crossing.

In December, Town Staff completed the assembly and installation of devices at all remaining locations which include Loop Road/Fox Haven, and Crystal Valley Parkway/Old Lantern Trail. Application of pedestrian crossing striping will follow at all

locations but is currently on hold due to snow operations, and will continue when possible. Town staff has provided all the labor to make signs, assemble the beacon and button array, complete the installations, and provide additional roadway striping.

Budget: \$35,900 Completion: 1st Quarter 2019

Engineering Division

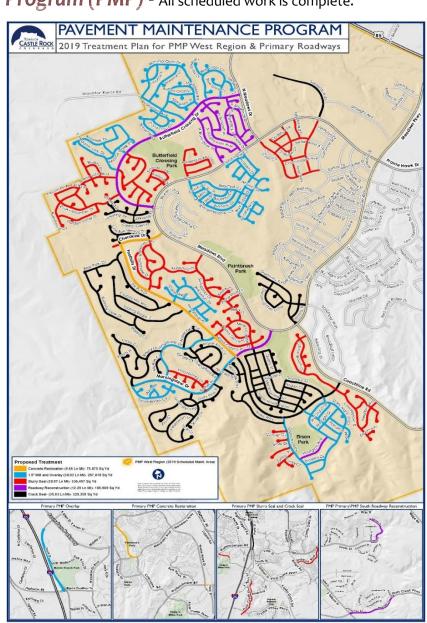
2018 Pavement Maintenance Program (PMP) - All scheduled work is complete.

Staff is working with the contractors to put all contracts into warranty period.

<u>2019 Pavement</u> <u>Maintenance Program</u>

(PMP) - The PMP team has completed the bid packages for the 2019 PMP projects. Nine (9) bid packages were sent to Rocky Mountain E-Purchasing on December 18. The bid packages were for the Asphalt Overlay, Full Depth Reclamation, Curb, Gutter and Sidewalk Replacement, Slurry Seal, two Concrete Pavement Restorations, two Reconstruction Projects, and a Mastic & Crack Seal Project. All nine bid packages have pre-bid meetings set up for January 9 and 10, 2019 with the bid openings for all eight projects scheduled for January 23 and 24, 2019.

The PMP map (shown right) indicates the proposed scheduled treatments for streets within the West PMP area and Primary Streets. This map may change based on maintenance treatments and resources available.



PUBLIC ORKS DEPARTMENT

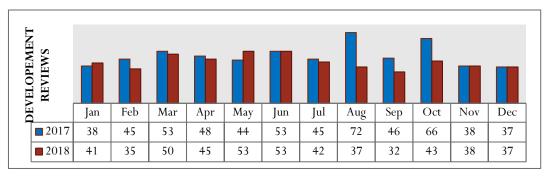
2019 Facilities Parking Lot Improvements Program - With the completion of the bid package for the 2019 Town Facility Parking Lot Improvement Project, staff is in the process of soliciting bids. The bid package was sent to Rocky Mountain E-Purchasing on December 18. A pre-bid meeting is scheduled for January 9, 2019, with the bid opening scheduled for January 24, 2019. The scheduled parking lots for the 2019 Town Facility Parking Lot Improvement Project include the parking lots at the Crystal Valley Tank 15 site, Coachline Tank 17 site, Founders Village Park, and half of the Red Hawk Club House Parking lot. Changes in the proposed facilities may occur due to current evaluation taking place and/or actual bid pricing received that may require some modifications.

2019 Bridge Maintenance Program (BMP) - Bids for the 2019 Bridge Rehabilitation for Front Street Flyover Bridge and the Perry Street Bridge were received on December 6. The low bid was within budget. Staff is developing contract documents to recommend Town Council approve a construction contract with T & M Construction, LLC. This project is expected to start in April and be completes by Spring 2019, pending weather.

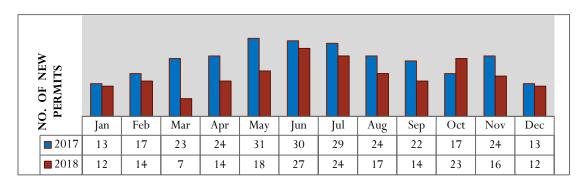
The Town's on-call consulting engineer, Felsburg, Holt & Ullevig (FHU), is continuing to work on the design for repairs, and stream mitigation for the 5th Street Bridge over I-25 and Plum Creek. The design, construction plans, and the bid package is expected to be complete by the end of January 2019.

Development Review and Permitting

<u>Development Review</u> - Included in the 37 submittals are 16 first time applications with two preapplications. All reviews were completed on or before the due date by the PW Development Services Team.



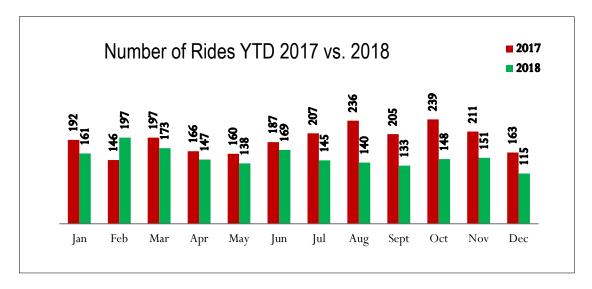
Permitting – Twelve permits were issued.



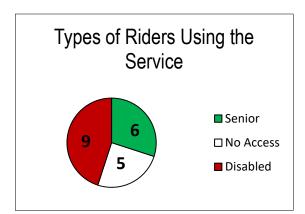
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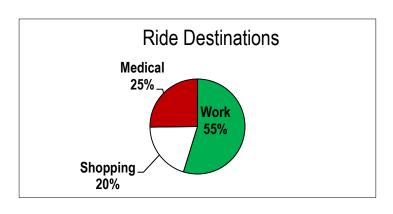
Transportation Division

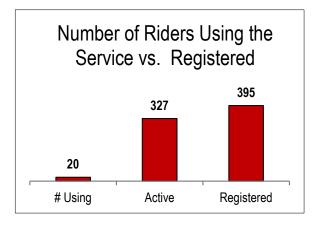
Taxi Voucher – For the month of December, the Taxi Voucher Program funded 115 rides, this was a 29% decrease from last December's total of 163 rides. Ridership this month is down from last month due to weather, holidays, and riders not needing help to get to work during these events.

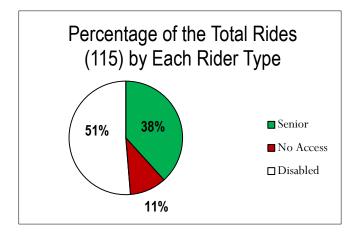


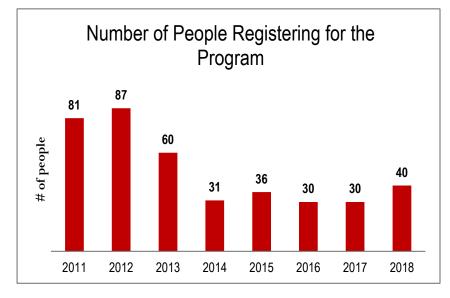
Rides are available for work, shopping or medical trips. Transportation services are provided for Castle Rock residents who are senior citizens, have a disability that prevents them from driving, or do not have access to a vehicle.



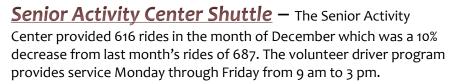








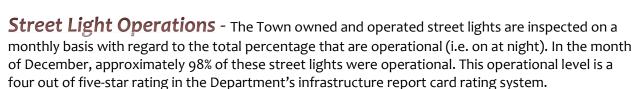
There were four new registrants for the Taxi program this month. Since its inception, a total of 395 people have registered for the Town of Castle Rock Taxi Voucher Program. Currently, 68 of these past registrants are inactive or have dropped out of the program.



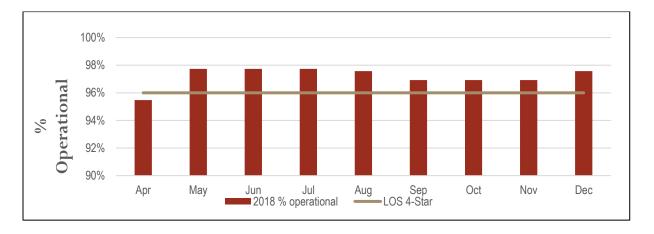


Traffic Engineering & Operations

Traffic Signal Operations and Maintenance - In the month of December, staff addressed three requests from the public related to traffic signal and intersection operations, safety, and maintenance. A total of 69 traffic signal maintenance visits were completed in December. Town Staff made 41 of those visits and 28 were made by our signal maintenance contractor. The signal contractor visits included several planned for thorough annual preventative maintenance checks, and assisting Town with the installation of new pan-tilt-zoom (PTZ) cameras. The signal contractor also provided emergency response assistance to an intersection where the signal cabinet was destroyed due to a traffic accident. Town staff planned maintenance visits included 17 visual inspections of signalized intersection operations. Town staff also performed signal maintenance tasks for eight signal timing changes, six emergency response tasks, and six non-emergency unplanned maintenance tasks. Emergency response tasks included incident timing for a crash at 5th and Perry Street, a southbound I-25 closure at Plum Creek Parkway, and a dark signal and cabinet replacement due to crash at Sabercat Way. The most frequently visited signal at four times, included Factory Shops and Promenade Parkway and three times at Wilcox and 5th streets and Factory Shops and Outlet Access respectively.







Street Signs and Pavement Marking Maintenance - During the month of December, the crew accomplished installing 58 new signs with the majority of these for the new rectangular rapid flash beacons (RRFB) installed around Town. In addition, the crew fabricated 28 news signs, many of which were used as part of the RRFB project. Finally, the crew assisted with the deployment of the traffic control devices needed for holiday events around Town.

Transportation Planning



Neighborhood Traffic Calming Program (NTCP) Update New Inquiry Updates

• Second Street: The homeowner lives in the Craig and Gould neighborhood and raised concerns regarding vehicle speeds on 2nd Street. The policy document along with the support petition was sent to the homeowner. They completed the petition and returned it to Town staff. However, two of the five signatures were not homeowners. According to the NTCP policy the signatures on the initial support petition need to be

homeowners. The contact person was notified of this and is in the process of gathering the last two signatures.

• North Meadows Drive: The homeowner lives in the Upland neighborhood south of Meadows Blvd. He shared his concerns about vehicle speeds on N. Meadows Drive. The support petition and policy document were sent to the homeowner to review and complete. The completed petition has been returned and signatures verified. The speed and volume study will be scheduled for January, weather permitting.

Previous Inquiries

- <u>Diamond Ridge Parkway</u>: Town staff is still awaiting the homeowner to return the initial support petition.
- <u>Saddleback Drive</u>: Town staff will attempt to complete the final signing and striping in January, weather permitting.
- Echo Hollow Street: Town staff still has not heard from the HOA representative on how they would like to proceed. Educational and outreach efforts will be made available to the neighborhood should they decide to proceed.
- Morning View Lane: Town staff still has not received the initial support petition from the homeowner. The support petition is required before the Town can conduct the speed and volume study.

Town Staff Identified Projects

• <u>Butterfield Crossing Drive</u>: A speed study was conducted on Butterfield Crossing Drive during the month of December. According to the data, the 85th percentile speed was 35 mph. This coincides with the posted speed limit (35 mph) and is therefore not eligible for the NTCP. Town staff is still observing traffic conditions and will make a recommended striping and signing plan for the roadway reconstruction project scheduled for this summer. Staff has developed the conceptual plan to calm traffic near Meadowview Elementary school that consists of curb extensions at the midblock crosswalk in front of the school.

Development Review

Staff reviewed and commented on seven transportation impact studies during the month of December. All reviews were completed on time.



<u>Downtown Mobility Master Plan</u> – The Town's consultant, Kimley-Horn & Associates, has been working on the final report. A draft report is expected to be submitted for Town in the month of January with final adoption of the plan by Town Council in the month of February.

Some of the preliminary recommendations include;

- Additional roundabouts at several downtown intersections, such as Wilcox/South streets, Fifth/Jerry streets, and Wilcox Street/Wolfensberger Road.
- 2. Activate the downtown alleys This recommended improvement would enhance the alleys and create a better shared use facility for people to bike and walk through downtown while still serving the needs of a traditional alley.
- 3. Complete gaps in the sidewalk system and look at widening sidewalks along certain streets, such as Jerry and Fifth streets.
- 4.Improve pedestrian safety In addition to the roundabouts mentioned above, several intersection improvements would include the construction of curb extensions, and improved sight lines. Other improvements may include increased lighting levels and adding rapid flashing beacons at certain crosswalks.
- 5. Modify current Town standards to apply only to the downtown, such as the intersection level of service standard, and minimum sidewalk widths as properties redevelop.

<u>I-25 / Blackfeather Trail Interchange and Founders Corridor Study</u> - Town staff has sent a letter to CDOT staff asking for participation in the study. Town staff has received a reply from CDOT. A meeting will be held with the appropriate CDOT staff to determine how the study should progress. The meeting is scheduled to take place in January 2019.

<u>I-25/Crystal Valley Parkway – Tomah Road Paired Interchange Study</u> - Town staff has been working with a consultant, Felsburg, Holt, & Ullevig (FHU), to determine the maximum vehicular capacity of the paired interchange concept and a standard full diamond interchange as identified in the Crystal Valley Parkway Environmental Assessment. This information will help assist Town staff in determining how much new development the interchange concepts can support as properties in the area develop.



<u>Future CDOT Bustang Stop</u> - No additional meetings were held in December regarding the potential Bustang stop in Castle Rock. Additional information on the three possible stops is expected at the I-25 PEL open house in January 2019. Town staff has been told that the PEL study will not select a preferred location, but instead will carry all three potential locations forward. These locations include the possible stop near the Douglas

County building in downtown Castle Rock, the CDOT excess right-of-way parcel at Wilcox Street and Wolfensberger Road, and the undeveloped land along I-25 in the proposed Pine Canyon development. Town staff and the public will have the opportunity to comment on the report at the PEL open house which is scheduled for January 15 before it is finalized for the PEL.



<u>DRCOG Active Transportation Plan (ATP)</u> - The public comment period on the draft ATP has closed. DRCOG Board is expected to adopt the plan early in 2019.

DRCOG 2021 – 2023 Transportation Improvement Program - The Douglas County Sub-regional Committee and technical team met once in December. At the meetings, it was decided that the scoring criteria for the sub-regional applications will not be amended further than what was agreed to earlier in the year. Also, the sub-regional TIP funds will not be allowed to fund reconstruction projects similar to the 16th Street Mall that was submitted at the regional TIP level. A maximum of 15% of the sub-regional funds will be available for studies and non-construction projects. It was noted that any project on a CDOT roadway would need to get concurrence from CDOT before submitting the project for consideration. Without CDOT's concurrence, the project is not eligible for TIP funding. The Town will have at least one project that will need CDOT concurrence. A potential list of sub-regional projects was shared with the Committee based on early conversations with the sub-regional agencies, however, it was made very clear that the list was conceptual and not intended to represent the selected projects. The competitive scoring process still needs to take place before any projects are recommended for funding. The sub-regional Committee and DRCOG Board will approve the funded projects.

The Memorandum of Understanding still has not been finalized due to lack of communications from Aurora. The Committee decided to give Aurora until February to sign the document otherwise they will not be able to participate in the scoring and review of submittals. They will still be able to submit projects for areas within Douglas County only.



Fleet Services

"Keeping Castle Rock on the Move"



As we drive around this Town of ours and see how busy all the different departments are with all the growth, from the Fire and Police departments along with Parks, Public Works, Water and Development Services relying on their Town issued vehicles to keep up with the first class service that we provide to the citizens of Castle Rock here at the Fleet Services Divison, we take great pride in knowing that those vehicles are reliable and safe to operate!

Fleet Services finished out 2018 with a solid December. The Fleet Services Division reached all of our benchmark objectives and we are gearing up for 2019. Staff is busy gathering all the 2018 output numbers and inputing all the budget numbers for 2019. In addition, new vehicles and equipment for 2019 are in the process of being ordered. As of December, 6-new patrol units are on order and two new plow trucks for the Street Operations & Maintenance Division have been ordered.

Work output for the month of December was 145 work orders completed and over \$48,000 of parts and labor were billed.



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

Outcome: Fleet team completed 83% of the work orders within 24-hours of opening repair requests or service requests. This benchmark number shows how quick the Fleet Services Division is working on vehicles to get them back on the road.

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

Outcome: Town vehicles and equipment were available 98.9% 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: Technican productivity was 72.7%.





66,000 POUND JET TRUCK BEING LIFTED UP AND WORKED ON!!

Street Operations & Maintenance Division

During the month of **December**, the Street Operations & Maintenance Division (SO&MD) performed work in seven (7) maintenance operations:

- Sweeping
- Snow Operations
- Gravel Road Maintenance
- Asphalt patching and Potholes
- Road Verge Operations
- Guardrail Operations
- Training

Sweeping

Sweeping operations have slowed due to mechanical failures of two out of four sweepers and also due to low temperatures. In spite of these setbacks, crews have completed 195.45 lane miles of sweeping. These operations serve to help keep the air cleaner by removing salt and sand deposited during snow operations and enhance the overall appearance of the Town.





Snow Operations

Streets crews responded to four snow events during December. Most of these events did not produce much snow but did present the threat of icing. The final day of the year, however, did present with appreciable snow. As such, the crews engaged in pretreating the roadways with the greatest propensity of icing over such as bridge decks and overpasses. In all 185.12 miles of roads and overpasses were treated.







Guardrail Operations

Staff has begun working on guardrail throughout the Town. In a collaborative effort with CDOT and Douglas County, Castle Rock Streets O&M crews are being trained in hands-on repair and replacement of guardrail. The guardrail end treatment along Hwy 85 has been repaired as well as one leading to the Promenade. These operations will greatly enhance the safety for motorists by ensuring the guardrail will perform as intended if an accident occurs.









Gravel Road Maintenance

Streets crews carried out blading and compaction operations on a total of 11.14 miles of Rocky View Road and Castle Oaks Drive. These activities enhance the drivability as well as the durability of the road by rebuilding the drainage, smoothing out ruts and washouts, and compacting the road.







Streets crews filled approximately 193 potholes using 3870 pounds of cold mix asphalt and used another 15.5 tons of hot mix asphalt to fill more potholes and large cracks along Butterfield Crossing Drive. These operations are vital for maintaining a safe and smooth ride for the motorist as well as preventing further damage to the roadway and or vehicles.









Road Verge Operations

The Streets O&M Division has completed 19.32 miles of road shoulder maintenance throughout the Town. These operations serve to maintain the drainage, appearance, and provide a smoother transition for any vehicles should they need to pull off the roadway.









Training

During December, four crew members received their Road Scholar I certification. This certification is given through LTAP (Local Technical Assistance Program) after numerous courses specifically targeting roadway maintenance workers. Each Road Scholar must complete no less than nine courses in order to complete certification for Road Scholar I. **Great Job to all!!**









Looking Ahead

In January, the Streets Division expects to continue snow and ice mitigation operations, address potholes and asphalt patches as needed, as well as carry out sweeping operations to keep the streets clean. We will continue to conduct training and work toward enhancing our ability to maintain the streets within Castle Rock.