

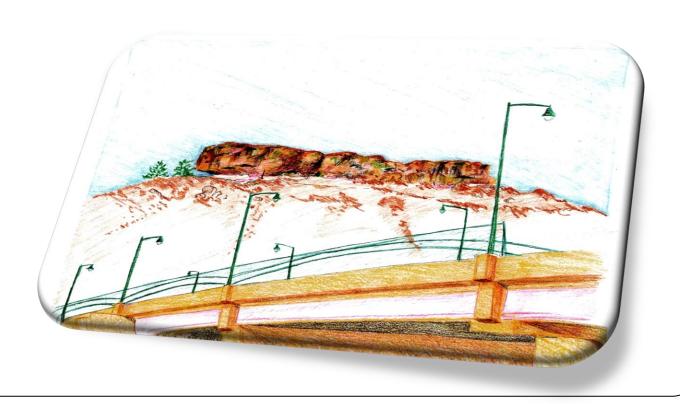
The Public Works Department operates under the CAN DO philosophy
- We are committed to doing the job right with a positive attitude
while staying dedicated to meeting the needs of our Town values
and continually searching for opportunities to improve.

PUBLIC WORKS DEPARTMENT

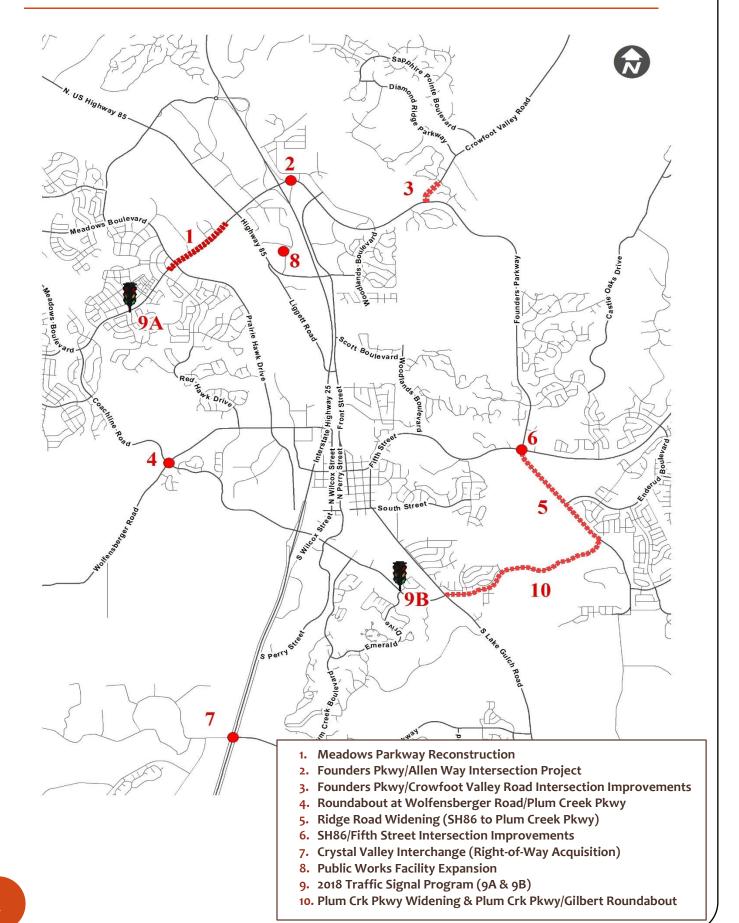


Our Mission: To provide outstanding service, safety and support for transportation infrastructure and maintenance.

MONTHLY REPORT - AUGUST 2018



CAPITAL PROJECTS



1. <u>Meadows Parkway Reconstruction</u> - This improvement project will consist of the reconstruction of the existing 4-lane roadway of Meadows Parkway from the intersection of Meadows Parkway and Prairie Hawk Drive to the railroad overpass over Plum Creek near US 85. This reconstruction will also

replace any broken curb/gutter, sidewalk, and add on-street bike lanes. Phase: Construction – The project was awarded to Schmidt Construction Company. Felsburg, Holt, and Ullevig (FHU) will assist the Town with construction management. Project is substantially complete and the road was open on August 10. Contractor continues to work on punch list items and staff is working on obtaining a separate contractor to complete the landscaping/irrigation work in the medians. Budget: \$2,467,000 Construction Completion: Late Summer 2018



- 2. <u>Founders Pkwy/Allen Way Intersection Improvement Project</u> 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:

- FHU completing Final Office Review (FOR) plans. Traffic signal sheets have been provided to CDOT to release their matching funds
- Continue to monitor right-of-way status. Plans to be resubmitted for approval/verification approximately 30 days prior to right-of-way clearance.
- Alternative 2a

• Minor Interchange Modification
Request (MIMR) has been resubmitted to
CDOT for approval and their submittal to
FHWA for authorization to proceed. Awaiting
CDOT response on status. Budget: \$760,000
Design Completion: 4th Quarter 2018
ROW Completion: Fall 2018

3. Founders Pkwy (SH86)/Crowfoot Valley

<u>Road Intersection Improvement Project and Crowfoot Valley Road Widening Project</u> – 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 are complete and under review with CDOT
- Town's Legal and Public Works staff continue to work on right-of-way and easement agreements with neighboring properties. Staff will transplant and replant plants/shrubs in the ROW areas acquired from the Metzler property. This operation will be completed prior to commencement of the construction.
- A revised right-of-way agreement has been submitted to CDOT for review
- Staff is working with the consultant to design the Crowfoot Detention Pond to 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 (2016-17) Design & ROW Completion: 4th Quarter 2018

4. <u>Wolfensberger Road/Plum Creek Parkway Roundabout Project</u> This project will accomplish the design and construction of a roundabout at this intersection to improve operations and minimize

potential accidents. Phase: Construction - Rocky Mountain Excavating was awarded the construction contract and a preconstruction meeting was held on July 16. The following construction activities were performed:

- Started clearing and grubbing on the NW and NE quadrants of the existing intersection.
- Continue to work on BMP's / GESC
- IREA continues to relocate their existing primary power lines.
- Black Hills Energy has relocated their existing gas line.
- Installing storm sewer pipe and drop inlets
- Completed the dry stack wall located in the NW quadrant of the existing intersection
- Began the removal of existing asphalt
- Completed the installation of the sanitary sewer

Budget: \$1.14M Construction Completion: Early Fall 2018



- 5. <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 60% complete. Budget: \$400,000 Design Completion: 4th Quarter 2018
- 6. 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 and is scheduled to be completed by January 2019. Town staff met with Emmaus Anglican Church for relocation of their driveway access to the church to accommodate the design of the roundabout. Preliminary design was presented to CDOT on July 13. Budget: \$340,000 Design Completion: 1st Quarter 2019
- 7. <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) have been submitted to CDOT for authorization, Town continues to wait for CDOT to authorize the plan sets. Budget: Development Escrow ROW Completion: 4th Quarter 2018

- 8. <u>Public Works Facility Expansion</u> This project will complete design plans for the Service Center building expansion. Phase: Design The following is a summary of the design activities that took place during this month:
 - Continuing to work on the final design and bid documents
 - Town staff, including the Water & Parks departments, is working on the Xeriscape landscaping design which promotes water efficiency.

Budget: \$220,000 Design Completion: Fall 2018



9A&9B. 2018 Traffic Signal Program - There are two intersections that are planned to be signalized this summer. These intersections include, Meadows Parkway/Low Meadows Boulevard, and Plum Creek Parkway/ Emerald Drive. Also included in this project is the Fire Department's emergency signal at their new Fire Station #152

located on Crystal Valley Parkway. The 5th Street/Valley Drive intersection was also a part of the design project, and will be restriped to accommodate a westbound acceleration lane on Fifth Street. Phase: Construction – In August, the signal construction contractor addressed punch list items. Only a few items remain, i.e. landscaping repair and street light removal. Illuminated street names signs and luminaires have been received and are expected to be installed in early September. The signals have been operational and trouble free, however, initial signal timing is still being evaluated, and will be adjusted as necessary in the next month. The project is on schedule and on budget with Town acceptance of all work by the contractor estimated for early fall. Budget: \$473,728 (Traffic Signals) \$172,967 (Fire's Emergency Signal) Construction Completion: Fall 2018

- 10. <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:

- Updated base map with additional utility information
- Advanced preliminary layout of Gilbert Street roundabout
- Continued property owner discussions for potentially affected properties
- Continued work on preliminary drainage design
- Prepared conceptual designs and cost estimates of project enhancements including Eaton Street roundabout, horizontal realignment, rectangular rapid flash beacon pedestrian crossing, guardrail, and noisefFence options.
- Prepared exhibits and conducted Public Open House #2

Budget: \$794,375 Design & ROW Completion: 4th Quarter 2018

<u>Traffic Signal System Upgrades (Phase 3)</u> – This project is the third and final 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 August, staff requested pricing quotes for two manufacturer's pan-tilt-zoom (PTZ) cameras and completed a trial of camera use at Meadows Parkway and Prairie Hawk Drive and North Meadows Drive and Butterfield Crossing intersections. Final

evaluation of camera products are ready to be documented, and in September, the next steps of procurement and final installation locations will be completed.

Staff finalized the evaluation and concluded the trial of travel time monitoring technologies, Acyclica (Wi-Fi) and Trafficast's BlueToad (Bluetooth) products. In August, a summary memo was routed for approval to procure Trafficast's Bluetoad Spectra sensors. The BlueToad product was much more reliable in providing travel time compared to traditional floating car travel time evaluations, including providing data that had less than 5% difference from measured floating car times, and in some cases less than 1.5%. The Trafficast software was also much easier and



more content rich, compared to the competitor product, with the ability to create repeatable reports that will be more effective for staff use and reporting. Quotes were requested for installation and the Town's signal maintenance contractor, using time and materials pricing, will be the most cost efficient way to install the devices. Delivery of the sensors and installation work should begin in early October and take a few weeks to complete. Travel time monitoring will be available on all the signalized corridors across Town with devices at 25 Town signal locations. Staff has been coordinating with CDOT to install devices at six of their signalized intersections and are working through the details of shared resources

and infrastructure that protects both jurisdictions. BlueToad devices provide real time and historic data of travel time and speed on Town's primary arterial corridors, share the travel time info to public via web based viewer and with CDOT's COTrip information service, as well as provide management center analysis data for origin and destination, and route finding.

Budget: \$520,000 Project Completion: Late Fall 2018

Engineering Division

2018 Pavement Maintenance Program (PMP) - The 2018

PMP has focused its efforts in the East PMP area with additional work taking place on primary streets (Woodlands Boulevard, Wilcox Street, Prairie Hawk Drive, Plum Creek Boulevard, and Meadows Boulevard). The remaining ongoing PMP primary street work is on Meadows Boulevard from N. Meadows Drive to Cherokee Drive. This project is a concrete restoration project, which consist of restoring structural integrity, improving ride quality and safety, and sealing the joints to extend the life cycle of the pavement. The project is currently in the first stage of restoring structural integrity by removing and replacing damaged or uneven concrete pavement panels. PMP

crack seal operations is scheduled to start in late September. This project will crack seal streets in the East PMP area that are in a condition that did not

require a surface treatment such as a slurry seal or overlay.



The 2018 Miscellaneous Concrete Replacement project's bid opening was July 26. The contract was awarded to Sabell's Civil & Landscape LLC and is scheduled to start September 4. This contract is providing the Town means to repair concrete infrastructure, such as sidewalk, curb and gutter throughout the Town as well as work on Americans with Disabilities Act (ADA) compliance. This contract will construct needed pedestrian crossing improvements at the Third Street/Jerry Street intersection, and traffic calming in the Woodlands neighborhood. Public Works has also teamed up with Castle Rock Water's Stormwater Division, to install the 2018 approved chase drains. These structures allow water to flow from the back-of-walk to the flowline of the gutter, reducing algae build-up on the sidewalk, which improves safety for pedestrians.

Public notification planning and web site updates are continuing with assistance from the Community Relations team.

2018 Facilities Parking Lot Improvements Program - This contract was awarded to Straight Line Sawcutting, Inc. and improvements started on August 30 at the parking lot located at 4th Street and Perry Street and will continue with improvements to the following:

- Metzler Park Parking Lot next to the In-line Skating Rink
- Metzler Park Main Parking Lots
- Rock Park Parking Lot

Maintenance will also be performed on three Castle Rock Water facilities, Founders Treatment Plant, Waterman Treatment Plant, and Weaver II Well Field.

2018 Bridge Maintenance Program (BMP) – The Town's on-call consulting engineer, Felsburg, Holt & Ullevig, is currently working on the design of structural repairs. The design is scheduled to be completed in September. The following locations have been identified for the 2018 BMP:

Structural Bridge Repair

- Castle Oaks Bridge at Rocky View Road
 - ✓ Girder repairs
- Fifth Street Bridge over I-25
 - ✓ Place riprap at column and repair spalled areas
- Perry Street Bridge over Sellers Gulch
 - ✓ Repair girder and girder bearing and upgrade approach rail

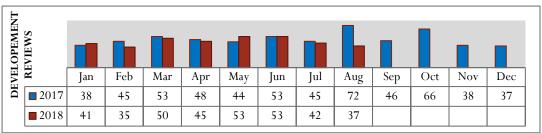
Bridge Surface Treatment

- Front Street Flyover
 - ✓ Mill and overlay wearing surface

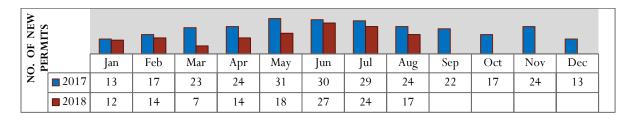
Treatments and locations may change pending current evaluation taking place and/or actual bid pricing received that may require some modifications.

Development Review and Permitting

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

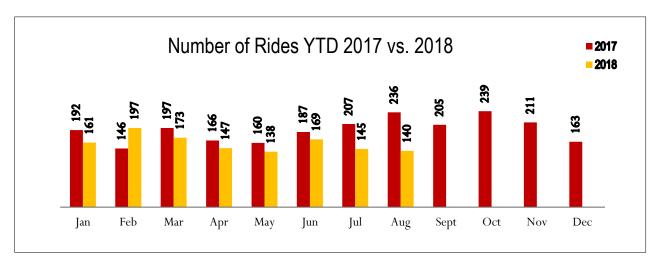


Permitting – Seventeen permits were issued. One location of note – Millers Landing Landfill Remediation.

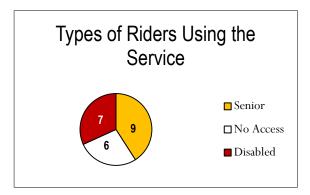


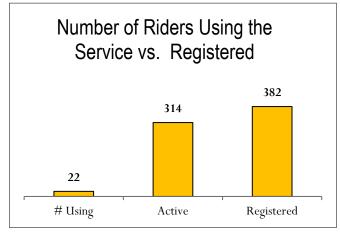
Transportation Division

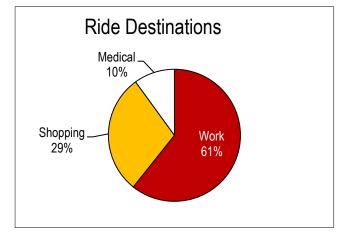
Taxi Voucher – For the month of August, the Taxi Voucher Program funded 140 rides. This was a 41% decrease from last August's total of 236 rides. Ridership this month is down from last month due to riders not needing rides to work and no weekend or evening rides are being offered at this time through the program.

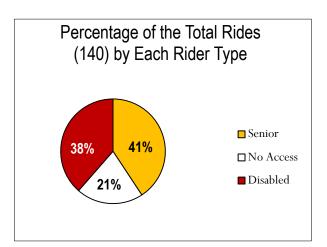


Rides are available for work, shopping or medical trips. Transportation services are provided for Castle Rock residents who are senior citizens, have a disability that prevents them from driving, or do not have access to a vehicle.









PUBLIC WORKS DEPARTMENT

There was one new registrant for the Taxi program this month. Since its inception, a total of 382 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.





Senior Activity Center Shuttle - The Senior Activity Center provided 629 rides in the month of August which was a 13% decrease from last month's rides of 723. The Senior Activity Center was closed August 13th-17th as part of the annual Recreation Center maintenance, therefore, no rides were given during this timeframe. The volunteer driver program provides service Monday through Friday from 9 am to 3 pm.

Traffic Engineering & Operations

Traffic Signal Operations and Maintenance - In the month of August, staff addressed nine requests from the public related to traffic signal and intersection operations, safety, and maintenance. A total of 54 traffic signal maintenance visits were completed. Staff made 37 of those visits and 17 were made by the Town's signal maintenance contractor. Thirteen of those visits were planned visits, including a follow-up on second quarter preventative maintenance items, beginning our annual preventative maintenance with our signal maintenance contractor assistance, and extra work associated with installing signal and sign modifications to the Plum Creek Parkway and l-25 dynamic lane use system. Forty-one of those visits were for non-routine traffic signal investigations, troubleshooting, project work, and repair, replacement and installing of parts. Thirty-three of which were completed by Town staff and approximately eight visits by the Town's signal maintenance contractor after hours.





Street Signs and Pavement Marking Maintenance - August was a productive month with the assistance of Colt Carlson and Jeff Story from the Street Operations & Maintenance Division, the crew accomplished 6,262 total tasks. Colt and Jeff hit the ground running by repairing 33 signs and fabricating 45 signs for a special sign project. The crew also completed 5,688 sign inspections in various locations around town. Colt, Jeff and Eric (our seasonal) repainted 39 symbols with in the Town. The Town's striping contractor striped 22 new lines for additional parking on Butterfield Crossing Drive along with an additional retracing of 396 lines in various areas around Town.

Transportation Planning

Neighborhood Traffic Calming Program (NTCP) Update

New Inquiries

- <u>Echo Hollow Street (located on the south side of the Crystal Valley subdivision)</u> The initial support petition has been sent to the homeowner.
- Morning View Lane (located in the Meadows subdivision) The initial support petition has been sent to the homeowner.

Previous Inquires

- <u>Sapphire Point Boulevard</u> The Public Works and Police departments continue to work with a concerned resident regarding speed on Sapphire Pointe Boulevard. Town staff has provided the resident with traffic calming yard signs and will conduct an additional speed study to address her concerns.
- <u>Saddleback Drive</u> Construction of Phase 3 improvements are scheduled to begin September 5, weather permitting. Phase 3 is the last phase of the traffic calming plan and includes one speed cushion, Saddleback Drive near Foxfield Drive, and one pedestrian center median on Black Pine Drive just east of Saddleback Drive.

Town Staff Identified Projects

- <u>Butterfield Crossing Drive</u> The contractor has completed the striping on Butterfield Crossing Drive. "No Parking" signs will be installed in early September. Town staff will also be striping the changes in front of the elementary school in the month of September. This new striping is being considered a pilot program to determine what the final striping plan will be when the roadway is reconstructed next year.
- <u>Auburn Drive</u> The on-street parking plan for Auburn Drive was presented to the neighborhood stakeholders. The group accepted the proposed plan, in which on the west side of the street, all on-street parking will be prohibited and a bike lane will be striped along the curb. The plan will maintain some parking along the east side primarily along the Reserve at Castle Highlands apartments. It will also widen the northbound through lane next to the parking areas, and restrict parking at driveways and intersections.

Development Review

Staff reviewed and commented on two transportation impact studies and the Meadows Parkway progression analysis during the month. All impact studies were completed on time.



Downtown Mobility Study - Town staff has been working with the consultant team to develop transportation improvements for the downtown mobility study. Potential intersection improvements are being developed and will be shared with Town Council in September. Potential projects will also be shared with the public at the 2nd public workshop in October. Staff has completed their review of the existing conditions report and forwarded comments to the consultant. Presentations to the Public Works Commission, Planning Commission, and the

Douglas County Transit Solutions Committee were given during the month of August.

<u>I-25 / Blackfeather Trail Interchange and Founders Corridor Study</u> - Town staff is exploring other possible methods to get CDOT staff and other stakeholders together to finalize the study's scope of work.

<u>I-25 / Crystal Valley Parkway / Tomah Road Paired Interchange Study</u> - The final report for the Crystal Valley / Tomah Road Paired Interchange Study has been delivered. According to the study, it is projected that traffic getting off at Plum Creek Parkway will back into the through traffic lanes on I-25 by 2028 if the paired interchange at Crystal Valley/Tomah Road, or improvements to the Plum Creek Parkway interchange are not constructed. The study notes that improvements at the Plum Creek Parkway interchange would be very costly due to the constraints created by the proximity of the BNSF railroad and Plum Creek. Therefore, the study recommends that the paired interchange at Crystal Valley /Tomah Road be constructed. Staff will be coordinating with CDOT to gain an understanding of their support for the paired interchange concept along with potential next steps to pursue further with FHWA.

<u>Future CDOT Bustang Stop</u> - Town and CDOT staff continue to work on the Bustang Parkn-Ride. Several locations are being reviewed in the Downtown Mobility Study and potential funding sources are under consideration with CDOT and the upcoming DRCOG Transportation Improvement Program.





<u>DRCOG Active Transportation Plan (ATP)</u> - Town staff has reviewed the proposed regional bicycle map and provided comments back to DRCOG to incorporate in the final version.

<u>DRCOG 2021 – 2023 Transportation Improvement Program</u> - Town staff attended the mandatory TIP training. The call for regional projects has been issued by DRCOG and applications are due by September 21, 2018. As previously stated, the sub-regional TIP Steering Committee meeting met earlier in the summer has selected the following three projects to submit at the regional level.

- 1. US 85 widening and reconstruction from Sedalia to Castle Rock
- 2. SH 83 Safety Improvements (Bayou Gulch Road to Palmer Divide Road)
- 3. I-25 / Lincoln Interchange Project

During August, the Town Council passed a resolution authorizing the Town to enter into a Memorandum of Understanding with the sub-regional TIP Steering Committee.



Fleet Services





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!

August 2018 was a very productive month for the Fleet Services Division. With a full crew of four technicians, we were able to catch up on some past due preventative maintenance and increased our fleet availability. Work output for the month of August was up from 103 work orders last month to 141 work orders this month. The Fleet Services Division billed out over \$68,000 of labor and parts which was an increase of 20% over August of 2017.

Fleet Services technicians went to an advanced training class for electrical diagnois and ECM reprogramming which was put on by NAPA.



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

Outcome: Fleet team completed 81% 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 98.8% 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:** Technican productivity was 77.3%.

New vehicles continue to roll in and the technicians are working hard to get them into service ASAP. One new Type III brush truck for the Fire Department was received and put into service. Fleet also added a new mobile lift to help with the added demand and to accommodate our fourth technician.



Type III Brush Truck

New Mobile Lift for Light Duty Vehicles



Street Operations & Maintenance Division

During the month of **August**, the Street Operations & Maintenance Division (SO&MD) performed work in six (6) maintenance operations:

- Sweeping
- Pothole Patching
- Gravel Road Maintenance
- Bridge Maintenance

- Road Verge Mowing
 - Special Operations

Sweeping

Sweeping operations continued with 49.7 miles of the downtown and business areas having been swept in accordance with the monthly sweeping schedule. There were also 14.23 miles of roadway swept for accident response and other operations. These operations help enhance the appearance of the Town and remove obstacles from the roadway that could present a hazard.







Streets O&MD received a number of requests for pothole repairs during the month and completed repairs on 82 potholes using 1230 pounds of cold mix asphalt. The crew also filled numerous concrete potholes and repaired a large number damaged flow pan areas on Enderud Boulevard and other areas using 3,000 pounds of concrete.







Gravel Road Maintenance

Crews completed gravel road maintenance operations, specifically along the South Frontage Road along I-25, Territorial Road, as well as numerous washouts in Town putting down 14,260 square yards of material following the large amount of rain received the last few weeks. These operations not only enhance the appearance of the Town but also prevent further damage from the potential of undermining roadways. They also re-establish drainage to areas where it can be controlled.







Bridge Maintenance

Streets O&MD crews have completed bridge maintenance operations for the 2018 season after finishing work painting and re-decking the pedestrian bridge along Gilbert Street. These operations ensure the bridges are protected from road salt placed during snow operations as well as preserving the safety and aesthetic value they provide. This also allows for an up close inspection to identify any potential issues that may have gone unnoticed.







Road Verge Mowing Operations

The Streets O&MD has begun round three of our mowing operations for the season as weather has spurred weed growth earlier than anticipated. Crews have completed 27.95 edge line miles of roadway to date and are diligently working to complete the rest of the assigned areas. Crews also have completed 94 lane miles of weed spraying in anticipation of the PMP crack seal operations set to begin in September.









Special Operations

Crews began trimming the trees as they encroach on the right-of-way over the roads. Not only does this keep the Town looking sharp but prevents damage to vehicles, improves line of sight at intersections, and allows for pedestrian traffic beneath them. This will also enhance plowing and sweeping operations as mirrors and windows have been knocked off/out of the trucks by low hanging branches.







Looking Ahead

Looking to the month of **September**, we will continue our efforts to keep the Town's roadways in good condition with potholing, asphalt patching, and street sweeping operations as needed. PMP crack seal operations are scheduled to begin. Finalizing new snow routes are also planned to account for new roads and changing school bus routes.