



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.

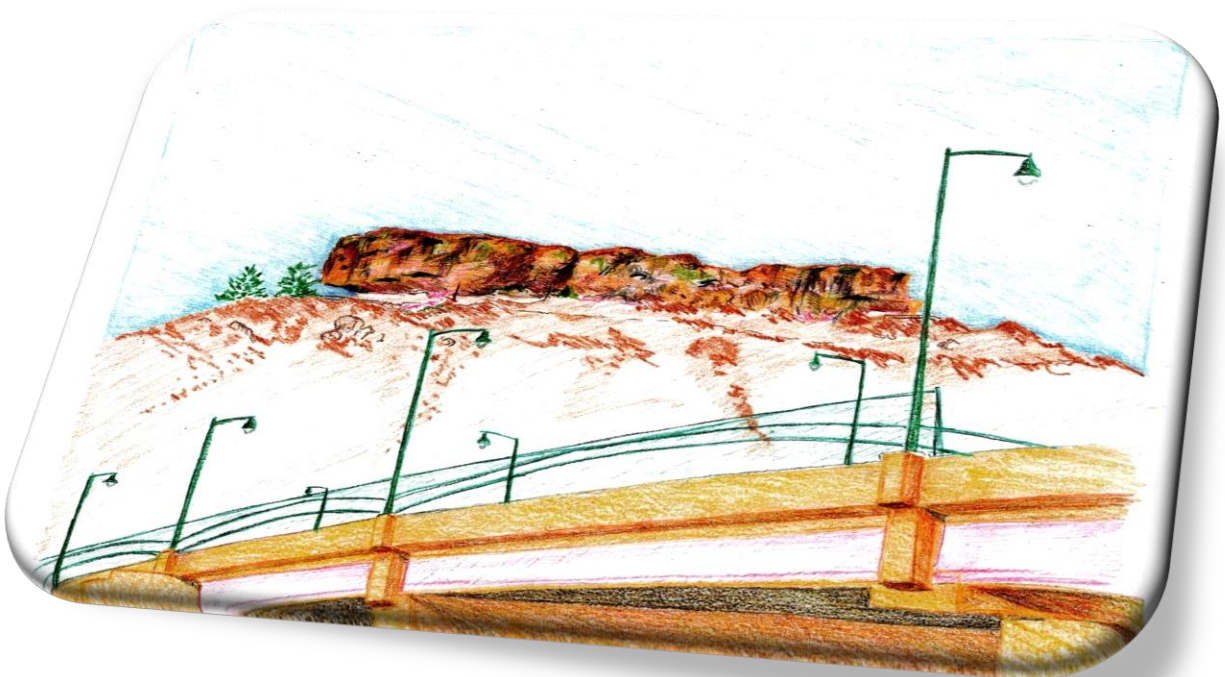
# PUBLIC WORKS DEPARTMENT



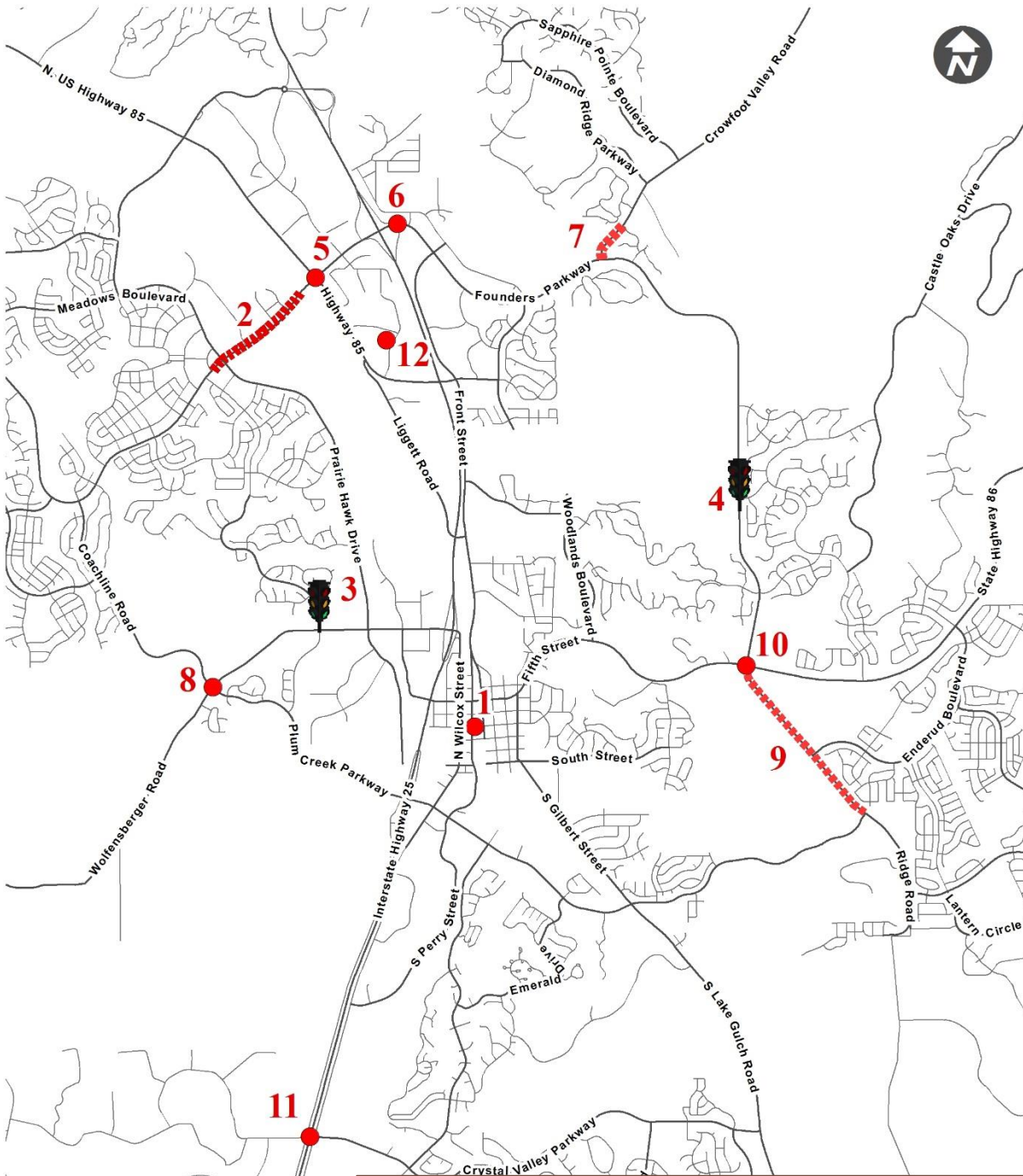
***Our Mission: To provide  
outstanding service, safety  
and support for  
transportation infrastructure  
and maintenance.***

***MONTHLY REPORT – JULY 2017***

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# CAPITAL PROJECTS



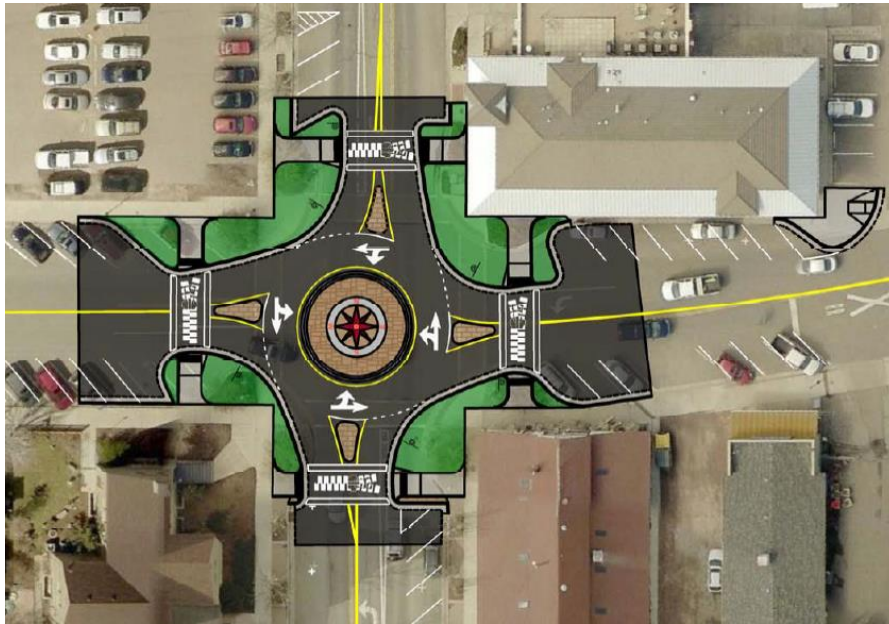
1. Roundabout at Perry Street/Third Street
2. Meadows Parkway Reconstruction
3. Traffic Signal at Wolfensberger Road/Red Hawk Drive
4. Traffic Signal at Founders Pkwy/Rising Sun Drive
5. US 85/Meadows Pkwy Intersection Improvements
6. Founders Pkwy/Allen Way Intersection Project
7. Founders Pkwy/Crowfoot Valley Road Intersection Improvements
8. Roundabout at Wolfensberger Road/Plum Creek Pkwy
9. Ridge Road Widening (SH86 to Plum Creek Pkwy)
10. SH86/Fifth Street Intersection Improvements
11. Crystal Valley Interchange (Right-of-Way Acquisition)
12. Public Works Facility Expansion

**1. Perry Street and 3<sup>rd</sup> Street Roundabout Project** –This construction project will convert the existing four-legged, 2-way stop intersection into a single lane mini roundabout. This will improve intersection capacity and traffic operations that can accommodate current and projected traffic volumes through the intersection while also enhancing the pedestrian environment. **Phase: Construction** - *The following is a summary of the construction activities that were performed during this month:*

- *Notice to proceed was issued to K.E.C.I. Colorado, Inc. on July 5<sup>th</sup>.*
- *Construction has started in the following quadrants:*
  - *Southwest corner of the roundabout*
    - *Demo of the existing curb and cutter with asphalt was completed*
    - *All underground electric has been completed*
    - *Light foundation complete*
    - *New curb and cutter with ramp has also been completed*
  - *Northwest Corner of the roundabout*
    - *Demo of the existing curb and cutter with asphalt was completed*
    - *All underground electric has been completed*
    - *Light foundation complete*
    - *New curb and cutter with ramp concrete forms are being placed*
  - *Southeast Corner of the roundabout*
    - *Existing trees have been relocated*

**Budget: Construction: \$877,000 Projected Construction: Summer 2017**

**ROUNDABOUT GRAPHIC**



**2. Meadows Parkway Reconstruction** - 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: Design** – *Felsburg, Holt and Ullevig is the design consultant for this project. Staff is working with consultant and CDOT to finalize incentive/disincentive language. Final submission will take place in the fall to allow for CDOT Standard Special Provision updates. Budget: \$112,385 Projected Design Completion: Fall 2017*

**3. & 4. Intersection Signalization Projects** – This project will complete the installation of two new traffic signals; one at the intersection of Wolfensberger Road/Red Hawk Drive; and one at the intersection of Founders Parkway/Rising Sun Drive. **Phase: Construction** – *During July, construction activities began at both intersections. The underground conduit has been installed at Rising Sun and the signal poles are up at Red Hawk.* **Budget: \$460,000 Construction Completion: Fall 2017**

**5. US85/Meadows Parkway Intersection Improvements** - This project will construct a second northbound left turn lane at Meadows Parkway/US 85 and replace the traffic signal pole on the northeast corner of the intersection. **Phase: Construction** – *This project began on June 26. The left turn lane construction has been completed and the new traffic signal caisson has been poured. The caisson must cure for seven days. Once curing is complete, the new signal pole will be installed.* **Construction Budget: \$212,000 Construction Completion: Fall 2017**



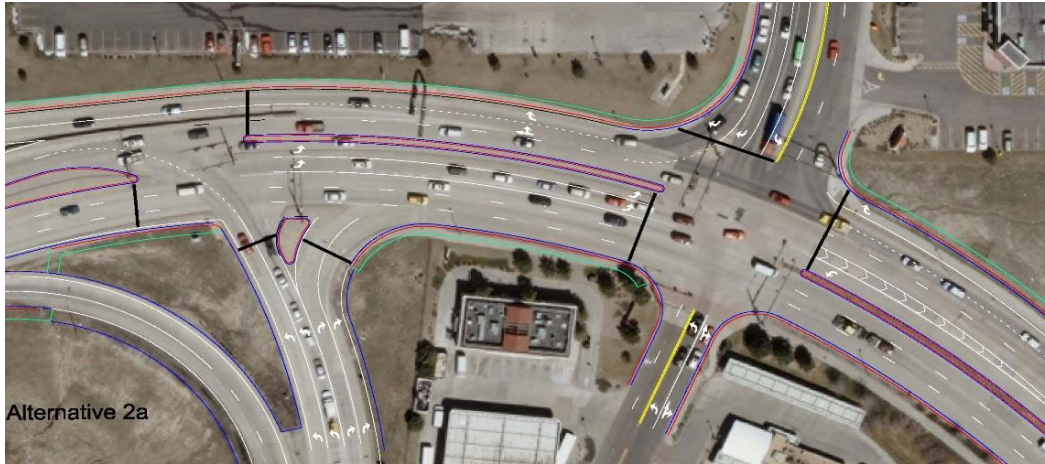
**6. Founders Pkwy/Allen Way Intersection Improvement Project** – This project will address the need for the following improvements:

- 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:*

- *Preliminary design is complete pending completion of review comments.*
- *The Field Inspection Review Meeting (FIR) was held with CDOT on July 17<sup>th</sup>.*
- *A traffic meeting was held on July 25<sup>th</sup> to confirm needs moving into Final Design.*
- *Right-of-Way needs are confirmed and legal preparation is underway.*
- *Awaiting environmental clearance documentation / review comments from CDOT.*

**Budget: \$760,000 Projected Design & ROW Completion: Fall 2017**



***Founders Parkway/Allen Way Proposed Intersection Layout***

**7. 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:

- Completed 30% plans have been submitted to CDOT and Town Departments for review. This will be presented to the Public Works Commission and Town Council for discussion/direction in August.
- Right-of-Way plans are underway to be finalized after 30% plan approval from CDOT.
- Field Inspection Review (FIR) meeting was held with CDOT on July 31<sup>st</sup>.
- Staff has compiled community input and is investigating implementation.

**Budget:** \$650,000 (2016-17) **Projected Design & ROW Completion:** Winter 2017

**8. 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: Design** –Short Elliott Hendrickson Inc. (SEH) is the consultant for design of this project. The following is a summary of the design activities performed this month:

- Finalized the survey and the right-of-way mapping for the project area
- Legal descriptions completed
- Completed the 30% plans and alignment
- The development of 60% plans has begun

**Budget:** \$150,000 **Projected Design Completion:** Winter 2017 **Construction:** 2018

**9. 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:** Stanley Consultants, Inc.,

has been awarded the design contract for this project. The following is a summary of the design activities performed this month:

- Survey work has been completed.
- 30% plans are near completion. The Town is awaiting CDOT input for Founders/Fifth/Ridge intersection to determine tie-in point near King Soopers.
- Staff will be meeting with property owners concerning ROW.

**Budget:** \$400,000 **Projected Design Completion:** Winter 2017 **Construction:** To be determined

**10. Founders Parkway (SH86)/Fifth Street Intersection Improvements** – The consultant will investigate multiple alternatives to address safety concerns and capacity issues at the intersection. Improvements under evaluation include:

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

**Phase:** Design – Short Elliott Hendrickson, Inc. (SEH) is the design consultant for this project. The following is a summary of the activities performed this month:

- Survey work has been completed.
- Conceptual design of intersection improvement alternatives – standard intersection widening, roundabout, and continuous flow intersection – have been completed.
- SEH and staff will be meeting with CDOT on August 2<sup>nd</sup> regarding alternatives.

**Budget:** \$340,000 **Project Design Completion:** Winter 2017

**11. 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:** Town of Castle Rock entered into a service agreement with Woolpert, Inc. to provide land surveying services for the Crystal Valley Interchange east side Right-of-Way Plan Review (ROWPR). Staff is now in the process of putting together a scope of work for the Crystal Valley Interchange west side ROWPR.

- Continuing with right-of-way monumentation surveys
- Continuing with final authorization survey plan edits

**Budget:** Development Escrow

**12. Public Works Facility Expansion** – This project will complete design plans for the Service Center building expansion. **Phase:** Design - The following is a summary of the design activities that the firm D2C performed during this month:

- Began working on 60% design

**Budget:** \$220,000 **Project Design Completion:** Winter 2017

**Traffic Signal System Upgrades - Phase 2** - Over the month of July, the Town's contractor, consultant, and radio vendor continued work on the deployment of more radios to complete the addition of the remaining Town traffic signals to the communication network. The remainder of the work for the project will be complete by the end of summer. To date, this project has completed the installation of battery back-up units at all Town intersections, video detection equipment that sends live feeds back to the Service Center and radios to bring all of the Town's traffic signals onto the communication network. **Budget:** \$400,000 **Construction Completion:** Summer 2017

## Engineering Division

**2017 Pavement Maintenance Program (PMP)** - The Curb, Gutter, and Sidewalk Replacement, Slurry Seal, and the Concrete Pavement Restoration projects are complete. Staff is in the process of documenting punchlist items for the contractors to address and complete prior to accepting the projects into the one year warranty period.

The Mikelson Boulevard overlay has been completed. Remaining items to be completed for the Asphalt Overlay and Full Depth Reclamation Project are the full depth reclamation of Johnson Drive and the Meadows Parkway bridge overlay. These treatments are scheduled to start in mid-August and be completed by the end of September.



Work is progressing nicely on Emerald Drive Reconstruction. The contractor has completed the bottom mat of asphalt pavement along the entire length of Emerald Drive. Emerald Drive was fully opened to the travelling public on July 27<sup>th</sup>. The contractor is performing final construction items in preparation for the top mat of asphalt to start on August 7<sup>th</sup>. The Prestwick Way reconstruction has begun and the contractor has completed curb, gutter and sidewalk repairs. The removal of the existing deteriorated concrete pavement started on July 28<sup>th</sup>. This reconstruction is expected to be completed by mid-August.

The Coachline Road Concrete Pavement Restoration began on July 10<sup>th</sup>. The contractor started removing and replacement operations of the concrete pavement at the northern end of Coachline and is continuing to work south. The project is scheduled to be completed by mid-September, which will include smoothness grinding and joint sealing.



The Mastic and Crack Seal Project is tentatively scheduled to start in September. This project will crack seal the streets within the south PMP area that did not receive a preservation or rehabilitation treatment.

Staff is working on obtaining concrete repair quantities for the 2017 Miscellaneous Concrete Project. These quantities were derived from residents identifying damaged sidewalk, curb & gutter as well as staff observation. The project is scheduled to bid in August, and work is expected to take place in September.

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

**2017 Facilities Parking Lot Improvements Program** –The parking lots scheduled for improvements are:

- Prairie Hawk Fire Station will receive asphalt patching, asphalt seal coat, concrete repairs, and concrete pavement joint sealing.
- Bison Park will receive asphalt patching, asphalt seal coat, and concrete repairs.
- Wrangler Park will receive asphalt patching, asphalt seal coat, and concrete repairs.
- Gemstone Park will receive asphalt patching, asphalt seal coat, and concrete repairs.
- Paintbrush Park will receive asphalt patching, asphalt seal coat, and concrete repairs.
- East Plum Creek Trail Head lot will receive asphalt patching, asphalt seal coat, and concrete repairs.
- Castle Rock Water Headquarters will receive asphalt patching, asphalt seal coat, concrete repairs, and concrete pavement joint sealing.

This project is tentatively scheduled to start in late August and completed by the end of September.

**2017 Bridge Maintenance Program (BMP)** - Staff has identified the following locations for the 2017 BMP:

Bridge Repair

- Meadows Parkway Bridges over Plum Creek – Upgrade interior bridge railing
  - ✓ The contractor has performed the surveying needed to start the fabrication of the Meadows Parkway bridge rail and is scheduled to start September 11<sup>th</sup>.
- Plum Creek Parkway Bridge over the Union Pacific Railroad – Repair bridge deck, and girders
  - ✓ Rehabilitation work started on the Plum Creek Parkway Bridge. All patching of the structural elements were completed on July 27<sup>th</sup>. The thin lift epoxy overlay is scheduled for August 7<sup>th</sup>. With the completion of the overlay, the Plum Creek Parkway bridge rehabilitation will be complete.

Bridge Surface Treatment

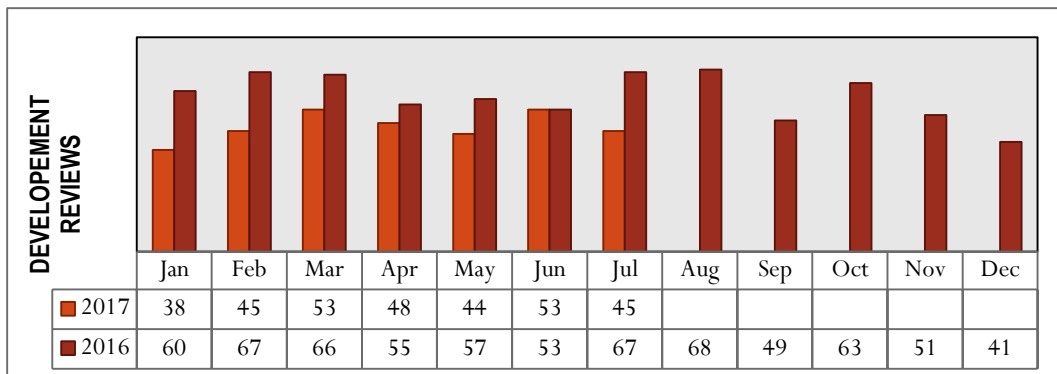
- Meadows Parkway Bridges over Plum Creek – Mill and overlay of wearing surface
  - ✓ Work is tentatively scheduled for September when the bridge railing installation is complete. This work will be performed at night.

Bridge Painting

- Meadows Boulevard Bridge 3 (near Sabercat Way) and Meadows Boulevard Bridge 4 (in the close proximity of Springbriar Drive) are scheduled to be painted in August by the Street Operations & Maintenance crew.

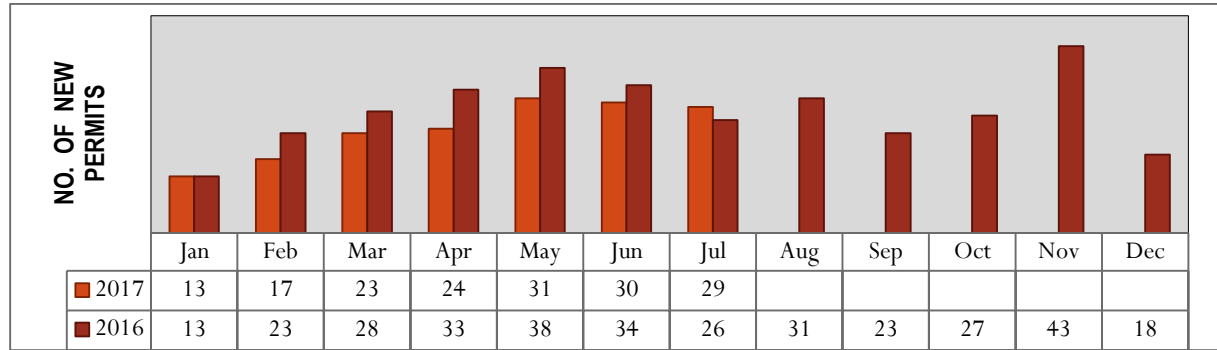
**Development Review and Permitting**

**Development Review** - Included in the 45 submittals are 24 first time applications with one pre-application. All reviews were completed on or before the due date assigned by the Development Services Project Manager.



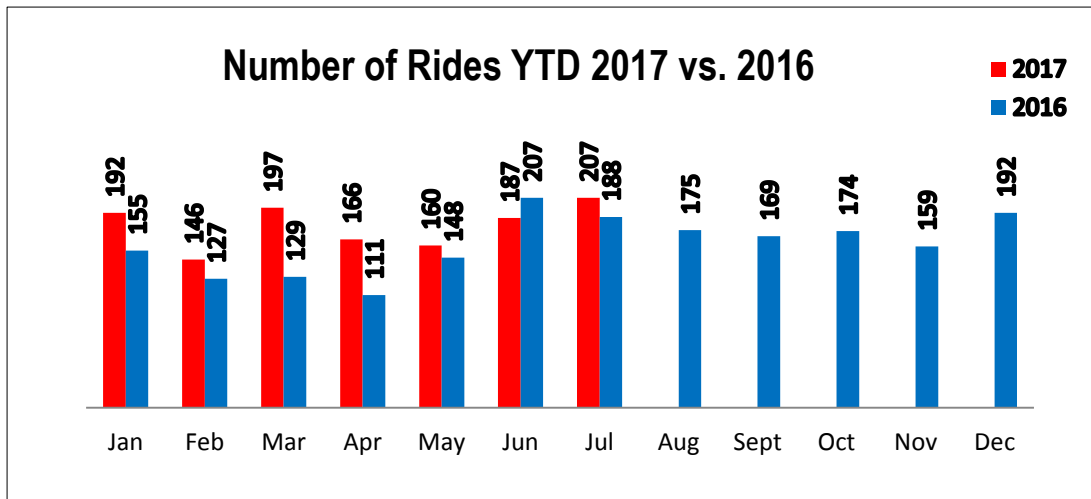


**Permitting** - Included in the 29 permits are: 3 - Residential Developments (Meadows F20 Lennar – Phase 1B, 2, and 3); 5 - Commercial (Jerry Street Sushi; Promenade Block 4, Lot 2A – ENT Credit Union; Promenade Block 5, Lot 3 – core and shell; Church of Rock Early Grading; Castle Lock II Sanitary Sewer); and 21 permits for work within the public right-of-way, 11 of which were necessary due to current development, and two were a pavement cuts.

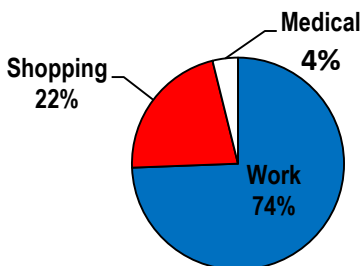


## Transportation Division

**Taxi Voucher** – For the month of July, the Taxi Voucher Program funded 207 rides, this was a 10% increase from last July’s total of 188 rides. The increase in rides is a result of a handful of new riders that joined the program to get transportation help to get to work, the grocery store and medical appointments.

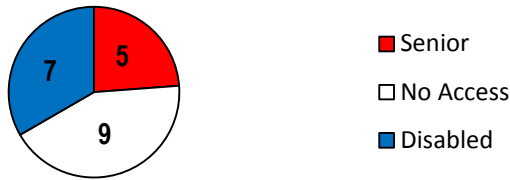


### Ride Destinations

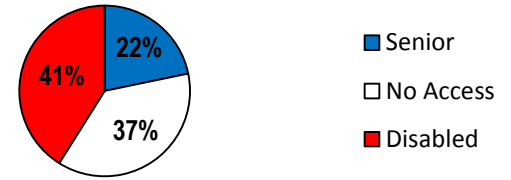


Rides are available for work, shopping or medical trips. Transportation services are provided for Castle Rock residents who are senior citizens, have a disability that prevents them from driving, or do not have access to a vehicle.

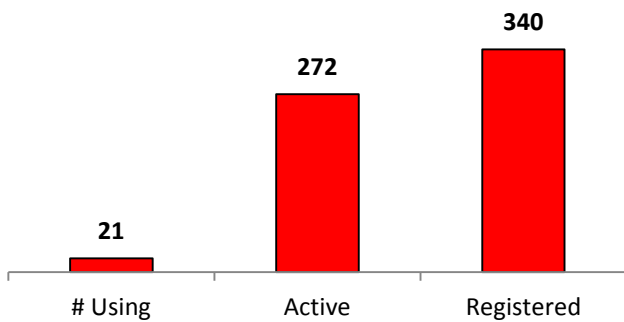
### Types of Riders Using the Service



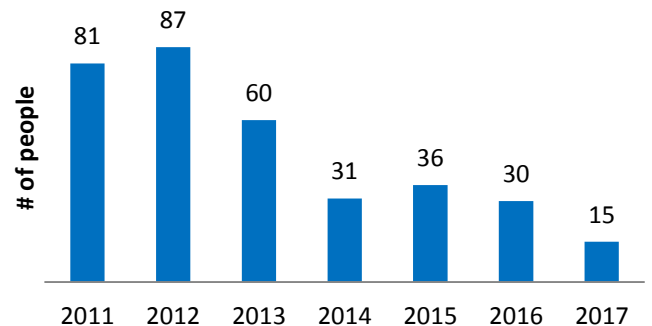
### Percentage of the Total Rides (207) by Each Rider Type



### Number of Riders Using the Service vs. Registered



### Number of People Registering for Program Each Year



There were five new registrants for the Taxi program this month. Since its inception, a total of 340 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.

**Town Trolley** - The Trolley provided rides for six events in the month of July. This included a wedding, the Grange’s Music in the Meadows Event, the Chamber’s Winefest, the Town’s Monthly Manager’s Picnic, the Douglas County Fair Parade and the DMA’s Boots & Brews Event. Riders enjoyed the fun atmosphere on the trolley as they were riding about at these events.



**Senior Center Shuttle** - The Senior Center provided 660 rides in the month of July which was a slight decrease from last month's rides of 662. The volunteer driver program provides service Monday through Friday from 9 am to 3 pm.



## **Traffic Engineering & Operations**

**Traffic Signal Operations and Maintenance** - For the month of July there were ten non-routine traffic signal maintenance visits completed by either Town staff or the Town's signal maintenance contractor. Most of these visits were related to vehicle detection problems, battery change-outs or radio installations. Other repairs completed were associated with LED change-outs for vehicle signal heads.



In addition, the programmed schedules in all of the school beacons near elementary and middle schools around Town were updated to reflect the upcoming year's calendar. This was done wirelessly using the software system that the Town deployed in August of 2016. The update went seamlessly and saved countless hours of staff time in manually programming each clock.

**Street Signs and Pavement Marking Maintenance** - July was a good month for the Signs and Markings Section. The two sign technicians and the seasonal personnel installed 348 pavement symbols. They also installed 148 new signs and 10 new pavement symbols. They have painted the specialty crosswalks in the downtown area once and will be painting them again this coming month.

In addition, the full crew (one supervisor, two technicians and four seasonal personnel) along with the Traffic Engineering Technician mapped, loaded trailers, set out, set-up and took down the traffic control devices for the Cattle Drive and the Douglas County Fair Parade. The crew was in late on Friday night and up early on Saturday morning in support of both of these events and did a great job in making sure that both events could safely occur while still keeping traffic moving.

## **Transportation Planning**

### **Neighborhood Traffic Calming Program (NTCP)**

#### **Updates:**

**Woodlands and Escavera:** The vast majority of traffic calming work in the Woodlands and Escavera neighborhoods has been completed. A few signing and striping items are scheduled to be completed in the first week of August, weather permitting.

**Transportation Master Plan (TMP) Update** - The draft Transportation Master Plan has been revised based on comments by the Town Manager. The TMP Executive Summary has been shared with Town Council. The draft document is out for public review until August 11<sup>th</sup>. It will be presented to the Public Works Commission on August 7<sup>th</sup> where the Commission will be asked to provide a recommendation of adoption to Town Council. The presentation to Town Council is scheduled for September 5<sup>th</sup> at which time Council will be asked to adopt the document.



**Development Review -**

- Staff reviewed and commented on six transportation impact studies during the month. All reports were completed by the due date.
- One of the studies involved the proposed Milestone Charter School along Ridge Road at Plum Creek Parkway. The proposed school is within Douglas County and went to the County Planning Commission in August for consideration, prior to the hearing with the Douglas County School Board. The Commissioners denied the project (4-3) for several reasons, including traffic concerns, safe walking routes, access, neighboring impacts, and lack of outreach. The next step is the hearing with the School Board for approval. This hearing date has not yet been set.
- Discussions on the development plan for Culver’s restaurant near Castleton Court and Genoa Way continued during July. Staff met with the applicant about subdividing the parcel to include a small retail building on the second parcel. The site plan has been reconfigured to account for previous staff comments. Public Works staff is currently supportive of the revised conceptual site plan that provides access to both Castleton Court and Genoa Way.

**Downtown Striping Plan**

The downtown striping plans for Wilcox and Perry streets in the area around Town Hall and Festival Park has been completed. Restriping the streets to add parking spaces will be coordinated with improvements at Festival Park.



*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, almost all of them have to rely on their Town issued vehicles to keep Castle Rock moving and growing. Here at the Fleet Services Divison, we take great pride in knowing that those vehicles are reliable and safe to operate.



In the month of July fleet technicians worked on 138 town vehicles and equipment and billed out over \$55,000 worth of parts and labor.

Fleet technicians Mike McKelvy, Chris Selheim, and Eric Dena also received and applause award for work that they did on the Town trolley to have it ready for a special event.



PUBLIC WORKS DEPARTMENT



Fleet Services technicians, Mike McKelvy, Chris Selheim, and Eric Dena also found time to attend technical training put on by our local NAPA store to learn all about new power steering systems.

Fleet Services Support Technican, Angie Williams, continues to work through the parts inventory to return older parts that are no longer needed to vendors.



Fleet Services continues to receive new vehicles are working hard to get them equipped and ready for service. This month we put into service three utility interceptors for the Police Department and two Ford F150's for Castle Rock Water.



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

**Outcome:** Fleet team completed 81.2% of the work orders within 24-hours of opening repair requests or service requests. This number shows the quick turnaround of vehicles that come into our shop for repairs.

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

**Outcome:** Town vehicles and equipment were available 98% of the time. This high number of availability 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 80.2%. This means that our Fleet Services technicians are working on Town vehicles 80% of the time they are here at work. A phenomenal number compared to the APWA standard!

## *Street Operations & Maintenance Division*

During the month of **July**, the Street Operations & Maintenance Division (SO&MD) performed work in seven (8) maintenance operations:

- Crack Sealing
- Pavement Maintenance
- Road Shoulder Maintenance
- Pothole Patching
- Street Sweeping
- Gravel Road Maintenance
- Equipment Maintenance
- Special Operations

### **Crack Sealing**

Staff completed the crack sealing maintenance operations in the Central PMP area of Town. Two crews have worked hard at the beginning of the month and completed **31 lane miles** of roadway. During these operations, staff completed the roadways in the Metzler, Castle North, Craig & Gould, Woodlands, and Escavera subdivisions. These operations revisits the areas that received a pavement maintenance treatment two years prior and improves the life of the roadway by minimizing the deteriorating effects of any new cracks that have appeared.



### **Pavement Maintenance**

Staff performed four (4) full depth pavement repairs. The roadways that received this work were Fair Street, Black Feather Trail, Malibu Street, Fringe Court, and Genoa Way using **17 tons** of asphalt. In other areas, staff performed milling operations to remove large humps that had formed at two locations on Plum Creek Parkway. The humps acted like speed bumps that cross the entire lanes of travel. One hump was removed just west of I-25 and the other one was just east of Eaton

Street. The staff also installed the asphalt for six large speed cushions in the Woodlands and Escavera subdivisions for the Neighborhood Traffic Calming Program.



### **Road Shoulder Maintenance**

Staff responded to a request for trash and debris removal as well as performed roadside vegetation control by mowing and trimming. In total, staff picked up and hauled off **10 yards** (two dump truck loads) of trash and debris off of Ridge Road, and mowed and trimmed **35 edge line miles** of roadway during the month.



### **Pothole Patching**

SO&MD received multiple requests for pothole repairs on the small section of Plum Creek Parkway just to the east of Gilbert Street. Staff completed the work over the course of two days repairing approximately **602 potholes**.

### **Street Sweeping**

Staff met their goal this month in street sweeping the business areas twice, and performed some special event sweeping after the Cattle Drive and before the Douglas County Fair Parade. These operations not only help to keep our Town vibrant and beautiful, they also help to keep our waterways and the air we breathe a little cleaner. During these operations staff swept **39 Lane miles** of roadway removing **80 yards** of materials.



### **Gravel Road Maintenance**

Staff responded to multiple requests for grading on Rocky View Road in Castle Oaks. The staff completed the repairs in one day completing **1.3 lane miles** of roadway.

### **Equipment Maintenance**

Regular equipment maintenance is essential to keep equipment safe and reliable, which helps to eliminate workplace hazards. Staff completed **12 work requests** this month that varied from V-box spreaders to changing wear items on an asphalt milling machine attachment.

### **Special Operations**

Staff responded to five separate requests over the last month. Three requests were to remove road kill, one request was to repair a damaged sidewalk, and another request was to install some sandbags to mitigate some localized flooding in the downtown area during a heavy rain event.



### **Looking Ahead**

During the month of **August**, the SO&MD staff will be working on bridge maintenance, road shoulder maintenance erosion and vegetation control, gravel road maintenance, and pavement maintenance where needed. At the end of the month, staff will begin crack sealing in the Founders and Castlewood Ranch areas, as part of our preventative maintenance program.