



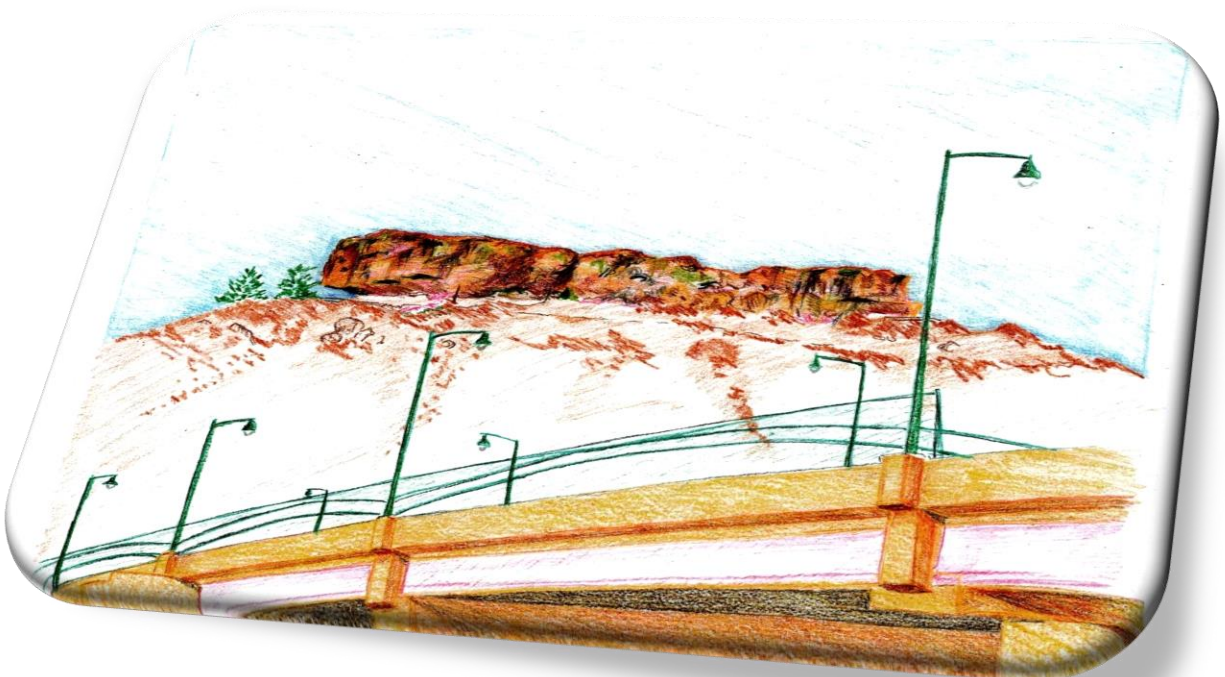
The Public Works Department operates under the CAN DO philosophy
- We are committed to doing the job right with a positive attitude
while staying dedicated to meeting the needs of our Town values
and continually searching for opportunities to improve.

PUBLIC WORKS DEPARTMENT

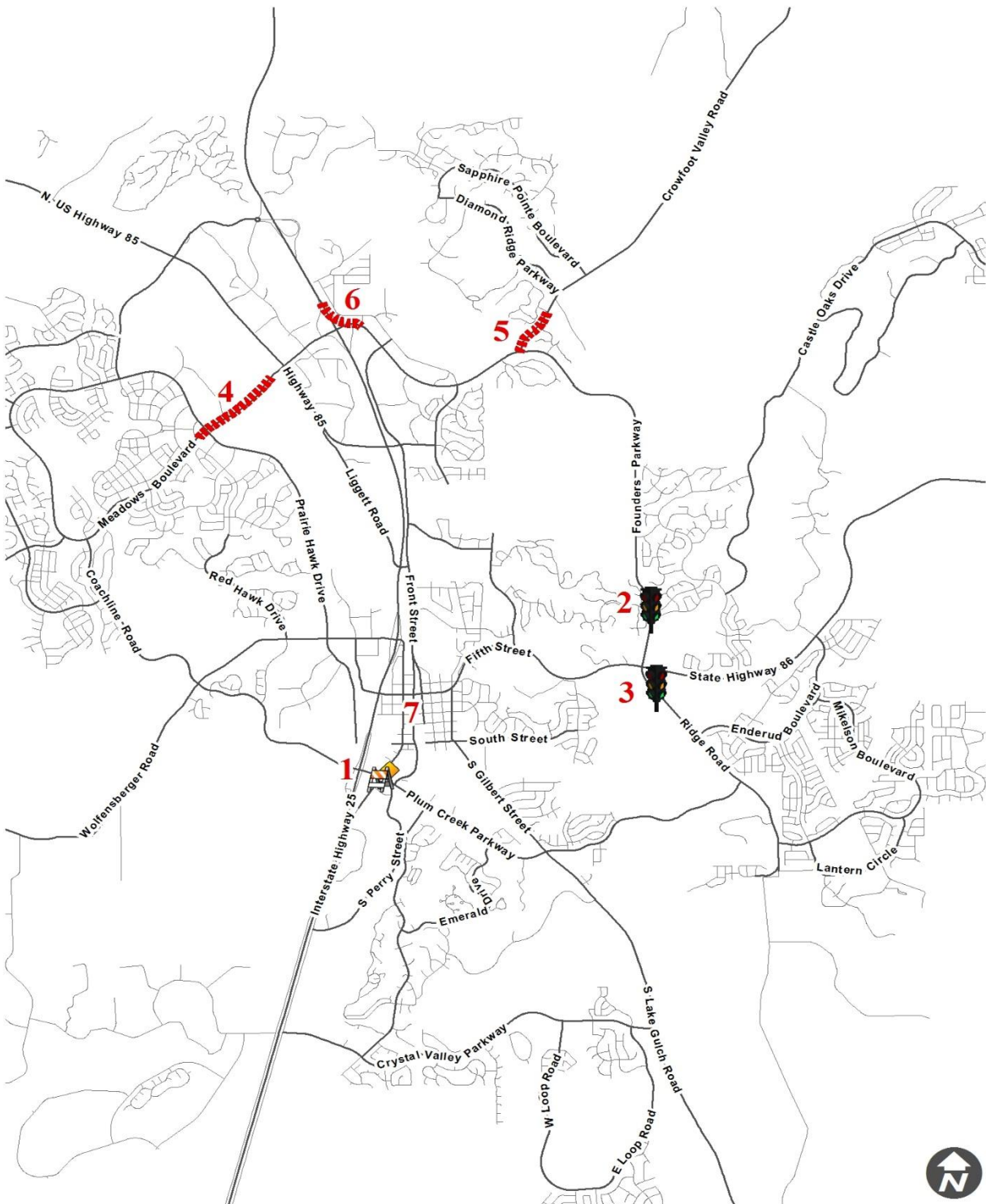


*Our Mission: To provide
outstanding service, safety
and support for
transportation infrastructure
and maintenance.*

MONTHLY REPORT – SEPTEMBER 2016



CAPITAL PROJECTS



1. Plum Creek Pkwy Intersection Improvements
2. Traffic Signal at Black Pine Drive/Copper Cloud Drive
3. Traffic Signal at Ridge Road/Kings Soopers Entrance
4. Meadows Parkway Reconstruction
5. Founders Pkwy/Crowfoot Valley Road Intersection Project
6. Founders Pkwy/Allen Way Intersection Project
7. Perry Street & 3rd Street Roundabout Project

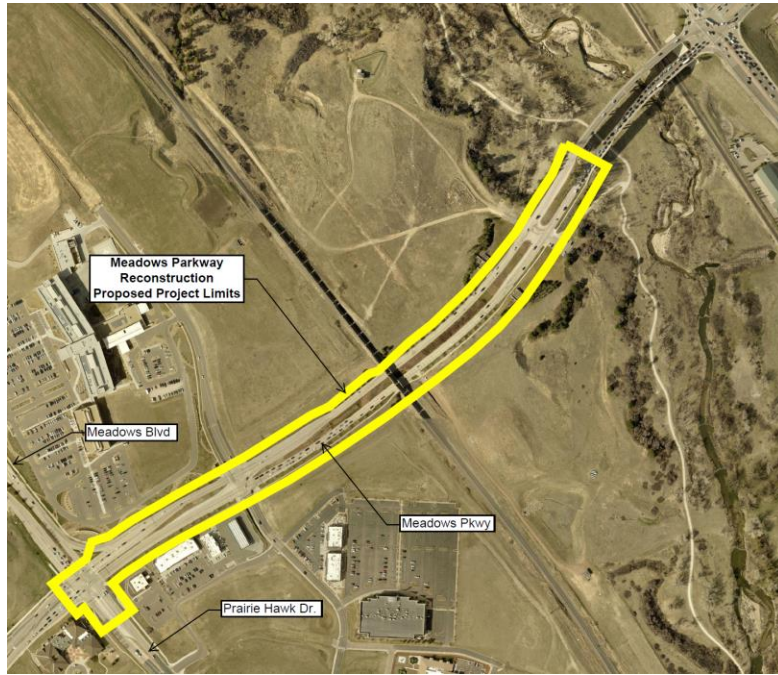
1. Plum Creek Parkway Intersection Improvements at Wilcox & Perry to I-25 – This construction improvement project completed the following components:

- Removed the dip at the intersection of Wilcox Street and Plum Creek Parkway (located on the east side of Wilcox Street).
- Reconfigured the above intersection to have two northbound left turn lanes from Wilcox Street to Plum Creek Parkway. In addition, the eastbound approach now has a free right turn lane onto southbound Wilcox and the westbound approach will have a dedicated right turn lane onto northbound Wilcox.
- Added a southbound free right turn lane from Perry Street to Plum Creek Parkway.
- Added a westbound right turn lane from Plum Creek Parkway to northbound I-25.
- Through the Pavement Maintenance Program, concrete restoration was completed on Plum Creek Parkway from Wilcox Street to the Douglas County Fairgrounds entrance.

Phase: Construction – The above components have been completed. Only signal work, including the proposed Active Traffic Management System (ATMS) remains for this project. Pending CDOT and Town testing, the ATMS is scheduled to be installed and operational in November. An open house is scheduled for this element of the project is scheduled for October 19th in Council Chambers at Town Hall. **Budget:** Capital Fund: \$3,050,000; Pavement Maintenance Fund: \$553,850; Utilities Department: \$59,000 **Projected Construction Completion:** Extended to November 2016 due to the ATMS testing component.



2 & 3. Intersection Signalization Projects - This project will complete the installation of two new traffic signals; one at the intersection of Black Pine Drive/Copper Cloud Drive/Founders Parkway; and one at Ridge Road/King Soopers Entrance. **Phase:** Construction – WL Contractors is nearly complete with the signal construction of Ridge Road at the King Soopers entrance. As of now, the signal pole and heads have been installed. The power meter, signal cabinet, wire, and other traffic items need to be installed to finish the signal installation. In addition, the contractor broke ground on the Founders Parkway at Black Pine/ Copper Cloud at the end of September. Median modification work is underway as well as the placement of caissons for the signal poles. We are optimistic in completing the signal construction by mid-November with the Ridge Road signal likely complete sometime in October. **Budget:** \$480,000 **Projected Construction Completion:** Fall 2016.



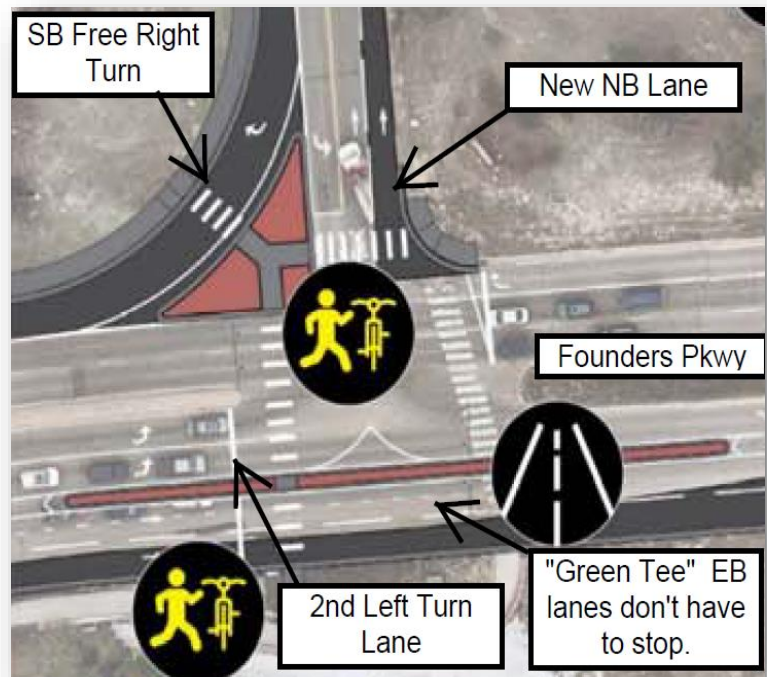
4. Meadows Parkway Reconstruction -

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 west abutments of the Meadows bridges over Plum Creek. This reconstruction will also replace any broken curb/gutter, sidewalk, and also add on-street bike lanes. Phase: Design – Felsburg, Holt & Ullevig (FHU) was awarded the contract for design on September 16th. Budget: \$112,385 Project Design Completion: December 2016

5. Founders Pkwy/Crowfoot Valley Road Intersection Improvement 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 Pkwy and Knobcone Drive.
- A southbound free right turn lane from Crowfoot Valley Road to westbound Founders Parkway
- Eastbound lanes added that are separated from the left turn lanes to allow the eastbound lanes to avoid stopping for the signal.
- Widen Founders Parkway both eastbound and westbound between the Crowfoot Valley Road and Woodlands Boulevard.

Phase: Design and ROW Acquisition – Staff is recommending to contract with Kimley-Horn for the design work. This item will be on the November 1st Town Council agenda. The early part of the design phase will verify whether this concept provides the best cost/benefit ratio or whether a different concept like a roundabout has a better ratio. Budget: \$650,000 (2016-17) Projected Design & ROW Completion: November 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 to Allen Way.
- An additional southbound right turn lane from Alley 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 – Public Works has advertised for design proposals for this project. These are due on Friday, October 14th. **Budget:** \$760,000 **Projected Design & ROW Completion:** November 2017

7. Perry Street and 3rd Street Roundabout Project – *This project consists of a roundabout being constructed at the Perry Street/3rd Street intersection. Phase: Design – Felsburg, Holt & Ullevig (FHU) was awarded the design contract on September 15th. This design will include a traffic analysis and engineering design/surveying for this roundabout. Budget: \$123,273 Projected Design Completion: December 2016*



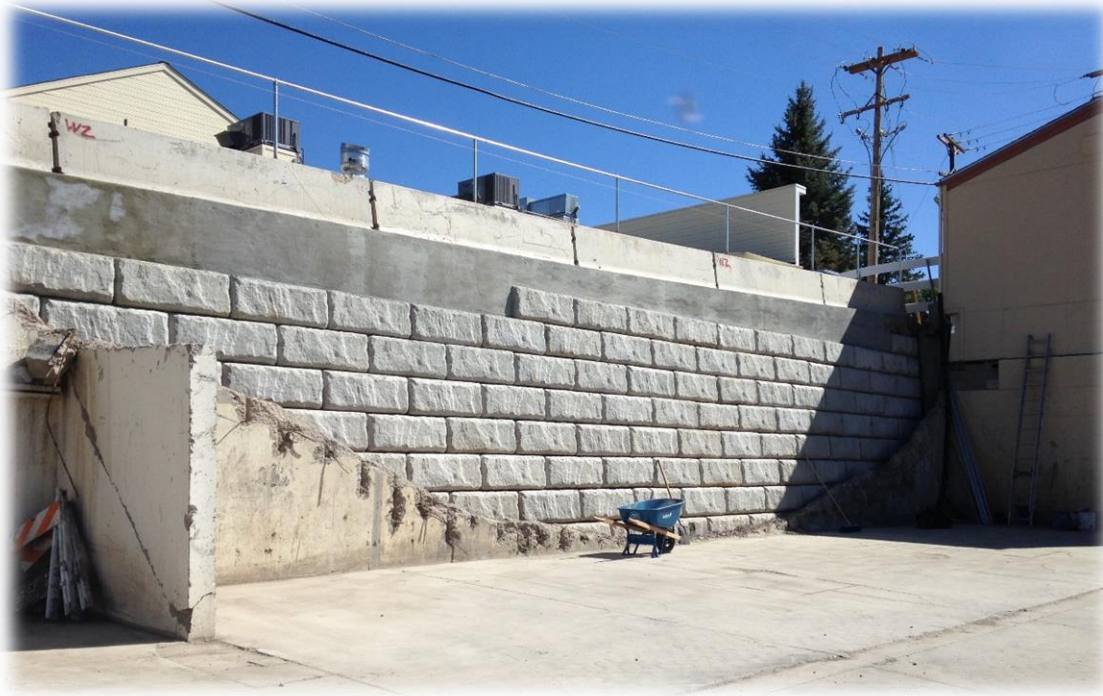
Traffic Signal System Upgrades

Phase 2 - Components included as part of Phase 2 of this project include battery back-up systems at all Town signals, upgraded vehicle detection systems that can bring video feeds back to the traffic operations center and a communication links to the CDOT signals in Town. **Phase: Construction** - WL Contractors have completed the bench testing of the five new 332 cabinets. They have also developed a plan for installing the remaining UPS battery backup systems on the existing traffic cabinets. One of these has been installed at Wolfensberger Road and Prairie Hawk Drive.

The remaining UPS and 332 cabinets will be installed throughout the month of October. So far the Trafficon FLIR video detection is meeting the Town's performance needs. Staff is able to bring up video detection through IP addresses which has helped in troubleshooting problems that arise. Staff is currently testing several different vendor's equipment with the intent of picking the system that provides the most ease of use. **Phase 2 Budget: \$400,000 Construction Completion: Winter 2016**

ENGINEERING DIVISION

6th Street Alley Retaining Wall and Pavement Failure - In June 2015, the retaining wall supporting the alley (north of 6th Street and between Wilcox and Jerry streets) failed. **Phase:** The wall is now substantially complete with the contractor working on punch list items. **Budget:** Design and Construction Contract: \$198,325 (Emergency Funds will be used for the project). **Projected Construction Completion:** Complete



2016 Pavement Maintenance Program (PMP) - The 2016 Concrete Pavement Restoration project began on September 21st on Justice Way. Work on Front Street from Founders Parkway south pass Milestone is scheduled to start on October 10th. This will involve lane shifts to do concrete pavement repairs and joint sealing from Founders Parkway to Milestone. From Milestone south along Front Street to the end of the concrete pavement will see traffic shifts to allow the

contractor to close half of the road. This will allow the contractor to perform the concrete pavement repairs, the concrete pavement grinding (to improve rideability), and joint sealing in a more efficient manner.

The mastic crack seal contractor is scheduled to start on October 5th, in the Gould Circle neighborhood within the Meadows.



Once completed with the Gould Circle neighborhood, the contractor will work on Crystal Valley Parkway.



The Miscellaneous Concrete contract began on September 21st. This contract consists of repairing sidewalk trip hazards, broken curb, and installation of sidewalk chase drains.

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

2017 Pavement Maintenance Program (PMP) - The PMP team continues working on the field reconnaissance for the 2017 PMP. This consists of the South PMP area, and scheduled primary streets which include; Mikelson Boulevard between Sovereign Street and Ridge Road, Valley Drive, Wilcox Street between 5th and Wolfensberger, and also complete the mastic sealing on Crystal Valley Parkway. The purpose of the field reconnaissance is to quantify curb, gutter, and sidewalk as well as pavement areas which are in need of repair prior to the application of the final maintenance surface treatments such as slurry seal, asphalt overlay, or pavement reconstruction. Changes in the proposed streets may occur due to current evaluation taking place and/or actual bid pricing received that may require some modifications.

2016 Facilities Parking Lot Improvement Program – All major construction activities have been completed for this program. Staff is in the process of walking the various parking lots with the contractor to develop punch list items for the contractor to address prior to accepting into warranty.



2017 Facilities Parking Lot Improvements Program - The PMP team has begun working on the field reconnaissance for the 2017 Facilities Parking Lot Improvements Program. This consists of the parking lots at the Prairie Hawk Fire Station, Bison Park, Wrangler Park, Gemstone Park, Paintbrush Park, East Plum Creek Trail Head parking lot, and Utilities Headquarters. Changes in the proposed facilities may occur due to current evaluation taking place and/or actual bid pricing received that may require some modifications.

2016 Bridge Maintenance Program - The work on the Crystal Valley Parkway Bridge over Plum Creek - Approach Slab Leveling Project has been completed.

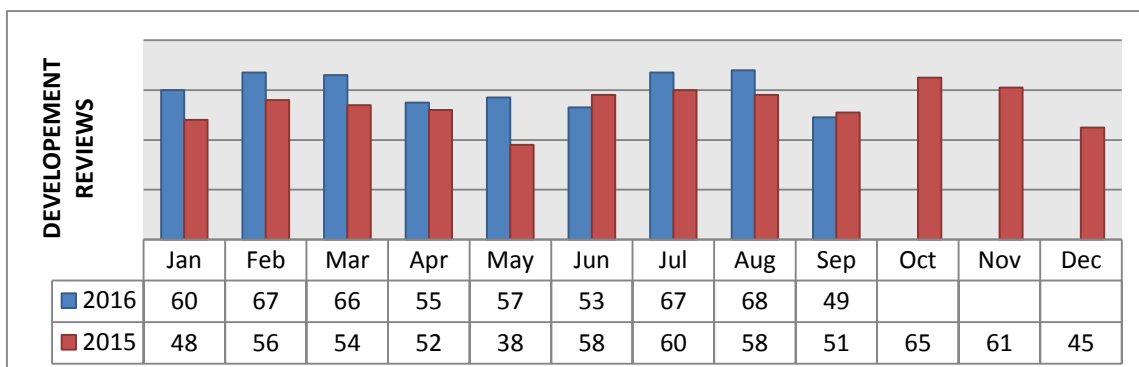


Street Operations & Maintenance Division began painting the following bridges:

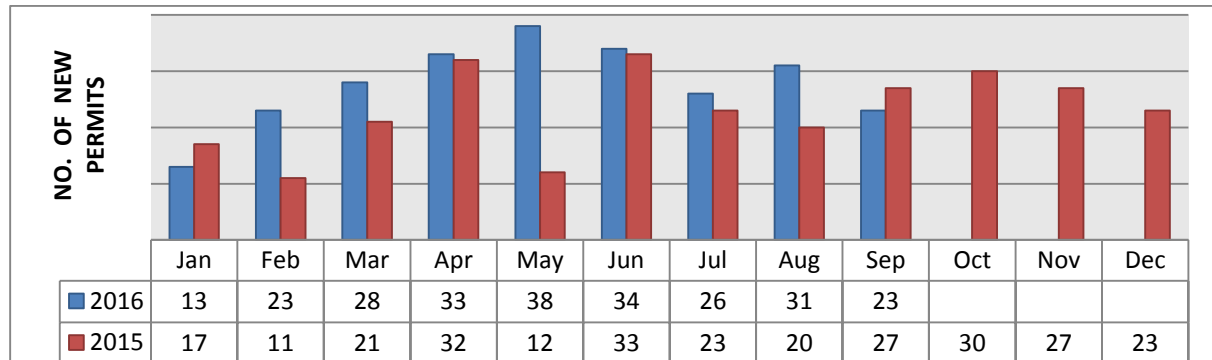
- Wilcox Bridge over Sellers Gulch - **completed**
- Perry Street Bridge over Sellers Gulch - **completed**
- Plum Creek Parkway Bridge over BNSF Railroad – **scheduled to be completed by end of October**

Development Review and Permitting

Development Review - Included in the 49 submittals are 24 first time applications with six pre-applications. All reviews were completed on or before the due date assigned by the Development Services Project Manager.

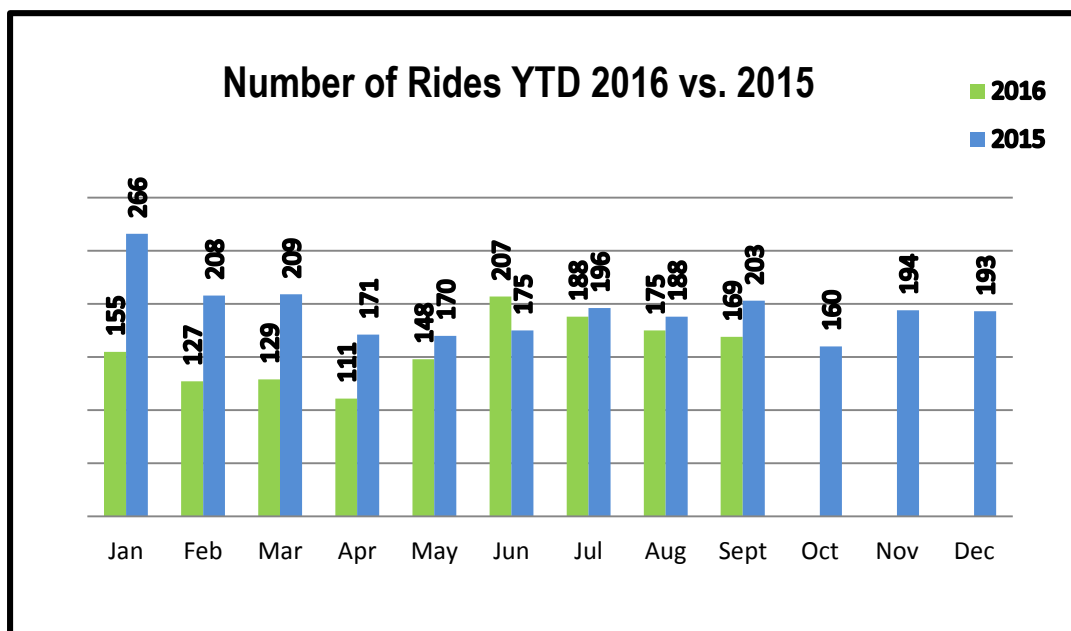


Permitting - Included in the 23 permits are: 5 - Commercial Developments (Meadows F17, Limelight Medical Office Building; Promenade Block 5 - 24 Hour Fitness; Promenade Block 6; and Master Magnetics site improvement. 1 - Residential Development (Meadows F18, Tract GG - Century Communities); and 17 permits for work within the public right-of-way, six of which were necessary due to current development, and two were pavement cuts.



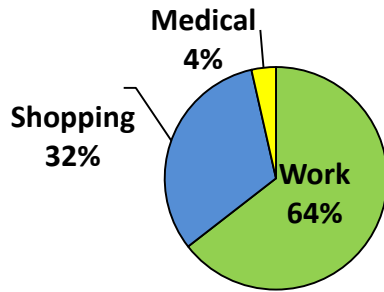
TRANSPORTATION SERVICES

Taxi Voucher – For the month of September, the Taxi Voucher Program funded 169 rides. This was about a 17% decrease over last September's total of 203 rides. The rides have decreased since last month due to the nice weather and some of the riders choosing to use walk or ride bikes to their destinations.

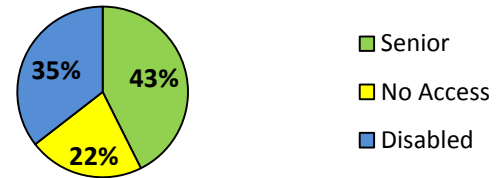


Rides are available for work, shopping or medical trips. Transportation services are provided for Castle Rock residents who are senior citizens, have a disability that prevents them from driving, or do not have access to a vehicle.

Ride Destinations



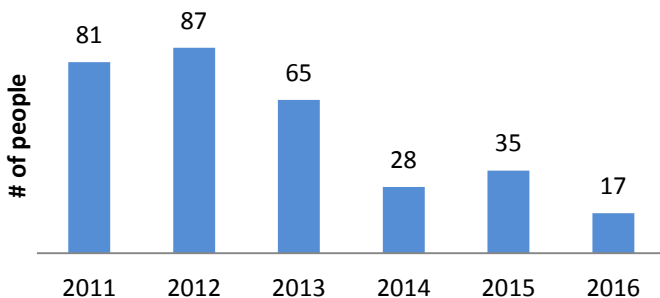
Percentage of the Total Rides (169) by each Rider Type



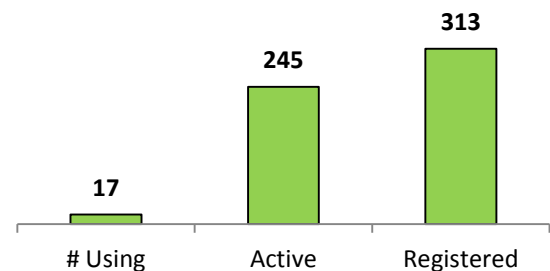
Types of Riders Using the Service



Number of People Registering for Program



Number of Riders Using the Service vs. Registered



We had one new registrant for the Taxi program this month. Since its inception, a total of 313 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 Center Shuttle - The Senior Center provided 624 rides in the month of September which was an increase of 9% from last month's rides of 573. The volunteer driver program provides service Monday through Friday from 9 am to 3 pm.





Town Trolley - The Trolley provided rides for six different events for the month of September, which included a Castle View Poms Team Get Together, two Movie Nights, the Senior Activity - "Center's Senior Tour", Artfest, and a wedding.

Traffic Engineering & Operations

Traffic Signal Operations and Maintenance - For the month of September there were a total of nineteen non-routine traffic signal maintenance visits completed by either Town staff or the Town's signal maintenance contractor. Staff worked on implementing signal changes to help improve the performance of the signal system. This included fine tuning signal optimization in order to provide better efficiency and a failsafe to address occasional vehicle detection problems. Modifications took minimal time to get changed, and signal implementations will continue to be bench tested as much as possible in order to identify and correct issues within the shop before being deployed into the field. The goal of implementation is to identify and correct all issues before it is released into the field.



Street Signs and Pavement Marking Maintenance - During the month of September, staff assisted with the set-up of traffic control devices for several special events. They also continued with the summer painting tasks of repainting crosswalks, stop bars and arrows town wide. The summer painting season will be winding down in October with the installation of the creative crosswalk layouts at four different intersections and two mid-block crossings in downtown Castle Rock.



Congratulations! To our staff who successfully passed their certification tests as either traffic control technician or traffic control supervisors.

Transportation Planning

Neighborhood Traffic Calming Program (NTCP)

NTCP New Inquiry:

- Members of the Timber Canyon HOA met with Town employees concerned with speeds along Knobcone Drive. The residents were provided with all the NTCP data and initial support petition. Town staff received the support petition and will begin the traffic/volume study. They indicated it could not be scheduled until the signing and striping for the summer was completed.



Updates:

- Cherry Plum Way: Town staff is still awaiting the return of the support petition to begin the traffic/volume study.
- Elk Run Drive: The re-test for the street has been moved to October due to the status of the nearby home construction and associated traffic.
- Woodlands and Escavera: A meeting will occur to provide an overview of the current plan prior to residents voting. This meeting is scheduled for Wednesday October 12th in the Panorama Hall at the Castle Rock Recreation Center from 6:30 to 7 pm. The agenda for the meeting will be to go over the proposed traffic calming plan, talk about the upcoming vote, and the plan implementation should the plan be approved. The Town will be sending out the ballots to homeowners along Saddleback, Ridgetrail, and Black Pine drives shortly after the meeting. A brochure will also be sent to all the homeowners in the study area describing the plan. The plan is proposed to be a 3-year phased plan consisting of the previously identified improvements of speed cushions, center pedestrian medians, and the center median with mailbox pullout area. If the plan is not approved by the homeowners, the project is closed and the streets are eligible for the program in one year. Only homeowners along the three streets will be voting.
- Heritage Avenue: Data collected from the Police Department showed the 85th percentile speeds along the road was 23.6 mph. This data is slightly less than the Traffic Division counted at roughly 27 mph. Therefore, no action is necessary.

Transportation Master Plan (TMP) Update - The consultant is in the process of analyzing the travel demand forecast model for all three forecast years (2016, 2030, and 2040). Results of the model and the existing conditions report will be reviewed and discussed in the month of October. This data will be presented at upcoming public open houses and meetings in November.

*Transportation
Master Plan*

Development Review

- Staff has reviewed and commented on five transportation impact studies, including the proposed Renaissance High School expansion project. All reports were completed by the due date.
- Staff has also provided DA comments on several development applications for transportation improvements including the Miller's Landing project.

Front Range High Speed Rail Project: The 1st phase of the study was completed earlier this year. A meeting was held at DRCOG in September to discuss the second phase of the study. Currently, Castle Rock is identified as a potential stop in all of the scenario alignments. The TMP update along with the Comprehensive Plan will explore potential locations for the station as these studies move forward. Staff will also continue to participate on the high speed rail technical committee.



Fleet Services

"Keeping Castle Rock on the Move"



The theme of the month for Fleet Services was making sure plow trucks will be ready for the snow season that is approaching. The Fleet Services team, led by our heavy duty technician Mac McKelvy, brought into the shop several of our large plow trucks to perform a complete inspection on each

truck. The technicians found several defects and repaired everything they could find. This procedure will help to ensure that snow removal equipment will be ready for when the snow starts to fly! The team will continue bringing in as much of the snow equipment as possible during the month of October.



Another big project Fleet Services is handling is the change over for the fueling of Town vehicles at the Douglas County School District facility. The new system should be easier to use and more accurate. Chad Bednar is heading up this project and everything should be completed in a couple of weeks.

Also, staff is undertaking hail damage repair for 70 Town vehicles. At this point, we have 25 vehicles repaired. This process will, of course, continue until we get all the hail damage repaired.



The month of September's total of service and parts was over \$67,000 which was our second highest to date total for 2016! The Town's technicians worked on 100 of the Town's vehicles.



The Fleet Services Division was also able to put into service a new Ford F150 truck for the Utilities Department Stormwater Division.

Fleet Services also completed a very successful auction selling two vehicles for a combined total of \$22,500 which was above our expected return.



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

Outcome: Fleet Services team completed 72% of the work orders within 24-hours of opening repair requests or service requests. This number was just a little below our benchmark but still a good result.

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

Outcome: Town vehicles and equipment were available 96.4% of the time. This demonstrates a very low percentage of downtime and shows how well we are keeping **"Castle Rock On the Move"**.

Objective/Benchmark: Technician productivity percentage of 70% (APWA standard)

Outcome: Technician productivity was 72.1% which is above our benchmark.

Street Operations & Maintenance Division

During the month of **September**, the Streets Division performed a lot of work in 7 maintenance operations functions.

- Concrete Pothole Patching
- Asphalt Repair & Replace
- Crack Seal Maintenance
- Street Sweeping
- Road Shoulder Maintenance
- Equipment Maintenance
- Special Operations

Concrete Pothole Patching Operations

During the month of September, staff performed pothole patching for the following concrete roadways: Lantern Trail, Foothills Drive, Cherokee Drive, and Halfmoon Drive. In all the staff completed **740** pothole repairs. It is also important to note that 60 of those potholes were on our requested list.



Asphalt Repair & Replace

During the month of September, staff was able to complete four full depth asphalt repairs on the following roadways: Kellwood Drive, Eight Street, East Scott Boulevard, and Canyon Drive.



Crack Seal Maintenance

During the month of September, staff got back into the swing of crack sealing operations. During the Fall season, the operations shift to a maintenance type of operation; working on roadways that received slurry seal and pavement overlays two years ago, in order to preserve and lengthen the life of these roadways. This year's activities are focused in the West Meadows area that were part of the 2014 Pavement Maintenance Program area. This area contains approximately 82.1 lane miles of roadway that need to be sealed which is our goal to complete by the end of the year. During the month of September, staff was able to complete sealing operations on **20.15** lane miles of roadway.

Street Sweeping

During the month of September, staff completed one of our AM sweeping operations for the business areas. We also responded to two emergency calls for sweeping activities during the month; one of which was a concrete spill on Perry Street, and the other was materials spill on Lantern Circle. In total, we removed **25** yards of materials from our roadways, helping to keep our stormwater systems and the air we breathe a little cleaner.



Road Shoulder Maintenance

During the month of September, staff completed repairs to our gravel road shoulders where the dirt had become pushed or washed away from the edge of the asphalt or concrete. These operations were completed on the following roadways: Prairie Hawk Drive, Castle Oaks Drive, and Eighth Street. These operations make it safer for our traveling public that may veer off the road to recover and get back onto the road. Additionally, staff removed trash and debris from the following roadways: North Meadows Drive, Butterfield Crossing Drive, and Topeka Way. During these operations we removed about 30 bags of trash.



Equipment Maintenance

During the month of September, staff performed equipment maintenance to keep our operations going smoothly and to continue to prepare for the winter months ahead. Minor maintenance was performed on a few small pieces of equipment like our Tack machine and our crack seal machine. Additionally, fabrication repairs to our slide-in liquid de-icing tank was completed along with the installation of an electronic gate detection loop, both of these saved the Town time and money compared to having contractors perform the work.

Special Operations

During the month of September, staff responded to five special operations requests. Three of these events were road kill related, one was to remove a dangerous trip hazard on Oakwood Drive, and the last was an emergency traffic control operation.

Looking Ahead

During the month of October, Streets Operation & Maintenance crews will continue with the crack seal maintenance operations, road shoulder maintenance operations (shouldering and mowing), begin our fall street sweeping activities once the leaves really start to fall and of course, stay ready for snow operations!

