



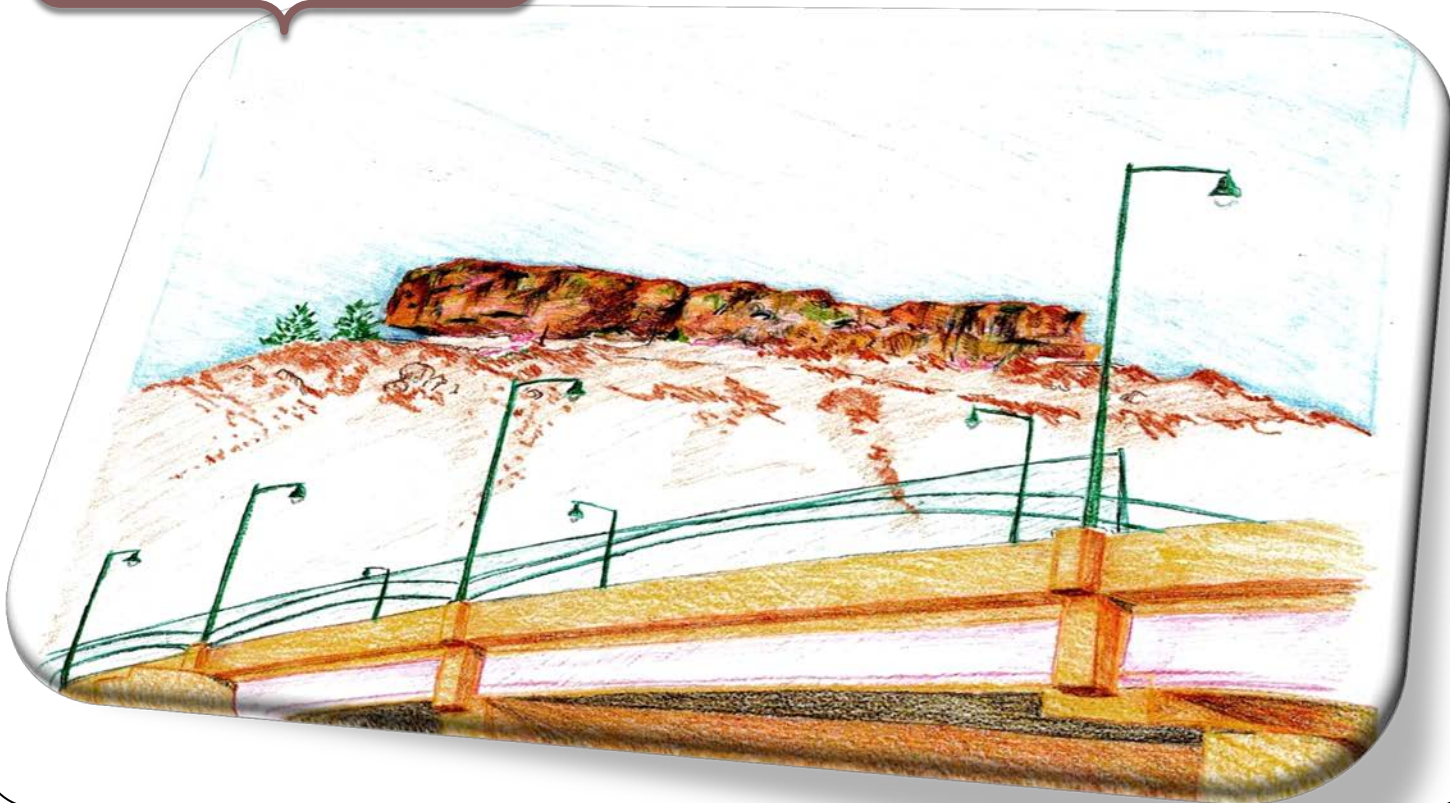
The Public Works Department operates under the CAN DO philosophy  
- We are committed to doing the job right with a positive attitude  
while staying dedicated to meeting the needs of our Town values  
and continually searching for new opportunities to improve.

# PUBLIC WORKS DEPARTMENT

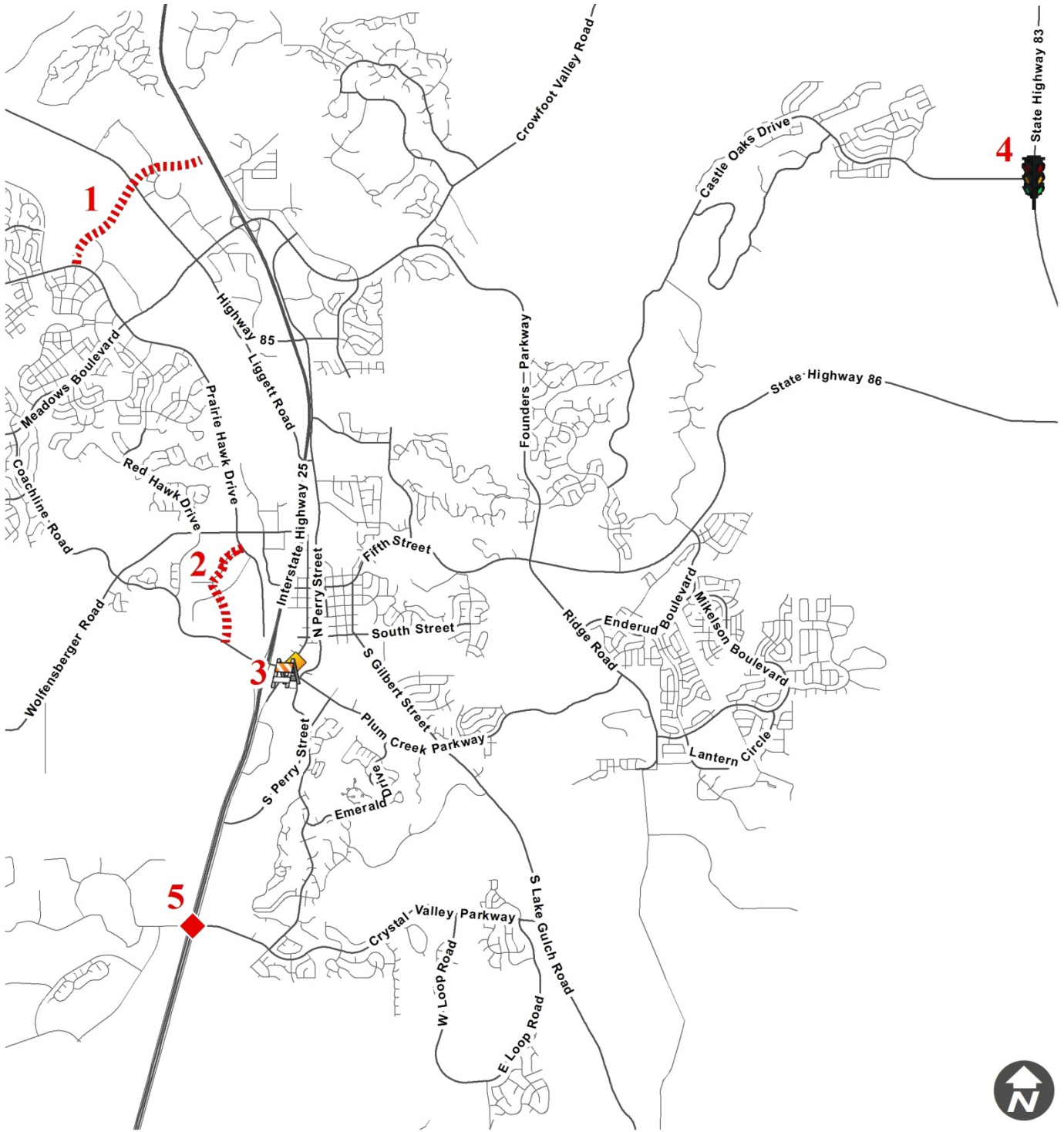
## *Monthly Report – July 2015*

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

**“CAN DO”**



# CAPITAL PROJECTS



PUBLIC WORKS DEPARTMENT

1. North Meadows Drive Extension Project
2. Prairie Hawk Extension – Industrial Tributary Trail & Drainage Way Improvements
3. Plum Creek Pkwy Intersection Improvements at Wilcox & Perry
4. Traffic Signal at Castle Oaks Drive/SH 83
5. CVDR/I-25 Interchange



**#1**

1. **North Meadows Drive Extension Project** - The Town's transportation project!! The following is a summary of the construction activities that took place during the month of July:

- Excavation of I-25 on and off ramps and roadway
- I-25 cast-in-place and precast panel wall construction
- NB I-25 Phase 2 bridge superstructure work completed
- US 85 bridge deck panel placement
- US 85 overhang installation
- US 85 block wall construction for future trail
- US 85 on-and-off ramp roadway construction
- Grading for US 85 bridge construction and detention ponds
- Storm sewer improvements along US 85 future on and off ramps

Traffic impacts to the traveling public:

- Flaggers will be present from 7am to 5pm, Monday through Friday along US 85; please be prepared to stop.
- Castlegate Drive North from US 85 to Castlegate Drive West is closed and will remain closed until the summer 2016.
- Traffic alignment lane shifts are present in the current configuration on US 85; please use caution and follow the posted speed limits.
- The new Phase 2 traffic configuration on I-25 has no shoulders and narrower lanes; please use caution and follow the posted speed limits.

**Phase: Construction Budget: 2015 - \$34.6M Construction Completion Date: June 2016.**



JACKED PIPE UNDER UNION PACIFIC RAILROAD

2. **Prairie Hawk Extension, Industrial Tributary Trail & Drainage Way Improvements** – This is a joint project with the Parks Department, Public Works Department, and the Utilities Stormwater Division. This project will include: a trail between East Plum Creek and Prairie Hawk Drive Extension along Industrial Tributary, Prairie Hawk Drive Extension between Wolfensberger Road and Plum Creek Parkway, and stream stabilization along Industrial Tributary between Prairie Hawk Drive and Atchison Way. **Phase: Design - Staff continues**



to work on finalizing the 90% roadway plans. The Town's design consultant, Olsson Associates, plans to deliver 90% plans of the combined roadway drainage and lower tributary drainage plans, in addition to completion of the GESC plans in August. **Budget:** The overall Public Works budget for this project was \$500,000. Balance from 2014 has been carried over to finalize design and right-of-way acquisition. Construction year has not been established.



**3. Plum Creek Parkway Intersection Improvements at Wilcox & Perry – This improvement project will consist of the following components:**

- Remove the dip at the intersection of Wilcox Street and Plum Creek Parkway (located on the east side of Wilcox Street).
- Reconfigure the above intersection to have two northbound left turn lanes from Wilcox Street to Plum Creek Parkway.
- Add a southbound right turn lane from Perry Street to Plum Creek Parkway.
- Add a westbound right turn lane from Plum Creek Parkway to northbound I-25.

**Phase:** Design - Staff has retained Hartwig and Associates to prepare the design to be completed by the end of 2015 with construction planned to follow in 2016. **Budget:** \$345,000

**4. State Highway 83 and Castle Oaks Drive Intersection Signalization** – This project will complete the installation of a new traffic signal at this intersection. In 2014, an engineering study was completed showing the need for a traffic signal at this intersection and the design was completed late in 2014. **Phase:** Construction – In July, underground conduit and caissons were completed. In addition, the signal poles and mast arms were installed. The construction is expected to be completed by mid-August with the signal planned to be in full operation no later than the end of August. **Budget:** \$225,000 **Construction Completion:** September 2015.



**5. Crystal Valley Parkway/Dawson Ridge/I-25 (CVDR) Interchange – Environmental Assessment Update** Through coordination with the Colorado Department of Transportation (CDOT) and the Federal Highways Administration (FHWA), Public Works will be determining if the CVDR interchange may be constructed in phases. The 2004 Environmental Assessment will be reevaluated as necessary if CDOT and FHWA determine a phased interchange is feasible. **Phase:** Planning – Public Works staff met with CDOT on July 13 to discuss potential phasing. The Town will present CDOT information pertaining to the levels of service anticipated in various phased conditions. The Town seeks CDOT's endorsement of a phased interchange in order to advance a plan to FHWA. Provided FHWA is receptive to a phased condition, the Town will reevaluate the Environmental Assessment, as needed. **Budget:** \$250,000 (Development Escrow Account)

**Traffic Signal System Upgrades (Phase 1)** – This project is the first step in implementing the system improvements that were initially identified as part of the October 2013 Signal System Evaluation study. The three main components of the Phase 1 project are a central communications upgrade, a central software upgrade that manages the signal system, and individual intersection traffic signal

controller upgrades. **Phase: Design** – In July, the consulting engineer assigned to the project continued the design work and field data collection for the communications upgrade portion of the project. Over the course of the month, several project meetings were held with Town staff from Public Works and DoIT along with the consultant in order to complete the preliminary design work of the proposed high speed communication network. Additionally, Town staff from Public Works and DoIT initiated the portion of the project focused on the selection of new traffic signal central software. Staff has developed a list of functional requirements for the software and will be meeting with some software vendors in August to receive demonstrations of their products. The schedule is to have all components of Phase 1 complete by the end of 2015. **Budget: \$700,000**  
**Construction Completion: End of 2015**

## ***ENGINEERING DIVISION***

***2015 Pavement Maintenance Program (PMP)*** - The Asphalt Patching, Overlay and Reconstruction Project is substantially complete. The contractor has landscaping repairs, and minor punch list items to complete. Curb, gutter and sidewalk repairs continue in the Metzler Ranch area which will be receiving the rejuvenating agent treatment. Asphalt patching on the streets receiving a rejuvenating agent or slurry seal treatment is complete. The Slurry Seal Project continues with the completion of the Castle North, Red Hawk, Meadows, and Metzler Ranch areas. The Woodlands area is scheduled to be completed by the end of July.



Plum Creek Boulevard Reconstruction Project continues with the completion of the bottom asphalt mat on the northbound lanes. Traffic was shifted to have both directions travel on the northbound lanes on July 23. Removal of the deteriorated concrete pavement on the southbound lanes has been completed. With several working days lost to weather, the project is behind schedule which means school will be back in session prior to the completion of the project. Staff is working with the Douglas County School District to work through any bussing issues that may occur.



The Concrete Restoration Project began on the existing portion of N. Meadows Drive between Meadows Boulevard and Butterfield Crossing Drive. This concrete portion of North Meadows Drive is 30 years old and is showing signs of deterioration. The Town's contractor is performing concrete pavement panel replacement on damaged panels prior to grinding the pavement surface to restore ride quality. Lastly, the final step for this concrete restoration will be sealing the concrete joints. Completion date for this project is August 13.



**2016 Pavement Maintenance Program (PMP)** - Staff is working on developing the proposed 2016 PMP budget for the north PMP area and scheduled primary streets. Determining which streets will receive surface treatments, overlays or reconstructs to maintain the programs Overall Condition Index (OCI) average goal of 70 on secondary streets and 75 on primary streets.

The PMP team completed the OCI for the secondary streets within the south PMP area (scheduled for 2017) and the primary street network. Condition rating is an evaluation of asphalt or concrete pavement; this applies a score which is utilized by the Town’s pavement management software to help determine the proper pavement treatment along with staff recommendations.

**2015 Facilities Parking Lot Improvement Program** - The contract with Straight Line Sawcutting, Inc. has been approved and work is scheduled to begin August 31. This contract will see needed improvements to four (4) Town facility parking lots as follows:

- Police Station and Rhyolite Park parking lots will receive concrete repairs, asphalt patching, and a full asphalt seal coat.
- Centennial Park parking lot will receive concrete repairs, and concrete pavement joint sealing.
- Fire Station 151 (Perry Street) parking lot will receive concrete repairs, asphalt patching, and a full asphalt overlay.

**2015 Bridge Maintenance Program** – Activities for the 2015 Bridge Improvement Program are as follows:

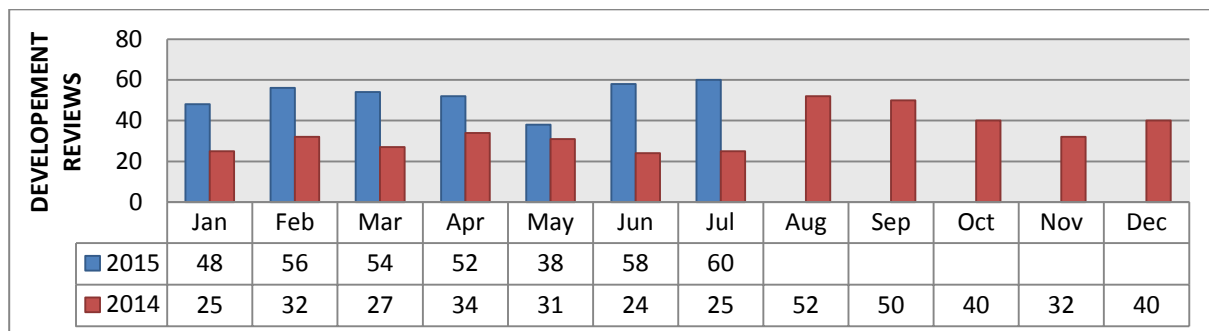
Bridge Painting

- Castle Oaks Drive/Cherry Creek: Re-paint bridge rails and approach rails.
- Front Street Flyover: Re-paint bridge rails, approach rails and fencing.

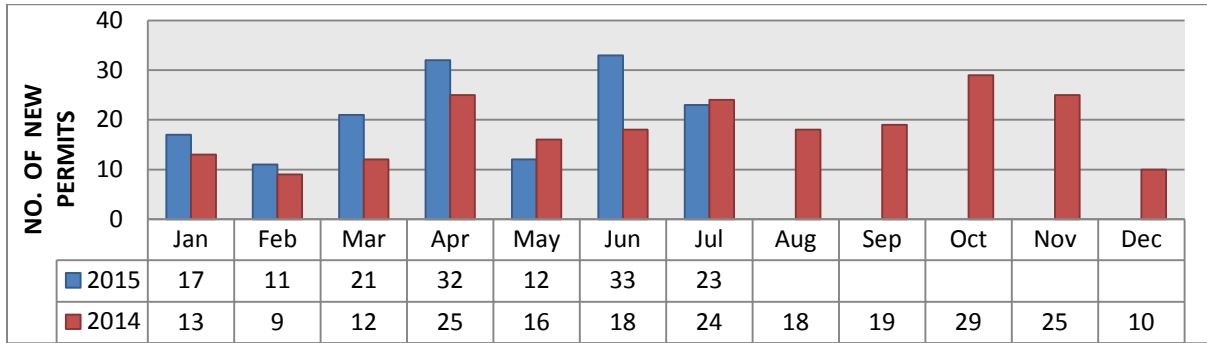
The curb repair on the Wilcox Bridge over Sellers Gulch has begun and is scheduled to be completed by the end of July.

**Development Review and Permitting**

**Development Review** - Included in the 60 submittals are 33 first time applications. All the reviews were completed on or before the due date assigned by the Development Services Project Manager. The Town has a contract with Bohannon-Huston to assist with Development reviews.

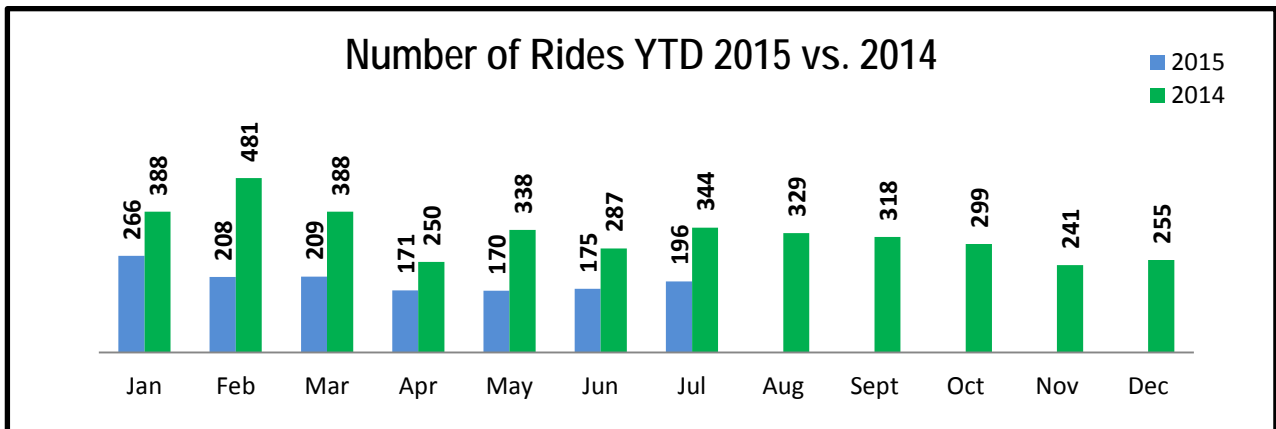


**Permitting** - Included in the 23 new permits are: 1 - Residential Development (Castle Oaks Dog Park), 3 - Commercial Developments (Promenade Early Grading Blocks 1-4 and Block 6), and 17 - permits for work within the public right-of-way (13 of which were necessary due to current development).

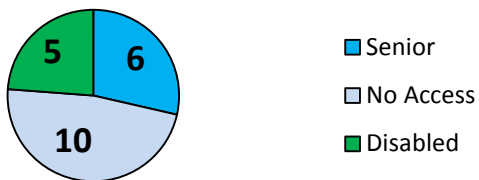


## TRANSPORTATION SERVICES

**Taxi Voucher** – For the month of July, the Taxi Voucher Program funded 196 rides. This was about a 43 decrease over last July’s total of 287 rides. However, rides have increased a little since last month as other programs around the County have begun to run out of their funding and riders are still in need of assistance to get to and from work.

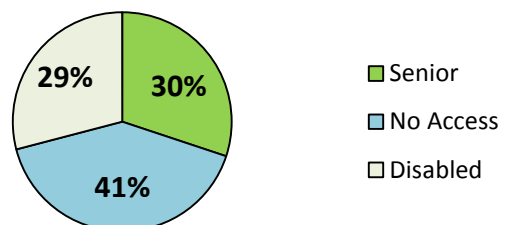


### Types of Riders



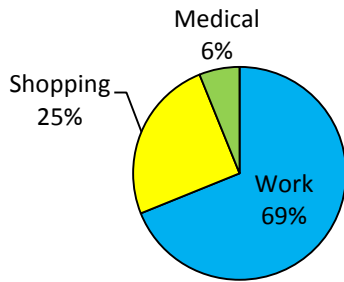
Transportation services are provided for Castle Rock residents who are senior citizens, have a disability that prevents them from driving, or do not have access to a vehicle. In July, there were 21 individuals who used the Town’s Taxi service.

### % of the Total Rides (196) by Type





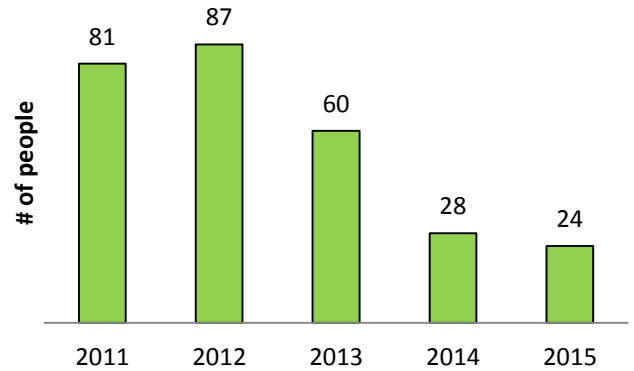
## Ride Destinations



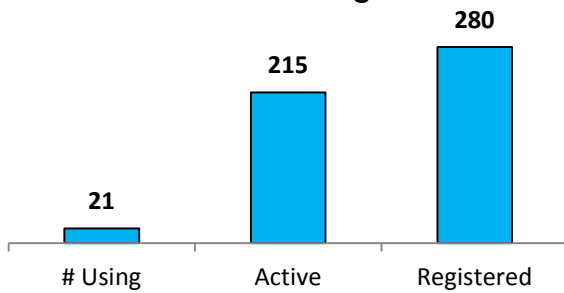
Rides are available for work, shopping or medical trips.

Two people registered for the Taxi program this month. Since its inception, a total of 280 people have registered for this program. Currently 65 of these past registrants are inactive or have dropped out of the program.

## Number of People Registering



## Number of Riders Using the Service vs. Registered



**Senior Center Shuttle** - The Senior Center provided 763 rides in the month of July. This was an increase of 2% from last month's rides of 751. The volunteer driver program provides service Monday through Friday from 9 am to 3 pm.



**Town Trolley** - The Trolley had a busy month providing rides for a variety of events during the month of July. The events included the Downtown Merchants Association's Movie Night, the Grange's Music in the Meadows events, a Bonaventure Tour of Castle Rock, The Town of Castle Rock's Monthly Manager's Meeting, The Chamber of Commerce's WineFest and the Relay for Life Event. The Trolley definitely provided a great classic view of Castle Rock to all riders this past month!





# TRAFFIC ENGINEERING & OPERATIONS

**Traffic Signal Operations and Maintenance** - The following provides a summary of the activities during the month of July with regard to the operation and maintenance of the traffic signal system.

- During July there were a total of ten non-routine traffic signal maintenance visits completed by the Town Staff and/or the Town's signal maintenance contractor. This did meet the goal of 13 or fewer non-routine visits per month. The majority of these visits, six overall, were due to signal corridors or individual signals in flash due to bad clock time, power outages or lightning strikes. The majority of these types of problems are currently in the process of being addressed with the traffic signal system upgrade project that kicked-off in June 2015. The other visits were due to bulb changes or pedestrian push button repairs.

For the 4<sup>th</sup> of July holiday, Town staff coordinated with CDOT with the goal of reducing traffic congestion and delay at traffic signals in the vicinity of the Outlet Mall during the holiday weekend. Traffic signal timing plans at New Memphis Court were synchronized with the CDOT traffic signal timing plans at Meadows Parkway. A similar effort will be undertaken in for the Labor Day weekend later this summer.

**Signs and Pavement Marking Maintenance** - In the month of July the Signs and Markings crew spent 281 hours painting 698 symbols. The crew is about 39% complete with summer painting schedule.

With regard to special events, the crew spent 79 hours in setting out traffic control devices for use at various special events. The largest event staff assisted with was the Town's 4<sup>th</sup> of July celebration.



## Transportation Planning

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

An update on the NTCP is as follows:

- The neighborhood contact person for inquiries identified last month on Black Canyon Way in the Meadows, Scott Boulevard at Whispering Oak, or Brantly Avenue in Founders Village have not contacted the Town for further action or questions regarding the Town's NTCP. However, staff continues to explore options for the sidewalk crossing on Scott Boulevard at Whispering Oak. In the meantime, staff has placed a radar speed feedback sign on Scott Boulevard to try and reduce speeds in that area.
- Staff has completed the speed/volume studies for Ashcroft and Parsons Avenue. According to the data collected, the streets do not meet the minimum thresholds established in the Town's NTCP. Staff will be contacting the residents to inform them of the results and discuss other options.
- Regarding the resident's concern in the Sapphire Point neighborhood on Baguette Drive; the Town conducted a speed study to see if the existing traffic calming plan is still effective. According to the study, the 85th percentile speed for southbound traffic was 24 mph and 27 mph for northbound traffic. These speeds are below the minimum thresholds for the NTCP and well



within acceptable speeds for a residential street. Staff concludes that the existing traffic calming plan is still reducing speeds as intended. The resident will be notified of the results.

- The Saddleback Drive traffic calming project is still in Phase 1. Yard signs were installed throughout the study area on Saddleback Drive, Ridgetrail Drive, and Black Pine Drive. However, at the request of the Homeowners Association, the yard signs along Black Pine Drive have been removed. Radar speed feedback signs have been installed along Black Pine Drive, Saddleback Drive, and will be installed along Ridgetrail Drive soon. Staff will re-evaluate the roads in September to determine if the passive measures helped to reduce the speed or volumes to levels below the program thresholds.

The NTCP policy amendment will be discussed with the Public Works Commission in August. The policy is expected to be presented to Town Council before the end of the year for final adoption.

### **Development Review Projects**

- Staff has provided CDOT the access permit application for the Promenade Parkway intersection at the I-25 southbound exit ramp roundabout. CDOT staff is currently reviewing the application along with the Minor Interchange Modification Request (MIMR). Approval is expected in the coming month.
- Public Works and Development Services staff has had several meetings with the Pine Canyon development team, including the transportation consultant. The primary reasons for the meetings were to discuss the Town's comments on the traffic impact analysis. The consultant will be amending the traffic study to address the Town's comments. CDOT has also provided comments that will be incorporated into the revisions.



## *Fleet Services*

*"Keeping Castle Rock on the Move"*



*"We're Proud of Our Blue Seal Team"*

The Fleet Service Division had a record breaking month in July billing out just over \$62,000 of labor and parts for the month and technicians worked on 116 Town vehicles and/or equipment and completed 134 work orders both of which were highs for the year.



**Congrats Chad!!** Technician Chad Bednar passed two ASE certification exams last month one in steering and suspension and one for general repair and maintenance for light duty vehicles.

The Fleet team was also busy accepting new vehicles into the fleet including two new Ford transit vans for the Recreation Center and one new Bobcat tractor for the Parks Department to be used at the new Phillip S. Miller Park.





**Objective/Benchmark:** Complete at least 80% of our Work orders within 24-hours of coming into the shop.  
**Outcome:** Fleet team completed 84% of the work orders within 24-hours of opening repair requests or service requests.

**Objective/Benchmark:** Town vehicles and equipment available for use 95% of time.  
**Outcome:** Town vehicles and equipment were available 98% of the time.

**Objective/Benchmark:** Technician productivity percentage of 70% (APWA standard)  
**Outcome:** Technican productivity was 77% - well above our objective!

*Repair work being done on two of the Town's heavy duty vehicles.*



## **STREET OPERATIONS & MAINTENANCE DIVISION**

In the month of July the Street Operations & Maintenance Division performed five (5) specific operations:

- Pothole Repairs
- Sweeping
- Crack Sealing
- Mowing
- Bridge Maintenance

Staff performed 41 repairs with our infrared machine to minor pavement distresses that would be large and more costly repairs if they went through the winter months. Staff also repaired 995 potholes on Meadows Boulevard, Lantern Trail, Prestwick Way, downtown alleys and removed a potential trip edge on Wilcox and Fourth Street.







Staff has swept 58 lane miles in July and has 925 lane miles year to date. This effort included the Spring Sweeping Program for 2015, heavy rainfall, and special events clean up.

Staff has completed crack sealing ahead of the Pavement Maintenance Program in a joint effort with the Engineering Division to keep our roads in good condition. Staff has sealed 277,950 lineal feet on 20 lane miles this month.



The mowing and trimming crew has been working hard to keep up with the growth from all the rain that has been received this year. The team has cut 85 lane miles this July and will continue during August.

The Bridge Maintenance Program has begun. Featured here is Michael Hucceby, one of our seasonal employees, painting the Castle Oaks Bridge over Cherry Creek.



# AUGUST

During the month of August the Street Operations & Maintenance Division will continue patching potholes, performing bridge maintenance, and road shoulder mowing.