



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.

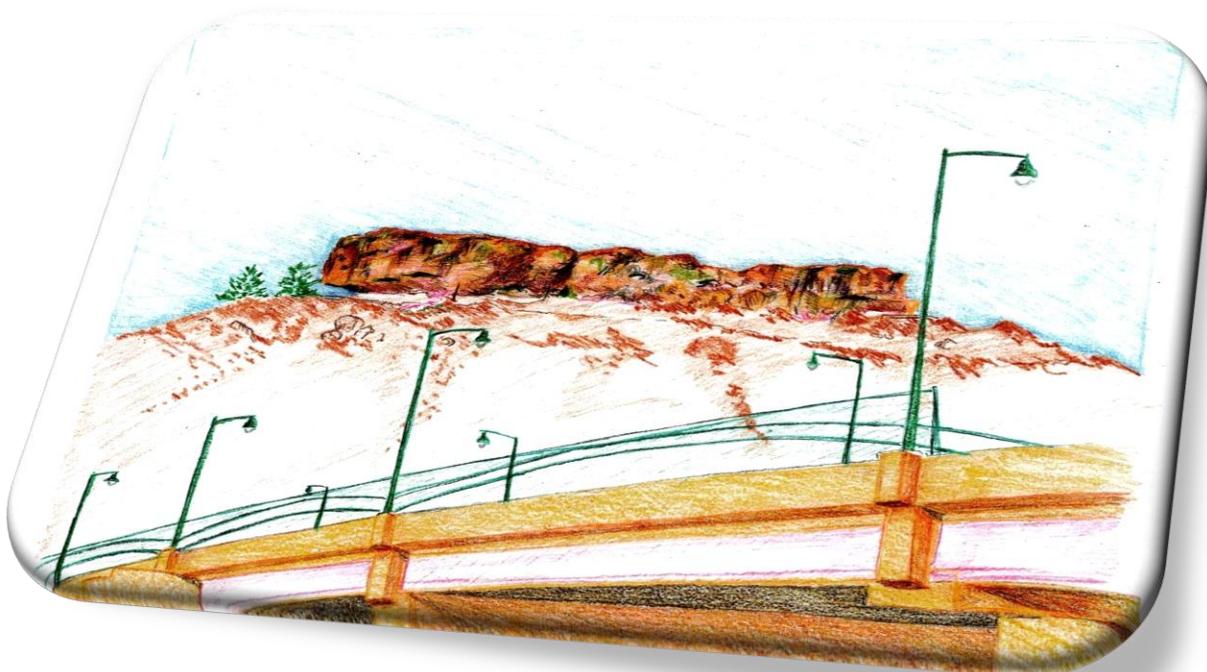
PUBLIC WORKS DEPARTMENT



Monthly Report – February 2016

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

MONTHLY REPORT – MARCH 2016



PUBLIC WORKS DEPARTMENT HAS BEEN ACCREDITED!!!!

Castle Rock's Public Works Department has recently been awarded a prestigious **American Public Works Association (APWA) Accreditation**. The APWA Accreditation program recognizes public works agencies that go beyond the requirements of the management practices established nationally in the public works industry, as contained in the APWA Public Works Management Practices Manual. Castle Rock's Accreditation indicates the department has met all applicable Accreditation documentation and practices.

The Public Works Department's mission is "to provide outstanding service, safety and support for transportation infrastructure and maintenance". Key services include planning and implementing new roadway projects in line with the transportation master plan; providing maintenance and repair of roadways, sidewalks, and curbs; completing snow and ice removal after storms; and managing traffic signals, signage, and pavement markings.

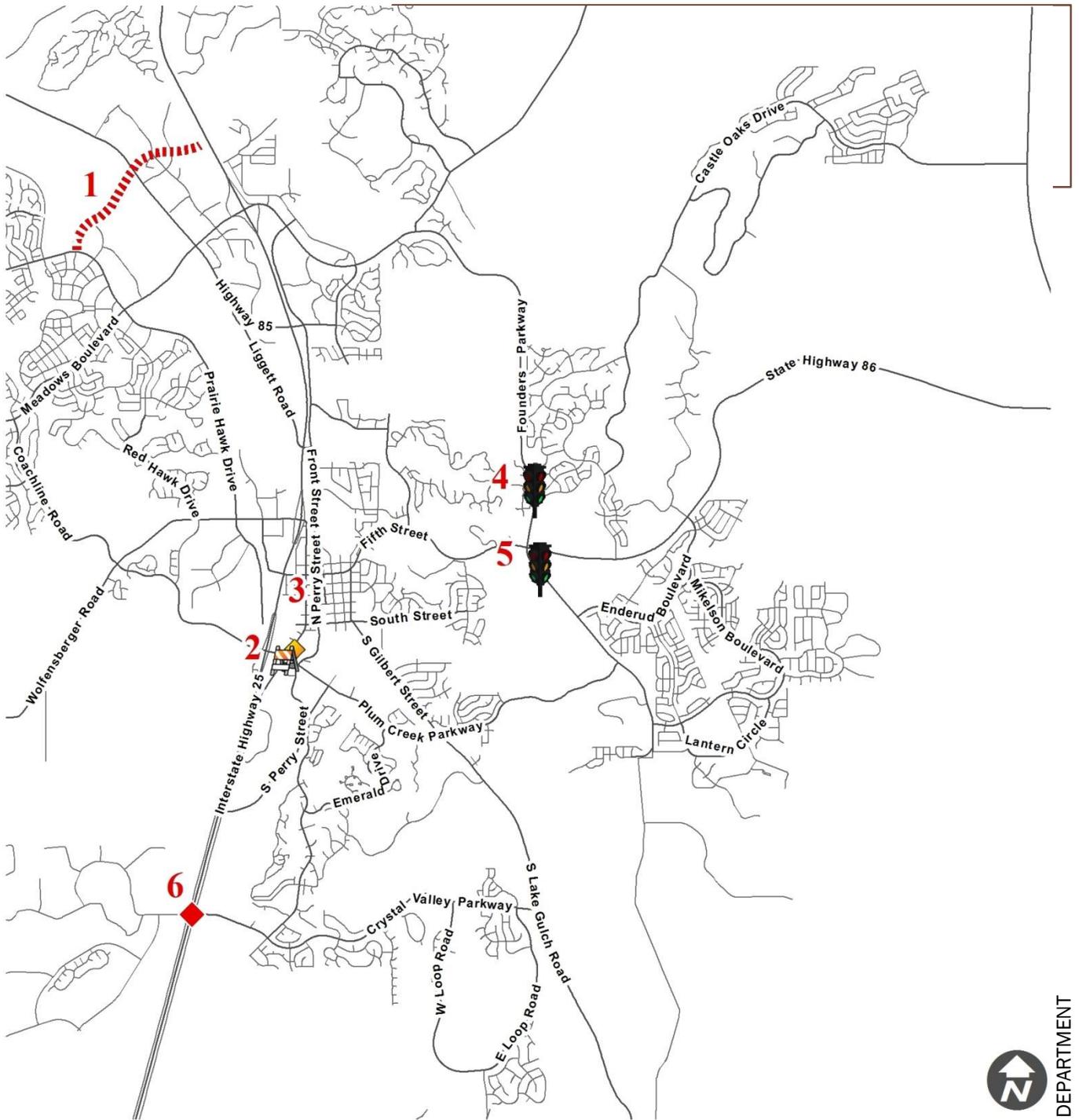
For the Town of Castle Rock's Public Works Accreditation review, a team of public works professionals from Edmond, OK, Topeka, KS and Kansas City, MO, completed a thorough evaluation of operations during their February, 2016 site visit. "It's great to have the Castle Rock Public Works Department reach full compliance with their practices I commend their continued and renewed commitment to the detailed review of the agency's policies and procedures to qualify," said APWA Director of Accreditation, Ann Daniels.

The Castle Rock Public Works Department becomes the 110th agency in North America to receive Accreditation and is the 6th agency in the State of Colorado, joining Arvada, Aurora, Cherry Hills Village, Golden, and Greeley.

The Department's accreditation is a commitment to continual improvement to best serve the Castle Rock transportation stakeholders."



CAPITAL PROJECTS



#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 this month:

- Excavation and construction of I-25 on and off ramps and roadway
- I-25 cast-in-place and precast panel wall construction
- US 85 on-and-off ramp roadway construction (asphalt and concrete paving)
- Concrete barrier on US 85 bridge structure
- Began construction of sign bridges on I-25
- Installation of light standards on both US 85 & I-25 ramps and at roundabout between I-25 and US 85

Traffic impacts to the traveling public:

- 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: 2016 - \$9.5M Construction Completion Date: Summer 2016.



Aerial of I-25 Interchange Construction

2. **Plum Creek Parkway Intersection Improvements at Wilcox & Perry to I-25** – 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. In addition, the eastbound approach will have a free right turn lane onto southbound Wilcox and the westbound approach will have a dedicated right turn lane onto northbound Wilcox.
- Add a southbound free 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: Construction - Staff completed the bid package which was posted to Rocky Mountain E-Purchasing for bid solicitation. Bid opening was conducted on March 24 with no bids received. Staff is re-advertising the project with modifications to the bid package with the bid opening scheduled for April 14. **Budget: \$3,050,000 Projected Construction Completion: Summer 2016**

3. Downtown Alley Rehabilitation – The Town has been awarded two grants to improve accessibility in certain public alleys within the downtown area. Public Works and Development Services have received direction from Town Council and will plan for the reconstruction of four alley segments. Three of the alleys are located from 1st Street to Briscoe Street between Wilcox & East Plum Creek; one alley is located north of 7th Street between Wilcox & Perry. **Phase: Construction** – Bid opening was conducted on March 10 with one bid received from Technology Constructors, Inc. (TCI) for \$357,142. Staff will recommend acceptance of the TCI bid and awarding of the contract at the Public Works Commission meeting on April 4 and Town Council on May 3. **Budget: Grants: \$202,000; Public Works: \$115,000; Utilities Department: \$71,835 - Total: \$389,442 Projected Construction Completion: Summer 2016**

4& 5. 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** – Staff completed the bid package which was posted to Rocky Mountain E-Purchasing for bid solicitation. A non-mandatory pre-bid meeting was held on March 31 with no contractors attending. However, two to three contractors are expected to provide bids on this project. The bid opening is scheduled for April 12. To ensure that the manufacturers can meet the CDOT pole specifications as well as delivery timeframe, staff has sent out a request for qualifications to pole manufacturers. It was determined that Valmont Industries would be able to meet the expected deadline within budget. **Budget: \$460,000 Projected Construction Completion: Fall 2016.**

6. Crystal Valley Parkway/Dawson Ridge/I-25 (CVDR) Interchange – Environmental Assessment Update - An update of the CVDR Interchange Environmental Assessment (EA) will be necessary as part of the approval process to construct the interchange. The present EA was completed in 2004. Based on discussions with CDOT, all sections of the 2004 EA must be updated as necessary to meet current Federal requirements. **Phase: Planning** - The EA update for a phased interchange is presently on hold. FHWA representatives stated interchange phasing is not consistent with AASHTO policy and is not receptive to phasing the construction of the interchange. The Town may advance the project with acquisitions of right-of-way needed for the project. Public Works is also analyzing other improvement concepts that would provide alternate routes for the Heckendorf/Crystal Valley Ranch community. Public Works is requesting information from CDOT and the Public Utilities Commission to determine what is necessary to advance plans for the alternate route scenarios. **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: Construction** – Dillie & Kuhn (D&K) has completed fiber optic splicing operations along the Town’s traffic signal corridors. WL Contractors has installed all of the Ethernet switches and necessary cables to the network. They are in the final stages by testing the network to make sure each device is able to communicate. D&K performed testing to ensure the splices they made were accurate to the plans.

The vendor, Intuicom, performed a site survey using the recently purchased radios to confirm the signal strength between intersections where wireless links will be present. After the switches have been installed, and are accurately communicating to the network, the next step is to configure and implement the rest of the broadband radios to the traffic signal network.

The Town installed eight Cobalt controllers to the existing non-communicating intersections. Staff will be deploying the other twenty-three controllers along corridors in early April.

IGA CDOT approved the IGA for the central traffic signal software purchase and confirmed our vendor selection for the traffic signal system software. Staff announced that Econolite was the awarded vendor and a kickoff meeting was held on March 28. During this meeting, staff evaluated network needs, community outreach, and a schedule for implementation. The current plan is to have the system operational by mid-May.

Phase 1 Budget: \$700,000 Construction Completion: With the completion of the central software installation, Phase 1 will be completed by May.

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. This project is expected to kick-off in April. **Phase 2 Budget: \$400,000 Construction Completion: Winter 2016**

ENGINEERING DIVISION

2016 Pavement Maintenance Program (PMP) - The 2016 PMP will focus its efforts in the north PMP area with additional work taking place on Mikelson Boulevard, Fifth Street, and the downtown area. Public Works Commission recommended all contracts for approval to Town Council at their March 7 meeting and Town Council voted unanimously to approve all contracts at their March 15 meeting. Approved contracts this year are:

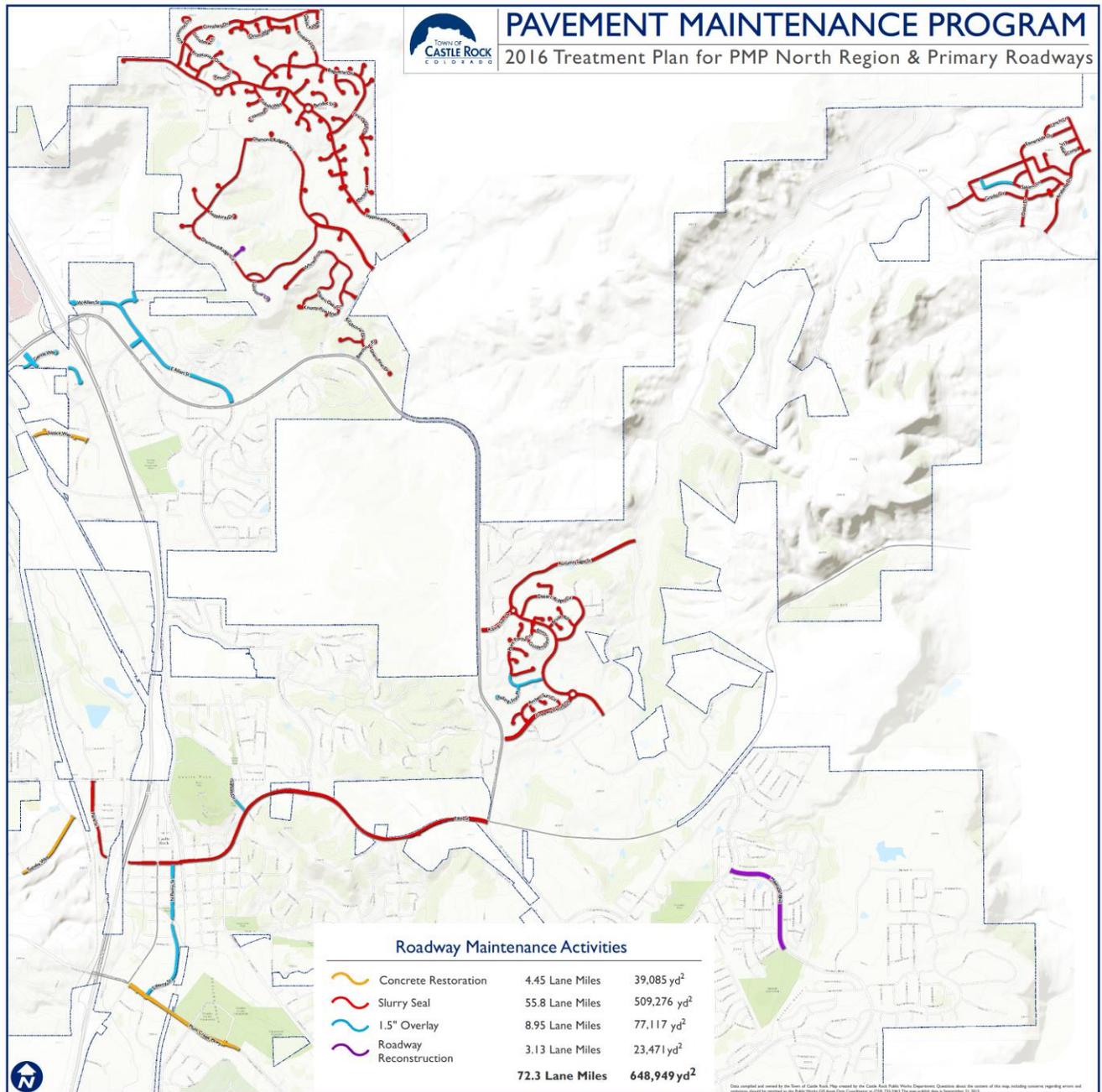
- Asphalt Patching, Overlay and Reconstruction Project
- Concrete Pavement Restoration Project
- Slurry Seal Project
- Curb, Gutter & Sidewalk and Miscellaneous Concrete Project
- Mikelson Boulevard Reconstruction Project

Notice of Award documents have been sent to the contractors and staff is preparing to review the performance and material bonds as well as the insurance documents.



Staff attended two March neighborhood HOA meetings within the North PMP area. The entire scope of work for their neighborhood was presented with the proposed schedule to approximately 25 residents.

The PMP map (shown below) indicates the proposed scheduled treatments for street within the North PMP area and Primary Streets pending.



The PMP team continues working on condition rating of streets within the east PMP area and the primary street network. Staff is anticipating this to be complete by mid-April, weather permitting. Condition rating is the 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.

2016 Facilities Parking Lot Improvement Program – The construction contract with PLM Asphalt & Concrete, Inc. has been approved and staff is working with the contractor to develop the project schedule. This contract will see needed improvements to eight (8) Town facility parking lots as follows:

- Founders Village Fire Station will receive asphalt patching, a full asphalt seal coat, and concrete pavement joint sealing.

- Crowfoot Valley Fire Station will receive asphalt patching, a full asphalt seal coat, concrete repairs, and concrete pavement joint sealing.
- Butterfield Park will receive asphalt patching, a full asphalt seal coat, concrete repair, and concrete pavement joint sealing.
- Coachline Trail Head Parking lot will receive a full asphalt seal coat.
- Matney Park Parking lot will receive asphalt patching, and a full asphalt seal coat.
- Meadows Water Treatment Plant will receive concrete repairs, asphalt patching, and a full asphalt overlay.
- Diamond Ridge Pump Station will receive a full asphalt seal coat.
- Police Station Parking lot will receive a full asphalt seal coat.

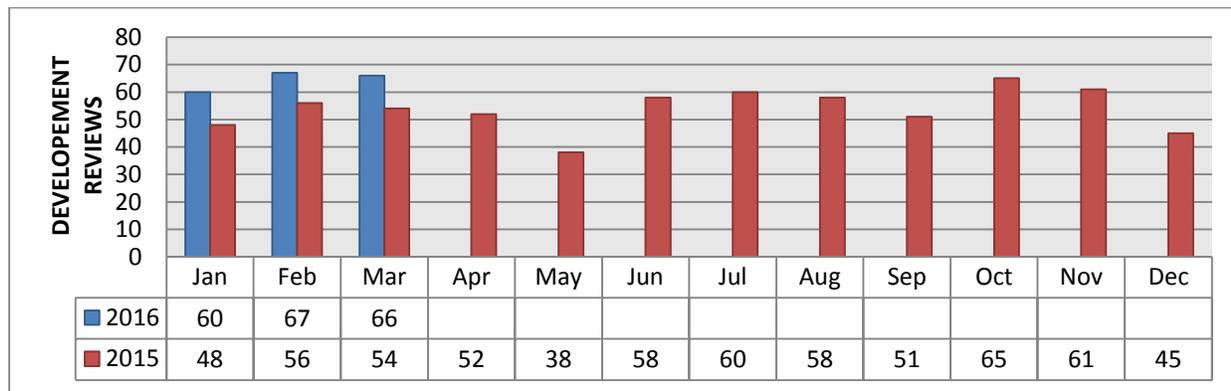
2016 Bridge Maintenance Program - The contract for the Castle Oaks Drive Bridge over Cherry Creek - Approach Slab Leveling Project has been approved and staff is working with the contractor, KECI Colorado, Inc., to develop a project schedule. The Wilcox Bridge over Sellers Gulch repair has also been approved as part of the 2016 Asphalt Patching, Overlay and Reconstruction project.

The following locations are proposed for painting maintenance and will be performed by the Street Operations and Maintenance Division:

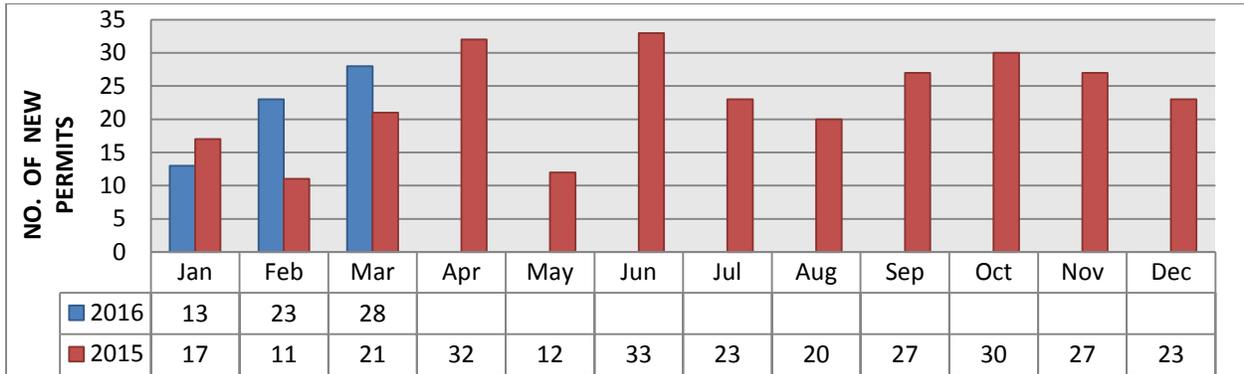
- Wilcox Bridge over Sellers Gulch
- Perry Street Bridge over Sellers Gulch
- Plum Creek Parkway Bridge over BNSF Railroad

Development Review and Permitting

Development Review - Included in the 66 submittals are 34 first time applications with four pre-applications. All reviews were completed on or before the due date assigned by the Development Services Project Manager.

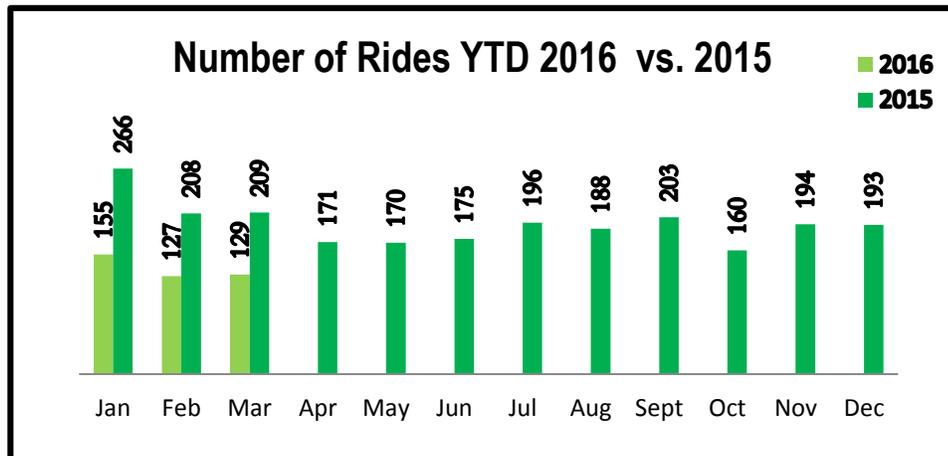


Permitting - Included in the 28 permits are: 5 - Commercial Developments (Promenade - Factory Shops Boulevard Infrastructure, Phase 2&3; Promenade – Sam’s Club, Block 4B; Castle Rock Adventist Hospital Campus, Phase 1B; and 230 3rd Street – The Mercantile Building); 2 - Residential Developments (Terrain Filing 1: High Point, Rocky View and Valley View infrastructure improvements and early grading); and 21 permits for work within the public right-of-way (14 of which were necessary due to current development).

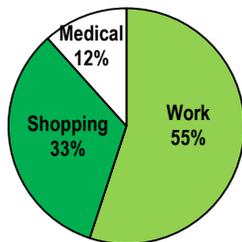


TRANSPORTATION SERVICES

Taxi Voucher – During the month of March, the Taxi Voucher Program funded 129 rides, this was about a 38% decrease over last February’s total of 209 rides. The rides have remained steady since last month. Other programs within the Castle Rock area have lost some of their funding which may lead to an increase of rides in the next couple of months.

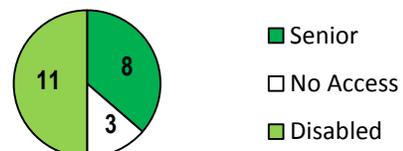


Ride Destinations

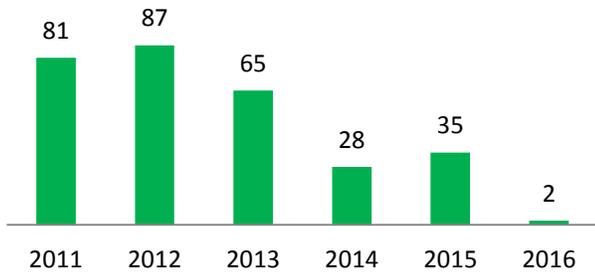


Rides are available for work, shopping or medical trips. Transportation services are provided for Castle Rock residents who are senior citizens, have a disability that prevents them from driving, or do not have access to a vehicle. In March, there were 22 individuals who used the Town’s Taxi service.

Types of Riders

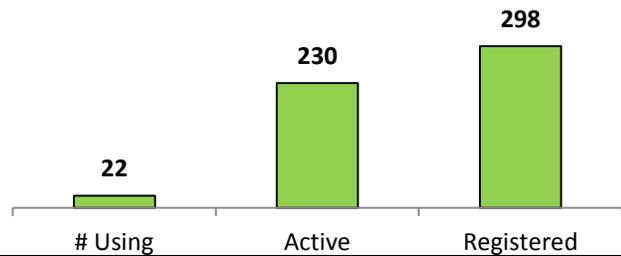


Number of People Registering



We had no new registrants for the Taxi program this month. Since its inception, a total of 298 people have registered for this program. Currently 68 of these past registrants are inactive or have dropped out of the program.

Number of Riders Using the Service vs. Registered



Percentage of the Total Rides (129) by each Rider Type



Senior Center Shuttle - The Senior Center provided 646 rides in the month of March which was an increase of 16% from last month's rides of 556. The volunteer driver program provides service Monday through Friday from 9 am to 3 pm.



Town Trolley - The Trolley provided rides for a few events for the month of March. These events included two tours of the Utilities Department's water treatment plant for different foundations and committees. The Trolley is looking forward to another fantastic season of events, tours, and many other occasions to provide Castle Rock Residents with a fun ride around Town.



Traffic Engineering & Operations

Traffic Signal Operations and Maintenance - For the month of March, there were a total of twelve non-routine traffic signal maintenance visits completed by either the Town staff or the Town's signal maintenance contractor. Some of these visits included vehicle detection problems which were caused by sun glare. Other maintenance issues consisted of clock resetting for both the traffic signal controllers and school beacons for daylight saving time. A few LED traffic signal indications were replaced. WL got a jumpstart on the second quarter preventative maintenance checks by completing a few signals at the end of the month.

Street Signs and Pavement Marking Maintenance - The sign crew spent 57 hours on the replacement of 197 signs, posts and boots plus straightening of various other signs and posts. This work was done as part of the project to replace the old green street name signs with the current standard blue street name signs. In the shop, the crew spent 17 hours cutting and fabricating 34 signs.



Finally, the crew began work on the Rectangular Rapid Flash Beacon Project (RRFB) by adding 16 signs in the Woodlands Boulevard and Saddleback Drive areas. This will assist families going to and from the nearby high school and recreation center.

Transportation Planning

Neighborhood Traffic Calming Program (NTCP) - NTCP inquiry updates:

- The homeowner along Elk Run Drive stated that they will be returning the initial support petition soon. As of March 31, the Town has not received the petition. Their concern was regarding the installation of speed limit signs on Elk Run Drive. Staff is currently assessing the area to determine the best location for a speed limit sign.
- Staff held the initial neighborhood public meeting for the Saddleback Drive traffic calming project on March 2 at the Recreation Center. At the meeting, the Town shared the staff team's recommended conceptual plan with the homeowners. Part of staff's plan was to include Ridgetrail Drive for traffic calming since speeding was also an issue on Ridgetrail Drive. In addition, a neighborhood working group was organized to create the neighborhood's preferred traffic calming plan that will eventually be voted on by the homeowners along Saddleback and Ridgetrail. The first working group meeting was held March 30 at the Public Works Service Center. Elements of the preferred plan were created and will be compiled into one plan that will be shared with the working group. The plan includes speed cushions on both Saddleback and Ridgetrail, a pull out area along Saddleback Drive near the mail kiosk, a pedestrian center refuge crossing, and possibly speed cushions on Black Pine Drive. Staff will also be analyzing the Black Pine and Saddleback intersection for a potential 3-way stop. If stop signs are warranted, speed cushions on Black Pine will not be part of the preferred plan. If the working group accepts the plan, final work will be performed on the plan by staff before it is presented to the working group for approval. The final step will be to mail the preferred plan to all homeowners along Saddleback, Ridgetrail, and Black Pine for final approval.



Transportation Master Plan (TMP) Update

The Request for Proposals (RFP) have been sent to the Town's four on call consultants for bids. A pre-submittal meeting was held on Monday March 28th to answer consultant questions on the RFP. All proposals are due to the Town by 4pm on Friday, April 8.



Fleet Services

“Keeping Castle Rock on the Move”



The month of March was another record month for the Fleet Services Division. Work orders completed were increased by 20% and also increased was the amount of parts and labor billed out by over 50% in comparison to March 2015. Some of the additional work was from the March 23 blizzard but overall a very busy month for the Fleet Services team.



The Fleet Services team billed out \$76,000 of labor and parts which was our second highest total to date and was \$16,000 higher than our monthly average! Fleet Services technicians completed 120 work orders which is also higher than our average of 105 work orders per month.

In addition to all the activity in the shop, two of our technicians were able to attend advanced training for 4X4 diagnostics presented by NAPA auto parts.



Ten new vehicles were ordered to replace older vehicles in need of replacement.



Objective/Benchmark: Complete at least 80% of our work orders within 24-hours of coming to shop.

Outcome: Fleet Services team completed 79.2% of the work orders within 24-hours of opening repair requests or service requests. This number is below our benchmark but considering all the repairs from the blizzard, this was a very good result!

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

Outcome: Town vehicles and equipment were available 97.4% of the time. This demonstrates a very low percentage of downtime and shows how well we are keeping Castle Rock on the move even with major repairs needed on several vehicles.

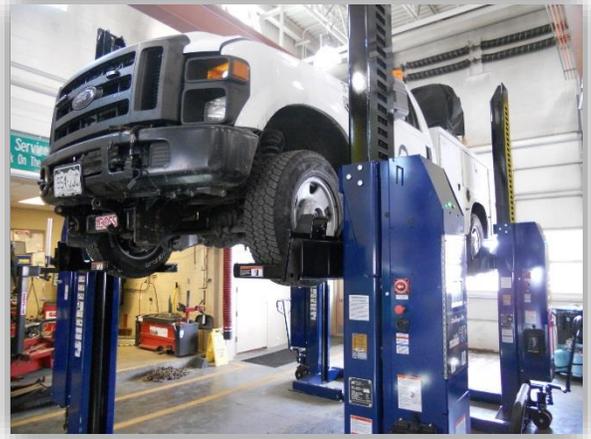
Objective/Benchmark: Technician productivity percentage of 70% (APWA standard).

Outcome: Technican productivity was 72%; above our benchmark!



Fleet Technicians installing brakes on a Police Interceptor

Fleet Technicians using new mobile column lifts.



Fleet Technicians working on plow truck during blizzard.

Street Operations & Maintenance Division

In the month of **March**, the Streets Division performed 7 specific operations:

- ❖ Snow Control
- ❖ Asphalt and Concrete Repairs
- ❖ Crack Sealing
- ❖ Street Sweeping
- ❖ Equipment Maintenance
- ❖ Bridge Maintenance
- ❖ Road Shoulder Maintenance

Snow Control –

During the month of March, the Streets Operations & Maintenance Division, with the assistance from the Utilities and Parks departments, performed plowing and deicing operations during **2** snow events. The first snow event only delivered us **4"** of beautiful white stuff and the crew was able to complete the plowing operations well ahead of our ahead of our 8 hour service goal. However, the second event was a completely different animal and delivered us with approximately **14"** of heavy wet snow in a very short 14 hour period. This storm is being referred to as the **March Blizzard of 2016** due to its very high wind speed. This blizzard really tested the fortitude and commitment of our employees. Through determination and grit of our employees, they battled the snow and were able to keep all of our main roads open during the event. After the snow stopped, crews continued with plowing operations until every road and cul-de-sacs in town received a visit. It took our crews 32 hours to complete the plowing operations due to the amount of snow left by the blizzard.





Crews quickly shifted gears and removed the snow from the downtown area, hauling off an amazing 302 dump truck loads thanks in part to our recently acquired snow blower. Because the crews continued to work non-stop 12 hour shifts, we were able to complete our snow removal efforts ahead of our 72 hour service goal.

Asphalt and Concrete Operations -

During the month of March, our crew focused some of our operations on those dreaded potholes. The crews patched **977 potholes on asphalt streets** in the areas of Mikelson Boulevard, Prairie Hawk Drive, Allen Street, and a host of smaller roads in the Founders and downtown areas. In addition to those efforts, the crews patched **1748 potholes on concrete roadways** around town primarily Mikelson Boulevard, Plum Creek Parkway, Emerald Drive, Meadows Boulevard, and Meadows Parkway. In total the crews patched 2725 potholes compare to our previous month's total of 2138 potholes. Due to the freeze thaw cycle this time of year, we will continue these operations in the next month as well.



Crack Seal Operations -

During the month of March, the crew was able to complete **5.57 lane miles** of crack sealing work in Cobblestone Ranch and Sapphire Point subdivisions in preparation for the upcoming Pavement Maintenance Program work later this year. In performing these operations, the crew was able to seal about 129,000 linear feet of cracks.

Street Sweeping -

During the month of March the Streets Division was once again able to perform street sweeping operations on a few nice warm days. The crews picked up materials from our primary roads network in the north part of the town and completed one of our night time sweeping operations in the downtown business area. In the end the crews picked up **53 yards** of materials, which greatly helps to keep our storm drains clean and helps to protect our environment.



Equipment Maintenance -

The crew performed various equipment maintenance activities. The bulk of these activities were repairing damages to plow attachments and replacing wear items. In addition to those activities, the crew repaired a few sections of fence around our lower yard due to a vehicle accident earlier in the month.



Bridge Maintenance -

Crew repaired a damaged expansion joint cover plate on the 5th Street Flyover. This unexpected project turned out to be very labor intensive, but once again our crews showed that no task is too great for us to overcome. The resulting repairs will ensure that this section of sidewalk will be in great shape for years to come.

Road Shoulder Maintenance -

The crew picked up trash on Front Street along the I-25 corridor and on Ridge Road. The crew was able to pick up **22 bags** of trash helping to sustain our bright and vibrant community.



Looking Ahead -

During the month of April the Streets Operations & Maintenance Division will continue to address the dreaded potholes that keep popping up, and will continue performing crack sealing operations in the Sapphire Point, Diamond Ridge, and Terrain subdivisions ahead of the PMP operations.