



STAFF REPORT

To: Honorable Mayor and Members of Town Council

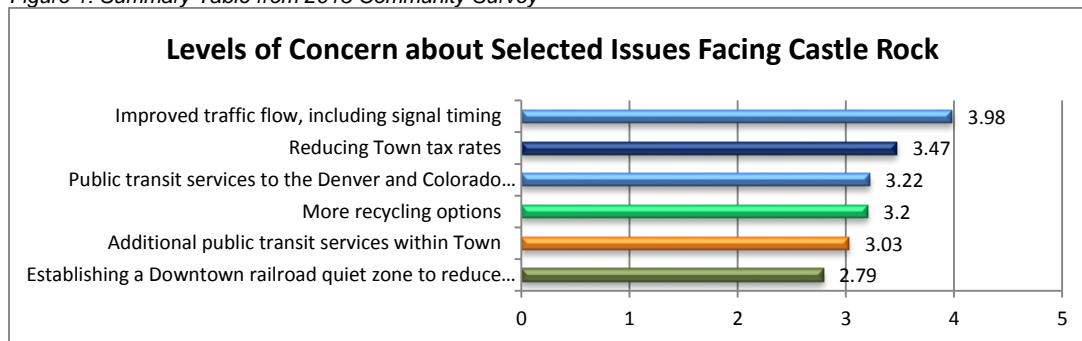
From: Town Manager's Office with Public Works and Finance Departments

Title: Discussion/Direction: Transportation CIP Forecasted Needs

Discussion

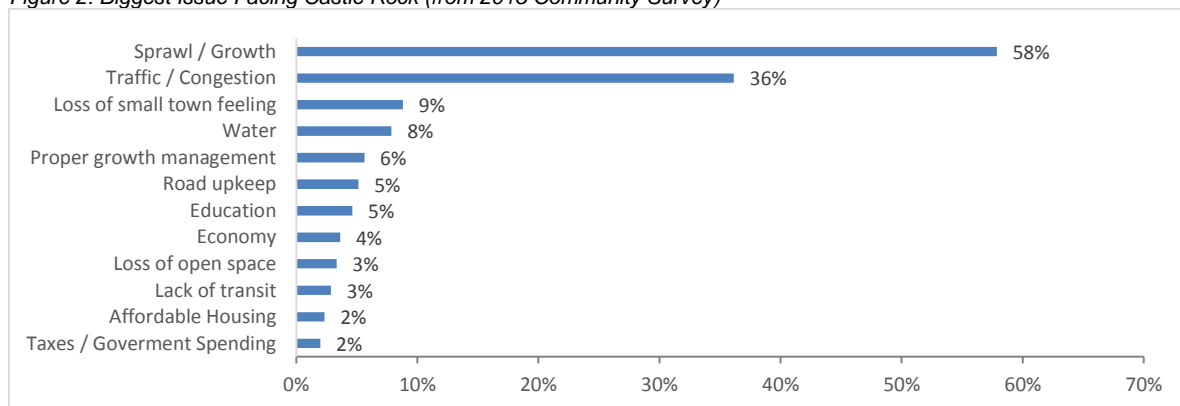
As part of the Town's Comprehensive Master Plan, it is estimated that an additional 20,000 residents will be added to the Town's population over the next ten years. Keeping pace with critical infrastructure needs to accommodate this increase will be important. This is particularly necessary in the area of surface transportation and has been confirmed as a Town priority within the past two community surveys as summarized in the following figures.

Figure 1: Summary Table from 2013 Community Survey



Scale: 1 = not concerned at all to 5 = extremely concerned

Figure 2: Biggest Issue Facing Castle Rock (from 2015 Community Survey)



While there are a variety of strategies associated with identifying transportation Capital Improvement Program (CIP) project priorities, focusing on capacity projects over the next ten years is recommended. The full list of fiscally unconstrained projects that have been identified to date is provided in (**Attachment A**). In order to narrow the focus of this discussion, Staff has identified projects that are recommended to be completed over the next ten years to assist primarily with reducing congestion levels. These projects are highlighted in yellow in (**Attachment A**). They are also summarized (and project phases combined for simplicity) in the following table in a recommended priority order based on a combination of congestion relief ability, existing grant funding, and relative balance geographically across the Town.

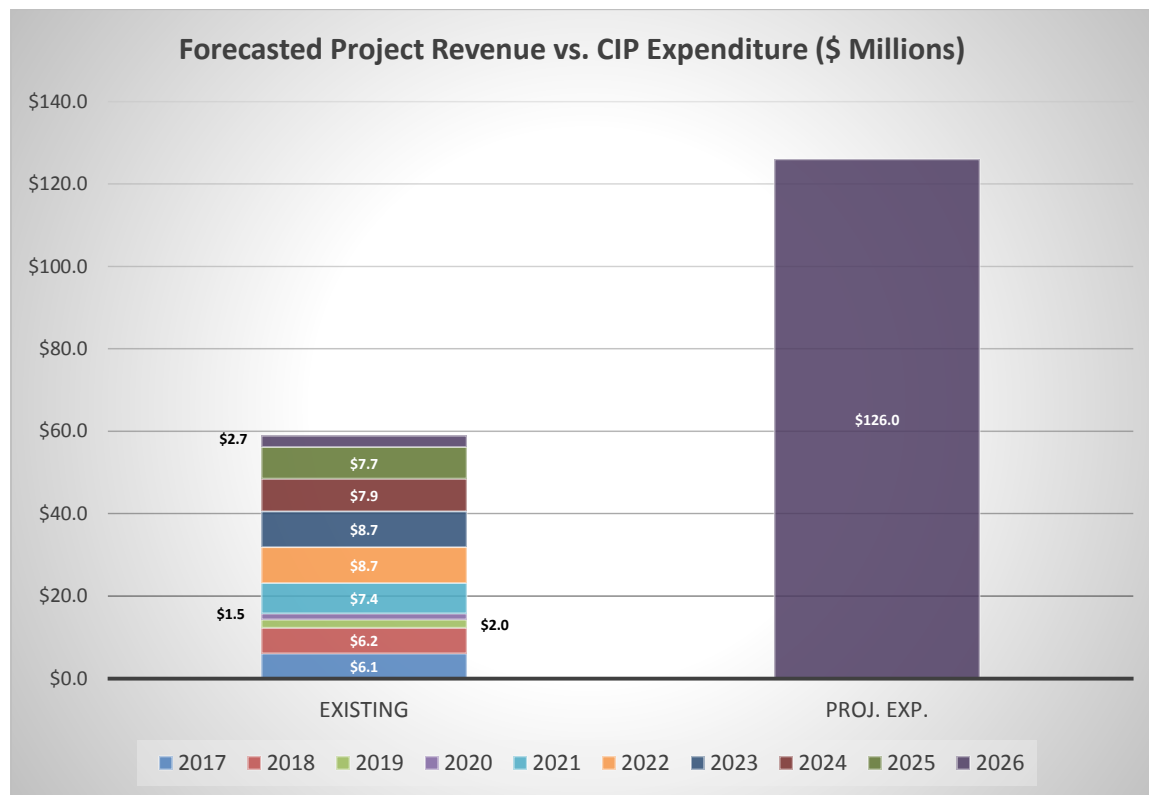
Map I.D. #	Title	Description	Estimated Town Cost
12	Founders Pkwy./Allen Way – Operational improvements	Add a second eastbound left turn lane and a second northbound I-25 on-ramp lane (Joint Town & CDOT project)	\$1,200,000
22a	Founders Pkwy./Crowfoot Valley Rd. – New turn lane	Add additional eastbound left turn lane on Founders (Joint Town & CDOT project)	\$750,000
33	Crystal Valley Pkwy Interchange	Purchase needed project right-of-way (using existing developer \$)	\$0
	Service Center Expansion	Expand building and fleet bay space to accommodate growth.	\$2,200,000
	Old Hwy 85/Meadows Pkwy. – New turn lane	Add a new left turn lane in northbound direction (into Meadows)	\$107,000
22b	Crowfoot Valley Road Widening	Widen Crowfoot Valley Road from Founders Parkway to Maher Rd.	\$6,725,000
14d	Roundabout: Wolfensberger Rd at Plum Creek Pkwy	Construct a roundabout at this intersection. Currently a 4-way stop.	\$1,100,000
30a	Ridge Road Widening	Construct an additional two lanes on Ridge Road from Highway 86 to Plum Creek Pkwy.	\$3,300,000
30b	Founders Pkwy./5 th St. – Intersection Improvements	Add additional southbound left turn lane; realign northbound lanes	\$2,800,000
15a	Fifth Street Improvements – Gilbert to Founders Pkwy	DESIGN AND CONSTRUCTION: Extend climbing lane, add curb and gutter, sidewalks and turning lanes.	\$5,500,000
3	West Frontage Road Relocation	Relocate the west Frontage Road along I-25 between the Plum Creek Parkway and Dawson Ridge/Crystal Valley interchanges to the west side of the BNSF railroad tracks (2-lanes).	\$12,000,000
29	Prairie Hawk Dr Widening – Wolfensberger to Meadows Pkwy	Construct Prairie Hawk to a minor three lane arterial section between Wolfensberger and Fence Post Dr. Complete Prairie Hawk to a four lane arterial section between Fence Post and Meadows Pkwy.	\$2,600,000
28	Plum Creek Pkwy Widening – Ridge to Gilbert	Construct the additional two lanes from Gilbert St. to Ridge Rd.	\$6,100,000
27	Plum Creek Parkway Widening – I-25 to Coachline	Construct the additional two lanes from I-25 to Wolfensberger Rd.	\$4,900,000
1	Prairie Hawk Extension to West Frontage Road	This improvement would provide an extension of Prairie Hawk Drive to the frontage road on the west side of I-25 and would also provide access to the I-25/Plum Creek Parkway interchange.	\$4,832,000
33	Crystal Valley/Dawson Ridge/I-25 Interchange	Construct new interchange at I-25 (complete interchange with all ramps)	\$38,500,000
34a	North Meadows Extension – Widening	Construct additional two lanes from Butterfield Crossing to US 85	\$24,100,000
14a,b,c	Wolfensberger Rd. Widening – Redhawk Dr. to Park Entrance	Widen to four lanes with bike lanes, sidewalks, and street lighting	\$9,300,000
Total:			\$126,023,000

The cost estimates are based upon the work left to complete the project, as some of the projects are further along in the planning and design phases than others. These cost estimates are program level estimates and are based upon general unit prices and not on a completed design. Also, future revenue contributions from future developments and State and Federal grants have not been projected for projects. A review of current impact fees is underway. It is likely that these will become available as the future plays out. However, to gain an accurate picture as things currently stand, no specific project contributions from these sources have been assumed.

Staff has prepared an estimate of the available revenue over the next ten years for transportation projects using the following assumptions:

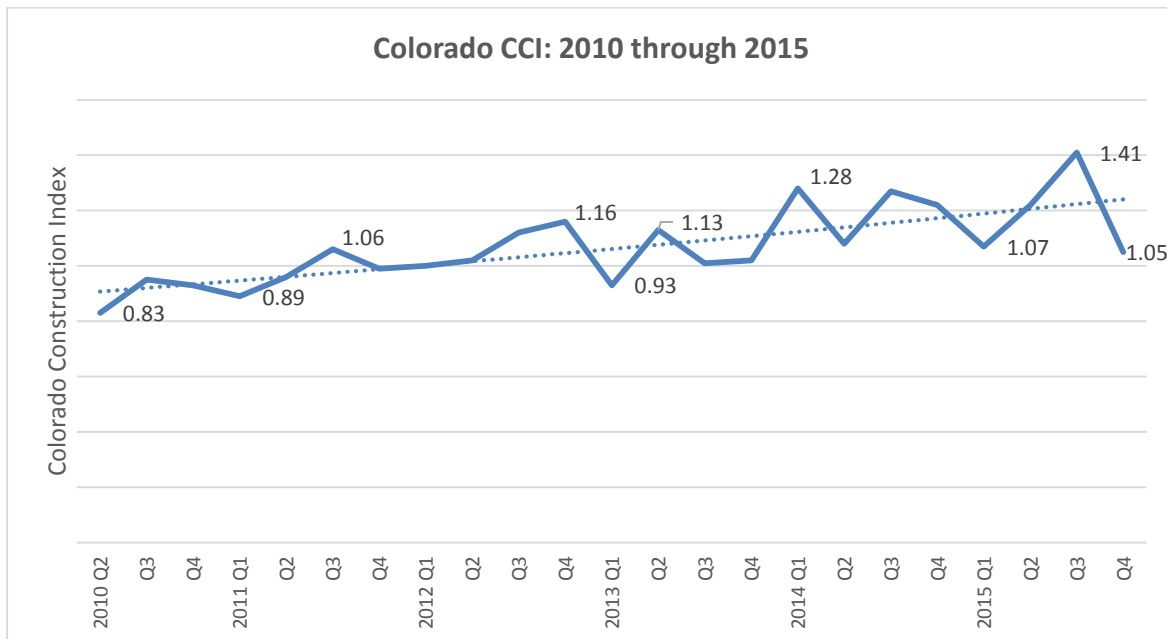
1. No changes to our existing levels of service for operations and maintenance are desired, and
2. No changes to our existing debt service, or fund transfers are desired, and
3. Current revenue and growth trends have been extended.

If these primary assumptions change, then adjustments to the amount of projected funding available for capital projects may be necessary as well as potential changes to project timing. Based on these assumptions, the following chart identifies the projected funding gap.

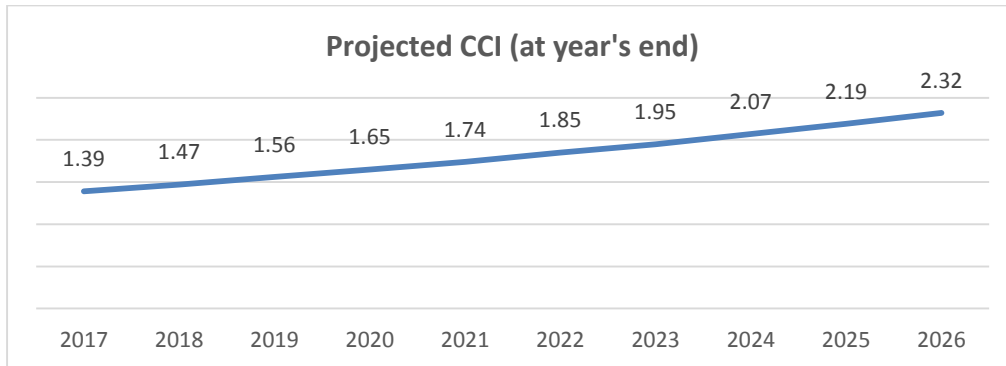


The ability to build in additional capacity to projects that extend many years into the future will be financially difficult. When new roadways are initially constructed, the initial volume that utilizes the roadway can be relatively small when an area is first growing. This leaves several years to absorb additional growth. As roadways widen, the capacity does increase, but at a smaller level. Capacity does not double for example when an initial two-lane roadway is widened to four lanes. Additionally, the existing volumes can be much closer to the capacity such that the number of years to reach this new capacity is shorter.

Construction market fluctuations and overall general inflation are also considerations that may influence project selection. The graph below shows the recent Colorado Construction Cost Index (CCI), which CDOT utilizes to track changes to typical highway construction costs. As can be seen in this graph the fluctuations are volatile with the recent measurements.



Projecting the CCI over the next five years based on the best fitting trend line yields the following outlook.



This trend projects nearly a 120% increase in construction costs by the end of 2026 compared to the end of 2015. However, the CCI has shown to have very wide swings between individual quarters.

Summary

This is a large subject, with several variables that will influence both the revenue available for future CIP projects, and the net expenditure of these projects to the Town. Staff believes however that a significant fiscal constraint exists within the next ten years that limits the ability to construct projects that will assist with addressing the growing congestion concern.