



STAFF REPORT

To: Honorable Mayor and Members of Town Council

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

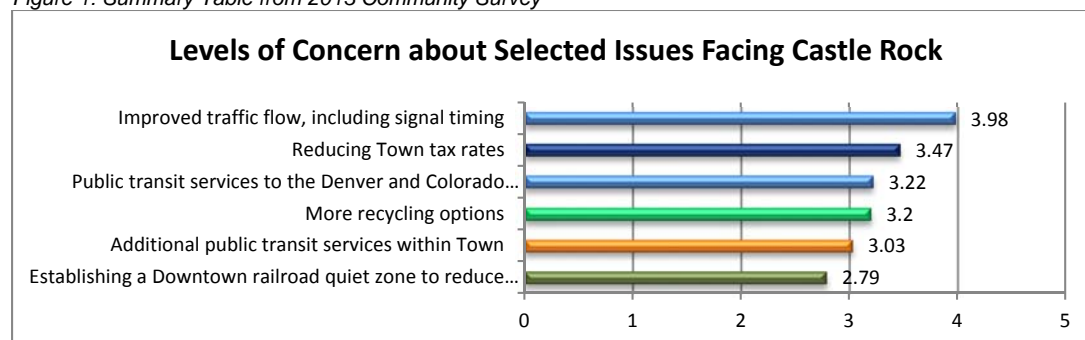
Title: Discussion/Direction: Transportation Impact Fee Adjustment

Discussion

As part of the current discussion associated with raising the Town's Impact Fees, this supporting memo is geared toward assisting with a further understanding of the Transportation Impact Fee component. During a June 2016 Town Council study session, information related to the next ten year priorities for transportation projects was presented. A forecasted funding gap between projected revenues available for transportation capital projects versus projected expenditures was also presented. This forecasted gap was based on the existing Impact Fees structure being maintained. With the proposed changes to the Impact Fee, the information presented at the study session in June is updated here.

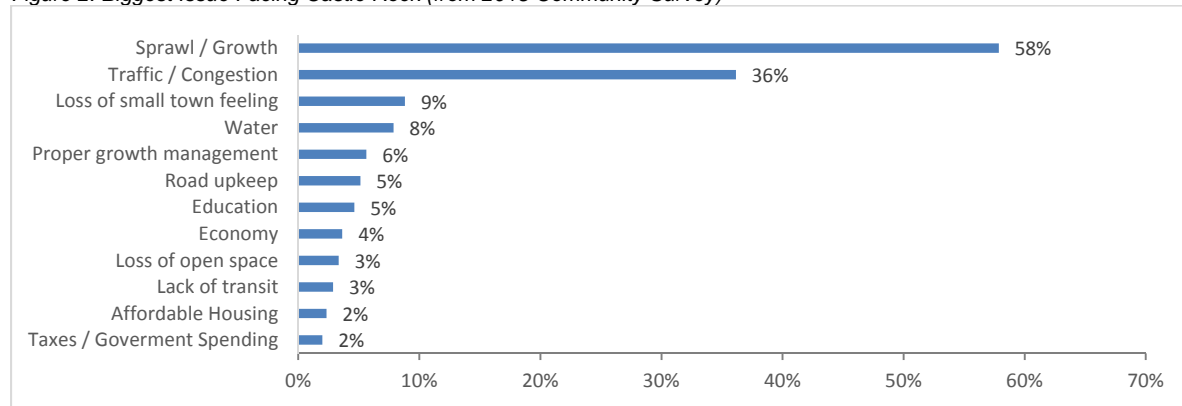
As part of the Town's Comprehensive Master Plan, it is estimated that an additional 20,000 residents will be added to the Town's population over the next ten years. Keeping pace with critical infrastructure needs to accommodate this increase will be important. This is particularly necessary in the area 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. 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 for two Transportation Impact Fee revenue scenarios 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. Recent growth trends have been extended.

The two revenue scenarios involve: 1) No changes to current revenue streams, and 2) Current adjustment to the Transportation Impact Fee is implemented.

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 two charts on the next page identify the projected funding gaps.

Figure 3: No changes to existing Transportation Impact Fee

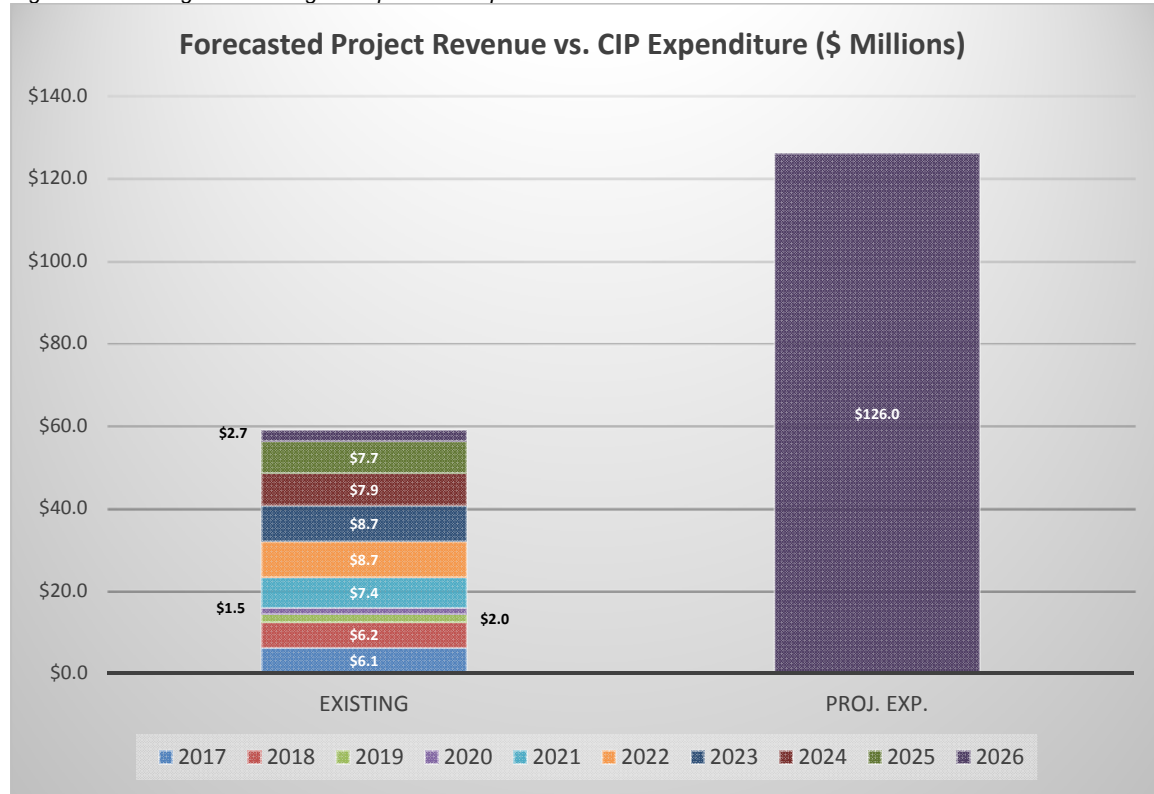
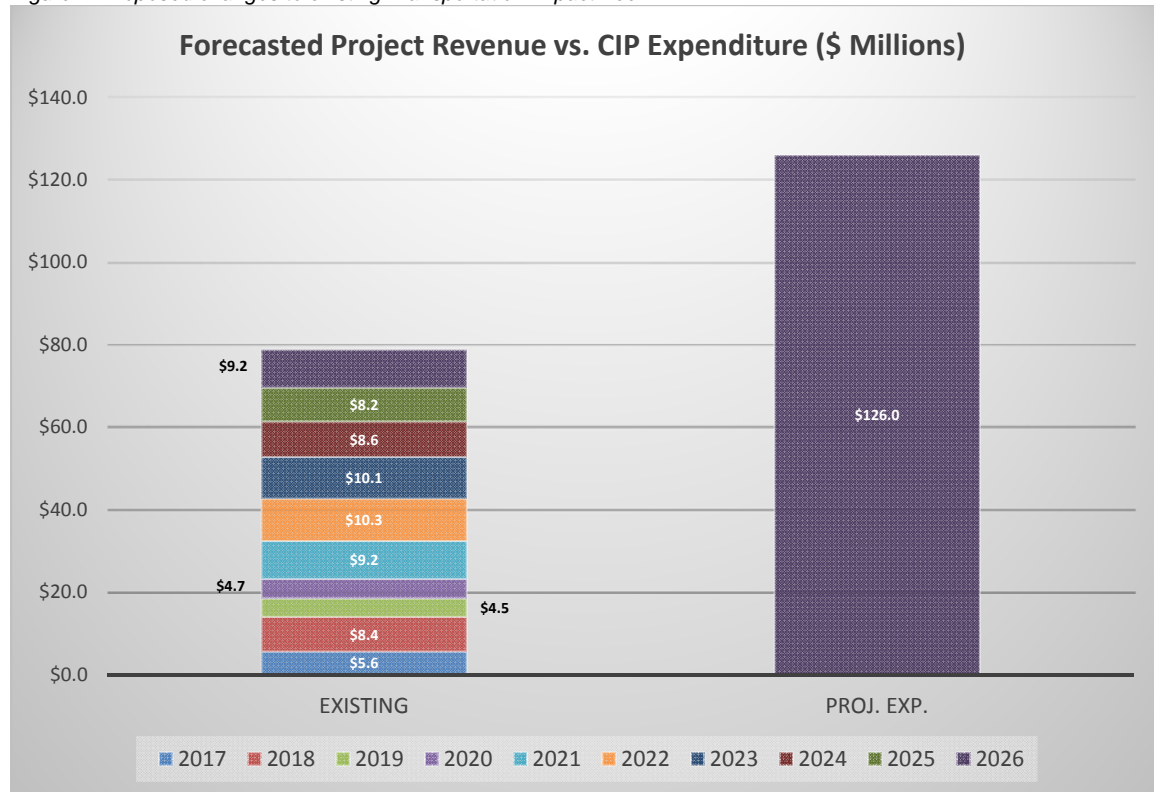
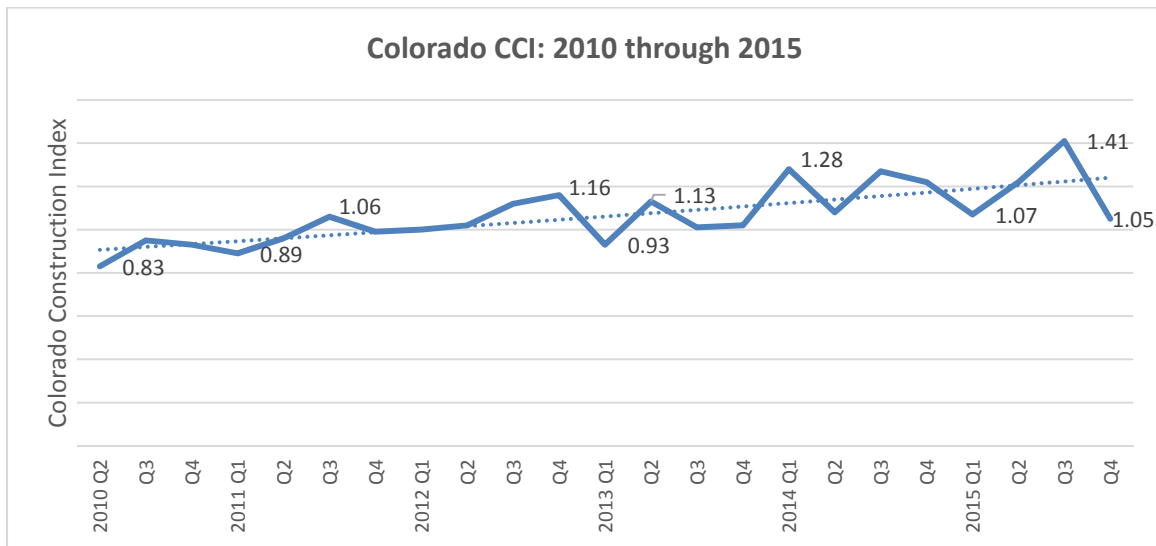


Figure 4: Proposed changes to existing Transportation Impact Fee

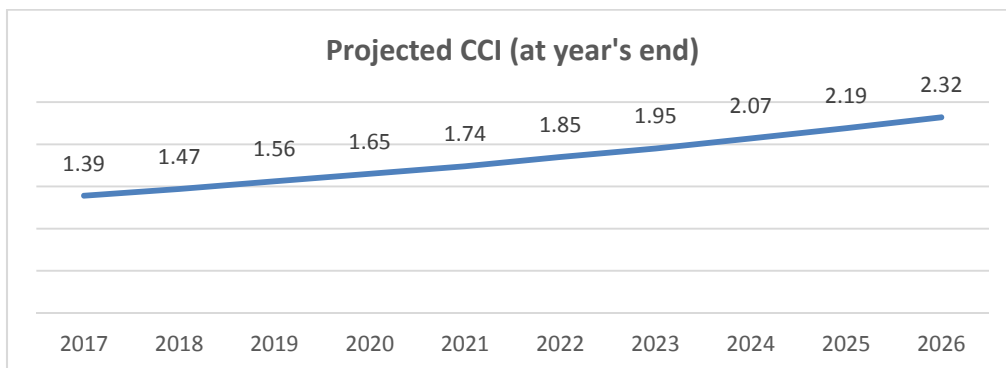


The ability to build in additional capacity to projects that extend many years into the future will be financially difficult. When new roadways are initially constructed, the initial volume that utilizes the roadway can be relatively small when an area is first growing. This leaves several years to absorb 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 ten years based on the best fitting trend line yields the following outlook.



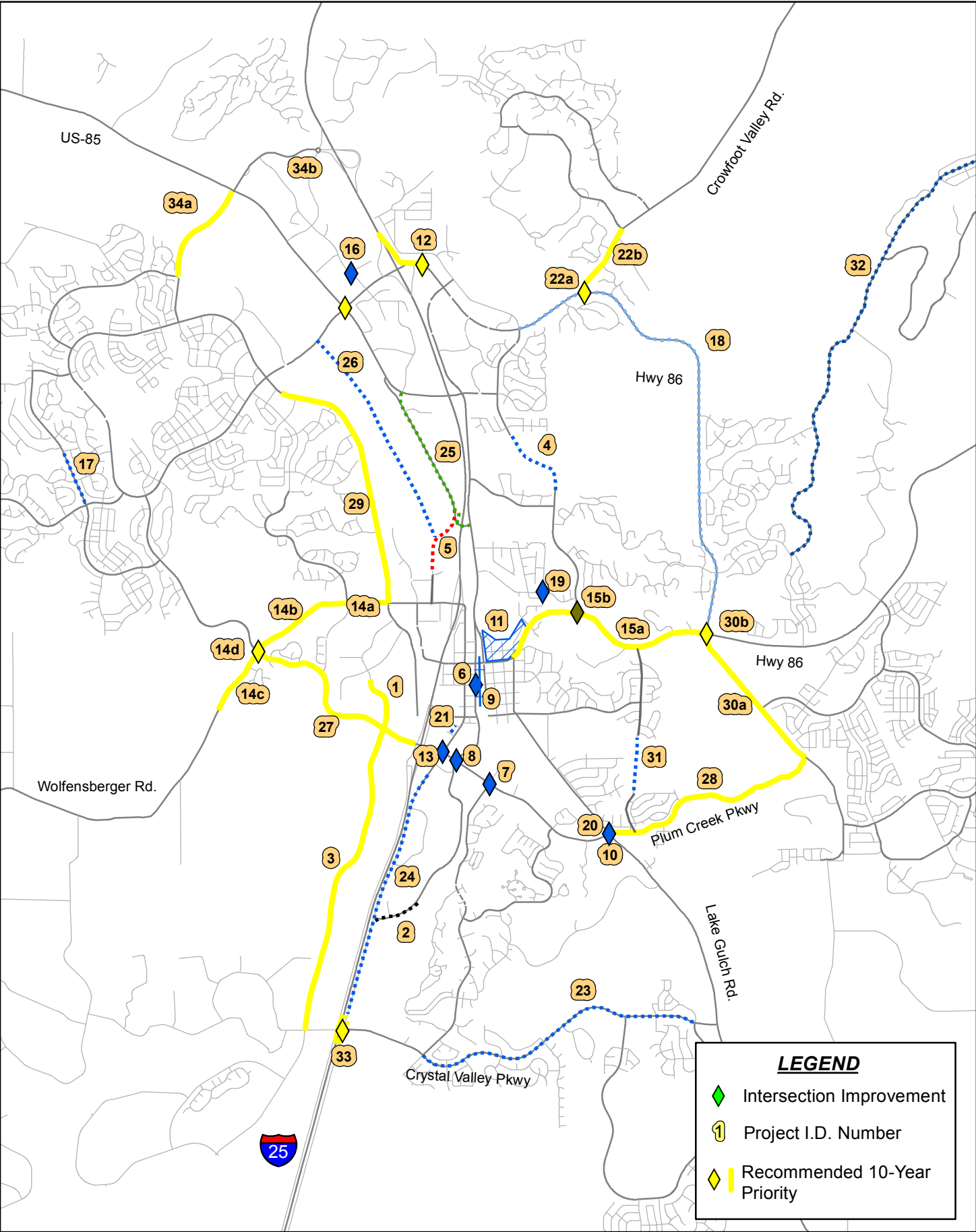
This trend projects nearly a 120% increase in construction costs by the end of 2026 compared to the end of 2015. However, the CCI has shown to have very wide swings between individual quarters.

Some of the identified projects are also good candidates for potential partnership funding. This is particularly true for projects that serve a larger population than just the Town. Examples include the Crystal Valley Parkway Interchange, and the widening of Crowfoot Valley Road. Based on this, the proposed adjustment to the Five-Year Transportation CIP is provided as (**Attachment B**) and includes the revenue scenario with increased Transportation Impact Fees for the years 2017 and 2018.

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 even with an increase to the Transportation Impact Fee in 2017 and 2018 that a fiscal constraint exists within the next ten years that limits the ability to construct projects that will assist with addressing the growing congestion concern.

Project Location Map



NOTE: Projects are not listed in any particular order. Identification numbers match identification numbers on accompanying map.

Note: The yellow shaded projects are staff recommended priorities to assist with congestion relief over the next 10-year period.

ID	Title	Description	Estimated TownCost	Congestion Relief	Open Up Development
1	Prairie Hawk Extension to West Frontage Road	CONSTRUCTION: Prairie Hawk Drive currently dead-ends south of Wolfensberger 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	X	X
2	Perry Street Extension	DESIGN AND CONSTRUCTION: This project would extend Perry Street south and west from the current termination south of Plum Creek Parkway to connect to the East frontage road. A new crossing of Plum Creek will be required.	\$5,700,000	X	
3	West Frontage Road Relocation	DESIGN AND CONSTRUCTION: 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		X
4	Woodlands Blvd. Connection	DESIGN AND CONSTRUCTION: This new roadway would connect Founders Parkway to Highway 86 by constructing the remaining section of road. This construction is dependent on developer contributions & timing.	\$3,000,000	X	X

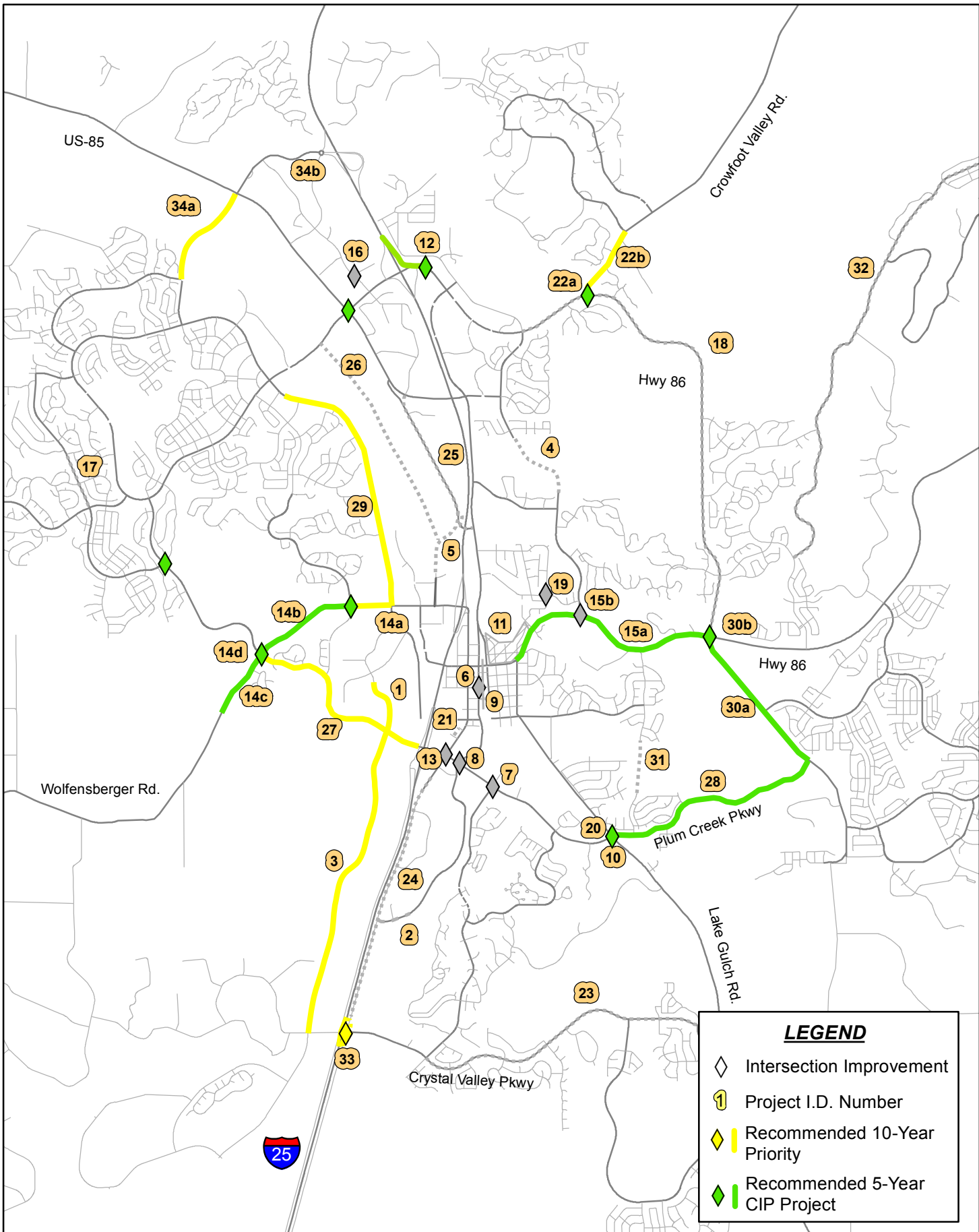
5	Liggett Rd Extension to Caprice	DESIGN AND CONSTRUCTION: Construct a new road that will connect Liggett Rd. to Caprice St. It will utilize the existing BNSF RR underpass just north of the new water treatment plant. A bridge will have to be constructed over Plum Creek.	\$6,500,000	X	X
6	Perry St @ 2nd (or 3rd) Roundabout	DESIGN AND CONSTRUCTION: Construct a roundabout at one of these intersections or install a traffic signal once warranted.	\$750,000	X	
7	Plum Creek Parkway/Plum Creek Boulevard Turn Lane Const.	CONSTRUCTION: Build an eastbound right-turn lane on Plum Creek Pkwy. for traffic wanting to turn south onto Plum Creek Blvd.	\$220,000	X	
8	Perry Street @ Plum Creek Pkwy Southbound Right Turn Lane	CONSTRUCTION: Add a dedicated right turn lane for southbound Perry Street for traffic wanting to turn onto westbound Plum Creek Pkwy.	\$500,000	X	
9	Train Quiet Zone Implementation	Implementation of a Quiet Zone in the downtown area.	\$850,000		
10	Plum Creek Pkwy @ Gilbert Roundabout	DESIGN AND CONSTRUCTION: Replace the existing traffic signal with a two lane roundabout.	\$900,000	X	
11	North Craig & Gould Neighborhood Improvements	DESIGN and CONSTRUCTION: Complete a full reconstruction of the roads in the area including replacement of water main & sanitary sewer and installation of storm water quality and conveyance.	\$3,900,000		
12	Founders Pkwy./Allen Way - Operational improvements	DESIGN AND CONSTRUCTION: Add a second eastbound left turn lane and another westbound lane for traffic wanting to access the northbound I-25 on ramp.	\$2,000,000	X	
13	Plum Creek Pkwy @ Wilcox Intersection Improvements	CONSTRUCTION: Add second northbound left turn lane on Wilcox at the intersection; reconstruct the intersection in order to remove the cross pan along the east side of Wilcox St.. Add a westbound right turn lane on Plum Creek Pkwy. Add second NBnd I-25 onramp.	\$2,550,000	X	
14a	Wolfensberger Road Widening Prairie Hawk to Red Hawk Dr.	DESIGN AND CONSTRUCTION: Widen Wolfensberger Road from Prairie Hawk Drive to Red Hawk Drive to 4 lanes, with bike lanes and 8' detached sidewalks .	\$1,000,000	X	
14b	Wolfensberger Road Widening from Red Hawk to Coachline	DESIGN AND CONSTRUCTION: Widen Wolfensberger Road from Prairie Hawk Drive to Coachline Rd. to 4 lanes, with bike lanes and 8' detached sidewalks .	\$5,900,000	X	

14c	Wolfensberger Road Improvements from Coachline to the Regional Park entrance	DESIGN AND CONSTRUCTION: Drainage improvements along Wolfensberger Rd. and widening to provide for a westbound left turn lane into the park	\$2,400,000	X	
14d	Roundabout: Wolfensberger Rd at Plum Creek Pkwy	DESIGN AND CONSTRUCTION: Construct a roundabout at this intersection	\$1,100,000	X	
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	X	
15b	Fifth Street/Woodlands Blvd. intersection improvements	DESIGN AND CONSTRUCTION: Replace the existing span wire traffic signal with a new installation that utilizes mast arms.	\$250,000		
16	Factory Shops Blvd. @ New Memphis Improvements	DESIGN AND CONSTRUCTION: Improvements to the intersection of Factory Shops / New Memphis to better accommodate traffic leaving the Outlet Mall and the Lowe's Store. May include the construction of a two-lane roundabout	\$1,000,000	X	
17	Foothills Drive Street Lighting Installation	Portions of Foothills are missing street lighting which development did not complete. This project is to have IREA install street lighting per existing regulations spacing.	\$225,000		
18	Founders Parkway Street Lighting Installation	Install street lighting from approximately Woodlands Blvd to 5th Street. IREA to design/construct	\$1,000,000		
19	Oakwood at Canyon Drainage	CONSTRUCTION: Install inlets, piping, and subdrain to alleviate water/icing problems	\$45,000		
20	Plum Creek Pkwy Bridge Impr. At Sellers Gulch	DESIGN & CONSTRUCTION: Segments of the road are beginning to be undermined as a result of the storm drains under the road needing to be repaired.	\$136,000		
22a	Founders Pkwy./Crowfoot Valley Rd. - Additional left turn lane	DESIGN AND CONSTRUCTION: Add additional eastbound left turn lane on Founders	\$2,100,000	X	

22b	Crowfoot Valley Road Widening	DESIGN AND CONSTRUCTION: Widen Crowfoot Valley Road from Founders Parkway to Maher Road. Initial effort will involve preliminary engineering to determine drainage needs. Staff will initiate discussions with the adjacent developers about using their contributions towards widening the section nearest to Founders initially.	\$6,725,000	X	
24	East Frontage Road Improvements	DESIGN AND CONSTRUCTION: Construct curb and gutter, sidewalk and turn lane improvements along the East Frontage Rd. from Crystal Valley Pkwy. to Plum Creek Pkwy.	\$4,000,000		
25	Liggett Rd Widening - Hwy 85 to Front	DESIGN AND CONSTRUCTION: Widen Liggett Rd., south of Old US 85 to a minor arterial section, with curb, gutter and sidewalk, a median and bikelanes.	\$4,400,000	X	
26	New Road - Meadows Blvd to Liggett	DESIGN AND CONSTRUCTION: Build a new two lane road between Meadows Pkwy. and the new Liggett Rd. extension	\$6,000,000	X	
27	Plum Creek Parkway Widening - I-25 to Coachline	CONSTRUCTION: Construct the additional two lanes from I-25 to Wolfensberger Rd.	\$4,900,000	X	
28	Plum Creek Pkwy Widening - Ridge to Gilbert	DESIGN AND CONSTRUCTION: Construct the additional two lanes from Gilbert St. to Ridge Rd.	\$6,100,000	X	
29	Prairie Hawk Dr Widening - Wolfensberger to Meadows Pkwy	DESIGN AND CONSTRUCTION: 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	X	
30a	Ridge Road Widening	DESIGN AND CONSTRUCTION: Construct an additional two lanes on Ridge Road from Highway 86 to Plum Creek Pkwy.	\$3,300,000	X	
30b	Founders Pkwy./Ridge Rd./5th St. - Intersection Improvements	DESIGN AND CONSTRUCTION: Add additional southbound left turn lane; realign northbound lanes	\$2,800,000	X	
31	Valley Dr Connection - Hover to Hudson	DESIGN AND CONSTRUCTION: Connect missing two-lane section between South St. and Miller Dr.	\$3,200,000	X	X
33	Crystal Valley/Dawson Ridge/I-25 Interchange	DESIGN AND CONSTRUCTION: Construct new interchange at I-25 (complete interchange with all ramps)	\$38,500,000	X	X

34a	North Meadows Extension - Widening	DESIGN AND CONSTRUCTION: Construct additional two lanes from Butterfield Crossing to US 85	\$24,100,000	X	
	Service Center Expansion	DESIGN AND CONSTRUCTION: Expand facility to permanently house staff working in modular units and accommodate staff growth.	\$2,200,000		
Town-wide	Traffic Signal System Upgrade	Replace traffic signal central system and local intersection equipment	\$2,000,000	X	
Town-wide	Annual Misc. projects (10-year period)	unidentified projects that occur each year	\$4,000,000		

Recommended Five-Year CIP Update



Proposed Five-Year Transportation CIP Update with Proposed Impact Fee Increase

Map I.D. #	Title	2017 Budget	2018 Budget	2019 Budget	2020 Budget	2021 Budget
12	Founders Pkwy./Allen Way – Operational improvements	\$360,000	\$3,708,000			
22a	Founders Pkwy./Crowfoot Valley Rd. – New turn lane		\$2,384,000			
33	Crystal Valley Pkwy Interchange		\$750,000	\$500,000	\$500,000	\$500,000
	Service Center Expansion	\$220,000	\$1,980,000			
	Old Hwy 85/Meadows Pkwy. – New turn lane	\$107,000				
14d	Roundabout: Wolfensberger Rd at Plum Creek Pkwy	\$150,000	\$950,000			
30a	Ridge Road Widening	\$400,000	\$3,600,000			
30b	Founders Pkwy./5 th St. – Intersection Improvements	\$175,000	\$3,165,000			
15a	Fifth Street Improvements – Gilbert to Founders Pkwy			\$500,000	\$5,000,000	
28	Plum Creek Pkwy Widening – Ridge to Gilbert				\$600,000	\$5,500,000
10	Plum Creek Pkwy @ Gilbert St Roundabout			\$150,000	\$950,000	
	Coachline Rd @ Foothills Dr Roundabout				\$150,000	\$950,000
	Wolfensberger Rd @ Redhawk Dr Roundabout				\$150,000	\$950,000
34a	North Meadows Extension – Widening		\$500,000	\$250,000	\$250,000	\$250,000
14b,c	Wolfensberger Rd. Widening – Redhawk Dr. to Park Entrance					\$800,000

Notes:

1. Cells highlighted in orange represent design expenditures
2. Cells highlighted in green represent construction expenditures
3. Dollar amounts for the Crystal Valley Interchange, and North Meadows Extension widening are project set aside amounts to assist with trying to encourage partnerships to advance construction of these projects.