MEMORANDUM

Date: **May 17, 2023**
To: **City Council**
From: **Charles Gillette, P.E., Ivins City Public Works Dir/ City Engineer**
Re: **List of Unfunded Potential Capital Projects for Ivins City**

At City Council on May 4th when it was indicated that the County would be contributing $1 million towards the Old Highway 91 Improvement Phase 2 project. This freed up the same amount of money that could be allocated towards a different Capital Project.

The Mayor requested that I provide a list of projects where this money might be spent. This list is provided as follows:

No.	Capital Project Name	Estimated Cost
1	Puerto Drive Safety Improvements	$465,000
2	Center Street Underpass for Trail Crossing	$1,000,000
3	Center Street Streetscape – Landscaped Islands	$150,000
4	400 East/Center Street Roundabout	$860,000
5	Lower Power Lines on Old Highway 91 – North Side	$1,750,000
6	Lower Power Lines on Old Highway 91 – South Side	$1,300,000
7	Streetlighting Upgrades	$100,000 to $2,000,000
8	200 East from 800 S to Old Highway 91 – Mill and Overlay Needed	$200,000
9	Kayenta Parkway/Kwavasa Roundabout	$350,000 (Kayenta Developer has indicated willingness to participate)
10	400 South from Puerto Drive to Cordero Drive – Reconstruct Needed	$100,000
11	Canyon Cliff Subdivision – (located at approximately 350 E and 500 S) – Reconstruct Needed	$500,000
12	Snow Canyon Parkway from St George Boundary to Red Mountain Spa – Cape Seal Needed	$165,000 to $435,000
13	400 East Waterways Replacement	$400,000 to $1.1 million
14	Possible Trail Projects: • Kwavasa Drive from 200 N to Kayenta Parkway • Kayenta Parkway from Old Highway 91 to Kwavasa • Taviawk Drive from Posovi Dr to Hell Hole Canyon Trailhead	
15	Possible Park Projects:	

Puerto Drive Safety Improvements
Estimate: $460,000

Puerto Drive from Center Street to 400 South is identified as a minor collector street on our transportation master plan map, but should be considered a major collector street based on current future traffic loads. If you look at the history of accidents on Puerto Drive, it appears to be a safe roadway, but it lacks sidewalks for most of the way. This is an especially big concern since it leads right to Vista School.

The intent of the project is to remove 6.5 feet of the existing asphalt and the existing curb and gutter along the west side of the road. In its place, a 5' concrete sidewalk would be installed along with a new curb and gutter. The remaining 1.5' would be asphalted back once the curb and gutter and sidewalk have been installed.

The project would require some earthwork since the proposed sidewalk would have to be raised up from the elevation of the existing roadway.

Additionally, there are approximately 15 homes that front Puerto Drive on the west side of the roadway. The driveways into these homes would need to be reworked to match the new grad es and elevations of the new curb and gutter.

Lastly, there are 7 ADA ramps that would need to be installed as part of the project.

Center Street Underpass for Trail Crossing
Estimate: $1,000,000

Install an underpass adjacent to the Tuacahn Wash and connect trail systems between Center Street and Tuacahn Drive as shown below on map. City owns all rights-of-way for this project.

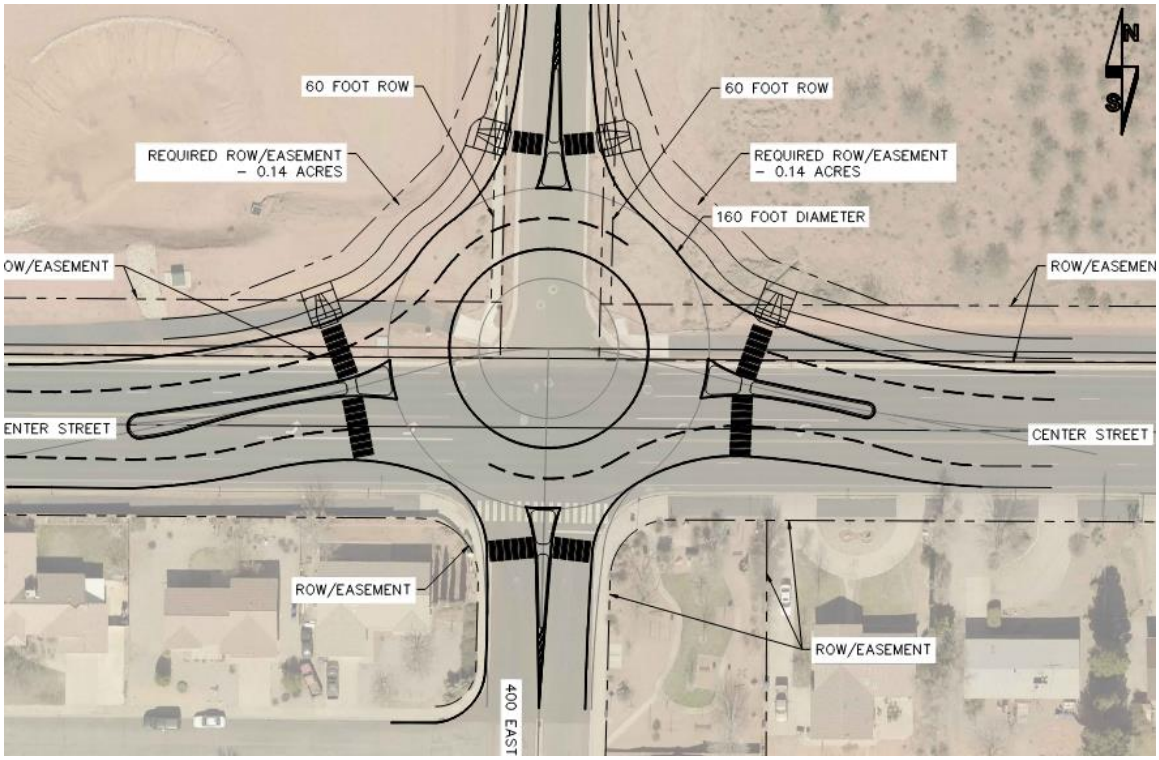


Center Street Streetscape Improvements – 750 East to 950 East
Estimate: $150,000

In our Transportation Master Plan, we have this project to add landscaped median islands in Center Street. It used to be a larger project, but as we looked at the feasibility of where it could be installed, we realized that it only works from 750 East to 950 East. It might morph into a larger project once vacant land has developed and we know where all future driveways are going to be located. Also, when we put the 400 East roundabout, we may lengthen the center median islands as far as reasonably possible to finish out this concept for Center Street.



400 East/Center Street Roundabout
Estimate: $860,000



The map above shows the concept that this cost estimate was based on. Right-of-way has already been acquired.

Staff does not see a need for this roundabout yet, and it is possible that it will be partially funded by development if the adjacent undeveloped property ends up becoming commercial property.

Streetlighting upgrades
Estimate: $100,000 to $2,000,000

Streetlighting is totally scalable as one might imagine. I am attaching the map of our City that shows where we have streetlights that would be eligible for replacement. Here is the table and estimated cost based on an estimate of an average of $15,000 to replace each light:

	Count	Cost to Upgrade
ANP Lights	10	N/A
Spectra Lights	63	N/A
Cobra Lights	29	$ 435,000
Acorn Lights	3	45,000
Box Light	1	15,000
Cobra Arms	39	585,000
Old Lantern	53	795,000
Old Lamp	2	30,000
Bollard Lights	236	N/A
	Total:	$ 1,905,000

The estimate of $15,000 per light is based on the approximate costs, without doing precise site examinations of what it costs to purchase and install lights, pullboxes, conduits, and in some cases transformers and meter boxes to install these lights.

200 East from 800 South to Old Highway 91 Mill and Overlay.
Estimate: $200,000

This section of roadway is old, we have been maintaining it be with crack seal and slurry seals, which has been effective at maintaining serviceability, however, the crack seals are making the roadway bumpy for an uncomfortable ride. It last received a treatment in 2017 which makes it due for a new treatment in 2024. We could slurry the roadway for $23,000 or cape seal for $85,000 if we can't find the funds for a mill and overlay with new asphalt.



Kayenta Parkway/Kwavasa Drive Roundabout
Estimate: $350,000

Terry Marten has committed to participate in this project. We had it in the FY2023 budget to spend $100,000, but we were waiting for Terry Marten to provide a design.

The project is not needed based on current traffic volumes, but there are some safety concerns since Kayenta Parkway has a curve that makes it hard for traffic on the Kwavasa to see if traffic is coming or not. We have considered funding it in the past since we have developer contributions to make the project less expensive to the City.



400 South from Puerto Drive to Cordero Drive – Reconstruction
Estimate: $100,000



This is a segment of roadway is failing, mainly due to poor soil conditions and high groundwater. The roadway has stabilized since we installed a groundwater drain in 2010, but has been severely cracked and held together with slurries since then. It was last slurried in 2014. Typically we would have slurried again in 2021, but we have delayed with the potential development of the SITLA project. If SITLA develops this area soon, we would have to do the reconstruction at the same time.

We may want to wait on this project until we know when SITLA might develop it. We could apply another slurry if it starts to pothole, as of right now, we are not seeing potholes.

Canyon Cliff Subdivision – Reconstruction is Needed
Estimates: $500,000 for total reconstruction
$100,000 for cape seal (chip seal + slurry seal) – 10-15 year life added
$25,000 for slurry seal – 5 years of life added

The pavement is completely turned into alligator cracks which is indicative of failed asphalt. Our analysis is that the asphalt failed due to insufficient pavement and base thickness. We slurried it in 2016 and it would have been typically due for another slurry in 2023 on a 7 year cycle, but we have delayed because we did not have the budget to do it.

Reconstruction is truly needed but, we may be able to continue to delay reconstruction with some of the treatments listed above. Another option could be to delay reconstruction and wait for potholes to start to develop. We are not receiving neighbor complaints because it has not started to pothole.



Snow Canyon Parkway from St George Boundary to Red Mountain Spa Curve
Estimates: $435,000 for mill and 2” overlay
$210,000 to fill ruts with skin patch and cover with cape seal
$165,000 to cape seal (no skin patch)

This section of Snow Canyon Parkway is starting to rut. It is hard to see, but we expect that the rutting problem will continue. The cracks are also getting worse. The cracks could be solved with the cape seal, but the ruts might need to filled first with skin patches. The best solution be a 1” mill covered with a 2” overlay.



400 East Waterway Replacement Project
Estimates: $400,000 to replace waterway only
$1,100,000 to replace waterway and storm drain lines under waterway

400 East is Ivins City “Flood Street” with an inverted crowned street designed to capture large storm flows when they might occur in this area.

The middle of the street has a 4’ concrete waterway that was designed with insufficient thickness and is buckling in many areas. It would be ideal to replace the entire length with new concrete that is properly designed.

The pipe under the waterway is also suspicious. We have conducted camera investigations of the pipe and there is cracking in many areas as well as joint that appear to not be soil tight and thus could be creating future sink holes.

If we just replace the concrete the cost is $400,000 but if we replace the waterway the piping the costs would increase to $1.1 Million.

