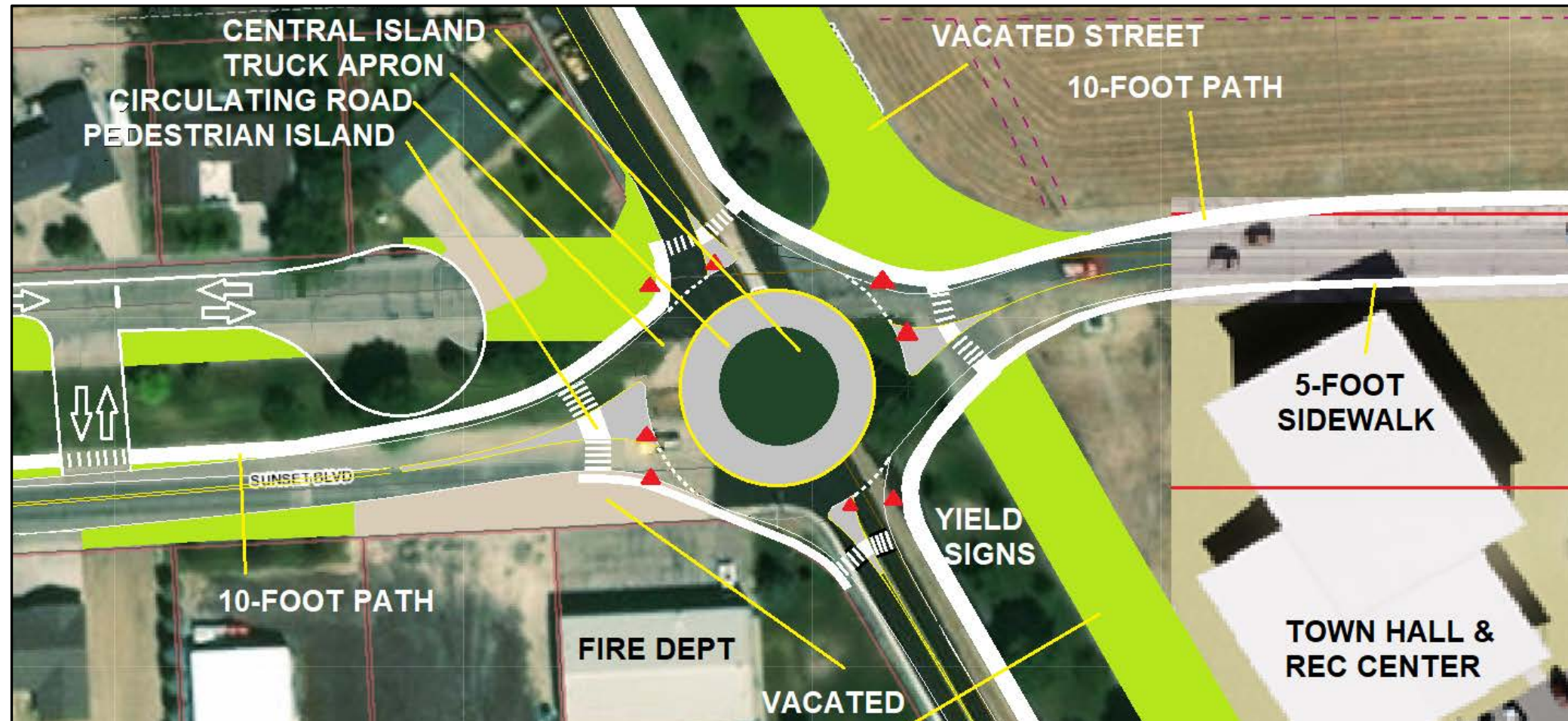


# BAR NUNN STREETScape REVITALIZATION PLAN



PREPARED ON BEHALF OF THE TOWN OF BAR NUNN, WYOMING  
AND THE CASPER AREA METROPOLITAN PLANNING ORGANIZATION

BY

Y2 CONSULTANTS LLC – CHEYENNE/JACKSON, WYOMING  
AND HARMONY DESIGN & ENGINEERING – DRIGGS, IDAHO

September 2022



**Cover Image** - The aerial image on the cover shows a concept sketch of the recommended alternative for the Antelope Drive / Sunset Blvd intersection area. The aerial illustrates the proximity of the planned Town Hall & Recreation Center, vacated pavements proposed for new recreational uses, a proposed roundabout intersection, and proposed trails and sidewalk connections.

This location would become the core of the Bar Nunn non-motorized parkway system and the west end of Bar Nunn’s commercial area. The modern roundabout intersection replaces three existing closely spaced skewed intersections, reducing the number of traffic conflict points from 173 to 16. It provides sufficient capacity to accommodate any future street re-configuration or contingency, while reducing speeds and providing superior vehicular and pedestrian safety performance.

**Study Budget:** This \$44,855.00 study was funded using 90.5% (\$40,589) in Federal/State Planning Funds, with the remaining 9.5% (\$4,266) using local government matching funds.

**Disclaimer:** Preparation of this report has been financed in part through grant[s] from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation, under the State Planning and Research Program, Section 505 [or Metropolitan Planning Program, Section 104(f)] of Title 23, U.S. Code. The contents of this report do not necessarily reflect the official views or policy of the US Department of Transportation, Federal Highway Administration (FHWA), or Wyoming Department of Transportation (WYDOT).

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## Executive Summary

The Town of Bar Nunn, Wyoming was built atop a 1930's era airport, and former runways and taxiways are now streets. With the former tarmac now 90 years old, maintaining the excess runway pavement is becoming increasingly unaffordable. Runways and taxiways are also not designed with curb and gutter or sidewalks, so pedestrians and bicycles must share street space with motor vehicles.

With the town now rapidly growing in population, Bar Nunn needs a plan for future re-configuration of these pavements, to reduce maintenance cost, promote safety for motorized and non-motorized vehicles, improve aesthetics, provide space for recreation, enhance property values, and accommodate planned development.

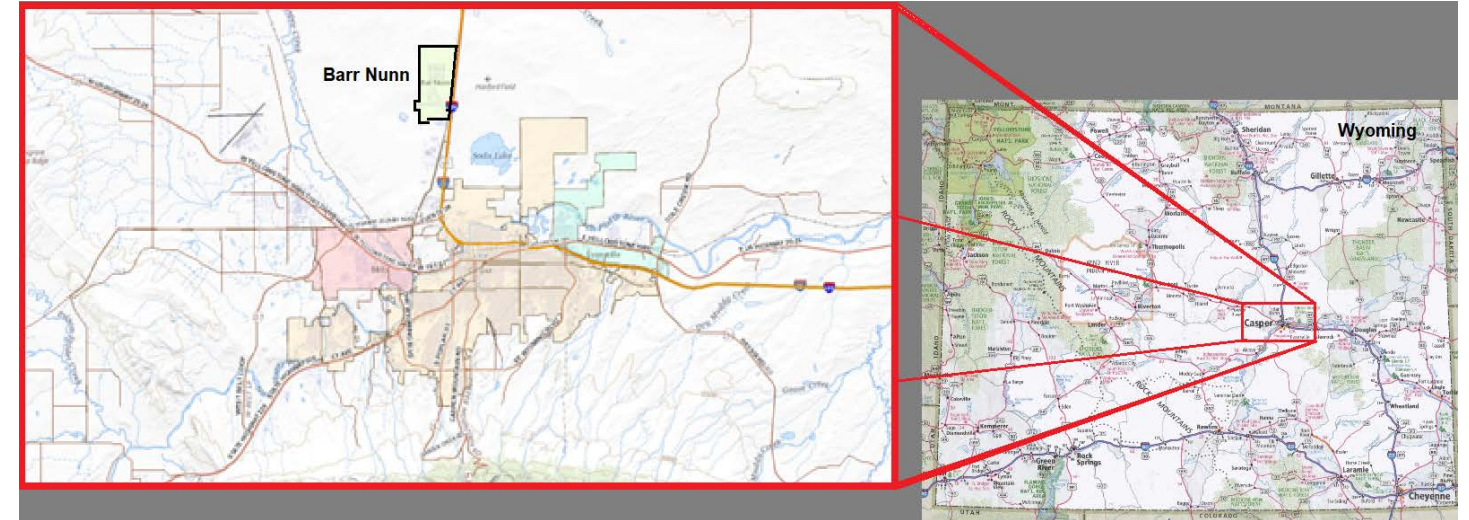
Study recommendations for improvements are based on the expected functional class and physical layout of each street:

- Former 150-foot runways (Antelope Dr., Sunset Blvd., and Palomino Ave.) will become a two-way 30 MPH residential collector street on one side, and a 20 MPH one-way residential access street on the other side. A shared-use non-motorized path will be provided along each former runway, and the median will be widened to 74' for use as neighborhood recreation and natural areas.
- Two school crossings on Antelope Drive will be marked with bold 'Zebra' crossings and equipped with pedestrian-actuated rectangular rapid flash beacons (RRFB).
- Former taxiway pavements (Bel Vista, Trail's End, Mustang Trail, and Prairie Lane) are all 45 feet wide, and these will become 20 MPH shared street space. Revised signs and pavement markings will make clear to all drivers they are entering the low-speed, pedestrian precinct. Where speeding is observed, traffic calming features may be added to discourage speeding.
- Some pavements (parts of Antelope Dr, Palomino Ave., and Sunset Blvd.) will become cul-de-sacs or vacated entirely to eliminate closely spaced intersections and unused pavement. The excess street space will be re-purposed as either green space or municipal parking.
- On the north side of the study area, McMurry Boulevard will become a three-lane, 30 MPH collector street with parking on the north side of the street only.
- Wardwell Industrial Avenue will have chevron added at the curve to prevent drivers from driving off the road during poor visibility. A parallel walkway may be added in the long-term future.
- To accommodate potential new street connections and closures, the intersection of Sunset Boulevard and Antelope Drive will become a 140-foot diameter modern roundabout. This will safely accommodate any potential change in traffic volumes or turn movement patterns. It will also provide safe crossing locations for the new non-motorized parkway network, a place for U-Turns serving the commercial area, and perhaps a central showplace for public art (maybe a biplane on a pedestal).
- Between Antelope Drive and Salt Creek Highway, Sunset Blvd will have a 50-foot cross section, with a ten-foot pathway along the north side serving the KOA campground.
- The 150-foot public right of way on Sunset Blvd. east of Arena Street will be retained for use as commercial parking, regional welcome center, and or public promenade. As a main entry to Town, the Sunset location should remain in public hands.

## Study Area Location

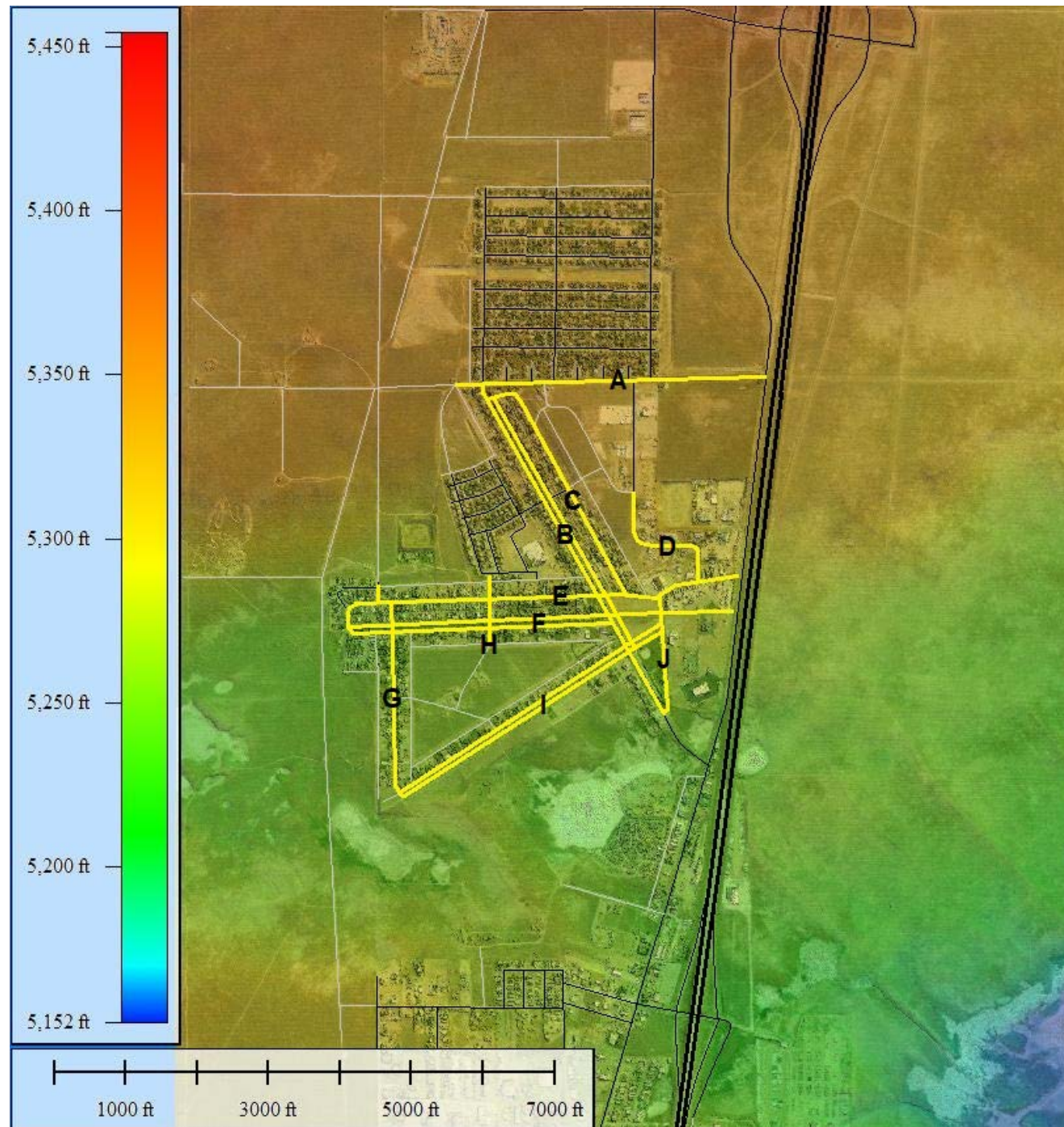
The Town of Bar Nunn is on the west side of Interstate 25, five miles north of the City of Casper in Natrona County, Wyoming.

The nearest town north of Bar Nunn on I-25 is Kaycee (63 miles, population 267). Bar Nunn is 183 miles northwest of the state capitol of Cheyenne, 281 miles northwest of Denver, Colorado, and 411 miles northeast of Salt Lake City, Utah.



### Study Area Streets:

#	Street Name	From	To	Length (ft)	Width (ft)	Pavement (Acres)	Functional Class
A	McMurry Blvd	Salt Creek	west terminus	4,270	45	4.4	Collector
B1	Antelope Dr. West	McMurry	Arena	5223	32	3.8	Collector
B2	Antelope Dr. West	Arena	Salt Creek	905	30	0.6	Collector
B3	Antelope Dr. East	Bel Vista	Arena	4,783	50	5.5	Res. Access 1
C	Bel Vista	Antelope	Prairie	3,560	45	3.7	Res. Access 2
D	Wardwell Ind. Ave.	Badger	Prairie	2,022	24	1.1	Ind. Access
E1	Prairie Lane west	Sunset	Antelope	3,604	45	3.7	Res. Access 2
E2	Prairie Lane east	Antelope	Salt Creek	2,004	40	1.8	Com. Access
F1	Sunset Blvd north	Prairie	Antelope	3,600	50	4.1	Res. Access 1
F2	Sunset Blvd south	Prairie	Antelope	3,627	50	4.2	Res. Access 1
F3	Sunset Blvd east	Antelope	Salt Creek	1,764	30	1.2	Collector
G1	Trail's End	Circle Dr.	Prairie	209	30	0.1	Res. Access 2
G2	Trail's End	Prairie	Palomino	2,672	49	3.0	Res. Access 2
H	Mustang Trail	Prairie	Sunset S.	355	36	0.3	Res. Access 2
I1	Palomino Ave north	Trail's End	Antelope	3,707	50	4.3	Res. Access 1
I2	Palomino Ave south	Trail's End	Antelope	3,700	50	4.2	Res. Access 1
I3	Palomino Ave east	Antelope	Sunset	740	50	0.9	Com. Access
J	Arena Street	Prairie	Palomino	363	31	0.3	Com. Access



Two I-25 interchanges provide freeway access to Bar Nunn. The I-25 / Westwinds Road diamond interchange is 1.85 Miles north of Sunset Blvd, and the I-25/Wardwell Road/Howard Street interchange is 1.25 miles south of Sunset Blvd.

The old main road (Salt Creek Highway) prior to I-25 is now the parallel access road following the west side of I-25. Salt Creek Highway provides access from I-25 to Bar Nunn.

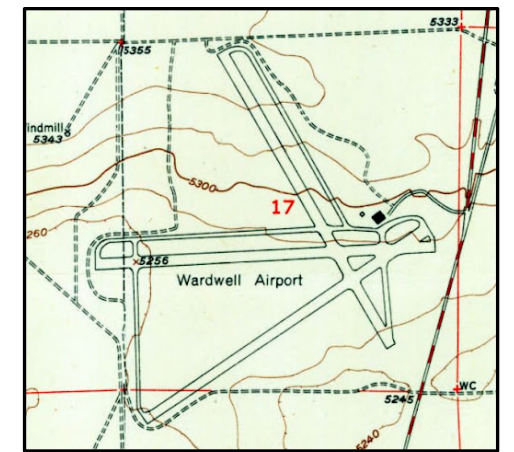
Study streets comprise a total of 8.5 miles of Bar Nunn’s street system as shown on the map below. Study streets include A: McMurry Boulevard, B: Antelope Drive, C: Bel Vista, D: Wardwell Industrial Avenue, E: Prairie Lane, F: Sunset Boulevard, G: Trail’s End, H: Mustang Trail, I: Palomino Avenue, and J: Arena Street. Most (B, C, E, F, G, H, I) are the former runways and taxiways of the 1930’s-era Wardwell Field.

## Study Area History

The Town of Bar Nunn, in Natrona County, Wyoming, is part of the Casper, Wyoming Metropolitan Statistical Area. Bar Nunn is just west of Interstate-25, seven miles north of downtown Casper. The town is at an elevation one mile and its estimated 2021 population was 3,031, up from 2,213 in 2010.

The Town of Bar Nunn was constructed around the former “Wardwell Field.” The airport was commissioned in 1927 and named in honor of Major Doyen P. Wardwell: an early developer of the airport who died in a crash near the airport on August 8, 1929.

The 1935 photo below shows a Waco biplane & 2 Stinson Sr Reliants in front of the new Wardwell Field hangar. (Photo courtesy of L. Reverchon). “The Hangar” is now a bar/restaurant and event facility.

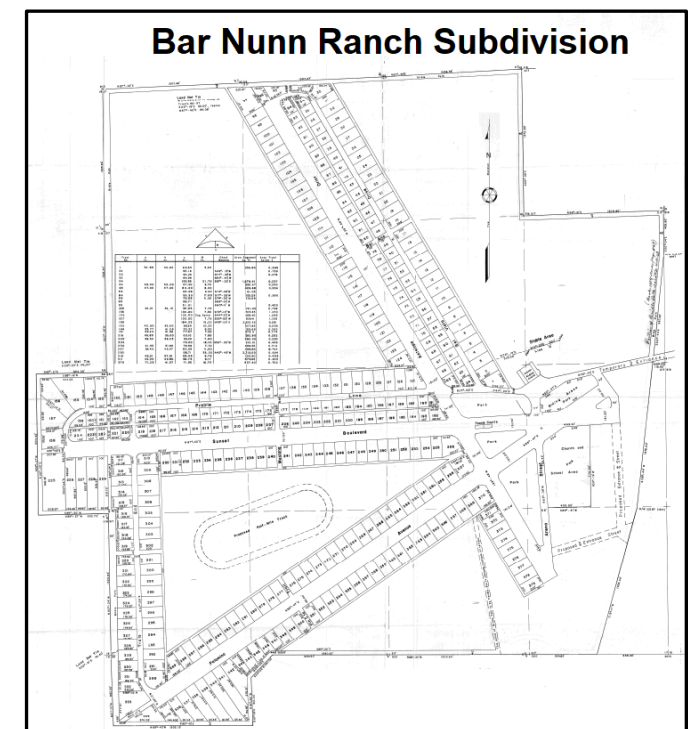


Wardwell Field closed in 1952 when Natrona County Airport relocated to the former Casper Army Airfield. In 1954, the land was sold to Mr. Romie Nunn, who subdivided the property and sold all but 10 lots by 1972. The former hangar became an arena for rodeos and livestock shows, and lots were set aside for parks, schools, churches, and businesses.

Former runways and taxiways became subdivision streets. The three main streets in Bar Nunn are runways 05/23 (Palomino Avenue), 08/26 (Sunset Blvd), and 14/32 (Antelope Drive). A 50-foot median was cut down the center of each 150-foot runway, leaving 50 feet of pavement on either side for residential access.

Now (2022) the aging tarmac has become increasingly expensive to maintain, and extra street width leads to speeding and safety concerns, especially for pedestrians who lack sidewalks. The east end where the runways converge remains mostly empty, and the Town has zoned for commercial development in that area.

The purpose of this study is to develop a new streetscape plan that will help the Town of Bar Nunn address these and other concerns, meet community aesthetic objectives, and accommodate planned development.



Runways Aren't Streets: Converting runways to residential streets may seem straightforward, but there are key differences that create challenges.

- Wardwell Field's runways were designed to handle aircraft up to 80-foot wingspan traveling 150 MPH. So, they were built 150-foot wide, arrow-straight, and a mile long.
- Typical neighborhood residential streets, on the other hand, carry private cars and pickup trucks, ideally at speeds less than 30 MPH. They are normally built about 30 feet wide with short straightaways and plenty of curves to keep speeds low. Long straightaways tempt drivers to speed up. In fact, a former Bar Nunn runway was once used as a drag strip.
- Runways need to be dry to prevent hydroplaning during landings and take-offs. So, they are built to drain off into the surrounding field, with no vertical elements (curbs etc.) that could constitute a hazard.
- Neighborhood streets are normally built below the surrounding land, with curb and gutter to channel run off from adjacent residential property.
- Runways are aligned with prevailing wind directions.
- Residential streets are aligned to maximize viable lots and provide access at minimal cost.

## Existing and Forecast Conditions

### Existing Land Use:

Much of Bar Nunn now consists of vacant, developable land. Vacant parcels along arterials are zoned for industrial and commercial uses, while inner areas to the west and south are zoned for residential uses.

### Existing Land Use Map:

Existing land uses are shown in color and vacant areas are shown as undeveloped land.

The surrounding area is undeveloped and has plenty of room for expansion.

Most study streets abut residential land (yellow).

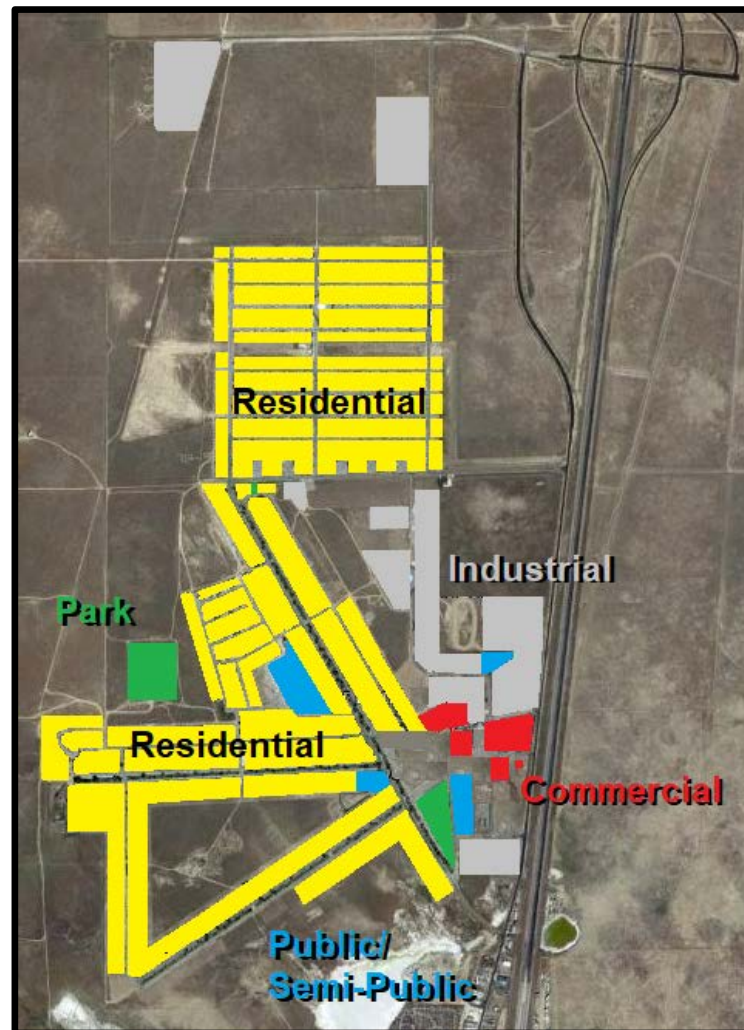
Prairie Lane and Sunset Drive east of Antelope Drive abut commercial land (red).

Wardwell Industrial Avenue abuts Industrial land (grey).

Traffic flows out of residential areas in the mornings and returns in the evenings. The opposite occurs in employment zones. The main entrance to town is currently on South Antelope Drive at Salt Creek Highway.

### Population Trends:

The population of Bar Nunn has increased by about 100 persons per year since 2000. Projecting this into the future, we expect around 6,000 residents by the year 2050: double the current population.



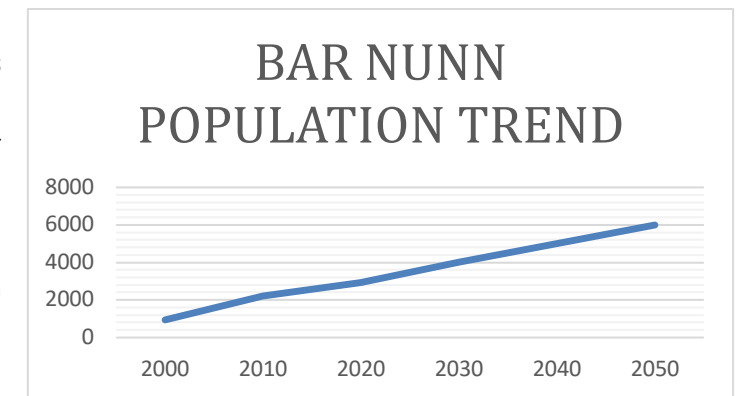
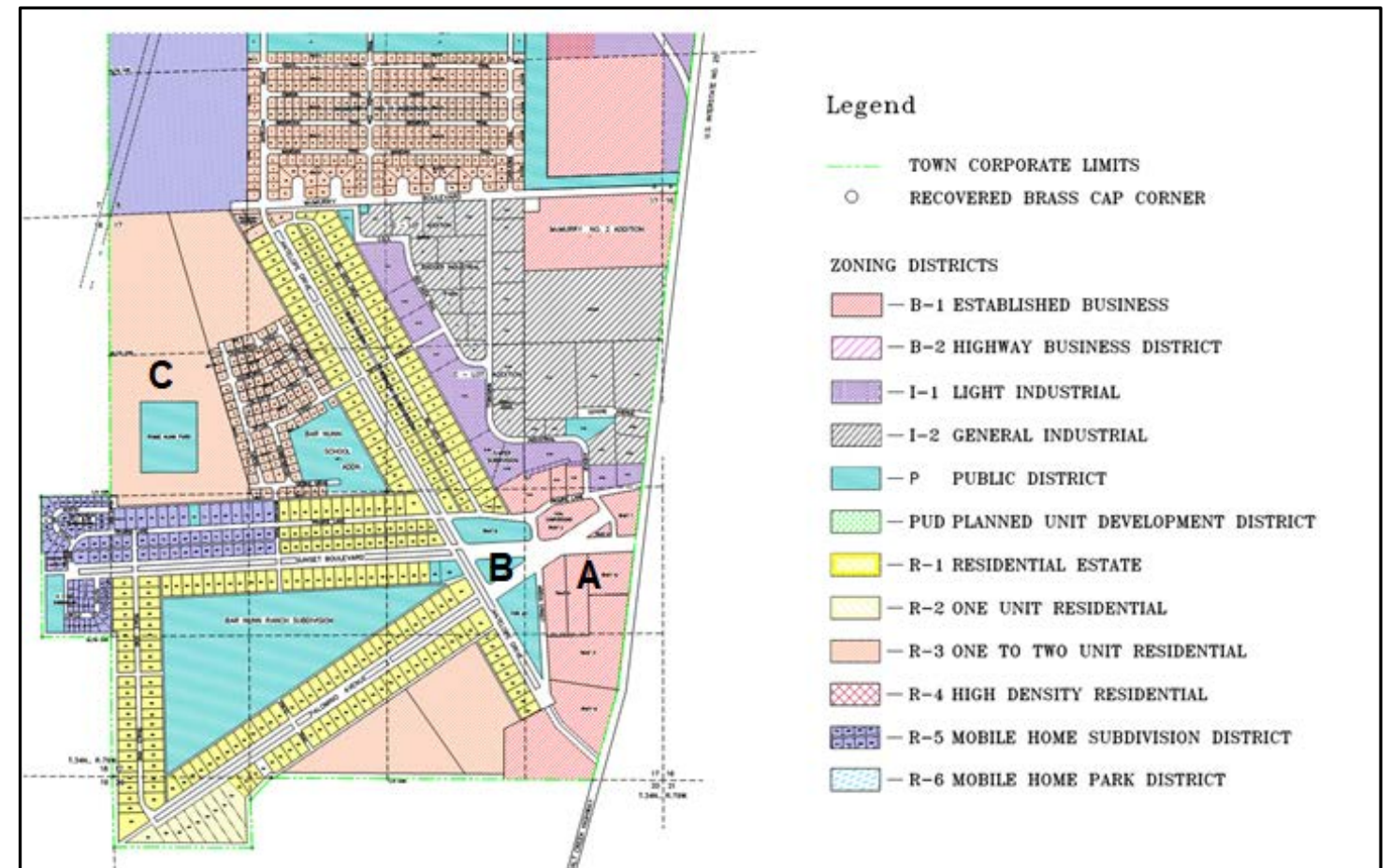
### Future Land Use (Current Zoning):

The current zoning map was enacted in 2019. Compared to the previous (2004) plan, it now calls for more single family and duplex residential and public parks, and less multi-family residential. The large triangular area between Sunset Boulevard and Palomino Avenue was re-zoned from high-density residential to Public District (blue).

Notable sites influencing study area streets and now beginning to develop include:

- A. The Business/Commercial area in the southeast.
- B. The Public District near the junction of the three former runways.
- C. New 170-unit residential subdivision in the northwest.

### 2019 Zoning Map:



## Near Term Development Plans

### 170-Unit Housing Development:

A new 170-unit housing development called “Sterling Heights” is proposed west of Turpin Street, between McMurry Boulevard on the north and Prairie Lane on the south.

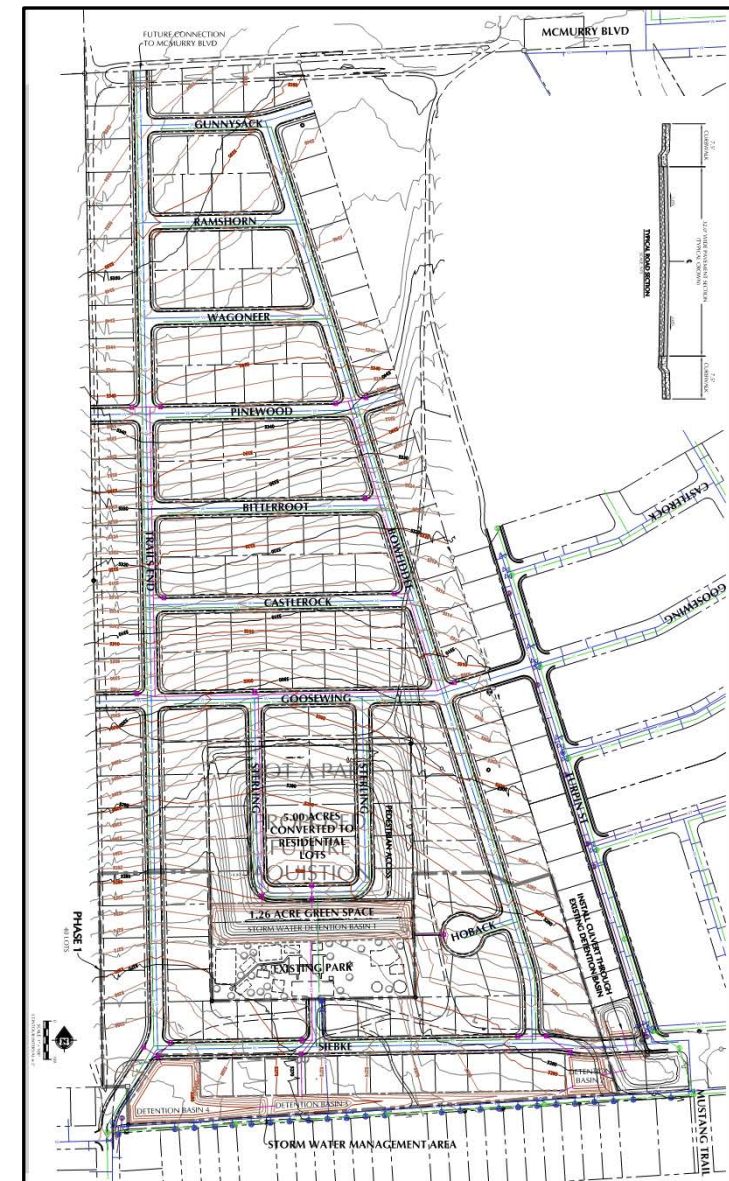
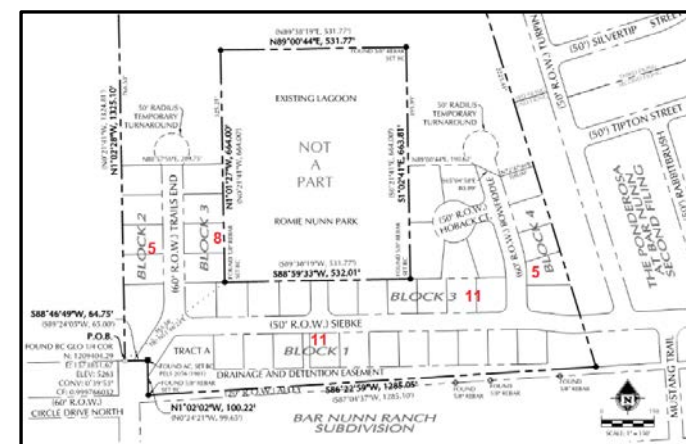
Interior traffic circulation proposes to use Trails End as a minor collector street which will eventually continue north to connect to a west extension of McMurry Blvd. Additional access is proposed by extending Goosewing Street and Siebke Drive west into the new subdivision.



This subdivision will generate about 1618 new daily vehicle trips, which will eventually load onto McMurry, Tipton, Prairie, Sunset, and Antelope.

Phase I of the proposed project consists of 40 lots in the southern area around Romie Nunn Park. These units will generate 381 vehicle trips per day, loading onto Trail’s End and Mustang Trail and connecting to Prairie Lane, Sunset Blvd., and Antelope. Both Bowfiddle and Trails End would terminate in temporary cul-de-sacs on the north, pending the next phase of the development.

This development proposal will generate a significant increase in traffic compared to existing street volumes. Therefore, the study and plan will need to address this new traffic and direct traffic to suitable collector streets.



### A New Main Entrance Road:

The March 2021 *Town of Bar Nunn Antelope Drive and Salt Creek Highway Access Study and Plan* recommended relocating the main town entrance road from Antelope Drive to Sunset Blvd. and constructing a roundabout at the Sunset/Salt Creek intersection. The Casper Area MPO Transportation Improvement Program listed \$720,000 for this project in 2022.

This study concurs with that recommendation. The action will allow future closure of Antelope Drive at Salt Creek Highway if desired, provide a safer intersection entering Bar Nunn, and create a welcoming gateway to Bar Nunn.

The immediate traffic effects of this action will be to reassign approximately 3,000 vehicles per day from Antelope Drive onto Sunset Blvd, increasing the daily volume to about 3700 vehicles. Increased traffic on this part of Sunset will also make adjacent commercial properties economically viable for development – another key community objective.

- AM peak hour volumes on Sunset will increase from 39 to 295.
- PM peak hour volumes on Sunset will increase from 46 to 308.
- Future commercial development along Sunset will add to these volumes.



### New Town Hall and Recreation Center:

Also on Sunset Blvd, west of the previously planned Salt Creek Hwy roundabout, the Town plans to start construction of a new 21,600 square foot Town Hall / Recreation Center in August 2022. The structure depicted is sited partially on the south 100 feet of the existing Sunset Blvd. right-of-way (red line in adjacent aerial image).

The remaining fifty feet of ROW will constrain potential street cross sections and non-motorized facilities in the new commercial district. Because travel lanes may need to carry a significant increase in traffic, travel lanes will need to be kept moving with minimal delay at intersection traffic controls.

These would be unusually narrow lanes in a commercial area. To allow 12-foot travel lanes, parking would need to be eliminated on one side of Sunset, and this would reduce commercial viability of the Resso properties on the north side of Sunset. If it is not too late, the Town may wish to consider relocating the new building on the excess rights of way on east Antelope and Palomino. If the Sunset rights of way can be preserved for on-street diagonal parking, it will promote commercial development within the new Town Center.

### A Much-Needed Grocery Store:

Bar Nunn currently has no grocery store, and residents have previously expressed a strong desire for one.<sup>1</sup> In the Town of Bar Nunn’s June 2008 Community Development Plan, citizens mentioned a grocery store more than twenty times.

At present, the nearest food stores are the Loaf-n-Jug convenience market at the Wardwell Road interchange in Hartrandt (1.2 miles south), and the Albertson’s supermarket on W 15<sup>th</sup> Street in Casper (6 miles south). Both have drawbacks for Bar Nunn residents in terms of product availability and travel distance.

As a rule of thumb, large supermarkets in urban areas require a population base of about 20,000 per store, and this rule-of-thumb fits the Natrona County retail market (population 82,000). Metro Casper has two Wal-marts, 2 Albertsons, and a Ridley’s. In addition, niche grocers include Sam’s Club, Smith’s Food and Drug, Natural Grocers, Fresh Foods Wyoming, Mile-Hi Frozen Foods, Brattis Meat Market, Little Mexico, MaryAnn’s Gourmet Shoppe, Alpenglou Apothecary, and others.

Isolated communities with a population of 3,500 can support a small rural grocery store.<sup>2</sup> In Bar Nunn, with large, low-cost competing grocery stores available within a 15-minute drive, residents must currently shop elsewhere. However, Bar Nunn’s 3000+ residents now provide the population needed to support a small or specialty grocery of around 10,000 to 20,000 square feet. What is needed is to create the correct lot size, accessibility, visibility, and traffic volume to support that type of development. Ongoing population increase will also improve the market potential



Ongoing population growth in Bar Nunn is gradually increasing market viability for a retail grocery. Bar Nunn’s has a current population of 3,000 and the proposed 170-unit housing development will bring about 500 more. Pass-by traffic on I-25 provides an additional potential market if the store is visible from the interstate. The east end of Sunset Blvd at Salt Creek Road provides that visibility.

The streetscape revitalization plan should help improve retail potential in the planned business area.

This study’s recommendation is that the Town of Bar Nunn work with viable property owner(s) to optimize a site for a grocery store near the Salt Creek Highway / Sunset Boulevard intersection. The Town would then contact grocery retail chains to inform them of the site and the desire for a grocery store. This plan can be used to attract prospective retailers. Continued progress implementing the plan will help reassure retailers that the Town is working to promote the site by moving forward with the streetscape plan.

### Regional Economy

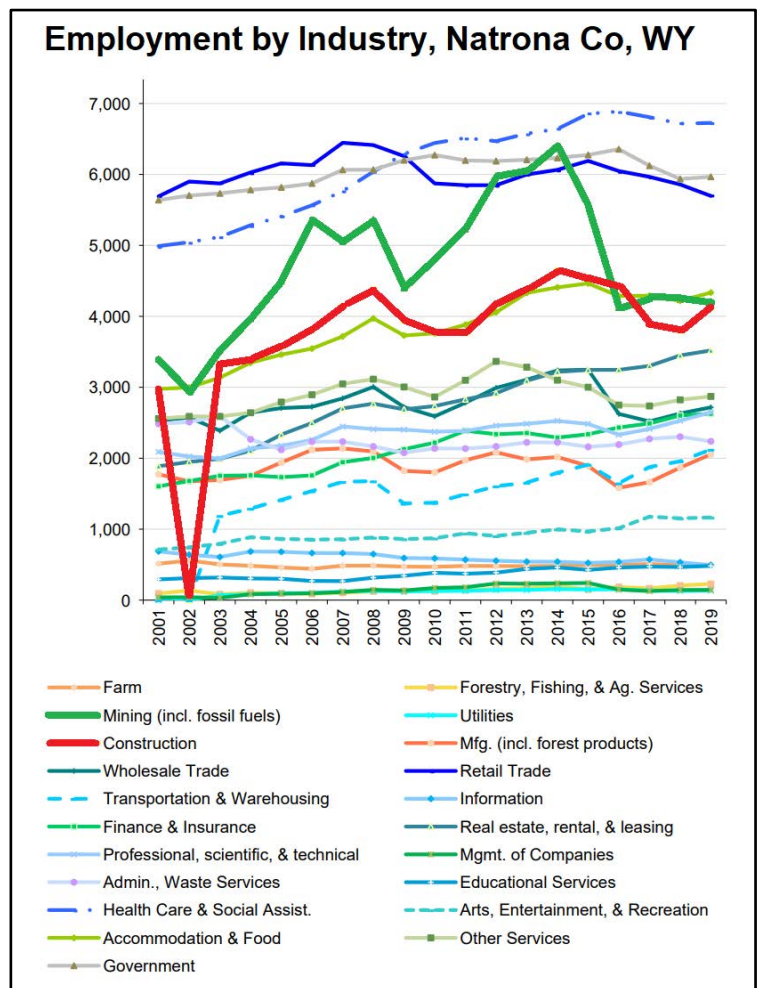
The immediate Bar Nunn area is primarily residential and industrial uses with limited commercial activity: a gas station / convenience store near the Howard Street interchange, and a car wash and coffee chop on Sunset Blvd west of Salt Creek Road. Residents have expressed wishes for a local grocery store and a general/hardware retailer. As residential areas continue to expand, the local market for these commercial services will continue to increase.

The regional labor pool is shared across the metropolitan area and people commute throughout the area. Because of Natrona County’s distance from other urban areas, economic data is most useful and reliable at the County level.

The Natrona County regional economy is tied to the oil industry, and the construction sector is also closely tied to extraction.<sup>3</sup>

From 2000 to 2020, trends show comparatively stable employment in most economic sectors. However, the local linkage between the fossil fuel /oil industry (green line) and the construction industry (red line) shows a strong boom-bust correlation. Boom periods occurred from 2006 to 2008, and again from 2011 to 2015. Busts occurred in 2002 and 2016 to 2020. Construction employment lags a few months behind oil employment.

Other employment sectors show less direct dependence on the oil industry. As metropolitan areas grow, they tend to stabilize and depend less on export employment and more on internal service sectors.



<sup>1</sup> Town of Bar Nunn Community Development Plan, WLC Engineering, Surveying and Planning, June 2008.

<sup>2</sup> O'Brien, Meghan. 2008. *Small Town Grocers in Iowa: What does the future hold?* Ames, Iowa: Iowa State University Extension.

<sup>3</sup> Graph Source: "A Profile of Socio-Economic Trends, Natrona County, WY" Headwaters Economics, April 2021

## Current Road and Street Plans

Since 2007, extensive road system improvements have been proposed around Bar Nunn, between I-25 and Casper-Natrona County International Airport. These plans have the potential to alter traffic patterns on local streets in Bar Nunn.

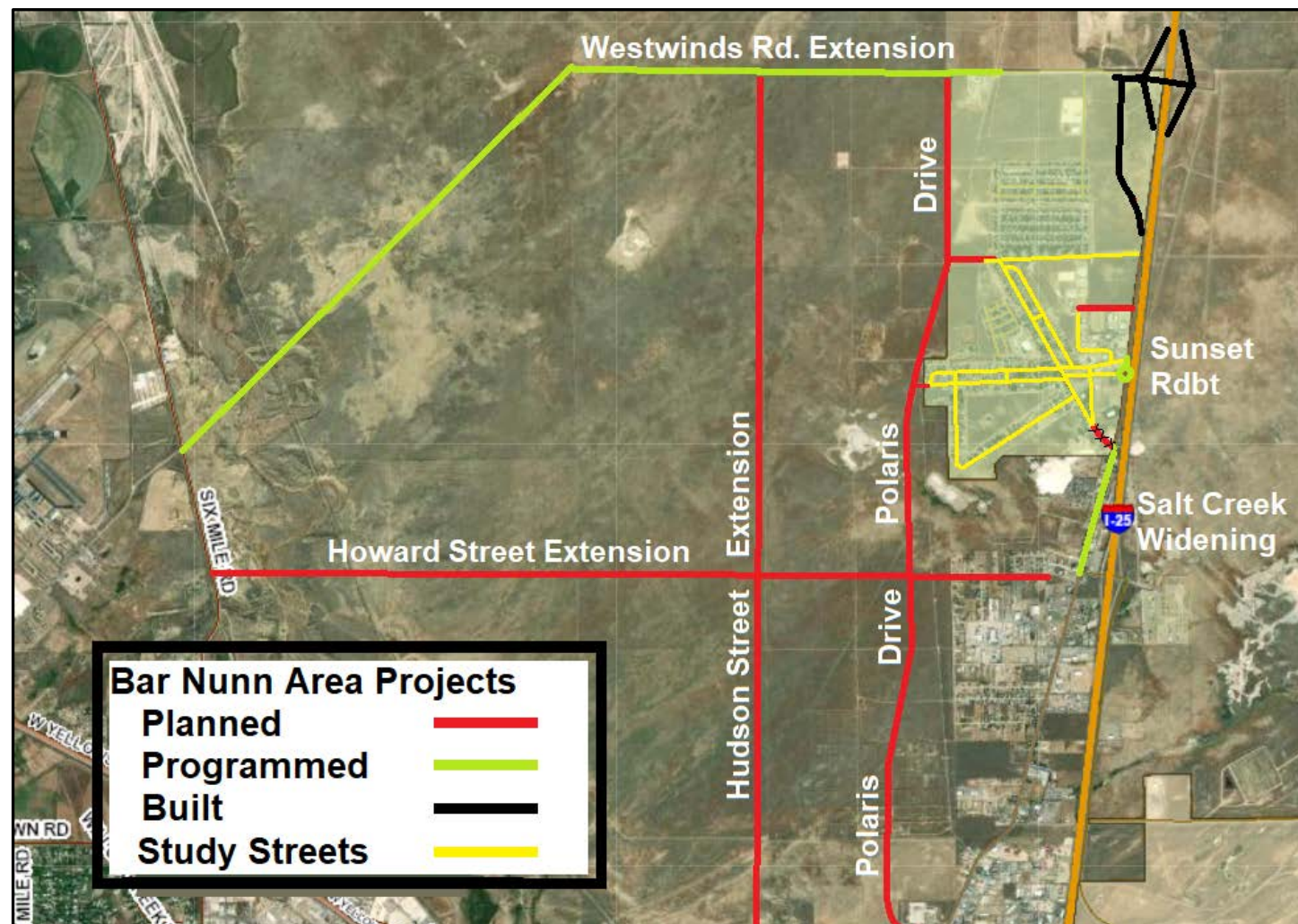
In 2018, a new interchange was built at I-25 and Westwinds Road, which has relieved traffic from the Wardwell Road (Howard Street) interchange.

In the current 2022-2025 Transportation Improvement Program (TIP), Natrona County set aside \$2 million toward extension of Westwinds Road to Six Mile Road. This project will provide a new route from north I-25 to Natrona County Airport and promote new land development along the corridor.

Other projects in the current TIP include construction of a roundabout at the intersection of Sunset Boulevard and Salt Creek Hwy and widening Salt Creek Hwy from Howard Street to Antelope Drive. The timeframe of these proposals is not yet known, but some or all of them will probably be built by 2050 as demand for new land development takes place.

Roads proposed but not yet funded include:

1. Polaris Drive
2. New industrial access street from Salt Creek Hwy to Wardwell Industrial Avenue
3. Extension of Howard Street to Six Mile Road.
4. Extension of Hudson Street north.



Of these proposals, the Westwinds Road Extension and Polaris Drive have the most significant potential to alter traffic flows within Bar Nunn. Connection of Polaris Drive to Sunset Boulevard and McMurry Boulevard will provide Bar Nunn residents with new connections to points west, and change traffic volumes and turn movement patterns at the McMurry/Antelope and Sunset/Antelope Intersections. The function of Sunset Blvd could change from residential access street to minor collector street.

### Excerpt from the Casper Area Long Range Plan describing the POLARIS DRIVE project:

*“Polaris Drive is a new connection roadway project that would provide a minor arterial running north-south along the western extent of Bar Nunn, from Westwinds Road to Salt Creek Highway near Sundown Place. The roadway would provide residents of Bar Nunn with an alternative primary access route and reduce emergency response times. The roadway would create a logical barrier around the western extent of the Town that would accommodate future housing growth without expanding beyond the furthest existing development to the west. The project would also assist in addressing future year congestion along Salt Creek Highway as well as providing a detour route for maintenance and reconstruction activities. As identified in the Town of Bar Nunn Transportation Plan, the facility should be built with sidewalks and bike lanes. In order to maximize utility of the facility, some east-west streets, such as McMurry Boulevard and Sunset Boulevard, would need to be slightly extended. To support construction costs of the road, an agreement between Bar Nunn and WYDOT may be explored where the Town takes responsibility for maintenance in exchange for capital funds.”*

Previous plans include a wide variety of proposals that could influence development and traffic in Bar Nunn. As development continues in coming decades, these or other street proposals may be built, and study area streets should be designed to accommodate any or all of these potential modifications. The following list describes some previous road and street proposals.

BAR NUNN AREA ROAD PLANS, FINDINGS & RECOMMENDATIONS, 2007 TO PRESENT		
STUDY / SOURCE	TIME FRAME	PLAN RECOMMENDATIONS AND PROJECTS
2022-2025 CASPER AREA MPO Transportation Improvement Program (TIP)	2022	NC1 - Construct Westwinds Road extension from CR119 Six Mile Road (\$2,000,000)
	2022	BN1 - Miscellaneous Streets (\$408,750)
	2023	BN2 - Chip Seal Project (\$442,730)
	2024	BN3 – Sunset Boulevard Improvements (\$720,000)
	2025	BN4 – 2025 Miscellaneous Streets (\$400,000)
	2022	BN5 – Sunset Boulevard Roundabout (\$720,000)
2021 Antelope Drive Salt Creek Hwy Access Study and Plan	2023	BN6 – Streets Realignment (\$330,000)
	Short Term	Eliminate maintenance of Antelope from Arena Street to Salt Creek. If Antelope is closed, convert to non-motorized use. (2025?) (#1 pg. 24)
	Short Term	Construct roundabout at Salt Creek and Sunset. Extend taper to allow NB-WB left turn lane to Prairie Lane. (This should be done BEFORE closing Antelope.) (#2 pg. 28)
	Short Term	Construct channelization improvements along Sunset Blvd and Prairie Lane at Antelope. (Curb extensions, crosswalks, AWSC, Stop bars, sidewalk and 8’ trail segments. (#6 Pg 28)
	Mid Term	Construct streetscape improvements along Sunset between Salt Creek and Antelope to build an attractive gateway to Bar Nunn and a new town center, along with the new Town Hall construction. (#7 pg. 29)
	Mid Term	Construct new E-W truck access road from Salt Creek Hwy to Wardwell Industrial Avenue. (#5 pg. 30)
Long Term	Build shared-use path along west side of Salt Creek from Sunset to Howard. (#7 pg. 32)	

	TBD	Relocate School Bus Stops
	TBD	Enforce speeding, traffic control compliance, and truck restrictions.
	TBD	Secure ROW from KOA and WYDOT
	TBD	Advance Study Recommendations into TIP for Preliminary and Final Design
<b>2020 CONNECTING CROSSROADS Casper Area Long Range Transportation Plan Update</b>	Medium Term	New roadway construction (RC4 Westwinds Road Extension) between the Airport and Bar Nunn/I-25 has been cited as a priority from Airport representatives in order to support future growth of the Business Park. Westwinds Road, extension to Airport from end of Westwinds Rd. (north of Bar Nunn) to County Road 119. 5.15 miles, \$21,099,000
	Medium Term	Salt Creek Hwy widening from Howard St. to Antelope Dr. 0.67 miles, \$2,235,000.
	Long Term	Polaris Drive from RC 10 (Westwinds Road) to Salt Creek Road Polaris Drive (new minor arterial) from Westwinds Rd. to Salt Creek, Hwy 4.15 miles, \$36,004,000
<b>2017 Town of Bar Nunn Transportation Plan</b>		Construct I-25 / Westwinds Interchange (Completed in 2018 for \$12 million)
		Construct Polaris Drive PEL
		Construct new N-S arterial with sidewalks and bike lanes on W side of Bar Nunn as a bypass and alternative emergency access
		Extend Howard Street to the Airport.
		Extend Westwinds Road to the Airport
		Extend Hudson Street north to Howard Street extension
		Construct new N-S Road about 1 mile west (Hudson Street Extension)
		Improve Bike and Pedestrian Connections
		Extend Transit to Bar Nunn
		Study and Improve Salt Creek Highway
<b>2015 Interstate 25 Entryway Beautification Project</b>		<b>Westwinds Interchange:</b> Boulevard trees along Westwinds Road. Roundabout with Bar Nunn gateway monument at Salt Creek intersection. Welcome to Bar Nunn on westbound approach to underpass. Projected population growth of Bar Nunn and the associated economic and development benefits. North gateway into the Bar Nunn community and Casper area. Open land - little restriction for expansion "Blank slate" provides unique opportunity to guide development and space for non-motorized facilities. Existing interstate bridges have short span which limits space beneath.
		<b>Wardwell Road Interchange:</b> Roundabout interchange with pedestrian improvements. South gateway to Bar Nunn. Right-of-way provides space. Little development on the east side of I-25 allows space for aesthetics and infrastructure modifications (without infringing on neighboring properties). Pedestrian and non-motorized vehicle access Wardwell Road is not located within the interchange area of influence, causing wayfinding confusion. Interchange is not within the metropolitan boundary. Space is limited west of the Interstate.
<b>2014 Polaris Drive / Westwind Blvd Planning and Environmental Linkages Study</b>	High Priority	Polaris Drive Arterial, 2-4-lane arterial segment 3 from US-20/26 to Hartrandt south Town Line, plus Segment 2 from Hartrandt S Town line to Bar Nunn south Town Line.
	Low Priority	Polaris Drive 2-4-lane arterial segment 1 along existing dirt road from Bar Nunn S Town line to Westwinds Road, with intersections at Sunset Drive, McMurry Blvd, and Westwinds Road.
<b>2013 Bar Nunn I-25 Interchange Feasibility Study</b>		Westwinds Road scored highest on alternative analysis (55 pts) with No-Build and McMurry options at 28 and 49 points, respectively.

<b>2012 Bar Nunn Salt Creek Intersection and Subarea Planning Traffic Study</b>	Priority 1	Westside Boulevard (AKA Polaris Drive) and connecting streets: A new arterial road parallel to Salt Creek Highway, with intersections at Westwinds, New Street 1, New Street 2, McMurry Blvd, New Street 3, Sunset Blvd, and Palomino Ave.
	Priority 2 (2018)	NEW I-25 Interchange at Westland Road north of McMurry, with possible future connection to Six Mile Road northeast of the airport would facilitate projected development and truck traffic. (Constructed 2018) Bar Nunn population grew 136% between 2000 and 2010.
<b>2010 Bar Nunn Traffic Study</b>		Multi-use paths on other streets (Sunset Blvd, Palomino Ave, Trails End, Prairie Lane, Bel Vista). On taxiways, 11' lanes and 8' parking lanes would allow 4' walking paths.
		Move signs outside of walking paths.
		Make school crossings conform to MUTCD.
		Improve signs at runway intersections.
		Replace YIELD signs with STOP signs.
		At Palomino/Trails End, remove the STOP sign until warranted. Install end of road signs.
		At Sunset Blvd / Prairie Lane, install a STOP sign on Prairie Lane.
		At Antelope Dr./Bel Vista Dr, replace YIELD sign with STOP sign.
		At Sunset/Antelope, add STOP signs to create two TWSC-controlled intersections. Define driving area of E Sunset with curb or pavement markings.
		At Palomino/Antelope, add STOP signs on east Antelope for consistency. Volumes on east leg of Palomino are too low to warrant other modifications.
	Short Term School	Prohibit Parking on N side of Siebke Dr. during school bus operations. Assign crossing guard at Siebke Dr Intersection Provide parking on west side of school building
	Long Term School	Create second school access on Siebke Drive - OR Create second school access on Tipton Street
		Define Bar Nunn Functional Class System
<b>2008 Salt Creek Hwy / McMurry Blvd Corridor Study</b>		Continued use of Wardwell Interchange is not feasible. Recommends new I-25 Interchange for the Town of Bar Nunn.
		Westwinds Road would facilitate future industrial and commercial needs.
		Salt Creek undercrossing near Westwinds is a feasible location for interchange.
		An interchange at McMurry Blvd could have adverse impacts on residential development.
<b>2007 CONNECTING CASPER Long Range Transportation Plan Update</b>		Create NE corridor belt loop system east of Bar Nunn to include extension of Bryan Stock Trail north, then west to Bar Nunn at or near McMurry Blvd
		Possible interchange at I-25 and McMurry Blvd
		Connection from I-25 near Bar Nunn to Natrona County Airport on WY Hwy 20/26 to improve regional mobility.

Planned Natrona County Road Projects in the Bar Nunn Area (Source: 2022-2025 TIP)											
PROJECT ID #	STATUS		PROJECT YEAR								
	PIN	Description	Phase	2022		2023		2024		2025	
				Cost	Source	Cost	Source	Cost	Source	Cost	Source
NC1	New Construction Westwinds Road Extension from CR 119 (Six Mile Road)	Planning									
		Design									
		Engineering									
		Construction	2,000,000	IRP							
		<b>Total</b>	<b>\$2,000,000</b>								

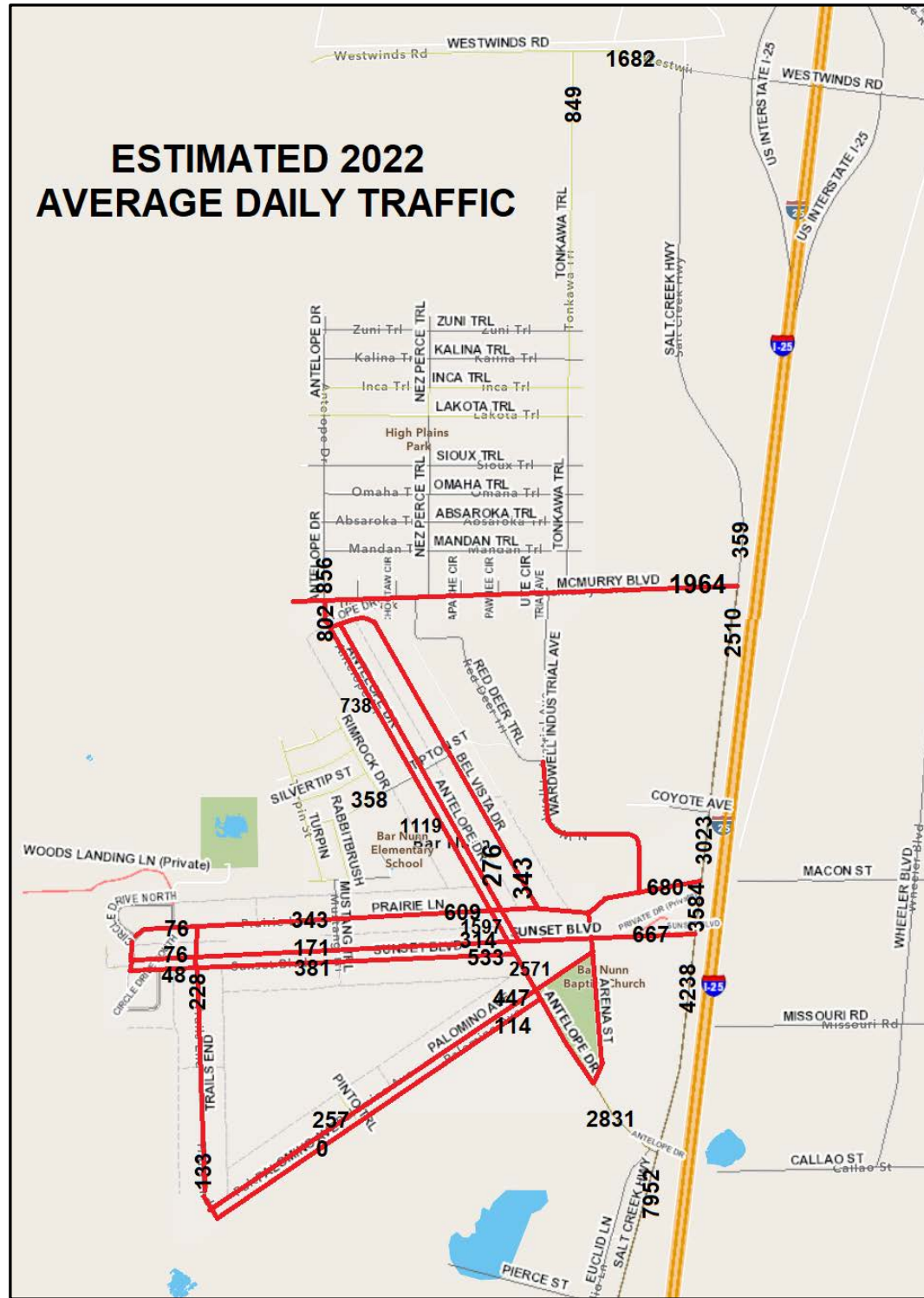
Town of Bar Nunn Sixth Penny Revenue Projections (Source: 2022-2025 TIP)					
Program/Funding Source	2022	2023	2024	2025	TOTAL
Optional 1% Sales WBC	1,128,750	772,730	720,000	399,999.67	3,021,479.67
<b>TOTAL</b>	<b>1,128,750</b>	<b>\$ 772,730</b>	<b>\$ 720,000</b>	<b>\$ 400,000</b>	<b>\$ 3,021,480</b>

Planned Town of Bar Nunn Street Projects (Source: 2022-2025 TIP)												
PROJECT ID #	STATUS		PROJECT YEAR									
	PIN	Description	Phase	2022		2023		2024		2025		
				Cost	Source	Cost	Source	Cost	Source	Cost	Source	
BN1	Miscellaneous Streets	Planning	6,250	1¢								
		Design	17,500	1¢								
		Engineering	35,000	1¢								
		Construction	350,000	1¢								
		<b>Total</b>	<b>\$408,750</b>									
BN2	2022 Chip Seal Project	Planning			7,500	1¢						
		Design			7,500	1¢						
		Engineering			38,880	1¢						
		Construction			388,850	1¢						
		<b>Total</b>			<b>\$442,730</b>							
BN3	Sunset Boulevard Improvements	Planning					30,000	1¢				
		Design					30,000	1¢				
		Engineering					60,000	1¢				
		Construction					600,000	1¢				
		<b>Total</b>					<b>\$720,000</b>					
BN4	2025 Miscellaneous Streets	Planning								16,667	1¢	
		Design								16,667	1¢	
		Engineering									33,333	1¢
		Construction									333,333	1¢
		<b>Total</b>									<b>\$400,000</b>	
BN5	Sunset Boulevard Roundabout	Planning	30,000	1¢								
		Design	30,000	1¢								
		Engineering	60,000	1¢								
		Construction	600,000	1¢								
		<b>Total</b>	<b>\$720,000</b>									
BN6	Streets Realignment	Planning			7,500	1¢						
		Design			7,500	1¢						
		Engineering			15,000	1¢						
		Construction			300,000	1¢						
		<b>Total</b>			<b>\$330,000</b>							
<b>Yearly Total</b>				<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>					
				<b>\$1,128,750</b>	<b>\$772,730</b>	<b>\$720,000</b>	<b>\$400,000</b>					
<b>Source Total</b>			Consol. Planning Grant	One Cent Fund	Consensus	One-Time	Surf. Trans Program	WY Business Council	FTA 5307	Other	TOTAL	
				\$3,021,480								

## Traffic

### Current Traffic Volumes:

The map below depicts estimated 2022 daily traffic volumes on various Town streets. Volumes on McMurry and Antelope are from counts taken March 24, 2022. Other streets show either projections from count trends from recent years or estimates based on Institute of Transportation Engineers' residential trip generation rates.



### Projected Traffic Volumes:

Due to uncertainty in future development patterns and road plans, future link volumes are uncertain. The following table provides a range of traffic volumes possible in the next twenty years:

#	Street Name	From	To	2022 Daily Traffic	Estimated No-Action Traffic	Functional Class
A	McMurry Blvd	Salt Creek	W. terminus	1,964	3,000 to 5,000	Collector
B1	Antelope Dr. West	McMurry	Arena	2,571 to 738	2,500 to 3,000	Collector
B2	Antelope Dr. West	Arena	Salt Creek	2,831	3,000 or 0	Collector
B3	Antelope Dr. East	Bel Vista	Arena	276	276	Res. Access 1
C	Bel Vista	Antelope	Prairie	343 (max)	343 (max)	Res. Access 2
D	Wardwell Ind. Ave.	Badger	Prairie	300	450	Ind. Access
E1	Prairie Lane west	Sunset	Antelope	609 (max)	650	Res. Access 2
E2	Prairie Lane east	Antelope	Salt Creek	690	800	Com. Access
F1	Sunset Blvd north	Prairie	Antelope	314 (max)	350	Res. Access 1
F2	Sunset Blvd south	Prairie	Antelope	533 (max)	550 – 1,000	Res. Access 1
F3	Sunset Blvd east	Antelope	Salt Creek	667	700 – 4,500	Collector
G1	Trail's End	Circle Dr.	Prairie	50	200	Res. Access 2
G2	Trail's End	Prairie	Palomino	228	250	Res. Access 2
H	Mustang Trail	Prairie	Sunset S.	<100 (est.)	700	Res. Access 2
I1	Palomino Ave north	Trail's End	Antelope	447	450	Res. Access 1
I2	Palomino Ave south	Trail's End	Antelope	114	200	Res. Access 1
I3	Palomino Ave east	Antelope	Sunset	100 (est.)	500	Rec. Access
J	Arena Street	Prairie	Palomino	<100 (est.)	TBD	Com. Access

**A Little About Traffic and Safety:**

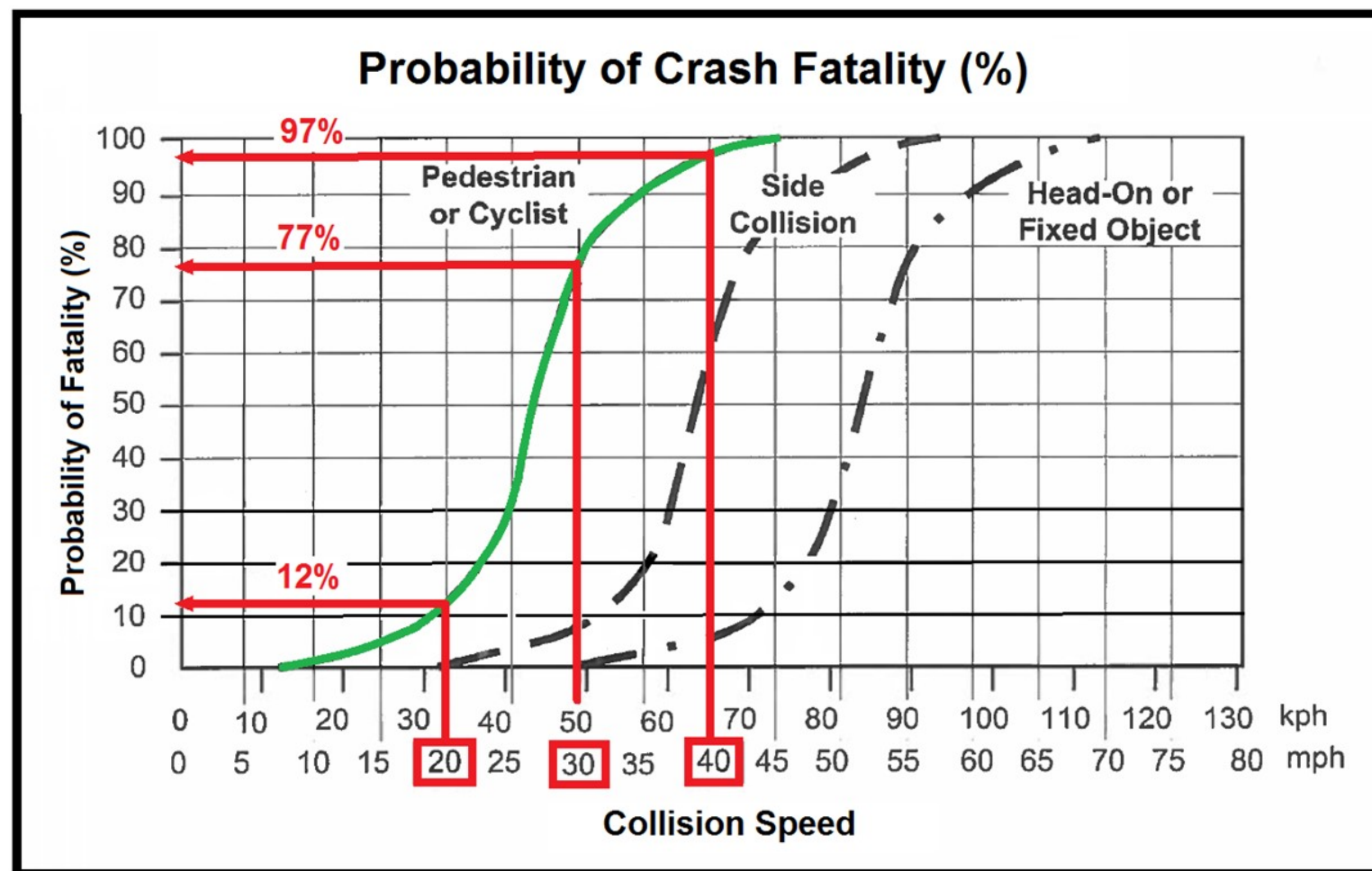
1. Development causes traffic.
2. Traffic causes crashes.
3. Speed causes injuries.
4. Crashes happen where paths cross (crosswalks and intersections).
5. We can predict where traffic will grow most, and *design intersections to control speed and prevent the most dangerous traffic conflicts* (Broadside, Head-On, Left Turn, and vehicle-Pedestrian conflicts)
6. The modern roundabout intersection solves each issue in #5 above.
7. The most important objective of any streetscape study is to promote public safety, by reducing the likelihood of injuries, and fatalities.



In any road environment, the probability of death or serious injury depends on several factors, including:

1. Collision Speed
2. Type of crash (Broadside, Angle, Head-On, Side Swipe, Fixed Object, Bicycle and pedestrian.)
3. Protection (padding, air bags, seat belts, etc.)

In Bar Nunn, the prevailing speeds are 20 to 30 MPH. Under those conditions, vehicle occupants are reasonably safe. The highest probability of death or serious injury is for bicycles and pedestrians. Where pedestrians and cars must share space, it is essential to keep vehicle speeds low. With this graph, we can observe that as the speed of crash increases, from 20 to 30 MPH, the probability of a pedestrian or bicyclist fatality increases from 12% to 77%. Therefore, the study recommends a speed limit of 20 MPH on all streets where vehicles and pedestrians must share space.

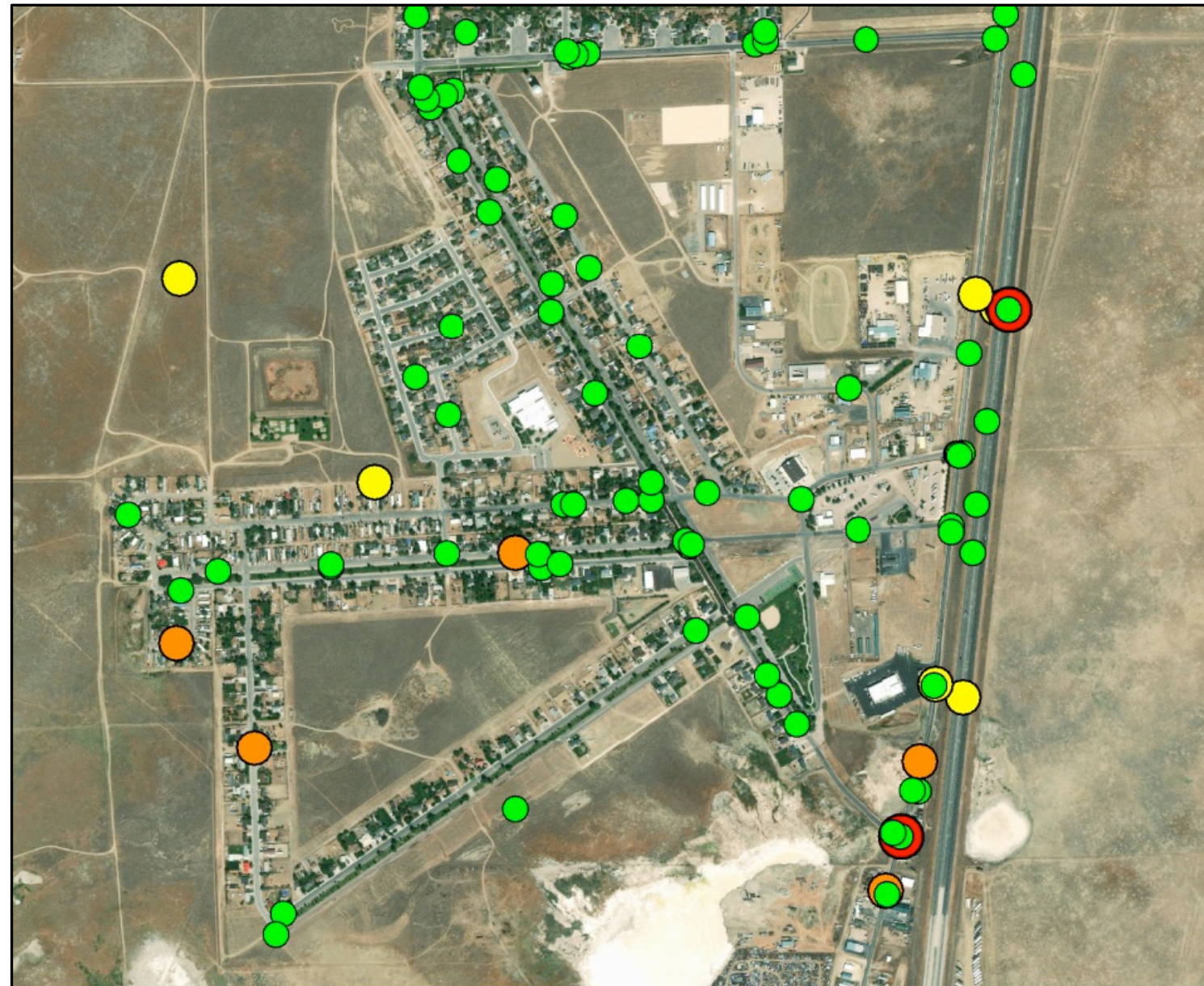


**Bar Nunn Ten Year Traffic Crash History:**

Maps below and on the following pages depict crashes at locations recorded by police officers from January 2012 to December 2021. Records are maintained by the Wyoming Department of Transportation. Crash severity is coded by color:

**GREEN = NO INJURY**  
**ORANGE = MINOR INJURY**

**YELLOW = POSSIBLE INJURY**  
**RED = SERIOUS INJURY**



**REPORTED CRASHES 2012-2021**  
Green = No Injury, Yellow = Possible Injury  
Orange = Minor Injury, Red = Serious Injury

BAR NUNN  
STREETSCAPE  
REVITALIZATION PLAN  
CASPER AREA MPO



**Traffic and Safety in Bar Nunn:**

Traffic and safety principles described on the previous page are apparent in the crash record in Bar Nunn. We can see the following on the map:

1. Crashes are concentrated at driveways and intersections where the highest numbers of vehicles cross paths. These locations are also called "conflict points".
  - a. Salt Creek Highway near Antelope Drive
  - b. Antelope Drive near Prairie Lane
  - c. Antelope Drive near Bel Vista
2. Serious injuries (Red Dots) occur on higher speed roads and streets (Salt Creek Highway and I-25).
3. Minor injuries and suspected injuries are dispersed at random locations and do not exhibit a pattern.
4. There were no pedestrian or bicycle crashes during the study period.

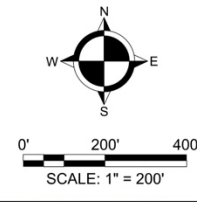
**Safety Effects of Rerouting Traffic:**

1. When new traffic is created or when traffic is re-routed from one street to another, new traffic conflicts are created and the locations of traffic conflicts can also move. For this reason, street designers anticipate these effects and design the street system to prevent safety problems.
2. Examples:
  - a. Construction of a new 170-unit subdivision north of Prairie Lane will create about 1600 new trips per day, which will need to get to Salt Creek Highway somehow or other. The street system will need to safely accommodate that.
  - b. Closing the intersection of Salt Creek Highway and Antelope Drive would relocate traffic to the intersections of Salt Creek Highway and Sunset Blvd, and to the intersection of Sunset Blvd and Antelope Drive. These intersections would need to be re-designed to minimize conflicts and safely accommodate that traffic.
  - c. Future construction of a street west of Bar Nunn would re-route traffic in that direction, and again alter the pattern of traffic conflicts. A good design needs to accommodate that possibility.

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- PROPERTY DAMAGE ONLY/UNKNOWN
- POSSIBLE INJURY
- SUSPECTED MINOR INJURY
- SUSPECTED SERIOUS INJURY



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SHEET NUMBER: MAP-02		PROJECT NUMBER: 21182	
CLIENT INFORMATION <b>BAR NUNN STREETSCAPE REVITALIZATION PLAN</b> <b>CASPER AREA MPO</b>			
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5.

## Existing Street Conditions

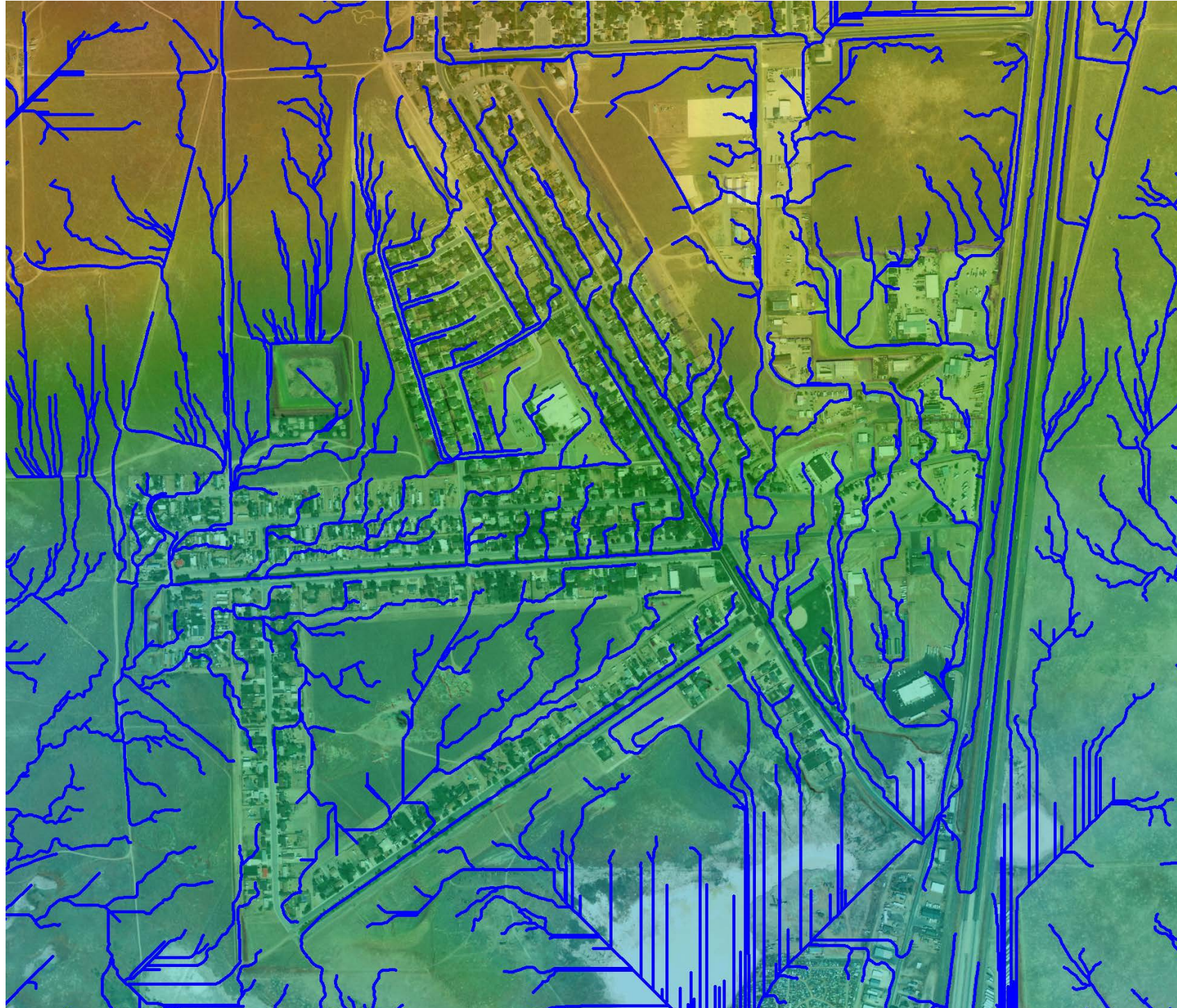
The table below lists existing characteristics and condition of study area streets.

Street	From	To	Former Function	Current Function	Future Functional Class	Speed Limit	Highest Volume	Street Length (ft)	Pavement Width (ft)	Sidewalk Width (ft)	Existing Layout	Curb and Gutter	Platted ROW Width	Pavement Area (sf)	Pavement Condition	Boring #	Asphalt and Base	Bearing Capacity /SF	Notes
Antelope Drive West	McMurry Blvd	Arena St.	Runway 14/32	Collector	Collector	30	2830	5,277	29	10	B/M/T/T	West side only	151	153,033	Good/New	2B5 & 2B6		1400-4800, 1700-4300	Good surface. Poor base structure S of Arena St. 75 ESALS. Geotech recommended 3" mill and 3" overlay.
Antelope Drive East	Bel Vista Dr.	Arena St.	Runway 14/32	Residential Access	Residential Access	30	345	4,899	50	0	B/M/P/T/T/P	No	151	244,950	Fair	1B3	4.5 + 4.5	2200-7500	Needs Seal Coat N of Palomino
Arena Street	Prairie Lane	Sunset Blvd N	Hangar Taxiway	Commercial Access	Commercial Access	30	100	293	30	0	T/T	Yes	68	8,790	Good/New				
Bel Vista Drive	Antelope Dr West	Arena St.	Taxiway 14/32	Residential Access	Residential Access	20	350	3,598	45	0	P/T/T/P	West Side Only	51	161,910	Fair/Poor				Needs Seal Coat at Antelope. Surface rough. North and east pavement edges have deteriorated to gravel. Needs chip seal throughout.
McMurry Blvd	Salt Creek Hwy	Tonkawa	N/A	Residential Collector	Commercial Collector	30	1975	1,610	45	0	T/T	No	80	72,450	Fair/Poor				Raised crosswalk east of Tonkawa. Rutting & edge spalling near Salt Creek Hwy. Shoulders need gravel.
McMurry Blvd	Tonkawa	West Terminus	N/A	Residential Collector	Residential Collector	30	1000	2,655	45	4	P/T/T/P	N Side Only		76,995	Fair				Needs Seal Coat
Palomino Avenue North	Trails End	Arena St.	Runway 05/23	Residential Access	Residential Access	30	450	4,392	50	0	P/T/T/P/B	North Side Only	150	219,600	Fair				Longitudinal cracking in S parking lane. Alligator cracking in EB lane. Needs chip seal.
Palomino Avenue South	Trails End	Antelope Drive West	Runway 05/24	Residential Access	Residential Access	30	125	3,720	50	0	P/T/T/P/B	South Side Only	150	186,000	Variable				Gravel surface W of 1995 with ponding water. New east of 1995. Good condition E of Antelope. Poor (gravelly) East of Arena
Prairie Lane E of Antelope	Salt Creek Hwy	Antelope Drive West	Taxiway	Antelope Drive West	Antelope Drive West	30	680	2,071	28	0	P/T/T	S Side E of Arena	50	57,988	Good/Fair	1B1 & 1B2	5.5" + 5.5" 4.0" + 5.0"	1200-4200 1900-4800	Some cross cracking E of Arena to Salt Creek Hwy. Pothole at Wardwell Int.. Needs seal. 31 ESALS. Geotech recommended 2" mill & 3" overlay.
Prairie Lane W of Antelope	Antelope Dr West	Sunset Blvd N	Taxiway 08/26	Residential Access	Residential Access	20	600	3,743	45	0	P/T/T/P	South Side Only	51.68	168,435	Poor				Highest traffic wear and tear and rutting/structural failure near Antelope. Surface in poor condition throughout. 90-degree parking w of Mustang.
Sunset East of Antelope	Antelope Dr West	Salt Creek Hwy	Runway 08/26	Commercial Access	Commercial Collector	30	667	1,745	28	0	T/T	No	150	48,860	Poor	1B5 & 1B6	6.5" + 4" & 5" + 5"	2200-6100 1900/5500	Heavy cracking from KOA to Antelope.
Sunset Boulevard North	Prairie Lane	Antelope Drive West	Runway 08/26	Antelope Drive West	Residential Access	30	450	3,655	50	0	P/T/T/P/B	No	150	182,750	Poor	1B4	4" + 5"	1600-7100	Highest traffic wear and tear and rutting/structural failure near Antelope. Crack seal applied. Needs Mill and resurface in east end.
Sunset Boulevard South	Prairie Lane	Antelope Drive West	Runway 08/26	Residential Access	Residential Collector	30	125	3,655	50	0	P/T/T/P/B	South Side Only	150	182,750	Poor	2B1, 2B2, 2B3, 2B4		2000-4000 2000-4000 2000-4000 1700-3000	Heavy cracking throughout length. Patched. 37 ESALS. Geotech recommended 2" mill and 3" overlay.
Trails End	Prairie Lane	Palomino Ave South	Cross Taxiway	Residential Access	Residential Access	20	250	2,812	45	0	P/T/T/P	Yes	51	126,540	Fair				North end needs Chip Seal
Wardwell Industrial Avenue	Prairie Lane	Badger St.	Airport Service Rd	Industrial Access	Industrial Access	30	350	2,010	26	0	T/T	No	60	52,260	Good				Needs guardrail and/or curve indications at curve near 4840 WIA.. Poor drainage at the SW corner of Red Deer Trail. Potential future NM trail
<b>Total</b>								<b>46,135</b>						<b>45</b>	Acres				

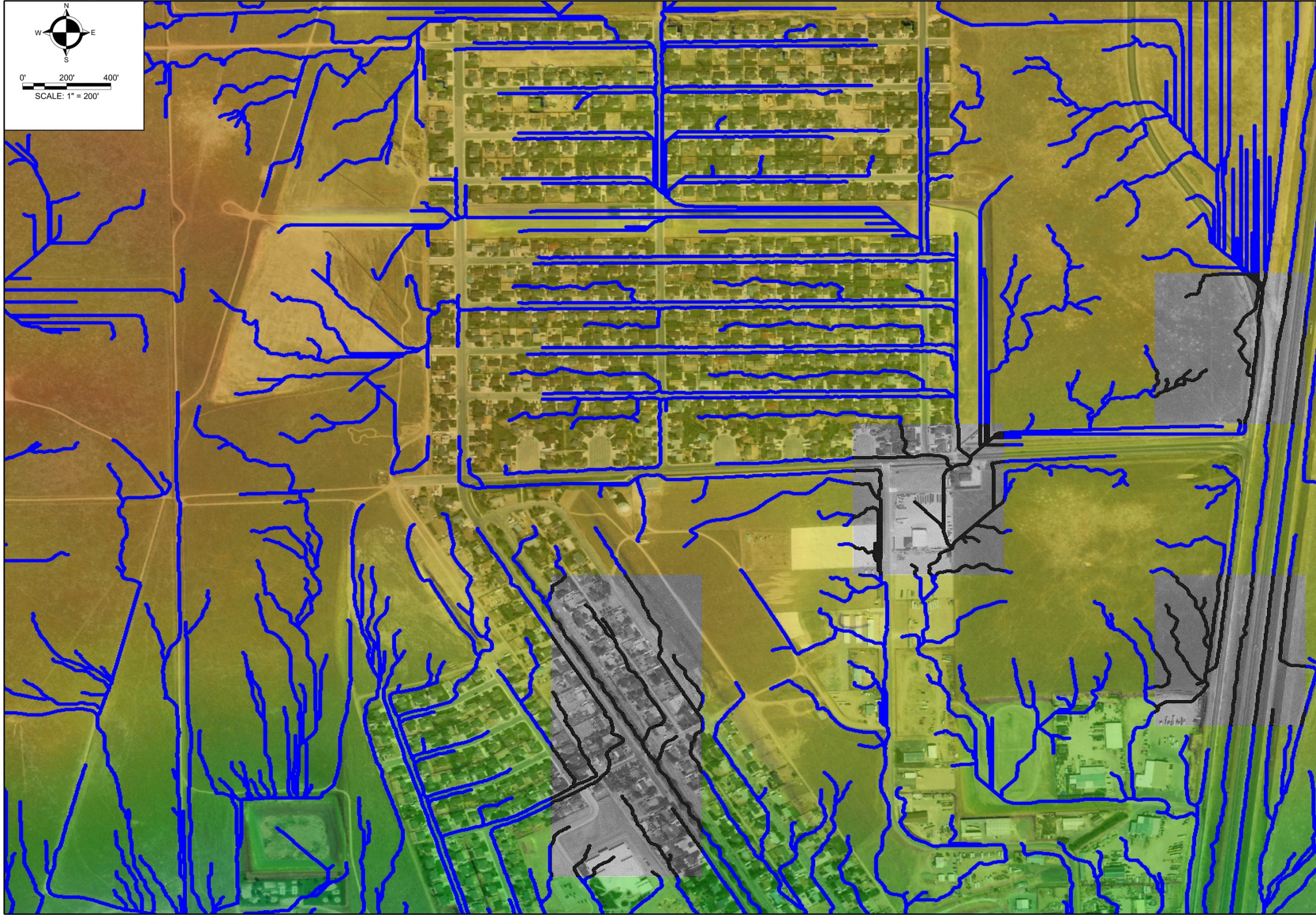
## Terrain and Drainage

The entire study area slopes south and discharges into the salt pans south of town, Soda Lake, and the North Platte River. Within Bar Nunn, runway edge pans and medians provide major drainage channels toward the south. Although some residents reported slow drainage, the Town of Bar Nunn stated there are no significant areas of ponding that need to be mitigated using the street system.

Images on following pages illustrate drainage patterns within Bar Nunn. Note: These are LiDAR computer generated images and do not take into account buried drains that are not visible from the air.

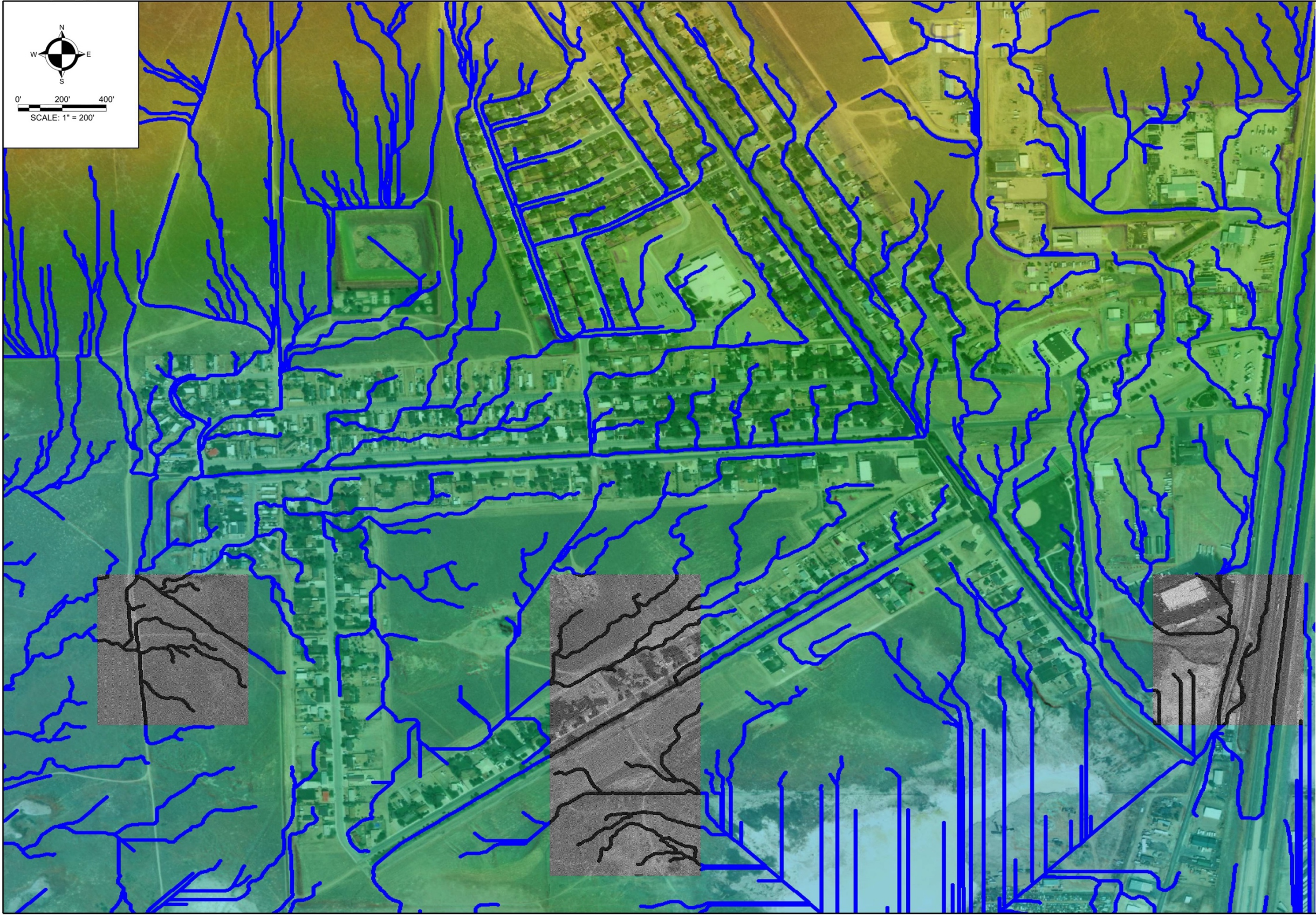


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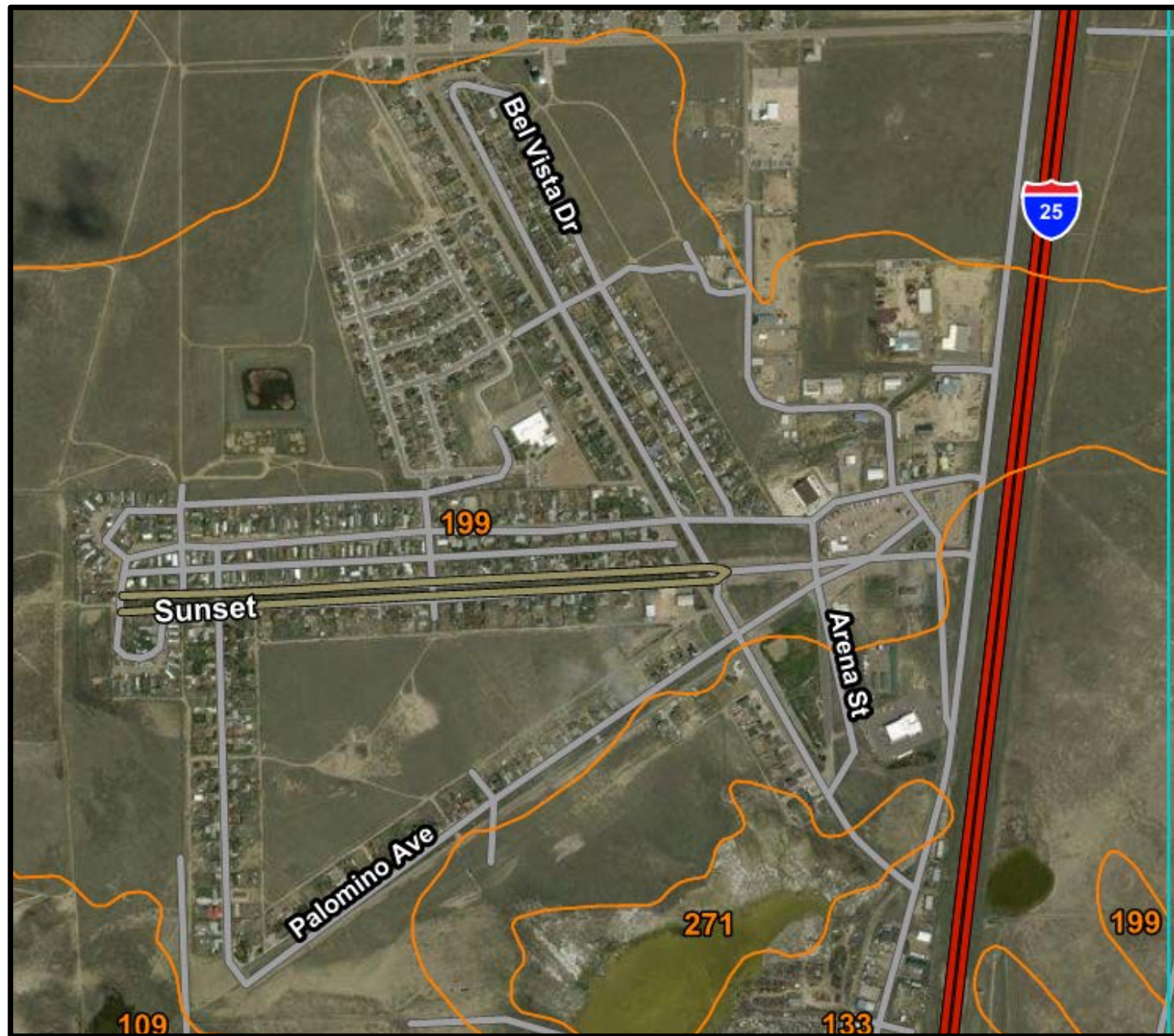
### Study Area Soils:

Study area soils are primarily soil classes 199 and 200 (well drained loamy sand) which is suited to road and building construction.

The exception is an area of wetland soils (Class 271 / Salt Flats) near the Antelope Drive / Arena Street intersection (see map below).

Because of the poor structural characteristics of this hydric (wet) soil, plans call for eliminating maintenance on that section of Antelope Drive and possibly closing that street once the road is no longer serviceable. The main entrance to Bar Nunn would then be relocated to the Sunset Boulevard/Salt Creek Road intersection.

Closure of Antelope Drive would re-route the existing 2,800 vehicles per day to Sunset Blvd. This would improve the visibility and accessibility of Sunset Boulevard, making it a more viable location for commercial development, including the community's desired grocery store and/or another small local retailer.



### Notable Assets and Issues

On Prairie Lane and former taxiways, the existing street road cross section looks like a rural state highway. Extra-wide travel lanes and double yellow centerline give the impression of a 60-MPH road, which conflicts with the 20 MPH speed limit.



Changing the appearance of the street can change the driver's visual cues and reinforce that this is a low-speed environment where all users share the street. This can be emphasized by installing bump-outs (curb extensions) at the Mustang Trail and Trail's End intersections. Options for former taxiways include visual narrowing, either with bike lanes as shown below, or pedestrian lanes with sharrows on the travel lane, indicating drivers share the lane with cyclists.

#### Option A: Bike Lanes



#### Option B: Sharrows and Pedways



Whichever option is selected, all former taxiways should be consistent.

**Town Center Land Ownership:**

Zoning, land ownership and utility easements restrict what can be built in the town center. The Town of Bar Nunn will reduce the Sunset Right-of-Way to 50 feet west of Arena Street. Existing rights of way along the former runways allow a variety of public uses. Proposed changes to regional road connections may significantly change traffic volumes. (Image Source: Natrona County Assessor GIS (Geographic Information System))



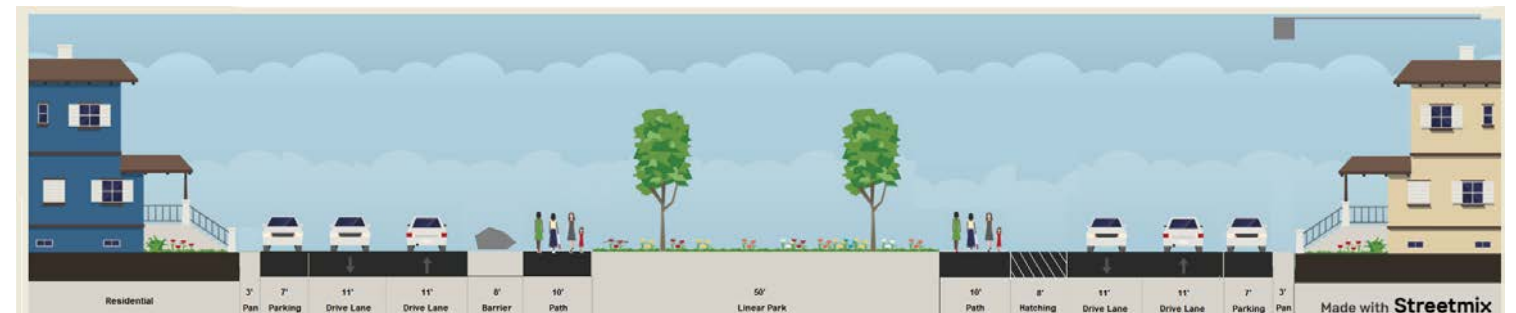
**Former Runway Streets**

Each original runway was 150 feet wide. A 50-foot median was cut from each one, leaving two parallel 50-foot-wide streets: 100 feet of asphalt to maintain. (A typical residential street with housing on both sides is about 30-35 feet, plus sidewalks.)

The existing Antelope Drive cross section (illustrated below) has an 8-foot landscape strip cut out, leaving 32 feet of street: more than sufficient for a residential collector with parking on one side of the street.

The parallel street on the opposite side retains the old 50-foot cross section, despite traffic volumes of less than 300 cars per day (about 30 cars per hour during peak hours.) The collector street on one side of each former runway offers more than sufficient capacity to accommodate these few vehicles.

While most runway streets retain 100 feet of pavement width, and this has been reduced to 92 feet on Antelope Drive and there is potential to remove significantly more and still have plenty of traffic capacity. Much of the existing pavement area might be used for other community purposes.



**Sunset Boulevard:**

Sunset Boulevard was proposed to connect someday to a new north south road on the west side of town (Polaris Drive). This would augment the street’s existing function as a minor collector street and provide a west entrance into Bar Nunn.

While we do not know if this will ever happen, the plan should be done so that it will accommodate that possibility.

Of the two sides of Sunset Boulevard, the south side is better suited for this purpose because a residence is along the north alignment. The south alignment also makes it possible to “square up” the skewed intersection of Sunset Boulevard at Antelope Drive and eliminate two of the existing intersections there.



**Palomino Avenue**

Existing Palomino Avenue is finished on the north side and only the east half is paved on the south side. Th north side of Palomino is lined with single-family homes throughout i’s length, and traffic volumes are not expected to change.



Pavement on the south side has reverted to dirt and both sides are signed at 30 MPH. Neighbors have stated that this is too fast and express concern about through traffic.



**Newly Revitalized Antelope Drive:**

Recent reconstruction of Antelope Drive west shows creative use of existing street space. The street was resurfaced, and an eight-foot section of asphalt was removed, with the space reused for drainage and vehicle-pedestrian safety barrier. This is crucial alongside a 30 MPH collector street. Here, large intimidating rocks create “shy-distance” and cause drivers to keep back and slow down.

This cross section can serve as a standard for other former runways (Palomino Ave and Sunset Blvd) that serve as residential collectors. Each street may have a distinctive barrier design (wood, metal, etc.) to create a unique visual character.



**School Crosswalks:**

Bar Nunn Public School officials expressed concern about risks to school children crossing Antelope Drive. While the crossing at Tipton is marked and stop controlled, the alley sidewalk near the playground is not marked and drivers may not see or expect pedestrians there.



**Rectangular Rapid Flash Beacons (RRFB):**

Where significant numbers of pedestrians must cross medium-traffic streets, the RRFB offers a good solution in many cases. A pedestrian pushbutton causes the lights to flash and focus driver attention on the crosswalk. These may be useful at school crossings on Antelope and elsewhere. RRFB may be hard wired or solar powered.



**Sunset Boulevard / Antelope Drive Intersections:**

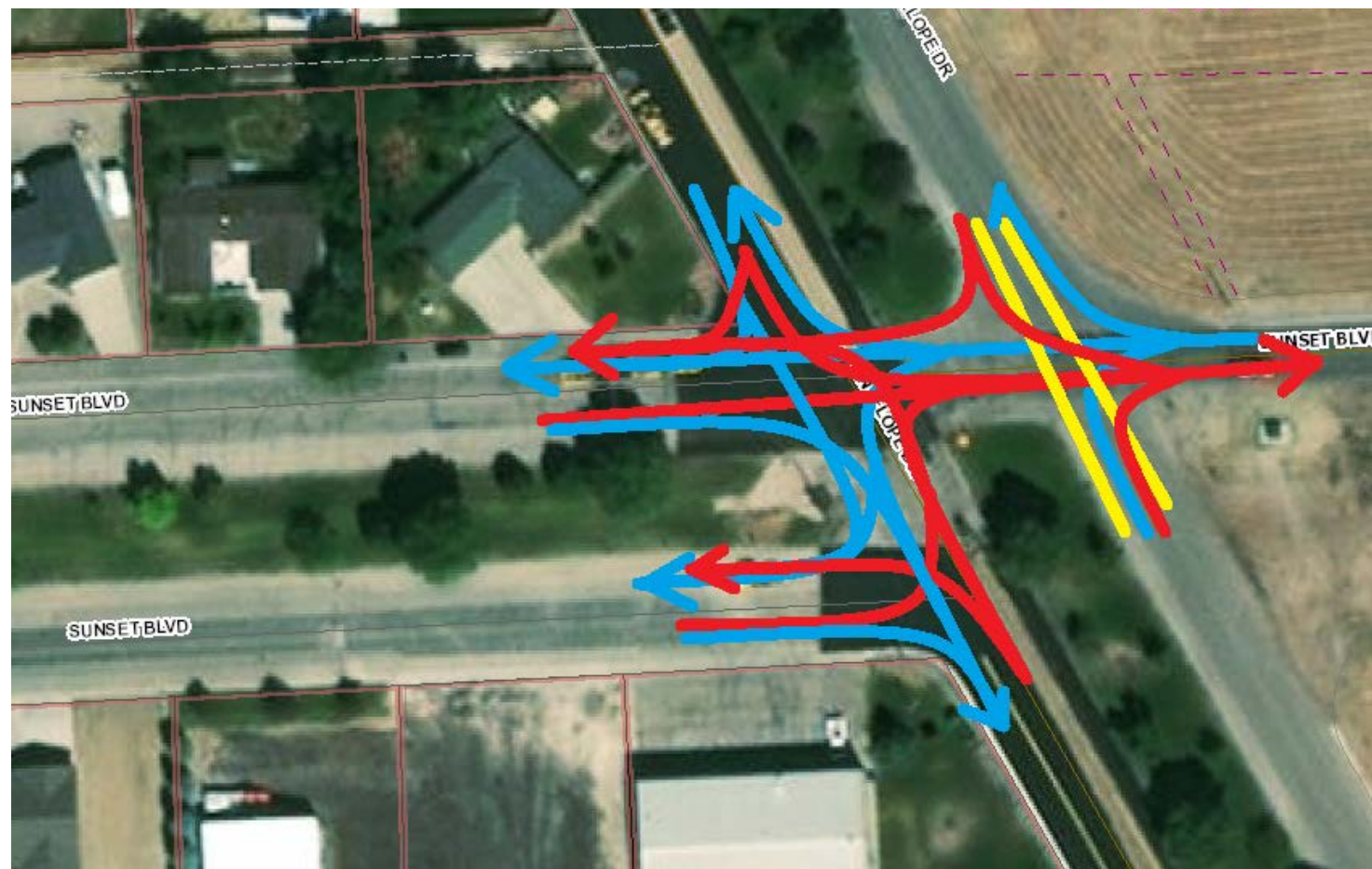
The crossing of these two former runways creates an increasingly complex pattern of daily traffic movements. No modern traffic engineer would design anything like this oddball, accidental layout.

When the two runways became four streets, it created four intersections crossing at skewed (65-degree/115-degree) angles. The southeast corner of the four original crossroads has since been closed, so the remaining configuration consists of three skewed intersections (or one seven-leg intersection) with centerlines 100 feet apart! At the posted speed of 30 MPH (44 feet per second), drivers have 2.4 seconds to prepare for the subsequent intersection.

With very low traffic volumes, almost any intersection layout will work. But Antelope Drive is the main entrance to southern Bar Nunn, and traffic volumes here have now reached about 2600 vehicles per day. The proposed 170-unit subdivision will add about 800 more vehicles. East Sunset Boulevard is proposed as the main town commercial area, which will add commercial access traffic through the intersection. Plans show Antelope Drive may someday close at Salt Creek Highway, making Sunset Boulevard/Salt Creek Highway the main town entrance, and that would reassign those 2600 daily vehicles to the east leg of the intersection and change the intersection turn movement pattern. If a future extension of Polaris Drive someday connects to the west end of Sunset Blvd, that will also modify traffic flows.

This is not to mention that the fire department driveway abuts the intersection and future pedestrian flows among the shared-use trail system will also use these crosswalks!

For the above reasons, this intersection is increasingly critical to the Town street network. The study recommends consolidating this seven-leg intersection into a four-leg intersection. The intersection will need to accommodate any additional changes without a capacity failure, and the safest way to accomplish this is to close three minor intersection legs and construct a modern roundabout.



**Antelope Drive / Palomino Avenue Intersections:**

The Antelope Drive / Palomino Avenue intersection is also a crossing of two former runways, and it also consists of three closely spaced crossroads, but it is less worrisome than the Sunset Boulevard intersection. The approach volume on south Antelope leg is about 2850 vehicles per day (equivalent to about 300 vehicles in the peak hour, or 5 cars per minute), and this is expected to increase in a few years to about 3500 vehicles per day. This is a manageable volume with modifications for safety. The intersection also crosses at a 90-degree angle, which improves sight lines and conforms better with driver expectations.

The east leg of the intersection provides access to the new Town Hall / Rec Center and Antelope Park. The Town hall will generate about 80 vehicles per day, and the rec center will generate an additional 600 vehicles per day, which is well within the capacity of a two-way stop-controlled intersection.

Future traffic at this intersection will either increase slightly due to new development, or decrease a great deal. If the south end of Antelope Drive is closed at Salt Creek Highway as has been proposed, traffic on the south leg of this intersection will decrease to about 200 vehicles per day, which is very compatible with a low-speed, residential cross intersection.

Given the above considerations, the recommendation for this intersection complex is to close and cul-de-sac the south side of Palomino and TEE it into the north side of Palomino using a median cross-over west of the cul-de-sac. This will eliminate one of the seven existing intersection legs, and the former street space will create a 0.25-acre publicly owned lot adjacent to Antelope Drive and the town core. The east side of Antelope Drive will be closed to through traffic and serve primarily as parking access for the Town Hall / Rec Center and Antelope Park.



## Public Involvement Outreach

Public involvement for the Bar Nunn Streetscape Revitalization Plan included a multi-media outreach. Opportunities for public comment included

- Telephone and email contact avenues
- A project Facebook page entitled “Bar Nunn Streetscape Revitalization Plan” attracted visits by 3720 individuals and had 79 comments during the study period.
  - Two Facebook “Events,” on May 25th and August 18th reached 264 stakeholders.
- A Social Pinpoint website, with survey forms and enabling comments from the public. This avenue produced 1459 visits, 17 comments, and 58 survey responses during the study.
- A Press Release on March 25, 2022, announcing the start of the study
- A press Release on May 6, 2022, announcing the upcoming public events of May 25th
- A “Walkabout” the town center on May 25th to experience the area and let participants consider the pedestrian aspects of the streetscape
- A presentation of findings and alternatives on May 25th to inform participants about study issues.
- A hands-on Design charrette on May 25th to facilitate detailed input on project corridor issues and ideas.
- A Press release on August 1 announcing the virtual public presentation on August 8th
- A virtual public meeting on August 18 to present study recommendations, which was recorded and placed on the Facebook page.



**Public Comments and Responses from the Study Team:**

A complete list of all public comments is provided in Appendix A. Public comments followed a few major themes that we will cover here.

- Growth:** Many people expressed concern about growth in general. Some residents feel that they have purchased a home in a quiet suburb, and they do not want any more people. Some people do not want any change at all. While these feelings are understandable considering the large investment in buying a home, land development is outside the scope of this streetscape study. Nationally, some communities have prevented growth by purchasing developable properties in the area, or by purchasing development rights to keep parcels vacant or agricultural. This can be an expensive solution. We can offer that the proposed elements in this Streetscape Revitalization plan (traffic calming, small new retail area, trail and parkway Network, and street safety improvements) will help increase property values within the Town of Bar Nunn, helping to secure resident’s home investments.
- Rocks:** Many people expressed concern about the large rocks that the Town has placed along Antelope Drive between the roadway and the non-motorized path. Our understanding is that the Town placed the rocks as a landscape feature and to separate pedestrians from vehicles.

  - The rocks appear to encourage lower speed along Antelope Drive. Although we do not know the speed on Antelope Drive before the rocks were installed, our speed studies along the corridor show that current driving speeds on Antelope Drive are as follows:

Location	Average Speed Northbound	85% Speed Northbound	Average Speed Southbound	85% Speed Southbound
Antelope Dr. North of Tipton St.	27.8 MPH	31.8 MPH	28.0 MPH	32.4 MPH
Antelope Dr. N of Prairie Lane	26.8 MPH	31.1 MPH	26.8 MPH	31.4 MPH
Antelope Dr. N of Sunset Blvd.	23.6 MPH	30.4 MPH	24.2 MPH	29.8 MPH
Antelope Dr. N of Palomino Ave.	26.6 MPH	30.1 MPH	28.3 MPH	31.7 MPH

The data shows that most local drivers obey the 30 MPH speed limit on Antelope Drive. Traffic in the northbound lane adjacent to the rocks also flows about one to two MPH slower than traffic in the southbound lane, so the rocks clearly have some effect on speed. This may be due to the phenomenon known as “shy distance” which causes drivers to slow down and shy away from obstacles.



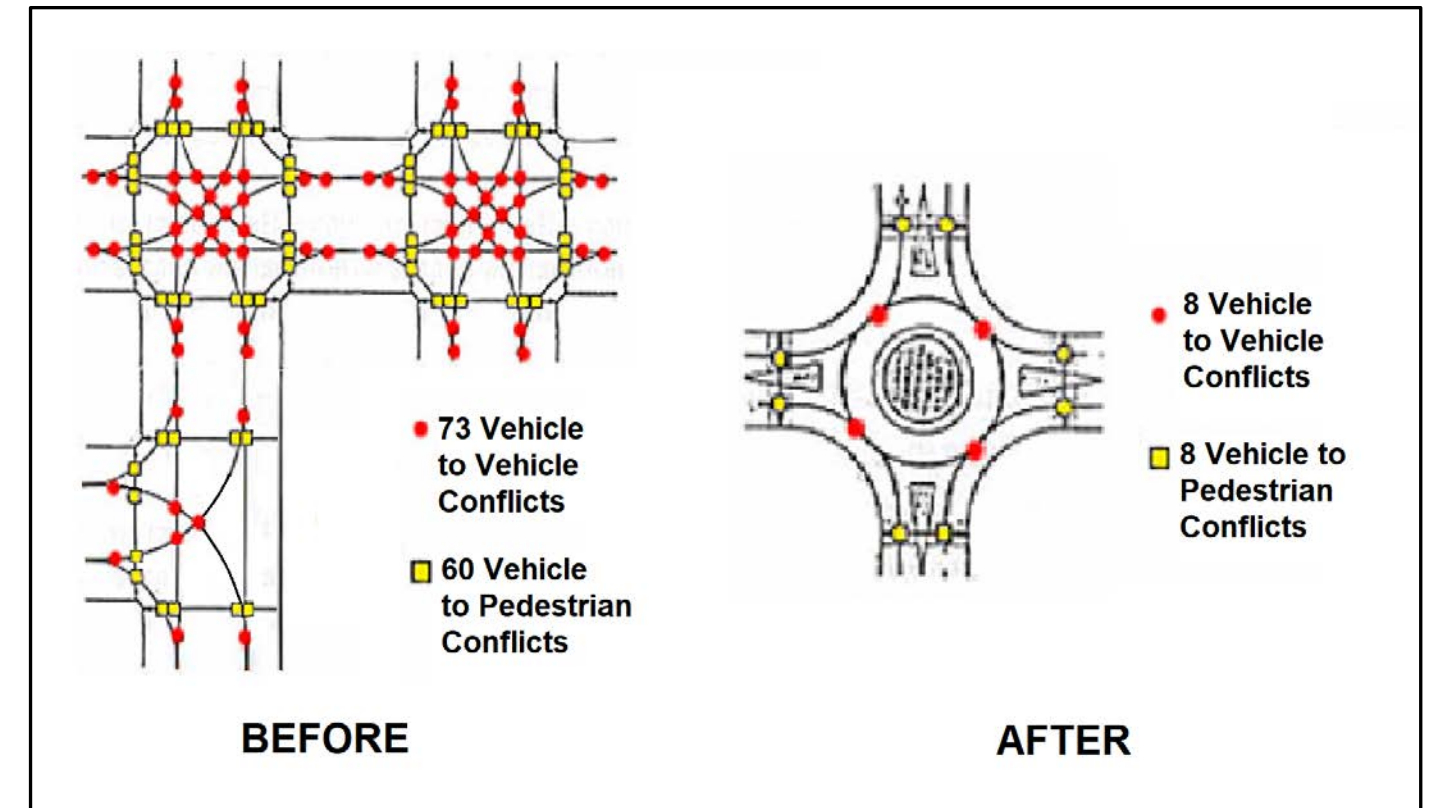
For future non-motorized paths along the other two former runways, the Town of Bar Nunn may wish to consider other types of vehicle barrier. Options include sections of concrete curb, wooden posts, berms, ditch, steel bollards, planters, trees and shrubs, wooden guard rail, steel “W” guard rail, box beams, pavement delineators, Jersey barrier, or a mix of options. Each option will have pros and cons for cost, snow removal, etc.

<sup>4</sup>Federal Highway Administration Office of Safety Programs: *Proven Intersections Safety Countermeasures C1*

- Roundabouts:** Comments pro and con were received regarding roundabout intersections.

  - The proposed roundabout at the Intersection of Salt Creek Highway and Sunset Drive was recommended by a previous study in 2021. Although it is outside the scope of the current *Bar Nunn Streetscape Revitalization Plan*, we concur with that previous recommendation for reasons of efficient traffic operations, superior public safety, and viability of commercial development.
  - This current study also recommends a second, matching roundabout at the intersection of Sunset Blvd and Antelope Drive. Reasons for this are that the Sunset Blvd./Antelope Drive intersection will have the same traffic volume as the intersection of Sunset Blvd and Salt Creek Highway, *while also serving as the pedestrian and bicycle hub of Bar Nunn’s Parkway Network*. This core intersection needs the safest possible configuration for all users.

**Traffic Conflict Diagram: Sunset Boulevard at Antelope Drive:**



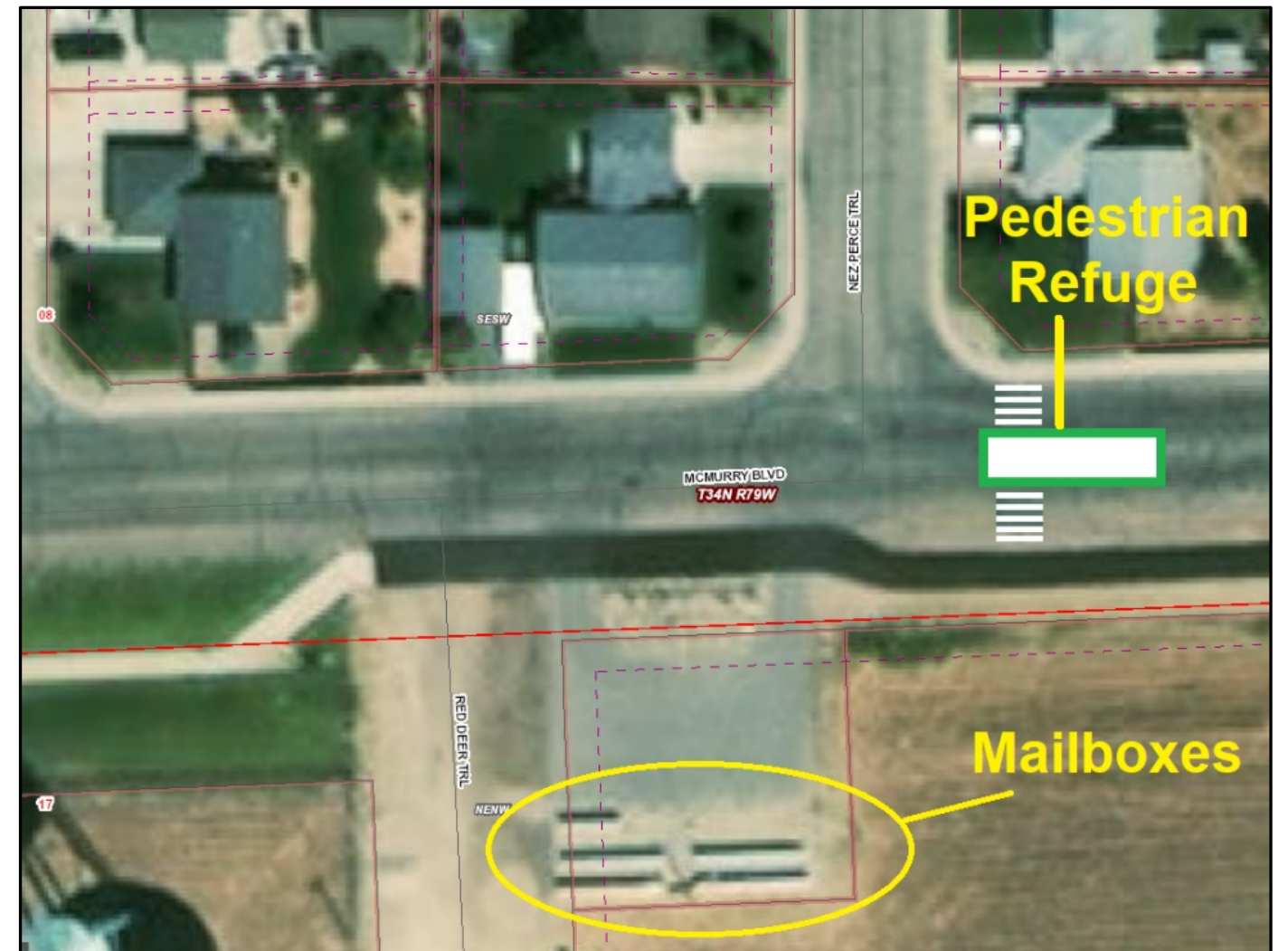
- Statistics show that roundabouts have the following effects compared to a four-leg crossroads intersection.<sup>4</sup>

  - 82% less risk of Fatal & Serious Injury Crashes (In other words, crossroads have FIVE TIMES as many!)
  - 40% less risk of pedestrian injury (due to low speeds, fewer conflict points, and safe refuge islands)<sup>5</sup>
  - Speeds controlled at low speed (due to the curved layout)
  - 50% less stopping and idling time (due to YIELD control instead of STOP control)
  - 50% less fuel consumption and vehicle emissions (also due to YIELD control).
- Because there is no safer or more efficient solution to the intersection of Sunset Blvd at Antelope Drive, we stand by this recommendation. As an added plus, the locations on the centerline of old Runway 26 f(Sunset Blvd) make both roundabouts perfect locations for landscaped static displays of antique aircraft: honoring the Town’s history as Wardwell Airfield.

<sup>5</sup><https://safety.fhwa.dot.gov/intersection/roundabouts/fhwas15016.pdf>

- Fire Department Access to Roundabout:** A citizen questioned how the Fire Department will access the roundabout. The Bar Nunn Fire Department access drive will have rollover curb leading directly onto Sunset Boulevard and the roundabout circulating roadway. Any vehicles already in the roundabout will exit the roundabout and then pull over and allow emergency responders to pass. Direct access will allow responders a fast response in all directions of travel.
- Location of North-South pedestrian Path:** During the public “walkabout,” attendees experienced the noise, dust and heat adjacent to Salt Creek Highway and I-25, and also the shade and low traffic noise adjacent to Antelope Drive. Without exception, everyone stated a preference for walking along Antelope Drive. We agree. For that reason, we recommend the top priority for a non-motorized path be along Antelope Drive from Sunset Blvd to Salt Creek Highway, rather than along Salt Creek Highway.
- Pavement Removal:** Many people expressed concern about removing the old airport pavement. One of the main objectives of this study was to find ways to reduce the amount of pavement the town is required to maintain. That’s what we were hired to do!  
The new cross section on Antelope offers an example to follow. There, we kept that new section for the west collector street side and recommended the east side of Antelope Drive as a one way southbound only to keep traffic to a minimum. We recommend Sunset Boulevard west of Antelope have the same cross section as Antelope Drive. The reason is that one side of Sunset Boulevard needs to serve as a collector street, both for existing and future homes and as a potential future Town entry from the west.
- One Way Pairs:** A suggestions was also made to convert former runways to one-way pairs, making parallel streets 98 feet apart. This idea has special merit on Palomino Avenue, because Palomino will not serve as a collector street. Both sides could be reduced to 26-foot-wide creating a new median 98 feet wide, including a non-motorized path along one side or the other. Reduced road width could enable a curvilinear path alignment using the existing runway pavement.  
However, all other one-way streets lack sidewalk and operate at 20 MPH. To be consistent with streets with similar cross sections, the speed would need to be 20 MPH.  
This concept can be explored further during a future design phase when the final layout of the community is more clearly defined. If desired, the runway street concepts presented in this document could be designed with 26-foot one-way streets, west of the first median crossover nearest Antelope Drive, and signed at 20 MPH.
- Crosswalk at McMurry Blvd and Nez Perce Trail:** A citizen stated that a marked crosswalk was previously present at the mailboxes south of McMurry Boulevard at Nez Perce Trail, and asked that the crosswalk be reinstalled. This

location should receive priority consideration for a mid-crossing refuge on McMurry, both for mailbox access and for pedestrian access from the north side of Bar Nunn to the McMurry Parkway. Future designers should also consider installing a rectangular rapid flashing beacon to increase driver awareness when pedestrians are present.



## Alternative Evaluations and Written Recommendations

Street Segment or Intersection	Conceptual Alternatives Evaluated	Evaluation and Recommended Actions
<b>Town-Wide Improvements</b>	<ul style="list-style-type: none"> <li>Reduce Pavement area to cut maintenance expense</li> <li>Calm Traffic to Reduce Speeding</li> <li>Formalize 'Shared Street' Space</li> <li>Attract Commercial Development</li> <li>Create a Separated Parkway Network</li> <li>Improve Intersection Safety</li> <li>Designate maintenance-free Natural Areas to Reduce Mowing Expense.</li> <li>Designate Future Drainage Streets</li> <li>Enact and Post Town-Wide 20 MPH Speed Limit</li> </ul>	<p>Issues and Evaluation:</p> <ol style="list-style-type: none"> <li>1. Unlike urban streets that provide surface drainage, runways and taxiways were built flush with the ground surface and drain onto the adjacent land.</li> <li>2. On all former runways, space exists for a separate, shared-use path and expanded recreational green space. This space can serve as recreation and drainage.</li> <li>3. On all former taxiways, pedestrians and bikes currently share the street with vehicles.</li> <li>4. Commercial properties along Sunset Blvd east of Antelope will increase in value and become more viable if traffic increases significantly. The east end of Sunset is visible from I-25.</li> </ol> <p>Short Term:</p> <ol style="list-style-type: none"> <li>1. Enact an ordinance for Town-Wide 20 MPH Speed Limit unless posted otherwise. Sign all entries to Bar Nunn accordingly.</li> <li>2. Provide a standard cross section suited to 20-MPH shared use streets.</li> <li>3. Remove excess unused irrigated lawn in favor of drought-tolerant native grasses. Relegate expensive lawn to areas of expected use.</li> <li>4. Conduct a town-wide drainage study to identify options for improved stormwater management.</li> </ol> <p>Long Term:</p> <ol style="list-style-type: none"> <li>1. Key shared streets may be excavated and reconstructed with depressed cross section, curb, gutter, and sidewalk to improve drainage and separate pedestrians from other vehicles.</li> <li>2. Provide recreational facilities at various sites within the expanded runway medians parkways, such as pocket parks, playgrounds, croquet, exercise trails, putt-putt golf, restrooms, picnic shelters, frisbee golf, skateboard park, natural areas, lawns,</li> </ol>
<b>Arena Street</b>	<ul style="list-style-type: none"> <li>No Action</li> <li>Developer Paid Improvements</li> <li>One-Way Conversion</li> <li>Mini-Roundabout or All-Way-Stop at Prairie Lane</li> <li>Mini-Roundabout or All-Way-Stop at Sunset Blvd</li> </ul>	<p>Issues and Evaluation:</p> <ol style="list-style-type: none"> <li>1. Arena is a two-block, low-volume access street within the planned future commercial district.</li> <li>2. The eventual street function and volume will not be known until future re-plats and site plans are done.</li> </ol> <p>Short Term:</p> <ol style="list-style-type: none"> <li>1. No Action</li> </ol> <p>Long Term:</p> <ol style="list-style-type: none"> <li>2. Require developer-paid street and sidewalk improvements as part of the site plan process.</li> <li>3. Construct four-way-stops, mini-roundabout or other intersection improvements when traffic volumes warrant at Sunset and Prairie intersections.</li> </ol>
<b>Antelope Drive East</b>	<ul style="list-style-type: none"> <li>No Action</li> <li>Chip seal, signs, and markings as a 20 MPH shared street.</li> <li>Remove Parking on one or both sides to reduce pavement width.</li> <li>One Way southbound, Narrow to 16' Travel Lane, 7' Parking Lane, 3' Pan and 74' median</li> <li>One-Way Southbound, with 11' Travel Lane, 7' Parking Lane, 3' Pan and 79' median</li> <li>Close street from Prairie Lane to Sunset and convert to park space as hub of the Town Parkway Network.</li> </ul>	<p>Issues and Evaluation:</p> <ol style="list-style-type: none"> <li>1. West Antelope Drive functions as the north-south collector street, carrying 1120+ vehicles per day.</li> <li>2. East Antelope Drive carries a stable maximum of 275 vehicles per day (30 in the peak hour).</li> </ol> <p>Short Term:</p> <ol style="list-style-type: none"> <li>1. Chip seal to preserve pavement. Re-stripe and sign with desired future configuration for test period.</li> <li>2. Close east Antelope Drive east between Sunset Blvd and Prairie Lane and convert to recreational use.</li> <li>3. Close east Antelope Drive between Palomino Avenue and Sunset Blvd and convert to recreational use or Town Hall parking.</li> </ol> <p>Long Term:</p> <ol style="list-style-type: none"> <li>1. After trial period, saw cut excess pavement, convert to one-way southbound, and expand median parkway to 74 feet.</li> <li>2. Install recreational features as desired (playground, paths, lawn areas, etc.).</li> </ol>

<b>Antelope Drive West</b>	<p>No Action</p> <hr/> <p>Add Curb, Gutter, &amp; Sidewalk</p> <hr/> <p>RRFB and Crosswalk at North and South School Crossings</p> <hr/> <p>Extend shared-use trail to Salt Creek Highway intersection</p>	<p>Issues and Evaluation:</p> <ol style="list-style-type: none"> <li>1. Antelope Drive West was recently re-designed and updated and offers a prototype for other 30 MPH interior collector streets.</li> <li>2. Traffic volumes on Antelope decrease gradually from 2850 per day north of Salt Creek to 800/Day south of McMurry.</li> <li>3. Rocks between the street and non-motorized trail have generated controversy. Palomino and Sunset Blvd. could each use different barrier treatments to make each street loo similar but unique.</li> <li>4. The intersection of Sunset/Antelope may significantly change function and traffic flows with possible closure of the Salt Creek intersection and/or construction of Polaris Drive.</li> </ol> <p>Short Term:</p> <ol style="list-style-type: none"> <li>1. Improve school crossings at Tipton and/or Alley north of Prairie Lane with marked ZEBRA X-Walk and RRFB Beacons.</li> <li>2. Extend Shared-Use Trail south to Salt Creek Highway intersection to connect with Sal Creek improvements.</li> </ol> <p>Long Term:</p> <ol style="list-style-type: none"> <li>1. Construct modern roundabout to replace the three existing intersections at Sunset Blvd.</li> <li>2. Close Antelope Drive north of Salt Creek Hwy and make Sunset the new entry to historic Bar Nunn.</li> <li>3. Add Curb and Gutter where needed</li> <li>4. Provide raised crosswalks if driver speeding or crosswalk compliance are a problem.</li> </ol>
<b>Bel Vista</b>	<p>No Action</p> <hr/> <p>Chip Seal, Signs and Markings as a 20 MPH Shared Street</p> <hr/> <p>Remove parking on one or both sides</p> <hr/> <p>Construct Curb Gutter &amp; sidewalks</p>	<p>Issues and Evaluation:</p> <ol style="list-style-type: none"> <li>1. Bel Vista is a 20 MPH former taxiway with all travel modes sharing the street space.</li> <li>2. Maximum volume is 343 cars/day (about 37 in the peak hour) and may increase up to 25%.</li> </ol> <p>Short Term:</p> <ol style="list-style-type: none"> <li>3. Chip seal, re-stripe, and sign as a shared-use street consistent with other 20 MPH former taxiways</li> </ol> <p>Long Term:</p> <ol style="list-style-type: none"> <li>1. Excavate 6" of pavement and resurface, adding curb, gutter, and sidewalks.</li> </ol>
<b>McMurry Blvd</b>	<p>No Action</p> <hr/> <p>Two-lane street with parking removed on both sides.</p> <hr/> <p>Three-lane collector with 11' Through Lanes and 8' parking on North Side only</p> <hr/> <p>Three-lane collector with 12' through-Lanes and 7' parking lane on North Side only</p> <hr/> <p>Remove median barrier at Salt Creek High intersection and relocate street light poles.</p>	<p>Issues and Evaluation:</p> <ol style="list-style-type: none"> <li>1. McMurry functions as a collector street, currently with 1975 vehicles per day (220 in peak hour)</li> <li>2. Sterling Heights subdivision will add 800 to 1000 additional trips per day.</li> <li>3. Additional development is expected along Mc Murry.</li> <li>4. Potential future construction of Polaris Drive N-S on west will connect to McMurry.</li> </ol> <p>Short Term:</p> <ol style="list-style-type: none"> <li>1. Re-Stripe as a three-lane 30 MPH collector street with 8' parking lane on north side only in residential area.</li> <li>5. Stripe 11' through lanes to emphasize 30 MPH speed.</li> </ol> <p>Long Term:</p> <ol style="list-style-type: none"> <li>1. Remove existing median at Salt Creek TEE intersection and re-stripe as one lane westbound and two-lanes eastbound (Left and Right turn lanes)</li> <li>2. Extend west to serve as collector street for future Sterling Heights subdivision and potential future Polaris Drive connector.</li> <li>3. Monitor intersection of Antelope Drive for any emerging problems due to traffic growth.</li> </ol>
<b>Mustang Trail north of Sunset Blvd</b>	<p>No Action</p> <hr/> <p>Convert Prairie Lane Intersection so that Mustang is the major street and Prairie Lane stops.</p> <hr/> <p>Convert North Sunset intersection to Stop Sunset and treat Mustang as the major street.</p> <hr/> <p>Add curb Gutter and Sidewalk</p>	<p>Issues and Evaluation:</p> <ol style="list-style-type: none"> <li>1. The proposed Sterling Heights Subdivision will generate 1615 vehicle trips per day, with about 25% of traffic accessing the road network via Mustang Trail north of Prairie Lane.</li> <li>2. Prairie Lane is the shortest route but is not suitable for use as a collector to reach Antelope Drive.</li> <li>3. Sterling Heights traffic should be directed to a suitable collector (Sunset Blvd) to reach Antelope Drive.</li> </ol> <p>Short Term:</p> <ol style="list-style-type: none"> <li>1. Convert Prairie Lane/Mustang Trail and north Sunset/ Mustang Trail intersections to two-way STOP control with Mustang Trail as the 20 MPH through street to the Sunset collector street.</li> </ol> <p>Long Term:</p> <ol style="list-style-type: none"> <li>1. Add curb, gutter, and sidewalk.</li> </ol>
<b>Palomino Avenue North</b>	<p>No Action</p>	<p>Issues and Evaluation:</p>

	<p>Convert to One-Way 20 MPH residential access street and Cul-de-Sac at Antelope Drive Leave as Two-Way 30 MPH collector street with Shared-use path</p>	<ol style="list-style-type: none"> <li>1. The pavement on Palomino Avenue north is in fair condition and development continues for the length of the street.</li> <li>2. Palomino Avenue north carries about 442 vehicles per day at the Antelope Drive terminus.</li> </ol> <p>Short Term:</p> <ol style="list-style-type: none"> <li>3. Chip seal and repaint striping.</li> </ol> <p>Long Term:</p> <ol style="list-style-type: none"> <li>4. Saw-cut an 8' landscape strip, and stripe with two, 11' travel lanes signed at 30 MPH like Antelope Drive west.</li> <li>5. Tee in south Palomino west of Antelope Drive.</li> </ol>
<b>Palomino Avenue South</b>	<p>No Action Convert to One-Way 20 MPH residential access street and Cul-de-Sac at Antelope Drive Leave as Two-Way 30 MPH collector street with Shared-use path</p>	<p>Issues and Evaluation:</p> <ol style="list-style-type: none"> <li>1. Palomino Avenue south terminates at Antelope Drive west.</li> <li>2. Estimated traffic is 114 daily vehicles and is expected to increase to about 350 at build-out.</li> <li>3. Palomino Avenue south is paved east of lot # 1967 only and is blocked with Jersey barrier to the west.</li> </ol> <p>Short Term:</p> <ol style="list-style-type: none"> <li>1. Chip seal existing pavement and stripe with desired future cross section (one-way eastbound).</li> </ol> <p>Long Term:</p> <ol style="list-style-type: none"> <li>1. Re-construct as a 20 MPH one-way eastbound and TEE into the north side west of Antelope Drive west of Antelope Drive. Convert excess pavement to landscaped parkway.</li> <li>2. Require housing developers to construct preferred cross section as new housing is built.</li> </ol>
<b>Prairie Lane East of Antelope Drive</b>	<p>No Action One-Way Conversion Repair large pothole at Chatters Bar and Grill driveway Curb and Gutter east of Arena Street Intersection improvements at Arena Street</p> <p>Future sidewalk connection along north side from new Wardwell Industrial Avenue path to Arena Street and Antelope Parkway.</p>	<p>Issues and Evaluation:</p> <ol style="list-style-type: none"> <li>1. This section of Prairie Lane is 30-foot-wide two-way road carrying 680 vehicles per day (about 75 during the peak hour.) This may increase to 1200 vehicles at build-out.</li> <li>2. Curb is present on the south side between Arena and Wardwell Industrial Avenue.</li> </ol> <p>Short Term:</p> <ol style="list-style-type: none"> <li>1. No Action</li> </ol> <p>Long Term:</p> <ol style="list-style-type: none"> <li>1. Install curb and gutter and enclosed drainage along the entire commercial corridor, with access management and intersection improvements at Arena Street.</li> </ol>
<b>Prairie Lane west of Antelope Drive</b>	<p>No Action Chip seal, re-stripe and sign as a shared-use street consistent with all other 20 MPH former taxiways One way access westbound only from Antelope Drive to eliminate through traffic from new Sterling Heights Subdivision. Install stop signs on Prairie at Mustang Trail and Trail's End and treat Mustang and Trail's End as the Major Streets. Add traffic calming (raised crosswalks, curb extensions, bump-outs, and/or speed humps) where speeding is an apparent problem. Excavate and reconstruct as residential street with curb, gutter, and sidewalk.</p>	<p>Issues and Evaluation:</p> <ol style="list-style-type: none"> <li>1. Prairie Lane is a 20 MPH former taxiway with all travel modes sharing the street space.</li> <li>2. Maximum volume is 343 cars/day (about 37 in the peak hour). This is not expected to increase.</li> </ol> <p>Short Term:</p> <ol style="list-style-type: none"> <li>1. Chip seal, re-stripe, and sign as a shared-use street consistent with other 20 MPH former taxiways</li> </ol> <p>Long Term:</p> <ol style="list-style-type: none"> <li>1. Excavate pavement and resurface, adding curb, gutter, and sidewalks.</li> </ol>
<b>Sunset Blvd East of Antelope Drive</b>	<p>No Action</p> <p>Minimal Road Cross section: (2X11' Lanes with 3' Shoulder and Curb) with separate bike and pedestrian facilities.</p> <p>2X11' Lanes with 8' Parking Lanes</p>	<p>Issues and Evaluation:</p> <ol style="list-style-type: none"> <li>1. Sunset is a 30' wide 30MPH roadway carrying less than 700 vehicles per day.</li> <li>2. If Sunset becomes the new main entry to historic Bar Nunn, traffic will increase to 3500 per day.</li> <li>3. A roundabout is the preferred solution at Salt Creek Hwy for safety and operations.</li> <li>4. The design must accommodate peds, bikes, cars, trucks, and recreational vehicles.</li> <li>5. Resident stated he drives a WB-67 Lowboy tractor trailer with 50' turn radius.</li> <li>6. Separate bike paths (shared use paths) are preferred (safer) at roundabouts.</li> <li>7. Parallel parking is not needed on east Sunset due to available off-street parking and the nature of adjacent land use.</li> <li>8. At Antelope, three intersections within 150 feet create excessive traffic and pedestrian conflict points.</li> </ol> <p>Short Term:</p>

	<p>2X11' Lanes with Bike Lanes</p> <hr/> <p>Retain existing 150' ROW east of Arena Street</p> <hr/> <p>Construct Modern Roundabout at Sunset Blvd and Salt Creek Highway</p> <hr/> <p>Construct Modern Roundabout at Sunset Blvd. at Antelope Drive</p>
<p><b>Sunset Boulevard North</b></p>	<p>No Action.</p> <hr/> <p>Retain as 2-way with parking and construct 8' median to separate Trail from traffic.</p> <hr/> <p>Convert to one way eastbound and convert unused asphalt to green space</p> <hr/> <p>TEE-into Sunset Blvd south and Cul-de-Sac terminus west of Antelope Drive to eliminate excess intersections.</p> <p>Issues and Evaluation:</p> <ol style="list-style-type: none"> <li>1. North Sunset is impractical for use as a 2-way collector link to a possible future Polaris Drive because a house is situated on the north alignment.</li> <li>2. With south Sunset as the collector street, continuation of both streets across Antelope Drive would leave two closely spaced intersections 50 feet from each other.</li> </ol> <p>Short Term:</p> <ol style="list-style-type: none"> <li>1. Chip and seal and re-stripe in the new configuration with 16' lane one way eastbound and adjacent parking lane along the north side.</li> <li>2. Cul-De-sac east end prior to Antelope and tee into the south side of Sunset Blvd. Monitor performance.</li> </ol> <p>Long Term:</p> <ol style="list-style-type: none"> <li>1. After test period with paint, remove excess asphalt and widen median reserve to 74 feet.</li> <li>2. Construct recreational features as desired.</li> </ol>
<p><b>Sunset Boulevard South</b></p>	<p>No Action.</p> <hr/> <p>Retain as 2-way with two 11' lanes, 7' parking lane and gutter pan, and construct 8' median to separate the non-motorized trail from vehicular traffic.</p> <hr/> <p>Convert to one way eastbound, Tee into Sunset Boulevard North, and convert unused asphalt to green space.</p> <hr/> <p>Convert to one way eastbound with separate shared-use trail.</p> <hr/> <p>Construct Modern Roundabout at Sunset Blvd. at Antelope Drive</p> <p>Issues and Evaluation:</p> <ol style="list-style-type: none"> <li>1. Sunset Blvd may someday intersect a new Polaris Drive arterial road. The South side of Sunset is preferable for that connection because the north alignment would displace a residence.</li> <li>2. At Antelope Drive, alignment of southwest Sunset with northeast Sunset created a 90-degree intersection, which allows better visibility and operations. This is compatible with whatever type of intersection is eventually preferred.</li> <li>3. The future Antelope/Sunset intersection will serve as the main distribution node in historic Bar Nunn, connecting two 30-MPH collector streets.</li> <li>4. A roundabout would be compatible with the roundabout at Salt Creek Hwy. It would be flexible to accommodate any future street configuration, reduce the probability of injury by 75%, reduce the probability of fatality by 90% compared to STOP control, and reduce fuel consumption by 50%.</li> </ol> <p>Short Term:</p> <ol style="list-style-type: none"> <li>1. Saw-cut and remove pavement to create a separate 10' path and install a median barrier using something other than large rocks.</li> </ol> <p>Long Term:</p> <ol style="list-style-type: none"> <li>1. TEE the north side of Sunset into the south side and cul-de-sac the north side of Sunset Blvd.</li> <li>2. Construct a modern roundabout at Sunset and Antelope.</li> </ol>
<p><b>Trail's End North of Sunset Blvd.</b></p>	<p>No Action</p> <p>Issues and Evaluation:</p>

	<p>Convert Prairie Lane Intersection so that Trail's End is the major street and Prairie Lane stops.</p> <hr/> <p>Convert North Sunset intersection to stop Sunset and treat Trails End as the major street.</p> <hr/> <p>Remove Parking on one or both sides.</p> <hr/> <p>Add curb Gutter and Sidewalk</p>	<ol style="list-style-type: none"> <li>1. The proposed Sterling Heights Subdivision on north Trail's End will generate 1615 vehicle trips per day, with about 25% of traffic accessing the local street network via Trail's End north of Prairie Lane.</li> <li>2. Prairie Lane is the shortest route to most travel destinations, but its shared street cross section and 20 MPH speed limit make it unsuitable for use as a collector street to reach Antelope Drive. That use should be discouraged.</li> <li>3. Sterling Heights traffic should be directed to a suitable collector street (Sunset Blvd) to reach Antelope Drive.</li> </ol> <p>Short Term:</p> <ol style="list-style-type: none"> <li>1. Convert Trail's End /Prairie Lane and Trail's End / north Sunset intersections to two-way STOP control with Trail's End as the 20 MPH through street to access the Sunset collector street.</li> <li>2. Chip seal and re-stripe as a 20 MPH shared street.</li> </ol> <p>Long Term:</p> <ol style="list-style-type: none"> <li>1. Remove 6" of pavement and reconstruct, adding curb, gutter, and sidewalks to drain into Sunset median.</li> </ol>
<b>Trail's End South of Sunset Blvd.</b>	<p>No Action</p> <hr/> <p>Chip seal, re-stripe and sign as a shared-use street consistent with all other 20 MPH former taxiways</p> <hr/> <p>Remove parking on one or both sides.</p> <hr/> <p>Install traffic calming where speeding is observed as a problem.</p> <hr/> <p>Construct standard street cross section with depressed roadway, curb, gutter, and sidewalk.</p>	<p>Issues and Evaluation:</p> <ol style="list-style-type: none"> <li>1. Trail's End is a 20 MPH former taxiway with all travel modes sharing the same street space.</li> <li>2. Maximum volume is 226 cars/day (about 30 in the peak hour). This should remain stable.</li> </ol> <p>Short Term:</p> <ol style="list-style-type: none"> <li>1. Chip seal, re-stripe, and sign as a shared-use street consistent with other 20 MPH former taxiways</li> </ol> <p>Long Term:</p> <ol style="list-style-type: none"> <li>1. Remove 6" of pavement and reconstruct, adding curb, gutter, and sidewalks.</li> </ol>
<b>Wardwell Industrial Avenue</b>	<p>No Action</p> <hr/> <p>Painted Centerline</p> <hr/> <p>Curve arrow or Chevrons at curve</p> <hr/> <p>Parallel Pedestrian Bike Path on west side</p>	<p>Issues and Evaluation:</p> <ol style="list-style-type: none"> <li>1. Wardwell Industrial Avenue carries about 300 vehicles per day and could approximately double in twenty years.</li> <li>2. Wardwell has two, 90-degree turns along its alignment.</li> <li>3. The west 90-degree turn has a drop-off and is elevated 25' above the terrain immediately south. If a car or truck misses that turn do to fog, snow, or ice, the result could be tragic.</li> <li>4. The public expressed a preference for chevrons over a turn arrow and suggested a sidewalk along one side of the roadway. The west side offers the best views.</li> </ol> <p>Short Term:</p> <ol style="list-style-type: none"> <li>1. Paint reflective centerline stripe through the curve areas.</li> <li>2. Install chevron signs to direct the southbound left turn.</li> </ol> <p>Long Term:</p> <ol style="list-style-type: none"> <li>1. When the need emerges, construct a parallel shared-use path along the west side of Wardwell Industrial Avenue to connect the north side of Bar Nunn to the new commercial center along east Sunset Blvd.</li> </ol>

## Illustrations of Recommended Treatments

### Typical Cross Sections:

The study recommends standard cross sections and treatments on former runways and taxiways. Standard treatments create driver expectations consistent with the street functional class.

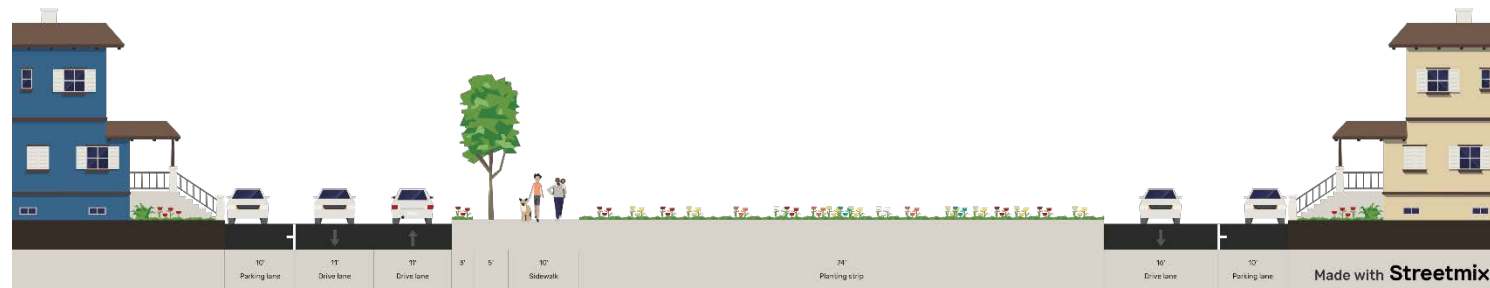
**Former Runways:** Each former 150-foot runway is divided into a 30 MPH residential collector street on one side, and a parallel 20 MPH one-way residential access street on the other side, separated by a landscaped parkway median. Median crossovers will be placed at intervals to connect the access street to the parallel collector street.

The 50-foot collector street side consists of a ten-foot parking lane, two 11-foot travel lanes, an eight-foot landscape strip, and a ten-foot shared use path using the original runway surface.

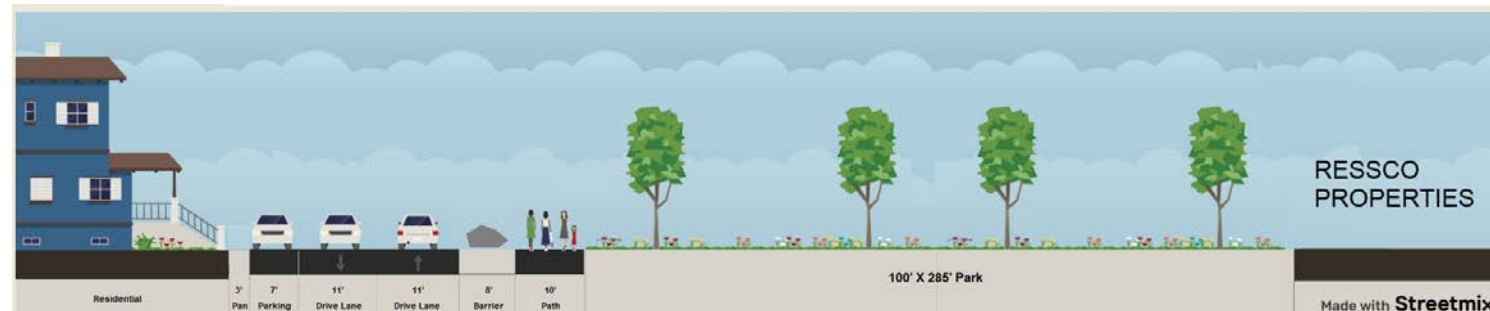
The 74-foot median consist of minimally maintained natural area, with recreational facilities and lawns at target locations to be determined. In time, pedestrians will wear paths into the grass to show where paths can be paved with crusher fines, wood chips, or mulch, as desired.

The one-way residential access street consists of a 16-foot travel lane to allowing space for vehicles to pass, and a ten-foot parking lane adjacent to residences.

### Runway Typical

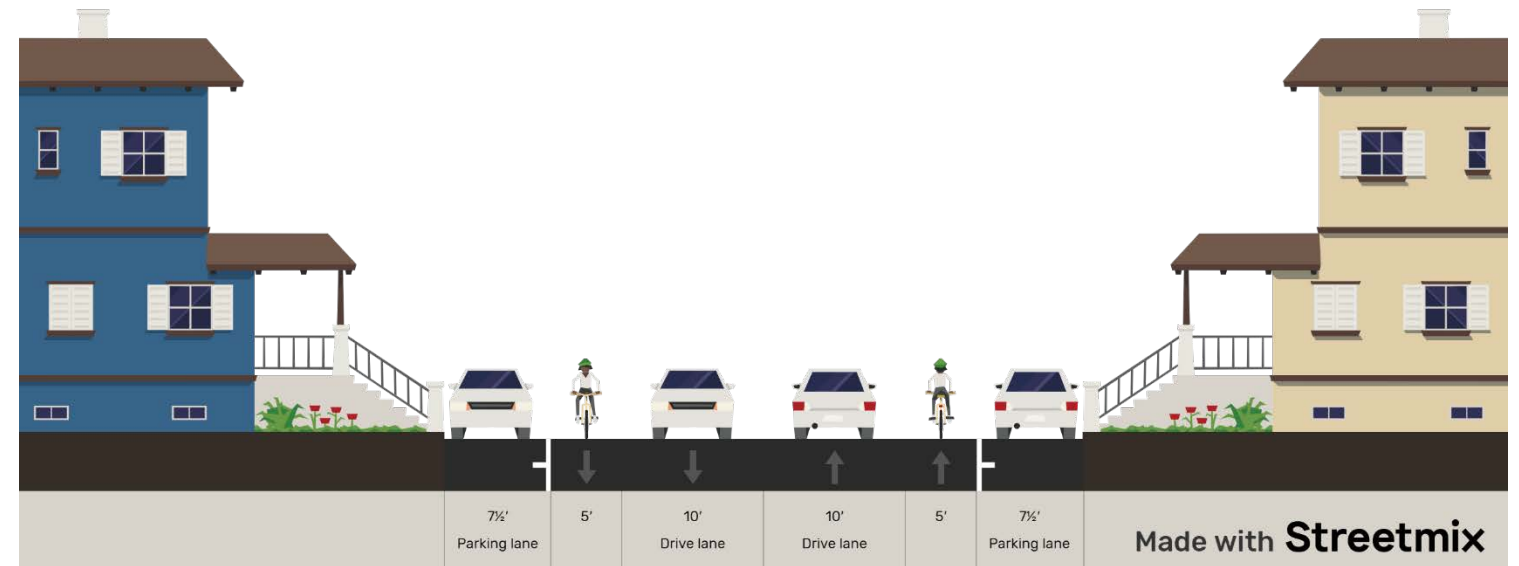


The east side of Antelope Drive between Prairie Lane and Palomino carries no significant traffic and should be replaced with greenspace and other civic uses (below). Elimination of the east side reduces total pavement width on this section to 32 feet, plus a 10-foot non-motorized trail.



**Former Taxiways:** Each 45-foot former taxiway surface will be a 20 MPH shared-space area, mixing pedestrians, bikes, and motor vehicles. Signs and markings will inform entering drivers they are in a shared-space area. The street surface will have a 'visually narrowed' cross section composed of chip seal, painted stripes, and bike lane markings. The cross section will consist of a twenty-foot travel way (two ten-foot travel lanes with no centerline), two marked 5-foot bike lanes, and 7.5-foot parking lane on each side.

## Taxiway Typical



### Taxiway Traffic Calming Measures:

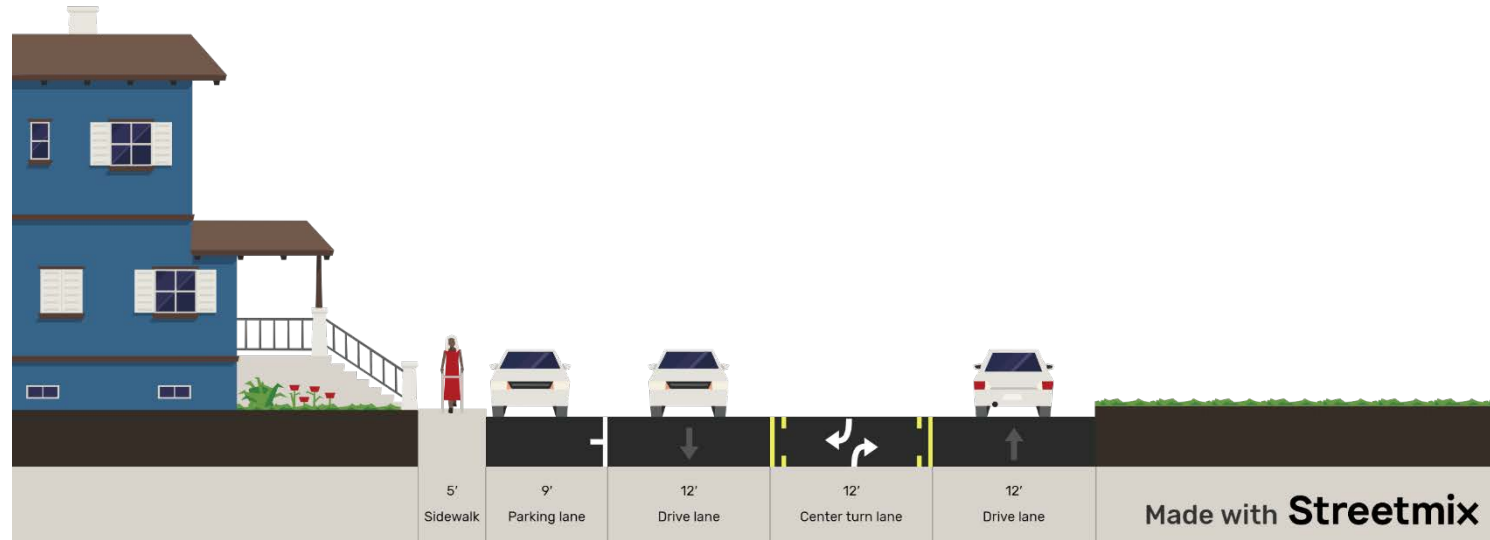
Bar Nunn drivers, bikes and pedestrians have shared the streets since 1954. Taxiways are 45' wide with no sidewalks or shoulders. Curbs create drainage problems, so this is likely to continue for many years.

But make sure everybody knows! A 20 MPH speed limit is fast – just enact an ordinance. Signs and markings are cheap and can be done in house. These signs and markings are needed until all retrofits are in place – perhaps many years.



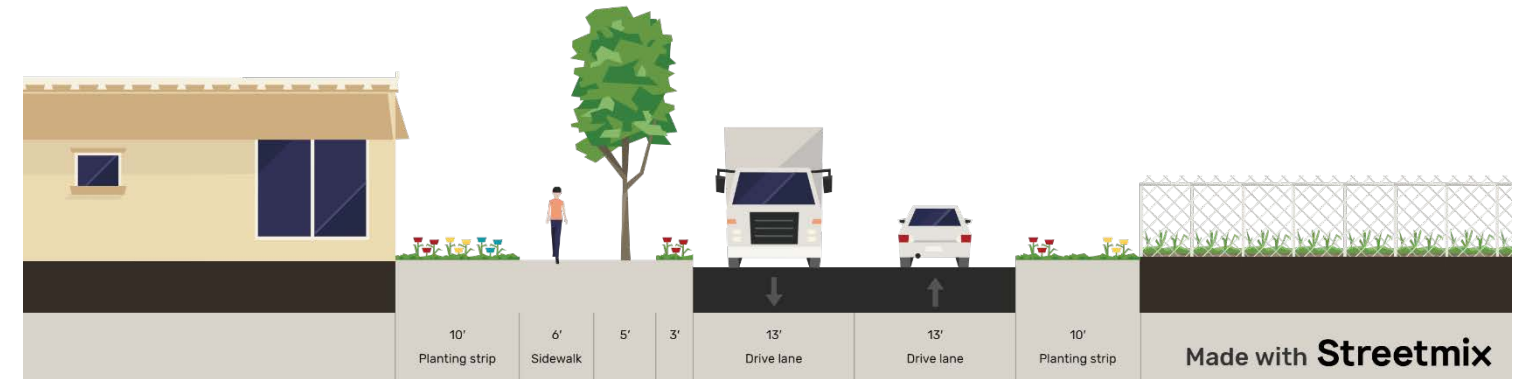
**McMurry Boulevard** is recommended as a 30 MPH three-lane collector street. The commercial section will have shoulders and no parking. The residential section will have parking on the north side only, two 12-foot travel lanes, and a 12-foot center left turn lane.

## McMurry Blvd Typical



**Wardwell Industrial Avenue** is recommended for warning devices at the curve atop the hill, either chevron arrows or a left arrow. In the long term, a parallel non-motorized path and viewpoint can be constructed as need develops with construction of the commercial area.

## Wardwell Industrial Ave Typical



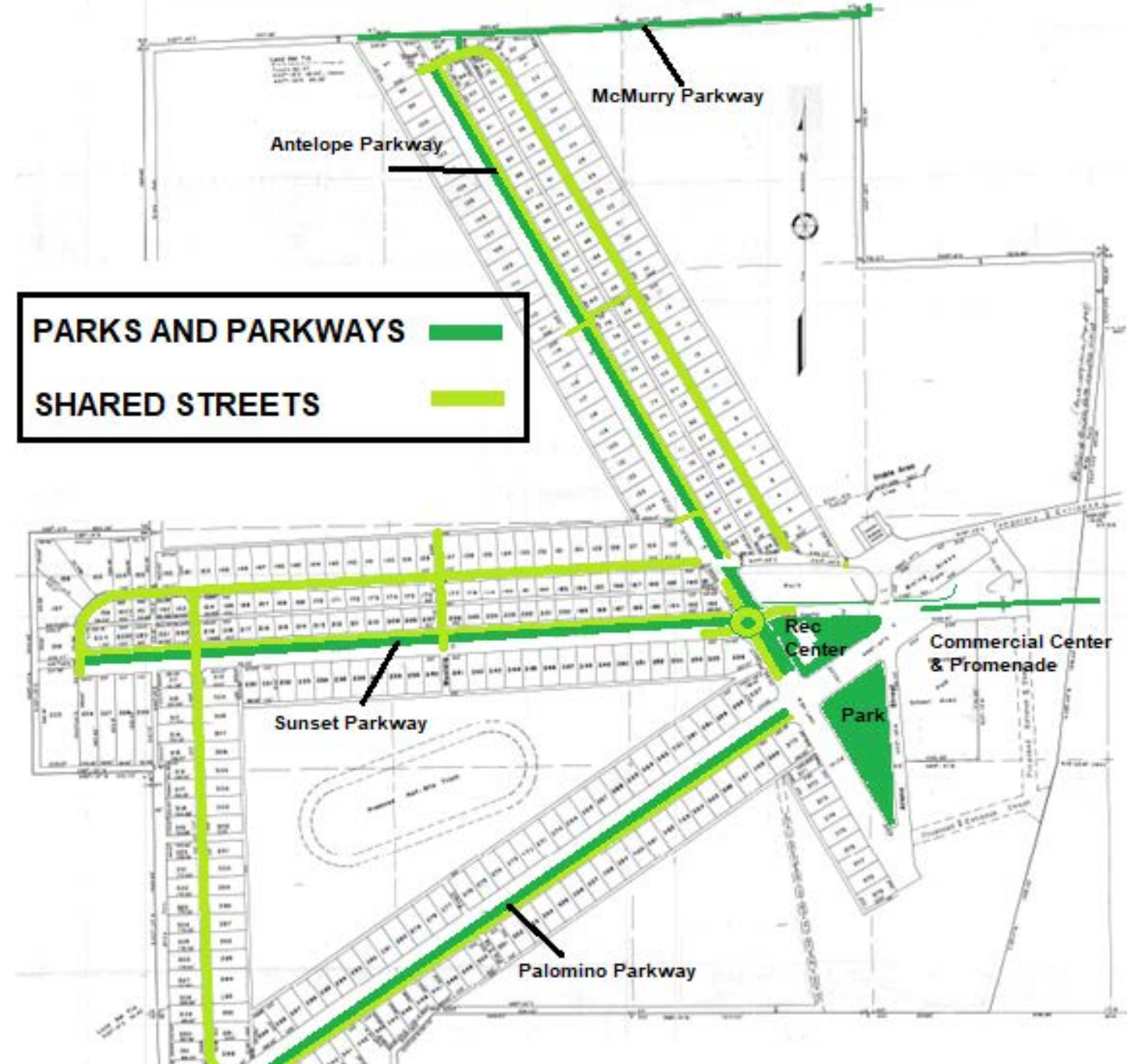
### An Emerging Parkway Network

As component pieces are constructed, individual trails and median greenspace will gradually merge into a network of pedestrian/bicycle parkways that converges on the new Town Hall / Rec Center area.

On the outer parkways, civic uses can be placed at strategic sites where they are most useful. Potential treatments include fenced tot lots at walkable locations, playgrounds, fitness trails, natural areas, sunny lawns, ball courts, dog parks, frisbee golf, native plantings, picnic tables, small shelters, etc.

In the town center area near the new Town Hall / Rec Center and Antelope Park, features can be provided for use by more people and larger gatherings, such as civic events, baseball games, and family and school reunions. Potential features include public restrooms, multi-table picnic shelters, historic aviation exhibits, interpretive trailside signs, and many others.

## Bar Nunn Parkway System



**Sunset Blvd. Business Area:**

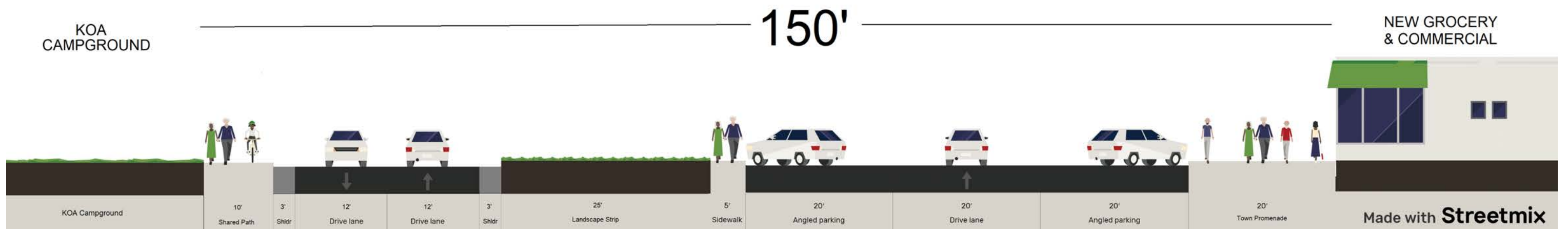
Between Antelope Drive and Arena Street, existing plans call for reducing the right of way to 50 feet to accommodate the new Rec Center / Town Hall.

Between Arena Street and Salt Creek Highway, the study recommends the Town retain the existing 150-foot right of way for municipal purposes. One possibility is to provide a 10-foot shared use trail from the KOA campground to Antelope Drive, adjacent to a 30-foot main street with curb and gutter, a grassy public space (possibly an I-25 rest area) and commercial parking with one-way (eastward or westward) access drive. The commercial area could have a 20-foot-wide sidewalk with outdoor café and public seating, shade trees and wind baffles, and adjacent storefronts. The available 150-foot right of way leaves many design options for future consideration.



# Sunset Boulevard

# Sunset-Commercial Parking Area



# McMURRY BOULEVARD EAST

**LANDSCAPE: CENTER MEDIAN / PEDESTRIAN REFUGES**  
Where the center lane is not needed for left turns, median islands may replace a center turn lane and provide safer pedestrian crossings. Medians also provide visual interest, suggest a "town" street, and encourage lower speeds.

**FUTURE BUSINESS DEVELOPMENT**

**NO ON-STREET PARKING**

**INSTALL STREET LIGHT**

**3-LANE WITH SHOULDERS**

**REMOVE EXISTING RAISED MEDIAN**

**RETAIN EX. RAISED CROSSWALK**

**FUTURE BUSINESS DEVELOPMENT**

Google Earth

# McMURRY BOULEVARD WEST

**LANDSCAPE: MEDIAN ISLANDS AND PEDESTRIAN REFUGES**  
Where a left turn lane is not needed (green areas below), median refuge islands might be added to provide a safer pedestrian crossing, create visual interest, and encourage reduced speed.

FUTURE WEST  
EXTENSION

ALL-WAY  
STOP

ADD CENTER  
TURN LANE

RETAIN NORTH  
PARKING LANE

ELIMINATE PARKING  
ON SOUTH

Google Earth

# BEL VISTA AND ANTELOPE DRIVE NORTH



**LANDSCAPE: EXPANDED 74' MEDIAN**  
The expanded median along Antelope Drive may include Parkway Network options, such as Shared Bike-Pedestrian pathways of mulch or crusher fines, Lawns at targeted locations to reduce maintenance, Drought-tolerant natural areas using native grasses, Street Furniture and Amenities (benches, picnic tables)

**LANDSCAPE: PARKING LANES AND SPEED CONTROL**  
Parking lanes on Bel Vista and Antelope may be interrupted as desired with planted curb extensions and pedestrian "bump-outs" at intersections.

# BEL VISTA AND ANTELOPE DRIVE CENTER



**LANDSCAPE: EXPANDED MEDIAN**  
- The expanded median along Antelope Drive may include various Parkway Network options, including: Mulch or Crusher-Fines mixed use pathways, Lawn in target play areas, Native grasses (drought-tolerant species), Amenities (benches, picnic tables)

**LANDSCAPE - PARKING LANES AND SPEED CONTROL**  
- Parking lanes along Antelope and Bel Vista may be interrupted as desired by Planted Curb Extensions and "Bump-Outs" at intersections

Google Earth

# PRAIRIE LANE AND SUNSET BLVD CENTER

**NEW SUBDIVISION**

## LANDSCAPE: EXPANDED 74-FOOT MEDIAN

The expanded median along Sunset Blvd. may include various Parkway Network Options, including:

- Shared-use pathway (pedestrian, bicycle) re-using the former runway surface
- Landscaped buffer strip separating motor vehicles from other users
- Side paths of mulch or crusher fines
- Lawn (in concentrated areas to reduce maintenance)
- Natural areas using native grasses and shrubs (drought-tolerant species)
- Amenities: benches, picnic tables



## LANDSCAPE: PARKING LANES AND SPEED CONTROL

Parking lanes along Prairie Lane and Sunset Blvd. may be interrupted as desired by planted curb extensions "Bump-Outs"

LANDSCAPE: CUL-DE-SAC The expanded greenway east of the proposed Sunset Blvd. cul-de-sac provides a key pedestrian connection to the crosswalk and the public greenspace and parkway crossroads at Antelope Park and the new Rec Center/Town Hall

# PRAIRIE LANE AND SUNSET BLVD WEST

**LANDSCAPE: SPEED CONTROL AND TRAFFIC ROUTING**  
Curb Extensions "Bump-Outs" and/or raised crosswalks at intersections will help discourage through traffic on Prairie Lane and direct drivers to Sunset Blvd.



**LANDSCAPE: EXPANDED MEDIAN**  
The expanded median at Sunset Blvd. may include various Parkway Network Options, including: Shared-use pathway (pedestrian, bicycle) re-using the old runway pavement, Landscaped barriers separating motor vehicles from other users, Side paths of mulch or stone crusher fines, Lawns (in concentrated areas to reduce maintenance), Natural areas using native grasses and shrubs, (drought-tolerant species), and Amenities (benches, picnic tables)

Google Earth

# TRAIL'S END SOUTH

**LANDSCAPE: PARKING LANES AND SPEED CONTROL**  
Parking lanes along Trails End may be replaced where needed or desired by curb extensions/planting areas and/or pedestrian "Bump-Outs" at intersections. These can be installed as crosswalks or for traffic calming and speed control, as needed.

- "SHARED STREET" SIGNAGE

20 MPH

20 MPH

- 20-FOOT TRAVEL WAY

- 5-FOOT BIKE PATHS

- 7.5-FOOT PARKING LANES

Google Earth

# PALOMINO AVENUE WEST

**LANDSCAPE: EXPANDED 74-FOOT MEDIAN**  
The expanded median at Palomino Ave. may include various Parkway Network options:

- Mixed-use pathway (pedestrian, bicycle)
- Landscaped barrier strip separating motor vehicles from other users
- Mulch or stone crusher fines side paths
- Lawn (in concentrated areas to reduce maintenance)
- Natural areas using native grasses and shrubs (drought-tolerant species)
- Amenities: tot lot, sport court, fitness trail, picnic tables

**LANDSCAPE: PARKING LANES AND SPEED CONTROL**  
Speed control elements may include:

- Planted curb extensions "Bump Outs" at intersections
- Raised crosswalks where desired or where speeding is observed



Google Earth

# PALOMINO AVENUE EAST

## LANDSCAPE: EXPANDED MEDIAN

- The wider, 74-foot median along Palomino Ave. may include:
- Parkway Network options, such as shared-use pathway (pedestrian, bicycle) made of mulch or stone crusher fines.
  - Lawn (in concentrated areas to reduce maintenance cost)
  - Natural areas of Native Grasses (drought-tolerant species)
  - Amenities: tot lot, sport court, fitness trail, tables, benches

## LANDSCAPE: PARKING LANES AND SPEED CONTROL

- Speed control elements may include planted curb extensions at intersections to replace parking area.

## LANDSCAPE: CUL-DE-SAC

- The expanded green space east of the proposed cul-de-sac may provide a connection to the larger public greenspace associated with Antelope Park and the Parkway Crossing at the Town Hall / Rec Center.

NON-MOTORIZED PATH

SAFETY BARRIER

2-WAY STREET

PARKING LANE

MUNICIPAL AREA

WIDEN MEDIAN

ONE WAY

MEDIAN CROSSOVER

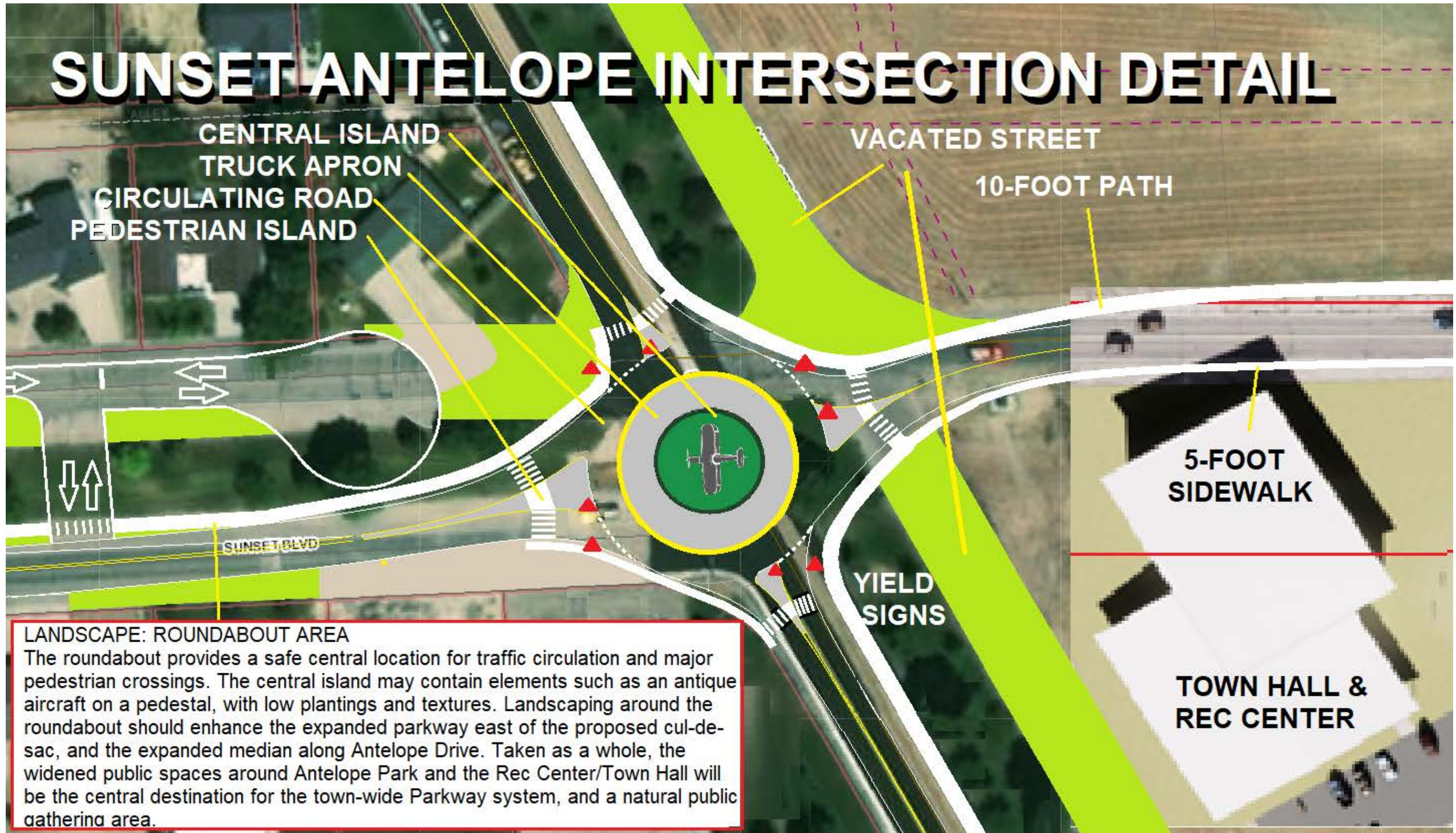
CUL-DE-SAC

VACATE INTERSECTION

CENTRAL BUSINESS DISTRICT

Google Earth

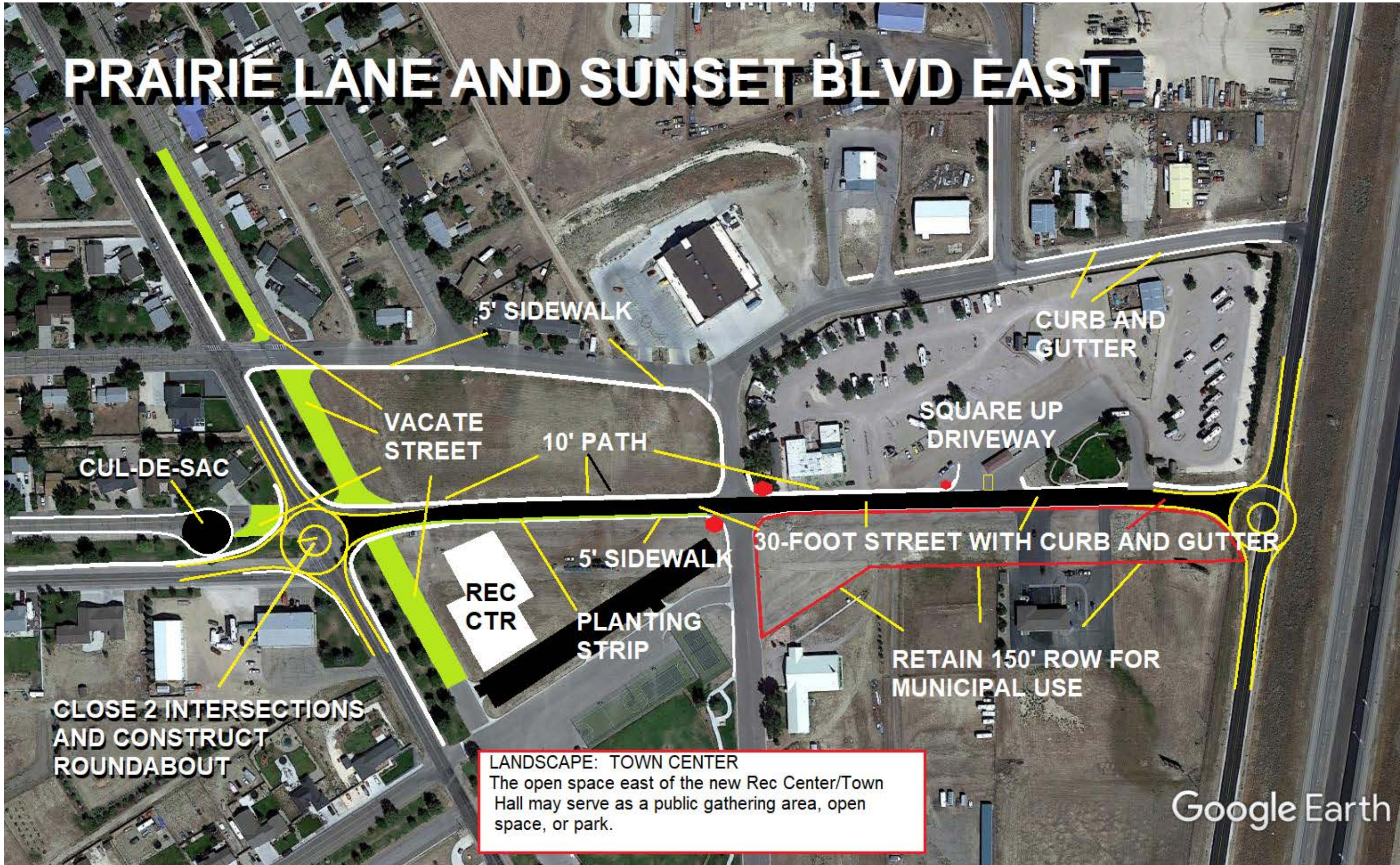
# SUNSET ANTELOPE INTERSECTION DETAIL



## LANDSCAPE: ROUNDABOUT AREA

The roundabout provides a safe central location for traffic circulation and major pedestrian crossings. The central island may contain elements such as an antique aircraft on a pedestal, with low plantings and textures. Landscaping around the roundabout should enhance the expanded parkway east of the proposed cul-de-sac, and the expanded median along Antelope Drive. Taken as a whole, the widened public spaces around Antelope Park and the Rec Center/Town Hall will be the central destination for the town-wide Parkway system, and a natural public gathering area.

# PRAIRIE LANE AND SUNSET BLVD EAST



# NEW COMMERCIAL AREA



**LANDSCAPE: SUNSET COMMERCIAL AREA**  
Landscape improvements will enhance the main entry to Bar Nunn and provide continuity with the nearby Rec Center/Town Hall to the west.  
Resident and traveler amenities may include:

- Expanded sidewalks, wide enough to support cafe seating, shade trees, plantings, etc.
- Kiosks displaying upcoming community events, public notices, parkway trail maps
- Potential amenities: benches, picnic tables, fenced dog park, public restrooms

# WARDWELL INDUSTRIAL AVENUE

Future  
Parallel Path

Overlook  
with Bench

Curve  
Chevrons

## LANDSCAPE: OVERLOOK

- An overlook located on the south/west side of Wardell Industrial Avenue would provide a destination or waypoint for those walking or bicycling the route. It may also be a useful rest for elderly folks after climbing up the hill. The waypoint could be a simple widening of the pavement, protected by posts or cairns, and signed.
- Amenities may include:
  - Shade tree or structure
  - Bench

Google Earth

# ARENA STREET AND ANTELOPE DRIVE SOUTH

EXTEND SIDEWALK

## LANDSCAPE: PARKWAY CROSSINGS

The expanded public greenspace at the town center will serve as the nexus for a proposed community-wide parkway system, and may include:

- Expanded Rec-Center/Town Hall Entry
- Open space for community events (Farm Markets, Fireworks, Concerts, Picnics)
- Pathway Elements: Wayfinding Signs, Bike Parking
- Amenities, Drinking Fountain, Benches, Picnic Table, Tot Lot

VACATE STREET FOR PUBLIC GREENSPACE

MUNICIPAL PARKING

EXTEND TRAIL TO SALT CREEK HWY.

Google Earth

## Recommended Landscape Treatments

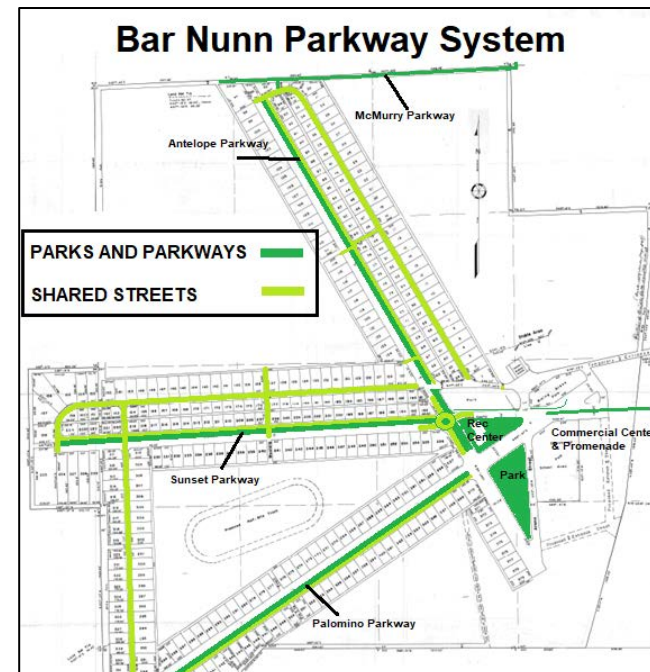
### Landscape Treatments:

The Town of Bar Nunn's stated desire to implement cost-efficient roadway updates suggests a broad range of associated landscape improvements, which will allow the town to:

- eliminate water-consumptive and under-utilized lawns,
- introduce native and drought-tolerant vegetation,
- provide multiple opportunities for recreation and gatherings throughout town,
- provide landscape furnishings and neighborhood amenities, and
- enable safe routes for non-motorized transportation on a new parkway network.

### Parkway Center:

The central destination and focal point of the Bar Nunn parkway system will be the new Town Center, which includes the Antelope Drive/Sunset Blvd intersection, Town Hall & Recreation Center, Antelope Park, the proposed Sunset Welcome & Rest Area, and the planned commercial district. Multi-use (non-motorized) pathways are proposed to branch from this central location to and from all neighborhoods of Bar Nunn. **See sheet L1 for a sketch of possible improvements and amenities.**



### Runway Streets / Parkway Network Options:

This study recommends narrowing segments of the former runway streets (Antelope Dr., Palomino Ave., Sunset Blvd.) to reduce roadway maintenance costs, and by so doing, widen the existing greenway medians between each pair of parallel streets. The expanded greenways will include space for the Parkway routes and amenities, as well as deliberately planned lawns and native grass areas to focus activities and reduce watering, mowing, and other maintenance costs. **See sheet L-2 for illustrated suggestions of amenities in these areas.**

### Taxiway Roads – Options:

This study also recommends re-striping the taxiway roads (Arena Street, Bel Vista, Prairie Lane, and Trails End) and McMurry Blvd. to encourage appropriate driving speeds by narrowing drive lanes. At the same time, this allows bicycle/pedestrian lanes and parking as desired. **See sheet L-3 for a perspective before-and-after sketch.**

### Chicane:

Chicanes combine traffic engineering and landscaping to control speed, manage stormwater, reduce the heat island effect, and improve aesthetics. **As shown on sheet L-3 and L-4**, chicanes can be placed symmetrically or only where parking is not required. When planted with street trees or other vegetation, chicanes provide attractive views and a welcome respite from a straight path. The landscape segment helps break up sightlines and make a street look less like a high-speed road. The Town may wish to locate chicanes along street segments where speeding is evident or aesthetic improvement is desired.

### Crosswalk Bulb Outs / Curb Extensions:

This configuration enhances pedestrian safety by improving visibility between drivers and pedestrians and by reducing the crossing distance. These are especially helpful in areas with parallel parking. Curb extensions can also delineate a 'calmed' precinct where speeds are low. They can also provide opportunities for stormwater management and landscaping. **See sheet L-5.** The Bulb Out may or may not be enhanced with a Speed Table or Raised Crosswalk.

### Speed Table/ Table Hump/ Raised Crosswalk:

This street treatment helps reduce speeding. Whether or not a crosswalk is integrated into the Table (as on McMurry Blvd **(see image sheet L-6)**), motorists are encouraged to slow to avoid discomfort. These features can be specially designed for different purposes and different speed environments.

### Modern Roundabout:

Roundabouts are discussed at length elsewhere in this report. For landscaping, roundabouts offer opportunities for community welcome signs, directional signs, iconic images, foliage, and public art. A well-designed roundabout landscape can serve as an entry landmark and central feature of the proposed Bar Nunn Parkway System.

In keeping with Bar Nunn's heritage as an airport from 1935 to 1952, sheet L-7 shows a vintage airplane and landscaping in the center of Bar Nunn's proposed central roundabout –on the centerline of old runway 26 (now Sunset Blvd). The planned roundabout at Salt Creek Highway and Sunset Boulevard offers a second potential location for public display of a vintage aircraft. As a side benefit, the highly visible location next to I-25 may be expected to attract visitors to Bar Nunn. Sidewalks around each roundabout offer opportunities to observe and photograph the aircraft from many different angles.



# TOWN CENTER - SUNSET WELCOME & REST AREA

By reclaiming the parallel pavement on Antelope Dr. and adding it to the existing vegetated median, the City can introduce Parkway improvements to a space approximately 100' x 300'.

The new Antelope Park could provide opportunities for community gatherings in the downtown core.

The Park would be easily accessible via the multi-use Pathways and the Parkway network.

By reclaiming excess pavement on east Sunset Blvd., the City can create an attractive town entry.

This space could provide parking for adjacent businesses, visitor amenities such as restrooms and an off-leash dog exercise area, and a green space immediately available to residents, tourists, and employees of downtown businesses.



BAR NUNN STREETSCAPE REVITALIZATION PLAN  
LANDSCAPE TREATMENTS

DRAFT FINAL  
L-1  
2022-08-18

# RUNWAY ROADS / PARKWAY NETWORK OPTIONS



## APPLICABLE SEGMENT OR INTERSECTION

- Antelope Drive
- Palomino Ave.
- Sunset Blvd.

### Overview:

Because family homes line the streets, speed control is critical for safety. The city should offer alternatives to vehicular travel, yet runway roads generally lack sidewalks or shoulders.

Runway roads are in various states of repair, and Bar Nunn desires to reduce pavement area and thus reduce maintenance costs - allowing for functional and aesthetic improvements during necessary repairs.

Wonderful greenways with well-established vegetation mark the center of these alignments. However the greenways are often:

- Somewhat too narrow for use - feeling more like a road median than a park
- Separated from homes by excessive pavement
- Burdened by under-utilized, high maintenance lawn

Therefore, the city may wish to reduce the width of pavement AND better utilize the remaining open space.

In addition to calmer traffic and safer pedestrian crossings, the city can create an overall Parkway system, including:

- Paved multi-use pathways (use existing pavement)
- Raised crosswalks/ speed tables at crossings
- Mulch-paved internal pathways
- Neighborhood-focused parklet on each road:
  - small playground (tot lot)
  - picnic shelter / gathering space
  - multi-use sports court
  - off-leash fenced dog park
  - benches
  - picnic tables
- Keep all existing healthy trees and shrubs
- Keep manicured lawns only as necessary for use
- Replace excess lawn with native grasses and xeriscape

## BAR NUNN STREETSCAPE REVITALIZATION PLAN LANDSCAPE TREATMENTS

DRAFT FINAL  
L-2  
2022-08-18

# TAXIWAY ROADS - OPTIONS

## APPLICABLE STREET SEGMENT OR INTERSECTION

- Arena Street
- Bel Vista
- Prairie Lane
- Trails End



### Overview:

The original TAXIWAYS run parallel to their associated Runways. As originally designed and constructed, the taxiways provide wide pavements, with no sidewalks or shoulders, and rare curb and gutter (existing, left).

Taxiways are not considered main thoroughfares, but neighborhood access for residents only.

Taxiway roads are in various states of repair. This provides opportunities for functional and aesthetic improvements as the City makes necessary repairs.

Improvements may address community values:

- Safe travel for children and pedestrians
- Allowance for alternative transportation
- Appropriate on-street parking
- Landscape improvements (providing shade, color, interest, community identity).

Prairie Lane provides an example, shown on this sheet.

One of many possibilities includes new pavement, and striping (center photo) to provide:

- Two-way travel
- Parking on both sides where desirable
- 5' multi-use pathway for pedestrians and bicycles

Traffic calming methods may include planted CHICANES a shown, CURB EXTENSIONS and CROSS-WALK BULB OUTS.

The planted areas would serve to calm traffic by narrowing the roadway.

Landscaping would further calm traffic, make the walk more interesting, and provide aesthetic value to the streetscape.

## BAR NUNN STREETScape REVITALIZATION PLAN LANDSCAPE TREATMENTS

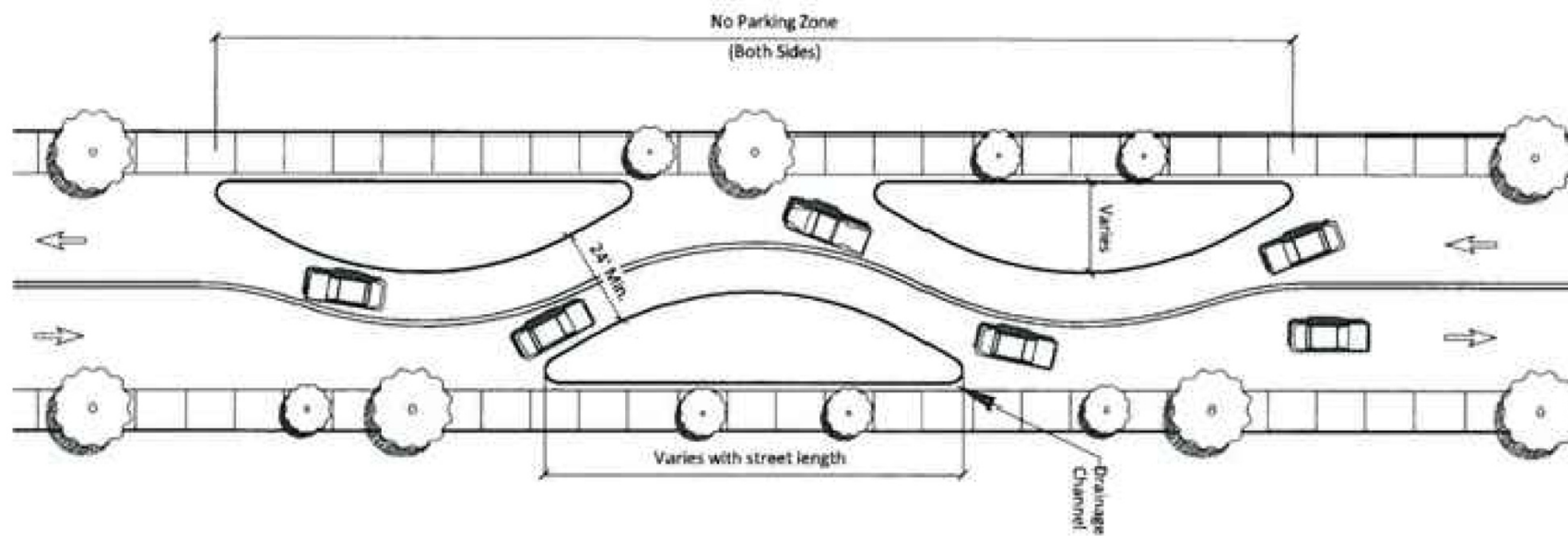
DRAFT FINAL  
L-3  
2022-08-18

# CHICANE



## APPLICABLE STREET SEGMENT OR INTERSECTION

- Arena Street
- Bel Vista
- Prairie Lane
- Trails End
- McMurry Blvd.



## Overview:

Chicanes narrow the roadway with curb extensions, which may include landscaping.

They may be installed on opposite curbs to narrow the travelway (far left) or may alternate to create an S-shaped curve (near left).

Chicanes reduce motorists' speed as they travel through the road segment. Data on chicanes' effectiveness in reducing speed and collision is limited, however experience has found chicanes to be effective in reducing speed from 18% to 35% overall.

## Fast Facts:

- Can be used on Local and Collector streets
- Reduces speed but does not reduce volume
- May impact parking

## Advantages:

- Increases pedestrian safety by reducing vehicle speed
- Most effective when used in a series
- Aesthetically pleasing
- Discourage high speed, but are easily negotiable by large vehicles such as fire trucks

## Disadvantages:

- Increases landscape maintenance
- Reduces on-street parking
- May create changes to property frontage
- Curbs and landscaping can be costly

## Criteria/Application(s):

- Appropriate where noise associated with Speed Tables may be unacceptable

# CROSS-WALK BULB OUT / CURB EXTENSIONS

## APPLICABLE STREET SEGMENT OR INTERSECTION

- Arena Street
- Bel Vista
- McMurry Blvd.
- Palomino Ave.
- Prairie Lane
- Sunset Blvd.
- Trails End



### Overview:

Bulb outs (a.k.a. curb extensions) narrow the width of the pavement a pedestrian has to cross, increasing safety and visibility.

They also can reduce speeds as motorists travel through the intersection, particularly when turning.

Bulb outs may be installed at an intersection or mid-block.

May be installed in conjunction with Speed Table or elevated crosswalk.

### Fast Facts:

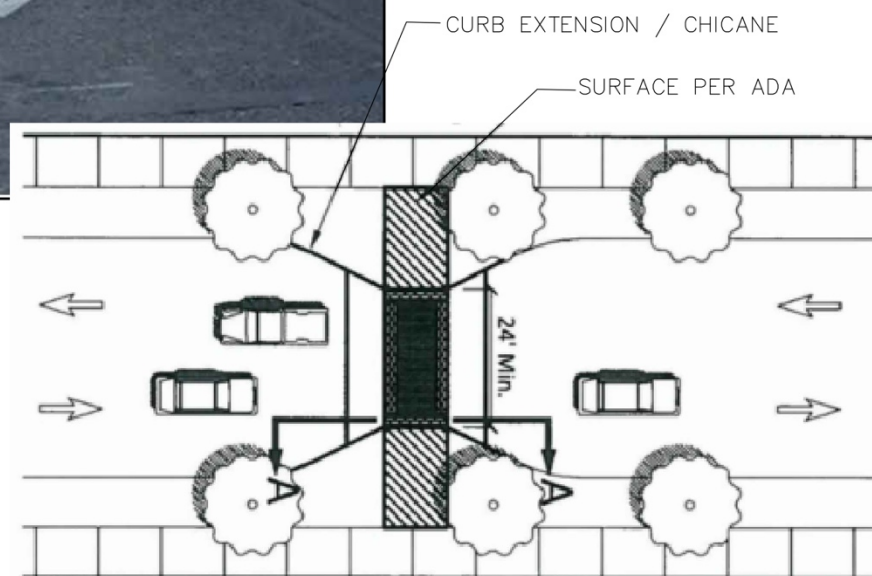
- Can be used on Local, Collector and Arterial streets
- Does not restrict access or traffic volume
- Does not impact emergency response vehicles.
- Bicyclist Impact- possible

### Advantages:

- Effective in reducing turning speeds
- Shortens pedestrian crossing distance
- Improves visibility of pedestrians
- Reduces vehicle speeds if placed mid-block
- Landscaping improves aesthetics
- Can absorb stormwater runoff

### Disadvantages:

- May affect larger vehicle turning radius
- Adjust to accommodate bicycle crossing at intersections
- May displace some street parking



# SPEED TABLE / TABLE HUMP / RAISED CROSSWALK



## APPLICABLE STREET SEGMENT OR INTERSECTION

- Arena Street
- Bel Vista
- McMurry Blvd.
- Palomino Ave.
- Prairie Lane
- Sunset Blvd.
- Trails End



## Overview:

A Speed Table is a section of elevated paving - usually 3.5" high - that requires motorists to reduce speeds. They have little affect on the vehicle driving the posted speed limit, but can produce discomfort when the speed limit is exceeded.

Can be combined successfully with a crosswalk, for example, where the Pathway crosses McMurry Blvd. (photo, below left)

## Fast Facts:

- Can be used on Local, Collector and Arterial streets
- Reduces speed
- Does not restrict access or transit
- Can park on top, if there's no crosswalk
- Designed to allow snowplows

## Advantages:

- Improves motorists visibility of pedestrians
- Clearly designates the crosswalk
- Self enforcing
- Relatively inexpensive
- May reduce speed by an average of 18%
- May reduce accidents by an average of 45%

## Disadvantages:

- Increases regular maintenance
- May increase response time for emergency vehicles
- May increase noise and air pollution

## Criteria/Application(s):

- Effective in reducing speeds though not as effective as a Speed Bump
- Most effective if used in a series; space 300 to 500 feet apart
- Useful in locations where pedestrian crossings occur at unexpected locations and vehicle speeds are excessive

# MODERN ROUNDABOUT

## APPLICABLE STREET SEGMENT OR INTERSECTION

- Arena Street at Prairie Lane
- Arena Street at Sunset Blvd.
- Sunset Blvd. at Salt Creek Highway
- Sunset Blvd. at Antelope Drive



### Overview:

Roundabouts are large raised circular islands placed in the middle of an intersection with channelized approaches.

The purpose of roundabouts is to slow motorist speeds as they maneuver around the circle to proceed through the intersection. Motorists entering the intersection must yield to circulating traffic.

### Fast facts:

- THE SAFEST form of Intersection
- 75% fewer Injuries than crossroads
- 90% fewer fatalities
- 40% fewer pedestrian injury crashes
- Useful for all Street Types
- Accommodates all vehicles types

### Advantages:

- Reduces Speed through the Intersection
- YIELD = High Capacity & Low Delay
- Reduces fuel consumption and emissions by 50%
- Accommodates Variable Traffic Flows
- Narrow roads can carry more traffic, so roads may not need widening
- Can be attractively landscaped
- Separates Conflict Points
- U-turns enable access without left turns

### Disadvantages:

- Requires more space at the intersection
- Pavement markings must be maintained
- Landscaping needs maintenance

### Other Application:

- Can be used for traffic calming

## Cost Estimates

### Street Improvements Engineering Cost Estimates:

Link	Base Cost Estimate (\$1,000s)	130% Contingency (\$1,000s)
Bel Vista	\$47	\$61
Prairie Lane	\$47	\$61
Trail's End	\$37	\$48
Mustang Trail	\$11	\$14
Antelope Dr. east, north of Prairie Lane	\$490	\$637
Antelope Drive Pathway, Sunset Blvd to Salt Creek Hwy.	\$340	\$443
Antelope Dr. east: reclamation from Prairie to Palomino	\$155	\$201
Sunset Blvd west of Antelope Drive	\$1,119	\$1,455
Palomino Ave west of Antelope Drive	\$1,359	\$1,767
Runway crossovers and Cul-De-Sacs (Each)	\$15	\$20
Sunset Blvd east of Antelope Drive	\$558	\$725
Sunset Blvd. Antelope Drive Roundabout	\$549	\$713
Curb Extensions (Each)	\$10	\$13
RRFB Beacons (Each)	\$15	\$20
Wardwell Industrial Avenue Side Path	\$492	\$639
Arena Street Sidewalk	\$53	\$68
<b>TOTAL</b>	<b>\$5.3 million</b>	<b>\$6.9 million</b>

**Landscape Costs:** Rough cost estimates for anticipated landscape features are provided on the following page. These estimates show typical costs during the summer of 2022. See engineering cost estimates include removing and/or replacing pavement, grading, and other necessary steps.

**Note:** This study is constrained to Planning level (10% / Conceptual) level of preliminary design. Many project details are not yet known and will be decided at later project stages. During final engineering design, Town leaders and designers will select elements to include in the project, such as picnic tables, trees and shrubs, street furniture, trash cans, etc. The adjacent list offers a reference for current costs for various landscape items.

### Landscaping Cost Components

Work Item	Unit	Estimated Quantity	x	Estimated Unit Price	Estimated Extend. Price
<b>REPLACE LAWN WITH NATIVE GRASS (per sq.ft.)</b>					
1 Seed Bed Prep (herbicide application, scarifying)	Sq.Ft.	1		\$0.05	\$0.05
2 Native Grass Reclamation Seeding	Sq.Ft.	1		\$0.50	\$0.50
3 Irrigation System	Sq. Ft.	1		\$0.50	\$0.50
Preserve and maintain existing irrigation system. Reprogram controller to provide adequate moisture for new seedlings; adjust irrigation times bi-weekly to reduce watering times and encourage deep roots of native grasses					
<b>ESTIMATED INSTALLED COST:</b>					\$1.05
<b>NEW LAWN (per sq.ft.)</b>					
4 Site preparation	n/a				
Subgrade preparation N.I.C. See engineering estimates for subgrade prep. of new lawn areas, including: removing existing pavement, scarify underlying soils, grade to subgrade (4" below finished grade), subsurface drainage structures (if any)					
5 Topsoil (4" layer)	Sq.Ft.	1		\$1.00	\$1.00
6 Lawn Sod (bluegrass mix or park mix sod)	Sq.Ft.	1		\$1.10	\$1.10
7 Irrigation System	Sq.Ft.	1		\$0.50	\$0.50
Connect to existing irrigation system including water supply with backflow prevention, controller, winterization components					
<b>ESTIMATED INSTALLED COST:</b>					\$2.60
<b>PLANTS</b>					
<b>Trees</b>					
8 Evergreen (12' - 14' high)	Each	1		\$1,120.00	\$1,120.00
9 Deciduous (3" - 3-1/2" cal)	Each	1		\$600.00	\$600.00
<b>Shrubs</b>					
10 Balled & Burlapped, screening shrubs, 6'-8' high	Each	1		\$400.00	\$400.00
11 Small- to mid-sized ornamental shrubs	Each	1		\$125.00	\$125.00
<b>FURNISHINGS</b>					
12 Shade Structure	L.S.	1		\$8,500.00	\$8,500.00
13 Bench (6' long)	Each	1		\$800.00	\$800.00
14 Drinking Fountain	Each	1		\$2,750.00	\$2,750.00
15 Trash receptacle	Each	1		\$1,200.00	\$1,200.00
19 Picnic Table (6' long)	Each	1		\$1,300.00	\$1,300.00
17 Mutt Mitt Station	Each	1		\$175.00	\$175.00
18 Bike Rack (6 bikes)	Each	1		\$800.00	\$800.00

## Capital Improvement Program

Revenue projection is complex. Inflation and interest rates are difficult to predict, and revenue streams are not constant or certain.

The Town of Bar Nunn provided budget records for the fiscal years 2015 through 2021. Future budget projections were based on an average of this historic budget data inflated to year 2022 dollars, and then rounding off to the nearest thousand dollars. All cost estimates are also in 2022 dollars and will require inflation adjustment for future budgets.

- **Forecast Street and Alley Maintenance Budget:** Between 2015 and 2021, Bar Nunn’s average annual Street Maintenance Budget was \$178,000. Using this, we project that the future Streets Dept budget will be about **\$211,000 (in 2022 dollars)**.
- **Parks Repair and Maintenance Budget:** This budget item is projected at **\$44,500 per year (2022 dollars)**.
- **Forecast Capital Improvements Budget:** During the analysis period, Bar Nunn’s average annual capital improvement budget was \$312,000, varying from a minimum of \$22,000 in FY 2020 to a maximum of \$442,000 in 2017. For simplicity, we have projected that future Capital Improvement budgets will average about **\$348,000 annually (2022 dollars)**.
- **Grants & Ear Marked Revenue:** Between 2015 and 2021, Bar Nunn received an average of \$307,000 per year in earmarked grants. Increasing for inflation, we project this source will average about **\$344,000 per year (2022 dollars)**.
- Combining the Capital Improvement Budget with the Grants and Earmarked revenue, we project **that \$692,000 per year will be available for Street Improvement projects (2022 Dollars)**.

With this revenue stream, and adding a 30% contingency for incidentals and unforeseen items, the schedule of projects in the following table appears feasible. Using bonding authority, the Town may also construct now and pay later. Some small projects may be done in-house. Some portion of street and sidewalk funding should also be required from developers at appropriate locations.

<b>Bar Nunn Streetscape Revitalization Plan Capital Improvement Program</b>			
<b>Project Component</b>	<b>Dollar Cost (2022 Dollars)</b>	<b>Revenue Years</b>	<b>Construction Year</b>
Sunset Blvd./Salt Creek Hwy Roundabout	\$720,000	NA	Programmed
Taxiways: Chip Seal, Signs, Paint, Bump outs	\$210,000	0.30	2024
Wardwell Industrial Avenue Chevrons	\$13,000	0.02	2024
Antelope Dr. E Reclamation + W RRFB Beacons	\$241,000	0.35	2024
Sunset Blvd west of Antelope Drive	\$1.50 million	2.17	2026
Antelope Dr. E: Reclamation Prairie-Palomino	\$201,000	1.21	2028
Sunset Blvd. Antelope Drive Roundabout*	\$713,000	1.03	2029
Antelope Dr. Pathway to Salt Creek Hwy	\$443,000	0.64	2030
Sunset Blvd east of Antelope Drive	\$725,000	1.05	2031
Palomino Avenue west of Antelope Drive	\$1.81 million	2.62	2034
Arena Street Sidewalks	\$68,000	0.10	2035
Wardwell Industrial Avenue Pathway	\$639,000	0.92	2036

*\*This sequence of improvements was developed to assure that safety components are completed before re-routing significant traffic volumes onto individual street links. The roundabout at Sunset Blvd and Antelope Drive, for example, should be constructed before closing Antelope Drive at Salt Creek Highway.*

*\*\* Construction costs should be reviewed and adjusted for annual construction cost inflation to assure the capital improvements schedule remains realistic. Over time, projected revenues also become clearer, and the schedule may be readjusted if needed. These corrections will enable schedule and budget adjustments to keep the budget on track.*

*This preliminary project schedule assumes that all capital improvement revenues and grants are directed to construct components in this plan. Inclusion of additional Town projects will delay completion.*

## Acknowledgements

Many professionals and individual citizens offered comments or otherwise aided immeasurably in developing the Bar Nunn Streetscape Revitalization Plan, and without whom this project would not have been possible. The study team wishes to gratefully acknowledge every individual effort and the generous offerings of concerns and ideas for the future of the Town of Bar Nunn.

Brad Adams, Citizen  
Chris Alexander, Citizen  
Cindy Alvey, Citizen  
Kyla Alvey, Citizen  
Chuck Anderson, Citizen  
Kristy Ann, Citizen

BZ Barkery, Citizen  
Brad Barr, Citizen  
Randy Blough, PLA, ASLA, CLARB, Harmony Design & Engineering  
Melissa Bowles, Chef, The Hangar Bar and Grill  
Garrett Boner, Citizen  
Andrea Boyer, Citizen  
Council Member Peter Boyer – Town of Bar Nunn  
Drew Brent, Citizen  
Shaw Brezina, Citizen  
Haley Sue Brien, Citizen  
Cindy Batchelor-Brugger, Citizen  
Juli Braunberger, Citizen  
Wendy Bruntmyer, Citizen  
Ashley Bryant, Citizen

JoAnn Ferguson Cain, Citizen  
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Mr. Raymond (Ray) Catellier, CEPI (Civil Engineering Professionals, Inc.)  
Venus Childress, Citizen  
Kristine Sebion Clark, Citizen  
Council Member Steven Clark- Town of Bar Nunn  
Ron Clark, Citizen  
Jenifer Crabb, Citizen  
Kody Crabb, Citizen

Ernie Crapo, Citizen  
Camela Mae Cummins, Citizen

Paula Dahlke, Citizen  
Donna Damori, Citizen  
Ethan Daniels, Citizen  
Chris Daniels, Citizen  
Joshua Lee Daniels, Citizen  
Tina Davis, Citizen  
Bill Deal, Citizen  
Wendy Degroot, Citizen  
Megan Deskins, Citizen  
Tyler Dice, Citizen

Cindi Effenberger, Citizen  
Genee Eggleston, Citizen  
Pat Ehrman, Landscape Architect, Harmony Design & Engineering  
Tristan Enders, Citizen  
Andrew Engleman, Citizen

Karen Farley, Citizen  
Bill Faust, Citizen  
Jeremy Faust, Citizen  
Jared Fehringer, Citizen  
Erica Paej Ficken, Citizen  
Hon. Patrick Ford, Mayor of Bar Nunn  
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Justin Foster, Citizen  
Tracy Foster, Citizen  
Levi French, Citizen

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Jerry Hansen, Citizen  
Janesse Harne, Citizen  
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DelRae Holt, Citizen  
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Robert Hoover, Citizen  
Jenifer Hopkins, Citizen  
Chris Howard, Citizen  
Jen Hume, Citizen  
Ken Hume, Citizen

Karen Jeske, Citizen  
Boone Johnson, Citizen  
Jennifer G. Johnson, Citizen  
Pam Jones, Administrative Technician, Casper MPO

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Sarah Kauffman, Citizen  
Maggie Kerns, Citizen  
Wilma F., Kluge, Citizen  
Bob Kreider, Citizen  
Kristie, Citizen  
Kristen Kulhavy, Citizen

Denise Lacey, Citizen  
Otis Larson, Citizen  
Curtis LeVene, Citizen  
Amy Linch, Citizen

Marianne Magee, Citizen  
Jesse Malone, Citizen  
A Marshall, Citizen  
Pastor Tyler Martin, Outfitter Church  
Tim Martin, Citizen  
Amber Mauk, Citizen  
Troy Mauk, Citizen  
Sheri Mead, Citizen  
Alicia L. Meredith, Citizen  
Pam Merrill, Citizen  
Coleen Miller, Citizen

Kelley Miller, Citizen  
Kristen Moore, Citizen  
Jack L. Moore, Citizen  
Lauren Mothersole, Citizen  
Tyler Muckley, Citizen

Lori Neibauer, Clerk Treasurer, Town of Bar Nunn  
Dr. Brian Neville, GIS Technician, Y2 Consultants  
Anthony Nickerson, Citizen  
Jessica Nguyen, Citizen

Kosha Olsen, Y2 Consultants  
Keri Owen, Citizen  
Vicke Owens, Citizen

Nikki Pacheco, Citizen  
Ariana Parker, Citizen  
Parmely, Citizen  
Cindy Pater, Citizen  
Colleen Eccles Penor, Citizen  
Tondra Plunkett, Citizen  
Virginia Ann Pond, Citizen  
Melisa Porter, Citizen

Dawn Reney, Citizen  
Darol Richardson, Citizen  
Tyler Ryan, Citizen

Dan Sabrosky, Citizen  
Brenda Sanders, Citizen  
Sarah, Citizen

Chas Beeson Schaff, Citizen  
Chris Shomler, Citizen  
Phil Schroyer, Citizen

Jan Stapert Schoolcraft, Citizen  
Kalista Schwartzrock, Citizen

Council Member Mary Sue Sorenson – Town of Bar Nunn

Jamie Spaulding, Y2 Consultants  
Amber Sparks, Citizen  
Amanda Stanart, Citizen

Rhonda Weinman Strange, Citizen  
Kristina Stubbs, Citizen  
Becci Selby Sutphin, Citizen

Ann-Marie Taylor, Y2 Consultants  
Tracy, Citizen  
Madison Trimble, Citizen  
Sheena Trout, Citizen

Mr. Kurtis Van Houten, Owner, The Hangar Bar and Grill  
Patricia Villines Jeffries, Citizen

Ed Waddell, Project Manager, Y2 Consultants  
TJ Wethington, Manager, IDAX Data Solutions  
Virginia Wharton, Citizen  
Veronica White, Citizen  
Jennifer Burton Whitehead, Citizen  
Cindy Young Williams, Citizen  
Cassie Wolfe, Citizen  
Kayla Wolosin, Citizen  
Dan Wolski, Citizen  
Jessy Wood, Citizen  
Solostin Wyoming, Citizen

Mr. Jeremy Yates, past MPO Supervisor

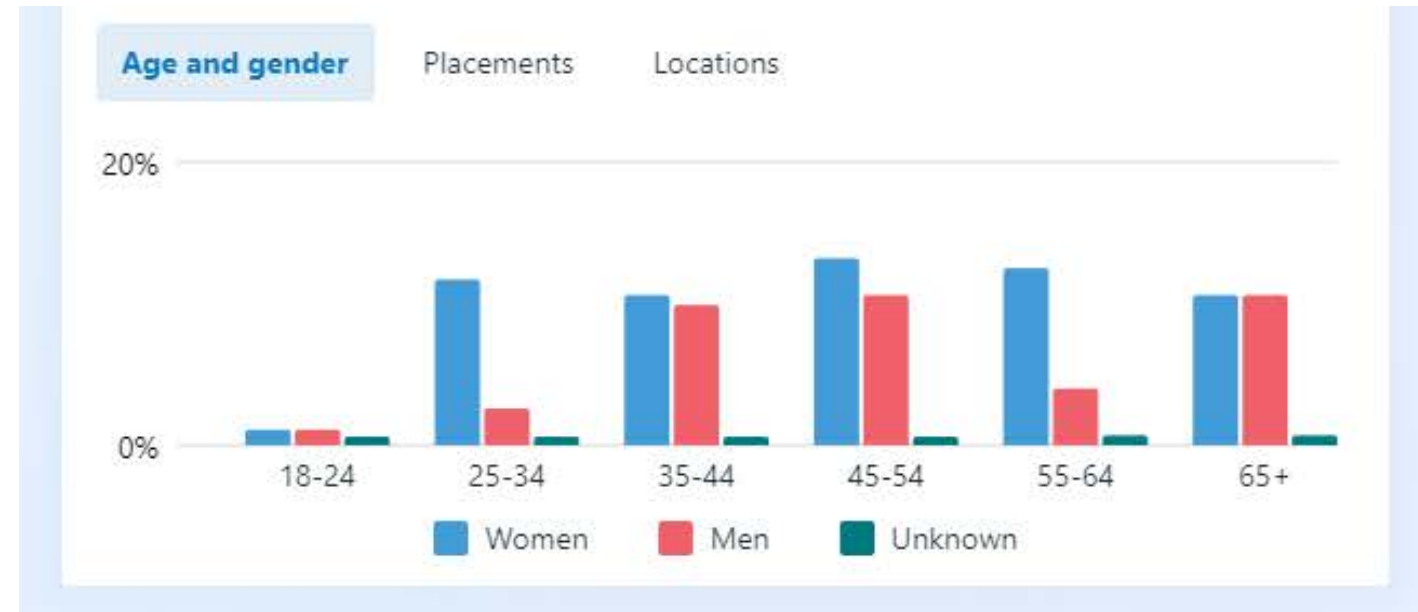
Zac, Citizen  
Theodore Zac, Citizen  
T.r. Zach, Citizen  
Kimbery Zahara, Citizen

## APPENDIX A: SUMMARY OF PUBLIC INVOLVEMENT OUTREACH

### Social Media Public Outreach:

A Facebook Page [Bar Nunn Streetscape Revitalization Plan] was launched on February 24, 2022. During 7 months in operation, the page reached 3,720 people, received 109 “Likes,” had 218 Engagements and received 79 written responses. Of these, about ½ were from Casper and half from Bar Nunn.

The age and gender breakdown of are depicted in the graph below.



### BAR NUNN STREETSCAPE REVITALIZATION PLAN

#### -PRESS RELEASE-

#### Bar Nunn Wyoming, May 9, 2022 –

The Town of Bar Nunn and Casper Area MPO are planning public events to help design the future street system and landscaping of major Bar Nunn streets, including the new downtown Bar Nunn commercial center. The events will be held May 25th from 4-8 PM at The Hangar in Bar Nunn.

Built on the grounds of old Wardwell Airfield, runways and taxiways became the main streets of Bar Nunn. Since 2000, the population of Bar Nunn has tripled from a sleepy village of less than 1000 people to a fashionable new suburb of almost 3000 residents adding 100 new residents every year. Development is continuing, including a proposed 170-unit housing complex, new Town Hall and recreation center, and many roadway improvements all transforming the Town.

Bar Nunn residents have an important opportunity to help guide this growth. The Town of Bar Nunn and Casper Area MPO will hold three public events at The Hangar starting at 4 PM on the Wednesday, May 25th:

- 4 PM - 5 PM: Walking Tour of the New Town Center. Weather permitting, participants will meet at The Hangar at 4 PM and tour the planned future downtown center.
- 5 PM - 6 PM: Presentation and Social Hour. Community design experts will present study findings and design alternatives for town streets for consideration by the public. Light refreshments (The Hangar’s award-winning pizza) will be served.
- 6 PM - 8 PM. Citizen Design “Charrette.” Community designers from Y2 Consultants and Harmony Design and Engineering will lead a hands-on citizen design “charrette.” Citizens can work with the design team and identify their concerns and proposed improvement locations on large-scale aerial maps of the community.
- Survey forms will be available for attendees to offer comments and suggestions.

For those who are unable to attend, the study has a ‘Social Pinpoint’ web page (see post below) where participants can fill out an opinion survey and read about study efforts.

**The May 9 press release was posted on Facebook and reached 264 people.**

### May 25<sup>th</sup> Public Events:

The First public events took place May 25<sup>th</sup> and a Facebook Event was advertised two weeks prior to the meeting to Facebook users within 2 miles of the Hangar.

**47 people stated they were interested:** Chris Howard, Chris Daniels, Lauren Mothersole, BZ Barkery, Joshua Lee Daniels, Chris Alexander, Levi French, Brad Adams, Ernie Crapo, Boone Johnson, Camela Mae, Cummins, Chas Beeson Schaff, Sheena Trout, Garrett Boner, Wyndi Gibbons, Robert Hoover, Kristy Ann, Doug Foster, Jeremy Faust, Tracy foster, Theodore Zac, Patricia Villines Jeffries, Kristen Moore, Dan Sabrosky, Tondra Plunkett, Andrea Boyer, Jennifer G. Johnson, Justin Foster, Cindy Young Williams, Venus Childress, Jen Hume, Ken Hume, Amy Linch, Kimberly Zahara, Melisa Porter, Jennifer Burto Whitehead, Ariana Parker, Kyla Alvey, Kayla Wolosin, Cindy Batchelor-Brugger, Erica Paej Ficken, Virginia Ann Pond, Shaw Brezina, Keri Owen, Joella Lewis Grimsley, Megan Deskins

Eight people stated that they would attend: MPO Staff, Nigel Michael Hagerman, Jerry Hansen, Jan Stapert Schoolcraft, Pam Merrill, Maggie Kerns, Donna Cuin Hoffman, Kimberly Zahara.

**Prior to the August 18th on-line zoom presentation, this press release was provided to the MPO and posted on the project Facebook page:**

### BAR NUNN STREETSCAPE REVITALIZATION PLAN

#### -PRESS RELEASE-

#### Bar Nunn Wyoming, August 1, 2022 -

The Town of Bar Nunn and Casper Area MPO plan an on-line public event on Thursday evening, August 18th. Y2 Consultants and Harmony Design will present study recommendations for the future street system and landscaping of major Bar Nunn streets, including the new downtown Bar Nunn commercial area.

The on-line presentation will be Thursday, August 18th from 6 to 8 PM on ZOOM. The ZOOM web link for the presentation is:

<https://tinyurl.com/8w6b7bsj> Meeting ID: 835 5647 6492 Passcode: 582663

Bar Nunn was built atop old Wardwell Airfield, and its former runways and taxiways were repurposed as subdivision streets. Bar Nunn is now a fashionable residential community of almost 3000 residents. The main question for the study was how to best re-design those old runways and taxiway pavements to most efficiently serve community traffic needs and promote property values. The study considered multiple objectives, including safety, maintenance cost, aesthetics, recreation, pedestrians and bicyclists, economic development, and property values. The study has developed innovative recommendations to help Bar Nunn meet those objectives, and they will be presented August 18th.

The study has provided several ways for the public to comment on the plan:

- The study Facebook page [Bar Nunn Streetscape Revitalization Plan] shows proposed street improvements and the public is welcome to post comments and questions.
- A ‘Social Pinpoint’ web page offers a web site where participants can fill out an opinion survey and read about study efforts. <https://tinyurl.com/2x7xytn6>
- Phone: Interested parties are welcome to contact the Casper Area MPO, at 307-235-8255
- E-Mail: Citizens can e-mail the Casper MPO project manager at [rhardy@casperwy.gov](mailto:rhardy@casperwy.gov)

### **August 18 2022 Virtual Public Meeting**

The second Facebook Event on August 18<sup>th</sup> was also advertised on Facebook for 2 weeks. The ad was targeted to the Bar Nunn vicinity and reached 1,384 Facebook users. There were 129 post engagements and 103 link clicks.

28 interested: Cindy Pater, Tristan Enders, Veronica White, Jerry Hansen, Ernie Crapo, Karen Jeske, Amber Sparks, Kristina Stubbs, Dan Wolski, Coleen Miller, Tina Davis, Colleen Eccles Penor, Cassie Wolfe, Marie K-n, Patricia Villines Jeffries, Becci Selby, Sutphin, Kristen Moore, Sheri Mead, Donna Cuin Hoffman, Jack L. Moore, Ken Hume, Brenda Sanders, Wilma F., Kluge, DelRae Holt, Kayla Wolosin, Cindy Batchelor-Brugger, Kristen Kulhavy, Rhonda Weinman Strange

3 Attended: Kimberly Zahara, Jenifer Hopkins, Ariana Parker

**August 28: Vickie Owens:** *I agree that closing the south end of Antelope will cut down maintenance costs. However, many of the other projects in this plan seem like a waste of money. I think what seems to get lost in analyzing the streets is that most of us that live here have moved out here because of the rural atmosphere and quiet environment! We don't want malls and gas stations and roundabouts! The people that complain about the lack of conveniences here made the choice to move here and are generally in the newer homes who have just moved here and are adjusting, most would complain about something regardless! Roundabouts are an unjustified waste of money that would only create chaos and unsafe conditions. I have lived here for about 28 years and now live on the corner of Palomino and Antelope. I see the traffic every day. We do not need to build a roundabout! With the upcoming closure of antelope and a town hall going in on this corner there's only 3 turns to make on that intersection! Most drivers can navigate that without any trouble! The safety on the corner of Palomino and Antelope is not caused by too much traffic but the conditions. Antelope narrows here due to the boulders on one side and Palomino has about a 60 degree turn onto Antelope here. There is also an increase in foot traffic now and many people don't stop at the stop signs while others are speeding and swinging wide to turn onto Antelope! A cul-de-sac won't help that. Why not expand the parameters of the park out to Antelope as that park gets used a lot. Why not turn the double streets into one-way streets and just put in a few more crossovers? They'd get half the traffic then... The appeal of Bar Nunn needs to be preserved and improved! Noise, confusing streets (such as double roads with dead ends) traffic and chaos would only be worsening the appeal. I want to live on a nice street, as quiet as possible! I also feel that all that money spent on these things could be used in a much more practical manner. I pay a lot of taxes and don't expect my money to be just thrown around as if it came easy!*

**Vickie Owens:** *We don't need this! I dont know why the push to spend all this money on something we don't need and don't want!*

**Mark Bahr:** *For God sakes don't put a roundabout in! Just don't!*

**Drew Brent:** *Roundabouts are absolutely stupid. Whoever invented them should no longer have a job.*

*Ashley Bryant: If the town does this then people need to be taught how to actually use them. I've had so many near misses in the roundabout by Summit Elementary from people just stopping to wait for the 'yield' side to go.*

*Tyler Dice: Why though? I've seen more accidents in roundabouts, than 4 or 2 way stops.*

*Tina Davis: I suggest you offer to the residents a Plan A (the roundabout), and a Plan B, to see which one the people who actually live here would like better. And I have yet to figure out the benefit of the big boulders -- looks like just taking up space? Change that into parking or sidewalks. I for one moved here because I loved the preserved runways as streets, and the out-of-city, quiet, country-feel, not because I thought some day in the future it would be renovated. I realize some change would be beneficial to accommodate events in the park, and walkways. But there's open spaces that could be made into parking. This a town, not a city. People move here because they like it here.*

**Ariana Parker:** *I'm for it! Round-Abouts work better than a 4 way stop!*

**Andrew Engleman:** *Bar Nunn Streetscape Revitalization Plan terrible idea. what's wrong with it now?*

**Paula Dahlke:** *I hate them changing the roads. We live on Antelope and those boulders are a pain in the ass. If you have a big camper to maneuver around forget it it really sucks. It's like a lot of big city ideas for our small community.*

**Bill Deal:** *Why would the town even consider roundabouts in the first place? Why not spend that money for a sprinkler system for some of the "green ways" and maintenance of the same? That would enhance the beauty of our community!*

**Doug Foster:** *Stop changing the roads. All you do is make things worse. I chose to buy my House here 11 years ago because I loved Bar Nunn as is. You want some fancy F'd up town to live in, move to California or some other screwed up state. Not to mention destroying history.*

**Bob Kreider:** *Why did they put the boulders along side the road??? That makes it harder to remove snow, something for vehicles to collide with, weed whack in the summer, narrow the roadway, parking, and a few other complications*

**Wendy Degroot:** *Bob Kreider agree on that plus a waste of money*

**Bob Kreider:** *Wendy Degroot, agree with you. That money could have been put into overlaying streets*

**Cindy Pater:** *Wendy Degroot I hate the boulders my mother-in-law lives on that side of street and if she wants to go for a walk she has to cross the gravel with her walker to get to walking path she's 84.*

**Cindy Pater:** *Everyone than can make it too this should .the last meeting there was talk about roundabouts more big boulders etc*

**Cindy Batchelor-Brugger:** *Bob Kreider with the boulders we can not move to the side of the road in an emergency... but I guess lives are not important*

**Chris Shomler:** *Bel Vista Is getting really bad, some potholes getting bigger in addition to the tar joints sinking.*

*Dan Wolski: Why not do antelope all the way up???*

**Wendy Degroot:** *Dan Wolski because they want to close antelope*

**Solostin Wyoming:** *Why does the town want to make Sunset a collector street, is it to serve the solar farm just west of if the town.*

**Otis Larson:** *With all the expertise they say they have with the above post I would certainly think they could come up with a better plan for our streets rather than narrow them up, haul away real good asphalt. Then place unsightly boulders on the streets. Never seen anything like that before in all of my travels.*

**Tracy Foster:** *Going up Antelope with an emergency vehicle behind there is NOWHERE to pull over. I had it happen nowhere to go*

**Otis Larson:** *Tracy Foster Yes you are correct. They insist the driving lanes are a good width, but all of the highways and streets, with the exception on Antelope, have a 4-6 ft safety lane for the very reason you stated..*

**Sarah Kauffman:** *Do you confer with a sampling of town residents to get public input and local insight regarding historical usage and traffic trends in the areas being redesigned?*

**Bar Nunn Streetscape Revitalization Plan:** *Sarah Kauffman Yes. We know the historic traffic for every street in the study. Every public comment will also be included in the plan. In addition, we account for uncertainties, such as potential future street extensions, new road connections, possible street closures, new commercial and residential developments, etc. The proposals are flexible enough and have plenty of traffic capacity to safely manage anything that comes along.*

**Tracy Foster:** *Then you will still do as you THINK is better. We like what we have*

**Otis Larson:** *No amount of safety devices will protect drinking drivers and speeding. Personal responsibility for ones actions has to mean something. No matter how much is done, can't protect stupid..*

**May 9, 2022 Press Release** Liked: Ron Clark, Chris Alexander, Ariana Parker

**NOTE:** *At the outset of the study, the zoning map on the Natrona County GIS website was from 2004, however the Town of Bar Nunn had changed the zoning map in 2019. Not knowing this, the study posted the OLD zoning map on Facebook and some Facebook users and residents reacted to the old zoning map, which called for apartments and mobile home developments in several areas. The zoning map was posted only to serve as background information for this street study, which was unrelated to land use. When the Town informed us of the error, the study team updated the zoning map on Facebook to the revised 2019 map.*

**Ken Hume:** *A mobile home park and high-density apartments do not really fit in at all.*

**Cindi Effenberger:** *You need a paid police force. There needs to be a handle on the vandalism and theft problems in Bar Nunn before trying to attract low and lower income residents for mobile home parks and multi family residential areas. Those sorts of residents will sadly increase those issues. The sheriffs dept barely deals with them as is.*

**Anthony Nickerson:** *Cindi Effenberger can Bar Nunn even afford a police station? Taxes will go up*  
*Cindi Effenberger: Dunno I'm not familiar with the cities budget, and I'm quite happy to no longer be living there because of the lack of "give a darn" the sheriffs dept has for that area and maintaining a secure community.*

**Amanda Stanart:** *This would be awful. We moved out here for nicer neighborhoods. Crime will go up and our property values will go down.*

**Ariana Parker:** *So after seeing the "For Sale" signs behind my house (which overlooks the alkali pond and junk yard; just how did this land get rezoned to residential? How are people supposed to drive BEHIND my house, because right now it is an alleyway? Why were we the residents on Palomino not notified of this rezoning plan and why were we not informed of what we were initially told was NEVER going to be built on, because of the alkali, now is? What a disgrace and complete lack of respect for the people who live here. Considering the realtor who is selling the land, told many of us, that he would not sell us the lots next to us "without seeing the building," plans for the lots. Meaning, he wanted over 3000sq ft homes, and now he is selling the land behind us for townhomes. What is this going to do to the current value of our homes? Will they be low income? Finally, if you want people involved, maybe go door to door. I'm going to start protesting what will/could happen behind my house.*

**Kody Crabb:** *I completely disagree with this whole thought, if you want to build then continue to build nice homes but bringing in lower income housing will greatly decrease the values of our homes not to mention bring more theft and vandalism in, we as current residents already worry about our stuff being broken into. DO NOT turn bar nunn into mills! Keep it the nice community we have all made it to be!*

**Brad Adams:** *How about make people hold to the covenant that they agreed to when they purchased their property..so many homes with just dirt and 0 cares what the neighbor hood looks like..I'm kinda sick of it..plant a dam tree.. have a lil grass or move to a dam condo where they rub your XXXX and tell you your a good boy...*

**Dawn Reney:** *Brad Adams I was with your opinion til you ended with Jr high maturity level comment*

**Ernie Crapo:** *Well some of us have to work guess there are certain people in our town government that only want a select few*

**Wendy Bruntmyer:** *Ernie Crapo it goes to 8pm. Plenty of time to put in any info you want. Unless you work nights.*

*Cindy Batchelor-Brugger: Why do this during our working hours ... we need to be able to attend at an evening meeting not during the day*

**Ariana Parker:** *Great. ...more cookie cutter houses, disruption to the wildlife out here. ...all so relators can make a Buck. How much is the town using of tax payer dollars to subsidize this land? Will property taxes go up to it for the new builds? Roads? Maintenance?*

**Karen Farley:** *Ariana Parker bar nunn needs to step up and protect what makes bar nunn desirable - big lots, rural feel, antelope, wide open spaces - and quit allowing these greedy developers to build exactly what you've said - hastily built cookie cutter houses all in the name of the almighty dollar.*

**Otis Larson:** *You are correct, those of us that moved here and like the semi-rural area to live are going to be effected with this.. Look at the areas that are rezoned. New trailer parks, apartments, condos. With all of this brings in new problems. Crime, drugs, theft, meth labs. Unfortunately it will all follow. The motive to all these changes are the council's desire to grow population to have access to federal funds at the residents expense. Our semi-rural lifestyle will be gone. Realtor greed, cookie cutter houses built cheap for the purpose of affordable houses.. That nice view you now have out your back yard, will be transformed to trailers, apartments, and all that comes with it.*

**Otis Larson:** *Also forgot to mention we will have scenic streets lined with boulders to make our community more attractive..*

**Ariana Parker:** *Otis Larson agreed unfortunately. And the greed of the council to expand this small community is apparent and sad. Many of us moved out here to remove ourselves from "city," life.*

**Ariana Parker:** *Otis Larson I know the boulders are a contentious point for many, I personally like them. Since Bar Nunn lacks sidewalks. ...EVERYWHERE! This is a great avenue for many of us to travel up a very busy street (my kiddo and I like to ride our bikes to the nicer park on the "new" side of town. I would take him on side streets, but he's 6.)*

**Commentators and Readers:** Kalista Schwartzrock, Kody Crabb, Cindi Effenberger, Karen Farley, Amber Mauk, Haley Sue Brien, Tim Martin, Amanda Stanart, Dan Wolski, Haley Sue Brien, Jenifer Crabb, JoAnn Ferguson Cain, Ariana Parker, Otis Larson, Haley Sue Brien, Kody Crabb, JoAnn Ferguson Cain, Ariana Parker, Tyler Muckley, Troy Mauk, Jared Fehringer, Dan Wolski, Jessy Wood, Brad Barr, Tyler

Muckley, Vicke Owens, Juli Braunberger, Alicia L. Meredith, T.r. Zach, Tyler Ryan, Kristine Sebion Clark, Ashley Bryant, Tyler Dice, Nikki Pacheco

**Bar Nunn Streetscape Revitalization Plan: Public Opinion Survey, May 25, 2022**

The purpose of this planning study is to identify problems on Bar Nunn’s major streets and develop the best design solutions - in terms of street cross section, intersection design, traffic calming treatments, signs and markings, pedestrian and bicycle improvements, landscaping, and cost.

Citizens often express concern about public safety, safety of children and school crossings, speeding & reckless driving, community development, pedestrians and bicycles, maintenance cost, and aesthetics. Every concern is important.

The adjacent map shows the streets being evaluated for this study. Please circle the names of the streets you use most often. Please describe any problem locations you have seen on these streets. **Continue on the back if needed.**



Study Street	Location	Problem
Antelope Drive		
Arena Street		
Bel Vista		
McMurry Blvd		
Palomino Ave.		
Prairie Lane		
Sunset Blvd		
Trails End		
Wardwell		
Industrial Ave.		

Of the streets listed above, which street is most in need of improvement? Where? Why?

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What other street improvements would you like to see in Bar Nunn?

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Do you walk or bike in Town? Where? Where do you most want pedestrian and bike path improvements?

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Optional:  
 Name: \_\_\_\_\_ Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_ E-Mail: \_\_\_\_\_

Would you like the study team to contact you? Yes / No

**Survey Responses, May 25, 2022**

• **Study Street/Location/Problem**

1. All streets/ all of o't/ trashy rocks
2. Antelope Dr, Arena St, Bel Vista, McMurry Blvd, Palomino Ave, Prairie Ln, Sunset Blvd/---/too much asphalt to maintain
3. Antelope St, Sunset Blvd, Trails End/---/---
4. Antelope St, Bel Vista, Prairie Ln/---/Gutter ditches, no curb and gutter and sidewalks, gutter ditches
5. ---/---/---
6. Antelope St, McMurry Blvd, Wardwell Industrial Ave/Salt Crk, Industrial, McMurry/Ice and Alcaine, Bulb out bad, bulb out bad
7. Antelope Dr/---/Remove the rocks
8. ---/---/---
9. Antelope Dr, Prairie Ln/---,Rods House/Rocks Removes, uses to go on circle north to speed to enter the field
10. Sunset Blvd/---/Potholes on south side
11. Antelope Dr/5145 Antelope Dr/Speeding
12. Antelope Dr, Prairie Ln, Sunset Blvd/---,---,---/needs crosswalks, needs to be regraded, closing Antelope Dr
13. Antelope Dr, Prairie Ln/---,---/---
14. Antelope Dr, Prairie Ln/All,all/Boulders on bike path, speed tables
15. Antelope Dr, Palomino Ave, All streets/salt creek, south side, all/many crashes, inadequate lighting and no pathway or walk area that North side has, too fast of speed limits- need lower
16. Antelope Drive/all/rocks on side

• **Of the streets listed above, which street is most in need of improvement? Where? Why?**

1. Get rid of boulders on streets, move traffic to median, put bike lane on house side of street
2. Antelope Dr, Sunset Blvd, and Prairie Ln
3. Antelope Dr and Sunset Blvd – get rid of the big rocks, they are a hazard
4. I don't have to use Antelope Dr, so I quit using it after the Boulders were in. Life is too short to endure ugly drive time. We walk in the street on Bel Vista – no walkway/ sidewalk
5. ---
6. General Even – Antelope Dr and Salt Creek when that falls apart.
7. Antelope Dr – Remove the rocks and replace the asphalt for drainage. Leave the streets alone.
8. ---
9. Circle North needs a way to stop people from speeding to field off Trails End. Fix water problem draining from roads, so it stops eating the street.
10. Potholes on southside of Sunset Blvd after fire hall need filled. They were not properly addressed by construction company that created many of them when put in gutters. The gutters are great. Thank you for...
11. Antelope Dr – Speeding way too fast – no rocks
12. ---
13. ---
14. Antelope Dr – Rock removal on bike path
15. Speed limits need to be lowered on all streets -- more pedestrian walkways/ crosswalks need to be installed – Speed bumps need to be put in place. Lines need painted.
16. Antelope Dr Rock removal by bike path

• **What other street improvements would you like to see in Bar Nunn?**

1. Move traffic away from houses and bike path nearest house
2. Roundabouts
3. Repair cracks and potholes
4. Pedestrian Crossing instead of full time stop signs
5. ---
6. Open to interstate business/ seek it
7. Remove the rocks on Antelope Dr, replace the asphalt. Leave the streets alone with extra parking. DO NOT NARROW UP THE ROADWAYS! IT DOES NOT CREATE TRAFFIC CALMING IN BAR NUNN.
8. ---
9. That all streets need holes filled in on the cracks
10. Get rid of the rocks or no more rocks put in on streets. They are an impediment to being able to use property. The boulders on Sunset Blvd are dangerous because people cut the corner and because people are afraid of hitting the rocks.
11. Walking – bike path sunset
12. Would like to see Sunset dressed up with curb, gutter, and sidewalks
13. ---
14. Speed bumps over rocks for speeding
15. Would love to see more bike/walk paths, better lighting (street lights), slower speed limits, roundabouts/parks
16. ---

• **Do you walk or bike in Town? Where? Where do you most want pedestrian and bike path improvements?**

1. ---
2. Yes, McMurry and Antelope. Great paths in new area, would like more in. Older area (prairie and sunset)
3. Bike, no improvements needed
4. I'd like for my older husband to be able to get off main street to enjoy his bike. Bike trails could go through the planted boulevards.
5. ---
6. Yes, town has really done a lot with paths.
7. ---
8. No
9. More lights for people that walk at night
10. Yes, from Sunset to Antelope Park up to Wardwell Ave. Up Antelope Dr to Wardwell
11. Sunset place to hold a band, skate park, new park, picnic tables, no more stupid big rocks – No Roundabouts
12. Yes – walk – east side of Antelope. Bike path all the way down Antelope
13. ---
14. Walk and bike, the speeding up Antelope is dangerous for my kids.
15. Both – Palomino, Antelope, Sunset – Would love to see more pedestrian and bike on Palomino/Sunset
16. ---

• **Additional Comments**

1. ---
2. –
3. Roundabouts would be a major hazard!
4. ---
5. ---
6. ---

7. Bump outs do not work. Ask the City of Casper. They had to remove them due to accidents. Speeding is an enforcement problem. Do not narrow the streets to slow people down, it does not work. Do not close the south end of Antelope Dr. It will force people to drive directly into the sun in the morning going to work and directly into the sun in the afternoon when coming home from work. Asphalt treatments: Black seal, sand seal, chip seal, crack seal surfacing, micro-surfacing (mixture of asphalt and cement)
8. No one in Wyoming uses turn lanes (Salt Creek or West Winds) No apartments. Apartments are not community oriented.
9. If close Antelope and open it to Sunset. Is Salt Creek going to be fixed in the bad alkaline to make it. There has been lots of accidents between Shirks Sanitation and Kenworth, so that needs fixed before anything because of increasing traffic. Traffic using Prairie Ln to North Circle Dr are having problems with people speeding of cars and motorbikes.
10. I personally all most been hit sitting at the stop sign by people who are cutting the corner because they are worried about hitting the boulders. None of the times were in bad weather with icy roads. Not a fan of one way roadway. Like Parking. Immediate concerns: Pot holes in 4378 Antelope Dr has potholes. They need to be filled. Several potholes on Sunset Blvd west of fire hall. Would like to see cross walk marked out across Antelope from intersection of sunset and antelope. I would of liked it better to have walk ways in our meridians it would have been safer for pedestrians.
11. ---
12. Sunset; Closing Antelope extension will congest traffic on Sunset morning and evening commutes when the sun is out. Also traffic from KOA will further congest traffic in morning. Prairie (2135 Prairie); There are places on Prairie where the grade is wrong and existing homes flood during melting snow and heavy rains. Antelope East Side; If the the street is narrowed, need to make sure there's parking on both sides of the street. Don't use one ways. Do not close for a park the area between Sunset and Prairie that is part of east side Antelope access. Need wider parking to accommodate wider vehicles and trailers. Trees need to have room for a root system to survive. No DBL yellow lines on residential streets.
13. Don't want any roundabouts anywhere! Thought boulders were to slow traffic!
14. NO ROUNDABOUTS
15. Like the idea of speed tables throughout. Like the idea of roundabouts. Like the center island/ pedestrian nid blocks-would work well for the grassy medians. Like the ideas for dog parks/ small "fitness" trail. Would like to see a family friendly/ updated park. More ball fields (softball, basketball, soccer, baseball, ...) Small punp track for bike riding.
16. NO ROUNDABOUTS!

**Name/address/phone/email/contact (yes or no)**

1. Jeff Ragirds/---/307-259-4055/jeff@ragirdselec.com/---
2. Tyler Martin/2130 Silvertie St/307-797-8372/Tyler@outfitter.church/ Yes
3. Dean and Liz Blavins/44847 Trails End/307-262-4702/deanb433@gmail.com
4. ---/---/---/---/No
5. Randy/---/---/---/---
6. ---/---/---/---/---
7. Danny Hobbs/5200 Antelope Dr/307-472-1305/---/Yes
8. Mark Brownrigg/5757 Tonkawa trail/810-247-2532/MLivewire07@yahoo.com/Yes
9. Margaret Kerns/2950 Circle Dr N/307-251-0204/maggieran1@live.com/---
10. Cheryl Faust/1915 Sunset Blvd, Bar Nunn/307-333-2807/cfaust@Tribcsp.com/---
11. Cindy and Terry Pater/5145 Antelope Dr/307-277-5625/DaisymaePATER@gmail.com/Yes
12. Karen Kraft/5135 Antelope/307-259-5717/Krkraft@bresnan.net/---
13. Melinda Sebion/---/307-237-4183/---/---
14. ---/---/---/---/---
15. Ariana Parker/1967 Palomino Ave/307-315-5463/airy182@gmail.com/Yes
16. ---/---/---/---/---

**In addition to the survey and comment form, attendees placed comment post-it notes on table aerial maps and illustration posters. The following is a list of comments received via that medium:**

**Poster of a Modern Roundabout**

- Add sidewalks and bike paths where possible (Salt Creek, Antelope, Sunset, Prairie)
- Consider W side Antelope be southbound and E side be northbound (not used section) (1 way) – widen median
- The roundabout at Sunset is a good idea – just be big enough for very large RV’s
- Love roundabouts, great Idea
- Consider backup of KOA customer traffic at 5pm waiting to register at KOA and their spot for the night. (Backups into sunset)
- Like the idea of commercial across from KOA – 2way w/ diagonal parking
- Wardwell Industrial – sidewalks! Or even gravel path/level walking area.
- McMurry – speed bump(s) near mailboxes
- Street Light at McMurry and Salt Creek HWY is amber and is not very bright at all. Needs a white light.
- No path along Salt Creek. People would be insane to use it with amount of traffic and the speeds on Salt Creek HWY.
- Reminder – Remove double yellow line on residential street.

**Poster illustrating a Chicane**

- I wonder is “Chicane” the root word for “Chicanery”? Someone has to ask these questions.

**Poster Illustrating Speed Table/Table Hump/Raised Crosswalk**

- No comments

**Map of Town Center – Sunset Welcome and Rest Area**

- Option 2 for Sunset looks good especially the green space/parkway
- Don’t like green space at west end of JR Resser LLC property because that property will eventually be sold.

- We do not need to be told we need the same solutions Ft. Collins and Cheyenne used for traffic flow. The expert telling us we need it still does not mean we need it now.

**Illustration of Runway roads – parkway network options**

- No comments

**Illustration of Center Island/ Mid-block Pedestrian Refuge**

- No comments

**Map of Cross-Walk Bulb Out/Curb extensions**

- Raised crosswalk where “alley” comes out of back gate of school and open onto Antelope
- School car pick up is not good. Maybe work this summer? ☑Give to Ray C.
- Boulders took away parking on Antelope for people to pick up their kids. It would take 30 minutes to pick up the kids at the school
- Sunset and Antelope need a marked cross walk where bus stops

**Diagram Map of Taxiway Roads – Options**

- No comments

**Aerial Map of Wardwell Industrial Avenue**

- Speed tables and raised crosswalk
- Taxiway road options good idea
- Don’t like speed tables narrowing with Bulb or Chicanes and Center Island
- Chicane has my vote

**Aerial Map of McMurry Blvd:**

- Industrial meets McMurry – Buildout is unsafe – too abrupt of width change
- I like McMurry as a 3 lane
- McMurry needs radar speed sign reminding people of their speed on westbound after Tonkawa.

**Aerial Map of Antelope Drive**

- Although I am not opposed to closing Antelope, that closure is bound to cause a large amount of congestion on Sunset.
- Suggest using Antelope “Rocks” for Base under Salt Creek!!
- Town Standard 9’ parking.
- The Boulders gotta go!!! The soil below will collect moisture and the freeze/thaw damage is going to minimize the life time of the asphalt. It won’t last!
- Bike/walking paths
- 
- Fix the playground pad
- Shade for benches at Splash Pad so parents don’t have to bake in the sun.
- “Loves the rocks” and love the roundabouts
- Antelope West Actual Measurements are: 7’ Parking, 11’ South, 9’ North, all taken before meeting. If 8’6” camper parked and 2 campers meet (13’). There is no mirror clearance
- Roundabout check with KW, HiCountry, Truss



**Bar Nunn Streetscape Revitalization Plan Social Pinpoint Opinion Survey**

**1. Do you walk or bike in Town? Where? Where do you most want pedestrian and bike path improvements?**

**Responses:**

Mainly bike to the mailbox from west end of sunset street. They have a nice paved riding area to the side of the main road.”  
 “Walking path from Bar Nunn to Family Dollar store.”  
 “I walk all over. Salt Creek needs a walking/bike path all the way to Loaf and Jug and Family dollar. Watched many people walk on Salt Creek in on coming traffic. and the McMurray subdivision needs bike and walk paths.”  
 “We walk/bike/run the loop around the median on Antelope most. The "improvements" that have been made, the excessive amount of stop signs and, once again, the boulders have not made any changes to the bike or walking path.”  
 “No”  
 “The new bike path is great! Wonderful addition. Most needed improvements is along salt creek. Definitely need a sidewalk.”  
 “We walk on Bel Vista Drive, Antelope and Tipton Streets.”  
 “Yes, both. A path to connect to Casper’s path would be best case scenario, unsure on feasibility though.”  
 “Walk. No complaints.”  
 “More benches to sit on. Shade cells to provide shade while on a longer walk.”  
 “No improvements! We love the bike paths!”  
 “Yes, areas I use are perfect as is, room for bikes and walkers, with the exception of Antelope. I will not use it due to the boulder situation on that street.”  
 “would be nice to have a walking path running the field west of Salt Creek Hwy that residents could walk dogs, bike, etc.”  
 “Walk, there needs to be more cross walks, especially for the children walking home from school.”  
 “1. Yes” 2. Palomino. 3. Around parks” We do both and cant really think of any improvements that need done.  
 “Walk and bike Silvertip to the park, Silvertip to Hanger”  
 “Walk or bike to the mailboxes.”  
 “Don’t”  
 “Sidewalks and bike path it loaf and jug and family dollar and down salt creek”  
 “Bike paths are great”  
 “Both. No improvements needed”  
 “Walk in the burbs. Mostly north of mcmurry”  
 “Walk and bike”  
 “The bike path and sidewalk in front of homes”  
 “The rocks need to have weeds removed and all dead trees removed. Thanks”  
 “Yes, we walk and ride bikes frequently. Bel Vista Dr, Sunset, and Prairie.”  
 “Lighting! Needs to have the weeds mowed and not just the 3 feet on each side of the trail! If property owners have to keep there yards mowed under 8”, the town should too!”  
 “walk and ride both...I would like to see a path over to mailboxes”  
 “We walk on sidewalks as they are more accessible”  
 “The boulders on Antelope are ugly and waste of space- something else to separate the road and bike lane would be better”  
 “I think we should look into adding bike lanes on salt creek highway from the port of entry to the edge of the city”  
 “Yes our family uses the walking area on Sunset all the way to the mailboxes, and Antelope. We also bikes and use the same paths.”  
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“But when I do use the road I wish there were bike paths on the roads.”

“Yes, on my street, Palomino Ave.”

“I walk and bike. Improvements along Antelope are needed most. It’s one of the ""main drags"" in Bar Nunn. It is comparable to E. 2nd St in Casper. Simply re-painting the road and pothole repair would be nice and appreciated.”

“We walk to the park on Antelope all the time. I think sidewalks with curb and gutter and more street lights would be a terrific improvement. I walk from trails end down palomino to the park with my daughter and dogs frequently. I enjoy the wide streets and the grass and tree divider areas. The grass and trees always attract the antelope and we see the spring antelope babies every year and I enjoy seeing them. We are very excited to experience the new splash pad, and the park improvements are wonderful. My daughter and I enjoy the park and the events held there.”

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“ON Sunset between antelope and saltcreek. One continuing from the park to family dollar”

Answered 39

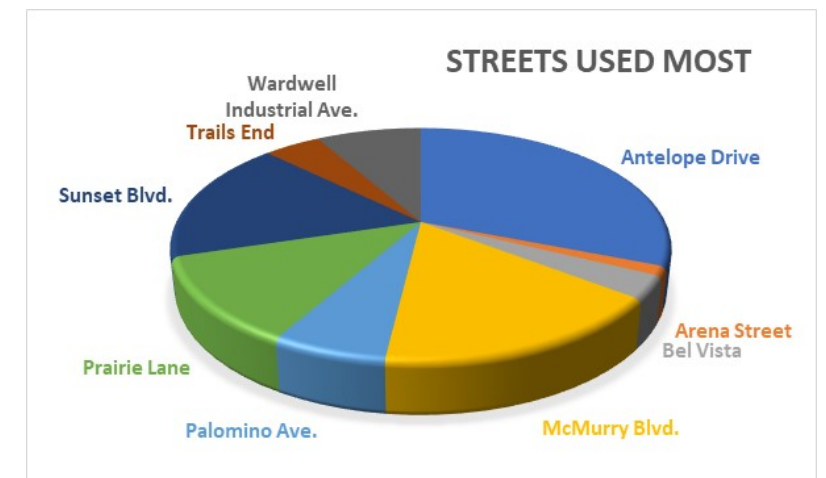
Skipped 19

**2. Please indicate which of these streets you use the most.**

Choice	Responses
• Antelope Drive	49
• Arena Street	2
• Bel Vista	5
• McMurry Blvd.	26
• Palomino Ave.	10
• Prairie Lane	19
• Sunset Blvd.	27
• Trails End	7
• Wardwell Industrial Ave.	13

Answered 58

Skipped 0



**3. Please describe any problem locations you have seen on these streets.**

**Responses**

“Snowplows in the winter constantly and consistently block my driveway at the west end of sunset. They way they plow the snow is idiotic. The wind ends up blowing it to the north , northeast, consequently blocking 4-5 other neighbors driveways.”

“Poor placement of rocks. The town reduced off street parking with the boulders. The turning radius on some of those streets make u go into oncoming traffic to complete the turns. Very poor planning on Antelope. Driving lanes are very narrow. North bound lane with boulders on side is narrower than south bound lane. The bike walking lane is too wide. Bought here because of wide streets and parking. The crossing placed on McMurray blvd and Wardell ind ave need to be redone. U have an intersection there now since the improvements that’s impractical. That’s a main collector street with a speed bump since the improvements.”

“I do not like the rocks that have been added. It makes the road seem to narrow and dangerous due to kids playing on them.”

“Antelope Drive - Large boulders that allow snakes to shelter under need to be removed!”

“Need turning lane turning into Bar Nunn”

“Potholes. Lots and lots of potholes”

“The boulders on Antelope have caused an entirely new set of problems that were voiced before they were placed. It is very difficult to travel this side of Antelope for plow trucks, school buses, trucks with trailers or campers. I have witnessed multiple times this winter that plow trucks would have to reverse and pull to the side for school buses and other vehicles to pass. They made this side of the road too narrow and are terrible to look at. Even when using the walking path it is an eye sore and created a mess.”

“Other than a few potholes there is nothing wrong with those streets”

“I live on Sioux Trail and I use Tonkawa and Nez Perce. Cross traffic does not stop on their streets, at best a horrible 'California Stop'. I have been darn near t-boned and cut off all the time.”

“Just the huge dips in the thoroughfares for drainage”

“Intersection of Salt Creek and Antelope is extremely dangerous. Near miss accidents everyday. Salt Creek and Sunset and Salt Creek and Prairie are also very dangerous. Salt Creek needs widened as soon as possible.”

“Rocks, the rocks!”

“Unnecessary stop signs where school time yields would have sufficed. ”

“Mailboxes, parkin needs repainted”

“People driving fast. Kids walking home while people don't follow school zone speed limits”

“The rocks are awful”

“The boulders on Antelope are serving no purpose. Waste of tax money. Big eyesore. A safety hazard for traffic. No more boulders on any more streets in our subdivision. A section of Trails End is rough as is Sunset.”

“The boulders on the side of the road going along Antelope. They are a hazard when buses and other large vehicles are going down them, regardless of the weather.”

“McMurry- The speed hump has caused damage to numerous vehicles. People slide over it in the winter regardless of the speed they are going. ”

“The intrusive boulders along the walking path”

“The left hand turn from Salt Creek Hwy on to Antelope Drive. Drivers turning left cut the corner tight due to the intersection is narrow.

Widening of it would be nice.”

“Poor planning for drainage ending up in dips in the road, should of used either culverts to move water or underground pipes. Additions of unused bike lanes interfering with parking. Adding decorative boulders which just become a hazard during icy conditions.”

“Lack of sidewalks for pedestrians, few street lights spaced far apart.”

“I live on antelope dr and those rocks that were put in are the stupidest thing and a total waste of money! I understand the meaning behind them but they are such a pain and total eye sore. I have family who come to visit and they say the same thing. Plus we lost a lot of parking when we have guests over. Now kids are walking on the west side of the street next to parked cars where there is no SIDEWALK!! The stop sign has helped I believe with speeding but these rocks have to go PLEASE! I love living out but this has to be the craziest thing I have seen done.”

“Narrow, large boulders, poor bus route planning, dark road at night pot holes, too steep speed humps”

“Stupid rocks along roadway, this is not California”

“The rocks are too close to the street. It's almost impossible to drag a stock trailer down Antelope.”

“The rocks are a terrible idea. I’ve seen so many kids playing on them, I’m so afraid they are going to get hit by a car going to fast, because the rocks don’t slow people down.”

“I don’t see the need for the jumps at McMurray and also Industrial. Not sure why there is so many stop signs on North end of Antelope.”

“You made Antelope narrower with your rocks.”

“corner of palomino and antelope;”

“on antelope across from antelope park;”

“Dips, blind spots”

“Salt creek and then all the side streets off salt creek by renauna ave industrial area should look at blading and then asphaltting those streets”

“Speed is an issue!! Too many people ignore the speed limit signs and stop signs.”

“People speeding down Palomino.”

“There are many kids that live on this road, and ride bikes, I’ve seen some close calls with the amount of people that speed on Palomino.”

“Age, potholes, etc”

“Speeding and not completely stopping at stop signs”

“The rock along antelope. Looks and feels too narrow”

“Pot holes everywhere.”

“Potholes that get fixed and reappear within a week. Turning at the new 4 way stop with the boulders on Antelope and Tipton. Buses especially have a hard time turning if there's multiple people at the 4 way stop”

“No real problems from my perspective. I dislike the large boulders that were put in on Antelope last year because it makes turning onto Antelope from a side street very tight and more difficult, especially with a trailer. Not a good design at all in my opinion.”

“Rocks on Antelope and no walkway on sunset from Antelope to Saltcreek”

**Answered 43**

**Skipped 15**

#### **4. Of the streets listed above, which street is most in need of improvement? Where? Why?**

##### **Responses:**

“Most streets in Bar Nunn seem in way better condition then casper city streets, however the south sunset street is starting to form some potholes.”

“Antelope”

“Most streets in way better condition than downtown Casper.”

“Prairie lane”

“McMurray has terrible pot holes. They do a crappy job at patching them.”

“Antelope is litterally falling apart and money was spent on rocks and limiting parking for residents.”

“Perhaps a new solution for that large dip by the fire department ”

“Salt Creek Hwy.”

“Antelope, the giant boulders are pretty useless and inconvenient”

“Boulders are something children will and do climb on. it is very close to Antelope Dr.”

“No improvement needed. I love the rocks on Antelope!”

“Sunset is terrible. All the way from the fire station to the very end. Antelope could also use some love.”

“Surface on Sunset. North portion of Trails End is getting rough. Palomino is in very good condition.. Mayor has already made a mess of Antelope.”

"McMurray- Speed Bump Gone & 4 Way Stop at McMurray and Salt Creek."  
 "Antelope, from Palomino Ave to Salt Creek Hwy. Potholes! Add in more street lights due to "more people now equals more crime!"  
 "No comment"  
 "All of them need more street lights and curb and gutter and sidewalks. They are residential and that would make them safer for the residents."  
 "Sunset - the road surface is in poor condition"  
 "Cant think of any"  
 "Antelope-lacks parking and narrow, bus routes should be diverted from busy roads for childrens safety"  
 "Antelope"  
 "Tonkawa, drainage culverts too aggressive"  
 "Sunset south. Potholes, large cracks, uneven"  
 "Antelope close to McMurray. The freeze/thaw destroys that street in the winter"  
 "Antelope"  
 "disregard of stop signs;"  
 "too sharp of corner turning onto antelope from palomino;"  
 "constant deterioration of pavement on antelope"  
 "Antelope"  
 "Prairie needs some spot fixes"  
 "Add bike lanes to Bar Nunn streets"  
 "NA"  
 "80% of streets need redone. Stop putting a bandaid on them. Hold companies that do them accountable! If they fall apart in less then 5 years, that company should have to come back on their dime and fix them because they hurried and half assed the job!"  
 "Sunset"  
 "Antelope & Salt Creek intersection. I've witnessed people running the stop sign, & people turning onto antelope from salt creek cutting the corner very sharp and coming close to accidents."  
 "Also in the winter, I believe this intersection could use better routine maintenance when it is snowing or icy. "  
 "Rock's on Antelope need removed I think they're dangerous."

**Answered 36**  
**Skipped 22**

**5. What street improvements would you like to see in Bar Nunn?**

**Response**

"I think for the most part Bar Nunn is doing some nice things with bike paths and walking paths near where I live. Reasonable improvements. U can't make all the streets into walkways and bike paths like you've done so far. The older streets are carrying more traffic than they were ever designed for."  
 "Walking path from Bar Nunn to Family Dollar store."  
 "I do not want to see the medians fo away or the character of old Bar Nunn to be taken away."  
 "Potholes on Prairie lane."  
 "No more stupid rocks. I saw a snake last year. I do not feel those paths on Antelope are safe in the summer with those rocks because of the snakes. And yes we have them. Also in the mornings in winter the rocks create snow drifts. Either the plows need to be out at 4 am or the rocks need to go away. There are some of us that work early In the medical field that have no choice but to leave early to work and not have to worry about a snow drift or a rock. This winter was mild. Next winter may not be mild."

"I would not like to see roundabouts or one ways. I would not like to see anymore boulders. A decrease in the excessive stop signs. It's a small community with not a ton of traffic, there are way too many stop signs around Antelope and the intersecting streets. Many of which are placed in area that used to have yield signs, which better controlled the flow of traffic."  
 "I would like to see those gosh awful boulders removed from Antelope Drive. There is a deep dip on antelope past the first street after the fire station that can use some filling"  
 "More painted cross walks. And a sidewalk from McMurray to Wardwell."  
 "Curb and gutter as well as sidewalks so its not safest to walk in the street."  
 "Improved drainage"  
 "Remove those awful looking boulders on Antelope and stop putting them in everywhere."  
 "Antelope"  
 "cable/post ran along Antelope Dr. NO BOULDERS. Keep the children safe and still have a delegated walk space free from parking."  
 "No improvements!"  
 "I'd like to see the boulders removed, they are a giant eye sore and are placed in front of every driveway making it difficult for parking campers boats trailers etc. The way the strip was milled up looks terrible. It traps all the sand from the road and just looks cheap and thrown together with no real vision or improvement to the street."  
 Fill in pot holes"  
 "When doing resurfacing on our streets, leave the bike path and walking path as is. Stop milling up and hauling away good asphalt to replace with boulders.. Only resurface the driving lanes. Leave streets as they are. No beautification necessary. Boulder rocks are not in any way beautiful or landscape improvement."  
 "link Zuni Trl to Salt Creek Hwy"  
 "Width- They are too narrow. No roundabouts, which is difficult for people pulling trailers, boats, campers, ect. It is also deterring buisness for the established businesses that get semi trucks to them."  
 "Re-painting! Some streets don't even have lines. Porthole repair is needed on Antelope!"  
 "Removal of items as listed above. Drop any idea of using roundabouts. They confuse people which impedes traffic." "Instead add third lane for turning from salt creek to sunset."  
 "More street lights. I dislike the boulders and asphalt dividers that have been placed."  
 "Radar speed limit sign on Antelope - north of McMurry."  
 "Please remove those ROCKS on antelope dr"  
 "Bus shelters, road way marking in the warm season and not late fall. Street sweepers!"  
 "just maintain the ones we have"  
 "Get rid of rocks, reclaim streets for wider access (you don't need a 10' wide bike/walkway on sunset, antelope, palomino"  
 "The streets are overall very good. Antelope from Sunset to McMurray is FAR too narrow now."  
 "Bar Nunn does an excellent job of keeping up the streets."  
 "Paved to actually stay usable for YEARS. Please use the land behind Tonkawa for a kids skate park! Give them somewhere to go and something to do. Have a snack bar, indoor arcade and hangout area. Please don't let a huge building go up and block the view. One reason we love the location of our home!"  
 "close down antelope at palomino permanently"  
 "No on street parking on Antelope"  
 "Anything that would help with snow removal"  
 "Salt creek highway add bike lanes on the edge and repave it."  
 "I think the streets are in good shape."  
 "The pot hole fixed in school parking lot"  
 "I would like to see sidewalks on Bel Vista where we live. We have a lot of younger children on this street and would benefit from a sidewalk even if it meant a narrower street."

“Rocks removed”

“Painted lines need to be done regularly. Too many times drivers believe both sides of Sunset are one way only; having the lines regularly updated prevents potential head-on collisions.”

“Could we use trees or nice fencing to separate the walking areas out rather than the big rocks? These would look nicer and keep cars from parking in our walking lanes. The big rocks concern me in the winter because the slick roads could and have caused sliding, especially in front of the fire hall (and I wasn’t even going very fast at all).”

“In the winter when plowing is done on side streets it has caused major issues with getting out of our driveways because the plow driver only plows down the middle. The extra snow gets pushed up toward our driveway and thus we can get out, we’ve even had damaged vehicles over it.”

**Answered 40**

**Skipped 18**

## **6. Do you walk or bike in Town? Where? Where do you most want pedestrian and bike path improvements?**

### **Response**

“Mainly bike to the mailbox from west end of sunset street. They have a nice paved riding area to the side of the main road.”

“Walking path from Bar Nunn to Family Dollar store.”

“I walk all over. Salt Creek needs a walking/bike path all the way to Loaf and Jug and Family dollar. Watched many people walk on Salt Creek in on coming traffic. and the McMurray subdivision needs bike and walk paths.

We walk/bike/run the loop around the median on Antelope most. The "improvements" that have been made, the excessive amount of stop signs and, once again, the boulders have not made any changes to the bike or walking path.”

“No”

“The new bike path is great! Wonderful addition. Most needed improvements is along salt creek. Definitely need a sidewalk.”

“We walk on Bel Vista Drive, Antelope and Tipton Streets.”

“Yes, both. A path to connect to Casper’s path would be best case scenario, unsure on feasibility though.”

“Walk. No complaints.”

“More benches to sit on. Shade cells to provide shade while on a longer walk.”

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