

# Fountain Hills

## CITIZEN ADVISORY STREETS COMMITTEE REPORT

June 20, 2023

### A “FIX-ALL-NOW” PROGRAM



El Lago Blvd, Before

[WWW.FH.AZ.GOV](http://WWW.FH.AZ.GOV)



El Lago Blvd, After

[WWW.FH.AZ.GOV](http://WWW.FH.AZ.GOV)

The Citizens Advisory Streets Committee (CASC) was presented a mission at its first meeting on September 29, 2021, to address street conditions and funding options, and make recommendations to the Town Council. During the process of studying available data the committee concluded new information was needed to determine current street conditions and subsequently the Town authorized Roadway Asset Services in 2022 to laser-test the entire network.

This Report represents the Committee’s evaluation of current data and provides recommendations to repair and maintain Fountain Hills streets.

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## **Executive Summary**

The street network evaluation conducted by Roadway Asset Services, LLC (RAS) reveals that while pavement conditions in Fountain Hills are generally considered 'good' with an average Pavement Condition Index (PCI) of 69, nearly half of all streets fall below the average. The current annual funding level of \$2.125 million is insufficient to address the backlog of streets with a PCI below 40, which is projected to increase to 15.2% over the next few years, surpassing an industry standard target backlog of 8%.

The primary challenge for Town staff is determining needed repairs for pre-incorporation streets (1989), which impacts future funding requirements. It is important to note that at a certain point in pavement life cycle, maintenance preservation measures will no longer suffice, and more extensive rehabilitation, such as overlays, will be necessary and more costly.

Given the current budget, the network's average PCI is expected to drop to 67 over the next five years, highlighting the insufficiency of funds to achieve acceptable PCI levels. It is evident that "business as usual" will not yield different results in the future.

To address these issues, the Citizens Advisory Streets Committee (CASC) recommends a comprehensive "Fix-All-Now" program that requires an additional \$50 million in funds (including intersection improvements). This program aims to improve the street network to a "PCI 70-Threshold" level, ensuring that the existing \$2.125 million street revenue sources are sufficient for future maintenance. The proposed amount considers the allocation of nearly \$8 million in Federal Covid relief funds already directed by the Town Council to street repairs.

Historically, funding for street improvements has relied on general funds, sales taxes, state-shared revenues, regional funds, and grants, but these sources have proven to be inadequate to prevent the deterioration of an increasing number of streets. The CASC suggests that traditional options like bonds should be considered, weighing the benefits of lower interest costs with a 5-year plan versus a higher annual secondary property tax, or higher interest costs with a 20-year plan and a lower annual tax.

In summary, the CASC emphasizes the urgent need for increased funding and the implementation of a large-scale rehabilitation program. Failure to invest adequately in street infrastructure will result in significant future challenges and a continued decline in pavement conditions throughout the community.

## Overview

During the past 20 months the CASC examined three street network reports: one developed in 2008 by Stantec Consultants, another in 2018 by Infrastructure Management Services (IMS), and a third in 2023 by Roadway Asset Services (RAS). During that time questions were raised, many matters were investigated, and on May 15, 2023, final CASC comments were submitted to generate this report.

The Fountain Hills Street network has nearly 4.2 million square yards of pavement for which the Town has responsibilities for about 3.5 million square yards (85%), or 166 miles. The other 15% are in gated 'communities' where sustaining street conditions are the responsibility of a HOA.

Before the Town was incorporated in 1989, many streets were constructed by developers before 'standards' were adopted, and many are now 34-50 years old. In the past decade maintenance/repairs have been a mix of activities totally dependent on the funds available which have varied from \$1.7M to \$3.9M each year. Since 2016, \$14.8M has been spent on streets, nearly 70% having occurred in the past 4 years.

For several decades, monies spent on streets and intersections have come from a combination of general funds including sales taxes, state-shared revenues, regional funds, and grants, but the total funds were never enough; streets continued to deteriorate. Following the Stantec Report, voters were asked in 2011 to approve an influx of new money, but a \$29M, 10-year bond package was rejected 55-45. Then two years later, in 2013, voters did approve 67-33 an \$8.2M, 5-year bond for the total reconstruction of a single project, Saguaro Blvd. And following the IMS Report, after the Saguaro bonds were paid off, voters were asked in 2018 to approve a \$7M Primary Property Tax (PPT) with \$4M being promised to be spent annually to repair and sustain the network, but it was rejected 60-40. Now, following the RAS Report, it's de-ja-vu again; more street funds are needed.

Using RAS PCI data, RAS square yardage, and RAS unit costs, the CASC has concluded that \$50M of additional funds are needed (including intersection improvements) to position the community so the existing \$2.125M street revenue sources will be sufficient to maintain the network thereafter. To accomplish that, an 'outside-the-box' 5-year "Fix-All-Now" program is suggested that will improve the street network to a "PCI 70-Threshold" level. *(The \$50M amount is after \$8M in Federal Covid relief funds directed by the Town Council to the network have been spent, and continuance of the \$2.125M annual allocation.)*

## Cost Summary by PCI and by Street Category (See Appendix E for Detail)

C (70 – 55)	D (55 – 40)	F (40 – 0)	Less Fed Funds	Funds Needed
Micro Surfacing, Slurry Seal w/patching	Mill & Overlay w/patching	Surface Reconstruction w/patching		
\$11,400,000	\$25,500,000	\$7,100,000	(\$8,000,000)	\$36,000,000
Intersection Improvements				\$9,000,000
5% Inflation (5-year Program)				\$5,000,000
<b>TOTAL PROGRAM COST</b>				<b>\$50,000,000</b>

ARTERIALS	\$5,000,000
COLLECTORS	\$9,000,000
LOCALS / ALLEYS (less Fed Funds)	\$26,000,000
INTERSECTIONS (w/inflation)	\$10,000,000
<b>TOTAL PROGRAM COST</b>	<b>\$50,000,000</b>

***Without significant additional revenues street network maintenance levels cannot be achieved which means streets will continue to deteriorate, creating failing conditions from which the Town cannot possibly recover.***

### **A “Fix-All-Now” Program**

Deciding which streets to fix, and when to do it, is a complicated process because the rates at which streets deteriorate are affected by many variables such as traffic, vehicle weights, pavement materials, subsurface soil conditions, and weather, to name a few. As streets age, pavements deteriorate. Usually, the first signs of distress appear as longitudinal cracks along the direction of travel, then transverse cracks across the pavement, then alligator-style cracking and subsequent potholes. When street deterioration reaches the alligator stage, even in small areas, it may represent a failure of the underlying base materials which necessitates total reconstruction, including subgrade repair.

To establish street conditions the best approach has proven to be by using laser technology to assign numerical values to ride comfort and pavement distresses. In doing so Pavement Condition Indexes (PCIs) are created. The first time this was done in Fountain Hills was 15-years ago, and then again in 2018, and in 2023. After extensive reviews of all the data collected in each test year the conclusion reached is that PCIs collected in one year cannot be compared to those in a later year, because no two streets are alike, each deteriorate differently.

Streets fall into 4 classifications, Arterials, Collectors, Locals, and Alleys. Arterials are the streets with the highest traffic volumes, followed by Collectors that take traffic from intersecting residential streets to a connection with Arterials, and then Locals that are in essence residential streets. Alleys (less than 1% of the network) are often found in business areas, but in a few situations Alleys act like Locals as they are the only access for some residents.

In June 2020 the Town Council established 'minimum' PCI goals for Arterials of 60-70; Collectors, 50-60; Locals, 50-55. Using PCI numbers street conditions can also be characterized in terms of five letter-grade categories that closely match maintenance/repair options:

- "A" are those streets with PCI ratings between 100-85 and labeled as 'excellent'.
- "B" streets between 85-70 PCI ratings are referred to as being in 'good' condition.
- "C" (70-55 PCI ratings), a 'marginal' category.
- "D" (55-40 PCI ratings), a 'fair' category.
- "F" (below a PCI rating of 40), considered a 'poor' category.

Pavement management falls into three major categories: (1) maintenance, (2) rehabilitation (repairs), and (3) reconstruction. The reason for these categories is that State Statutes restrict 'low interest, tax-free bonds' to be used for one-time 'rehabilitation/reconstruction' projects, not ongoing/annual 'maintenance'.

- Maintenance is usually associated with "A" and "B" streets, down to a PCI rating of 70, and consists of crack filling followed by protective or slurry seals. (Recent example, Shea Blvd. Costs in the maintenance category are estimated to vary from \$1.60 to \$3.70 per square yard.)
- Repair/Rehabilitation usually occurs with "C" and "D" streets (PCI ratings between 70 and 40) and consists of some panel replacements followed with a slurry seal or chip seals with cape. And mill & overlays, some for the full pavement width, and in some very wide streets, just the travel lanes. (Recent example, El Lago Blvd from Palisades to Ave of the Fountains. Costs in this category vary widely between \$3.70 and \$53.00 / SY.)
- Reconstruction is normally associated with "F" streets (PCI ratings between 40 and 25) and consists of mill & overlay with major panel replacements. PCI ratings below 25 usually necessitate full-depth replacement. (Costs in this category vary extensively and could approach \$70.00 / SY.)

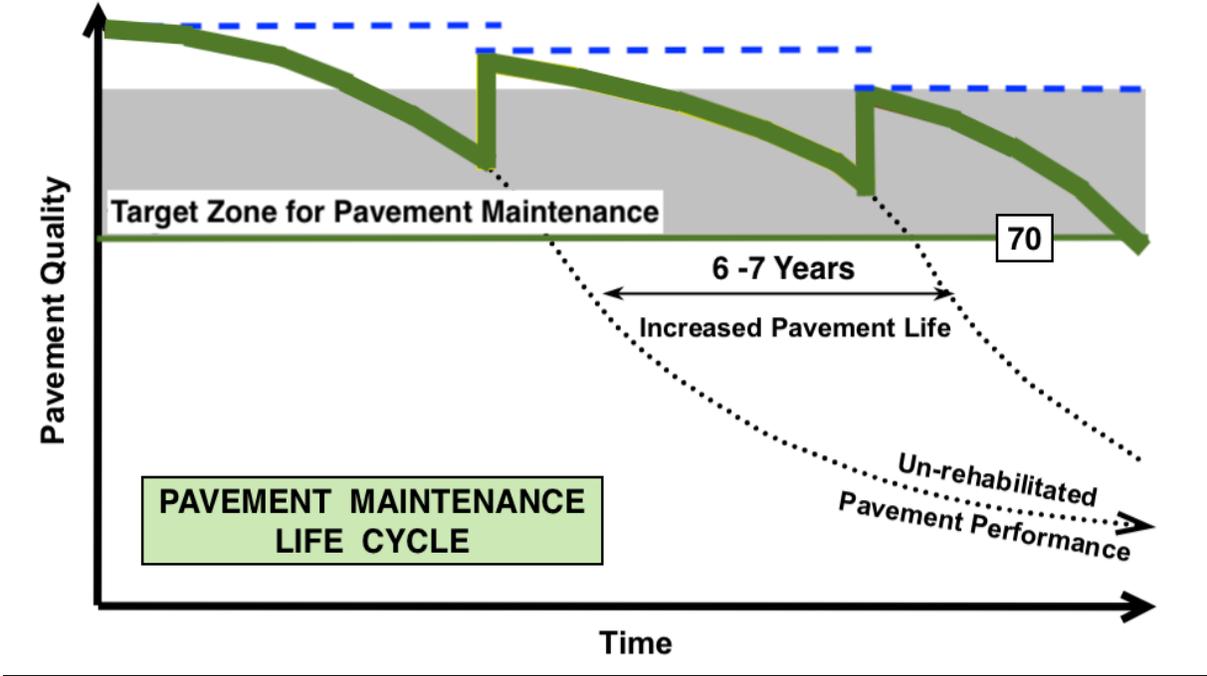
Once streets are 'fixed' PCI values are 'reset' until the next laser test results. Assumed values are:

For Maintenance: crack fill with seal coating: PCI 85

For Repair/Rehabilitation: slurry, chip seals with cape: PCI 88. Mill & overlay (including isolated panel replacements): PCI 90  
For Reconstruction: PCI 95

But these values do not last forever; all streets begin to deteriorate immediately. To keep pavements above a PCI 70-Threshold, maintenance activities must be repeated every 6-7 years. But each time that's done the 'reset' value diminishes somewhat, and after maybe three maintenance applications (20 years) streets will need to undergo more extensive treatment. To determine deterioration rates, it is suggested that laser tests be conducted every five years.

### Pavement Maintenance Life Cycle



### Funding Options

Over the years funding options have not changed. Three options are available to supplement current existing Town revenues:

- Bonds are often considered first since they have a sunset provision that appeals to many voters. However, bonds include interest expenses; dollars paid that do not make it to the streets. Depending on bond retirement schedules, a 5-year plan will have a lower interest price tag but a higher annual secondary property tax, while a 20-year plan will have more interest but a lower annual tax. (Bonds are like home mortgages or vehicle loans when cash reserves are not available.)

- A Primary Property Tax is a cash reserve alternative to bonds (no interest expenses). Based on a 5-year “Fix-All-Now” program, \$9M will be needed. Then, after the entire network is fixed, property tax revenues could be used to pay for fire, police, etc. and the local sales tax rate could be cut to 1.2% thus making FH more attractive to businesses and consumers.
- Local Sales Taxes are another option (they do not require voter approval). The Town’s current 2.9% sales tax rate is expected to generate \$15.4M in 2024. To produce another \$9M to fix the street network, the rate would have to increase 58% to 4.6% (and when combined with State Sales Taxes it would mean that FH would have the highest sales tax rate in Maricopa County).

Inasmuch as no decisions will be reached for a while, the months that follow would be a great opportunity to assess how voters would like to proceed. Then in the fall the Town Council will be in a better position to arrive at a consensus on how to address the street network going forward.

### **Recommendations**

The CASC recommends a “Fix-All-Now” strategy to bring all streets up to a PCI 70-Threshold level using municipal tax-free bonds as the financing source. Two bond alternatives are suggested, either a combination of “packages” by street category, or one overall issue.

Either alternative is designed to be a “Fix-All-Now” program, where the monies available from General Fund commitments and from bonds are combined to complete all necessary repairs over a seven-year period. Funds for the first two years, FY23 and FY24, are already committed by the Council. Bond funds will be needed for FY25 through FY 29. Then when the program is completed in 2030, the currently available \$2.125M annual revenues should be sufficient to sustain “maintenance” activities for the foreseeable future.

#### **Alternative 1: Comprehensive single bond package:**

**\$50M**, 20-year bond program to improve all streets, including intersections.

#### **Alternative 2: Street “Packages” – 4 separate bond packages:**

**\$5M**, 5 to 20-year bond program for Arterials only.

**\$9M**, 5 to 20-year bond program for Collectors only.

**\$26M**, 5 to 20-year bond program for Locals/Alleys only.

**\$10M**, 5 to 20-year bond program for Intersections, Pedestrian, & Bicycle Safety only\*.

*\*(La Montana/Palisades, La Montana/Saguaro, Palisades/Palomino, Palisades/Golden Eagle, Palisades/FH Blvd, Saguaro/FH Blvd, Avenue of the Fountains/Saguaro + sidewalk infill, Crosswalk Safety Improvements, adding turn lanes, installing traffic and/or pedestrian signals, adding bicycle lanes.)*

The advantage of long-term bonds is the annual ‘tax’ is the least and some of the indebtedness will be paid by those who move to Town in later years. Costs used to generate the bond amounts are based on recent street bid prices, plus reasonable contingencies for unknown surprises, and 5% annual inflation.

The CASC recommends Alternative 2 on the belief this bond referendum approach provides voters an opportunity to choose what they believe are most important. The CASC also recommends that a referendum be presented to voters in November 2024.

### **Summary**

Throughout this decade and before, monies to fix Fountain Hills streets have come from a combination of general funds including sales taxes, state-shared revenues, regional funds, and grants. Because streets have continued to deteriorate using these limited funds should be proof that relying on those monies alone is not enough.

The recommended “Fix-All-Now” 5-year program will eliminate the need to ask voters for more funds every 5-7 years, and after streets are improved to a PCI 70-Threshold level, the combination of existing general funds should be sufficient to properly maintain the street network for the foreseeable future.

Other considerations:

1. The “Fix-All-Now” solution differs considerably from the RAS recommendation, where instead of an “average” PCI as a goal, the “Fix-All-Now” uses a PCI 70-Threshold goal. (Adopting an “average” approach means some streets will not meet the Council’s ‘minimum’ conditions.)
2. The CASC believes an across-the-board “reconstruction” strategy for pre-incorporation streets included in the RAS report is not warranted, or affordable. (Using a previously proven hybrid repair on pre-incorporation streets that served the community for at least the past 34 years (since 1989 incorporation) is recommended.)
3. Before bond amounts are finalized consideration should be given to reclassify some streets and make a thorough review of future intersection needs, including pedestrian and bicycle safety improvements. (Traffic warrants may already justify signals at several locations, and as the community grows in the next 7 years, more improvements will be needed.)

4. After extensive reviews the CASC is convinced that there are no short cuts to fixing the streets without a significant amount of new revenue; conditions will only worsen. Even if the Town could allocate an additional \$1M each year, that would not be enough. (It's unrealistic to believe the Town could allocate as much as \$50M over the next 7 years ... \$7M every year.)
5. Since 2008 two different professional street consultants have concluded more funds are needed, and now in 2023, a third consultant has concluded the same. But only once have more funds been provided, and that was 10 years ago when \$8M was approved to reconstruct Saguaro Blvd. (The \$29M rejected by voters in 2011 and the \$4M annual rejection in 2018 would have reduced today's price tag considerably.)
6. Catching-up with street repairs to overcome ongoing deterioration seems paramount. To accomplish that requires significant additional revenues so existing revenues can be used to maintain the network at levels acceptable to residents and businesses.

Failure to invest adequately in street infrastructure will result in significant future challenges and a continued decline in pavement conditions throughout the community.

To help resolve the street issues it's suggested that public open forums be initiated this fall to give residents ample opportunities to voice their opinions.

## Appendix

### A. Talking Points

**Overview:** The streets in Town are falling apart; half the network is substandard. Even streets that are in good condition are subject to deterioration and must be maintained. The problem today is the result of ignoring what should have been done years ago and without an influx of capital, continual deterioration will exceed the Town's ability to sustain the network. Support statements include:

1. Infrastructure Improvement: Investing in the bond issue will significantly enhance the overall infrastructure, leading to smoother, quieter, and safer travel experiences for residents and visitors.
2. Long-Term Cost Savings: By proactively addressing streets through the bond issue, further damage can be prevented, and more expensive repairs can be avoided. Investing now will help save money over time by reducing the need for extensive street reconstruction projects.
3. Enhanced Safety: Upgrading and maintaining streets is crucial for ensuring the safety of motorists, pedestrians, and cyclists. By addressing current street conditions and intersection needs through the bond issue, accidents and potential injuries can be minimized, creating a safer environment for everyone.
4. Economic Growth: Well-maintained and reliable infrastructure is vital to attracting businesses, promoting tourism, and stimulating economic growth. By investing in the bond issue, it demonstrates the community's commitment to attracting new businesses and creating job opportunities.
5. Preserving Property Values: High-quality streets contribute to the overall appeal and desirability of the Town. By funding street repairs through the bond issue, property values will be preserved and potentially increased, thus benefiting property owners and ensuring a positive real estate market in the long term.
6. Limited-Time Opportunity: The urgent need for street repairs combined with the availability of the bond issue presents a unique opportunity. By acting now, necessary funding at favorable interest rates can be achieved.
7. Community Well-being: Investing in the Town's streets is an investment in the well-being of its residents. Smooth and well-maintained streets improve accessibility, reduce noise levels, and minimize traffic congestion, resulting in a higher quality of life for everyone.

8. Environmental Benefits: Upgrading streets can include implementing environmentally friendly practices, such as incorporating sustainable materials and improving drainage systems, thus reducing the carbon footprint, and contributing to a greener future.
9. Increased Civic Pride: Addressing Street problems through the bond issue demonstrates commitment to a sense of pride among residents, fostering a stronger community spirit, and a shared responsibility for the Town's development.
10. Transparency and Accountability: The bond issue provides a clear and transparent mechanism for funding street repairs, ensuring the funds are dedicated solely to the intended purpose. Implementing oversight and accountability measures to promote trust and confidence among residents are doable.

## **B. Pavement Lifecycle Program**

### **Pavement Lifecycle**



### **C. Additional Considerations**

1. Based upon Town growth in the past decade and current traffic, some streets may need to be reclassified to the next higher category. Prior to finalizing any bond packages, each category should be visited to determine which streets should be reclassified to a higher level; examples are included below.

	<b>from</b>	<b>to</b>
<b>Collectors to Arterials</b>		
Golden Eagle	Palisades	Sunridge
Sunridge Dr	Palisades	Golden Eagle
<b>Locals to Collectors</b>		
Gunsight	Saguaro	La Montana
LA Montana	El Lago	Arroyo Vista
Arroyo Vista	La Montana	FH Blvd
Chama	FH Blvd	Gunsight
Sierra Madre	Sunridge	Sunridge
Verde River / Paul Nordin	Palisades	Saguaro
Panorama	Saguaro	Saguaro
Bainbridge	FH Blvd	Golden Eagle
Inca	FH Blvd	Kingstree
Monterey	Shea	Saguaro
Del Cambre	Grande	El Sobrante
Hampstead / Fayette	Palisades	Fairlynn
Saguaro Business Frontage	Panorama	Colony
Thistle	Palisades	Mountain Side
Mountain Side	Thistle	Palisades

2. A Town-wide “speed limit assessment” should be conducted to ensure that by category streets are consistent; that speed limits are posted the same in both directions; that general signage upon entrance to the Town informs drivers that the local speed limit is 25 mph on any street not posted.
3. The Town should investigate and identify options for private (HOA) properties to be able to use Town negotiated prices so cost savings can be passed along.
4. Throughout the program of street repairs, the Town should consider addressing wide streets with pavement markings that allow for a left-turn lane, parking lanes, and/or bike lanes by narrowing the travel lanes appropriately to help “manage” posted speed limits.
5. All Arterials and Collectors should have centerline markings.
6. All Local streets at a minimum should have traffic control stop signs/stop lines when intersecting with Collectors and/or Arterials.
7. All frontage streets should be clearly marked and/or signed as two-way.

8. Additional radar activated speed limit signage should be placed strategically throughout the community on Arterials, and on all streets ahead of entering a special enforcement area.
9. Prepare an ‘Intersection 10-Year Improvement Plan” addressing primary intersections; considerations are shown below.

<u>Facility</u>	<u>Cross Street</u>	<u>Existing</u>	<u>Recommended</u>	<u>Description</u>
Palisades	Palomino	4 way stop	New Traffic Signal	Complete planned improvements
Palisades	Golden Eagle	3 way stop	Traffic Circle	Eliminate 3 way stop with circle
Palisades	FH Blvd	Existing Traffic Signal	L Turn Queuing	NB to WB & EB to NB turn lane ext
Palisades	Ave of the Fountains	Existing Traffic Signal	Do Nothing	-
Palisades	La Montana	4 way stop	Traffic Circle	Eliminate 4 way stop with circle
Palisades	Saguaro	Existing Traffic Signal	L Turn Queuing	NB to EB turn lane extension
Saguaro	La Montana	2 way stop	Traffic Circle	Eliminate 2 way stop with circle
Saguaro	Ave of the Fountains	3 way stop	Traffic Circle	Eliminate 3 way stop with circle
Saguaro	El Lago	Existing Traffic Signal	L Turn Queuing	NB to EB turn lane extension
Parkview	Verde River Drive	4 way stop	Traffic Circle	Eliminate 4 way stop with circle
FH Blvd	El Lago	Existing Traffic Signal	Do Nothing	-
FH Blvd	Saguaro	1 way stop	Traffic Circle	Reduce traffic conflicts with circle
El Lago	La Montana	4 way stop	Traffic Circle	Eliminate 4 way stop with circle
La Montana	Parkview	1 way stop	Traffic Circle	Eliminate EB stop sign with circle
<u>Other</u>	<u>Concept</u>			
Sidewalk Infill	Downtown/Arterials	x ft		
Speed Controls	Radar Speed Limit Signs	x number of controls		
Pedestrian Crossings	Signal Controlled Crossings	x number of crossings		
Bicycle Lanes	Arterials/Collectors	x number of miles		





## **F. Volunteer CASC Members**

**Jerry Butler, Kim Colenso, Gregg Dudash, Mark Graham,  
Buck Haworth, Bernie Hoenle, Dean Hughson, Jeffrey Kerr,  
Karl Manthe, Joe Mueller, Chris Plumb, Gary Salavitch**

### **CASC Background Experience**

**45 years - Business Management Leadership  
40 years - Transportation Planning  
36 years - Design / Construction Industry  
33 years - Civil Engineering  
28 years - Roadway Construction  
25 years - Project Consulting  
20 years - Home Building Industry  
15 years - Project Management  
8 years - Design / Roadway Management**

**\*\*\***

A special debt of gratitude is extended to Town Hall staff for guiding us through the community's complicated street maize, and for their patience. Without their leadership this report would not have been possible. *Thank you.*

Grady Miller, Retired Town Manager  
Rachael Goodwin, Interim Town Manager  
Justin Weldy, Public Works Director  
David Janover, Town Engineer  
Andy Whisler, Assistant Town Engineer  
Jeff Pierce, Streets Superintendent  
Angela Espiritu, Executive Assistant