



Sierra Vista

EXTRAORDINARY SKIES.
UNCOMMON GROUND.

Sierra Vista City Council Work Session Agenda July 26, 2016

1. Call to order – 3:00 p.m. in the City Hall, Council Chambers, 1011 N. Coronado Drive, Sierra Vista, Arizona.
2. Presentation and discussion:
 - A. July 28, 2016 Council Meeting Agenda Items (agenda attached)
 - B. Discussion of Council Executive Report (attached)
 - C. Fry Boulevard Corridor Study
 - D. Health Impact Assessment (HIA) Overview
 - E. Report on Recent Trips, Meetings and Future Meetings
 - F. Future Discussion Items and Council Requests
3. Adjourn

City Council work sessions are informal meetings of the elected body designed to allow the Mayor and Council Members to prepare for upcoming regular meetings, have staff briefings on issues, and provide an opportunity for more detailed discussions amongst themselves. The meetings are limited by City Ordinance to 90 minutes; but with Council consensus may be extended by an additional hour. The meetings are set in accordance with the State Open Meeting Law and no discussion can take place on issues/topics that have not been posted on the agenda at least 24 hours in advance. The public is welcome to observe the meetings in person or on Cox Channel 12, but time is not reserved on work session agendas for public comment. The public may, however, address the City Council at their regular twice monthly meetings or share written views through the City website, www.SierraVistaAZ.gov.

Sierra Vista City Council
Work Session Minutes
July 26, 2016

1. Call to order by Mayor Mueller at 3:00 p.m. in the City Hall, Council Chambers, 1011 N. Coronado Drive, Sierra Vista, Arizona.

Roll Call

Mayor Rick Mueller – present
Mayor Pro Tem Bob Blanchard – absent
Council Member Alesia Ash – present
Council Member Gwen Calhoun – present
Council Member Rachel Gray – present
Council Member Hank Huisiking – present
Council Member Craig Mount – present

Others Present:

Chuck Potucek, City Manager
Ron York, Fire Chief
Sharon Flissar, Public Works Director
Matt McLachlan, Community Development Director
Jeff Pregler, Planner
Tina Moore, Planner
Jill Adams, City Clerk
David Felix, Finance Manager
Dan Coxworth, MPO Administrator
Simone McFarland, Economic Development Manager
Judy Hector, PIO
Anissa Jonovich, Healthy Community Design Manager, Arizona Department of Health Services
Leslie Dornfeld, PLANeT
Jeff Velasquez, J2 Engineering
David Hewitt, J2 Engineering
Teresa Makinen, MakPro Services

2. Presentation and discussion:

Mayor Mueller stated that the order of the agenda would be modified and the work session would begin with Item D.

D. Health Impact Assessment (HIA) Overview (presentation)

Mr. Coxworth stated that the next two projects are what the MPO has been working on and the two items complement each other. With regard to how the City got to this point and where it started was with Leslie Dornfeld with the planning firm PLANeT contacting him about a unique grant opportunity through the Arizona Department of Health Services to fund a health impact assessment that is specific to transportation and land use. In talking to her, he mentioned other things that are happening in the City, i.e., North Garden Avenue redesign, Fry Boulevard Corridor Study and MPO's inventory of all of the City's sidewalks and ADA ramps in order to do a Pedestrian Gap Analysis. A Pedestrian Gap Analysis is to identify those areas in the community that might inhibit or discourage someone from riding their bike or walking to the

destination. All of the projects and the plan were good subjects for the HIA and there are elements of those in the HIA.

Ms. Dornfeld stated that the grant was from the Arizona Department of Health Services and this is the last year that they are offering that grant. They were given some money by the Center for Disease Control (CDC) to look at the impact of physical activity on health. She spoke to Mr. Coxworth and applied for the grant and was fortunate to be selected.

The healthy community design manager for the health assessment is Anissa Jonovich and she will be representing the Arizona Department of Health Services. They are pleased to do this in Sierra Vista and help the community look at how health and transportation are interrelated.

Ms. Dornfeld defined a health impact assessment and explained that these are things that are done all over the country and are very much supported at the federal level by the CDC. These are things that begin to get people to think about how they do things that impact health. An example is if a road was built that separates the school from the park. The kids may not be able to walk across the street anymore and so they are going to be less physically active and childhood obesity is a huge issue. These are small kind of decisions that are made and the idea is to bring the perspective from a health viewpoint and through the health lens of what is the impact of these kinds of actions on the health of the communities. These projects can be leveraged to have further benefits to the community besides just providing jobs or getting a new store.

Ms. Dornfeld stated that a lot of developers have asked her why she cares and the reality is that people are spending less on their health. If people are spending less on obesity related chronic disease i.e., diabetes and hypertension, then they are visiting the doctor less and paying less for healthcare and so they will have more money to spend in their community and they will live better.

Two pie charts were introduced that indicated how people behave that determines their health and the decisions that they make that have a 20 percent impact on mortality. The environmental and social factors piece of the pie are things like how people live, the places that they live in and the economy. They have a tremendous impact on health in a variety of areas.

The health assessment impact is focused on activity; but some of the stuff people are born with. Bad medical care is also going to be responsible for mortality.

The focus is also on health/active transportation that studies have documented:

- Aerobic exercise decreases tension and puts people in a better mood;

Ms. Dornfeld stated that when people are unhappy, doctors tell them to go and take a walk. Walking begins to help people with depression and some of those mental illnesses that are an issue in Sierra Vista.

- Walk able/bike able access;

Ms. Dornfeld noted that this will begin to help people do things in a healthy transportation mode and it will change their life style. Also, if there are safe places to walk in the community there will be more people walking.

- Physically active people live longer and have less incidents of disease.

Ms. Dornfeld stated that the purpose of the HIA in Sierra Vista was to:

- Identify how healthy transportation options, i.e., walking, biking and transit can impact obesity and related chronic diseases, asthma, isolation, depression and substance abuse.
- Educate the community on how their health is connected to how they move;
- Provide Council information so that they think about health when they think about land use planning and transportation planning;
- Provide guidance to the variety of transportation plans that focus on active transportation or healthy transportation.

When a HIA is done and the consultants are out of the health world, they have a thing that they have to say, "Significance in value". A plan has purpose and goals. This has meaning to Sierra Vista because it could affect how plans are implemented and the policies will have some health impacts. The plans that were looked at were:

- Sidewalk Implementation Plan;
- Safe Bicycle and Pedestrian Routes Plan;
- West Fry Boulevard Corridor Study;
- North Garden Avenue Corridor Study; and
- Future updates to the City of Sierra Vista's Development Code.

The HIA process is strict and the following six elements must be included:

- Screen;
- Scope;

Ms. Dornfeld stated that what was looked at in Sierra Vista as healthy transportation.

- Assess;

Ms. Dornfeld stated that she looked at the City's health situation and how can the plans, policies and transportation affect it.

- Make recommendations;
- Report;

Ms. Dornfeld added that reporting includes going to the community and there were two community meetings on the HIA and they worked with the Be Healthy Sierra Vista Committee and the Cochise County Health Department. One of the meetings had the Cochise Bike Advocates present as well as food banks and other providers in the County providing ideas on how health could be improved through transportation. The Fort was involved in the study and they provided some of the recommendations presented in the report.

- Value;

The last part is how is this going to have value and how would be the ones to implement them.

These will all be in the report and they are just suggestions.

Ms. Dornfeld provided a pathways diagram that showed how the plans are connected to health. Through the HIA it was learned that providing better connections, sidewalks, bike lanes, signalization and more connected trails and bike routes, which were all the different types of components of the Sidewalk Implementation Plan and the Safe Bicycle and Pedestrian Plan, affect the determinants' of health:

- Built Environment (52 percent);
- Individual Behavior (20 percent);
- Social and Economic Development Environment (52 percent).

They are real and measurable impacts on obesity, diabetes, hypertension, asthma, mental health, depression and substance abuse. This could also affect economic activity and a sense of community that Council is aware of because they authorized the Fry Boulevard Study.

Conclusions and connections were arrived at by looking at a lot of data for Sierra Vista and worked with what was available. There was only one original study for the report and that was due to funding. Demographics were looked at and a Waist to Hip Ratio Survey and Transportation Survey were conducted. Also looked at were existing infrastructure mapping, Fort Huachuca's health data and Census Tracts. Cochise County data was also looked at that came from the Health Department as the State does a lot of data that helps look at morbidity and mortality to find out where the County fits in the State.

Ms. Dornfeld provided health reporting data that showed that almost a quarter of the community reports physical inactivity and 27 percent stated that they have no access to exercise opportunities. In terms of obesity, 25 percent of the adult population in the County is obese and a half of the population is either overweight or obese.

The chart in terms of Arizona, there is other counties that are worse than Cochise County; but the County is in the middle range of that and they are significant. In terms of diabetes, 13 percent of the population in the County is diabetic.

Ms. Dornfeld pointed out that Sierra Vista is a huge part in terms of Cochise County and the City bends the trend.

The County is the fourth highest in the state in terms of short term diabetes and uncontrolled diabetes.

Also introduced was a chart from the State on health reporting:

- Cochise County ranks third/fourth in terms of uncontrolled diabetes and complications;
- Third in terms of hypertension, a heart disease and obesity related;
- Fifth with things like obesity, a chronic disease; and
- Sixth in the State out of 15 counties for COPD, obesity related and chronic pulmonary disease.

The following chart from the State on health reporting showed mortality and morbidity:

- Third in terms of death from heart disease; and
- Second highest from stroke.

Ms. Dornfeld noted that getting people more physically active in Sierra Vista can help and that in fact there are some things that Council may want to look at by providing opportunities for active transportation.

Cochise County did a Waist to Hip Ratio Survey and it means that if a person falls in the safe range that person is not a risk for obesity related chronic diseases. The survey consisted of measuring people's waist and hips; but one of the challenges was that if the person was overweight and heavy they did not want to do it because they were embarrassed.

These are somewhat bias; but even with that the County has a third of the population that is not within the safe range. There were 200 people in the study and it was not known where they reside.

Looking at Sierra Vista in terms of health, the City is not a poor community and typically the poorer the community, the worse it is to access to health care, higher rates of obesity and other kinds of diseases. The City has a fairly large percentage of disabled population and they need sidewalks and access to non-motorized, other transportation forms and mobility options.

Also noted was that 5.6 percent of the population does not have access to a car and making the community walk able could benefit and help with that portion of the population. The population is not that old and that is due to Fort Huachuca and the City is a third of the County.

Council Member Ash asked how physical disability is defined and tracked. Ms. Dornfeld stated that it is self reported from the Census. Physical disability is a person in a wheel chair and does not have mobility.

The Sidewalk Implementation Plan had 26 recommendations and looked at were transit, schools, commercial areas and parks to see where sidewalks were needed. If the sidewalks are connected, more opportunities will be created for people to walk.

Physical injury is also related to health, especially if people are elderly as the hazards with tripping are more severe and a quarter of all pedestrian injuries come from people falling on sidewalks. Having the sidewalks in good repair has a health impact and it is a real benefit to the community, less time at the doctor, less deductible out of their pocket, less time worried about health.

School studies were done and looked at how the lack of sidewalks does not help in getting kids to school. It is a safety concern for the Joyce Clark and Pueblo Del Sol schools because there are a lot of students walking in the street. There are missing crosswalks and 10 percent of the parents say that their children are not safe. More sidewalks would increase the number of children walking to school which would address childhood obesity and that is a national issue.

A chart was displayed with circles indicating that it is half a mile to a grocery or specialty store in the lowest income neighborhoods. The chart also indicated the need for connections to a full service grocery store.

Ms. Dornfeld added that sidewalks also help with access to healthy food and noted that low income people are those that do not have access to a car or more than one car. Providing non-motorized facilities and transportation options could help people access healthy food.

Census Tracts were looked at along with a map of the City that showed that there are areas in the City that have high rates of physical disabilities. Some Census Tracts showed that 20 percent of people have a physical disability and those are located mostly along Fry and lower income tracts. This also looks at ADA compliance holes.

In looking at the safe bicycle and pedestrian routes it was noted that the highest number of crashes were along Fry Boulevard and that is a clear health concern. By providing better sidewalks and facilities along some of the main accident areas would contribute to health. A road with a bike lane has an accident rate of 50 percent lower than roads without them. A

protected bike lane with a barrier or curb has a 90 percent lower rate of accidents and shared use paths reduce injury by 60 percent.

Ms. Dornfeld stated that the West Fry Boulevard was looked at and it is believed that widening sidewalks on west Fry and North Garden Avenue would provide shade and separate pedestrians from traffic. Also improving the street scape for North Garden Avenue would help to create a more walk able connection.

Data from Fort Huachuca indicates that over half of the military population on the Fort is obese or overweight based on reports from their hospital. Obesity affects more than 1/3 of the retired military.

Mayor Mueller asked if the data involves soldiers, military family members and retirees. Ms. Dornfeld stated that it does and it is anyone that is using the Fort's hospital and surprisingly it includes the soldiers. The enlist come in great shape; but the longer they stay, the more obese they seem to get. It is a huge issue at the Fort. More than half of all active military are overweight and there is a 10 percent obesity problem with dependent children. Obesity related diseases that can be managed with diet and exercise such as cardiovascular disease and COPD make up the largest portion of chronic diseases among the military at the Fort.

A chart depicting behavioral health diagnosis rates by year and diagnosis category of active duty on the Fort was also presented. PTSD is not genetic but substance abuse, anxiety disorders, personality disorders and psychosis are genetic and are affected by physical activity. They are certain diseases and the more physical activity those diseases, the better they can be helped to manage them.

A Walk and Bike Feedback Survey was conducted by the Fort revealed that most of the people do not live on the Fort; but they work on the Post. When asked about safe bike routes, it was indicated that there are none to the Fort; and when asked about sidewalks and crosswalks, many said yes. A lot of folks living in town are biking to work at the Fort. The Fort asked he to look at that and they recommended some routes.

In addition to the adopted plan for the City recommendations, HIA recommendations include suggestions that would result in transpiration options with the cost health benefits. The recommendations for the Fort were provided by Fort staff.

The reason that the list was developed was that there are areas that had lower incomes from the rest of the community and higher rates of disability. These are the recommendations in higher accident areas that would better serve to address those issues. It is more than a connection to a school and shopping and it states where some of the health needs in the community are and how the recommendations can help address those needs:

- Sidewalk Implementation Plan;
 - o Provide a connection between N. Carmichael Avenue where it terminates at N. Railroad Avenue to west Fry Boulevard;
 - o Provide additional sidewalk along Avenida Cochise between Paseo San Luis and Calle Mercancia with ADA upgrades;
 - o Provide additional sidewalk along SR92 between E. Hazen and Avenida Cochise with ADA upgrades;
 - o Provide additional sidewalk on S. Carmichael Avenue between sheila Lane and Timothy Lane with ADA upgrades;

- Provide additional sidewalk between N. Colombo Avenue between E. Evergreen Drive and E. Galieleo Drive;
- Fry Boulevard and N. Garden Avenue Redesign;
- Fort Huachuca proposed improvements:
 - Additional sidewalks on Burns Street;
 - Additional sidewalk connecting H Street and Col Johnston;
 - Additional sidewalk connecting Bonnie Blink to Old Post;
 - Bike lanes/shared use paths on Arizona Street between Irwin Street and Brainaird Road;
 - Whitside Road bike lane/shared use path proposal;
 - Hatfield Street to main gate bike lane/shared use path proposal; and
 - Allison to Winrow bike lane/shared use path proposal.

New recommendations are:

- Include the proportion of disabled and persons over 65 in overall sidewalk connectivity as well as income;
- Develop a “walk the Fort” program where people are encouraged to walk more on the Fort to help folks get more active;
- Zoning Ordinance that may or may not be done:
 - Placing buildings closer to the street;
 - Making sure bicycle and pedestrian connections exist and put them within existing commercial developments;
 - Making sure that there is good landscaping and parking lots and pedestrian connections between commercial developments to encourage people to link those trips;
 - Making sure that new development connects to existing bike paths; and
 - Make sure that there is connection and public access through developments.
- Develop a Safe Routes to school Plan and Program that address the concerns of the parents both in the City and Fort; and
- Adopting a complete Streets Policy.

Ms. Dornfeld stated that it is an important and great thing to do. It is a process; but creating those streets does bring a lot of benefit and encourages people to walk and creates a great walking environment.

Council Member Ash asked Ms. Dornfeld if she has noticed any trends in populations where there is an active military installation. Ms. Dornfeld stated that this is her first HIA done in a predominant military based community and so she can't really answer that question; but based on her review of the literature, she did not see a lot of that kind of study and it is something that is appropriate to start looking at.

Council Member Calhoun asked if there is place to go to have an evaluation for health impacts. Ms. Dornfeld stated that she would have told the City to go to the Arizona Department of Health; but their funding for these kinds of projects has ebbed. She believes that the County Health Department might be able to assist the City. As part of this process, the State did a training program that the County Health Department attended and they are trained on doing HIA's and the idea of having her come out and doing the HIA in Sierra Vista was the “do one,, teach one” approach. She did work closely with the County Health Department and she believes that there is funding for Be Healthy Sierra Vista.

Mr. Coxworth stated that there is also the Legacy Foundation and they are funding a part time position, a City employee, to help administer the Be Health Sierra Vista Healthy Committee. He believes that the committee might serve to look at potential policies or plans going forward to ensure that they are taking into consideration some of the health impacts of the policy/ordinance that goes before Council.

Council Member Calhoun stated that she thinks that community development is a big piece of this and asked where to look for information as she wonders if in 20-30 years from now if the things that Council may do or want to do in the community, in a smart way so that changes are allowed in community development over the years, is going to be the trend. Currently the City is looking at the west end and talking about walk ability. Ms. Dornfeld stated that the easiest place to look at is the ULI as they endorse the health community design and they have books on how to design for health communities. There is a lot of activity in terms of health communities design in the public housing community now and not only in terms of physical design; but services available on site, i.e. proximity to a store or transit stops. There is also in Arizona the Arizona Alliance for Livable Communities and that is a loose association of a variety of health organizations to promote the awareness of health. There are also two other organizations and one will actually work with developers and help them integrate healthy design into their communities. The Arizona Partnership for Healthy Communities is another organization that promotes and works with the community for health. The resources are growing and Arizona is actually becoming the leader in the field.

Council Member Mount asked if the study was paid for by the State. Ms. Dornfeld stated that the CDC gave money to the State through a grant.

Council Member Mount asked about the size of the cities focused on for studies. Ms. Dornfeld stated that this particular grant was focused on rural communities. She added that she has done four studies and they were in Miami, Ganado, Peach Springs and Verde Valley. There have been others in Yuma, Tucson, and Phoenix on various topics and there are about 20 total in the State.

Council Member Mount asked where Sierra Vista ranks in terms of size and isolation on the list of 20. Ms. Dornfeld stated that the City is not out there; but more connected than Peach Springs and Ganado. The Verde Valley's five different communities that are desperate, far from Tucson and more like Bisbee, so Sierra Vista is considered a rural community; but not necessarily extraordinarily rural.

Council Member Mount asked who would bear the burden of the cost with the recommendations that were put forward. Ms. Dornfeld stated that the recommendations put forward were mostly to as the City moves forward with the CIP, projects that have been planned, and the cost would be to the MPO and the City. For some of the other recommendations in terms of promoting those programs, it depends on the City's funding source. There is federal funding available for safe routes. The zoning update is something that the City would probably have been doing as a part of the City's existing work program. Fry Boulevard is something that the City has begun to work on and funded. PLANeT is not really recommending substantial physical construction of improvements; but more of a way that the City moves forward with existing non-motorized projects that the City has in the hopper and a way to prioritize through a health lense and to leverage health benefits as well.

Council Member Mount asked if the City is responsible for the leasing, financing and maintenance of a building when putting forward code that is going to affect how somebody builds a building. Ms. Dornfeld stated that typically for other communities that she has worked

in, and has worked in almost all in the State, the types of recommendations that PLANeT is suggesting are standard. It makes sure that the investments that the City is making in the public infrastructure, i.e., trail, does not end at a dead end. Developers now want trails in their communities as it adds value to their projects and they want open space in their communities.

Ms. Dornfeld added that as a member of the ULI, as a technical assistance panel, most of the developers that she works with want to work with communities so that their residences don't end up at a dead end street. They want their residents to connect to a trail that brings them to the grocery store or park. That is a selling point for their project. It does not really add cost; it is a way of simply saying that if they are going to do it, they want a way that makes it worthwhile as opposed to building a trail to nowhere.

Council Member Huisking asked how PLANeT would recommend prioritizing if the Council already has a strategic goal to be a healthier community and they have the group in place and in projects in the hopper. She also asked how to get public input in terms of giving them access. Ms. Dornfeld stated that when PLANeT did the HIA, they heard from the community and they learned from the statistics that there are folks in the City that have health issues that may be underserved.

When the looked at it through the health lense the priorities that PLANeT suggested in the report changed around some of the City's priorities and the priorities that they did look at where income, disability and age because those are typically the folks that have the most health issues. There is no health data in Sierra Vista that is more geographically precise than the City and County. PLANeT could not find a Census Tract that had a high incidence of diabetes; but they do know that diabetes has the highest association with people that are lower income and older. They looked for those indicators and that was why they recommended that the City's priorities be reexamined. The projects that PLANeT pulled in the report were from the longer list of projects that the City already had identified in the Sidewalk Implementation Plan.

Council Member Huisking noted that PLANeT provided the basics; but now Council has to go and look at it again to see how they are going to plan the City according to what the results are.

Ms. Dornfeld stated that it is one of the objectives that the CDC wants to see from the HIA's because by shining the light on something that can be understood and seen is tangible. The HIA did its job because it raised the level of understanding about how everything impacts health. Then Council will begin to think of health when doing other things, i.e., housing policy, liquor license laws, and etc. Other things to think about are traffic, economy and benefits to children.

Mayor Mueller stated that everyone wants safe routes to school because they believe it to be important and it is known that there is a need in a number of areas; but if Council can look at needs and the amount of money, which does not cover the bill, and then look at other factors whether it is low income or an area where there are high disabilities, that sidewalk in that area might get fixed before two years down the road the rest of the sidewalks. It helps prioritize and support the greater needs first.

Council Member Huisking noted that now there are more metrics to go by.

Council Member Mount asked Ms. Dornfeld if she has done this for 20 other cities. Ms. Dornfeld stated that there have been 20 HIA in the State and she has done five of them.

Council Member Mount asked how many out of the 20 or the five are unique recommendations that are provided for each of the cities. Ms. Dornfeld stated that they are the same and different. When PLANeT was in Ganado it was recommended to build trails and they are recommending building trails in Sierra Vista; but that was attached to a quarter study and where they were putting the trail did not serve the senior center, school children and so PLANeT made specific recommendations to build the trails; but in a different place. The recommendation in Ganado was to build trails that connected the bulk of their population to their Friday market. Trails are always going to be in there when looking at active transportation; but specific recommendation of the trail will differ from community to community.

Council Member Mount stated that he grew up in a very large city, an urban setting, and he does not consider Sierra Vista to be an urban setting at all. He is worried about taking recommendations from the Urban Land Institute and places like that. He did not stay in the City because he wanted to resemble an urban area and he worries about a homogenized recommendation just because that is kind of the thing that everybody is picking up in conferences and seminars and bringing that back to the City.

Council Member Mount stated that he researched PLANeT and noted that a lot of the recommendations seem similar and he wonders what the benefit is. Ms. Dornfeld stated that it is a good point and added that when PLANeT did their research in the Verde Valley where they have a large group of homes for the disabled, PLANeT's recommendation focused on transit and transit to the main hospitals. When PLANeT looked at native communities, which don't bike, PLANeT recommended trails in understanding that the native culture is about running. In Sierra Vista PLANeT understood and learned that it is a unique area due to the proportionate of military, mental health and physical disability issues. PLANeT looked at the sidewalk connectivity and benefits of sidewalks.

Generically, it is important to provide places for people to walk and what they look like is a different story. Ms. Dornfeld also stated that she has worked on all of this through the State and other states and it is about how well the community is designed, i.e., Scottsdale has dirt pads in North Scottsdale because they want it to look rural; but she know that Scottsdale is not rural. However, Scottsdale has sidewalks down town.

PLANeT is not stating to put in hard curb sidewalks, eight foot wide with big street lights because that is not what Sierra Vista is about. Communities should be connected and Sierra Vista is a fairly large community. People in the community need to get food, health services and to places. They are not living in one house on a 40-acre spread. There are apartments in the community and there are also a lot of single family master plan communities that should allow their residents to be connected to the services that they desire and to have choices in how they get there. Every single health assessment that PLANeT has done has emphasized the ability of people to have choice no matter where they live.

Mayor Mueller stated that he appreciates her presentation and Council also appreciates her input and they know that Mr. Coxworth will be using that for opportunities as they arise and not only to work with codes; but also to attract other money to help put in some of these projects.

A. July 28, 2016 Council Meeting Agenda Items (agenda attached)

Item 2 Fiscal Year 2016/2017 Property Tax Levy Public hearing

Mr. Potucek stated that this is a public hearing for setting primary property tax rate for the next fiscal year as part of the budget process. The primary property tax levy is recommended to be the same at .1136 per One Hundred Dollars of assessed valuation, which will generate about \$362,000 for the General Fund Budget this year, a slight decrease from last year's \$364,000 due to falling assessed valuations. Once the public hearing is done, then Council at its next meeting will vote on tax levy, which will then conclude the budget process for the fiscal year.

Council Mount asked if there were any changes. Mr. Potucek stated that there were not changes.

Council Member Calhoun asked about the type of comments that Council typically get during a public hearing on the tax levy. Mr. Potucek explained that it is State Law that states that there has to be a public hearing on property tax levies. Property taxes are important to the folks in Arizona; but Sierra Vista does not raise them. He would assume that Council would get comments if they were thinking about raising the rate; but given that it is the same, he doubts that there will be much comment.

Mayor Mueller noted that one of the comments was that they were glad that the rates were not being raised.

Item 3 Council Minutes for July 14, 2015 – There were no changes.

Item 4 Resolution 2016-050, Adoption of the Final Budget for FY 2016/2017

Mr. Potucek stated that this is the final adoption of the FY 2016-2017 budget and the final budget is in the amount of over \$70 Million and that number remains unchanged from the Tentative Budget cap that Council set a month ago. There have been no changes to the budget since that time and this will complete the budget process in terms of the fiscal portion of it.

Council Member Mount asked if the small business set aside and the economic development attraction fund are in the budget. Mr. Potucek stated that they are both in the budget.

Item 5 – Resolution 2016-051, Amendment to Intergovernmental Agreement with the Arizona Department of Revenue for the collection of transaction privilege taxes

Mr. Felix stated that last year the State conducted the tax simplification taskforce and as part of that the City signs a new agreement with the Department of Revenue for the collection of taxes. The State is moving to all program cities also must go through the Department of Revenue's portal to remit their taxes, unified principle and things like that. Part of the agreement did allow for amendments that were agreed upon by both the Department of Revenue and the League of Arizona Cities. Over the last year, five items have come up that both entities wished to have the original contract amended. This agreement puts together the five amendments to the contract that have come up over the year. A couple of these do not necessarily apply to Sierra Vista because the City is a Program City and not Independently Collecting Cities; but it is part of the agreement that needs to be updated, signed and sent to the State.

Mayor Mueller asked if there are impacts to Sierra Vista. Mr. Felix stated that there are no impacts to the City.

Item 6 – Resolution 2016-052, Adoption of the Development Fee Schedule that corresponds to the Land Use Assumptions and Infrastructure Improvement Plans in Accordance with A.R.S. 9-463, and City Code 154.10-20

Mr. Potucek stated that this is the ongoing lengthy process to establish changes in the City's development fees. The adoption of the fee schedule that Council went over and approved about a month ago in terms of the Infrastructure Improvement Plan and Land Use Assumption. The schedule for the fees remains the same with slight reductions in most of the categories that were discussed before and with Council's approval, the fees schedule will then become effective on October 17, 2016.

Mayor Mueller asked if there have been any changes since the last time. Mr. Potucek stated that there have been no changes.

Items 7 and 8 Appointments to commission – There was no discussion.

C. Fry Boulevard Corridor Study (presentation)

Mr. Coxworth stated this is the Fry Boulevard West End Corridor Study and noted that Jeff Velasquez and the J2 Team are present to provide the final draft report. He also put into context how the City got to where it is and added that he has been working for the City for over 10 years now and he has to say that the discussion of Fry Boulevard and what can be done with it, either through city management, council members or West End commissioners, has always been a discussion and the discussion continues. There currently is a City Council Strategic Objective to look at Fry Boulevard and to improve the walk ability and bike ability of Fry Boulevard, particularly on the west end.

Mr. Coxworth stated that it is important to note that the Corridor Study is more than just looking at improving the aesthetics of the roadway because as Ms. Dornfeld pointed out in her presentation, it is about the health of the residents of the community. It is also about improving the safety of the roadway and not just for bikes and pedestrians; but also for vehicular traffic. It is also about economic development and economic sustainability in the community.

Mr. Velasquez with J2 Engineering thanked Council for having them back as they were in Sierra Vista in the fall. He added that it has been an excellent process and community to work with. He also introduced David Hewitt an associate with J2 Engineering and Teresa Makinen from MakPro Services, who provided the public outreach stakeholder process.

A photo for Fry Blvd between BST and 7th Street was presented that tells the story of where the City is at now. Mr. Velasquez stated that J2 Engineering has seen this as they develop communities and worked on community corridor revitalization projects - the wide kind of state highway system and is overbuilt for a time in the past when it was also auto centric, most automobile oriented. J2 Engineering found that many communities are starting to look at revitalization of these areas and corridors. Some are main streets and others are downtowns; but many of these areas can be retrofitted and revitalized into a multi model corridor that is cohesive transpiration network for pedestrians, bicycles, mass transit and vehicular travel. When that does occur and the City can take advantage of the community and around the community, there can be excellent results in terms of environmental, transportation, cultural and economic sustainability that plays into that.

Mr. Velasquez presented a slide depicting Fry Boulevard, which runs west to east and stated that in light of a connected pedestrian network and walk ability as outlined in Council's

approved VISTA 2030 General Plan Update, they wanted to see developing for the west end and for Sierra Vista a more walk able connected multi model network.

Seen is a quarter mile seven minute walk within proximity of Fry along with a 15 minute walk. There is open space, schools, parks, neighborhoods and seen is a potential to bring in a pedestrian network to make the area into a more pedestrian/bike oriented and mass transit in the end. There is a bus line that currently runs north through the area and additional bus stops could be implemented in that zone once those networks become built out and improved.

A photo analysis of the corridor was also done and shown on the slide was the 100 foot right of way, public domain of Fry Boulevard, which is the area that is being worked with. There is also a 75 foot dimension that is shown from sidewalk to sidewalk that is going to be important because of the 100 foot public right of way. There are areas that they are going to try to stay within the 75 foot framework because of other things that are happening along the Corridor.

Shown were pictures of work done in other communities:

- Downtown Chandler with bump outs, walk able pedestrian/friendly bicycle lanes and different environments;
- Southern Avenue in Mesa in the Fiesta District with shared use paths and storm water harvesting swails, two primary ideas that were well liked throughout the process;
- Downtown Tolleson in the West Valley of Phoenix with wide sidewalks, an excellent program where they have built on art and economic development with positive action.

Mr. Velasquez stated that one of the things that is important when they do corridor studies and evaluations is taking advantage of the assets of the community and they always do a Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis:

- Strengths

The business stakeholders/owners were eager to embrace successful change and building on tourism and putting visitors in hotel rooms, heads and beds. The Ramsey Canyon Preserve/Hummingbird Zone, tourism triangle (Wine Country, Kartchner Caverns, Bisbee and Tombstone) can definitely be played upon as an asset and be developed to have Fry Corridor be a unique environment. There are already some eateries and businesses starting and functioning and if that is built upon as having a collective zone that is pedestrian friendly to have festivals and to advertise that and start to work that towards the City's advantage.

- Weaknesses

The perception that Sierra Vista is a retirement community and not that it is a bad thing; but it is more than that and it has been seen. Also mentioned were the vacant structures along Fry, lack of art culture, music, and walk ability/bike ability.

Young Sierra Vista families shop and play in other communities and the City needs to find a way to keep those dollars in the City if there is a unique corridor with unique businesses; but also bring in people from other communities around the State and Nation as Arizona is a major tourism destination.

A traffic analysis was completed as part of the team's work that indicates that the Average Daily Trips (ADT) at Garden Avenue towards the west area of Fry is 8,700 ADT. Going towards the east presents more traffic at 13,700 ADT.

As a comparison to the downtown Tempe area in Mill Avenue, one lane in each direction with very few turn lanes in the middle is almost 16,000 ADT. The traffic that several decades ago was travelled along Fry when it was State Route 90 is not travelling Fry anymore. This was a major prevalent item in their planning.

Council Member Calhoun asked if traffic may be turning off before getting down as far as Garden Avenue. Mr. Velasquez stated that it seems that through the decades, with the rerouting of the State Route to the north, it was a bypass and that has worked the way that it was supposed to work. It seems like the traffic has reduced and diminished in addition to that and he believes that the State Route Bypass was the impetus.

Mayor Mueller noted that there is a history to that too and explained that when the Buffalo Soldier Trail came in, it took some of the traffic off North Garden that intersects Fry. Also before 911, the City had one configuration on access to the gate to the Fort. Most people were going in through one gate and coming out on Wilcox, which also changed. The latest change on the installation has most of the heavier traffic going to the north gate. The use of the road on Fry that is west of the North Garden intersection has diminished significantly.

Mayor Mueller stated that he hopes that this will not be an issue and added that his concern is that in that area historically, the City has always had a lot of traffic going into what was the old main gate; but now that the entrance has changed, the traffic level on that section of the road, furthest west part of Fry, has significant less traffic. It is not going to be an issue if it connects with West Garden if the area before getting there is narrowed. There is still plenty of traffic capacity in the area from Sixth Street all the way down to North Garden. There will be peak times in the morning where the extra couple of lanes will be needed on the last segment, west of North Garden, to make sure that people can access the post; but it is not going to be like in the past where there were actually backups.

Council Member Mount noted that Mayor Mueller is right as everything has been redirected and there have been other circumstances that have reduced the amount of traffic going through that section of road. He asked if there are any projections that assume success. Mr. Velasquez stated that his team has looked at that and there are some projections. The traffic engineer ran a one percent increase through 2040 and it is roughly 8,775 ADT that would equate to 11,500 if there is success at the Garden Avenue area. At the 13,700 ADT east towards Sixth Street and running that same one percent increase in traffic capacity all the way through 2040 would give the City about 17,000 ADT.

Mayor Mueller stated that the other thing to consider is that one of the reasons that Wilcox was designed as wide as it is was to function as a reliever if there ever needed to be. Mr. Velasquez stated that there is capacity on Wilcox to the south if it really blew up and was successful. They believe that the full infrastructure would play out well. The view here is the story seen through the years, not too much shade, and narrow sidewalks and there are no bike lanes and like the previous presentation, it is not a very walk able, pedestrian friendly environment.

J2 Engineering came up with three concepts, A, B and C and took these out to stakeholders and to a public meeting.

- Concept A Parkway Amenity Zone essentially takes the five lanes down to three with one lane in each direction with a middle turn lane that allows ingress and egress into driveways and parking lots in businesses.

Proposed is water harvesting swail on each side next to the travel lane that would buffer pedestrians and bikes from the shared use path and the vehicular travel lanes. Shared use paths are safer than bike lanes on a street, which are safer than no bike lanes at all. It is a shaded tree system and the water harvesting swail would take the first flush of storm water off the street and sidewalk or path into those swails and it is an LDI that is proposed in the VISTA 2030. Also included are 25 foot parkway amenity zones located between the 75 foot right of way dimension and the 100 foot. Current landscape could be improved with shade trees and benches. The existing asphalt for parking does not have to be torn out and put a fence to make an aesthetic screen wall and etc; but J2 Engineering is working within the 75 foot perimeter.

Mr. Velasquez displayed pictures of the project once completed and what may occur in ten years after or 15 years after with new patio dining in the fronts of restaurants, food trucks and more private sector development.

J2 Engineering is looking at taking the first stage of development and encouraging the private sector to come in and do their share.

Council Member Huisking asked how much of the plan can be done so that the majority of residents could see it. Mr. Velasquez stated that they are proposing a first stage project that the City might be able to implement so that the whole mile corridor does not have to be built and that would be from Buffalo Soldier Trail to Fab. It would be a little less of a quarter mile improvement. J2 Engineering also has graphics that they can present.

- Concept B, the Cycle Track is a separated bike lane zone that has a curb that is separated from vehicle travel.

A photo was displayed to show what a Cycle Track looks like. Proposed is one lane in each direction with a middle turn lane with the cycle track located on one side of the street.

Mr. Velasquez stated that this concept was not well liked; but Concept A was liked by the business stakeholders for the most part and the public. People felt that the Cycle Track did not fit on Fry Corridor.

Slides were shown of the Cycle Track once completed and what it would look like long term.

Council Member Calhoun stated that she can't tell where the bike lane is located. Mr. Velasquez stated that the bike lane is on both sides of the street.

Council Member Calhoun asked if the bike lanes would be next to automobiles. Mr. Velasquez stated that they would be; but there would be a raised curb. J2 Engineering is not proposing on this concept that it would be as elaborate as the photo but the raised curb that would provide a buffer.

- Concept C, Five Lane Parkway maintains the five lane condition that is seen on Fry.

J2 Engineering felt that this should be evaluated and the issue with this concept is that the 100 foot right of way needs to be used and they can't stay in 75 foot zone, which existing sidewalk to sidewalk. When this is done, disruption to some of the asphalt pavement and parking areas for private businesses. This was not too well liked. The business stakeholders and the public stated that this was not the preferred, that Concept A was a much more preferred option. This

concept does have water harvesting swales with less width and a middle paved turn lane that would function for left and right turn ingress and egress to businesses.

Slides of each concept were displayed:

- Concept A with 75 feet back of sidewalk to back of sidewalk within the zone with 11 foot lanes in each direction fitted along with a middle turn lane. There is 11 feet wide water harvesting swails that creates a healthier tree environment thereby reducing long terms irrigation. There is a 10 foot shared use path on both side of the street and in the parkway amenity zone, 12 – 13 foot zone on the outsides with existing landscape can be taken advantage of and put in benches, way finding elements, art and signage and where there is no landscaping available can be maintained as existing parking.

Council Member Calhoun asked if the shared use paths have designation for bikes and walkers. Mr. Velasquez stated that generally they don't do that and it is usually kind of open. They have found that it functions well in other projects that they have done; but they can be striped and it will need to be wider to designate two-way bike traffic and be clear about how it is going to be designated. They have not found that it is a problem and they did this recently in the southern corridor of Mesa and it is heavily travelled with pedestrians/students.

Mayor Mueller asked about the automobile lane width standard. Ms. Flissar stated that currently City Development Code has lane width from 12 to 14 feet; however, the manual on uniform traffic control devices does allow down to 10 foot travel lanes. This would meet the minimum standard.

Mr. Velasquez stated that J2 Engineering in a 35 mph speed limit has done 10.5 foot travel lanes in downtown Chandler 35 most recently and it has created a safer environment and average speeds have dropped in that environment pre-project from 41 to 28. The lane width does matter. At this zone, they found that 2012 to 2014 there were six to seven pedestrian or bicycle vehicle accidents in this zone and that is a lot for the amount of traffic over the area of project. It is a concern in terms of safety.

On the south side of the street shows a switch between the location of the landscape area and the shared use path. J2 Engineering was asked to look at and it is a good idea when first looking at it to get more shade on the sidewalk on the shared use path. The one thing that they are concerned about is brining bicyclists and pedestrians closer to that travel lane. If the City wants to retain water harvesting swails on that side as well, the City could convey storm water underneath the sidewalk and scupper or grade systems that would add more to the cost of the project. In the end, they are proposing the first section that was displayed which can be worked out on a final design.

Council Member Huisiking asked if there would not be much shade if the trees were done first and then the sidewalks. Mr. Velasquez stated that it depends on if the City has the parkway amenity zone lushly planted on the south side. If that was parking lot there would be less shade on that sidewalk as opposed to having trees on the left side; but that can be worked out in final design. All options can be on the table for the corridor.

Council Member Mount asked about the upkeep cost for the vegetation. Ms. Flissar stated that she has not had the opportunity to look at this in depth and cannot provide the exact cost at this time.

Mayor Mueller noted that this is a concept to figure it out and then Council will go to design where they will find out the figures and what the actual cost will be and after figuring out what

is acceptable, they will make a decision. There are a couple of steps to go through. Council Member Mount stated that he slightly disagrees with that.

Mr. Velasquez stated that he does have data on maintenance cost. The numbers are from downtown Tolleson where they did a mile long improvement almost identical in lane configuration nature. Based on their mile long compared to a .24 mile improvement on a first stage project estimating that there is a \$22 to 23,000 per year, which would include a partial part time staff person and that includes salary, benefits, equipment, water, electric, plant and fixture replacements and it could vary depending on development agreements that the City puts in place for any future development that comes in. The City could ask a developer or write it into the code. If a mixed use development or apartment comes in, the City could have them maintain between their right of way frontages all the way to the back of curb. Some cities do that and it almost like an HOA on an arterial. There are different things that can be done. There has even been some discussion in the stakeholder meetings of different businesses taking over certain areas as part of a sponsorship program and that is a fresh idea that had not been heard of before.

Council Member Mount asked if that \$22,000 is based on the first stage project. Mr. Velasquez stated that it is, about a quarter mile.

Council Member Mount asked that if it is the full length once that is complete, the City is looking at \$75,000 per year in upkeep costs. Mr. Velasquez stated that it could be \$85 to \$90,000 per year.

Council Member Ash asked what is included in the amount. Mr. Velasquez stated that it includes labor, salary, benefits, equipment, water, electricity, plant and fixture replacements, i.e., LED lights, trees and plants that die and are being replaced. This also includes emptying trash.

Council Member Ash stated that she thought that the water is coming from a catchment system. Mr. Velasquez stated that they would proposed that there is a start up irrigation system that would get the plant material going so that it does not die to begin with. It needs to be healthy and in drought conditions, the City would want to supplement water. The City could design it completely native or no irrigation; but that is not always the best shade system and more color. Natives could be good and that could be worked out during the final design.

Mr. Velasquez stated that they had a fairly robust stakeholder outreach.

Council Member Gray asked that the previous two slides be displayed and asked on which concept was decided upon. Mr. Velasquez stated that it was Concept A that was preferred.

Teresa Makinen with MakPro Services stated that they had a wonderful time working with the businesses and stakeholders on the project. The concepts that were shown are exactly what were shown to them.

There were two business meeting and then a third meeting which was a "you all come," a public meeting where anyone could come and there was a much broader outreach and communications when it came to that one.

MakPro Services wanted everyone to be there and make sure that the west end businesses knew about it and to make sure that not only did they know about it in the mail; but that they really reached out to them.

Ms. Makinen stated that she is originally from Sierra Vista and grew up in the west end and went to Carmichael, the Old Geronimo Theater that is now a park and graduated from old Buena and it is close to her heart as she still has a lot of family in town. She wanted to make sure that everyone knew and that anybody that wanted to participate in the process could do that and knew how to do that. They sent out mailers to all of the businesses at their physical locations on the west end and to the property owners. They also went individually to each of the businesses and teamed up for the Chamber Walk because she wanted to get contact information and be in contact continually through E-Updates or whatever was going on.

The first meeting was not just started up by stating that they had these concepts. They started out by asking them what they wanted to see in the west end and what they think it looks like in the future. They heard things like greenery, landscaping, art, wider sidewalks, a place that feels safe, plants, benches, open eateries, more crossing, and lighting, a place where they can walk and ride bikes safely. This lent itself well to the concepts that Mr. Velasquez provided.

There was a lot of interest, questions and input as far as what they really liked about the three concepts because they were not sold on any of the three. That input was taken and massaged and provided at a second business meeting and did the same outreach. By this time the word had gotten out so it was a much bigger showing at this meeting and there was an obvious interest in what was going on.

From that information, they went to the public meeting and 40 individuals were at that meeting. The businesses were there as well because they wanted to make sure that their input was said as they have a stake in it.

For additional outreach they had a web site, media exposure and a radio interview. In addition they had the project mailers and E-Updates so they could interact with the businesses by blasting information to them.

Mr. Velasquez provided a photo of the Fry Corridor as it is currently and stated that it is not an inviting corridor to walk, bike or ask private development to come in and develop. There are assets around; but they are trying to make a there, there – a sense of place as a destination environment ultimately.

A photo of Concept A, the Parkway Amenity, was shown with one lane in each direction, a middle turn lane that could be paved with brick pavers, unit pavers or asphalt. There is ingress and egress into driveways, a midblock crossing north of the Landmark Café. There is also 11 foot wide water harvesting storm water swails that can deep water plants and generally provide 14 inches of rainfall that Sierra Vista gets annually. There are 10 foot wide multiuse paths that can accommodate bikes, pedestrian walking of all ages along with a robust street tree system with parkway amenity. It is basically the 75 foot zone from edge of sidewalk to edge of sidewalk and if there is existing landscape, benches could be added, signs, art work, planting and where that is not available, the City could maintain it as parking.

David Hewitt talked about the overarching concepts and presented two slides of inspiration type boards that come from Sierra Vista and Cochise County. This is a unique area in the State of Arizona and the American Southwest and they wanted to pull inspirations from that.

Mr. Hewitt stated that the rain gardens provide an aesthetic buffer from the vehicular traffic to the pedestrians, bicyclists and families walking their strollers along a wider sidewalk. The second thing that it does is that it also an aesthetic show that also takes the first flush of rainwater off of the streets and it brings it into the rain garden itself. It seems like a fluffy idea and not very concrete; but it really is taking the first flush of rainwater and storm event and it is pulling it off of the street into the rain garden and out of the existing drainage infrastructure. This will lessen the stain on infrastructure, reduce maintenance cost over time.

Mr. Hewitt displayed an image of Fiesta Avenue in Mesa that J2 Engineering has worked on. He also displayed a slide of hardscape materials, planting palette, accent trees, accents and shrubs and explained that another way to use right of way is to use it efficiently and the City can bring in complete streets and rain gardens. They are not trying to take a type of cookie cutter approach to this and noted that the previous slides for Mesa and Tolleson have unique solutions and look that speak to that community.

Council Member Ash asked about the planting palette and the street trees. Mr. Hewitt stated that low impact in terms of irrigation for landscaping is unique and it is hard to guarantee what is going to happen with the plants; but in their experience, it is important to have that supplemental irrigation for drought times. They want to definitely use a smart irrigation controller that when it rains, it will not just add the water because it knows that it is getting that additional water. This is a conceptual phase and if the native planting is something the City would like to go for they can look at solutions to that as well.

Mayor Mueller added that the City has a Native Tolerant Plant Ordinance that requires the developers to use those plants and he hopes that they can use the same ones; but for plants that have been planted in the roadway, they are basically given two years to be irrigated and after that they are on their own. Occasionally there are periods of extreme drought so that is why there is infrastructure that is hooked up to be used later in those situations.

Council Member Huisking pointed out that in the plan that they have for Fry Boulevard it is going to be a lot better than what was done on Avenida Cochise where not enough room was given for planting. There were no curb cuts to allow the rainwater to help plant them and this would be different and more beneficial.

Mayor Mueller stated that the part of Avenida Cochise that was mentioned was in place before the City had the tolerant standard.

Mr. Hewitt stated that it is another good point in talking about maintenance cost over time and noted that bushes are turned into little gum drops as a result of not being spaced correctly. Trees and shrubs need to have proper spacing to stretch out and go their maximum length and they would have a wider area.

Council Member Mount stated that he feels like they are at the car lot and now they are being shown the leather bucket seats, sun roofs and everything else. He is having a hard time reconciling a project that right now is \$2.3 Million for the first phase and he sees the way that it is laid out. It does not make any sense to just do the first phase. Ultimately, the City has to get to all of the phases in order for it to be a complete project. The project is \$7.3 Million and the City is staggering it out for cost efficiencies. The part that he is trying to figure out is when they talk about the other cities and asked if the costs are parallel to what they are putting into a similar project.

Council Member Mount asked if the project that is being presented to the City, \$7.3 Million Project broken up into three phases, equivalent to what would be seen with the similar project in another city in terms of cost and scope. Mr. Velasquez stated that it is equivalent.

Council Member Mount stated that this is the part that Council needs to understand because Council is being shown Chandler, Tempe, Mesa and he wants to put things into perspective. Tempe's budget is \$580,000,000 per year, Chandler's budget is \$971,000,000 per year, Mesa's budget is \$1.6 Billion and Sierra Vista is at \$70,000,000.

Council Member Gray asked about Tolleson's budget. Council Member Mount stated that it is at \$83,000,000 and added that this is great; but what this is going to come down to is if the City wants to dedicate 10 percent of an annual budget towards the project. The project is still being paid for as they go through the concept and design phase.

Mr. Velasquez stated that they are just going through the conceptual phase and it is about done.

Council Member Mount noted that it is a great project; but he is worried about cost and there are some other logistic things that he is worried about and it is very hard to reconcile.

Council Member Calhoun added that she is not sure if Council wants to have a conversation on the pros and cons for the project; but the one thing that she thinks about is what if they don't do it and if not now when. She also wonders if Council will continue to let the City look like it does now and those are the kind of things that she thinks about in addition to the cost. On a big basis, they all have to think about this.

Council Member Mount asked Mr. Velasquez if anyone in the City give them a budget to say what was within the City's means or did they just say to bring a project to the City. Mr. Velasquez stated that they were tasked with looking at a corridor wide vision that could set the table for a long term revitalized corridor. They were asked not to put handcuffs on the big vision; but look at things that could be implemented.

Council Member Mount asked that if in their project charter they did not have bound that said, "do this project within this bound." Mr. Velasquez stated that the discussion were to be reasonable in what was presented and they did certain things as an example, i.e., the light fixture there were different custom light fixtures and it was decided to go with just the City standard, minor modifications to the pedestrian lights half way up the pole. There were a lot of discussions back and forth on being practical on what was proposed. They did not want to propose anything that would be outlandish.

Council Member Calhoun stated that she is thinking about going to the next phase, design phase, Council is going to talk about alternatives. Mr. Potucek stated that clearly there has to be a plan first before embarking on budgetary outlays are going to be made and how it is going to be paid for. He thinks that when they get into actually engineering the project and if he is looking at this right now, it is easy for him to see that the major costs are going to be the infrastructure changes. They are changing the lanes, sidewalks, drainage and those costs are going to be there regardless of what option is chosen. The incidentals, park benches, lights and etc., all those cost; but they are not going to cost anywhere near what the actual infrastructure changes are going to cost. By virtue of having the plan in place is that it provides Council with goal issue for and a chance to spread out the cost over time and to find outside funding instead of peeling it out of HURF. The Council knows that they can't do that and there has to be outside funds through some other way to pay for all of this. The City has been

successful at phasing other projects in the past, i.e., the park master plan and it is just a matter of how much time it will take. As they go into each phase if there is a proposal to bring that forward, they will look at engineering and various costs to bring those options to Council before approving it. The City has a project on Coronado that they went out to bid that came over budget and now the City has to go out and reengineer to make sure that it comes within budget. That is the way the processes work. The City is a long way from seeing the first phase of Fry Boulevard.

Council Member Calhoun asked if it is possible to break down the total or the portion between infrastructure, the major necessity and the trees and other amenities for the design. Mr. Velasquez stated that they can break down in the process to have that separated so that it is easily available

Council Member Gray asked that if it rains too much will that flood back into the street. Mr. Velasquez stated that yes it would. It has inlets and outlets and it does and when it is heavily inundated it has the ability to go back out and down the street to the local regional storm water conveyance. Mr. Potucek stated that it is a good point as last the City had a 100 year storm event on the west side on Fry Boulevard. It was completely flooded and part of the problem is that it is the older part of town that did not have the same type of engineering standards back 50 years ago when the areas was first built. Improvements that the City makes on the west side should take into account the potential flooding and anything that they do come up with will be able to handle storms like that much better than the current situation.

Mayor Mueller stated that it is an excellent point especially when looking at cost as the City basically has no sewer system that conveys storm water systems and the City does not have it on the west side so that may be an additional cost to figure out how to convey water always from the streets. Mr. Potucek noted that the swails will be helpful.

Council Member Gray stated that she understands that they will be helpful; but her question is if they will not be so helpful because Fry can get very flooded. Ms. Flissar stated that one of the important things to realize is that the vast majority of storms that come through are the smaller level storms and this kind of feature would function very well. It would only be on the largest storms where it would come back out onto the road and that is not a condition that would be any worse than it is today. It would actually be better because a portion would be taken off the road. Alto of times, they use larger rock in them so that when it does come back on the road, it is not taking decomposed granite onto the road with it. All of that is designed appropriately so that it does not create a mess when it comes onto the road.

Ms. Makinen added that when they had the business together, mentioned was frustration from going through a process similar to this over the years and when something is going to be done. When they asked the first question of what they would like to see in the City, one of the responses that she got and the team thought was very telling was that they asked for potted plants.

Council Member Mount stated that he does not think that his statement is to abandon everything within the project. His statement is to say that if right now there is a project that is scaled to the equivalency of Tempe or Mesa that have significantly more resources than what Sierra Vista has plus the reoccurring costs that come with it; either A, they City has to learn to live within their budget because that is just the situation that they are in and he is not sure if they are up on what the City had to do to get this budget put through or last year's budget with a tax raise. Those are significant things that do matter and it matters to those business owners as much as having the proper decoration. The other part is that there are other things that the

City can consider and that are what he wants Council to be aware of. Council has to find the right balance and he is not sure yet what that is; but he is just bringing up some other things while they are in the concept phase before getting into the other ones. Council does not want to move up to another phase before having out these things and they might have to rescope some of this. In closing, he stated that he is a project manager as he does that for a living.

Mr. Velasquez stated that he has been talking to Mr. Coxworth about summarizing everything and they are working with another community over the Yuma area, Summertown, with their main street and there is identical parallel on the same timeframe. They are about 14,000 people and they are in Yuma metro area; but they sit down by San Luis near the border and they have talked about the similarities. They did go through a mile long study with them since October and they are now implementing the first phase, \$2 Million. They moved things around and they have been looking at a long time, it is a big bite for them and there is longer vision that they want and they realize that over the next five years, they are going to tackle this one first. Every community has to set priorities, study and see where they want to go.

Council Member Huisking asked what he meant by a long time from the concept for consideration. Mr. Potucek explained that some of that is up to Council because they are the ones that have to provide the funding or it make take staff time to find the outside funds to bring a recommendation to Council. They still have some significant planning to go through and then engineering and design. Three to five years is probably the timeframe before seeing the first phase.

Mr. Velasquez provided full length project pictures of Buffalo Soldier Trail to 7th Street and stated that the amenities if the City builds to a full stage project would be a three lane roadway, 10 foot wide paths, 11 foot wide water harvesting sails, bus shelters, pedestrian side furnishings included, directional way finding signage, roadway, LDI lighting and pedestrian, middle lane paving, water and electrical hookups for special events.

Council Member Calhoun asked if the middle turn lane leaves enough room for emergency vehicles, especially during the West End Fair. Mr. Velasquez stated that yes and they studied those parameters and at downtown Tolleson, they have the same end result as right here. They do leave the middle lane open for emergency access through and they also have side street exit/access for emergency vehicles. They also have fire department gators that come through and are readily available. The City may want to have a fire and police plan for the West End Fair and it does work in Tolleson and other communities.

Council Member Gray asked for landmarks. Mr. Velasquez provided the landmarks along the route and noted that 7th Street is the full study area.

Council Member Calhoun stated that a citizen asked about the benefit of using traffic circles at the Buffalo Soldier end or Garden Avenue rather than roundabouts. Mr. Velasquez stated that they found that traffic circles or roundabouts on a pedestrian zone are not conducive to pedestrian crossing because traffic never stops if it functions correctly. They are seen in Sedona; but it is not meant for pedestrian crossings and they are trying to get pedestrians and bikes to easily cross and that is why they are proposing a midblock over the landmark area.

Mr. Velasquez stated that the proposed first stage project could be from Buffalo Soldier Trail over to Fab and they would not do much with the lane configuration at Buffalo Soldier Trail and that probably should be a five lane configuration just to facilitate traffic in and out. There would be a five lane condition at the west, midblock crossing north of the Land Mark Plaza and it could be a signalized crossing or a hawk type crossing, pedestrian pocket plaza at that zone,

parkway amenities zone for enhanced landscaped that would be the light green rendered areas that could be simple landscape now and later be benches or art work or other items. There would be street electrical outlets for aesthetics and events, locations for future art work and interpretive elements, benches, seat walls and all of the site amenities and enhanced crosswalk paving as well as a middle turn lane paving. That first area would be a \$2.3 Million construction cost build.

A plan view enlargement showed the typical area around the Landmark and Hoppin Grapes area showing sidewalk treatments, tree zones, midblock crossing and possible interpretive elements. J2 Engineering think that customizing that to tell the story of Sierra Vista, Fort Huachuca and the southern Arizona region would be a good way to build upon tourism, destination environment and sense of place.

Mr. Velasquez stated that it is not a conducive environment for business development, economic development and noted that he came out to Sierra Vista with his family to experience the whole tourism triangle in Sierra Vista during spring break. He found that it was difficult to find Sierra Vista as a destination when he was right in the middle of the triangle, Sonoita to Elgin, Kartchner Caverns to Tombstone and Bisbee. It feels like it wants to be a draw, a destination environment of some sort and this project could be the impetus for that.

Council Member Gray asked if the existing concept encroaches on private property or are the existing easements and right of ways being used. Mr. Velasquez stated that they are only using the existing available public right of way and they are not only staying within that; but they would work within 75 feet zone and not tearing up existing parking where possible.

Council Member Calhoun asked if the businesses on west end could start now with putting in flowers as two ideas have come up. One was cement planters with geraniums put in that could be taken care of by area businesses. Another was to have planters attached to existing light poles and the west end would like to think about which of those two things could be done now that would not be taken apart when the actual design starts. This would be occurring provided that businesses adopted a light pole, a pot or planter.

Mayor Mueller asked if there are any prohibitions on having businesses maintain plants or whatever else may be put out on the right of way in front of the businesses. Mr. McLachlan stated that the area without affecting the design would be the space between 75 foot and the 100 foot right of way line that is reserved for landscape enhancements as part of the plan. There are deficits within that zone that could be filled in with landscape material whether they follow the plant palette that is identified by the consultant in the plan or deviate and allow other material to be installed be it public or private. The question becomes how is the ongoing maintenance paid and if that is something that the City is not prepared to accomplish on its own and there is a desire by the business community, there could be some sort of agreement worked out between the adjoining property owners or service organization to fund that ongoing maintenance cost.

Mr. McLachlan recommended that Council pick the palette and then offer that up to the business community to implement within that initial zone.

Council Member Ash offered thoughts on the project in respond to Council Member Mount because she thought it was a great question. First of all when she attended the university, Mill Avenue was one of her favorite placed to hang out so there is a comparison to some of these other communities and she knows that Fry Boulevard will likely never have that sort of traffic. However, she does feel like having safe places to walk, streets that encourage multi model

transportation and that are inviting to businesses and people and tourists should not be reserved only for those larger cities that have larger budgets. Currently as it is now, she can say that Fry Boulevard is not inviting to the businesses so playing with words and symantecs as some would say that it is not conducive to business development; but Council has seen some places, i.e., Hoppin Grapes, Land Mark, Horned Toad are moving in. In order to make it more inviting, the business community, people who walk up and down Fry Boulevard will agree that more can be done. She does not expect Sierra Vista to necessarily go for the Cadillac plan, not that this is that; but Council Member Mount was touching on that and she believes that this is definitely a great start and she would like to see those continued partnerships with businesses and the outreach.

Council Member Mount stated that the part that he wants to go back to is that he does agree that something should be done in order to help and that is not a bad thing and he does not know if this is the Cadillac plan or not; but he thinks that Council can find a balance and there are business down there currently and it goes back to the statement that he had with other consultants. The City does not have a responsibility by doing some of these actions to finance and help them as they are still their own business and the City has to be careful that they don't set conditions where the City tries to help but end up hurting what their business is. It is a balance and Council Member Ash went to a big school and he grew up in a big place and they do love these kind of places; but the other thing is that they have to be careful that they are not falling into a trap that the City is getting into this homogenized kind of set of ideas where it is kind of the flavor of the day and it is trendy. They still live in Sierra Vista and this is part of Sierra Vista, maybe not turning it into downtown Chandler. That may not be the best way for the City in the end and they have to think about that as well. He does like the idea of finding money in the next budget to go in there and maybe do beautification and if it can be found by backing out of some other things, it is great and he thinks that it will help and be a payoff in the end.

Council Member Huisking stated that she just came back from a trip to New York and the streets there are not necessarily anything to write home about; but there are people all of the time walking and she had no problem getting her exercise. They also pick little places where they can plant flowers and the City used the Compost Program to pick places where they could plant anything that they wanted in the area between the 75 and 100 foot. She stated that she is aware that the Environmental Affairs Commission is very much interested in urban forestry and she believes that the City could do a lot to help without going into a \$2 Million project.

Council Member Huisking stated that it is not that she does not want to; she loves everything presented and appreciates the public input as she was present at some of the meeting and she heard what people have to say; but it cannot be another plan that gets puts on the shelf for the next three to five years and do not have any kind of connection to the people because it was done and there are no funds and when there is money or it decided how to do it, then it will be picked up where it left off. She hopes that it does not disappear from visibility and she would like to do what can be done to show a little of the visibility now and not wait for another budget year to go by. There are people who would sponsor a block, a segment of plantable space on the west end and there are organizations and people too. They just need to be shown the idea and what is possible within the parameters of what can be done; Council could help push that.

Mayor Mueller stated that it is a good suggestion for Rotary Club projects and service or club projects; but the first step is to identify those areas that would be available to do that and there is potential discussion to maybe do that piece upfront even though when they get to road

construction, swails and other things, the City will actually need certified engineers because there are liability issues.

Mayor Mueller thanked the consultant and noted that it is up to Council to decide how they are going to make it happen and there are challenges that will be worked through to try and make Sierra Vista better. He also thanked everyone present and asked Mr. Coxworth about next steps.

Mr. Coxworth recommended that the concept plan come before Council for formal approval and that way the residents of the community, West End Commission and Ms. McFarland's business forum understand that this is an approved concept for Fry Boulevard. Council can then decide how they want to move forward with planning for design and construction.

Mr. Potucek stated that this is a good first step and once Council approves that, then they can start setting in motion and identifying areas to work on first or where improvements can be made without hurting the overall project. The area around Buffalo Soldier Trail to Garden Avenue would be an easier area to begin with at a lower cost and the City could start putting some resources towards trying to figure out what those costs might be to get started on the project.

Council Member Huisking asked what approving the plan would entail. Mr. Coxworth stated that he would ask the J2 Engineering team to come back to Council and make another presentation.

Mr. Potucek asked Mr. McLachlan if this needs to be added to the overall plan as a concept and would there be a Planning and Zoning process associated with this. Mr. McLachlan stated that not into the general plan. It would be more into the Five Year CIP when it reaches a point that there is a desire to proceed with the funding. That is the document.

Mayor Mueller asked if Council needs to take the concept and place it on the CIP. Mr. McLachlan stated that the design and construction documents then ultimately the actual construction, the actual scope.

Mayor Mueller asked Mr. Potucek if Council needs to go back and ask specific questions about the next steps and what the requirements are. Mr. Potucek stated that approval of a concept would probably not require going through the Planning and Zoning; but putting it in the actual CIP would be a more formal process for the Council. This would be a Council process and would go through the CAC process and then brought to Council for inclusion in the CIP.

Council Member Mount asked if Council is accepting this concept for \$7.5 Million. Mayor Mueller stated that it is part of the next discussion whether or not Council would accept this; there is no proposal before Council or in the future as to whether Council is accepting this or not. This is what has been presented and Council needs to hold a meeting for Council to buy part or the entire concept do nothing or request a new concept. This discussion has not yet taken place. Council Member Mount stated that he thinks that Council has not had that all and that is why he is hesitant.

Mr. Potucek stated that any concept that Council may choose will have costs associated with it and he does not necessarily think that choosing a concept or the first option, which seems to be the one that people settled on, that it equates to some dollar figure yet at this point and time because Council will have to take a look at it and see how they can shave cost and make it a functional project as opposed to a pie in the sky.

Mayor Mueller added that staff needs to look at Concept A and come up with cost figures and come back to Council and then Council may decide to accept, not accept, phase it or not.

Council Member Mount asked when it would be done. Council Member Gray explained that it cannot be done now because this is part of a work session. Mayor Mueller asked if there is a cost to be able to make those decisions.

Mayor Mueller asked for a consensus to use Option A as the model. Council Member Mount stated that there is cost on it and asked if Council thinks that it will be different. Mr. Potucek stated that he hopes the cost is different because \$7 Million is a lot of money; but nothing gets done without the funding. Council could vote on a \$7 Million project to start next month; but with no money to pay for it, it is not going to happen.

Council Member Mount stated that he is confused as to what Council is doing at this point. Mr. Potucek stated that all Council is doing is approving a concept and not approving engineering design, project. Council is basically giving staff authorization to take the concept and explore what it is going to look like in cost in the future.

Council Member Mount stated that he is not sold on the concept.

Council Member Gray asked J2 Engineering if the figures that they provided for Phase I and II included for Concept A in mind, the most liked by the public. Mr. Velasquez stated that it was Concept A that has been cost out for the first stage project and the full project.

Council Member Mount asked if the public was given the price during the course of the presentation. Mr. Velasquez stated that they did not talk cost. Council Member Gray noted that it is Council's job to do that.

Council Member Calhoun asked Council Member Mount if rather than Concept A, maybe there is a whole other idea that needs to be talked about. Council Member Mount stated that the City as customer should provide to J2 Engineering the scope of what the City is looking for so that they are not test fixed until it is right. If Council or staff thinks that \$2.3 Million or \$7.5 Million is impossible because it exceeds the scope of the City's resources, then how big the project can be is the definition of scope. Before doing schedule cost, the City has to provide the scope that they are willing to plan. J2 Engineering will do all of the work and they will come back and provide the cost, what it will look like, quality and etc. This is what Council should be providing as the customer. J2 Engineering should not be playing guessing games with the City as it is wasting their time.

Council Member Gray stated that it was her understanding that Council was getting the feedback from the public, staff's input and Council's input only. Mayor Mueller stated that his understanding was that J2 Engineering was going to present through public outreach the concepts.

Mayor Mueller asked Mr. Coxworth if after this, it is the end of the contract. Mr. Coxworth noted that he is correct and stated that they would have fulfilled what the MPO requested and he thinks that the way to look at this is that this is the broad vision concept for the corridor and how the City builds up to this full implementation of the concept will be the decision based on resources. Approving a concept is going to be approving their final draft plan that is in place and then it is handed over and they start working with it, looking at ways to fund it.

Council Member Mount stated that the driving cost of this is redoing the roads and etc.; but the flowers are not going to cost anything and that is the critical part the Council has to be careful in accepting. Council Member Gray stated that J2 Engineering is done with their job. Council Member Mount stated that it is fine; but if Council was to go back and murder board this, he would say where the thing where Council made a mistake is that Council should have scoped this in. He also added that he is not prepared to say that because he believes he knows what the cost would be based on their estimate.

Mr. Coxworth stated that J2 Engineering was asked to give the City the vision of the community, what they see for the corridor, and provide the cost for that. He does not believe that accepting the plan is locking the Council to finding resources to have to do this by accepting what the businesses and the stakeholders have told the City that they want. One of their concerns was cost of implementation.

Council Member Mount added that he does not want to be beat up by what the public came back and said because he has been through an experience where Council did the CAC and the public overwhelming went with something else that Council did not do and that was the purview of the Council to make the decisions. Council has to decide how they are going to do this now if they are not going to be locked into this specific thing, then ok, it will be accepted because it is a good project and he understands what is being delivered; but he has big caution on that.

Council Member Gray asked if this would be considered like when Council knows that at some point there is need for a park because the public told them and the City has not even gotten there or even for park plans, airport plan or every other plan that there is in the City where the City has a plan to get there; but the Council has not figured out exactly how they are going to pay to get there.

Mr. Coxworth added that it is a good way of describing this and moving forward is not going to be easy to implement this. He cautioned Council on the little things that can be done because there is a risk of doing implementation of the plan at a small scale at the risk of the business and the property owner asking if this is it. He believes that the City is dealing with this on North Garden Avenue with the resources that are available. The City does not want to do this half way. Not that there are not things that can be done to improve the aesthetics of the corridor; but when there is a concept and a plan that is accepted, there are going to be some very difficult decision going forward to ensure that it is not half way done.

Council Member Mount explained that what he is scared of is that when Council accepts the plan because the next thing after planning is executing. He is trying to point out is that the City may never be able to afford this without some really creative ways and maybe that is the case; but the public needs to know how much this is going to cost. This was done before with some other plans and the City asked to get best ideas and to dream big and then Council comes back and it is not executable.

Mayor Mueller stated that in his mind, this is a general concept and this is ideally what the City would like to and when they go into the planning phase the Council will look at cost and practicality and if the City has to down scale and phase to work towards that ideal. The City has a concept and they work towards the concept during the planning phase and execution phase. He has not seen any project in the City that has been easy and in most cases, there have been adjustments; but again, this is talking about the overriding concept and not design and specifics and execution. All there is are estimates on the cost of the last two.

Council Member Gray asked if these are guess estimates. Mayor Mueller stated that they could be higher or lower. Mr. Potucek stated that he is sure that they are based on previous work. Council Member Mount stated that there is nothing from stopping Council to wait to figure out what the City is doing before accepting the concept. He noted that he has a feeling that once the Council accepts it, the plan is going to be the three lane, big sidewalks, 11 foot whatever's for a cost that is going to be roughly in that order of magnitude and the next step is that the City is doing it.

Council Member Calhoun asked what Council would be waiting for. Council Member Mount stated that maybe it is not the right thing to do. Council Member Gray asked Council Member Mount if he is proposing that Council say no and go hire another company to bring forth another concept; because she is not proposing that Council approve it now. She believes that it needs to be done in a more formal vote and consensus is not the right word. Council Member Mount stated that it is cheaper than \$7.5 Million and that is the way a project works. Council probably needs to turn around and say that if they are going to redo Fry Boulevard, this is what Target A is and this is what the City is willing to put forward in resources and then Target B and etc. that would be different amounts. Then it is turned over to them and Council can say that this is the resources that they are bound by.

Council Member Mount then provided an example of when President Kennedy stated that he wanted to put a man on the moon; but he did not say that, he added by the end of the year – he is locked into a scope. Council did not do this in the exercise. The City said to the people to tell the City everything that they possibly want and it comes back to something that Council knows that they can't afford.

Council Member Gray asked J2 Engineering if the City provided a scope of work. Mr. Coxworth stated that they did provide them with a scope through the process explaining the City's budget being strenuous. Staff was looking for something that was implemental that would make the change and get the City to where it needs to go; but this could have come easily three times the cost based on things.

Council Member Mount asked if the total cost for the total project is \$7.5 Million when would it be done and how would it be funded. Mr. Potucek stated that there are two ways, one is through a bond and the City would then take out a loan and pay for it over 10 - 15 years. The project gets done all at one time and it is done. That is saying that the City is going to do a \$7.5 project and ignore all other projects on the CIP and then the Capital Improvement Fund pays for it. Another way is to break into meaningful parts that gets scraped out of the existing budget and whatever the Capital Improvement Fund allows and it gets taken out of there and the City does not take out a loan and it is done a piece at a time like it has been done many other times with other projects over the years. Maybe through the MPO through other grant sources that the City may be able to find some grant funding to augment the City's to get portions of it done. These things take time and he did not say three to five years because he knew that Council did not want to hear that. Sometimes it takes that long to figure out how they are going to go about doing these things and the other bond issues are paid off in 2021, 2023 the Council at that time may make that a priority and the City can afford it at that time. Those are the types of things that are looked at and he does not mind having a goal to shoot for and he loves having staff being creative to find ways to get thing done for Council as it motivate staff. All Council is doing now is trying to set a goal for staff. If this is a priority for the Council as opposed to other projects, then staff will go after it; but it has to be taken in to context of everything else that is going on and the budget constraints.

Council Member Gray noted that it is not a decision. Mayor Mueller stated that what he was trying to do earlier was to get Council to agree to have staff at least look at a financial plan of how this could be implemented and he believes that it is probably the next step.

Council Member Mount stated that he thinks that Council is railroading itself. Council needs to listen to what the business owners are saying because they are not asking for a bunch of construction, they are asking for general beautification. The City has to keep those options open. He also noted that he is afraid that if Council accepts this, whether it is through the MPO or whoever else, it is what Council agreed upon whether it is now or another Council is burdened with this five years from now with that.

Council Member Huisking voiced her disagreement and stated that infrastructure is going to improve the west end and Council has to think beyond the cosmetic changes. Flooding and ways to take care of drainage are not currently taken care of and the City cannot put these off indefinitely. This included all of the concerns that the City has for infrastructure that would make the biggest difference that would give the City the biggest bang for the long term and this is important to think about. Putting in flowers can be done; but she also thinks that the Infrastructure is important and asked if the infrastructure solely cost out excluding the landscaping. Mr. Velasquez stated that it is a task that they need to do immediately, pull out the infrastructure and the landscape and probably irrigation and provide that number to Mr. Coxworth. Council Member Huisking noted that it will make a difference in the discussion.

Ms. Adams noted that Council has hit the extra hour mark per Ordinance.

Council Members Calhoun and Huisking stated that they would like to see better ways to inform the public beyond what is currently done so that others, i.e., the West End Commission can be made aware of the presentation.

Council Member Ash stated that one of the most important things that Council can do about the Fry Corridor process is to be absolutely factual about what businesses want to see out of this implementation. She would also love to have the west end share their comments in an open setting, i.e., work session as well as the business owners who might be willing to speak on this topic voice their opinion publicly as that would be important.

Council Member Calhoun added that with Mr. Jordan present the public is going to get a good report and stated that in talking to people about this, everyone respects the way that the newspaper reports on everything that the City is doing and how it is factual and clear, even if they are not present or watch the meeting on TV. They are able to glean on what is written in the paper about what happened and stated to Mr. Jordan that as soon as he mentions the cost, the public will know the cost and Council will get feedback and that will be a good thing.

Council Member Calhoun noted that J2 Engineering did a wonderful job and she likes the looks of it as she has driven Arizona Avenue and it is beautiful and it is not really big city, it is neighborly and that is what she likes about this particular concept.

C. Discussion of Council Executive Report (attached) – not discussed

Mayor Mueller encouraged Council to sit down with Mr. Potucek when the opportunity is available to talk about the items on the Executive Report.

E. Report on Recent Trips, Meetings and Future Meetings – not discussed

Mayor Mueller stated that if Council Members have future discussion items or Council requests to talk to Mr. Potucek or Ms. Jacobs once she is back from leave.

F. Future Discussion Items and Council Requests – not discussed

3. Adjourn

Mayor Mueller adjourned the work session at 5:34 p.m.



Mayor Frederick W. Mueller

Minutes prepared by:



Maria G. Marsh, Deputy Clerk

Attest:



Jill Adams, City Clerk



Sierra Vista City Council
Meeting Agenda
July 28, 2016

Call to Order

5:00 p.m., City Hall Council Chambers, 1011 N. Coronado Drive, Sierra Vista, Arizona

Roll Call

Invocation

Pledge of Allegiance

Item 1 Acceptance of the Agenda

Awards and Presentations

City Council Business for the Month of July - Bati'Mamselle Boutique

Fiscal Year 2015 Comprehensive Annual Financial Report (CAFR) Award

City Manager's Report: Upcoming Meetings, Bid Openings and Bid Awards

Public Hearing

Item 2 Fiscal Year 2016/2017 Property Tax Levy

New Business

Item 3 Approval of the City Council Meeting Minutes of July 14, 2016

Item 4 Resolution 2016-050, Adoption of the Final Budget for FY 2016/2017

Item 5 Resolution 2016-051, Amendment to Intergovernmental Agreement with the Arizona Department of Revenue for the collection of transaction privilege taxes

Item 6 Resolution 2016-052, Adoption of the Development Fee Schedule that corresponds to the Land Use Assumptions and Infrastructure Improvement Plans in Accordance with A.R.S. 9-463, and City Code 154.10-20

Item 7 Resolution 2016-053, Appointment of Ethan Johnson to the Youth Commission, said term to expire July 9, 2018

Item 8 Resolution 2016-054, Appointment of Sherron L. Driver to the Commission on Disability Issues, said term to expire September 22, 2018

For special needs and accommodations, please contact Jenifer Thornton, Management Analyst, Department of Community Development, 72 hours prior to the meeting or activity. Ms. Thornton can be reached at (520) 458-3315 or through the Arizona Relay Service at 1-800-367-8939, or by simply dialing 7-1-1.

Call to the Public

Comments and Requests of the Council

Adjournment

For special needs and accommodations, please contact Jenifer Thornton, Management Analyst, Department of Community Development, 72 hours prior to the meeting or activity. Ms. Thornton can be reached at (520) 458-3315 or through the Arizona Relay Service at 1-800-367-8939, or by simply dialing 7-1-1.



Council Executive Report

Charles P. Potucek, City Manager

June 2016

Highlights

- ➔ Domestic violence calls in the City have held steady over the past five years.
- ➔ The City was awarded a grant to fund a part time Recreation Coordinator, who will focus on health and wellness.
- ➔ Recruitment efforts for firefighters and ambulance crew members are underway, with many qualified applicants to be interviewed in August.
- ➔ Enough petition signatures were gathered to annex area in Fry approved by Council in May.
- ➔ New security camera system was installed at Sierra Vista Airport.

Departments

| | Page |
|----------------------------|------|
| Police | 3 |
| Fire and Medical | 6 |
| Community Development | 8 |
| Leisure & Library | 12 |
| Public Works | 14 |
| Economic Development | 17 |
| Marketing & Public Affairs | 20 |
| Administration | 22 |

City Manager's Message

June was a busy month with the budget, Council candidate orientation, change of commands on Fort Huachuca, and other activities.

June City Manager Highlights

-  Fort Huachuca Garrison Commander COL Tony Boone relinquished his responsibilities to COL James W. Wright. I've had the chance to meet COL Wright, and he is supportive of the continuing positive and close working relationship between the City and the Fort. I will continue to meet with COL Wright at least monthly.
-  My team and I concluded three orientation sessions for Council candidates. These information sessions have proven valuable over the years in providing a general overview of all City operations and major issues. There were some excellent questions, and my team and I are committed to providing follow up information as requested. My policy is to ensure the information provided is or has already been provided to the Council.
-  On June 24, the City held its annual service awards luncheon. Well attended by employees, this luncheon honored those who had achieved 3, 5, 10, 15 and 20 year anniversaries as of December 31, 2015. The Mayor and I were pleased to provide certificates and pins to 68 employees representing over 684 years of service to the organization. Special thanks to the Council Members who were able to attend the event.
-  The City's annual Spotlight Breakfast is scheduled for Tuesday, August 9 at 7:00 a.m. at the Windemere. As you know, this is the City's opportunity to highlight its accomplishments and look to the future. Invitations will be mailed to community leaders, VIP's, and board and commission members shortly. City staff is making preparations for the event. The breakfast is open to the public and will be advertised after a brief opportunity for invitation holders to register.

Upcoming Council Meetings

(City Hall Council Chambers except where noted)

July 12, 3:00 p.m.
Council Work Session

July 14, 3:00 p.m.
Special Council Work Session

- Hoover Dam Power Allocation

July 14, 5:00 p.m.
City Council Meeting

July 26, 3:00 p.m.
Council Work Session

- Fry Corridor Study
- Health Impact Assessment Overview

July 28, 5:00 p.m.
City Council Meeting

Other Meetings and Events

July 9, 9:00 a.m.-3:00 p.m.
Christmas in July Bazaar at Ethel Berger Center

July 23, 7:00 a.m. – 5K Run Around the Park, Rothery Ed. Center

City Manager's Office Contacts

Charles.Potucek@SierraVistaAZ.gov

Mary.Jacobs@SierraVistaAZ.gov

Linda.Jones@SierraVistaAZ.gov

520-439-2147

www.SierraVistaAZ.gov

 Last year, the City of Sierra Vista was allocated a small amount of Hoover Dam power from the Arizona Power Authority (APA). This allocation has a 50 year life and is an opportunity not only to introduce renewable power to the City's utility usage, but save the City money in the future. There are two components to the process: a contract with the APA accepting the power; and a bill crediting agreement with our provider, SSVEC, which has already been negotiated and finalized. City Attorney Nathan Williams has opined that the APA contract requires Council approval, so we have scheduled the topic for a special work session on July 14 at 3:00 p.m. The City's consultant on this matter will be present to review the issue in more detail at that time.

 Just a reminder that the schedule for final approval of the FY16/17 budget and related actions is as follows:

July 28 -- Final action on budget

August 11 -- Vote on property tax rate

As always, please let me know if you have any questions or concerns. My door is always open.

Chuck Potucek, City Manager

Police Department

Domestic Violence: More than just another call for service

This month's report will provide a comprehensive review of domestic violence in Sierra Vista and explain SVPD's multi-faceted approach to addressing these calls for service. Domestic violence calls remain one of the most dangerous calls for service officers to handle. Routinely, two officers are dispatched to domestic violence calls. Officers often juggle multiple priorities when handling domestic violence calls. These priorities include: making the scene safe, determining if a crime occurred, finding a solution for all parties when no crime has occurred, conducting follow-up investigations, authoring detailed police reports, coordinating with the Cochise County Attorney's Office, and activating victim resources.

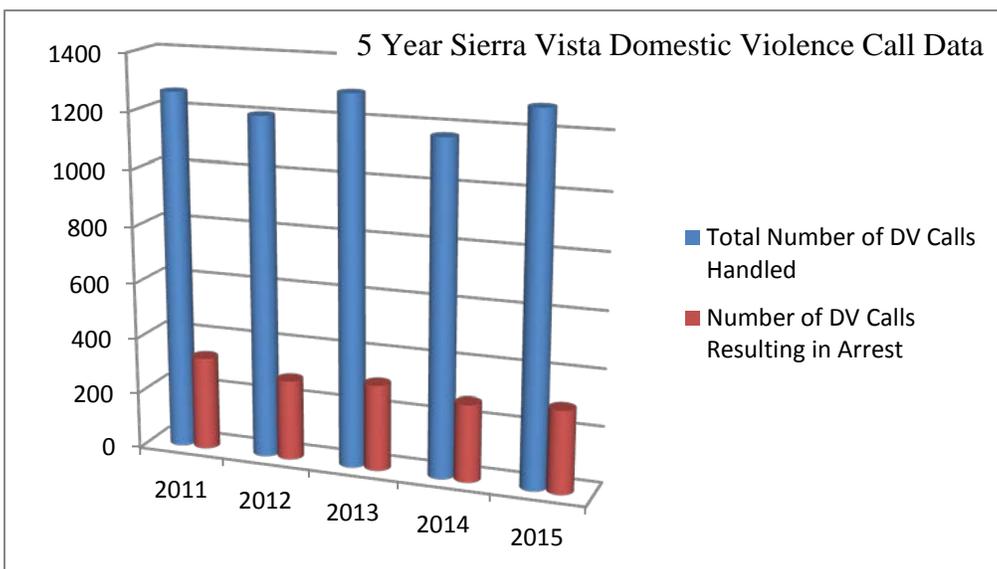
Domestic Violence Call Data - Holding steady over the last five years

The frequency of domestic violence calls in Sierra Vista has remained steady over the years. Averaging the last five years, SVPD responds to approximately 1,243 calls of domestic violence each year. This amounts to 3.4 domestic violence calls per day. The outcome of these calls will vary. In some instances, the parties are not located. If a crime has not been established, officers will work to find a solution and separate parties. An arrest is made if probable cause is established for a crime covered under the domestic violence umbrella, as outlined in A.R.S. 13-3601. Common charges include assault, disorderly conduct, criminal damage, threatening/intimidating, criminal trespass, and violation of a court order. Numerous other crimes also fall under the domestic violence category as well.

If an arrest is made, officers will collect evidence, take photographs, gather witness statements, and complete a detailed police report. Typically, the offender is booked into the Cochise County Jail. Two officers are required on these calls in order to help ensure a safe scene. Also, it is the responsibility of the backup officer to obtain witness statements and assure the victim is given all required paperwork for follow-up resources while the primary officer is tied up booking the offender into jail.

Even if probable cause for a crime is not established, officers will often complete a full police

report on the incident because there is an allegation of a crime by one of the parties. Officers frequently conduct follow-up on such cases and send the completed investigation to the Cochise County Attorney's Office for review for the possible issuance of a complaint after the fact. Based on the five year average, an arrest is made on approximately 297 domestic violence calls out of the 1,243 handled each year.



Lethality Assessment

Domestic violence is often referred to as a “cycle of violence.” Statistically, it will take a victim seven times to leave the abuser before they finally break away from this cycle of violence. All too often, SVPD officers recognize repeat calls of domestic violence at the same residence. In 2015, the SVPD implemented a new tool to help officers gather information to help break the cycle of violence. This tool is a 29 question lethality assessment form that is filled out by the officer while on scene with the victim. The form becomes part of the police report. The use of the assessment tool serves multiple purposes:

- Past unreported incidents are uncovered;
- Victim awareness of lethality and risk becomes heightened;
- Victim advocates receive more specific information for developing personalized safety plans;
- Prosecution and probation uses the information to prioritize options (i.e. diversion, counseling, etc.);
- A consistent method through a standardized assessment tool ensures high lethality cases are properly prioritized by law enforcement and critical information does not slip through the cracks.

| Lethality Assessment Questions | Report # |
|--|----------|
| 1. Has the suspect ever used physical violence against you? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused a. If yes, have you ever been hospitalized because of the violence? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused (Document past injuries hospitalized for and which hospital victim was at) | |
| 2. Has the suspect ever strangled you? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused (If yes, document in narrative) | |
| 3. Has the suspect ever threatened you with a weapon? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused (If yes, document incident and what weapons suspect has access to in narrative) | |
| 4. Has the suspect ever assaulted you with a weapon? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused (If yes, document past incident and what weapons suspect used in narrative) | |
| 5. Has the suspect ever threatened to kill you? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused (If yes, document in narrative) | |
| 6. Has the suspect ever attempted to kill you? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused (If yes, document in narrative) | |
| 7. Have there been physical assaults or assaults with weapons in the past by the suspect that you did not report to police because you were afraid of violent repercussions or death? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused (If yes, document in narrative) | |
| 8. Has the suspect threatened you, your family or themselves with physical violence or death if you ever left them? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused (If yes, document in narrative) | |
| 9. Do you feel like the violence against you has been escalating in severity and/or frequency? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused (If yes, document in narrative) | |
| 10. What is the worst incident that has happened between you and the suspect? (Document in narrative) | |
| Coercive Control Assessment Questions | |
| 1. Has the suspect ever used or threatened violence against your children? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused | |
| 2. Has the suspect ever used or threatened violence against family pets? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused | |
| 3. Has the suspect ever accidentally injured children or pets during a fight or argument with you? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused | |
| 4. Has the suspect ever made you have sex or perform a sexual act when you didn't want to? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused | |
| 5. Does the suspect control your access to money? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused | |
| 6. Does the suspect make it difficult for you to visit with friends and/or family? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused | |
| 7. Has the suspect ever threatened you with violence or a negative consequence for not complying with their demands? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused a. If yes, have they followed through with their threats? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused | |
| 8. Does the suspect monitor your correspondence such as phone calls, text messages, emails, letters or social media? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused | |
| 9. Does the suspect use physical size or past incidents of violence to intimidate you? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused | |
| 10. Does the suspect use access or harm to your children or pets as a way to control you? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused | |
| 11. When you are away from the suspect does he/she check up on you and who you are with? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused | |
| 12. Have you ever felt like the suspect was following or stalking you? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused | |
| 13. Has the suspect ever made up impossible rules for you to follow with harsh consequences for breaking them? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused | |
| 14. Does the suspect restrict your access to vehicles or check your mileage if you use one? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused | |
| 15. Does the suspect make humiliating remarks, use name calling, swearing, or criticizing statements towards you and/or about you to others? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused | |
| 16. Does the suspect damage your property or search through your private things? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused | |
| 17. Have you ever attempted to leave the suspect? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused a. If so, how many times? <input type="checkbox"/> 1x <input type="checkbox"/> 2x <input type="checkbox"/> 3x <input type="checkbox"/> or more | |
| 18. If you left the relationship with the suspect in the past, was there a negative result after leaving? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused (If yes, document in narrative) | |
| 19. Would you be willing to speak with someone from the local domestic violence shelter or National Domestic Violence Hotline right now? <input type="checkbox"/> Yes, number was provided and call made in officer's presence <input type="checkbox"/> Yes, but wishes to call later. Phone numbers left with victim <input type="checkbox"/> No | |

cracks.

The Sierra Vista Police Department was the first law enforcement agency in Cochise County to use the lethality assessment at the patrol level. The assessment tool was adopted from nationally recognized lethality assessment studies. Other agencies in Cochise County are now adopting this tool as well.

Domestic Violence Training

As mentioned earlier, officers must balance multiple priorities while handling domestic violence calls. Continuing education courses and training scenarios are used annually to sharpen the officers' skills. The SVPD has two nationally certified domestic violence instructors. These instructors provide training to all officers through roll call sessions, in-service training, and scenario-based training with feedback. New officers who have graduated the

academy go through a post-academy week at SVPD. During this phase, the officers go through numerous DV scenarios with roll players. This hands-on training approach has proven to be a successful transition from the academy setting to the field training portion of the officer's career.



Officer Joanna McDaniel completes a domestic violence scenario during post academy training

Taking a Regional Approach & Developing Partnerships

Ending the cycle of violence requires a coordinated response by all entities involved. This includes first responders, advocates, prosecutors, probation, mental health providers, and child welfare agencies. For Sierra Vista, a good working relationship with Fort Huachuca is paramount. Advocates with Army Community Services work closely with SVPD officers regarding domestic violence issues involving service members and dependents.

The SVPD has taken a leadership role in coordinating countywide cohesion with all DV stakeholders. Officer Lori Burdick and Lt. Chris Hiser co-chair a regional domestic violence fatality review team. Additionally, Lt. Hiser co-chairs the DV Awareness and Collaboration Team (DV-ACT) with the Forgach House and also sits on the governing board for the Cochise Family Advocacy Center. One major milestone completed through DV-ACT was the creation of countywide protocols for best practices in the investigation of child abuse, domestic violence, and sexual assault. These protocols apply to first responders, prosecutors, advocates, and child welfare entities. Throughout 2015 and 2016, Lt. Hiser met with agency heads in Cochise County to obtain support for the implementation of the protocols. Several police chiefs have signed the protocols in support of implementation. The lethality assessment piloted at the patrol level by SVPD has been furnished to Willcox, Bisbee, Douglas, and Benson Police Departments for widespread use.

Department Promotions

Rounding out this month's report, the SVPD is proud to honor its most recent promotions (over the past several months), which will be celebrated at an informal gathering at the training room on Thursday, July 14 at 4:00 p.m. City Council Members are welcome to attend.



From left to right, Commander Lawrence "Butch" Boutte; Lieutenant Tony Venditto; Sergeant Jeremy Wolfe; and Corporal Liz Chatham

Fire and Medical

Captain Promotions



Adam Saathoff



Justin Wright

These two excelled throughout the promotional process and we are confident they will be great leaders, role models, and mentors.

Recruitment

As of June 23rd, Fire and Medical had 43 qualified applicants (having passed both written and physical components) for the open firefighter positions, and 15 qualified applicants for the peak-hours ambulance crew. We are pleased with these numbers and plan to hold interviews the first week of August.

Communications

Drafting of new deployment strategies has been completed that will better coincide with the automatic aid agreements with Fry Fire District and Fort Huachuca. These strategies guide the City in deploying the most appropriate resources to send on different types of incidents, while also ensuring resources remain available for other incidents that may occur while equipment and personnel are on calls. Once they are reviewed internally for accuracy, they will be moved into the dispatch system for implementation.

Seven radios received from a grant (through PD) have been programmed with Fort Huachuca Fire's frequency, and are in service. One radio was defective and it was returned through Canyon State.



C.A.D.E.T. Program

We had a successful C.A.D.E.T. (Confidence, Accountability, Diversity, Education, and Teamwork) program, with 15 participants and over 60 people attending the "graduation" ceremony at the end of the week. Feedback from several students and parents was exceedingly positive.

Accreditation

Fire and Medical is working toward completion of Core Competency evaluations with a target date of July 1. We have begun work on our

Community Risk Assessment and Standards of Cover document, and have also sent a request to CPSE to host a data analysis course in Sierra Vista in early 2017.

Prevention

Seven residential fires were responded to in June, none related to arson. There were also 3 vehicle fires, 1 dumpster fire, and 8 brush fires. This is a typical month for the department

81 business inspections were also done in June.

EMS

Each year, the Arizona Department of Health Services requires annual inspections of ambulances. This year's inspections revealed minor violations, but all were fixed while the inspector was here. The Fleet Services division does an excellent job maintaining F&MS vehicles, rigs and equipment.

The specifications for the FY16/17 budgeted Patient Transport Engine were completed and sent over to fleet for review. The tentative budget currently includes \$1,000,000 for this new apparatus, which will replace one that is 25 years old. The department is moving toward a new type of apparatus that includes patient transport in the same vehicle. This is a new trend for fire departments across the country, especially for smaller communities where resources are not as readily available. The advantage of this unit is that a single apparatus can be deployed to some incidents where it is unclear whether transport is required. Department personnel feel this new unit will be very beneficial to the department's response capabilities.



Community Development

Planning & Administration

- 🏡 Staff continues to conduct outreach activities inside the City's proactive annexation areas, educating property owners on potential real estate tax savings and other benefits of incorporation. The initial focus is being placed on commercial properties in the Fry Town Site area and frontage parcels along State Route 92. The Fry Town Site target area encompasses 65 parcels, constituting approximately 16 acres of land with a 2016 full cash appraised value of \$5,448,190. There are 41 distinct property owners. The SR 92 target area consists of 19 parcels comprising approximately 22 acres of land with a full cash value of \$7,568,731. There are 18 separate property owners along the corridor.

On May 26, 2016, the City Council authorized staff to proceed with the annexation of eight parcels comprising 1.8 acres on the west side of 5th Avenue, north of Fry Boulevard. Petition signatures will be collected starting June 7, 2016. The City has received three signed petitions with a combined assessed valuation of \$344,693 which is sufficient to complete the annexation. Staff will advertise a public hearing before the City Council for August 11, 2016, for final acceptance of the annexation.

- 🏡 Staff has reviewed an abandonment petition for a platted alley and conditional use permit request for a place of worship on property located on Denman Avenue, between 4th Street and 5th Street, in the Fry Town Site subdivision. On July 5, 2016, the Planning and Zoning Commission voted unanimously to recommend approval of both applications. Public hearings have been scheduled before the City Council on July 14, 2016.
- 🏡 On June 14, 2016, Staff met with the Parks and Recreation Commission to solicit feedback on the proposal to extend the Cochise-Vista Trail to create a 21-mile loop. The Commission voted unanimously in support. The sign panels were produced by Stronghold Signs at a lower cost than the County estimate. The signs will be installed using volunteers from the Cochise Bicycle Advocates by the end of July.

Building & Inspection Services

As shown in the following chart, the City has averaged 84 permit applications per month for FY 15/16. In June, staff processed 102 permits resulting in 281 inspections and worked on the following projects:

Approved Plans:

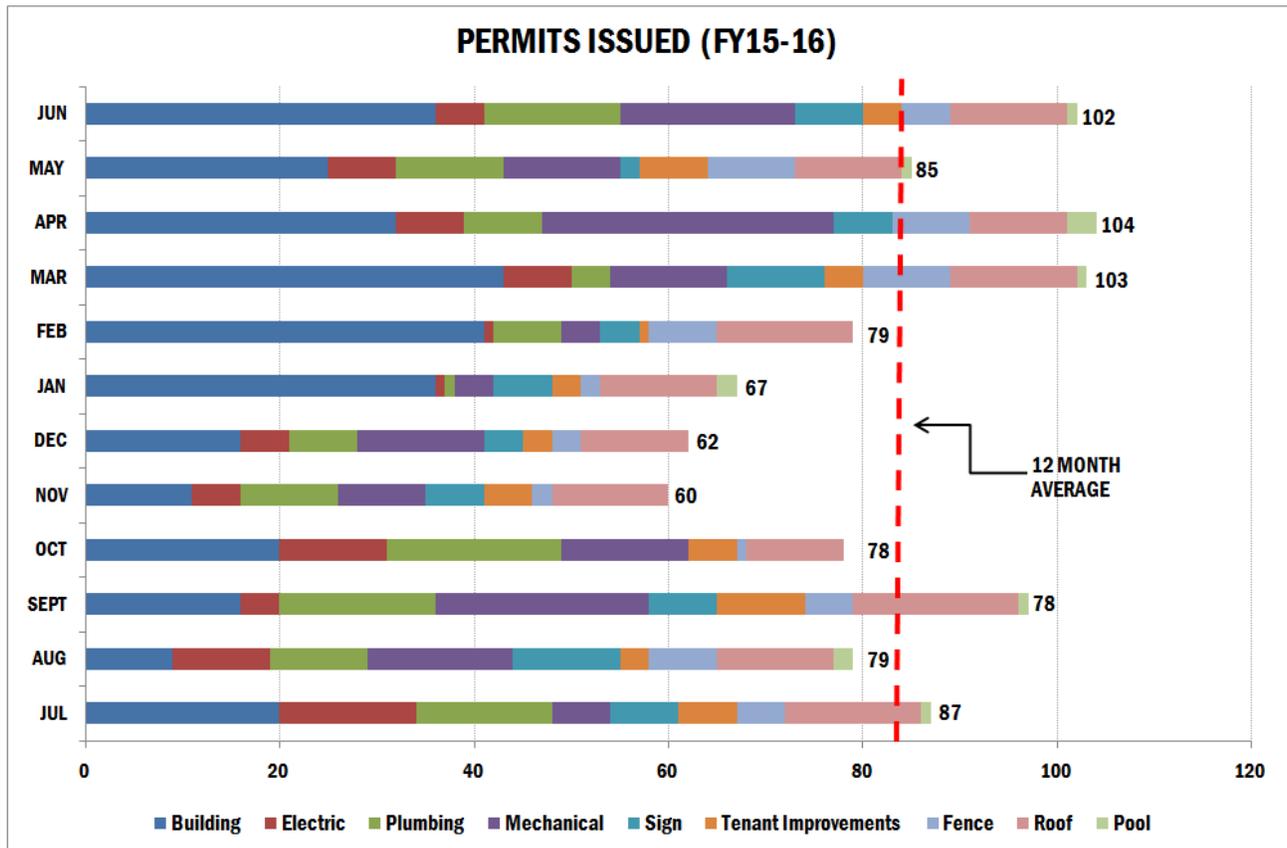
- Chiricahua Community Health Services – Tenant Improvement – 155 Calle Portal 600
- Target - Solar Panels - 4151 E. Hwy 90

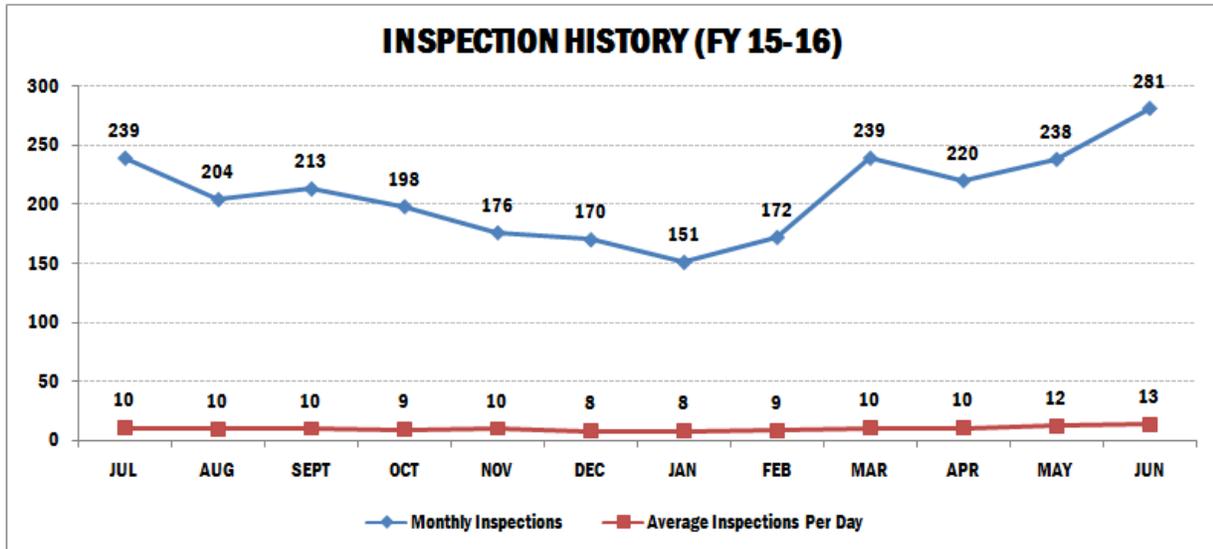
Current Projects Under Construction:

- AT&T Cell Tower Modifications – 1045 S. Lenzner Ave
- Arizona Auto & Radiator Repairs – Tenant Improvement – 1255 E. Fry Blvd
- Arizona Auto Spa – New Construction – 3850 Martin Luther King Jr. Pkwy
- Cochise Children’s Dental – New Construction – 1718 Paseo San Luis
- Domino’s interior remodel – Tenant Improvement – 3670 E. Fry Blvd.
- Factory Auto Part Store – Tenant Improvement – 1255 E. Fry Blvd
- Hatfield Funeral Home – Tenant Improvement – Office for Animal Crematory
- Immanuel Lutheran Church – Fellowship Hall Addition – 2145 S. Coronado Drive
- Jack Furrier Tire & Auto Care – Repairs from Car Accident – 3350 E. Fry Blvd
- Lawley Honda – Tenant Improvement – 3200 E. Fry Blvd.
- Little Caesars – Tenant Improvement – 55 S. Hwy 92 Suite C
- Mountain Vista Apartments – Patio Repairs – 4400 E. Busby Drive
- Peacock Restaurant – Tenant Improvement – 386 W. Fry Blvd.
- Pizza Hut – Tenant Improvement – 3680 E. Fry Blvd.
- Southwest Gas – New Construction – 4411 Industry Drive
- The Horned Toad – Tenant Improvement – 526 W. Fry Blvd.
- The Salvation Army – New Construction – 180 E. Wilcox Dr.

Projects completed:

- McNeal/AT&T Cell Tower Modifications - 240 N Highway 90





| CONSTRUCTION TYPE | FISCAL YEAR TO DATE | |
|-------------------------|---------------------|---------|
| | 2015 | 2016 |
| | JUL-DEC | JAN-JUN |
| SINGLE-FAMILY UNITS | 20 | 32 |
| SINGLE-FAMILY ADDITIONS | 7 | 5 |
| COMMERCIAL (SQ. FT.) | 4,453 | 0 |
| INDUSTRIAL (SQ. FT.) | 11,953 | 0 |
| INSTITUTIONAL (SQ. FT.) | 29,230 | 0 |
| OFFICE (SQ. FT.) | 4,582 | 0 |

Code Enforcement

Staff continues to implement the Registration and Maintenance Program for Vacant Properties. To date, 72 bank-owned properties have been registered with the City (12 new applications were received in June).

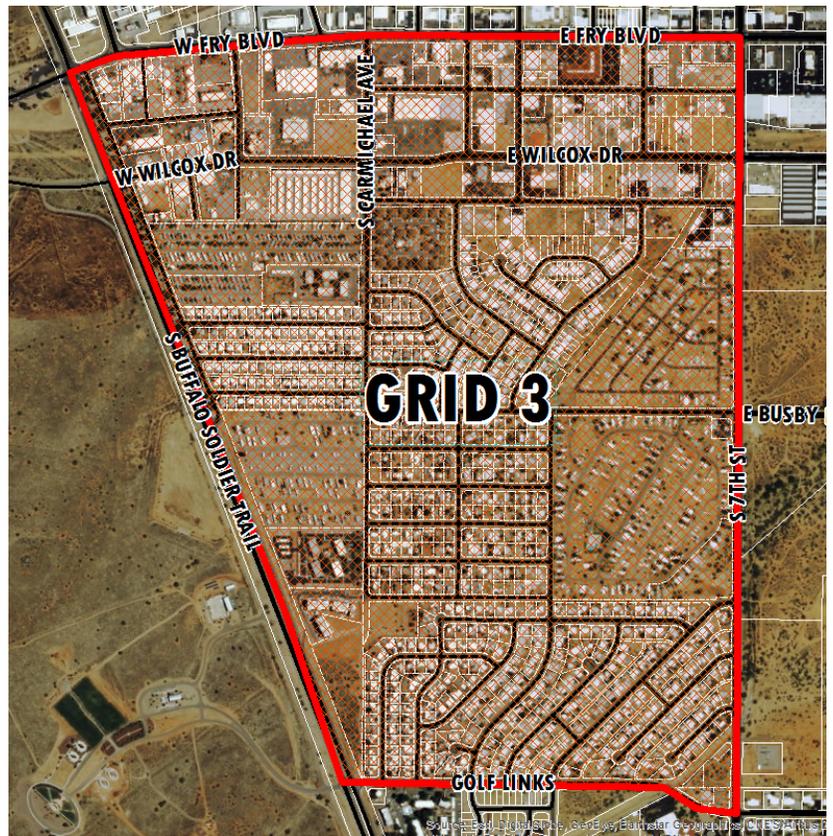
On May 26, 2016, the City Council accepted title to a 5,040 sq. ft. (+/-) parcel located at 366 McAbee Street deeded from the Pascua

Yaqui Tribe. The City abated the property and discussions are underway as to its ultimate disposition. The Council will be provided with a recommendation in the near future.



Code Enforcement Staff completed the proactive, parcel by parcel sweep of each property within Grid 3, the area identified on the map to the right. During the month of June, 175 cases were initiated in this area of which 40 cases have been closed through voluntary compliance. The top three violations types were litter and debris (52); inoperative vehicle (48) and overgrowth (46).

To aid this effort, the Southwest Sierra Vista Neighborhood Association invited staff to attend a gathering of residents on June 11, 2016, to talk about minimum property maintenance requirements and the process the City follows in working with property owners and tenants to resolve code violations. Staff views community education and participation as key to our success in the City's neighborhood revitalization efforts.



Leisure and Library

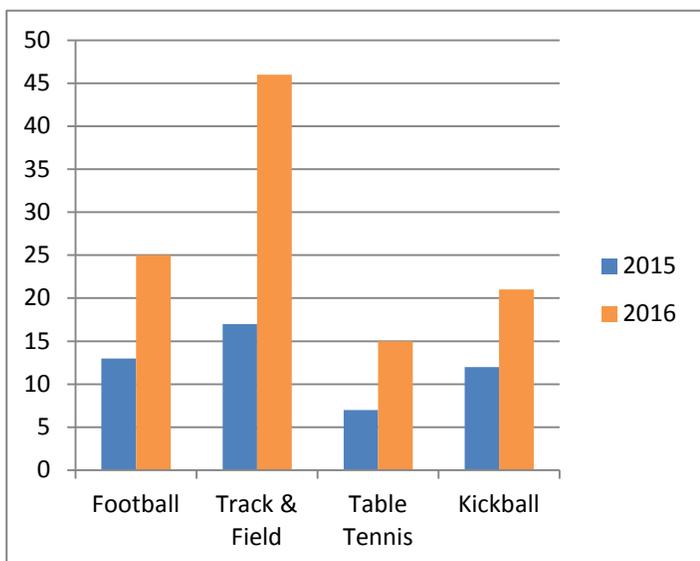
May Dashboard

| | | | |
|-----------------------------------|--------|--|-----------|
| Library circulation | 30,961 | Total Monthly revenue | \$106,201 |
| Library program attendance | 1,718 | Leisure class/program participation | 4,035 |
| Library patron count | 14,659 | Facility/field/room rentals | 4,277 |
| New library cards | 372 | Library meeting room use | 92 groups |

Legacy Foundation Grant received

In May, the City was awarded a grant of \$33,333 by the Legacy Foundation to fund a part time Recreation Coordinator position to focus on health and wellness. Currently under recruitment, this person will have a variety of responsibilities, including working with the Be Healthy! Sierra Vista Health Advisory Committee to build capacity administratively through managing meeting activities; researching and presenting action options to the committee for health prevention strategies tied to county-wide health concerns; researching and applying for relevant grants; and coordinating with other county health and wellness committees. Assistance will also be provided to the Sierra Vista Metropolitan Planning Organization related to community education on the benefits of multi-modal transportation, and the promotion of methods of multi-modal transportation. The new person will also help with coordination of community health-related events throughout the year such as the annual walk/bike to school days and community forums. Last but not least, one of the first tasks for the new hire will be completing the last two goals of the Let's Move program.

Summer Sports Camp Participation Increase



Healthy activity promotion is a high priority for Leisure & Library Services, and some changes throughout the year have led to significant increases in sports camp participation this year. Staff at all levels worked together to implement improved service such as opening registration in April instead of waiting until the end of May, and some new advertising ideas led to excellent coverage on Facebook and 'clip out' ads in the newspaper featuring all of the months' activities in one place.

These combined efforts have led to more than doubling the participation in youth sports camps. In 2015, there were 122 registrations for various camps by the end of June. In 2016, 250 registrations had been received by the

same time, which is also more than the 238 kids registered for all summer camps combined last year. Staff expects July registrations to continue to exceed expectations.

Awesome Programs

Leisure & Library staff put on some excellent programming throughout the year! Summer is a particularly fun time, and one standout program in the month of June has been the new Teen Anime Club. At its first two meetings, 50 and 45 teens respectively joined staff Sierra and Ruthy. Not only are these numbers some of the highest ever for teen programming, some even arrived at the program dressed in costume like Skylar and Anna, shown here in their Attack on Titan gear.

The Teen Anime Club meets on the first and third Wednesdays of the month at the Library.



July Events

July 1: Chair Tai Chi short story discussion, 9am, SVPL

July 1: Family Movie Night, 4pm, SVPL

July 5,19: Teen Anime Club, 3:30-5pm, SVPL

July 6, 20: Walking Club short story discussion, 5:30pm, SVPL

July 7: Library Summer Games, 11-12pm, SVPL

July 7-8: T-Ball Camp, 8-9:30am, Howard Field

July 8: Tabletop Game Night, 4-5pm, SVPL

July 9: Christmas in July Bazaar, 9-3pm, EBC

July 9: Zoo to You, 1 & 2pm, SVPL

July 12: Tuesday Talks-Race to the South Pole, 1pm, SVPL

July 15: Library after Dark: Laser Tag, 8-9:30pm, SVPL

July 16: Back to School Fair, 10-12pm, Mall at SV

July 18-20: Basketball Camp, 8-10:45, Rothery Ed. Center gym

July 21: Caregiver Workshop, 1-3pm, EBC

July 23: The Grand Picnic Party, 1-2pm, SVPL

July 23: Summer Saturday @ the Museum: Game Day Revolution, 10-12pm

July 23: 5K Run Around the Park, 7am, Rothery Ed. Center

July 23: Glow in the Dark Finger Painting, 8-9pm, Teen Center

July 25-28: Youth Soccer Camp, 6-8pm, Arbenz Field

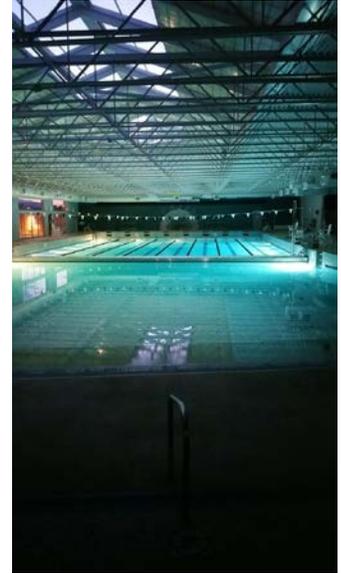
July 29: Tsunami Night, 7pm, Cove

Public Works

Parks and Park Facilities

Cove Upgrades. Staff recently began the replacement of the pool lighting at the Cove. The existing lighting was the original lighting installed when the Cove was constructed more than 15 years ago and was both inefficient and at the end of its useful life. The result of the new lighting is truly striking. In addition to being brighter, the new lighting also has a natural blue hue whereas the old lighting was more yellow. The picture to the right shows the work halfway done, with the new lights on the right and the old lights on the left.

The slides at the Cove were also refinished within the last month. The coating will help to protect them from UV sun damage and ultimately more costly repairs. The recoating process ideally needs to be done every few years to maximize the life of the slides.



City Facilities



Painting. Painting projects were completed in June at the Police Station and the Pedro Castro Maintenance Center. Both buildings have not received any exterior paint in approximately ten years, so the existing paint was in rough shape. The picture to the left shows the painting in progress at the PCC. All bollards are being repainted safety yellow to help improve their visibility. The contractor will also be repainting all pedestrian and overhead doors. Although the original color of the doors was a bright blue, it has faded badly over the years. The new color will be a neutral brown to better match the other colors used at the facility, and the new brown color should also be less noticeable as it fades.

Other facilities projects completed by June 30 include the installation of new security cameras at the Airport and generator connectors at the Ethel Berger Center.

Engineering Projects

Annual Street Maintenance. The City's annual street maintenance project is nearing completion. Patching, crack sealing, and chip sealing have all been completed. The only remaining task is to apply a final seal coat on top of the chips to give the road a finished, black appearance. A few of the larger volume roads will also be re-striped.

7th/Fry Traffic Signal. The new traffic signal at 7th Street and Fry Boulevard was energized on Thursday, June 23rd. The existing signal had been the oldest in the City and was well beyond its useful life. However, utility conflicts and limited space made the design and construction of the new traffic signal particularly challenging. Staff is very excited to see the new traffic signal come on-line, as maintenance should be much improved over the existing signal.



Airport

Fire Season. The wildfire season continues to be active with fire activity around southern Arizona at high levels. The arrival of the monsoons, however, has helped to improve conditions. For the last several weeks, there have been no active fires in Cochise County. Staff continues to provide services in support of firefighting operations in adjacent counties and states.

A prolonged power outage at the airport on Saturday, June 18th, impacted airport operations, including the ability to dispense fuel in support of firefighting operations. The power outage was a result of a failure of an SSVEC transformer and took down portions of Whetstone, Huachuca City, and northern Sierra Vista starting on the evening on June 18th and continuing until the early morning hours of June 19th. Although the terminal building is on emergency power and was therefore able to continue with limited operations, generator service does not extend to the fueling areas or the hangars. The City was unable to dispense fuel during the power outage, and hangar tenants who had their doors open when the outage began were unable to secure them. The Airport Commission is planning to include the outage as an agenda item on their next meeting in July.

Streets



Regulatory Sign Replacement. Staff recently completed a project to replace over 6000 signs and 1800 brackets within the City with new, larger signs that meet the most recent federal standard. The sign replacements come as a result of updates to the Manual on Uniform Traffic Control Devices (MUTCD), and all communities across the country are required to be in compliance with the new standard. The City was able to secure Highway Safety Improvement Program (HSIP) funding to cover 100% of the purchase cost of the new signs, and staff has been working diligently for more than a year to get all of the signs installed. The installation process had a variety of challenges. Some of the signs were on high volume and high speed roadways, requiring the work to be done at night. Also, since the new signs are larger, modifications to existing brackets and sign placement were often necessary. All new sign locations were inventoried and logged, so the City now has an accurate record of sign installation dates and locations. The project was completed by existing staff with limited resources and was finished five months ahead of schedule. The pictures shows the completed installation of the very last sign.

Refuse

Multi-Family Residential Service. July 1st marks a change in state law that will allow private refuse haulers to compete with the City in providing service to multi-family residential sites. To date, the City has lost about two-thirds of its year-to-year multi-family residential revenue due to cancellations, and additional cancellations are likely within the next few weeks. Initial indications are that the private haulers are undercutting the City's published rate by approximately 50%, but this low rate is likely unsustainable. However, in the short term, the City is projecting lower revenues in the Refuse Enterprise Fund as a result of the cancellations. Routes will be evaluated after July 1st to determine if efficiencies can be gained by combining or eliminating some of the existing routes.

Transit

Staffing. Staffing at Vista Transit continues to be a challenge. Although a full-time position was recently filled, several part-time positions remain vacant, and applications to fill the part-time vacancies have generally been disappointing in both number and quality. Although existing staff are being reassigned to cover gaps, in the worst case scenario, reduced service may be needed for a limited period of time if there are not enough drivers available. Human Resources continues to assign the Vista Transit vacancies its highest priority, and it is hoped that the open positions will be filled within the next few weeks. The city is also beginning the process to hire an Administrator to oversee Transit and Airport functions, and this position should be posted by early July.

Economic Development

Successes. The Economic Development (ED) Division has set a goal for the next fiscal year to increase the exposure of Sierra Vista in web and print publications. We have kicked off this effort with an article in TECHCONNECT, Arizona's Technology Magazine. Starting on page 6 is a 2-page article talking about the City's efforts to develop a Cybersecurity sector. https://issuu.com/tcguy/docs/12_tc_jul16_final

Retention and Entrepreneurship



Sierra Vista Toyota celebrates 14 years in Sierra Vista with their service members

Mayor's Visitation Program (MVP). On June 14, Elsie MacMillan, three time winner of Toyota President's Award, celebrated 14 years in Sierra Vista. Elsie invited Mayor Mueller and the Economic Development Division to join her and the Sierra Vista Toyota staff to commemorate the achievement.

Elsie gave a recap of the history of Sierra Toyota and described how she navigated the economic swings over the last 14 years. The recession has made an impact to the business, but Elsie is seeing signs the worst may be in the past.

Elsie is increasingly concerned with buying local. She mentioned that she continues to see that Sierra Vistans are buying cars from Tucson across brands. Since cars are large ticket items, they have a significant impact on the City's general fund. The MacMillans have signed a 6-year extension on their franchise contract. This is indeed good news because it keeps Elsie and husband Paul influential community leaders in Sierra Vista for the greater part of the next decade.

Business of the Month Recognition. Hank Huisking recognized two businesses for the month of June, Sun 'N Spokes and M&M Cycling. Both of these businesses have gone above and beyond the call of duty to keep Sierra Vistans and visitors on our roads, paths, and mountain trails.



Sun 'N Spokes

Since 1976, Sun 'N Spokes has provided bikes to Sierra Vistans and visitors. Recently, Mark Lapaglia and the Sun 'N Spokes team donated 11 bikes to the Walk & Bike to School Day. Thanks to Sun 'n Spokes, every school in Sierra Vista had access to free safety checks and discounts on bikes to any kids participating. Mark and his team played a critical role in planning for the day and volunteering at various schools.

During the last 20 years, M&M Cycling have also made valuable contributions to Sierra Vista, including coaching members of the Buena Mountain Bike Club who won the state championship last year. Mike Baltunis and Martin Coll offer multiple skills clinics throughout the week to keep families and friends riding together.



M&M Cycling

We look forward to both companies' continued success and appreciate their contributions to making Sierra Vista a bike friendly city.

June 16th Sierra Vista Business Walk. Economic Development and the Sierra Vista Area Chamber of Commerce (SVACC) conducted a business walk targeting businesses south of Fry from Buffalo Soldier Trail to Moorman Ave. Businesses on both the north and south side of Wilcox Drive were surveyed as well. Overall, 47 businesses were contacted with 41 completing the survey. ED is expected to complete analyzing the responses by early July. To date, 132 businesses have completed the survey. While a complete analysis is pending, some initial trends in responses can be grouped into three major categories:

- Assistance finding qualified candidates
- Requests for educated workforce including general and vocational skills
- Help with marketing and advertising

Upcoming events

Good Morning Sierra Vista (GMSV).

Thursday, July 7, 2016, 7:00 – 8:30 a.m. Key note speaker Michael T. Reinbold, Development Partner of El Dorado and “Villages at Vigneto” in Benson.

Business Walk. July 14th. Meet at the Sierra Vista Area Chamber of Commerce at 10:00 a.m. Targeting areas from Coronado Drive to the west side of Highway 90, south to the Coronado Village Shopping Center

NACA Workshop. August 6, 10-1, SVPD. Learn about the down payment homeowner assistance program. It provides for zero down payment and helps to resolve credit concerns.

Spotlight Breakfast. Join the City to hear about current accomplishments and City priorities. Tuesday, August 9, 7:30-9:00 a.m. (buffet opens at 6:45) at Windemere.

Housing. On May 19, Dr. Robert Carreira, Chief Economist for the Cochise College Center for Economic Research, reported the number of homes sold in Cochise County in the first quarter of 2016 was up 1.4 percent from the fourth quarter and 5.7 percent from the first quarter last year. 371 homes were sold countywide in the first quarter (up from 366 in the fourth quarter and 351 in the first quarter 2015).

In order to support this positive trend, the division organized a free home ownership workshop in partnership with the Neighborhood Assistance Corporation of America (NACA). NACA has a down payment assistance program (DPA) to help citizens of Cochise County purchase homes with no down payment. The workshop is scheduled for August 6 at the Sierra Vista Police Department from 10:00 a.m. to 1:00 p.m. If there is sustainable interest in this HUD approved program, NACA is interested in opening a regional office in Sierra Vista that is expected to create five full-time jobs as well as creating a pathway to responsible home ownership for low to moderate income families.

Highlighted Partnerships

Social Media Day – June 30

Social Media Day was started in 2010 by Mashable, a global media and entertainment company, as a way to celebrate social media's growing impact on our daily lives. Moniek James, a local entrepreneur, decided to visit Sierra Vista businesses to educate the community on the power of social media. The Economic Development team is supporting Moniek by connecting her with the small businesses that have requested help with marketing through the Small Business Ombudsman (SBO) office. The objective is to demonstrate in real time how social media tools can be used to improve our local economy along with boosting the visibility of Sierra Vista.

The SBO will be spending the entire day with Moniek highlighting businesses and organizations in Sierra Vista. The plan is to live stream video from each location which will generate more awareness and ultimately result in a video that can be shared with potential customers. The SBO will also follow up with each business to make sure they continue to use cost effective tools to raise awareness of their businesses and Sierra Vista as a whole.

May Stats.

| March Ombudsman Activities | Number of Business Contacts |
|-----------------------------------|------------------------------------|
| Partner Referrals | |
| SBDC | 3 |
| EDF Loan Program | 0 |
| Chambers | 20 |
| Arizona@Work | 2 |
| Workforce Development | 2 |
| Marketing / Advertising | 2 |
| Education | 3 |
| Finance / Capital | 1 |
| Site Selection | 2 |
| Total | 35 |

Marketing and Public Affairs

Public Affairs

Outreach to Mexico. The Marketing and Public Affairs division took a lead role in reaching out to our sister city, Cananea, to invite the city's council and city leadership to participate in Sierra Vista's Fourth of July celebration. On that date, we welcomed Cananea Council Member Guadalupe Taylor Martínez and Economic Development and Tourism Director Nitzia Gradias, and hosted a luncheon and a tour of the Henry Hauser Museum. The collective effort between Public Affairs, Leisure Services, and the Tourism, Sister Cities, and Cultural Diversity commissions, along with Council Members Husking and Calhoun, will aid Sierra Vista in developing a stronger relationship with Cananea for both tourism and economic development.

Communications Projects. In June, the Public Affairs Office produced 69 different communications projects, 11 press releases, and dozens of social media posts.



This Facebook post honoring one of Sierra Vista's finest went viral with a reach of more than 18,500 and 671 shares.

Public Works' My Waste app now features a freshly branded refuse truck, emphasizing the app's owner as well as furthering our branding efforts.

The Facebook post that earned the highest organic reach (18,665) on the City of Sierra Vista page advised readers about the wildfire burning along the U.S./Mexico border. Closely following, with an organic reach of just over 18,000, was a post about Sierra Vista Police Officer Brandon Eaton, who was recognized with a Congressional First Responder of Distinction Award for helping to save the life of a local toddler.

The following are a few additional project highlights:



- Designed and uploaded to the City's website a print-ready PDF of Council's Strategic Plan
- Developed and placed a wrap for the Phoenix light rail system, promoting Sierra Vista as a summer vacation destination
- Produced and placed multiple ads for Leisure Services, Animal Control, and Public Works
- Continued work on Police and Fire & Medical recruitment campaigns
- Updated splash screen for Public Works' My Waste app

Tourism

Market Reach. Among other markets, Sierra Vista's tourism program targets those engaging in outdoor activities such as hiking, bicycling, and wildlife watching. In addition to web, broadcast, and out-of-home media, we also purchase print advertising. In June, we saw the results of a May placement in *Outside* magazine. The publication, distributed to 225,000 readers in the western United States and Canada, resulted in nearly 800 direct requests for visitor information. Other national attention was earned through public relations efforts resulting in media activity in state and regional publications, reaching a collective readership of nearly 0.5 million.

Visitor Center. Literature was provided in bulk quantities to Southwest Wings Spring Fling, Douglas Days, and several visitor centers and tourism destinations across the state, as well as through local literature racks, the Visitor Center, and direct mail. In addition to managing inventory and fulfilling information requests, the visitor center assisted the following guests in **May**:

| | |
|---------------------------|-----|
| Local | 228 |
| Arizona (not local) | 85 |
| Out of state | 243 |
| Foreign | 30 |
| Telephone calls | 220 |

**EXTRAORDINARY SKIES.
UNCOMMON GROUND.**

**EYES ON THE SKIES.
FEET ON THE GROUND.
ENJOY IT ALL HERE.**

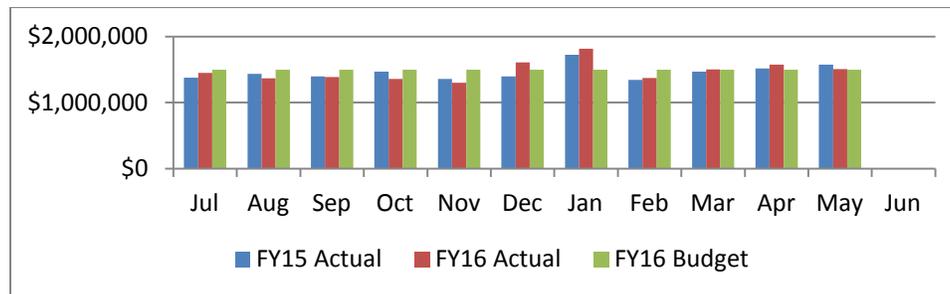
Sierra Vista
ARIZONA

Discover soaring peaks, cool temperatures, and room to roam. Extraordinary skies showing daily. Start your adventure at VisitSierraVista.com or call 800-288-3861.

This Outside magazine ad reached readers across the western U.S. and Canada. The ad copy reflects Sierra Vista's brand, and photos—selected to resonate with readership—illustrate some of our key tourism messages.

Administration

Sales Tax Collection. Gross privilege tax collections for May 2016 were \$67,229, or 4% lower than last May. Total retail sales, including retail and food for home consumption, was down \$19,228 from last year. At the old rate, the classification would have had an \$113,902 decrease. Construction activity continues to lag, and May's construction tax revenues were \$36,000 below last year's. The chart below provides a monthly comparison of FY16 actual, FY16 budget, and FY15 actual. For the fiscal year, total privilege taxes are 1.1% ahead of last fiscal year, but 1.3% below budget.



The following table lists the privilege taxes by the new classifications. Some of the differences between categories can be attributed to businesses reporting under an incorrect classification in a period; for example, reporting food sales as retail instead of food for home consumption. The 'Other' classification combines all of the classifications that have less than 10 entities reporting.

| Description | May-15 | May-16 | Difference | % change |
|------------------------------------|---------|---------|------------|----------|
| Under old business classifications | (783) | (849) | (66) | 8% |
| Utilities | 74,016 | 76,340 | 2,324 | 3% |
| Communicaitons | 25,324 | 22,943 | (2,381) | -9% |
| Publication | 3,863 | 4,083 | 220 | 6% |
| Restaurant & Bar | 175,668 | 184,959 | 9,291 | 5% |
| Contracting - Prime | 113,625 | 77,707 | (35,918) | -32% |
| Retail Sales | 784,845 | 749,726 | (35,119) | -4% |
| Use Tax Purchases | 64,216 | 40,299 | (23,917) | -37% |
| Use Tax from inventory | 1,816 | 2,008 | 192 | 11% |
| Residential Rental | 39,622 | 35,121 | (4,501) | -11% |
| Retail Food for home consumption | 157,455 | 173,346 | 15,891 | 10% |
| Commercial Rental | 42,341 | 39,315 | (3,026) | -7% |
| Tangible Property Rental | 16,764 | 18,020 | 1,256 | 7% |
| Extended Stay | 66,336 | 73,023 | 6,687 | 10% |
| Other | 6,222 | 8,062 | 1,839 | 30% |

Airport Security Camera System. IT collaborated with Public Works staff and contractors to install a new security camera system for the SV Airport. Staff provided project management and technical guidance throughout the duration of the project. Twenty cameras were installed, in addition to a new video server and network equipment. Training on the new system/cameras and its capabilities was also provided. The project was completed under budget and on time.

 **Wireless System Upgrade.** IT performed a complete upgrade of the existing City wireless network infrastructure. The current system was end of life and using old technology. Additionally, the system did not meet ACJIS requirements and could not be used by the police department. The new system conforms to these requirements, which allows us to install Access Points at both Fire and Police, thereby allowing the officers and fire personnel to become more efficient and mobile. Additionally, the new system has failover capabilities and utilizes the latest technology increasing bandwidth and speed significantly. Lastly, it also provides access to vendors, contractors, and others that may utilize the Fire and PD facilities for meetings and the like.

 **Cyber Security Awareness Training.** IT continues to strengthen the City's cybersecurity portfolio. As part of increasing our Cyber Security, IT is initiating an employee Cyber Awareness campaign. Studies have shown that users are the weakest link in any malicious attack. Utilizing specific training software, we will present employees with scenarios, phishing schemes and other various social engineering methods that will enhance the employee's awareness of malicious intent. Additionally, this software will allow the employee to receive training that will provide teachable moments intended to prevent repeat future real life violations.

 **Disadvantaged Business Enterprise (DBE).** The City is required to meet federal contracting goals regarding the percentage of DBE businesses that are utilized for grant funded projects. In order to get the word out, the Procurement Division with the assistance of the City Manager's summer intern is developing a robust, bilingual outreach program for local area businesses. This program will include information on what the DBE program is, how it is utilized, and how to register. One of the collateral materials includes short videos in English and Spanish, which will be available on the City's website once completed.



Fry Boulevard Today - Looking West



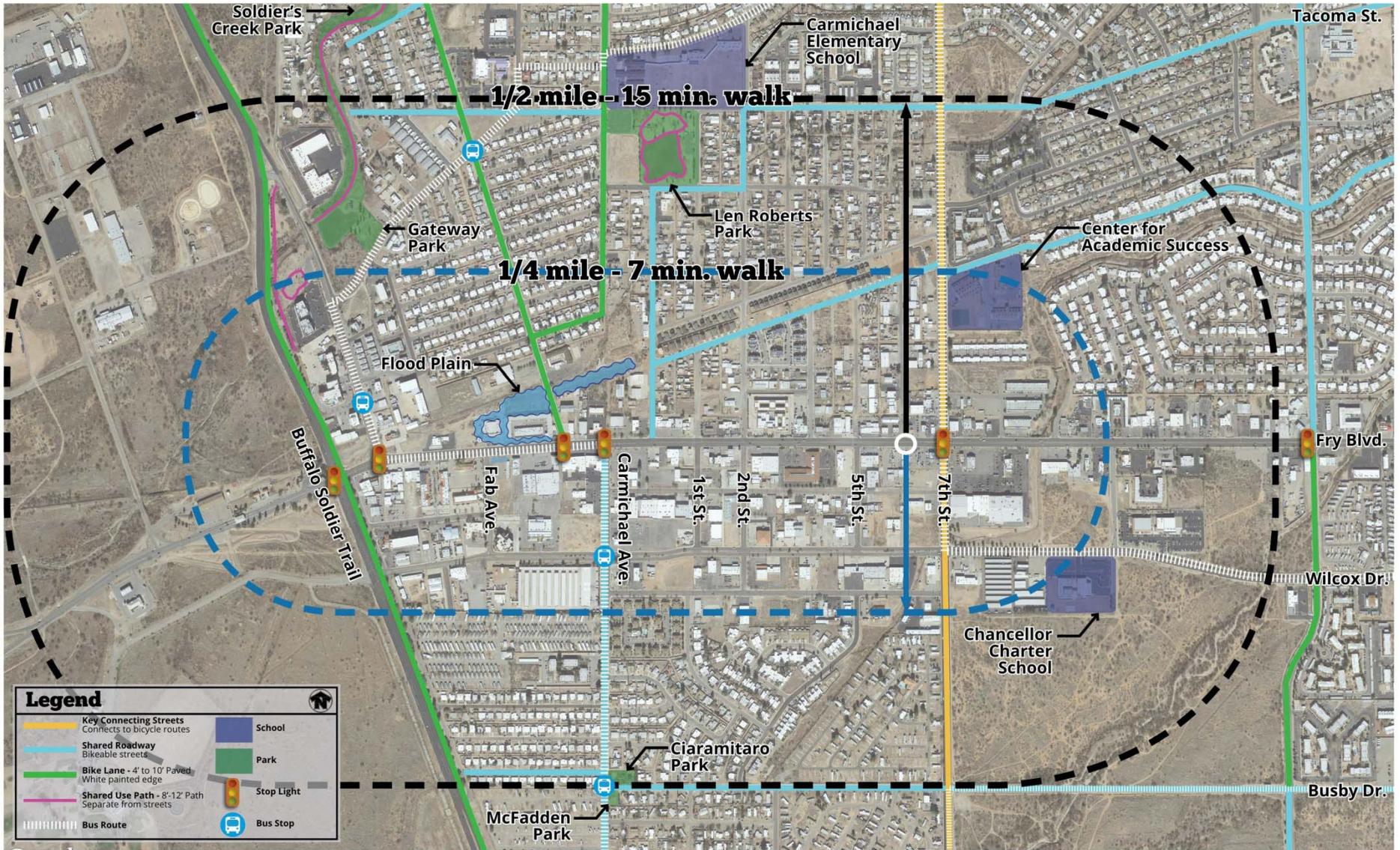
Fry Boulevard - West End Corridor Study

Fry Boulevard between Buffalo Soldier Trail and 7th Street

Existing Conditions

July 26th, 2016

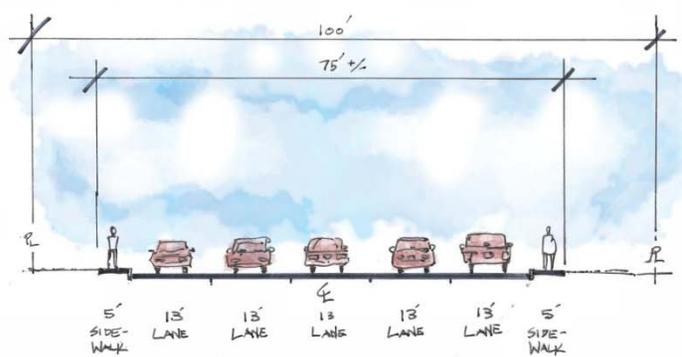






Existing Conditions

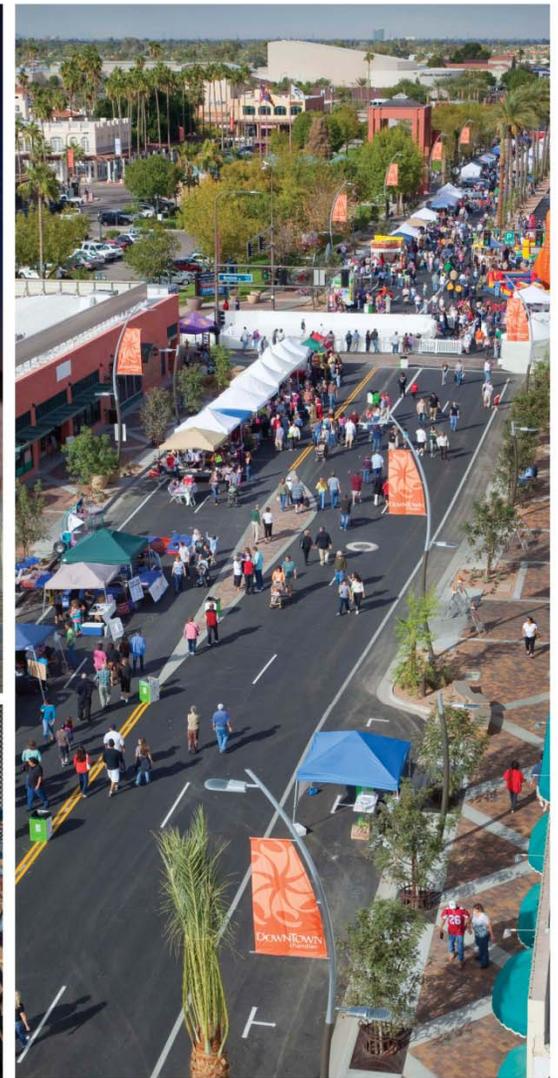
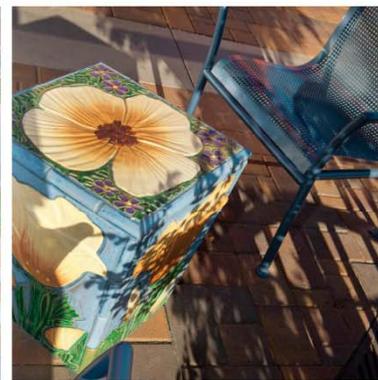
- Fry Boulevard currently supports five travel lanes that are 13' wide. For perspective a typical car is 7' wide.
- Existing functioning space is 75' wide from back of sidewalk to back of sidewalk. This includes the five travel lanes and two 5' wide sidewalks.
- The right-of-way owned by Sierra Vista is 100' wide. The additional 25' is being utilized in a variety of ways by property owners along both sides of Fry Boulevard.



Fry Boulevard - West End Corridor Study

Fry Boulevard between Buffalo Soldier Trail and 7th Street

Project Area Map
February 1, 2016



Downtown Chandler - Arizona Avenue



Fry Boulevard - West End Corridor Study

Fry Boulevard between Buffalo Soldier Trail and 7th Street

Completed Project
July 19, 2016





Fiesta District - Southern Avenue, Mesa



Fry Boulevard - West End Corridor Study

Fry Boulevard between Buffalo Soldier Trail and 7th Street

Completed Project
July 19, 2016





Downtown Tolleson - Van Buren Street



Fry Boulevard - West End Corridor Study

Fry Boulevard between Buffalo Soldier Trail and 7th Street

Completed Project
July 19, 2016



Strengths

- Fry Blvd is the entry to Sierra Vista; the existing condition is a call for action
- Business stakeholders are eager to be successful and embrace a change
- Connection to Fort Huachuca
- Ramsey Canyon Preserve / Hummingbird Capital
- Tourism Triangle (Sonoita-Wine Country, Kartchner Caverns, Bisbee, Tombstone)
- Cycling Activities
- Farmers Market
- Mountains / Scenery / Weather
- Great Retirement Community
- A good family environment
- Excellent Sense of Community

Opportunities

- Increase retail development
- Restaurant opportunities
- Increase entertainment options
- Opportunity for businesses to attract young professionals
- Attract more tourism dollars: heads in beds, biking, birding
- Attract manufacturing and tech businesses, defense
- Attract visitors with festivals and special events
- Potential for mixed-use development along Fry in the future

Weaknesses

- Dependence on Fort Huachuca (need for Economic Diversification)
- Perception as just a "retirement community"
- Vacant structures along Fry
- Challenges with funding infrastructure improvement
- Lack of culture, arts, music
- Lack of walk-ability and not bike friendly
- Lack of character along Fry Boulevard
- Young Sierra Vista families shop and play in other communities

Threats

- Adjacent communities – destination dollars
- Resistance to change
- Lack of infrastructure improvement
- Fort Huachuca: Lack of Economic Diversification
- Project Cost



Fry Boulevard - West End Corridor Study

Fry Boulevard between Buffalo Soldier Trail and 7th Street

SWOT Analysis
March 14, 2016



Traffic Analysis

MPO-05 Fry Boulevard West End Corridor Traffic Analysis 7th Street to Buffalo Soldier Trail



Prepared for:



Sierra Vista Metropolitan Planning Organization
401 Giulio Cesare Avenue
Sierra Vista, AZ 85635

Prepared by:



J2 Engineering and Environmental Design
4649 E. Cotton Gin Loop, Suite B2
Phoenix, AZ 85040

Project Number: 150850
July 8, 2016



2016 Traffic Analysis was Completed by Design Team

- Analysis determined that Fry Blvd. could function efficiently as a 3-lane roadway, utilizing a middle turn lane
- 8,775 Average Daily Trips (ADT) at Garden Avenue
- 13,704 ADT at 6th Street
- Comparison: Mill Avenue, Tempe has 15,577 ADT





Fry Boulevard Today - Looking West



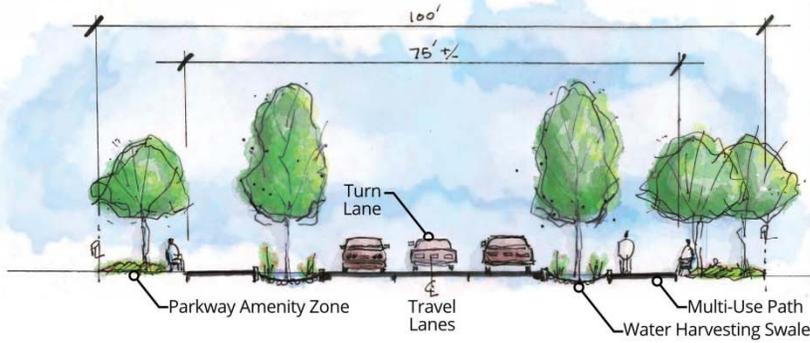
Fry Boulevard - West End Corridor Study

Fry Boulevard between Buffalo Soldier Trail and 7th Street

Existing Conditions
July 19, 2016



Conceptual Section A - Parkway Amenity

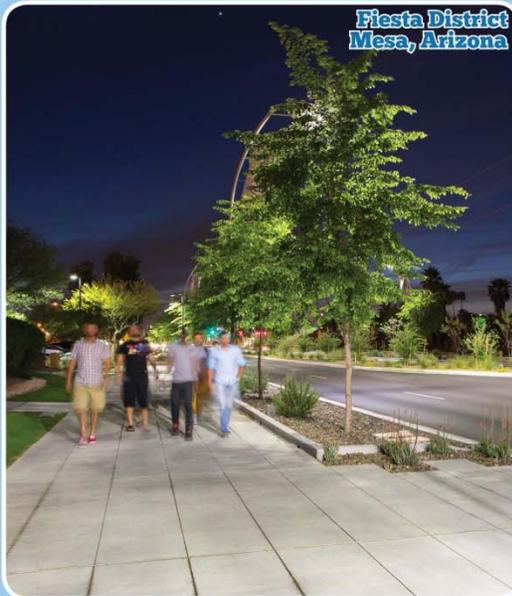


- Functions within existing 75' roadway/sidewalk zone without disturbing adjacent property parking layouts.
- 10' ± Multi-use path supports pedestrian and bicycle activities.
- Includes 10' water harvesting swales which act as planting buffers between multi-use path and vehicular traffic.
- The parkway amenity zone can harvest stormwater runoff while providing additional space for community activities where feasible.

Existing Conditions

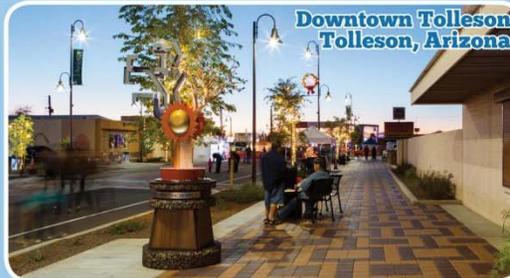


Multi-Use Path



Multi-Use Paths are pedestrian thoroughfares that are wide enough to support pedestrians, runners, wheelchairs, parents with strollers, bicyclists, and scooters.

Parkway Amenity Zone



An amenity zone is an additional area within the city right-of-way that provides a variety of features for public use. Amenities can take the form of plazas, seating, water features, wayfinding elements, monumentation, public art, shade structures, parklets, and economic incubators.



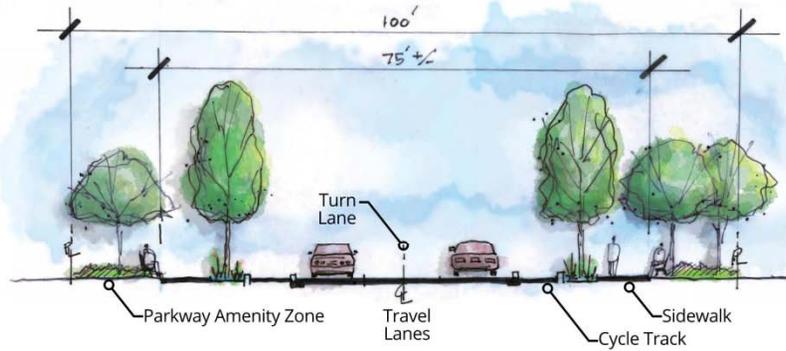
Concept Sketch - 'Project Completion'



Concept Sketch - '10 Year View'



Conceptual Section B - Cycle Track

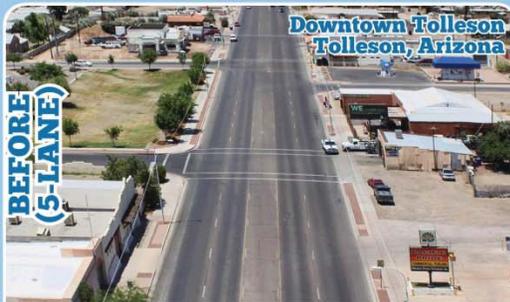


- Functions within existing 75' roadway/sidewalk zone without disturbing adjacent property parking layouts.
- A cycle track bike lane physically separates cyclists from vehicular and pedestrian traffic by using a concrete curb and planting zone buffer, respectively.
- The parkway amenity zone can harvest stormwater runoff while providing additional space for community activities where feasible.

Existing Conditions

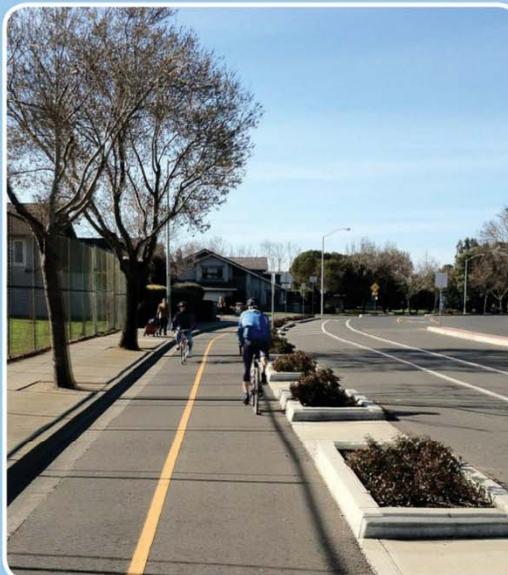


Road Right-sizing



Reducing a five-lane roadway to a three-lane roadway could provide space on Fry Boulevard for multiple amenities.

Cycle Track



Cycle tracks are protected bike lanes that separate bicyclists from vehicles and pedestrians. Barriers vary from concrete curbs, landscape areas, raised medians, reflective highway markers to simple painted warning lines.

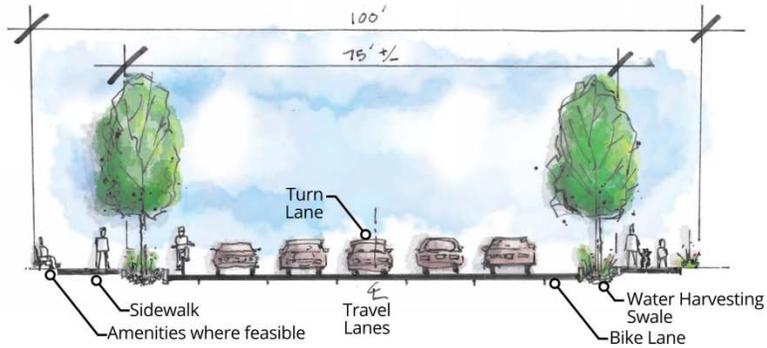
Concept Sketch - 'Project Completion'



Concept Sketch - '10 Year View'



Conceptual Section C - Five Lane Parkway



- A five lane alignment utilizes the entirety of the Fry Boulevard's 100' right-of-way.
- Water harvesting swales are an efficient, flexible infrastructure improvement that reduces water runoff volume and velocity during heavy storm events.

Existing Conditions

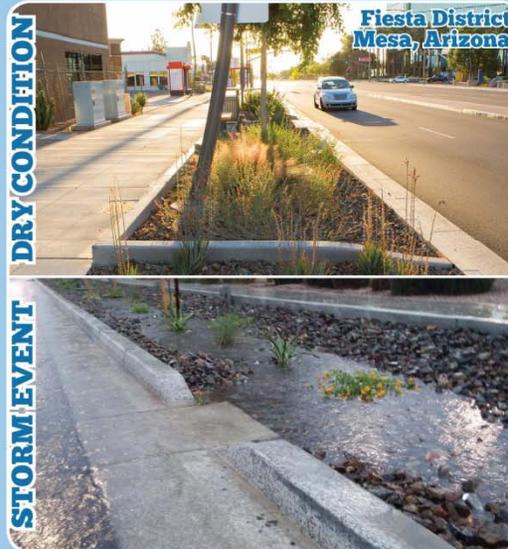


Five Lane Roadway



Fry Boulevard currently supports a five lane roadway alignment with 13' wide travel lanes and 5' sidewalks. Improvements would involve the reduction of lanes and extension of pedestrian amenities to the full city right-of-way of 100'.

Water Harvesting Swale



Water harvesting swales implemented within the city right-of-way efficiently manage roadway flooding during severe storm events. Properly designed, swales and other stormwater management techniques reduce the volume of stormwater from all travel lanes and relieve burdens on drainage infrastructure -- saving money on future maintenance and upkeep.

Concept Sketch - 'Project Completion'



Concept Sketch - '10 Year View'

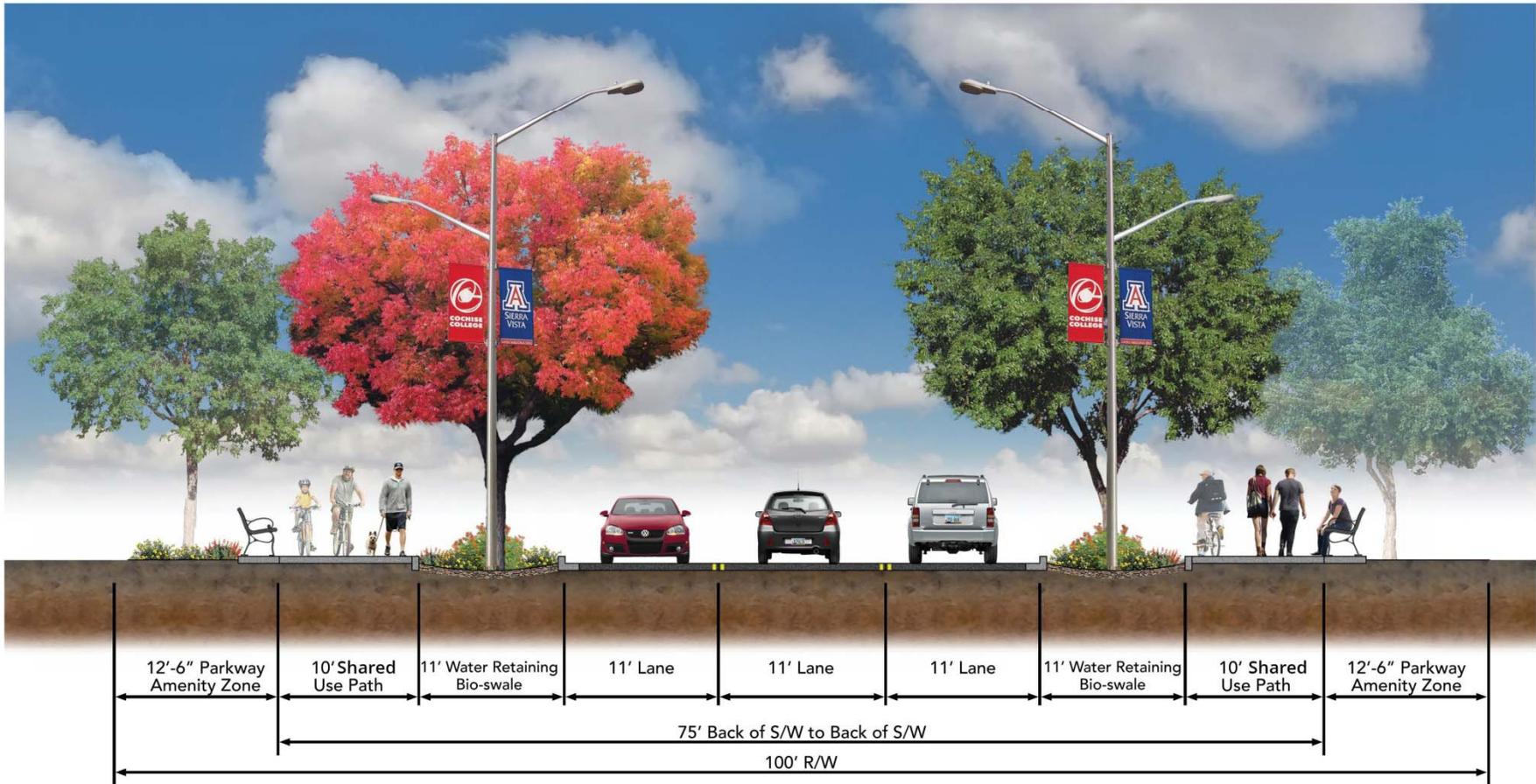


Fry Boulevard - West End Corridor Study

Fry Boulevard between Buffalo Soldier Trail and 7th Street

Concept C - Five Lane Parkway

February 1, 2016

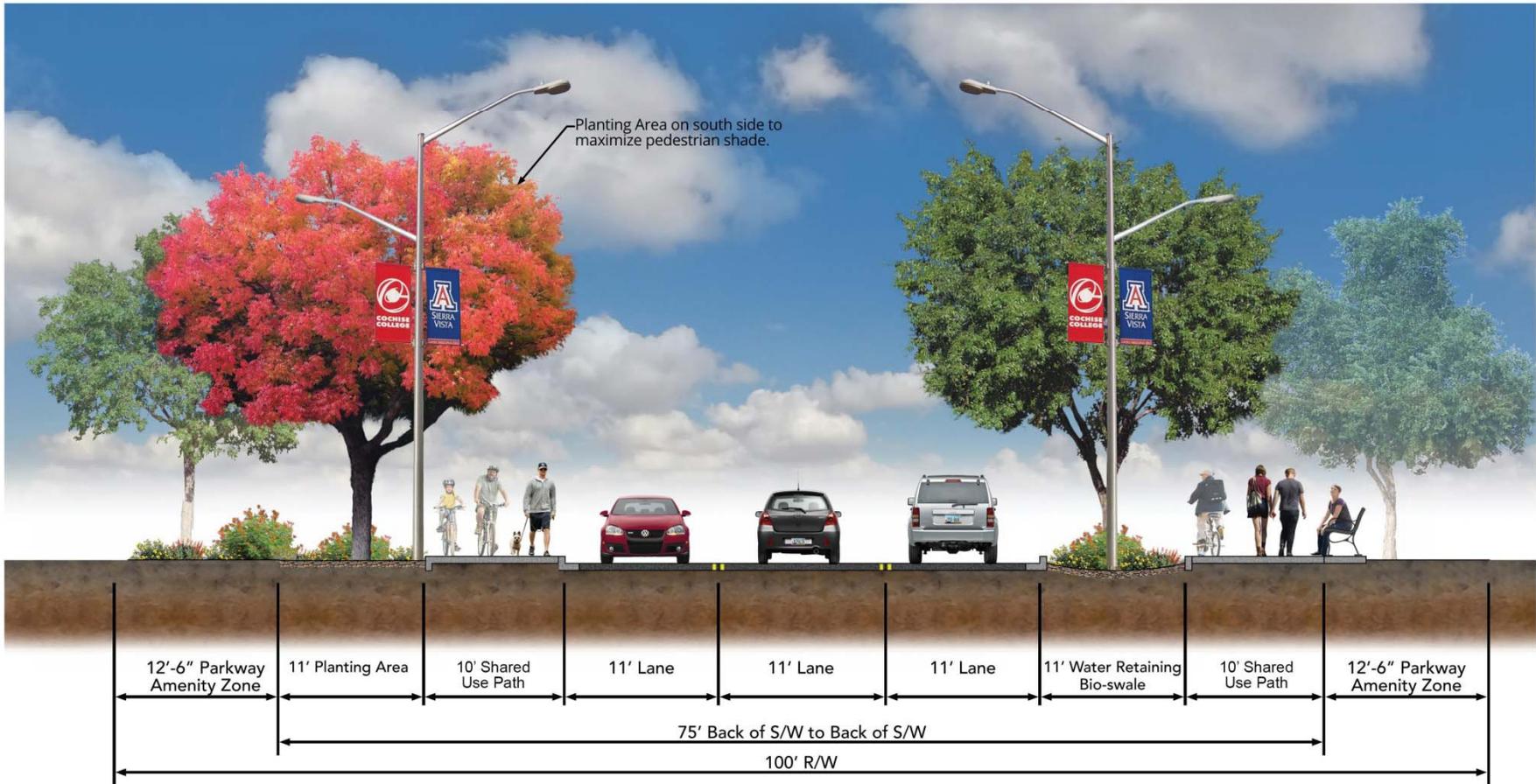


Fry Boulevard - West End Corridor Study

Fry Boulevard between Buffalo Soldier Trail and 7th Street

Typical Section
April 5, 2016





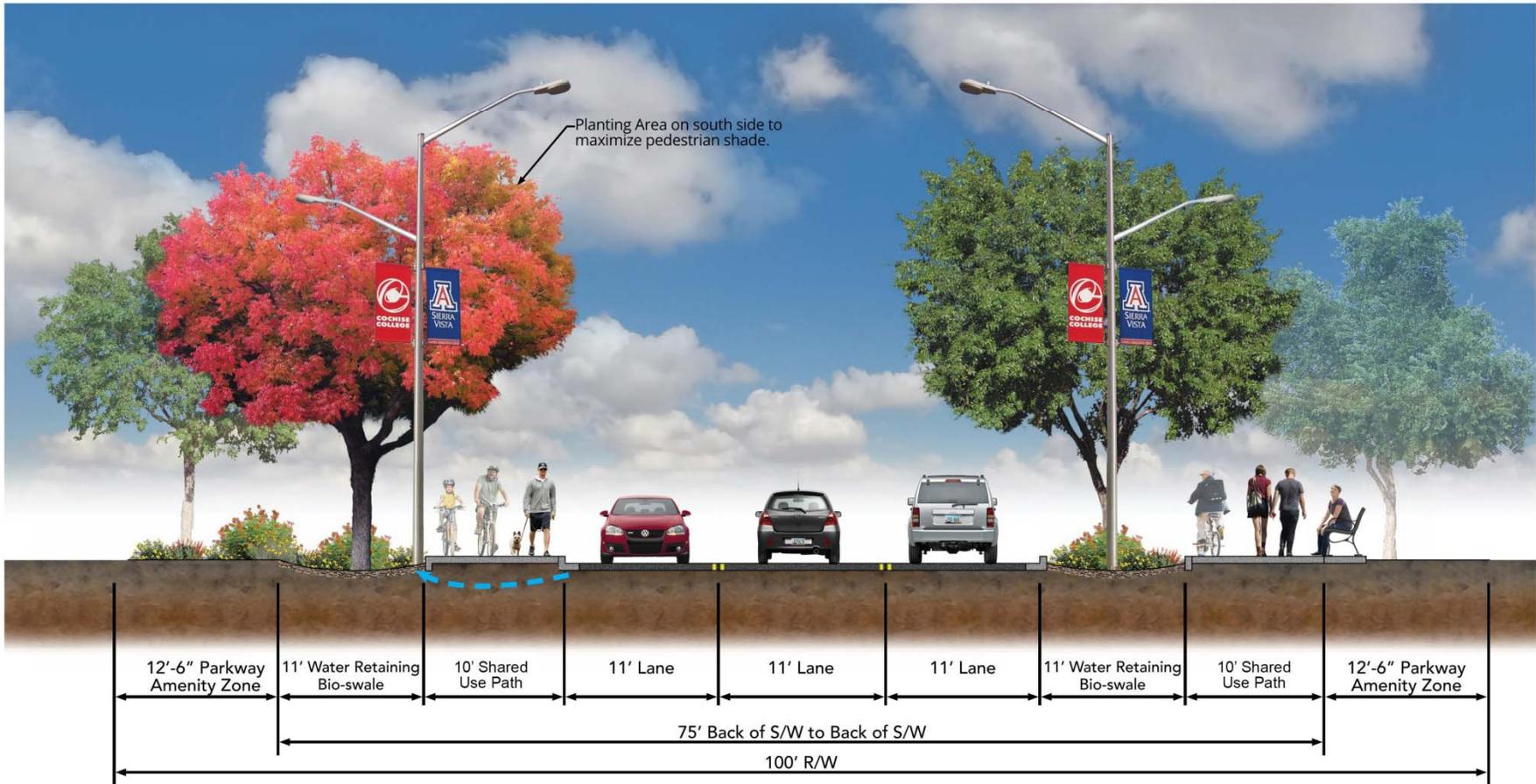
Fry Boulevard - West End Corridor Study

Fry Boulevard between Buffalo Soldier Trail and 7th Street

Alternate Section

April 5, 2016





Fry Boulevard - West End Corridor Study

Fry Boulevard between Buffalo Soldier Trail and 7th Street

Alternate Section with Swale

April 5, 2016



Stakeholder & Public Outreach



Meeting Milestones

October 16, 2015
Kickoff Meeting/Brainstorming Session

November 17, 2015
City Council Corridor Study Presentation

January 21, 2016
Individual Business Outreach

February 1, 2016
Business Roundtable Discussion #1

March 1, 2016
Study Project Team Meeting/Individual
Business Outreach

March 14, 2016
Business Roundtable Discussion #2

April 5, 2016
Public Meeting Presentation



Fry Boulevard - West End Corridor Study
Fry Boulevard between Buffalo Soldier Trail and 7th Street

Stakeholder & Public Outreach
July 26th, 2016





Fry Boulevard - West End Corridor Study

Fry Boulevard between Buffalo Soldier Trail and 7th Street

Existing Conditions
April 5, 2016





Fry Boulevard - West End Corridor Study

Fry Boulevard between Buffalo Soldier Trail and 7th Street

Street View Rendering

April 5, 2016



Rain Garden



Natural Inspiration



Street Lighting / Wayfinding



Complete Streets



Fry Boulevard - West End Corridor Study

Fry Boulevard between Buffalo Soldier Trail and 7th Street

Parkway Amenity - Mountain Rain Garden Conceptual Inspiration
April 5, 2016



Hardscape Materials



Planting Palette

Street Trees



Accent Trees



Accents



Shrubs



Full-Length Project – BST to 7th Street

Preliminary Cost Estimate: \$7.2 million



Matchline - See Bottom Left



Matchline - See Upper Right



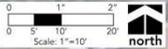
Fry Boulevard - West End Corridor Study
Fry Boulevard between Buffalo Soldier Trail and 7th Street

Full-Length Project – BST to 7th Street
 April 5, 2016



First-Stage Project– BST to Fab Ave. Preliminary Cost Estimate: \$2.3 million





Fry Boulevard - West End Corridor Study
 Fry Boulevard between Buffalo Soldier Trail and 7th Street

Expanded Plan View
 April 5, 2016





Fry Boulevard - West End Corridor Study

Fry Boulevard between Buffalo Soldier Trail and 7th Street

Street View Rendering

April 5, 2016





Fry Boulevard - West End Corridor Study

Fry Boulevard between Buffalo Soldier Trail and 7th Street

Existing Conditions
April 5, 2016



Thank You Questions and Answers



Fry Boulevard Today - Looking West



Fry Boulevard - West End Corridor Study

Fry Boulevard between Buffalo Soldier Trail and 7th Street

Existing Conditions
July 26th, 2016



Sierra Vista

Fry Boulevard

West End Corridor Study



Table of Contents

2

Acknowledgements



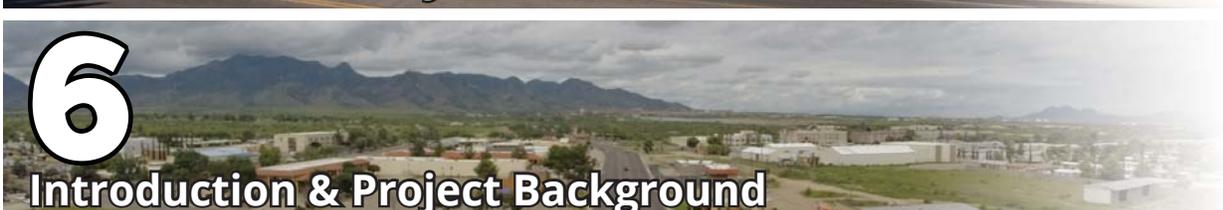
3

Executive Summary



6

Introduction & Project Background



8

Corridor Analysis & Brainstorming



13

Stakeholder Involvement & Outreach



14

Implementation Plan



15

Preliminary Cost Estimate



19

Appendix





Acknowledgements

The J2 Engineering & Environmental Design Team would like to acknowledge the following City Council members and City Staff members who contributed to the MPO-05; Fry Boulevard, West End, Corridor Study. Special thanks are in order to Dan Coxworth, Administrator of the Sierra Vista Metropolitan Planning Organization (MPO).

Mayor and City Council

Mayor

Rick Mueller

Mayor Pro Tem

Bob Blanchard

Council Member

Alesia Ash

Council Member

Gwen Calhoun

Council Member

Rachel Gray

Council Member

Henrietta "Hank" Huisking

Council Member

Craig Mount

City Staff

City Manager

Charles P. Potucek

Assistant City Manager

Mary Jacobs

Public Works Director

Sharon Flissar

Community Development Director

Matt McLachlan

Economic Development Manager

Simone McFarland

Sierra Vista Metropolitan Planning Organization

Administrator

Dan Coxworth

Additionally, the input of the residents, business owners, stakeholders, and Sierra Vista West End Commission members has been invaluable in guiding this project.

Thank you very much!



Executive Summary

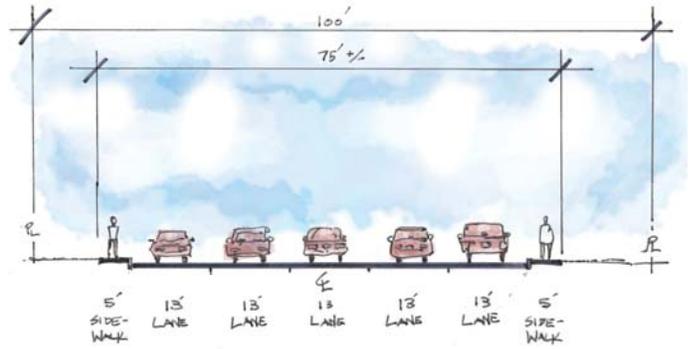
The Fry Boulevard West End Corridor Study (The Project) – Fry Boulevard between Buffalo Soldier Trail (BST) and 7th Street, is a corridor revitalization project that originated from the Sierra Vista City Council's strategic objective to "Update and implement a plan to beautify public infrastructure that increases walkability and bike-ability on Fry Boulevard and North Garden Avenue."

The Project will ultimately encompass the revitalization of Fry Boulevard between BST and 7th Street with improvements that will enhance economic development through reinvestment by businesses, property owners, and future private development. The primary objective of The Project is to showcase Fry Boulevard as an economically vibrant "Front Door" to Sierra Vista that promotes the City and the thoroughfare as a destination environment, attracting new businesses and visitors and enhancing the lives of Sierra Vista's residents as put forth in the *Vista 2030: Sierra Vista General Plan*.

As it stands today, the existing framework of Fry Boulevard within the West End is not an efficient use of city-owned right of way, with several areas being unused and unproductive. To increase the effectiveness of Fry Boulevard and the economic vibrancy of the West End, this report includes multi-modal transportation and streetscape recommendations based upon stakeholder, public, City Council, City Staff, Sierra Vista Metropolitan Planning Organization (SVMPO), and Design Team input. In addition, an understanding of community



Fry Blvd. showing city ROW and roadway.



Existing Fry Blvd. section.

values, history, branding and marketing potential, and future development scenarios has been utilized throughout the Project process. This study also includes placemaking elements, urban design analysis, a streetscape preliminary alignment plan, opinion of probable costs, and strategies for successful project implementation.

Full Project Study Area





Executive Summary

Proposed Project: The Design Team has worked with City Staff to identify a first-stage design and construction project that will set the precedent for the City's long-term vision for Fry Boulevard and the West End. Although the planning aspect of this report spans the entire one mile from BST to 7th Street, the Design Team and City Staff realized that a cost-effective and functional first-stage project could serve as the genesis of this revitalization. The recommended first-stage project runs from BST east to Fab Ave. (see exhibits X and Y for Preferred Section and Plan Graphics). The Project runs approximately 0.23 miles including the Garden Ave. intersection.

The framework for the project improvements consists of utilizing the 100-foot wide road right-of-way efficiently to implement a more balanced, multi-modal Fry Boulevard corridor that is safe for vehicles, bicycle riders, and pedestrians. A traffic study was completed as part of the Project and it was determined that the existing 5 lanes are not being fully utilized in terms of vehicular traffic volume. The traffic analysis looked at the possibility of a

lane reduction along Fry Boulevard from Buffalo Soldier Trail to 7th Street. This narrowing of the roadway was analyzed during the AM and PM peak hours to year 2040 and was found to provide acceptable levels of service and traffic operation. A lane reduction, also known as "road right-sizing" has been utilized by many communities to better balance transportation modes and to economically stimulate a streetscape or district corridor.



Shared-Use Paths are pedestrian thoroughfares wide enough to support a variety of users.

The proposed first-stage project consists of reducing the existing 5 lanes to 3 lanes (counting the median turn lane), which would provide room for a variety of amenities, aesthetics, and placemaking opportunities that will help to energize the Fry Boulevard Corridor (see proposed Section). The existing narrow sidewalks will be expanded into 10-foot wide shared-use paths, providing space to efficiently support both bicyclists and pedestrians. Additionally an 11-foot wide water-harvesting swale will allow street stormwater to flow into the landscape zone, helping to reduce strain on the local drainage infrastructure during storm events while providing deep natural watering to street trees. In addition, the water-harvesting swale will provide a buffer separating pedestrians and bike riders from vehicular traffic, while trees and understory plantings will shade and cool users of the shared-use path. Providing a buffer space between vehicular traffic and pedestrians/bicyclists greatly improves the safety and comfort for those walking and bicycling.

The proposed improvements will create a safer, more pedestrian-friendly multi-modal environment, while providing room for the many amenities that will develop the Fry Boulevard corridor into a unique destination environment with a true sense of place

Road Right-sizing

Downtown Tolleson
Tolleson, Arizona

Reducing a five-lane roadway to a three-lane roadway could provide space on Fry Boulevard for multiple amenities.



Executive Summary

(see street view rendering). Overall, Fry Boulevard will function as an efficient 3-lane roadway with additional right-turn lanes where required. The 3-lane roadway will also serve to shorten crosswalk lengths, which will increase pedestrian safety and increase walk-ability along the streetscape.

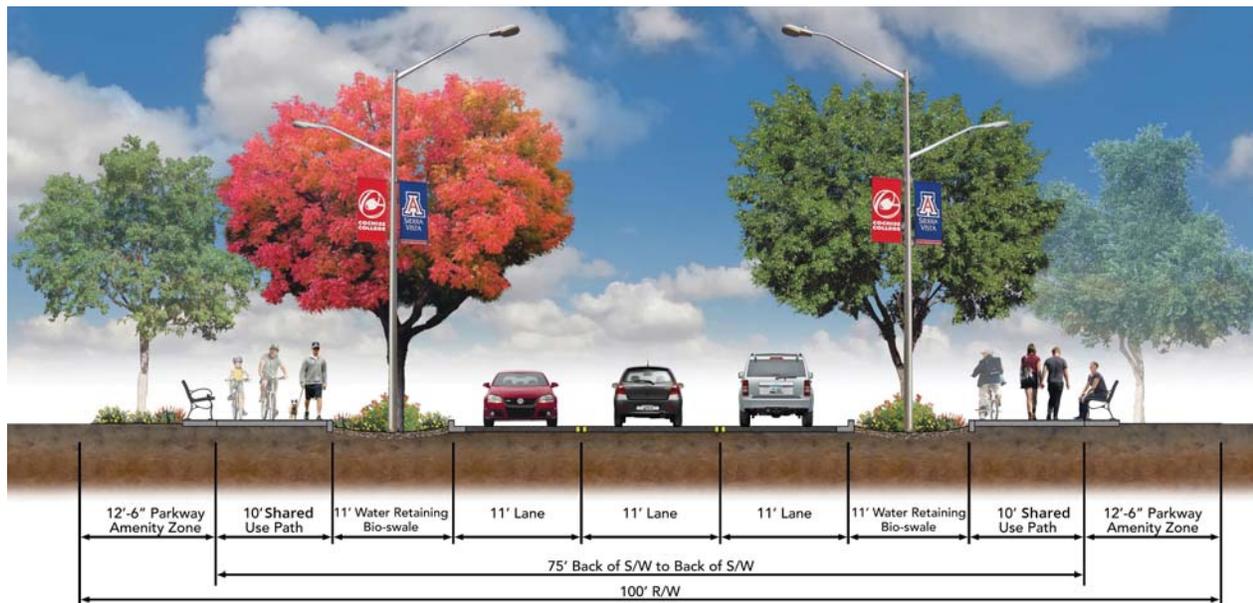
The proposed first-stage project includes: wider shared-use paths (sidewalks), new energy-efficient LED roadway and pedestrian lighting, new roadway paving, light pole accent banners, enhanced pedestrian paving, enhanced crosswalk and median turn lane paving (not a raised median), bus shelters, street trees and landscaping, a mid-block pedestrian crossing, automated drip irrigation system, street

furnishings (benches, seatwalls, tables, chairs and litter receptacles), bike racks, locations for future artwork and interpretive elements, new curb and gutter, electrical outlets for future tree lighting, water hookups for special events, and custom directional wayfinding signage. In addition, there will now be room for pedestrian plazas and small pocket parks.

The estimated construction cost for this first-stage project from Buffalo Soldier Trail to Fab Avenue is \$2.25 million which includes a 20% contingency. Engineering design for this first-stage project is not included in this number and generally runs approximately 10% of construction costs.



First-Phase Project - Buffalo Soldier Trail to Fab Ave.



Typical Conceptual Section



Introduction & Project Background

The City of Sierra Vista lies in southwest Cochise County, Arizona. Sierra Vista is approximately 14 miles from the U.S./Mexican border, 60 miles southeast of Tucson, Arizona, and 160 miles southeast of Phoenix, Arizona. Fry Boulevard, a minor arterial roadway, runs west to east through the city and merges into State Route 90 to the east of the project area. Nearby attractions and municipalities include Kartchner Caverns State Park, Benson, Bisbee, Fort Huachuca, Huachuca City, Sonoita-Elgin wine country, Tombstone, and the San Pedro Riparian National Conservation Area. As of 2010 the population of the City of Sierra Vista was 43,888.

In the summer of 2015, the Design Team was selected to provide planning and conceptual design services for potential improvements to Fry Boulevard in Sierra Vista's West End. The Project is known as the **Fry Boulevard West End Corridor Study**. Fry Boulevard is a major commercial urban thoroughfare in Sierra Vista running west and east from the Main Gate of Fort Huachuca at Buffalo Soldier Trail to State Route 90. Less than a one mile stretch of the road is in the City's West End, the oldest area of town where businesses along the road are small and mostly locally owned. This area of town is in the City's redevelopment area and the City of

Sierra Vista is now considering alternatives that will improve economic development and reinvestment by business and property owners and allow this section of road to be more pedestrian friendly. To create a safe and welcoming community, one of the Sierra Vista City Council's strategic objectives is to "Update and implement a plan to beautify public infrastructure that increases walk-ability and bike-ability on Fry Boulevard and North Garden Avenue." The Fry Boulevard West End Corridor Study has identified multi-modal transportation and streetscape design options, green infrastructure improvements, and programmatic strategies to improve the corridor with a particular focus on how transportation and streetscape strategies impact placemaking and economic development. The focus of the Project is in the area between Buffalo Soldier Trail and 7th Street.

2016 Fry Boulevard Traffic Analysis: A traffic analysis, dated April 2016, was completed by the Design Team to document existing and future traffic conditions and to provide recommendations for use as a foundation for determining the potential of Fry Boulevard from Buffalo Soldier Trail to 7th Street (See MPO-05 Fry Boulevard West End Corridor Traffic Analysis - 7th Street to Buffalo Soldier Trail).



Fry Blvd. existing conditions. Buffalo Soldier Trail to 7th Street.



Introduction & Project Background

Although there are continuous sidewalks abutting Fry Boulevard, the majority of the pedestrian amenities are not ADA (American with Disabilities Act) compliant. Additionally bike and transit facilities are not currently provided along the corridor.

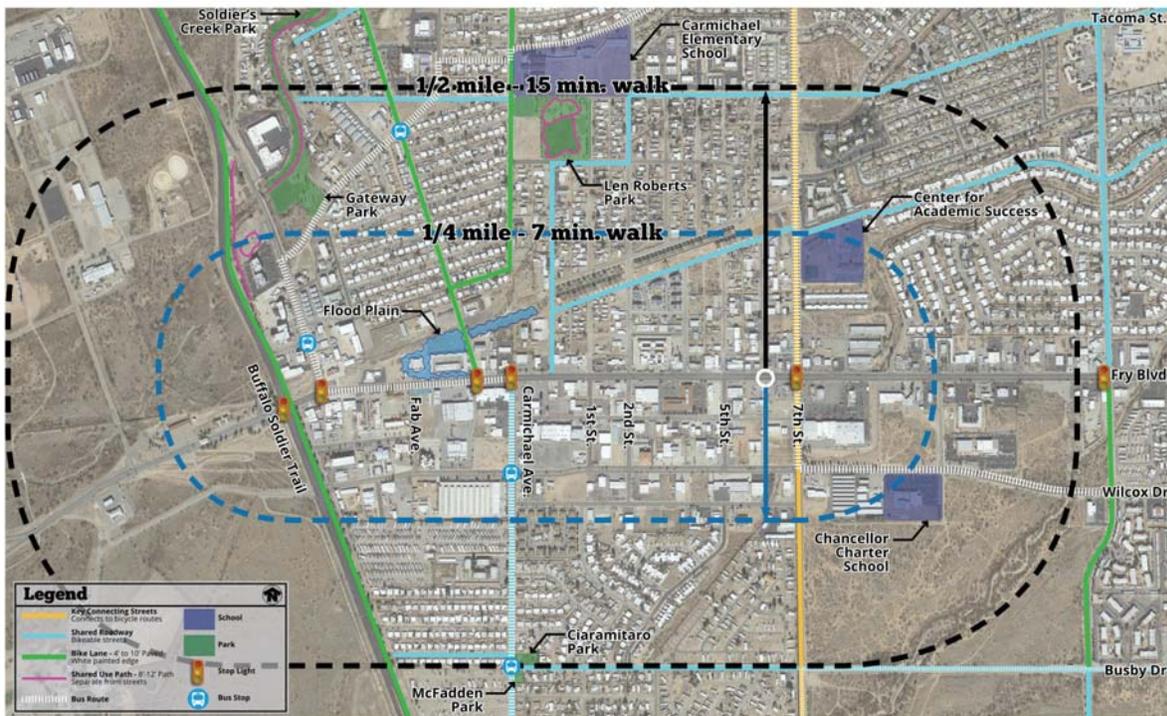
The traffic analysis looked at the possibility of a lane reduction along Fry Boulevard from Buffalo Soldier Trail to 7th Street. This potential narrowing of the roadway was analyzed during the AM and PM peak hours to year 2040 and was found to provide acceptable levels of service and traffic operation along Fry Boulevard in a lane reduction scenario.

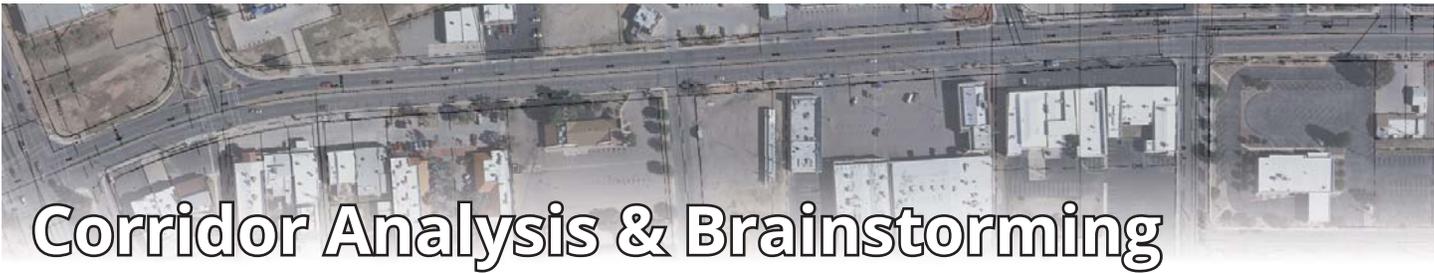
The analysis also recommended incorporating multi-modal enhancements - including pedestrian, bicycle, transit, and parking improvements, in order to support the goals of the *Vista 2030 Sierra Vista General Plan*, *City of Sierra Vista SAFE Bicycle and Pedestrian Routes Plan*, and *Sierra Vista Transportation Efficiency Study*.

In order to improve safety, enhance economic development opportunities, and achieve an improved multi-modal balance of vehicular, pedestrian, bicycle, and mass transit traffic, the Design Team proposed a lane reduction from the existing 5-lane scenario (counting middle turn lane) to a 3-lane

scenario for the Fry Boulevard Corridor between BST and Fab Avenue.

The opportunity: Due in large part to the rerouting of State Route 90 away from Fry Boulevard in the 1970's and the recent shift of Fort Huachuca's main gate entrance northward to the Van Deman Gate, the existing Fry Boulevard corridor has fairly low vehicular traffic volume for a 5-lane arterial roadway. The traffic study determined that 8,775 Average Daily Trips (ADT) occur just east of Garden Avenue and 13,704 ADT occur just west of 6th Street. This provides an opportunity to reduce a single traffic lane in each direction in order to develop a more balanced, multi-modal Fry Boulevard corridor that is safe for vehicles, bicycle riders, and pedestrians – while still allowing for efficient movement of vehicular traffic. In many communities throughout Arizona and the United States, this approach has produced dynamic positive results in terms of economic development opportunities, beautification, safety improvements, placemaking, low-impact development/green infrastructure improvements, and overall community health and wellness. There is excellent opportunity for the Sierra Vista community to achieve similar results with a revitalization of the Fry Boulevard corridor in the West End.





Corridor Analysis & Brainstorming

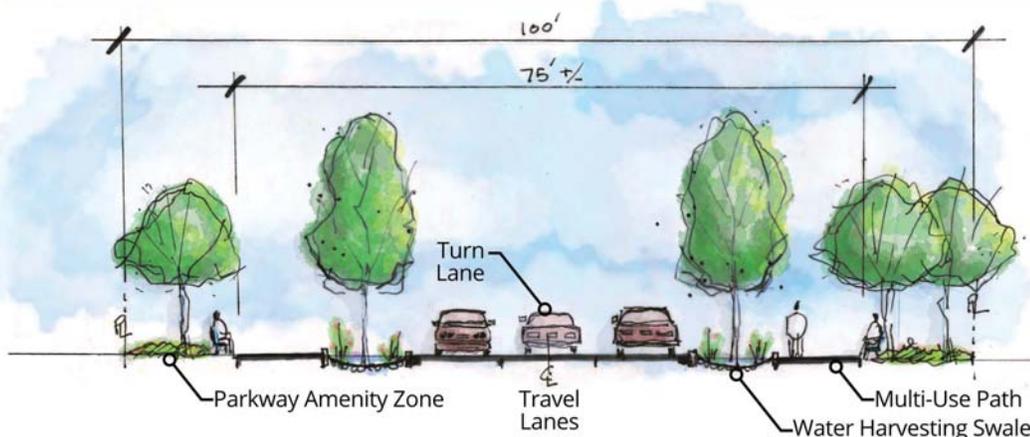
The Design Team began the Project by conducting several site visits and looking at the strengths and opportunities that Sierra Vista has to offer. For example, with the connection to Fort Huachuca and the proximity to other local tourism attractions, Sierra Vista – and the Fry Boulevard West End Corridor - is a prime location to attract tourism dollars and attract new businesses and private development. A major opportunity would be that the corridor also provides an outstanding potential to become a community centerpiece for Sierra Vista residents in a revitalized live/work/play atmosphere. The community of Sierra Vista, business stakeholders and property owners were engaged in this analysis and community brainstorming phase and many embraced a potential change, which is exceptionally valuable and is unique compared to many other communities. In the case of the Fry Boulevard project area, positive change has the potential to significantly promote economic growth and the City of Sierra Vista has a strong foundation to build a unique corridor destination in the West End.

The Design Team began gathering existing data, analyzing Fry Blvd., and evaluating how the project area currently interacts with the larger context of Sierra Vista. An important element of pedestrian access was determining what amenities could be accessed within a 1/4 to 1/2 mile walk from the project limits. The Design Team looked at existing and

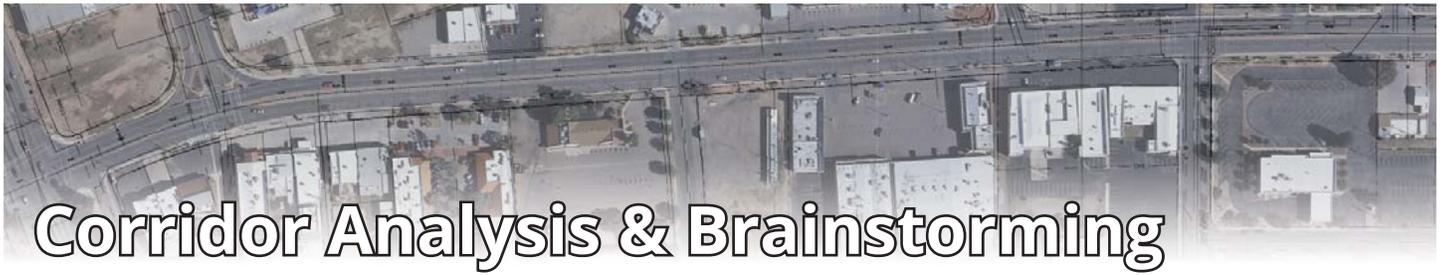
proposed recreation amenities, school facilities, bus stops & routes, and bicycle amenities that connect to the Fry Boulevard Corridor. It was determined that several neighborhoods, parks & open space elements, and schools are within a comfortable 1/2-mile walk from the Fry Corridor. See Site Context Map. During this analysis it was also identified that there currently is a lack of “destination” and “sense of place” along the corridor – with no significant existing character. The project area is heavily auto-centric with narrow sidewalks, minimal shade and street trees, and it lacks pedestrian and bicycle amenities and facilities; the streetscape is simply not comfortable for pedestrians or bike riders. The current reality is that the West End vicinity does not offer the private development community and/or local entrepreneurs a solid reason to invest in the project area. In addition, many young families shop and play in other communities. Several vacant businesses and lots within the West End also add to some frustration for local residents and stakeholders. There is also a perception that Sierra Vista is simply “just a retirement community” that lacks culture, arts, and music.

To further define major factors affecting the corridor, the Design Team developed a Strengths-Weaknesses-Opportunities-Threats (SWOT) analysis (see SWOT exhibit) based on input from business stakeholders, property owners, public meeting

Conceptual Section A - Parkway Amenity



- Functions within existing 75' roadway/sidewalk zone without disturbing adjacent property parking layouts.
- 10' ± Multi-use path supports pedestrian and bicycle activities.
- Includes 10' water harvesting swales which act as planting buffers between multi-use path and vehicular traffic.
- The parkway amenity zone can harvest stormwater runoff while providing additional space for community activities where feasible.



Corridor Analysis & Brainstorming

Strengths

- Fry Blvd is the entry to Sierra Vista; the existing condition is a call for action
- Business stakeholders are eager to be successful and embrace a change
- Connection to Fort Huachuca
- Ramsey Canyon Preserve / Hummingbird Capital
- Tourism Triangle (Sonoita-Wine Country, Kartchner Caverns, Bisbee, Tombstone)
- Cycling Activities
- Farmers Market
- Mountains / Scenery / Weather
- Great Retirement Community
- A good family environment
- Excellent Sense of Community

Weaknesses

- Dependence on Fort Huachuca (need for Economic Diversification)
- Perception as just a “retirement community”
- Vacant structures along Fry
- Challenges with funding infrastructure improvement
- Lack of culture, arts, music
- Lack of walk-ability and not bike friendly
- Lack of character along Fry Boulevard
- Young Sierra Vista families shop and play in other communities

Opportunities

- Increase retail development
- Restaurant opportunities
- Increase entertainment options
- Opportunity for businesses to attract young professionals
- Attract more tourism dollars: heads in beds, biking, birding
- Attract manufacturing and tech businesses, defense
- Attract visitors with festivals and special events
- Potential for mixed-use development along Fry in the future

Threats

- Adjacent communities – destination dollars
- Resistance to change
- Lack of infrastructure improvement
- Fort Huachuca: Lack of Economic Diversification
- Project Cost



Corridor Analysis & Brainstorming

attendees, and input from past projects. The SWOT focused the Design Team on several key factors that were helpful in determining where many in the community see Sierra Vista needing to gravitate over the next decade.

The Design Team also evaluated the existing Fry Boulevard roadway section, existing businesses, park and public amenities, existing vehicular traffic and pedestrian circulation routes, and designated flood plains within the Project area. See Project Area Map.

The analysis and brainstorming provided direction for the Design Team to develop a conceptual framework that will enhance the economic, health, safety & wellness, multi-modal, and placemaking potential for the project area. This input and brainstorming resulted in three potential roadway sections that were developed for the purpose of design investigation and to facilitate public input. (See Proposed Road Sections). Concept A – “Parkway Amenity” entailed reducing the existing five lanes of traffic to three, narrowing of lanes, adding shared-use paths, incorporating Low Impact Development (LID) practices such as water-harvesting swales, and utilizing unused right of way as a parkway amenity zone where applicable. Concept B – “Cycle Track” reduced the five lanes to three and narrowed the lanes, expanded the existing sidewalk while implementing water-harvesting swales, provided park amenity zones, and proposed a separated “cycle track” that would physically separate vehicles from bicyclists with a raised curb. This scenario was unpopular due to excess space being taken by the cycle track. Concept C – “Five Lane Parkway” entailed keeping all five existing travel lanes, adding a bike lane, expanding the sidewalk, and implementing water-harvesting swales. To maintain the existing five lanes, this scenario would expend the entire 100’ right of way, eliminating some business access and parking that currently resides in the City right-of-way. As a result this scenario was not well liked. Concept A – “Parkway Amenity” was overwhelmingly the preferred option when presented to stakeholders and City Staff.

The Design Team also proposed streetscape elements that would create a unique sense of place that is desired in Sierra Vista. The incorporation of “complete street” principles was desired in the Vista 2030: Sierra Vista General Plan and these elements will be incorporated throughout the proposed improvements along Fry Boulevard. The amenities and elements proposed for the Fry Boulevard conceptual framework were developed with an eye toward the natural beauty of the Huachuca Mountains, the military history and southwest culture of the area, and ways that Sierra Vista’s Extraordinary Skies and Uncommon Ground branding could be reflected along the corridor. The Design Team produced conceptual imagery, photos, and renderings that would serve as inspiration for the corridor improvements. The overall proposed design concept for the corridor was titled “Mountain Rain Garden” reflecting the mountain views and parkway design with its drought-tolerant but lushly planted water harvesting swales. **The key design elements proposed for the Project Improvements included:**

- Pedestrian Paving - the primary 10’ wide pedestrian paving will be integral colored concrete. This wide pathway provides both bicycle and pedestrian activity, called a “shared-use path” along with seating, bike racks, and litter receptacles. This allows bicycle riders the ability to ride on the path in a much safer environment than on-street bike lanes.
- Benches & Seat Walls (Seatwalls are an optional item to be evaluated during final design) – These elements will be located in areas of high activity or at decision points along the path to frame space and provide opportunities to gather and socialize. The seat wall materials would reflect the stones of the Huachuca Mountains to present a dynamic appearance.



Stone benches



Corridor Analysis & Brainstorming

• Tables & Chairs (Social Seating) - located in areas of high commercial activity or adjacent restaurants. The objective is to get pedestrians to interact with each other, to linger and support local businesses, define a unique sense of place, and promote a sense of community.

• Water Harvesting Swales – 11' wide planted swales (1' deep) will be implemented along the streetscape to accommodate roadway and sidewalk stormwater, which will provide deep watering of plants and trees.



• Bike Racks –bike rack designs will mirror the themes presented in the 2015 Branding Study. The ability to have distinctive elements helps to develop a unique theme and sense of place.



Conceptual Bike Racks from 2015 Branding Study

• Street Trees and Low Water Use Landscape - Street trees will be selected based on their ability to survive in the West End environment and provide abundant shade. The shrubs and accents will be sight visibility restriction-compatible, low maintenance, hardy plants with visual interest. The vegetation would be designed so that very minimal water use would be needed, particularly long-term.

• Light Poles will continue the theme that has been set by previous Sierra Vista projects. Roadway and pedestrian light poles will be integrated using energy-efficient LED fixtures to create a safe, welcoming environment. Accent banners will be installed on the roadway poles to enhance the visual identity of Fry

Boulevard.

• Directional Wayfinding Signage – Wayfinding Elements will be strategically located throughout the corridor to direct visitors to city attractions and facilities. These directional elements will utilize similar materials, architecture, and design styles of existing elements.

• Enhanced Pavement Crosswalks – The enhanced crosswalks will incorporate roadway unit pavers to improve pedestrian safety by better defining the crosswalk.

• Utility Infrastructure for Festivals – Outdoor electrical receptacles are proposed for each street tree along the corridor for use as twinkle-light and holiday light outlets. In addition, these outlets may be used by vendors for future street fairs and festivals, providing tremendous potential for large-scale community and regional events in the West End. There will be several areas where 4-plex outlets will be provided for music/stage performance zones. There will also be several “locking hose-bib water bollard” locations for potable water hookups, also for special events.

• Art Elements (future element) – One aspect that can be a unique unifying element is public artwork. Although the public art itself is not part of this estimate, the City will be able to procure future artwork for the base pedestals, which would be part of the project and could serve as seatwalls until art is in place. Conduit will be stubbed to the base pedestals for future potential uplighting of future art. There are numerous ways to implement future art work, including community art, local schools, or a request for artist proposals.



Public Art in Tolleason, Arizona



Corridor Analysis & Brainstorming

In summary, the Corridor Analysis & Brainstorming phase allowed the Design Team to work with Stakeholders to develop a conceptual framework that produced a design concept that could serve to revitalize the Fry Boulevard West End Corridor. The renewed Fry Boulevard is envisioned as a destination environment for the community and region that incorporates complete street, green infrastructure, and low-impact development (LID) principles for long-term economic and community sustainability, while providing a more pedestrian-friendly, multi-modal transportation environment.

The Design Team began the Project by conducting several site visits and looking at the strengths and opportunities that Sierra Vista has to offer. For example, with the connection to Fort Huachuca and the proximity to other local tourism attractions, Sierra Vista – and the Fry Boulevard

West End Corridor - is a prime location to attract tourism dollars and attract new businesses and private development. A major opportunity would be that the corridor also provides an outstanding potential to become a community centerpiece for Sierra Vista residents in a revitalized live/work/play atmosphere. The community of Sierra Vista, business stakeholders and property owners were engaged in this analysis and community brainstorming phase and many embraced a potential change, which is exceptionally valuable and is unique compared to many other communities. In the case of the Fry Boulevard project area, positive change has the potential to significantly promote economic growth and the City of Sierra Vista has a strong foundation to build a unique corridor destination in the West End.



Expanded rendered plan view of conceptual Proposed First Stage Project. (Detail Enlargement View)



Stakeholder Involvement & Outreach

A key component to developing a successful, workable, and functional Project was to engage the business owners, property owners, West End Commission, residents, City and MPO staff, and other area stakeholders to identify the needs and vision for the future. The project schedule included two stakeholder meetings exclusively for businesses, discussions with individual stakeholders, collaboration with the City, County, and MPO, and a public meeting for all interested individuals to learn about the proposed concepts and have their voices be heard. A local project hotline was also set up by the Project Team in addition to the website operated by the SVMPO (www.svmpos.org).

To reach out to businesses in the West End corridor project area, mailers were sent to property and business owners, followed by personal visits to deliver information to encourage participation. This involvement provided input that assisted in the conceptual design, function, and amenities along Fry Boulevard's West End. A follow-on meeting exclusively for businesses provided an opportunity for additional input and comments on refined Design Team plan concepts. This meeting yielded a much larger interest and discussion with business owners as well provided the impression that businesses were beginning to coalesce and work toward a common vision and goal for the Project. To that end, many businesses were present at the public meeting where they shared their thoughts with the general public about their desires to help the West End redevelop and revitalize into a destination for now and the future. One business owner put it well when he said, ***"The West End is where Sierra Vista began, but it's not where it ends"***.

These open discussions and interactive sessions with businesses, property owners and residents of the West End and Sierra Vista guided the direction, focus, and conceptual design for the project recommendations and has truly resulted in a stronger overall plan. The public has expressed a clear need for more walkable streets, a safer community, aesthetic improvements, community interaction and enhancing positive property access along Fry Boulevard's West End. Familiar themes of family, community pride, history, and economic opportunity were reiterated several times by many different voices at each of the meetings. The proposals put forth in this document reflect Sierra Vista's goals in a realistic and cost effective way.

Meeting Milestones

October 16, 2015

Kickoff Meeting/Brainstorming Session

November 17, 2015

City Council Corridor Study Presentation

January 21, 2016

Individual Business Outreach

February 1, 2016

Business Roundtable Discussion #1

March 1, 2016

Study Project Team Meeting/Individual Business Outreach

March 14, 2016

Business Roundtable Discussion #2

April 5, 2016

Public Meeting Presentation





Implementation Plan

Fry Boulevard is the heart of the West End—Sierra Vista’s oldest community. Despite this strong historical connection and the devotion of residents and business owners, the Fry Boulevard West End Corridor has seen decline since the rerouting of SR 90 in the 1970s. Implementing a priority revitalization project to begin the transformation of Fry Boulevard from a vehicular-focused State highway to a dynamic destination corridor is crucial at this time in order to enhance the economic, health, safety & wellness, multi-modal, and placemaking potential of Sierra Vista’s West End. The Project evaluated the one-mile area of Fry Boulevard between Buffalo Soldier Trail and 7th Street. However, implementation of this corridor revitalization should be accomplished in cost-effective steps. The City, MPO, and Design Team have proposed a first-stage “priority project” as the first step.

The first-stage priority project is proposed for Fry Boulevard from Buffalo Soldier Trail to Fab Avenue (approximately 0.24 miles of improvements). The Project would consist of narrowing the existing five-lane roadway east of Garden Avenue to a three-lane configuration with one lane in each direction. All existing turn lanes at major intersections will remain, and the lane conditions between Buffalo Soldier Trail and Garden Avenue would remain as a five-lane scenario. The number of driveways will be strategically reduced to enhance pedestrian safety and to ensure proper ingress and egress to every business. No medians will be designed that obstruct traffic flow in any way. Shared-use paths will increase the safety and health of residents, while landscaping and shade trees will adhere to the personality of Sierra Vista and be planted in water-harvesting swales that reduce the strain on drainage infrastructure. The installation of site furnishings, amenities, wayfinding elements, and street light banners will match the tone set by the *2015 Branding Study* and will further accentuate the character of the Fry Boulevard Corridor. These solutions all adhere to the *Vista 2030: Sierra Vista General Plan*, promoting Sierra Vista as “an attractive, vibrant, and inviting place to live, work and visit.”

This first-stage priority project from BST to Fab Avenue will be a powerful signal to the city that the West End is a valuable asset to Sierra Vista and will announce to City residents, Fort Huachuca, Arizona in-state visitors, and out-of-state tourists that the

Fry Boulevard Corridor is an outstanding location – very much open for dining, hotels, festivals, commercial activity and night life.

The construction cost estimate for the first-stage project is approximately \$2.25 million which includes a 20% contingency. This first-stage project could be designed in approximately 7 months from commencement and would take approximately 7 to 8 months to construct.

The remainder of the project, from Fab Avenue east to 7th Street, can be designed and completed in the future at one time - or may be broken up into smaller, more economically manageable portions. **This eastern area of the corridor, titled the “Segment Two Project: Fab Avenue to 7th Street” has a construction cost estimate of approximately \$3.44 million which includes a 20% contingency.**

The Design Team recommends that the **First-Stage Priority Project: Buffalo Soldier Trail to Fab Avenue** be implemented by the City of Sierra Vista as soon as possible to take advantage of the many economic, health/safety/wellness, multi-modal, and placemaking potential that exists for the City and West End.



Existing Fry Boulevard



Preliminary Cost Estimate

| ITEM NO. | DESCRIPTION | UNIT | QUANTITY | UNIT COST | EXTENDED AMOUNT |
|-------------------------------------|--|------|----------|--------------|-----------------|
| GENERAL ITEMS | | | | | |
| 1 | MOBILIZATION | LS | 1 | \$70,000.00 | \$ 70,000.00 |
| 2 | CONSTRUCTION WATER SUPPLY | LS | 1 | \$17,000.00 | \$ 17,000.00 |
| 3 | TRAFFIC CONTROL (ALLOWANCE) | LS | 1 | \$95,000.00 | \$ 95,000.00 |
| 4 | SWPPP (ALLOWANCE) | LS | 1 | \$35,000.00 | \$ 35,000.00 |
| 5 | POTHOLING (ALLOWANCE) | LS | 1 | \$16,500.00 | \$ 16,500.00 |
| 6 | PUBLIC OUTREACH (ALLOWANCE) | LS | 1 | \$15,000.00 | \$ 15,000.00 |
| 7 | CONSTRUCTION SURVEY, LAYOUT, AS-BUILTS | LS | 1 | \$35,000.00 | \$ 35,000.00 |
| 8 | FIELD OFFICE | LS | 1 | \$28,000.00 | \$ 28,000.00 |
| 9 | MISCELLANEOUS (SWEEPING, DUST CONTROL, PERMITTING) | LS | 1 | \$50,000.00 | \$ 50,000.00 |
| 10 | BOND | LS | 1 | \$70,000.00 | \$ 70,000.00 |
| 11 | INSURANCE | LS | 1 | \$92,000.00 | \$ 92,000.00 |
| 12 | RIGHT-OF-WAY PURCHASE (NONE AT THIS TIME) | SF | 0 | \$14.00 | \$ - |
| REMOVALS | | | | | |
| 13 | REMOVE AC PAVEMENT | SY | 8,627 | \$3.30 | \$ 28,469.10 |
| 14 | REMOVE & SALVAGE MISC BENCHES AND SITE AMENITIES (DELIVER TO CITY YARD) | LS | 1 | \$4,000.00 | \$ 4,000.00 |
| 15 | REMOVE CONCRETE CURB & GUTTER | LF | 2,750 | \$3.00 | \$ 8,250.00 |
| 16 | REMOVE CONCRETE SIDEWALK, DRIVEWAY, VALLEY GUTTER & PAVERS | SF | 11,457 | \$2.00 | \$ 22,914.00 |
| 17 | REMOVE TRAFFIC SIGNS (MISC REMOVAL) | LS | 1 | \$2,000.00 | \$ 2,000.00 |
| 18 | REMOVE & DELIVER STREET LIGHTS TO CITY FIELD OPERATIONS YARD | LS | 1 | \$18,000.00 | \$ 18,000.00 |
| 19 | REMOVE, SALVAGE, AND RELOCATE FIRE HYDRANT | EA | 1 | \$2,500.00 | \$ 2,500.00 |
| 20 | REMOVE MISC WALLS & HARDSCAPE (MISC REMOVAL) | LS | 1 | \$2,000.00 | \$ 2,000.00 |
| 21 | REMOVE AC PAVEMENT AT TIE-IN AREAS (TCE) | LS | 1 | \$2,500.00 | \$ 2,500.00 |
| 22 | REMOVE TREES | LS | 1 | \$4,000.00 | \$ 4,000.00 |
| 23 | REMOVE CATCH BASINS | LS | 1 | \$5,000.00 | \$ 5,000.00 |
| EARTHWORK AND ROADWAY PAVING | | | | | |
| 24 | ROADWAY SUBGRADE PREPARATION | SY | 5,600 | \$3.00 | \$ 16,800.00 |
| 25 | 6" AGGREGATE BASE COURSE | TON | 740 | \$20.00 | \$ 14,800.00 |
| 26 | 2.5" AC PAVEMENT SURFACE COURSE (D-1/2') | TON | 625 | \$75.00 | \$ 46,875.00 |
| 27 | 3" AC PAVEMENT BASE COURSE (C-3/4') | TON | 749 | \$75.00 | \$ 56,175.00 |
| 28 | TACK COAT (0.08 GAL/SY) | TON | 2 | \$625.00 | \$ 1,250.00 |
| 29 | SLURRY SEAL APPLICATION AT EAST & WEST APPROACH AREAS (20 LB/SY) 1/2" ACFC (100 FOOT APPROACH) | LS | 1 | \$3,000.00 | \$ 3,000.00 |
| 30 | VERTICAL CURB & GUTTER | LF | 2,947 | \$15.00 | \$ 44,205.00 |
| 31 | ADJUST VALVE FRAMES & COVER TO GRADE | LS | 1 | \$5,000.00 | \$ 5,000.00 |
| 32 | ADJUST MANHOLE FRAMES & COVER TO GRADE | LS | 1 | \$5,000.00 | \$ 5,000.00 |
| 33 | SURVEY MARKER TYPE A | EA | 4 | \$800.00 | \$ 3,200.00 |
| 34 | SIDEWALK RAMP | EA | 12 | \$1,200.00 | \$ 14,400.00 |
| TRAFFIC SIGNALS | | | | | |
| 35 | TRAFFIC SIGNAL AT GARDEN AVENUE | LS | 1 | \$160,000.00 | \$ 160,000.00 |
| 36 | HAWK MID-BLOCK CROSSING (INCLUDING ELECTRICAL SERVICE AND ALL EQUIPMENT) | LS | 1 | \$95,000.00 | \$ 95,000.00 |
| SIGNING & MARKING | | | | | |
| 37 | PAINT STRIPING & MARKING | LS | 1 | \$25,000.00 | \$ 25,000.00 |
| UTILITIES & STORMDRAIN | | | | | |
| 38 | WATER SERVICE & METER - 1 1/2" FOR FESTIVAL WATER BOLLARDS, INCLUDING BACKFLOW PREVENTER | EA | 1 | \$5,500.00 | \$ 5,500.00 |
| 39 | WATER SERVICE RUNNING LINE TO ALLEYS | LS | 1 | \$10,000.00 | \$ 10,000.00 |
| 40 | MISC. WATER LINE / SEWER LINE RELOCATIONS | LS | 1 | \$10,000.00 | \$ 10,000.00 |
| 41 | REMOVE & REPLACE EXISTING CATCH BASINS | LS | 1 | \$8,500.00 | \$ 8,500.00 |

Proposed First-Stage Project - Buffalo Soldier Trail to Fab Avenue (page 1 of 2)



Preliminary Cost Estimate

| ITEM NO. | DESCRIPTION | UNIT | QUANTITY | UNIT COST | EXTENDED AMOUNT |
|--|--|------|----------|-------------|-----------------|
| HARDSCAPE | | | | | |
| 42 | CONCRETE SIDEWALK - INTEGRAL COLOR (BROOM FINISH 4" THICK ON GRADE) | SF | 20,053 | \$5.50 | \$ 110,291.50 |
| 43 | CROSSWALK ENHANCED PAVING (UNIT PAVERS ON SAND & CONCRETE BASE) | SF | 2,026 | \$12.00 | \$ 24,312.00 |
| 44 | MEDIAN LANE ENHANCED PAVING TREATMENT (UNIT PAVERS ON SAND & CONCRETE BASE) | SF | 8,548 | \$12.00 | \$ 102,576.00 |
| 45 | DRIVEWAY CONCRETE AT SIDEWALKS (BROOM FINISH 8" THICK ON GRADE) | SF | 1,878 | \$9.00 | \$ 16,902.00 |
| HARDSCAPE RENOVATION OF EXISTING CONDITIONS | | | | | |
| 46 | MISC ADJACENT HARDSCAPE REHABILITATION - FINISH AND COLOR TO MATCH EXISTING | LS | 1 | \$5,000.00 | \$ 5,000.00 |
| SITE AMENITIES | | | | | |
| 47 | LITTER RECEPTACLE | EA | 8 | \$1,900.00 | \$ 15,200.00 |
| 48 | SEATWALL W/ TILE | LF | 80 | \$425.00 | \$ 34,000.00 |
| 49 | BIKE RACK | EA | 4 | \$1,200.00 | \$ 4,800.00 |
| 50 | ACCENT TABLES | EA | 3 | \$1,250.00 | \$ 3,750.00 |
| 51 | CHAIRS | EA | 9 | \$2,500.00 | \$ 22,500.00 |
| 52 | BENCHES | EA | 4 | \$2,800.00 | \$ 11,200.00 |
| 53 | WATER BOLLARD (POTABLE WATER HOSE BIB FOR SPECIAL EVENTS) | EA | 4 | \$2,000.00 | \$ 8,000.00 |
| 54 | BUS STOP STRUCTURE W/ CITY LOGO, BENCH, LITTER RECEPTACLE | EA | 1 | \$15,500.00 | \$ 15,500.00 |
| LANDSCAPE | | | | | |
| 55 | TREE (36" BOX) | EA | 45 | \$515.00 | \$ 23,175.00 |
| 56 | SHRUBS AND ACCENTS (5 GAL) | EA | 125 | \$22.00 | \$ 2,750.00 |
| 57 | SHRUB (1 GAL) | EA | 200 | \$12.00 | \$ 2,400.00 |
| 58 | MISC LANDSCAPE RESTORATION (AT PRIVATE PROPERTY EDGES) | LS | 1 | \$8,500.00 | \$ 8,500.00 |
| 59 | PARKWAY AMENITY LANDSCAPE (INCLUDING TREES, SHRUBS, DG) | SF | 16,325 | \$2.00 | \$ 32,650.00 |
| 60 | 1" TO 3" ANGULAR RIPRAP FOR WATER HARVESTING SWALES | SF | 10,290 | \$1.65 | \$ 16,978.50 |
| LANDSCAPE IRRIGATION | | | | | |
| 61 | IRRIGATION REMOVAL & RESTORATION | LS | 1 | \$5,000.00 | \$ 5,000.00 |
| 62 | IRRIGATION CONTROLLER 'A' 24 STATION W/ PEDESTAL | LS | 1 | \$8,500.00 | \$ 8,500.00 |
| 63 | 1 1/2" METER AND REDUCED PRESSURE BACKFLOW PREVENTER W/ ENCLOSURE | EA | 1 | \$4,500.00 | \$ 4,500.00 |
| 64 | PARKWAY AMENITY DRIP IRRIGATION SYSTEM | SF | 16,325 | \$1.00 | \$ 16,325.00 |
| 65 | LANDSCAPE IRRIGATION SYSTEM | LS | 1 | \$18,000.00 | \$ 18,000.00 |
| STREET & PEDESTRIAN LIGHTING / ELECTRICAL / ACCENT LIGHTING | | | | | |
| 66 | ROADWAY LIGHT POLES WITH LOWER HEIGHT PEDESTRIAN LIGHT (LED FIXTURE) | EA | 16 | \$3,300.00 | \$ 52,800.00 |
| 67 | PEDESTRIAN LIGHT POLE (LED FIXTURE) | EA | 16 | \$2,400.00 | \$ 38,400.00 |
| 68 | METER / ELECTRICAL SERVICE AND UTILITY COMPANY COSTS FOR AUXILIARY POWER | EA | 1 | \$9,000.00 | \$ 9,000.00 |
| 69 | TRENCH, CONDUIT, AND WIRE FOR ROADWAY / PEDESTRIAN LIGHTING | LS | 1 | \$25,000.00 | \$ 25,000.00 |
| 70 | AUXILIARY TREE LIGHTING OUTLETS | EA | 42 | \$800.00 | \$ 33,600.00 |
| 71 | AUXILIARY 4-PLEX OUTLETS FOR FESTIVAL USE | EA | 2 | \$1,200.00 | \$ 2,400.00 |
| 74 | TRENCH, CONDUIT, AND WIRE FOR ELECTRICAL OUTLET SYSTEM | LS | 1 | \$21,000.00 | \$ 21,000.00 |
| 75 | BANNERS W/ SPRING-LOADED BRACKETS FOR ROADWAY LIGHT POLES (DUAL BANNERS TO MATCH MLK PKWY) | EA | 16 | \$300.00 | \$ 4,800.00 |
| SIGNAGE /WAYFINDING ELEMENTS | | | | | |
| 76 | SCULPTURE BASE FOR FUTURE INTERPRETIVE ART | EA | 2 | \$2,600.00 | \$ 5,200.00 |
| 77 | WAYFINDING ELEMENTS | EA | 2 | \$12,000.00 | \$ 24,000.00 |
| Subtotal | | | | | \$ 1,876,848.10 |
| CONTINGENCY (20%) | | | | | \$ 375,369.62 |
| SUBTOTAL WITH CONTINGENCIES | | | | | \$ 2,252,217.72 |
| SEGMENT ONE PROJECT: | | | | | \$ 2,252,217.72 |
| BUFFALO SOLDIER TRAIL TO FAB AVENUE | | | | | |

Proposed First-Stage Project - Buffalo Soldier Trail to Fab Avenue (page 2 of 2)



Preliminary Cost Estimate

| ITEM NO. | DESCRIPTION | UNIT | QUANTITY | UNIT COST | EXTENDED AMOUNT |
|-------------------------------------|--|------|----------|--------------|-----------------|
| GENERAL ITEMS | | | | | |
| 1 | MOBILIZATION | LS | 1 | \$70,000.00 | \$ 70,000.00 |
| 2 | CONSTRUCTION WATER SUPPLY | LS | 1 | \$17,000.00 | \$ 17,000.00 |
| 3 | TRAFFIC CONTROL (ALLOWANCE) | LS | 1 | \$95,000.00 | \$ 95,000.00 |
| 4 | SWPPP (ALLOWANCE) | LS | 1 | \$35,000.00 | \$ 35,000.00 |
| 5 | POTHOLING (ALLOWANCE) | LS | 1 | \$17,500.00 | \$ 17,500.00 |
| 6 | PUBLIC OUTREACH (ALLOWANCE) | LS | 1 | \$18,000.00 | \$ 18,000.00 |
| 7 | CONSTRUCTION SURVEY, LAYOUT, AS-BUILTS | LS | 1 | \$35,000.00 | \$ 35,000.00 |
| 8 | FIELD OFFICE | LS | 1 | \$28,000.00 | \$ 28,000.00 |
| 9 | MISCELLANEOUS (SWEEPING, DUST CONTROL, PERMITTING) | LS | 1 | \$50,000.00 | \$ 50,000.00 |
| 10 | BOND | LS | 1 | \$70,000.00 | \$ 70,000.00 |
| 11 | INSURANCE | LS | 1 | \$92,000.00 | \$ 92,000.00 |
| 12 | RIGHT-OF-WAY PURCHASE (NONE AT THIS TIME) | SF | 0 | \$14.00 | \$ - |
| REMOVALS | | | | | |
| 13 | REMOVE AC PAVEMENT | SY | 26,743 | \$3.30 | \$ 88,251.90 |
| 14 | REMOVE & SALVAGE MISC BENCHES AND SITE AMENITIES (DELIVER TO CITY YARD) | LS | 1 | \$4,000.00 | \$ 4,000.00 |
| 15 | REMOVE CONCRETE CURB & GUTTER | LF | 8,525 | \$3.00 | \$ 25,575.00 |
| 16 | REMOVE CONCRETE SIDEWALK, DRIVEWAY, VALLEY GUTTER & PAVERS | SF | 35,517 | \$2.00 | \$ 71,034.00 |
| 17 | REMOVE TRAFFIC SIGNS (MISC REMOVAL) | LS | 1 | \$2,000.00 | \$ 2,000.00 |
| 18 | REMOVE & DELIVER STREET LIGHTS TO CITY FIELD OPERATIONS YARD | LS | 1 | \$18,000.00 | \$ 18,000.00 |
| 19 | REMOVE, SALVAGE, AND RELOCATE FIRE HYDRANT | EA | 2 | \$2,500.00 | \$ 5,000.00 |
| 20 | REMOVE MISC WALLS & HARDSCAPE (MISC REMOVAL) | LS | 1 | \$2,000.00 | \$ 2,000.00 |
| 21 | REMOVE AC PAVEMENT AT TIE-IN AREAS (TCE) | LS | 1 | \$2,500.00 | \$ 2,500.00 |
| 22 | REMOVE TREES | LS | 1 | \$4,000.00 | \$ 4,000.00 |
| 23 | REMOVE CATCH BASINS | LS | 1 | \$5,000.00 | \$ 5,000.00 |
| EARTHWORK AND ROADWAY PAVING | | | | | |
| 24 | ROADWAY SUBGRADE PREPARATION | SY | 17,360 | \$3.00 | \$ 52,080.00 |
| 25 | 6" AGGREGATE BASE COURSE | TON | 2,294 | \$20.00 | \$ 45,880.00 |
| 26 | 2.5" AC PAVEMENT SURFACE COURSE (D-1/2") | TON | 1,938 | \$75.00 | \$ 145,350.00 |
| 27 | 3" AC PAVEMENT BASE COURSE (C-3/4") | TON | 2,322 | \$75.00 | \$ 174,150.00 |
| 28 | TACK COAT (0.08 GAL/SY) | TON | 6 | \$625.00 | \$ 3,750.00 |
| 29 | SLURRY SEAL APPLICATION AT APPROACH AREAS (20 LB/SY) 1/2" ACFC | LS | 1 | \$20,000.00 | \$ 20,000.00 |
| 30 | VERTICAL CURB & GUTTER | LF | 9,136 | \$15.00 | \$ 137,040.00 |
| 31 | VALLEY GUTTER | SF | 0 | \$8.00 | \$ - |
| 32 | ADJUST VALVE FRAMES & COVER TO GRADE | LS | 1 | \$5,000.00 | \$ 5,000.00 |
| 33 | ADJUST MANHOLE FRAMES & COVER TO GRADE | LS | 1 | \$5,000.00 | \$ 5,000.00 |
| 34 | SURVEY MARKER TYPE A | EA | 12 | \$800.00 | \$ 9,600.00 |
| 35 | SIDEWALK RAMP | EA | 33 | \$1,200.00 | \$ 39,600.00 |
| TRAFFIC SIGNALS | | | | | |
| 36 | TRAFFIC SIGNAL ADJUSTMENTS | LS | 1 | \$160,000.00 | \$ 160,000.00 |
| SIGNING & MARKING | | | | | |
| 37 | PAINT STRIPING & MARKING | LS | 1 | \$25,000.00 | \$ 25,000.00 |
| UTILITIES & STORMDRAIN | | | | | |
| 38 | WATER SERVICE & METER - 1 1/2" FOR FESTIVAL WATER BOLLARDS, INCLUDING BACKFLOW PREVENTER | EA | 1 | \$5,500.00 | \$ 5,500.00 |
| 39 | WATER SERVICE RUNNING LINE TO ALLEYS | LS | 1 | \$10,000.00 | \$ 10,000.00 |
| 40 | MISC. WATER LINE / SEWER LINE RELOCATIONS | LS | 1 | \$10,000.00 | \$ 10,000.00 |
| 41 | REMOVE & REPLACE EXISTING CATCH BASINS | LS | 1 | \$8,500.00 | \$ 8,500.00 |

Proposed Segment 2 Project - Fab Avenue 7th Street (page 1 of 2)



Preliminary Cost Estimate

| ITEM NO. | DESCRIPTION | UNIT | QUANTITY | UNIT COST | EXTENDED AMOUNT |
|--|--|------|----------|-------------|-----------------|
| HARDSCAPE | | | | | |
| 42 | CONCRETE SIDEWALK - INTEGRAL COLOR (BROOM FINISH 4" THICK ON GRADE) | SF | 59,788 | \$5.50 | \$ 328,834.00 |
| 43 | CROSSWALK ENHANCED PAVING (UNIT PAVERS ON SAND & CONCRETE BASE) | SF | 13,403 | \$12.00 | \$ 160,836.00 |
| 44 | MEDIAN LANE ENHANCED PAVING TREATMENT (UNIT PAVERS ON SAND & CONCRETE BASE) | SF | 30,386 | \$12.00 | \$ 364,632.00 |
| 45 | DRIVEWAY CONCRETE AT SIDEWALKS (BROOM FINISH 8" THICK ON GRADE) | SF | 8,962 | \$9.00 | \$ 80,658.00 |
| HARDSCAPE RENOVATION OF EXISTING CONDITIONS | | | | | |
| 46 | MISC ADJACENT HARDSCAPE REHABILITATION - FINISH AND COLOR TO MATCH EXISTING | LS | 1 | \$5,000.00 | \$ 5,000.00 |
| SITE AMENITIES | | | | | |
| 47 | LITTER RECEPTACLE | EA | 24 | \$1,900.00 | \$ 45,600.00 |
| 48 | SEATWALL W/ TILE | LF | 240 | \$425.00 | \$ 102,000.00 |
| 49 | BIKE RACK | EA | 12 | \$1,200.00 | \$ 14,400.00 |
| 50 | ACCENT TABLES | EA | 9 | \$1,250.00 | \$ 11,250.00 |
| 51 | CHAIRS | EA | 27 | \$2,500.00 | \$ 67,500.00 |
| 52 | BENCHES | EA | 12 | \$2,800.00 | \$ 33,600.00 |
| 53 | WATER BOLLARD (POTABLE WATER HOSE BIB FOR SPECIAL EVENTS) | EA | 12 | \$2,000.00 | \$ 24,000.00 |
| 54 | BUS STOP STRUCTURE W/ CITY LOGO, BENCH, LITTER RECEPTACLE | EA | 1 | \$15,500.00 | \$ 15,500.00 |
| LANDSCAPE | | | | | |
| 55 | TREE (36" BOX) | EA | 208 | \$515.00 | \$ 107,120.00 |
| 56 | SHRUBS AND ACCENTS (5 GAL) | EA | 575 | \$22.00 | \$ 12,650.00 |
| 57 | SHRUB (1 GAL) | EA | 925 | \$12.00 | \$ 11,100.00 |
| 58 | MISC LANDSCAPE RESTORATION (AT PRIVATE PROPERTY EDGES) | SF | 1 | \$8,500.00 | \$ 8,500.00 |
| 59 | PARKWAY AMENITY LANDSCAPE (INCLUDING TREES, SHRUBS, DG) | SF | 27,123 | \$2.00 | \$ 54,246.00 |
| 60 | 1" TO 3" ANGULAR RIPRAP FOR WATER HARVESTING SWALES | SF | 45,372 | \$1.65 | \$ 74,863.80 |
| LANDSCAPE IRRIGATION | | | | | |
| 61 | IRRIGATION REMOVAL & RESTORATION | LS | 1 | \$5,000.00 | \$ 5,000.00 |
| 62 | IRRIGATION CONTROLLER 'A' 24 STATION W/ PEDESTAL | LS | 1 | \$8,500.00 | \$ 8,500.00 |
| 63 | 1 1/2" METER AND REDUCED PRESSURE BACKFLOW PREVENTER W/ ENCLOSURE | EA | 1 | \$4,500.00 | \$ 4,500.00 |
| 64 | PARKWAY AMENITY DRIP IRRIGATION SYSTEM | SF | 27,123 | \$1.00 | \$ 27,123.00 |
| 65 | LANDSCAPE IRRIGATION SYSTEM | LS | 1 | \$18,000.00 | \$ 18,000.00 |
| STREET & PEDESTRIAN LIGHTING / ELECTRICAL / ACCENT LIGHTING | | | | | |
| 66 | ROADWAY LIGHT POLES WITH LOWER HEIGHT PEDESTRIAN LIGHT (LED FIXTURE) | EA | 48 | \$3,300.00 | \$ 158,400.00 |
| 67 | PEDESTRIAN LIGHT POLE (LED FIXTURE) | EA | 46 | \$2,400.00 | \$ 110,400.00 |
| 68 | METER / ELECTRICAL SERVICE AND UTILITY COMPANY COSTS FOR AUXILIARY POWER | EA | 3 | \$9,000.00 | \$ 27,000.00 |
| 69 | TRENCH, CONDUIT, AND WIRE FOR ROADWAY / PEDESTRIAN LIGHTING | LS | 1 | \$77,500.00 | \$ 77,500.00 |
| 70 | AUXILIARY TREE LIGHTING OUTLETS | EA | 130 | \$800.00 | \$ 104,000.00 |
| 71 | AUXILIARY 4-PLEX OUTLETS FOR FESTIVAL USE | EA | 2 | \$1,200.00 | \$ 2,400.00 |
| 74 | TRENCH, CONDUIT, AND WIRE FOR ELECTRICAL OUTLET SYSTEM | LS | 1 | \$65,000.00 | \$ 65,000.00 |
| 75 | BANNERS W/ SPRING-LOADED BRACKETS FOR ROADWAY LIGHT POLES (DUAL BANNERS TO MATCH MLK PKWY) | EA | 48 | \$300.00 | \$ 14,400.00 |
| SIGNAGE /WAYFINDING ELEMENTS | | | | | |
| 76 | SCULPTURE BASE FOR FUTURE INTERPRETIVE ART | EA | 6 | \$2,600.00 | \$ 15,600.00 |
| 77 | WAYFINDING ELEMENTS | EA | 6 | \$12,000.00 | \$ 72,000.00 |
| Subtotal | | | | | \$ 3,843,423.70 |
| CONTINGENCY (20%) | | | | | \$ 768,684.74 |
| SUBTOTAL WITH CONTINGENCIES | | | | | \$ 4,612,108.44 |
| SEGMENT TWO PROJECT: | | | | | \$ 4,612,108.44 |
| FAB AVENUE TO 7TH STREET | | | | | |

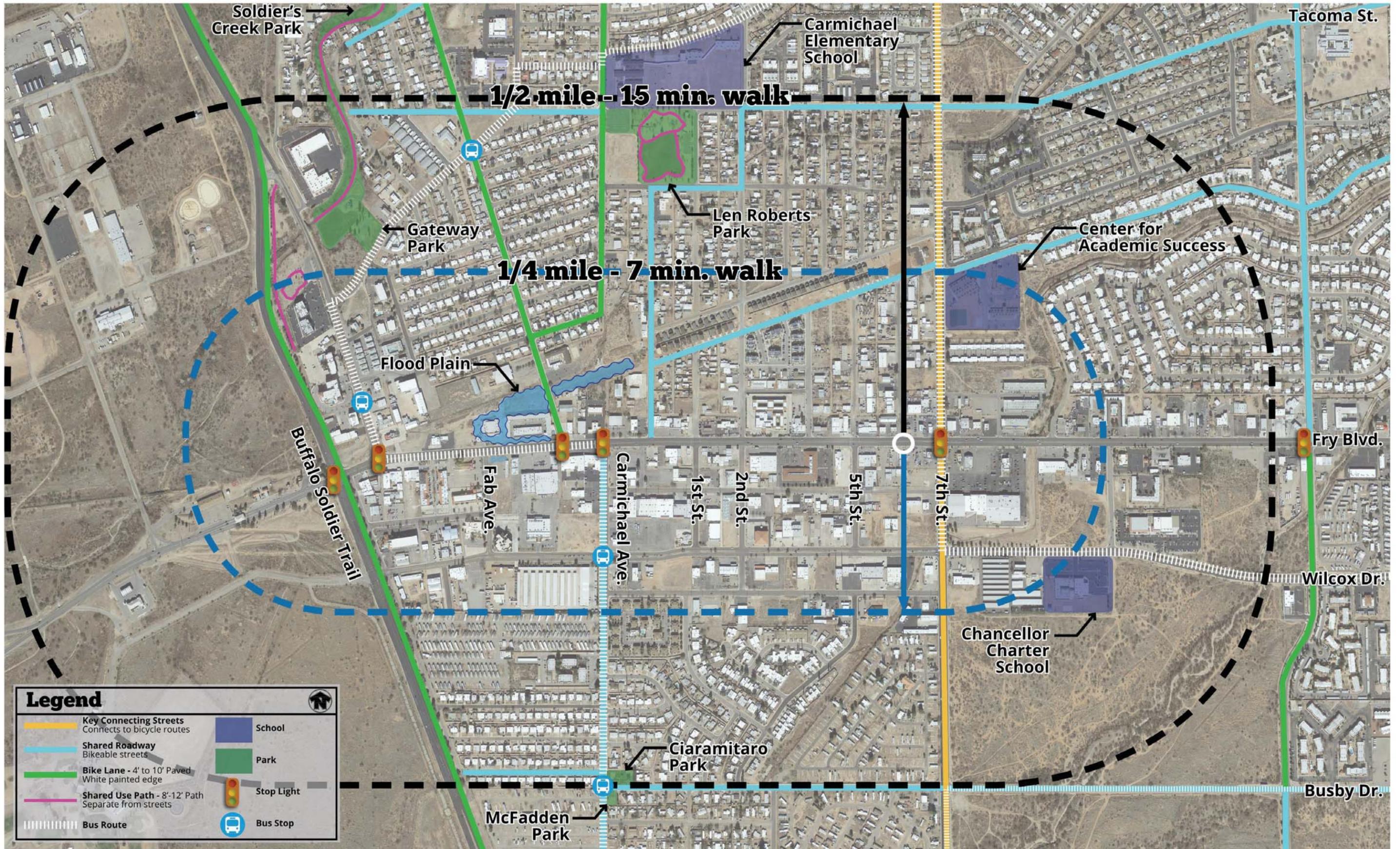
Proposed Segment 2 Project - Fab Avenue 7th Street (page 2 of 2)

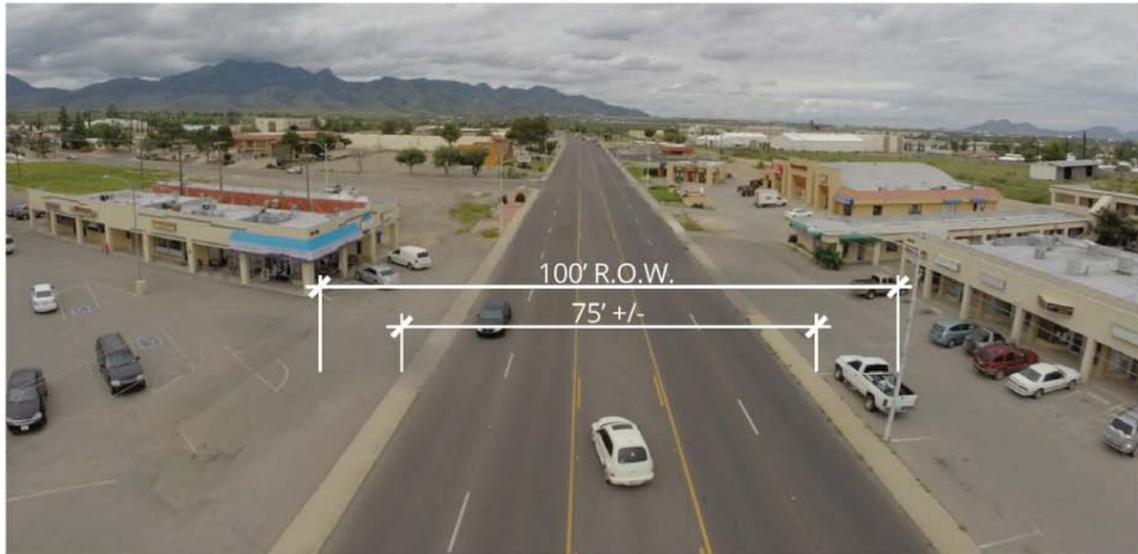
Sierra Vista

Fry Boulevard

West End Corridor Study

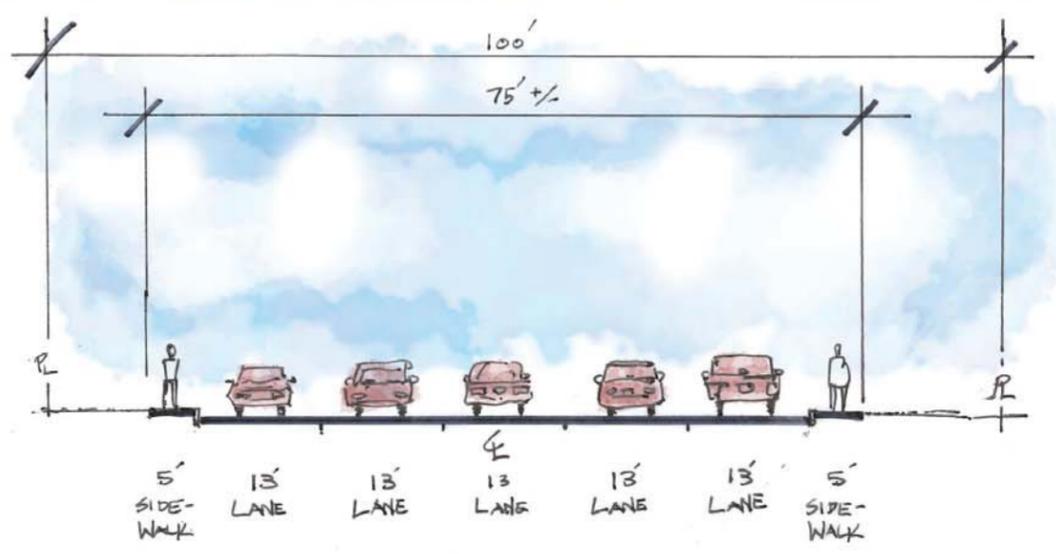
Appendix





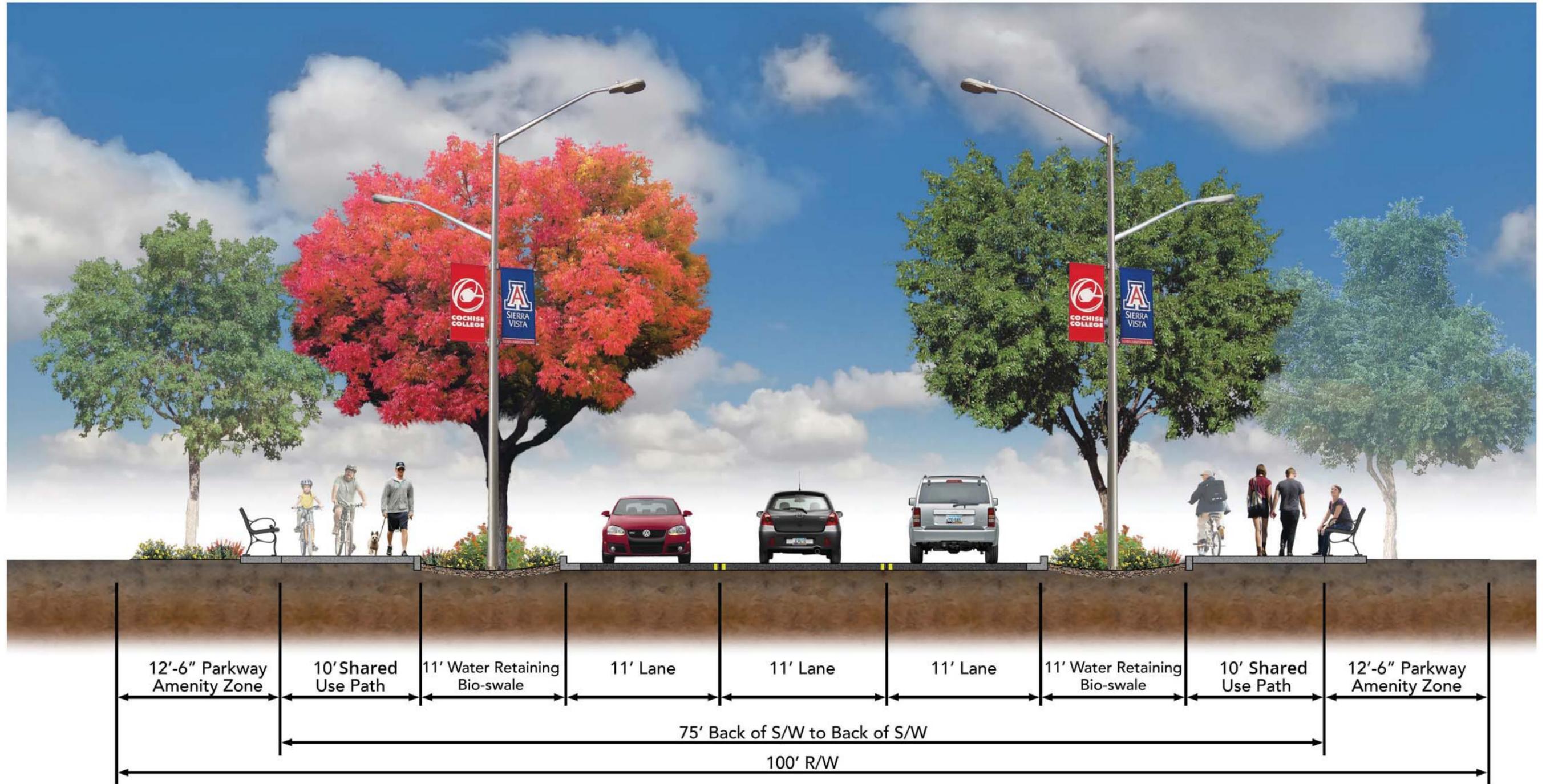
Existing Conditions

- Fry Boulevard currently supports five travel lanes that are 13' wide. For perspective a typical car is 7' wide.
- Existing functioning space is 75' wide from back of sidewalk to back of sidewalk. This includes the five travel lanes and two 5' wide sidewalks.
- The right-of-way owned by Sierra Vista is 100' wide. The additional 25' is being utilized in a variety of ways by property owners along both sides of Fry Boulevard.







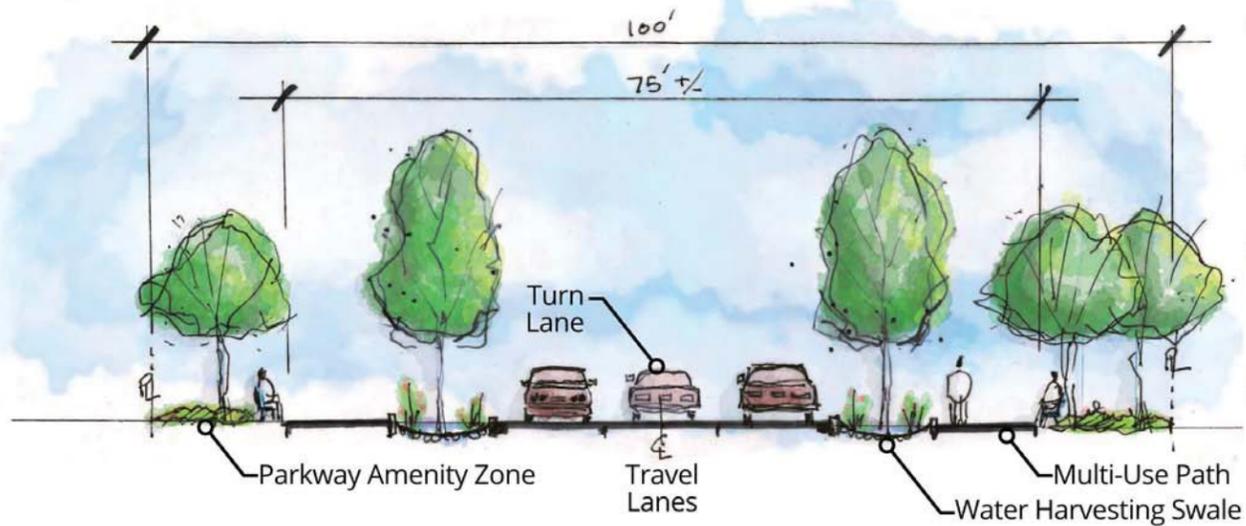




Fry Boulevard - West End Corridor Study

July 8, 2016

Conceptual Section A - Parkway Amenity

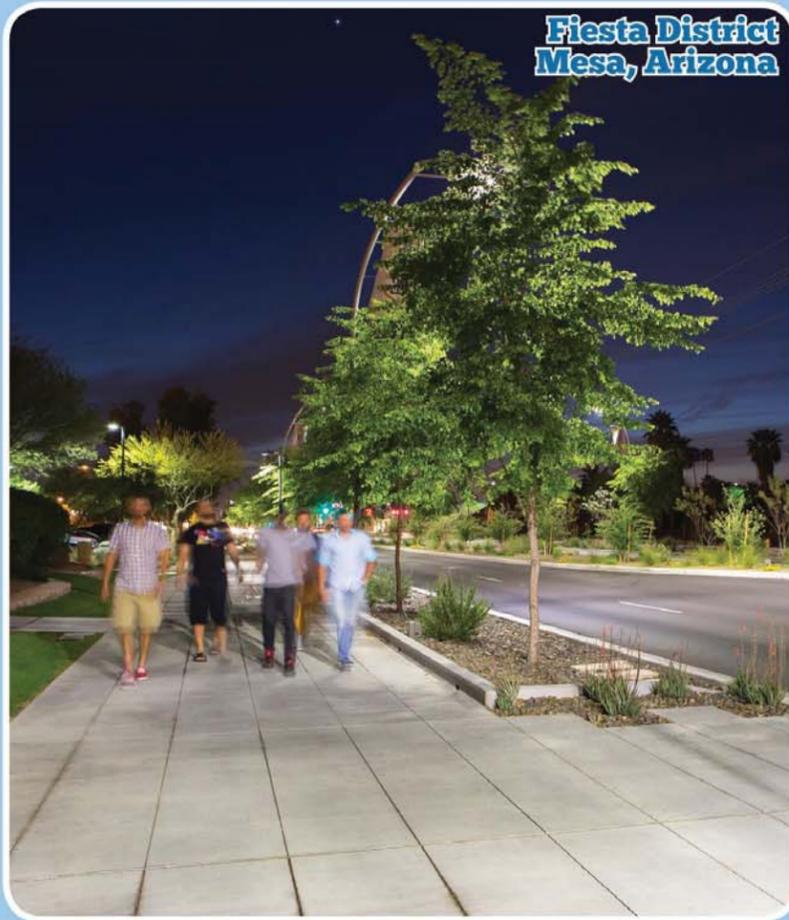


- Functions within existing 75' roadway/sidewalk zone without disturbing adjacent property parking layouts.
- 10' ± Multi-use path supports pedestrian and bicycle activities.
- Includes 10' water harvesting swales which act as planting buffers between multi-use path and vehicular traffic.
- The parkway amenity zone can harvest stormwater runoff while providing additional space for community activities where feasible.

Existing Conditions

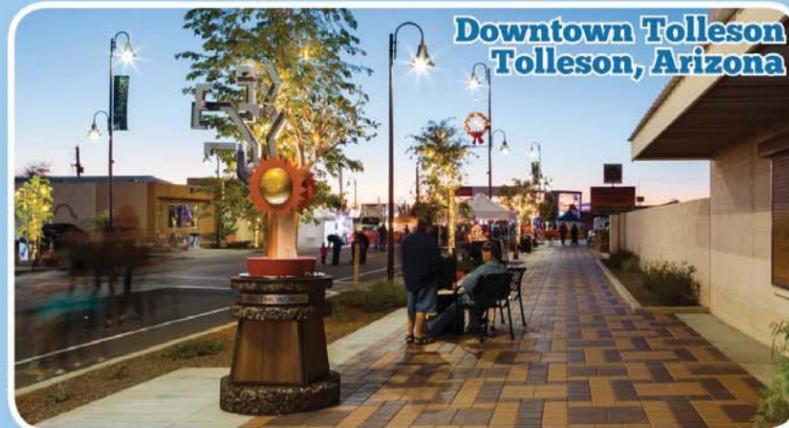


Multi-Use Path



Multi-Use Paths are pedestrian thoroughfares that are wide enough to support pedestrians, runners, wheelchairs, parents with strollers, bicyclists, and scooters.

Parkway Amenity Zone



An amenity zone is an additional area within the city right-of-way that provides a variety of features for public use. Amenities can take the form of plazas, seating, water features, wayfinding elements, monumentation, public art, shade structures, parklets, and economic incubators.



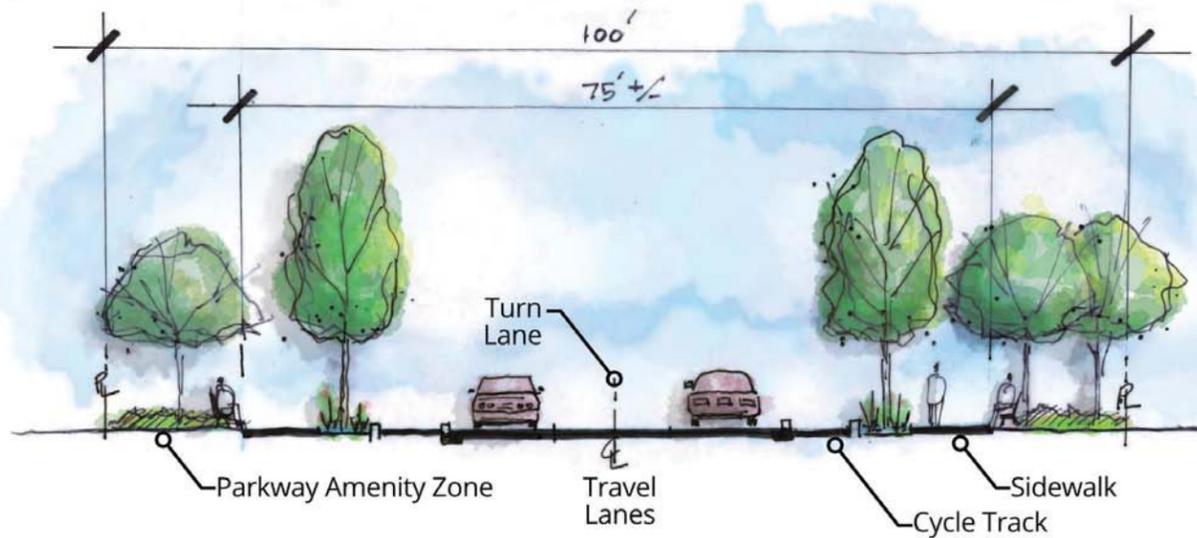
Concept Sketch - 'Project Completion'



Concept Sketch - '10 Year View'



Conceptual Section B - Cycle Track

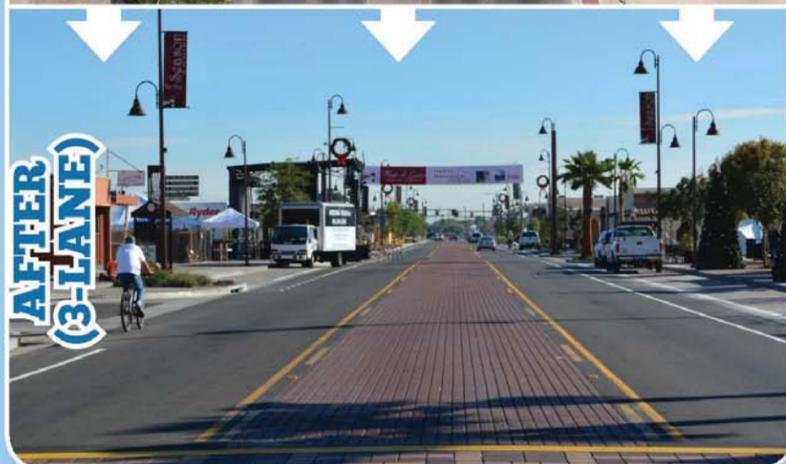


- Functions within existing 75' roadway/sidewalk zone without disturbing adjacent property parking layouts.
- A cycle track bike lane physically separates cyclists from vehicular and pedestrian traffic by using a concrete curb and planting zone buffer, respectively.
- The parkway amenity zone can harvest stormwater runoff while providing additional space for community activities where feasible.

Existing Conditions

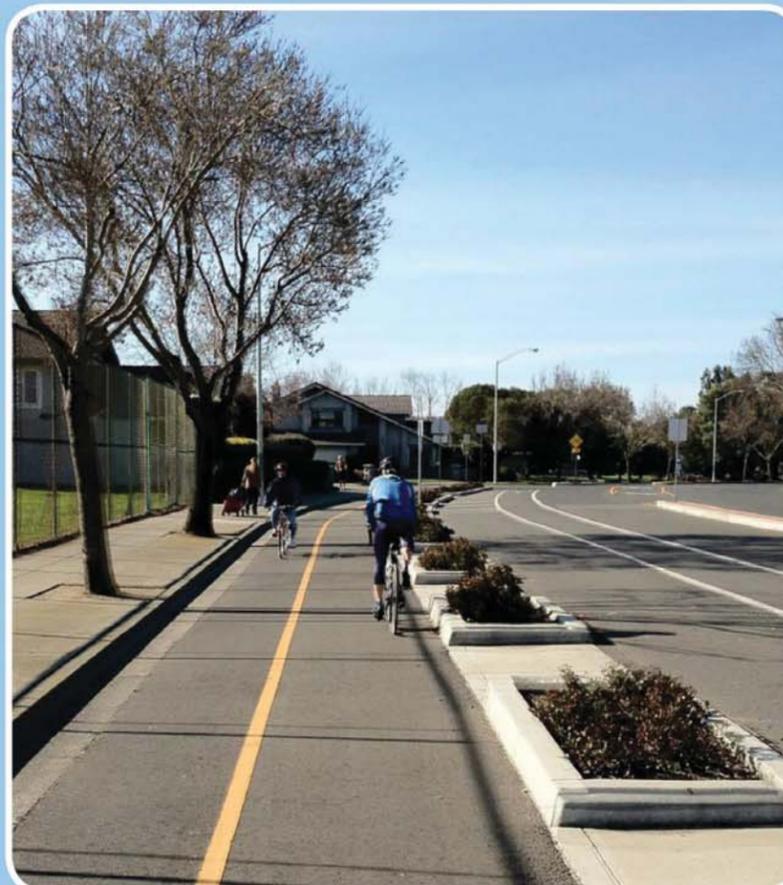


Road Right-sizing



Reducing a five-lane roadway to a three-lane roadway could provide space on Fry Boulevard for multiple amenities.

Cycle Track



Cycle tracks are protected bike lanes that separate bicyclists from vehicles and pedestrians. Barriers vary from concrete curbs, landscape areas, raised medians, reflective highway markers to simple painted warning lines.

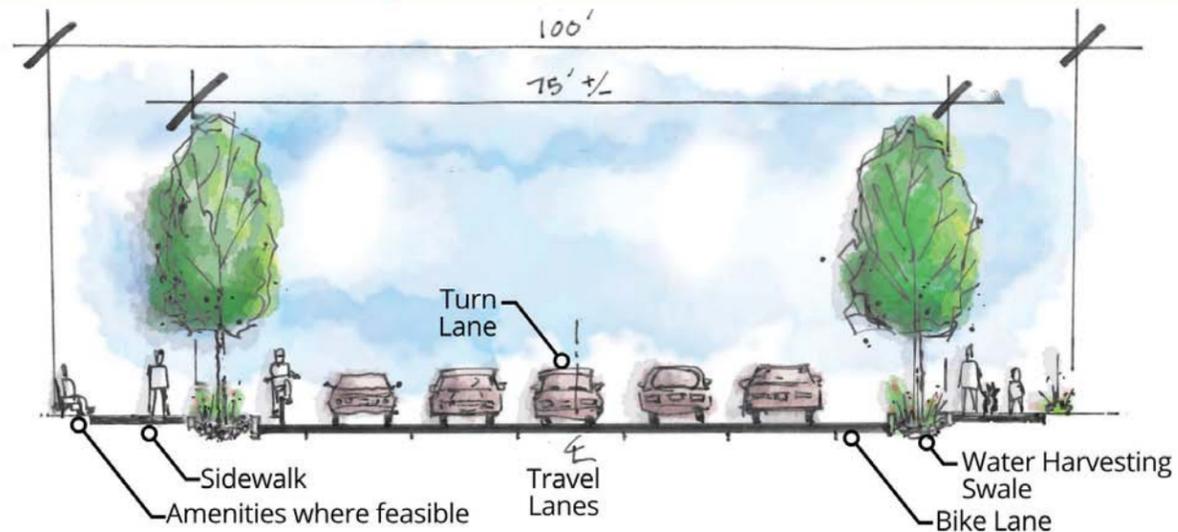
Concept Sketch - 'Project Completion'



Concept Sketch - '10 Year View'



Conceptual Section C - Five Lane Parkway

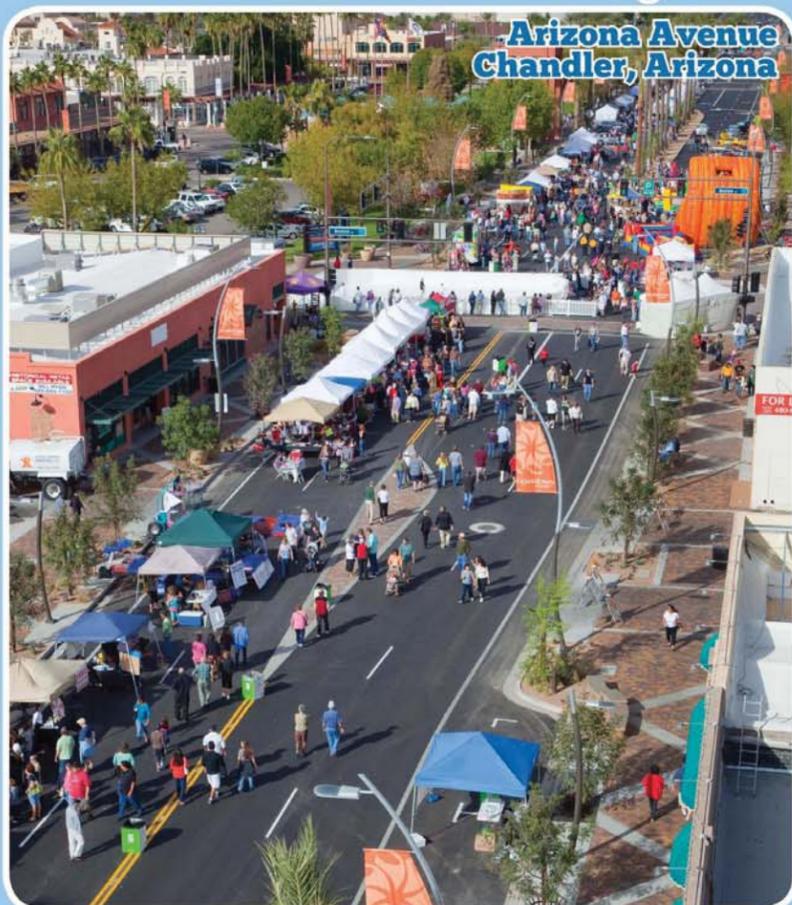


- A five lane alignment utilizes the entirety of the Fry Boulevard's 100' right-of-way.
- Water harvesting swales are an efficient, flexible infrastructure improvement that reduces water runoff volume and velocity during heavy storm events.

Existing Conditions

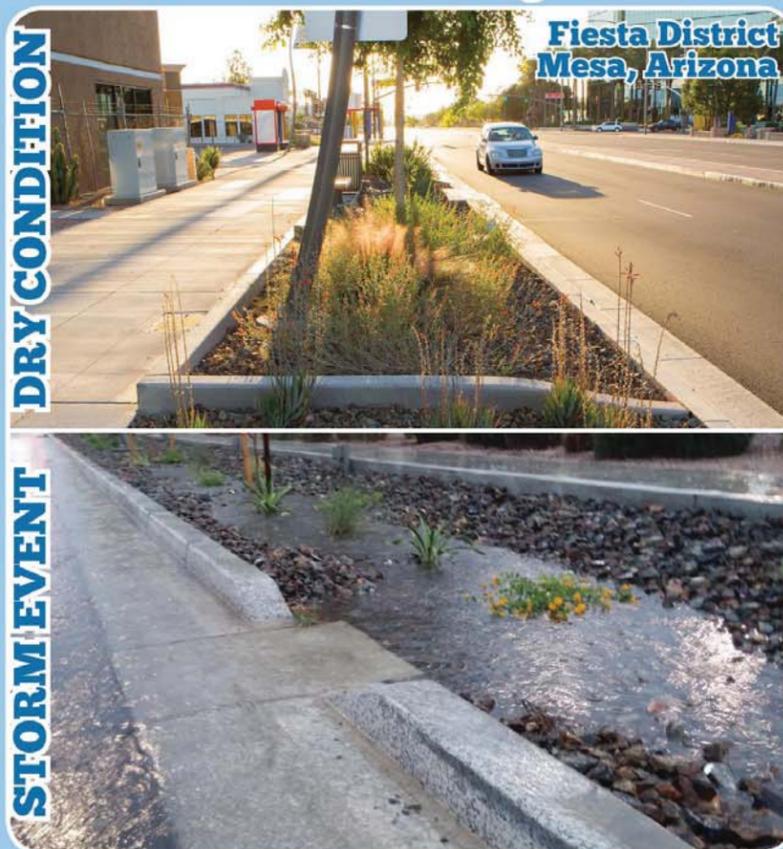


Five Lane Roadway



Fry Boulevard currently supports a five lane roadway alignment with 13' wide travel lanes and 5' sidewalks. Improvements would involve the reduction of lanes and extension of pedestrian amenities to the full city right-of-way of 100'.

Water Harvesting Swale



Water harvesting swales implemented within the city right-of-way efficiently manage roadway flooding during severe storm events. Properly designed, swales and other stormwater management techniques reduce the volume of stormwater from all travel lanes and relieve burdens on drainage infrastructure -- saving money on future maintenance and upkeep.

Concept Sketch - 'Project Completion'



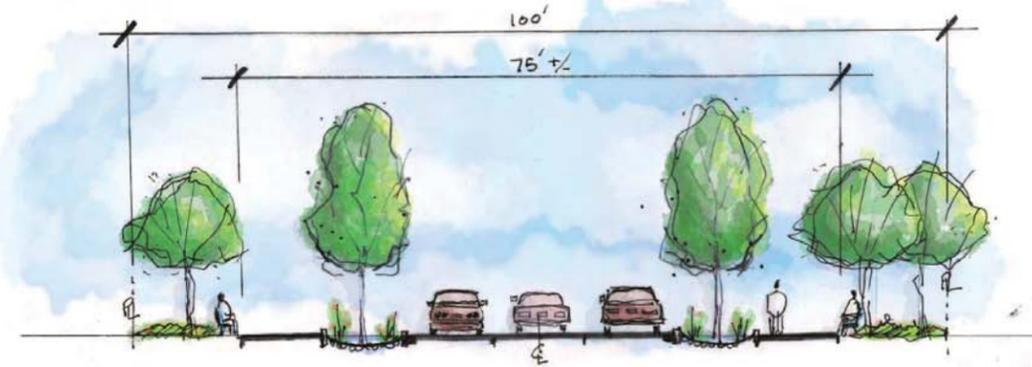
Concept Sketch - '10 Year View'





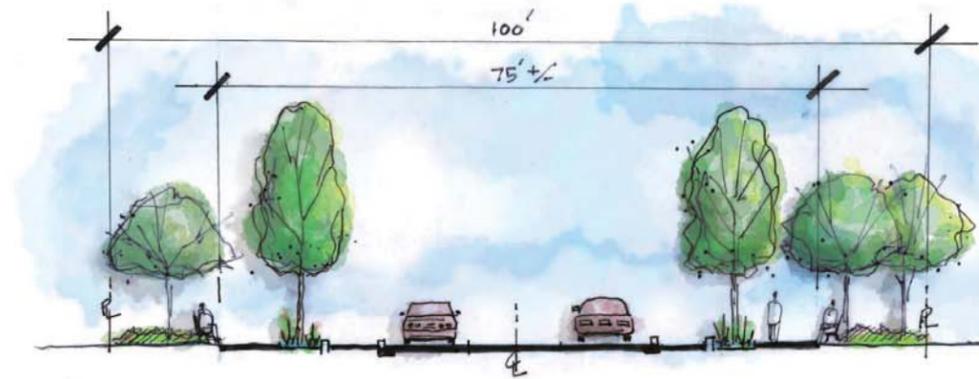
Concept A Parkway Amenity

- Functions within existing 75' sidewalk zone without disturbing adjacent property parking layouts.
- 10' Multi-use path supports pedestrian and cyclist activities.
- Includes 10' water harvesting zones that act as planting buffers between multi-use path and vehicular traffic.
- The parkway amenity zone can harvest stormwater runoff while providing additional space for civic activities where feasible.



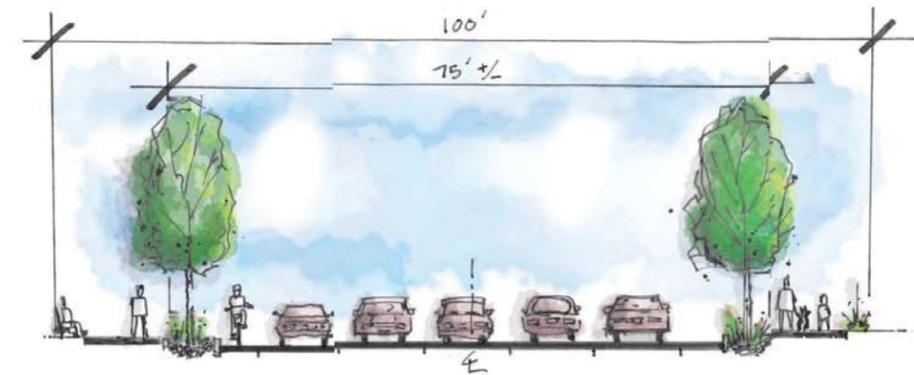
Concept B Cycle Track Parkway

- Functions within existing 75' sidewalk zone without disturbing adjacent property parking layouts.
- Cycle track bike lane physically separates cyclists from vehicular and pedestrian traffic by using a concrete curb and planting zone buffer, respectively.
- The parkway amenity zone can harvest stormwater runoff while providing additional space for civic activities where feasible.



Concept C Five Lane Parkway

- Conforms to existing five lane roadway layout by reducing lanes to 10.5'.
- This concept must utilize the full 100' R.O.W. on Fry Boulevard, disturbing adjacent property parking layouts.
- Includes 6.5' water harvesting zones that act as planting buffers between multi-use path and vehicular traffic.



Rain Garden



Natural Inspiration



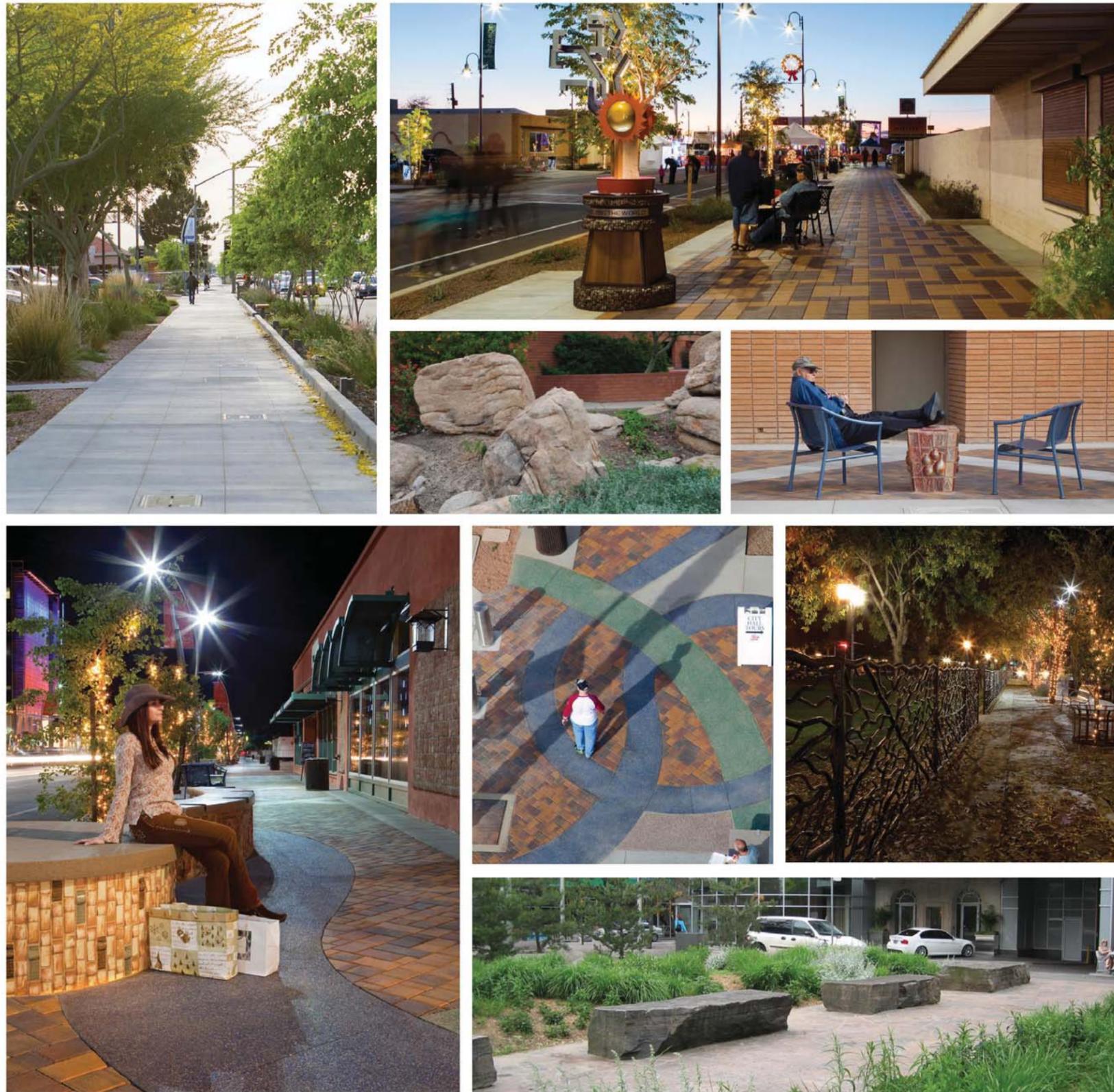
Street Lighting / Wayfinding



Complete Streets

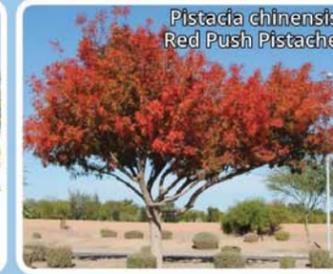


Hardscape Materials



Planting Palette

Street Trees



Accent Trees



Accents



Shrubs



Active Transportation In Sierra Vista

Health Impact Assessment





DRAFT DATED: 07/17/16



Acknowledgments

The following individuals and entities generously contributed their time and expertise in the development of this HIA:

SIERRA VISTA METROPOLITAN PLANNING ORGANIZATION

Dan Coxworth, Administrator, Sierra Vista MPO
Mallory Ress, Volunteer, Sierra Vista MPO
Roza Vickers, Health Policy Manager, Cochise County Health Department

BE HEALTHY! SIERRA VISTA COMMITTEE

ARIZONA DEPARTMENT OF HEALTH SERVICES

Anissa Jonovich, Health and Community Design Manager
Deborah Robinson, Office of Chief of Community Innovations

FUNDING

Funding for this project was provided by the Center for Disease Control and Prevention- National Center for Environmental Health under grant number 1UE1H001193-01

Contents

| | |
|---|-----------|
| ACKNOWLEDGMENTS | 3 |
| CONTENTS | 5 |
| 1. SUMMARY | 1 |
| 2. ABOUT | 7 |
| 3. SCREENING | 13 |
| 4. SCOPING | 21 |
| 5. ASSESSMENT | 31 |
| 6.RECOMMENDATIONS | 55 |
| 6. REPORTING | 65 |
| 7. MONITORING AND EVALUATION | 67 |
| APPENDIX A: COMMUNITY COMMENTS | 83 |
| APPENDIX B: THE RELATIONSHIP BETWEEN HEALTH AND TRANSPORTATION | 85 |
| APPENDIX C: ABOUT OBESITY & CHRONIC DISEASE | 89 |
| APPENDIX D: STAKEHOLDER ENGAGEMENT PLAN | 91 |
| APPENDIX E: PROCESS EVALUATION | 93 |

LIST OF FIGURES

| | |
|--|----|
| Figure 1: Project Context Map..... | 2 |
| Figure 2: Benefits Of Health Impact Assessment..... | 9 |
| Figure 3: Steps Of HIA | 10 |
| Figure 4: Relationship Of Health To Transportation..... | 11 |
| Figure 5: U.s. Trips By Mode Of Transportation | 12 |
| Figure 6: Health Impact Assessment Screening Summary..... | 14 |
| Figure 7: World Health Organization Determinants Of Community & Individual Health | 16 |
| Figure 7: Healthy People 2020 Social Determinants Of Health Physical Determinants Of Health..... | 17 |
| Figure 8: Sierra Vista Hia Pathway Diagram..... | 23 |
| Figure 9: Pathways Explanation Table | 24 |
| Figure 10: Sierra Vista Location Map..... | 31 |
| Figure 11: Population Of Cochise Counties Jurisdictions | 32 |
| Figure 12: Median-Age: Cochise County Jurisdictions | 32 |
| Figure 13: Median Income By Census Block Group In Sierra Vista..... | 33 |
| Figure 15: Cochise County Mortality Factors Per 100,000 Persons (2013)..... | 35 |
| Figure 14: 2013 Deaths Per 100,000 Population - Cochise County And Arizona..... | 35 |
| Figure 18: Cochise County Morbidity Factors Per 100,000 Persons (2013)..... | 36 |
| Figure 17: 2016 Physical Inactivity: Arizona Counties | 37 |
| Figure 18: Obesity Among Adults In Arizona Counties..... | 38 |
| Figure 19: Short Term Complications From Diabetes Per 100,000 Arizona Counties (2013) | 39 |
| Figure 20: Rates Of Uncontrolled Diabetes Per 100,000 Arizona Counties (2013)..... | 39 |
| Figure 21: Hypertension Per 100,000 Arizona Counties (2013)..... | 40 |
| Figure 22: Waist To Hip Ratio Risk Assessment..... | 41 |
| Figure 23: Grocery Stores And Income Within Sierra Vista..... | 43 |
| Figure 24: 2014 Obese And Overweight Military Personnel..... | 44 |
| Figure 25: 2014 Chronic Disease Rates By Diagnosis Category | 44 |
| Figure 26: Sidewalk Connectivity | 46 |
| Figure 27: Sidewalk Ada Compliance Analysis..... | 48 |
| Figure 28: Percent Of Sidewalk Ramps Meeting Ada Requirements Sierra Vista 2015 | 49 |
| Figure 29: Pedestrian And Cyclist Collisions: Sierra Vista | 49 |
| Figure 27: Bike Lane Connectivity In Sierra Vista..... | 50 |
| Figure 30: West Fry Boulevard Conceptual Renderings | 51 |
| Figure 28: Fort Huachuca Bicycle And Pedestrian Improvements..... | 52 |
| Figure 29: Recommendations Sierra Vista Planned Update To The Zoning Ordinance..... | 60 |
| Figure 33: Fort Huachuca Recommendations..... | 61 |
| Figure 30: Reporting | 65 |
| Figure 31: Implementation Responsibility And Timing | 68 |

1. Summary

HIA CONTEXT, PURPOSE AND GOALS

CONTEXT

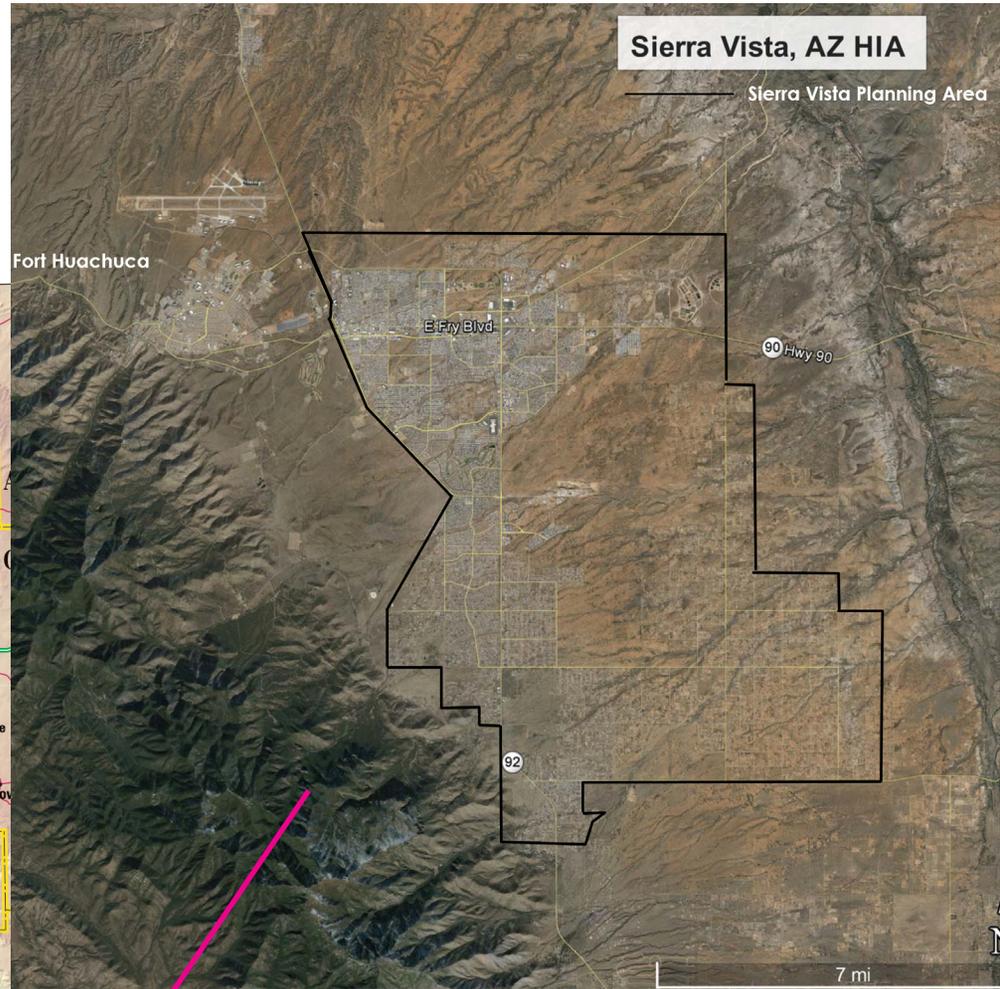
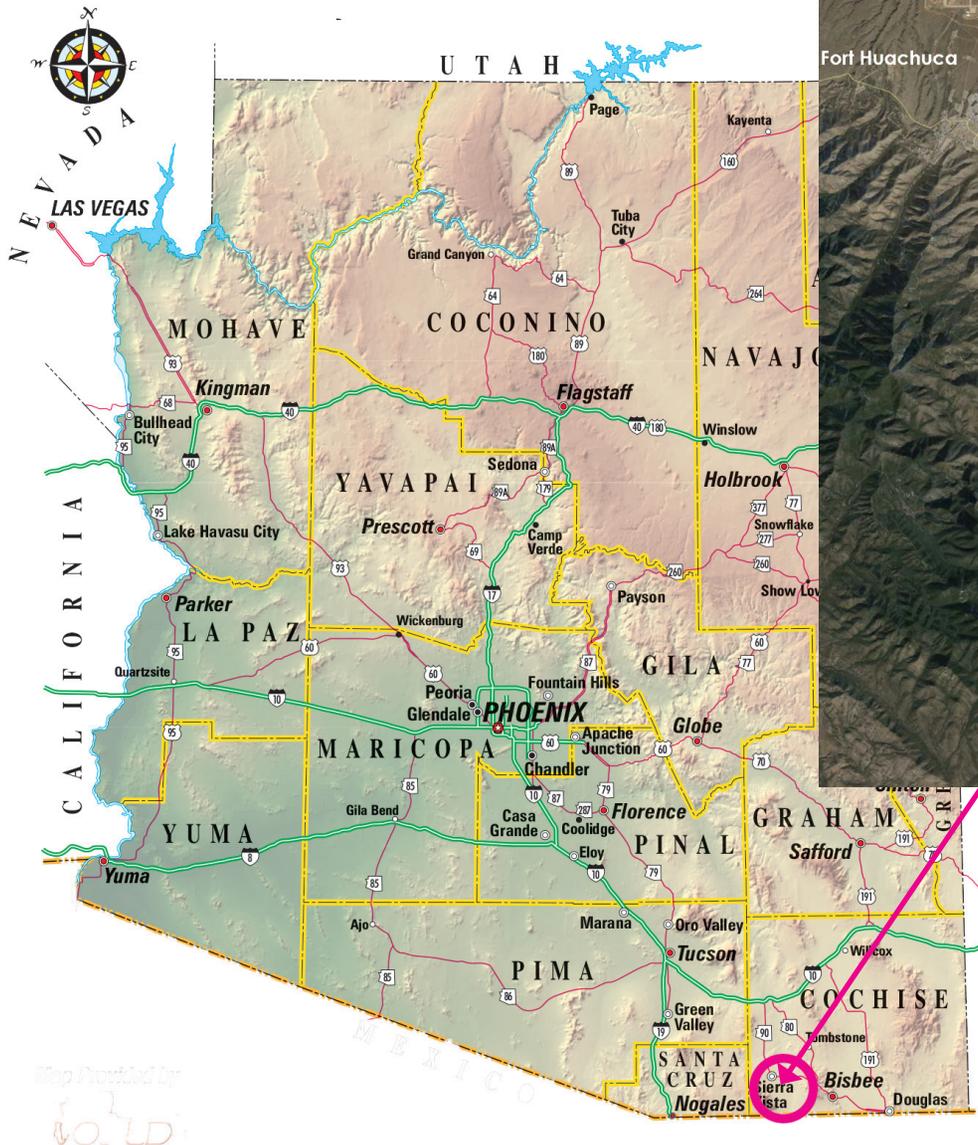
Incorporated in 1956, Sierra Vista is located in the most southwestern part of Cochise County, approximately 28 miles south of the intersection between the 1-10 and SR90. As of 2015, the City was home to over 43,800 residents, many of whom live and/or work on Fort Huachuca, an active military installation and nationally designated historical place. Fort Huachuca was annexed into the City of Sierra Vista in 1971 (Figure 1: Project Context Map)

PURPOSE

By examining the health impacts of increasing and improving facilities for bicycling, walking, and public transit in Sierra Vista, this Health Impact Assessment (HIA) is intended to inform decision-making related to non-motorized and public transportation planning in Sierra Vista.



Figure 1: Project Context Map



HIA GOALS:

- Forging community partnerships and generating support for healthy transportation recommendations.
- Raise awareness within the community of the relationship between transportation and physical and mental well-being, from an individual and community health perspective.
- Informing the capital project priorities of the Sierra Vista Safe Bicycle and Pedestrian Routes Plan and Sidewalk Implementation Plan (SVMPO Regional Transportation Plan (2015-2040)
- Provide input to the:
 - City of Sierra Vista development code update
 - Sierra Vista Unified School District school crosswalk plans.
 - Fry Blvd. Corridor Study
 - North Garden Avenue Streets-cape Redesign.
 - Policy and planning on the military base Fort Huachuca, a quintessential part of the greater Sierra Vista community.

OBJECTIVES OF THIS HIA

The primary objective of this HIA is to help participants in the HIA planning process and the larger Sierra Vista community to gain a greater awareness of the relationship between transportation and physical and mental health, for individuals and the community.

This objective will be accomplished through:

- Providing the Sierra Vista Metropolitan Planning Organization (SVMPO) and HIA Steering Committee (Be Healthy! Sierra Vista) information about the relationship between individual and community health, and available transportation options and planned non-motorized transportation facilities
- Using the HIA process to engage and educate people who live and work in Sierra Vista and at Fort Huachuca about the intersection between transportation and their health and the health of their community. Forging community partnerships and generating support for health-relevant transportation recommendations.

HIA TEAM & SPONSORSHIP

This Health Impact Assessment was developed in partnership with the Sierra Vista Metropolitan Planning Organization (SVMPO). The HIA was funded by the Arizona Department of Health Services (ADHS) with a grant from the Center for Disease Control and Prevention-National Center for Environmental Health under grant number 1UE1H001193-01.

The team conducting the Health Impact Assessment included:

- Anissa Jonovich, Arizona Department of Health Services
- Dan Coworth, Sierra Vista Metropolitan Planning Organization
- Mallory Ress - Volunteer, Sierra Vista Metropolitan Planning Organization
- Leslie Dornfeld, FACIP, CSBA, PLAN*et Communities PLLC
- Kevin Godfrey, PLAN*et Communities

SUMMARY OF FINDINGS

The addition of new sidewalks, bicycle lanes, and multi-use paths will remove gaps throughout the existing city of Sierra Vista and will contribute to increased connectivity and provide healthy transportation options for residents and visitors. When residents take advantage of healthy transportation options such as bicycling, walking, and transit, they increase their level of physical activity, which contributes to the reduction of potentially fatal chronic diseases, such as diabetes and heart disease. Physical activity has also been proven to decrease stress, depression, and isolation, which are significant factors related to the potentially fatal diseases of alcohol and drug addiction.

Healthy transportation options also make important community destinations such as medical care, parks, social services and access to healthy food more accessible to people who do not drive, including the disabled, seniors, and children. Making safety improvements to sidewalk ramps, sidewalk surfaces, crosswalks, and improving sidewalk connectivity will increase the physical and perceived safety of sidewalks and bike lanes, resulting in more people using them and providing better facilities for those who are disabled.

RECOMMENDATIONS

- Sierra Vista Sidewalks Inventory and Implementation Plan- Include census tract income, proportion of disabled, and persons over 65 in overall sidewalk connectivity priority area determination.
- Sierra Vista Sidewalks Inventory and Implementation Plan: Provide a connection between N. Carmichael Avenue where it terminates at N. Railroad Avenue to West Fry Boulevard.
- Sierra Vista Sidewalks Inventory and Implementation Plan: Provide additional sidewalk along Avendia Cochise between Paseo Luis and Calle Mercancia with ADA upgrades. (Project 1).
- Sierra Vista Sidewalks Inventory and Implementation Plan: Provide additional sidewalk on S. Carmichael Ave. between lane and Timothy Lane, with ADA upgrades (Project 13).
- Fry Blvd. Corridor Plan: Sierra Vista City Council Strategic Objective goal is to implement a plan to beautify public infrastructure that makes Fry Blvd. and North Garden Ave. more walkable and bike-able.

Upgrades to the zoning ordinance in Sierra Vista are recommended by the HIA team. These alterations would among other things require ADA compliance of all sidewalks along local streets, increase connectivity throughout the City via new bike lanes and multi-use paths, and requirements of future developments that enhance this connectivity rather than disrupt it.

Recommendations for infrastructure improvements on Fort Huachuca are also outlined in this HIA. All of those recommendations look at either filling in gaps in the sidewalk grid or improving bike lanes and MUP's that in their current condition can be present public safety challenges and limit the viability of active transportation.

A variety of stakeholder engagement techniques were employed to educate the community about the relationship between transportation, physical activity and health, and engage them in the development of the HIA. These included:

- Two public meetings to educate interested parties of the HIA, compile data, and interact with the community
- Engaging "Be Healthy! Sierra Vista," as the HIA Stakeholder group in February 2016
- Hosting a Sierra Vista HIA table at the "Super Bowl Tailgate" held by the Sierra Vista Chamber of Commerce
- Participating in the April 28, 2016 Sierra Vista Chamber of Commerce Health, Wealth and Lifestyle Fair

- Distributing information about the HIA and community meetings through local radio, print, and city sponsored digital newsletters
- Hosting an HIA web page to share information about specific health issues in Sierra Vista, public comment summaries, and encourage community dialogue about health and its relationship to transportation.

2. About

THE PROJECT

The purpose of this project is to identify and make recommendations to maximize the potential beneficial health impacts resulting from more available non-motorized transportation facilities in Sierra Vista through a variety of projects, plans and policies. Each of these projects is described below:

- West Fry Boulevard Corridor Study - An ongoing corridor study for the West end of Fry Boulevard. This end of Fry Boulevard terminates at the historic entrance to Fort Huachuca. A second entrance to Fort Huachuca, located at the west terminus of SR90 has replaced the West Fry Boulevard entry, and now the West Fry entrance is open only on weekdays. As a result, commercial activity along West Fry Boulevard and associated with the Fort's entrance has declined and shifted approximately three miles east to the intersection of Fry Boulevard and SR90. Additionally, the residential areas north of West Fry Boulevard include some of the city's lowest income residents. The West Fry Boulevard Corridor Study seeks to identify streetscape, pedestrian facilities, and other investments that will promote activity and contribute to the revitalization of commercial activity along West Fry Boulevard.
- North Garden Avenue Corridor Study - A road diet program to generate pedestrian activity and beautify the North Garden Avenue streetscape. North Garden Avenue is located along the east side of the Fort, provides access to West Fry Boulevard, and borders the low income housing area north of West Fry Boulevard.
- Sidewalk Implementation Plan - The Sidewalk Implementation Plan identifies gaps in the city sidewalk network. The plan prioritizes where sidewalks are needed based on access to transit, activity centers, parks, and schools. This HIA provides input into implementation of this plan as well as the plan recommendations.
- Safe Bicycle and Pedestrian Routes Plan. In 2011 the city of Sierra Vista completed a Safe Bicycle and Pedestrian Routes Plan. The plan identifies bicycle and pedestrian needs and deficiencies within Sierra Vista and recommends projects, programs, and studies to

improve bicycle and pedestrian safety and comfort. This HIA provides information and recommendations regarding priorities for implementation of this plan.

- Planned Update to the Sierra Vista Development Code. The Development Code regulates how development occurs and the types of development that can occur at a given location. This HIA can provide a better understanding of how transportation facilities, access, and landscaping that provides shade can impact health. The HIA recommendations can influence requirements for sidewalks, bike paths, trails, and other facilities such as bus stop shelters, bicycle racks, benches along sidewalks, and shade that affect the safety, comfort, and connectivity of the non-motorized transportation system.



Bike lane in Sierra Vista. Source: Dan Coxworth, SVMPO Administrator



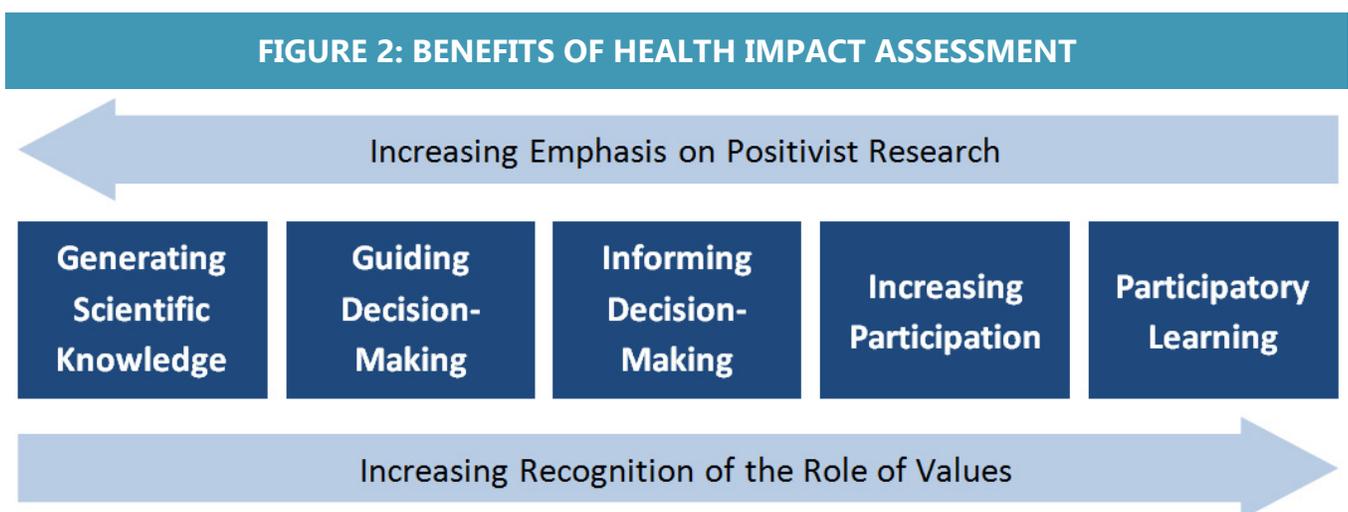
Overhead view of West Fry Boulevard. Source: Dan Coxworth, SVMPO Administrator

HEALTH IMPACT ASSESSMENT EXPLAINED

An HIA is a specific, six-step process that examines the potential health consequences of a proposed project, plan, or policy. HIAs differ from other tools commonly used for health assessment, such as health risk assessments and public health assessments. The CDC states that HIAs:

- Are intended to inform deliberations on a specific proposal—legislation, proposed rule-making, and project permitting, for example.
- Systematically assess the multiple influences on health that can occur as a result of social, economic, and environmental changes.
- Use a broad definition of health that includes physical and psychological health and general well-being.¹

HIAs provide benefits to the community and decision-makers because they enhance understanding of the total intended and unintended benefits and/or costs while an action is being considered. This knowledge can shape a potential plan, policy, or project so that positive health outcomes are maximized and negative ones are diminished as much as possible. The purpose of an HIA is never to stop a proposal, rather it is to clearly articulate to stake-holders information about the intersection between policy and public health outcomes. In turn, the HIA process brings public health issues to the attention of persons whose purview may not explicitly deal with matters of public health, for example, an official making decisions on transportation planning or land-use planning (Figure 2: Benefits of Health Impact Assessment.).



Harris-Roxas B. Views of the Purpose of Health Impact Assessment, Centre for Health Equity Training, Research and Evaluation (CHETRE): Sydney, 2008 http://www.hiaconnect.edu.au/evaluating_hia.htm

THE HIA PROCESS

The HIA Process includes six steps (Figure 3: Steps of HIA):

- Screening
- Scoping
- Assessment
- Recommendations
- Reporting
- Monitoring and Evaluation

Screening is the first step of the process. During the screening process, a determination is made if the project is related to the determinants of health and if conducting an HIA will have value to decision makers. Information about determinations of health is located in the Screening chapter of this document.

Scoping identifies the determinants of health and health indicators that are specific to the HIA and identifies data sources that can be used in constructing the HIA. During scoping, the types and extent of the public engagement process are also outlined in a stakeholder engagement plan. The stakeholder engagement plan for this HIA is located in Appendix XY: Stakeholder Engagement Plan.

The **Assessment** phase of an HIA is where the baseline health indicators related to the project or policy are described in detail and where the potential health effects of the proposal are characterized.

Recommendations are specific actions included in the HIA that could benefit community health with regards to the proposed project or policy.

Reporting includes activities to inform the community of the HIA recommendations and process.

The **Monitoring and Evaluation** section addresses various ways the process could have been improved, and identifies potential indicators that could be used to monitor the impact of the project and recommendations.



Source: *The HIA Process*. August 26, 2014. The Pew Charitable Trusts. <http://www.pewtrusts.org/en/about/newsroom/news/2014/08/28/the-hia-process>

THE RELATIONSHIP OF HEALTH TO TRANSPORTATION

How we travel from one place to another affects our health. Driving is the least active form of transportation. The ULI states that communities designed in a way that supports physical activity—wide sidewalks, safe bike lanes, attractive stairways, accessible recreation areas—encourage residents to make healthy choices and live healthy lives. Healthy places in turn create economic value by attracting both younger and older workers and appeal to a skilled workforce and innovative companies¹.

Literature shows that regular physical activity:

- Decreases the risks of cardiovascular disease, colon cancer, and diabetes
- Maintains muscle strength and joint structure and function
- Is necessary for normal skeletal development during childhood
- May relieve depression, anxiety, and other mental illnesses
- Along with appropriate dietary patterns, may lower obesity levels

Transportation systems influence our level of physical activity in the following three ways (Figure 4: Relationship Of Health To Transportation):

SIDEWALKS TO PROMOTE WALKING

Research has shown that people living in communities with sidewalks are 47% more likely to engage in physical activity for 39 minutes per day, than those that live in communities without sidewalks³. A safe, accessible, well maintained sidewalk not only increases public health, it also encourages social interactions and by increasing the community's walk score, can increase home values.

FIGURE 4: RELATIONSHIP OF HEALTH TO TRANSPORTATION



Sidewalks are also important to remove barriers to accessing public transportation. A 2010 study conducted for the American Public Transportation Association found that neighborhood design features that support transit, such as sidewalks, shade, and mixed land uses, also support public health. Of people with safe places to walk within ten minutes of home, 43% achieve physical activity targets, compared with just 27% of less walkable area residents.⁴

TRAFFIC CALMING EFFORTS TO MAKE WALKING/BIKING SAFER

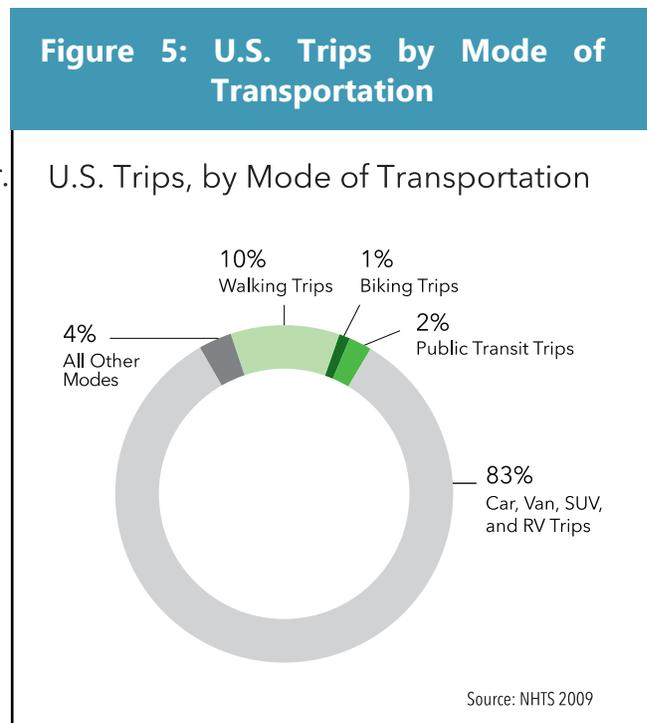
Wide, well-lit sidewalks, clearly marked crosswalks, pedestrian-activated crossing signals, and reducing speed limits on streets improves both pedestrian and bicyclist’s safety. Streets that are wide, smooth, and straight encourage automobile travel at fast speeds and discourage travel by foot or bicycle. Conversely, streets that are narrow and irregular discourage automobile travel at high speeds. Additionally, streets that incorporate pedestrian and bicycle facilities (bike lanes, sidewalks, crosswalks, etc.) and that are calmed (i.e., streets that contain traffic-slowing obstacles and devices) are believed to facilitate more walking and bicycling. In the United States, street design has been dominated by the desire to facilitate the smooth flow of automobile traffic, resulting in design standards for streets that encourage driving and discourage walking and biking⁵.

BENEFITS OF REGULAR PHYSICAL ACTIVITY

- Reduces the risk of dying prematurely.
- Reduces the risk of dying from heart disease.
- Reduces the risk of developing diabetes.
- Reduces the risk of developing high blood pressure.
- Helps reduce blood pressure in people who already have high blood pressure.
- Reduces the risk of developing colon cancer.
- Reduces feelings of depression and anxiety.
- Helps control weight.
- Helps build and maintain healthy bones, muscles, and joints.
- Helps older adults become stronger and better able to move about without falling.
- Promotes psychological well-being.^{5a}

U.S. TRIPS, BY MODE OF TRANSPORTATION

According to the 2009 National Travel Survey (the most recent available), about 40% of trips are shorter than two miles—about a 30-minute walk or a 10-minute bike ride.⁶ However, driving remains a primary mode of transportation, and according to the 2009 National Transportation Survey, 83% of all trips were made by motorized vehicles (Figure 5: U.S. Trips by Mode of Transportation.).



3. Screening

INTRODUCTION

Screening is the first phase of Health Impact Assessment (HIA). During this period, the value of conducting an HIA is examined. Screening assesses the extent to which the project, proposal, or policy could have **significance** and **value** in impacting identified determinants of health, and the extent to which the recommendations of an HIA could be implemented (Figure 6: Health Impact Assessment). Screening Summary documents the significance and value of this HIA.

SIGNIFICANCE

This HIA could affect the implementation of a variety of plans that will substantially change the non-motorized transportation environment in Sierra Vista. For all Sierra Vista residents, these changes could result in a reduction in obesity and obesity-related diseases such as diabetes and heart disease, improved mental health, and better access to healthy food, healthcare, employment, and schools.

VALUE

The Sidewalk Implementation Plan, North Garden Avenue Corridor Study, West Fry Boulevard Corridor Study, Safe Bicycle and Pedestrian Routes Plan, and the planned update to the Sierra Vista Development Code affect how the city of Sierra Vista can provide non-motorized transportation facilities through zoning, development, and roadway improvements. Some of the plans, such as the Safe Bicycle and Pedestrian Routes plan and the North Garden Avenue

Corridor Study, are adopted by the Metropolitan Planning Organization (MPO) and the HIA can provide guidance in implementation priorities. Some, such as the West Fry Boulevard Corridor Study, are in process and the HIA can provide input into the development of recommendations and concept designs. Others, such as the update to the Sierra Vista Development Code are planned, and this HIA can provide foundational information to topics that should be considered in the update.

FIGURE 6: HEALTH IMPACT ASSESSMENT SCREENING SUMMARY

| CRITERIA | RESPONSE | DISCUSSION |
|--|--|---|
| Is there a specific decision being made? | This HIA will impact several specific decisions. | This HIA will provide input into the West Fry Boulevard and the North Garden Avenue Corridor Studies, and the update of the Sierra Vista Zoning Ordinance, and the determination of implementation priorities for the Safe Bicycle and Pedestrian Routes Plan, the Sidewalk Implementation Plan and Avenida del Sol School crosswalk design and implementation. |
| Policy Area | Transportation and Health | Focus on connectivity of the bicycle and pedestrian system and its impact on health. |
| Proposal Status | Awarded and Active | The Sierra Vista Metropolitan Planning Organization is moving forward with implementing these projects and requested input from this HIA to assist in project prioritizing. |
| Proposal Timing | The corridor studies are awarded and active. The zoning ordinance update is planned. The Sidewalk Implementation Plan and Safe Bicycle and Pedestrian Routes Plan have been adopted and are moving towards Implementation. | The HIA time frame is from February 2016 through August 2016. This time-frame will provide an opportunity for the HIA to provide input to the studies and implementation schedules. |
| Potential Health Impacts (Initial Screening) | Yes | Sierra Vista is home to Fort Huachuca. Key health issues include a disabled population, isolation, obesity, heart disease, and diabetes. All of these issues can be impacted by increased mobility and physical activity. |

FIGURE 6: HEALTH IMPACT ASSESSMENT SCREENING SUMMARY

| CRITERIA | RESPONSE | DISCUSSION |
|--|-----------------------|---|
| Impact on health disparities | Yes | Sierra Vista is a suburban community with limited non-motorized and healthy transportation options. People without cars often have limited access to healthcare, healthy eating options, employment, and education. |
| Local vs. State | Local | This is a local project. The Sierra Vista MPO is mostly focused on the city of Sierra Vista |
| Discretion of Stakeholder Group | Guidance and advocacy | This project will be guided by the Sierra Vista MPO and Be Healthy! Sierra Vista. |
| TIER II | | |
| Receptivity of decision makers | High | The MPO and the City of Sierra Vista both support this project. The HIA will be presented to the SVMPO, Fort Huachuca and City for acceptance/ adoption. |
| Partners exist to help with HIA | Yes | This HIA will be prepared in partnership with the Cochise County Health Department and the Sierra Vista MPO (SVMPO). SVMPO has committed to ensuring the participation of other key health-related stakeholders. |
| Potential for systemic and/or institutional change | Potentially | It is possible that more education regarding the health impacts of transportation facilities could result in healthy transportation options receiving higher priority in the implementation of a variety of non-motorized transportation plans, corridor studies, and other projects. |

DETERMINANTS OF HEALTH EXPLAINED

Different entities and organizations identify a range of different factors that determine health outcomes. Three general categories fundamental to most definitions of the determinants of health are: built environment, social environment, and individual behavior. To a large extent, individual behavior is influenced by physical and social determinants.

The World Health Organization (WHO) broadly describes nine determinants of community and individual health. (Figure 6: WHO Determinants of Community and Individual Health)

- Social and Economic Environment
- Built Environment
- Income and Social Status
- Genetics
- Social Support Networks
- Individual Characteristics and Behaviors
- The Physical Environment
- Health Services
- Gender

Healthy People 2020, operating under the auspices of the National Institute of Health Office of Disease Prevention and Health Promotion identifies two categories of health determinants of health: physical and social. Transportation options is identified as a social determinant of health. Other directly related social determinants of health identified by Healthy People 2020 are access to educational, economic, and job opportunities and health care services.

Healthy People 2020 physical determinants of health include the natural environment, such as green space (e.g., trees and grass) or weather (e.g., climate change), built environment, such as buildings, sidewalks, bike lanes, and roads, and physical barriers (Figure 7: Healthy People 2020 Social Determinants of Health)⁷.

FIGURE 7: WORLD HEALTH ORGANIZATION DETERMINANTS OF COMMUNITY & INDIVIDUAL HEALTH

The Social and Economic Environment - Availability and access to community organizations and employment affects all aspects of our physical and mental health.

The Built Environment - How we live affects our health. Communities designed to encourage physical activity result in lower rates of obesity and diseases related to physical inactivity. Physical activity increases the production of certain hormones and chemicals that have been shown to prevent depression and other mental illnesses. Communities that are designed to encourage interactions between their residents also help to foster a sense of community. A sense of community has been found to increase individual well-being. Communities that are designed to be safe can prevent accidents that can cause personal injuries.

Income and Social Status - Higher income and social status are linked to better health. The greater the gap between the richest and poorest people, the greater the differences in health.

Genetics - Inheritance plays a part in determining lifespan, healthiness and the likelihood of developing certain illnesses. Personal behavior and coping skills – balanced eating, keeping active, smoking, drinking, and how we deal with life’s stresses and challenges all affect health.

Social Support Networks – Greater support from families, friends and communities is linked to better health. Culture - customs and traditions, and the beliefs of the family and community all affect health.

Individual Characteristics & Behaviors - How a person behaves has a direct impact on individual and community health. A person that engages in high risk activities can endanger the health of themselves and others.

The Physical Environment – Safe water and clean air, healthy workplaces, safe houses, communities and roads all contribute to good health. Employment and working conditions – people in employment are healthier, particularly those who have more control over their working conditions.

Education- Low education levels are linked with poor health, more stress and lower self-confidence.

Health services - Access and use of services that prevent and treat disease influences health

Gender - Men and women suffer from different types of diseases at different ages.

SOURCE: World Health Organization. Health Impact Assessment. <http://www.who.int/hia/evidence/doh/en/>
Access Date: June 19, 2015.

The Centers for Disease Control (CDC) defines determinants of health, as factors that may be biological, socioeconomic, psychosocial, behavioral, or social in nature ⁸. The CDC identifies five general areas including:

- Biology and genetics. Individual behavior. Examples: alcohol use, injection drug use (needles), unprotected sex, and smoking
- Social environment. Examples: discrimination, income, and gender
- Physical environment. Examples: where a person lives and crowding conditions
- Health services. Examples: Access to quality health care and having or not having health insurance.

RELATIONSHIP OF THIS PROJECT TO THE DETERMINANTS OF HEALTH

This project would have an effect on the following Determinants of Health:

- Physical Activity
- The Physical Environment (transportation Options and community design)
- Individual characteristics and behaviors
- Economic Environment (Access to Employment)

How each of these affects individual and community health is discussed below.

FIGURE 7: HEALTHY PEOPLE 2020 SOCIAL DETERMINANTS OF HEALTH

- Availability of resources to meet daily needs (e.g., safe housing and local food markets)
- Access to educational, economic, and job opportunities
- Access to health care services
- Quality of education and job training
- Availability of community-based resources in support of community living and opportunities for recreational and leisure-time activities
- Transportation options
- Public safety
- Social support
- Social norms and attitudes (e.g., discrimination, racism, and distrust of government)
- Exposure to crime, violence, and social disorder (e.g., presence of trash and lack of cooperation in a community)
- Socioeconomic conditions (e.g., concentrated poverty and the stressful conditions that accompany it)
- Residential segregation
- Language/Literacy
- Access to mass media and emerging technologies (e.g., cell phones, the Internet, and social media)
- Culture

Physical Determinants of Health

- Natural environment, such as green space (e.g., trees and grass) or weather (e.g., climate change)
- Built environment, such as buildings, sidewalks, bike lanes, and roads
- Worksites, schools, and recreational settings
- Housing and community design
- Exposure to toxic substances and other physical hazards
- Physical barriers, especially for people with disabilities
- Aesthetic elements (e.g., good lighting, trees, and benches)

Source: Healthy People 2020. Determinants of Health. <http://www.healthypeople.gov/2020/about/foundation-health-measures/Determinants-of-Health>. Access Date: June 22, 2015

PHYSICAL ENVIRONMENT

TRANSPORTATION

There is a strong relationship between non-motorized transportation and the determinants of health. Walking and bicycling are physically active modes of transportation that provide the benefit of improved health and have many other individual and community benefits. These benefits include social equity, reduction of traffic congestion and costs of road maintenance, reduction of greenhouse gas emissions, and economic benefits by reducing the number of vehicles a family needs.

Chronic diseases and conditions—such as heart disease, stroke, cancer, type 2 diabetes, obesity, and arthritis—are among the most common, costly, and preventable of all health problems⁹. At community meetings held during the development of this HIA, Sierra Vista residents stated they are concerned about the impact of the obesity in their community. The Surgeon General's report states that the benefits of physical activity include reducing symptoms of anxiety and depression, improved mood, and promotion of a feeling of well-being¹⁰.

Transportation is also associated with individual and community economics. Through enhanced transportation options, more people can access school, work, community services, and their neighbors without a car. A 2014 Urban Institute Study found that low income families who had cars were more likely to get access to high-quality neighborhoods—and they were more likely to get jobs if they did not have jobs already, and keep jobs if they already had jobs, than those households who did not have cars. Access to public transit was associated with keeping a job, but not with getting one¹¹.

COMMUNITY DESIGN

Transportation planning shapes subsequent land-use decisions and the overall growth of an urbanized area. Connecting and providing more sidewalks and bicycle facilities will make Sierra Vista more pedestrian and bicycle-friendly and provide opportunity for residents to change how they travel within the city. Providing better pedestrian, bicycle, and transportation access can also help to shift development patterns to ones that may be pedestrian and bicycle oriented, as well as oriented towards automobiles.

INDIVIDUAL CHARACTERISTICS AND BEHAVIORS

Providing better access to natural resources and providing facilities where people can more safely walk, bicycle, or use transit can impact individual mobility choices and result in behavior changes where people choose to walk, bike and use public transportation instead of driving.

ECONOMIC ENVIRONMENT

ACCESS TO EMPLOYMENT

Access to employment and income are related to individual and community health. A community with a healthy economy has revenues to invest in public facilities, such as parks, schools, sidewalks, bicycle lanes, and trails. Individual income is correlated with health care access and mental health. Revitalizing West Fry Boulevard will result in more revenues to the City of Sierra Vista, potentially jobs that can be accessed by the local community, and a more pleasant physical environment along West Fry Boulevard that could encourage walking and biking.

EFFECT ON VULNERABLE POPULATIONS

OLDER POPULATIONS

As people age, they are less likely to drive. A study done by AARP, "Planning Complete Streets for Aging America," found that when streets are designed to promote and encourage non-motorized forms of transportation, older people who drive less, or no longer drive at all, are more likely to remain mobile and physically active¹². The 2014 ACS reports the City of Sierra Vista has a senior population of 15.2%, By contrast, Arizona's over 65 population is 13.7%. The percent of Sierra Vista Population over 75 years old is 7%; Arizona's over 75 population is 5.6%¹³. The Automobile Association of America (AAA) states, "Visual, cognitive and physical skills that affect driving ability decline with increasing age. Aging drivers often have difficulty seeing objects at dusk and in the evening. Judgment may become impaired, making them less able to react at higher speeds and make turns in front of oncoming traffic. Also, medical conditions such as arthritis or weakening muscles and joints can make it challenging to safely operate a vehicle. While most older adults compensate for these age-related health issues, some do not. It is those who fail to compensate for physical or mental declines, and those who do not stop driving if their limitations cannot be addressed, who suffer a higher risk of causing crashes."¹⁴

People living in poverty have a much higher reliance on transit and public transportation than those who do not. A 2014 FHWA report states that people in poverty take about three times as many transit trips as those in the higher income groups. They also have the greatest rate of bike trips and take walk trips about 50% more than their higher income counterparts. When using personal vehicles, individuals in poverty are about twice as likely to travel in a multi-occupant vehicle¹⁵. 12.6% of Sierra Vista's residents, roughly

OLDER DRIVER FACTS AND FIGURES

- Fifty percent of the middle-aged population and 80 percent of people in their 70s suffer from arthritis, crippling inflammation of the joints, which makes turning, flexing and twisting painful.
- Weaker muscles, reduced flexibility and limited range of motion restrict senior drivers' ability to grip and turn the steering wheel, press the accelerator or brake, or reach to open doors and windows.
- More than 75 percent of drivers age 65 or older report using one or more medications, but less than one-third acknowledged awareness of the potential impact of the medications on driving performance.
- Per mile traveled, fatal crash rates increase beginning at age 75 and rise sharply after age 80. This is mainly due to increased risk of injury and medical complications, rather than an increased tendency to get into crashes.
- Since older drivers are more fragile, their fatality rates are 17 times higher than those of 25- to 64-year-olds.
- In 2009, 33 million licensed drivers were over age 65 – a 20 percent increase from 1999. And by the year 2030, 70 million Americans in the U.S. will be over age 65 – and 85 to 90 percent of them will be licensed to drive.
- In 2009, nearly 5,300 senior drivers were killed and 187,000 were injured in traffic crashes.
- In 2009, more than 60 percent of deaths in crashes involving drivers over age 70 were older drivers themselves and 16 percent were their passengers. Twenty-two percent of these deaths were occupants of other vehicles, bicyclists and pedestrians.³ By comparison, in the same year 42 percent of deaths in crashes involving at least one driver younger than age 30 were attributed to the younger drivers themselves and 24 percent were their passengers. Thirty-four percent were occupants of other vehicles, bicyclists and pedestrians.

Source: SeniorDriving.org.com. American Automobile Association. Facts and Research. Access Date: July 5, 2016.

5,530 individuals, live below the poverty level¹⁶. This group will benefit from an investment in non-motorized transportation infrastructure to establish connectivity between their homes, places of recreation and leisure, and services necessary to maintain individual health (i.e. healthy food, medical care).

PEOPLE WITH DISABILITIES

Over 20% of the Cochise County 2012 population is disabled, higher than the U.S. average of 12%¹⁷. Some of this may be due to the presence of Fort Huachuca, and some of this may be due to the county's slightly higher than national percent of 2010 population over 65 years old¹⁸. In Cochise County, almost 9 percent of all disabled people have an ambulatory difficulty, and almost 7 percent of all people with a disability have a hearing or vision difficulty¹⁹. The Bureau of Transportation Statistics reports that 12% of people with disabilities have difficulty getting the transportation they need, compared to 3% of persons without disabilities. The problems most frequently cited by individuals with disabilities are, no or limited public transportation (33%), don't have a car (26%), disability makes transportation hard to use (17%), no one to depend on (12%). Of the non-disabled who have difficulty getting the transportation they need, the reason cited most often is no or limited public transportation (47%)²⁰. Providing connected and safe sidewalks and safe connections to public transportation can help people with disabilities access community destinations more easily. Since walking and bicycling are physical activities, they also increase serotonin, and increased serotonin is associated with better mental health.

4. Scoping

INTRODUCTION

This chapter outlines the framework for understanding the scope of this assessment. In this chapter, a Pathway Diagram is used to illustrate the range of individual and community health related outcomes relevant to the SVMPO adopted and proposed non-motorized transportation plans, designed to strengthen the non-motorized transportation network in Sierra Vista. This chapter also identifies specific groups of stakeholders that will be contacted and outreach techniques that will be used during the Assessment phase of the HIA.

ABOUT PATHWAY DIAGRAMS

The purpose of a Pathway Diagram is to help develop a shared understanding of how a project will develop and the health outcomes that can be expected. Typically, Pathway Diagrams map out the casual pathways by which health effects might occur due to a proposed plan, policy, or project. In general, this approach identifies the specific action, identifies the determinants of health impacted by the action, and then connects the determinants of health to the specific health effects that could occur.



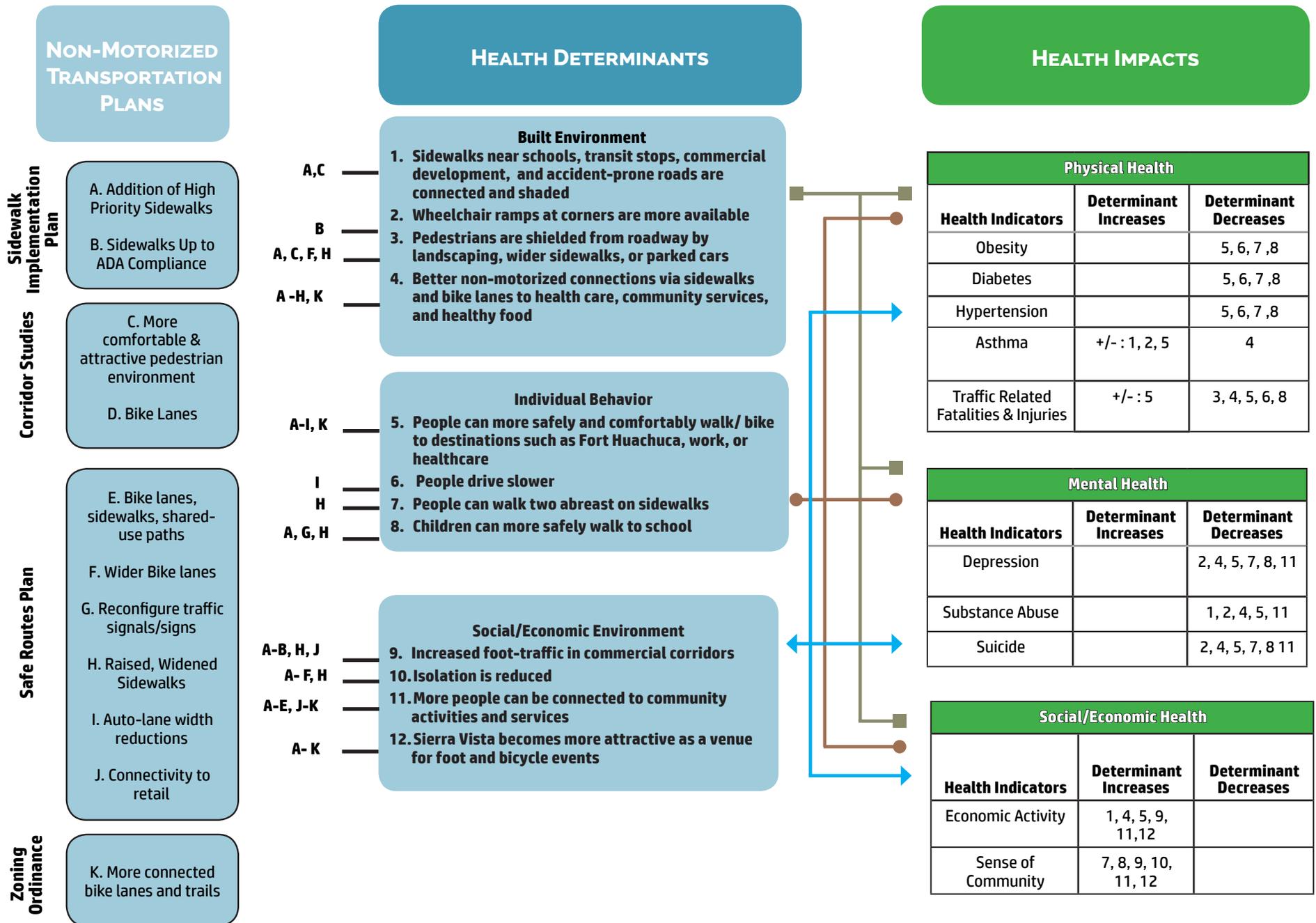
SVMPO NON-MOTORIZED TRANSPORTATION PLANNING PATHWAY DIAGRAMS

SVMPO and the City has adopted and is also developing several plans that call for investments into the non-motorized transportation infrastructure. These include the adopted Safe Bike and Pedestrian Routes and Sidewalk Implementation Plans, the underway corridor studies for West Fry Boulevard and North Garden Avenue, and Safe Routes To School (SRTS) projects.

Policies and specific projects associated with each of these plans are identified on the left hand side of the Pathway Diagram.

At public meetings held in Sierra Vista, community members identified how transportation options could impact specific health determinants. The impacts identified by the community are listed in the center column of the Pathway Diagram. The impacts on individual and community health factors important to Sierra Vista, as determined in community meetings and through the screening process, are identified in the column on right side of the Pathway Diagram (Figure 8: Pathway Diagram and Figure 9: Pathway Explanation Table.).

Figure 8: SIERRA VISTA HIA PATHWAY DIAGRAM



RELEVANCE OF THIS PROJECT TO COMMUNITY HEALTH

The Sidewalk Implementation Plan, Bicycle and Pedestrian Safety Plan, West Fry Boulevard and North Garden Avenue Corridor Studies, Safe Routes To School efforts, and potential updates to the city’s zoning ordinance will include a variety of recommendations that will change how the city provides non-motorized transportation facilities. Providing non-motorized transportation facilities will influence community health. At public meetings held throughout Sierra Vista, community members identified how non-motorized transportation options could impact physical and community health. The chart below provides additional information on how the potential impacts on the determinants of health including the Built Environment, Individual Behavior, and the Social and Economic Environment can impact mortality, morbidity, and community health.

Figure 9: Pathways Explanation Table

| PATHWAY | DETERMINANT | DESCRIPTION |
|---------|--|---|
| 1 | Built Environment - Sidewalks near schools, transit stops, commercial development, and accident prone roads are connected and shaded | <p>Making the pedestrian environment safer, more connected and comfortable, and convenient may result in people walking more. If people walk more, they are more active. Increased activity is associated with reduced rates of obesity related chronic disease such as hypertension and diabetes. Physical activity is also associated with reduced rates of depression and related chronic diseases such as substance abuse and alcoholism.</p> <p>If people walk instead of drive to nearby destinations, it also may reduce stress associated with traffic congestion. Lower rates of stress are associated with reduced rates of depression and related chronic disease such as substance abuse and alcoholism. Reducing congestion could make people more willing to travel for education and other community services throughout the Verde Valley, thereby reducing isolation.</p> <p>As more people walk, and higher vehicular speeds that are associated with less traffic congestion may increase, pedestrian and bicycle collisions will increase.</p> |

Figure 9: Pathways Explanation Table

| PATHWAY | DETERMINANT | DESCRIPTION |
|---------|---|--|
| 2 | Built Environment - Sidewalks up to ADA compliance | <p>Providing sidewalks that are at ADA standards can result in fewer injuries for people with disabilities, and help make those with disabilities who cannot drive more independent and mobile. This could result in better access to healthcare and services for this population group; potentially reducing isolation and associated chronic diseases of substance abuse, depression, and alcoholism.</p> <p>Providing ADA accessible sidewalks and crosswalks will make the non-motorized transportation environment safer for those with disabilities, potentially reducing fatalities and injuries from crashes with vehicles.</p> <p>Enhancing mobility for the disabled could make employment more accessible, resulting in higher incomes. Higher incomes are associated a healthier economy, and reduced rates of depression and associated chronic diseases of substance abuse, and suicide.</p> |
| 3 | Built Environment - Pedestrians are shielded from the roadway by landscaping, wider sidewalks, and/or parked cars. | <p>Protecting pedestrians from the roadway with landscaping and parked cars creates vertical barriers between the pedestrian and vehicles. This could result in fewer people being injured due to accidents involving cars and pedestrians, and cars and cyclists.</p> |
| 4 | Built Environment - Better non-motorized connections via sidewalks and bike lanes to health care, community services, and healthy food. | <p>Creating better connections between healthy food, community services, and health care will result in improved community health. Improved access to healthy food will help reduce obesity related diseases. Better access to health care can help reduce chronic disease and help to diseases associated with depression. Better access to community services can help reduce isolation. Reduced isolation is associated with reduced substance abuse, suicide, and depression. If people are better able to access community services and amenities, they will benefit from an increased sense of community.</p> <p>Sierra Vista has one major hospitals (not including medical facilities) on the Fort. The network of sidewalks, bike lanes, and shared use paths do not effectively connect all parts of the city to these places.</p> |

Figure 9: Pathways Explanation Table

| PATHWAY | DETERMINANT | DESCRIPTION |
|----------------|--|--|
| 5 | Individual Behavior - People can more safely and comfortably walk/ bike to destinations such as Fort Huachuca, work, or health care. | Walking and biking are two ways to engage in physical activity that contributes to maintaining a healthy body weight. Healthy body weight is associated with decreases in the rates of chronic diseases often associated with obesity. Physical activity is also beneficial to mental health, and could reduce rates of depression, substance abuse, and suicide. Asthma rates may increase due to exposure to the air in Sierra Vista, which has high levels of dust and other particulate matter. |
| 6 | Individual Behavior - People Drive Slower | The higher the impact speed in a pedestrian - vehicle crash the higher the incidence of a pedestrian fatality. Reducing traffic speeds could contribute to a decrease in pedestrian and bicyclist fatalities in pedestrian vehicle crashes. Increases vehicular speed can impact the comfort of a pedestrian on an adjacent sidewalk or bicycle lane. Reduced vehicular speeds will increase pedestrian and cyclist comfort levels. Increased comfort can result in an increase in physical activity for the number of people who use Sierra Vista's sidewalks, bike lanes, or shared use paths. |
| 7 | Individual Behavior - People can walk two abreast on the sidewalk | Currently, some sidewalks in Sierra Vista are too narrow for two people to walk side by side. This is important for safety (parents with small children, adults that need assistance walking) as well as for encouraging social interaction. If sidewalks are safer, people will walk more. |
| 8 | Individual Behavior - Children can more safely walk to school | Making it safer for children to walk to school can result in more parents allowing their children to walk to school and increased physical activity for school children. Safer school crossings can also result in reduced pedestrian and bicycle fatalities for the entire population. Often, children walking together to school results in an increased sense of community because children and parents get to know one another as their children walk to school. |
| 9 | Social/Economic Environment - Increased foot activity in commercial corridors | Pedestrian activity in and around commercial corridors like Fry Boulevard (an area of the city which is not as economically healthy as in the past) may allow local businesses to attract more customers, leading to employment growth, and higher incomes. A sense of community pride may develop if these areas become destinations of commerce, attracting people from all over Sierra Vista. |
| 10 | Social/Economic Environment - Isolation is reduced | Reduced social isolation leads to a stronger sense of community and less depression, substance abuse, and suicide. |

| Figure 9: Pathways Explanation Table | | |
|--------------------------------------|--|---|
| PATHWAY | DETERMINANT | DESCRIPTION |
| 11 | Social/Economic Environment- More people can be connected to community activities and services | Connecting more people to health services helps them to better monitor their health. This results in better overall health and management of obesity and mental health chronic diseases. Connecting people to local goods and services can also result in increased economic activity if more people start shopping in local establishments instead of driving to stores outside the city. Finally, as more people are able to access community activities, their sense of community will increase, reducing isolation and related chronic diseases of depression, substance abuse and suicide. |
| 12 | Social/Economic - Sierra Vista becomes more attractive as a venue for foot and bicycle events. | Events such as bicycle races and foot races bring visitors into Sierra Vista that spend money on goods and services. This benefits the Sierra Vista economy. As Sierra Vista becomes known as a desirable destination for these events, and resident pride in the city can increase. |

The Sierra Vista Safe Bike and Pedestrian’s Route and Sidewalk Implementation Plan, West Fry Boulevard and North Garden Avenue corridor studies, Safe Routes to School program and the City of Sierra Vista planned zoning ordinance update all influence the design, location, and provision of non-motorized transportation facilities and will impact the determinants of health.

HEALTH OUTCOMES

Based on scoping, this HIA will focus on the health determinants of the Built Environment, Social Environment and Individual Behaviors, and the individual and community health outcomes below:

- Physical Health • Obesity • Chronic Disease • Hypertension (blood-pressure) • Asthma
•Traffic related injuries or deaths
- Mental Health • Substance Abuse • Depression • Suicide
- Social Health • Economic Activity • Sense of Community

DATA RESOURCES

The following resources have been identified and will be used to provide data for this Assessment.

- Alliance for Biking and Walking (<http://www.bikewalkalliance.org/>)
- American Community Survey 2014 (<https://www.census.gov/programs-surveys/acs/>)
- Arizona Department of Health Services (www.azdhs.gov/)
- AARP (www.aarp.org/)
- Center for Disease Control (www.cdc.gov/)
- Cochise County Health Services BMI Study and other studies (<https://www.cochise.az.gov/health-and-social-services/home>)
- Healthy People 2020 (<https://www.healthypeople.gov/>)
- National Household Travel Survey (<http://nhts.ornl.gov/>)
- Raymond W. Bliss Medical Center (rwbach.huachuca.amedd.army.mil/)
- Robert Wood Johnson Foundation County Health Rankings and Roadmaps (www.countyhealthrankings.org/)
- Sierra Vista Metropolitan Planning Agency U.S. Census 2010 (www.census.gov/2010census/)
- U.S. Department of Health and Human Services (www.hhs.gov/)
- World Health Organization (<http://www.who.int/hia/en/>)
- FHWA (non-motorized transportation studies) (<https://www.fhwa.dot.gov/>)
- Bicycle and Pedestrian Information Center (<http://www.pedbikeinfo.org/>)

SPECIFIC HEALTH OUTCOMES EVALUATED IN THIS ASSESSMENT

The transportation plans will include high level recommendations to reduce congestion and provide mobility options within Sierra Vista. As a result, health areas of focus will be general, and address outcomes associated with chronic diseases such as obesity, diabetes, heart disease, and hypertension, social isolation, and access to healthcare.

PHYSICAL HEALTH

Chronic Diseases are long-lasting conditions that can be controlled but not cured and include, but are not limited to, diseases such as diabetes, obesity and overweight, hypertension (high blood pressure) and heart disease. As described by the Centers for Disease Control, chronic disease is the leading cause of death and disability in the United States. The CDC reports that half of all adults suffer from chronic diseases, and that seven of the top causes of death in the United States are due to chronic disease¹³.

Transportation facilities that provide healthy mobility options can result in increases in physical activity. Increased physical activity is directly correlated with reductions in chronic obesity-related diseases, including hypertension, diabetes, and heart disease.

MENTAL HEALTH

The strongest evidence suggests that physical activity and exercise probably alleviate some symptoms associated with mild to moderate depression. The evidence also suggests that physical activity and exercise might provide a beneficial adjunct for alcoholism and substance abuse programs; improve self-image, social skills, and cognitive functioning; reduce the symptoms of anxiety; and alter aspects of coronary-prone (Type A) behavior and physiological response to stressors¹⁴.

SOCIAL HEALTH

By providing access to community institutions and education, residents can be more connected to their community and to opportunities for social interaction. Reductions in social isolation can contribute to positive mental health. Individuals who lack social connections or report frequent feelings of loneliness tend to suffer higher rates of morbidity and mortality, as well as infection, depression, and cognitive decline, and social isolation may pose a particularly severe risk for older adults. Older adults are more likely to experience bereavement and develop health problems, both of which may increase their need for social support and companionship. As a result, social isolation may be particularly deleterious for older adults. Indeed, research indicates that older adults who experience one or another aspect of isolation have been found to be at greater risk for all-cause mortality, increased morbidity, depression, and cognitive decline¹⁵.

ECONOMIC HEALTH

Providing a variety of connections that also support recreational activities for visitors, in particular bicycling and walking, will support tourism within these areas, as well as provide healthy transportation options for local residents. In June 2013, Arizona Department of Transportation released a report, *An Economic Impact Study of Bicycling in Arizona: Out of State Bicycle Tourists and Exports* (PDF), which focused on the impacts from out-of-state cyclists traveling to Arizona for events, guided tours, races, and training camps. The study documented \$57 million in retail sales and 721 jobs created across the state¹⁶.

STAKEHOLDER ENGAGEMENT

Two public meetings were held with the public to educate interested parties of the HIA, compile data, and interact with the community. "Be Healthy! Sierra Vista," a local advocacy group, participated in the second of the two public meetings.

In February, SVMPO staff attended the Chamber of Commerce's "Super Bowl Tailgate with the Public," marketing the HIA and collecting further input. SVMPO employees set up a booth for information on the HIA. Local media was also instrumental in informing the public of the HIA, with the Sierra Vista Herald embedding an article on the HIA and a local radio host making mention of the project. Others may have come to know about the project as CHSS compiled health statistics on willing Sierra Vistans, to supplement the lack of record keeping of health outcomes at the municipal level.

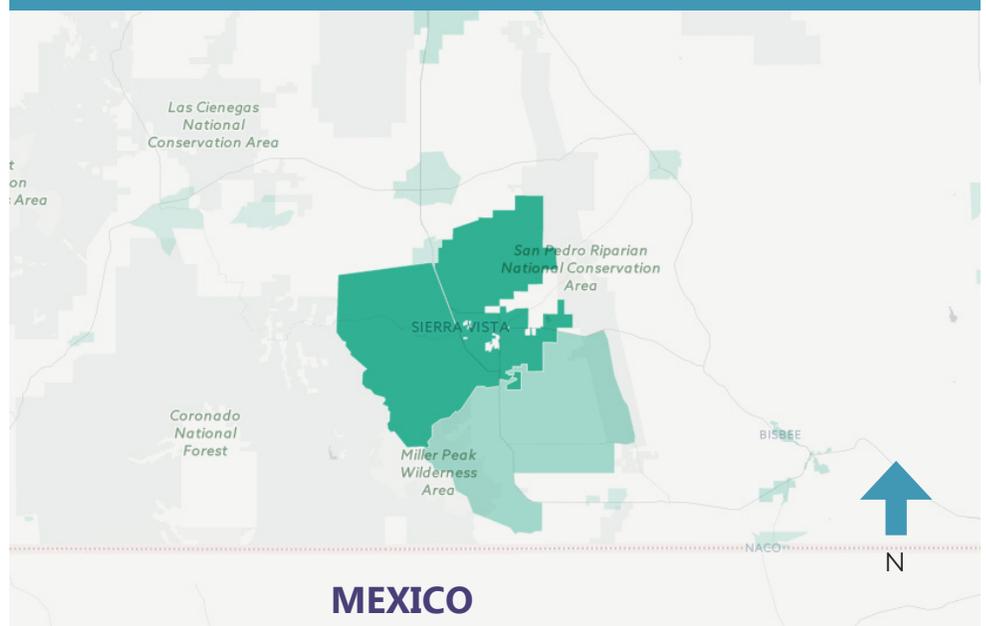
It was the intention of the HIA team to amass Ideas and viewpoints via a webpage dedicated to the HIA process. The website was set up with mysidewalk providing a platform for the HIA to share findings and updates with anyone interested in the project. The mysidewalk page also had the ability for visitors to comment and contribute to the dialogue surrounding health in the community of Sierra Vista.

5. Assessment

INTRODUCTION

This chapter of the HIA includes data and findings that generally describe current health challenges facing the City of Sierra Vista and how plans to further non-motorized transportation could affect community health.

Figure 10: Sierra Vista Location Map



COMMUNITY PROFILE

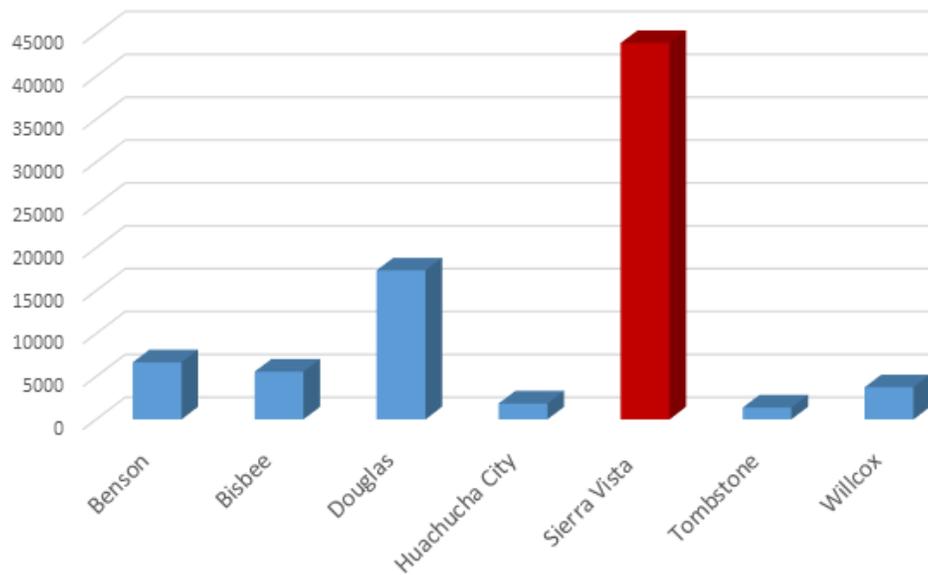
Sierra Vista is located in Cochise County, Arizona. The county is in southeast Arizona and is bordered by New Mexico and Mexico. Cochise County includes 129,112 people (Arizona State Demographers Office Medium Series Projections) and is mostly rural.¹⁸ Sierra Vista, the largest of the seven cities within the county, comprises approximately 1/3 of the total county population. Fort Huachuca is an active and historic military base, located within the north west portion of the city. On the northwest border of Sierra Vista is the town of Huachuca City (2013 population 1,794). The Huachuca Mountains create Sierra Vista's Southwest border (Figure 10: Sierra Vista Location Map.).

DEMOGRAPHIC ANALYSIS

POPULATION

According to the Arizona Department of Administration, Sierra Vista's 2016 projected population is 47,314 and accounts for 35 percent of the total Cochise County population. The next largest city in Cochise County is Douglas, with a total 2016 projected population of 17,119. 52,104 people live in unincorporated Cochise County¹⁸(Figure 11: Population of Cochise Jurisdictions.).

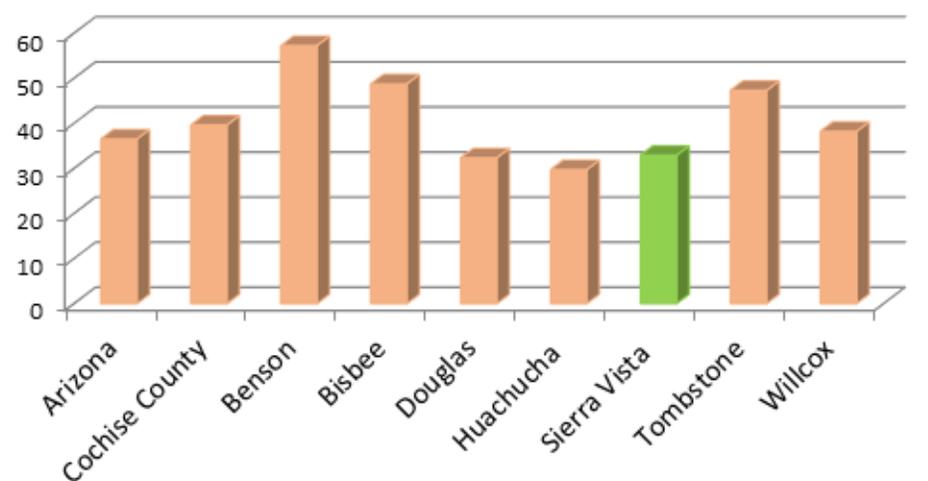
Figure 11: Population of Cochise Counties Jurisdictions



AGE

The median age of Sierra Vista residents in 2010 was 32.9 years. While the city had approximately the same percent of residents under 18 in 2010 as Cochise county, it had city has a larger proportion of 2010 population with residents between 18 and 65 years of age (62.5%) than Cochise County (60.7%) and a larger 2010 percentage of over 65 population (17.3%) than Cochise County (14.6%). This likely reflects the Fort

Figure 12: Median-Age: Cochise County Jurisdictions



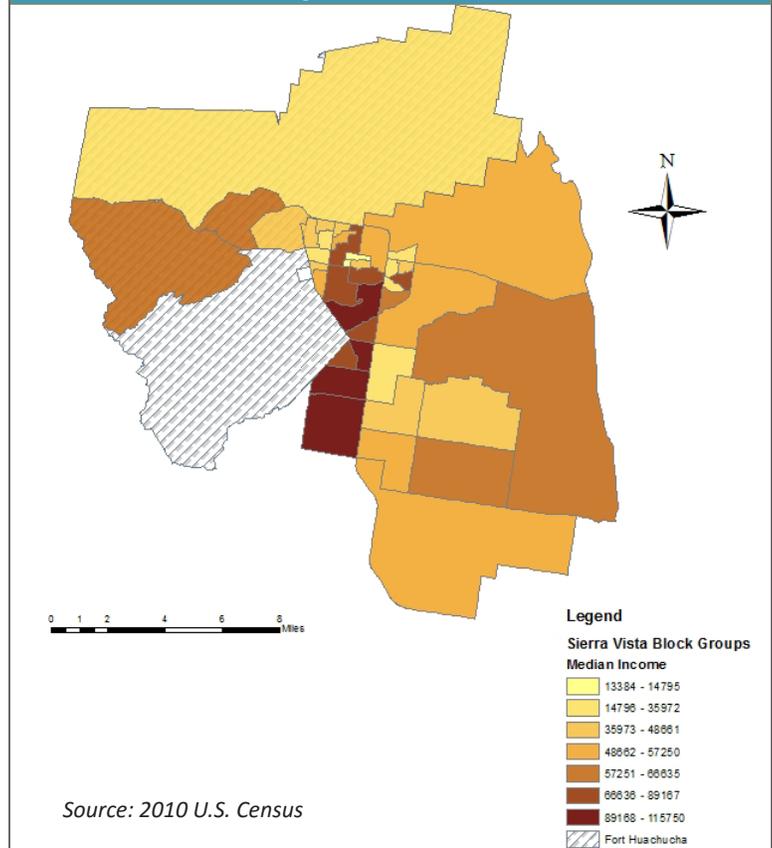
Source: 2010 U.S. Census

Huachuca population within the city and retired military (Figure 12: Median-Age: Cochise County Jurisdictions.).

INCOME

Sierra Vista's median 2014 income of \$58,818 surpasses that of the state as a whole by nearly \$9,000 (the State of Arizona's 2014 median income is \$49,928). Almost 13 percent of all individuals living in Sierra Vista in 2014 were below the poverty level. The majority of those living in poverty were at or above 150 percent of the poverty level in 2014²¹. The lowest income areas are located in the center of Sierra Vista, close to the historic West Fry Boulevard entrance to the Base and around the Fry Boulevard/SR 92 intersection. This is significant because lower income households typically have less vehicles and could benefit from facilities for non-motorized transportation. Conversely, reducing the need for a vehicle for these households could provide savings that could be used for healthier food or healthcare (Figure 13: Median Income by Census Block Group in Sierra Vista).

Figure 13: Median Income by Census Block Group in Sierra Vista



HEALTH INSURANCE

In 2014, 11 percent of Sierra Vista residents were uninsured, lower than the County (12.5%) and the State (16.3%)²². The high percent of insured residents is likely due to the presence of the Fort.

RACE

Almost 63 percent of Sierra Vista residents consider themselves white not of Hispanic or Latino origin, as compared to 56 percent in Cochise County. Nine percent of residents identify as African American, compared to about 5 percent in Cochise county and four percent identify as Asian, compared to just over two percent in Cochise County²³. The larger percent of minority residents as compared to the county is likely due to the presence of Fort Huachuca, which more closely reflects national demographic trends.



Source: Dan Coxworth

SIERRA VISTA HEALTH DATA

Much of area-specific health data presented in this assessment uses State and County sources. Some health data sets are not accessible or available specifically for the City of Sierra Vista and HIA research team relied heavily on county level health data. Two studies used for this assessment includes a BMI study conducted by members of the Cochise County Health and Services Department. This study included 200 people and provided a sample size large enough to derive meaningful analysis. Another Sierra Vista data source includes Raymond W. Bliss Hospital patient data.

MORTALITY

Almost half of all deaths (44 percent) in Cochise County are due to obesity related diseases that can be managed, in part, by increasing physical activity and healthy eating. Cochise County has the third highest rate of deaths due to heart disease of any county in Arizona (Mohave and La Paz County have higher mortality rates due to stroke). The county falls in the middle of all counties for causes of death due to stroke and suicide. (Figure 14: Deaths per 100,000 Population - Cochise County and Arizona.)

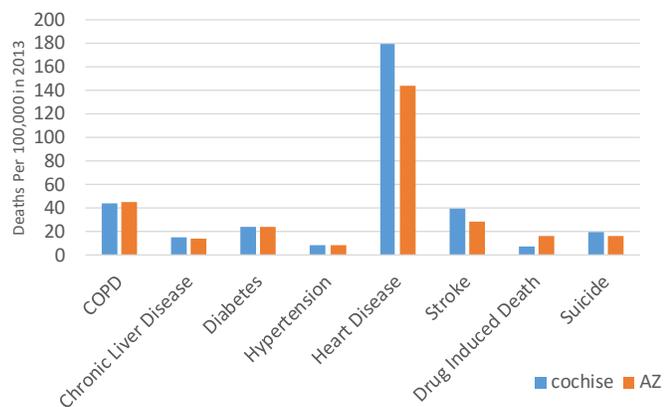


Pedestrians in Sierra Vista

Heart disease is responsible for almost one-quarter of all deaths in Cochise County, and accounts for 60 percent of all death from obesity related diseases. (Figure 15: Cochise County Mortality Factors Per 100,000 Persons). This is higher than for Arizona, where heart disease accounts for 21 percent of all 2013 deaths²⁴. The impact of heart disease on Cochise County is representative a nation-wide epidemic of cardiovascular disease. Among the health indicators listed in Figure 15, heart disease and stroke are responsible for more deaths per 100,000 residents in Cochise County than in the State of Arizona as a whole²⁵.

Chronic Lower Respiratory Diseases (CLRD), including asthma, accounts for the second highest morbidity rate in Cochise County and accounts for 5.9 percent of all deaths, lower than that of Arizona (6.6 percent of all deaths). Two of the major reasons CLRD’s develop are smoking and exposure to pollution. Despite falling smoking rates in the U.S., 16 percent of all Cochise County residents smoke cigarettes²⁶. Smoking is a major cause of heart disease. A study on the influence of physical activity on Cigarette Smoking among adolescents found that one additional weekly occurrence of exercise lead to a .3 percent decline in the probability of being a smoker and a decline in the number of cigarettes smoked by smokers in a month. This article concludes that reduction in health-damaging smoking behavior among adolescents could be an additional benefit of being physically active²⁷. The Canadian Center for Addiction and Mental Health states that “physical activity decreases the desire to smoke, reduces cravings and withdrawal symptoms, and positively influences factors such as perceived ability to cope and self-esteem, which in turn can protect against initiation of, or return to, smoking. When physical activity is combined with nicotine replacement therapy, it facilitates smoking cessation and delays weight gain in women who smoke²⁸.”

Figure 14: 2013 Deaths Per 100,000 Population - Cochise County and Arizona



Source: AZDHS. Community Profiles Dashboard. Access date: June 25, 2016

Figure 15: Cochise County Mortality Factors per 100,000 Persons (2013)

| Cochise County | Indicator | Per 100,000 | Rank in AZ | Main Cause |
|----------------|------------------------------------|-------------|------------|---|
| Mortality | All Death | 737.9 | 7 | |
| | Chronic Lower Respiratory Diseases | 43.9 | 7 | Tobacco smoke, outdoor air pollution (WHO, 2015) |
| | Diabetes | 23.9 | 13 | Genetics, obesity |
| | Stroke | 40.1 | 2 | Age, high blood pressure, diabetes, smoking. (National Institute of Health) |
| | Hypertension | 8.7 | 6 | Obesity, lack of physical activity, alcohol. (NIH) |
| | Heart Disease | 179.4 | 3 | |
| | Drug Induced | 7.9 | 12 | Often brought on by depression/mental distress |
| | Suicide | 19.6 | 8 | Often brought on by depression/ mental distress |

Source: Arizona Department of Health Services Community Profiles Dashboard. Accessed: June 18, 2016

Pollution in Sierra Vista, with high levels of dust and particulates in the air, can also contribute to respiratory problems. In 2012, Sierra Vista is not a non-attainment zone for ozone or PM-25, and no reliable sources for measuring air quality could be identified for this HIA. However, a 2001 Health Consultation: Review of Environmental Data in Air, Drinking Water and Soil report prepared by the Arizona Department of Health Services Office of Environmental Health Environmental Health Consultation Services under cooperative agreement with the Agency for Toxic Substances and Disease Registry identified concrete block and funeral services businesses that emitted low levels of contaminants. Additionally, the report identified other sources of pollution in the area including vehicular and aviation sources.

MORBIDITY

Cochise County reports a higher rate of chronic diseases including COPD, uncontrolled Diabetes and complications from uncontrolled diabetes, and hypertension than Arizona. (Figure 18: Cochise County Morbidity Factors per 100,000 Persons.) In 2013, the county ranked 3rd highest in the state for both uncontrolled diabetes and for hypertension. The incidence of short term complications from diabetes in 2013 was 152% more than for Arizona. COPD affect 145% more of the population in Cochise County than Arizona. Drug and alcohol abuse is lower in Cochise County than the state as a whole²⁹(Figure 16: Cochise County Morbidity Factors per 100,000 Persons.).

Figure 18: Cochise County Morbidity Factors per 100,000 Persons (2013)

| Morbidity Factor | Rate per 100,000 Persons | | Rank (All Counties) | Causes |
|---|--------------------------|----------------|---------------------|--|
| | Arizona | Cochise County | | |
| COPD | 299.50 | 923.8 | 6 | Smoking, breathing in secondhand smoke, irritants, or chemicals (NIH) |
| Uncontrolled Diabetes | 20.10 | 45 | 3 | Genetics, obesity (National Diabetes Foundation) |
| Complications from Diabetes | 83.10 | 127.2 | 4 | Genetics, obesity (National Diabetes Foundation) |
| Hypertension | 299.50 | 326.1 | 3 | Obesity, lack of physical activity, alcohol. (NIH) |
| Congestive Heart Failure | 53.70 | 24.20 | 9 | Heart disease, hypertension (high blood pressure) (NIH) |
| Drugs | 289.30 | 242 | 8 | Mental illness, depression, social factors, genetics |
| Alcohol Use | 950.5 | 661.8 | 14 | Depression, mental illness, social factors, genetics |
| Chronic Diseases (arthritis, obesity, cancer) | 4,503.70 | 5,919.9 | 5 | Obesity, smoking, lack of physical activity, high cholesterol, alcohol (NIH) |

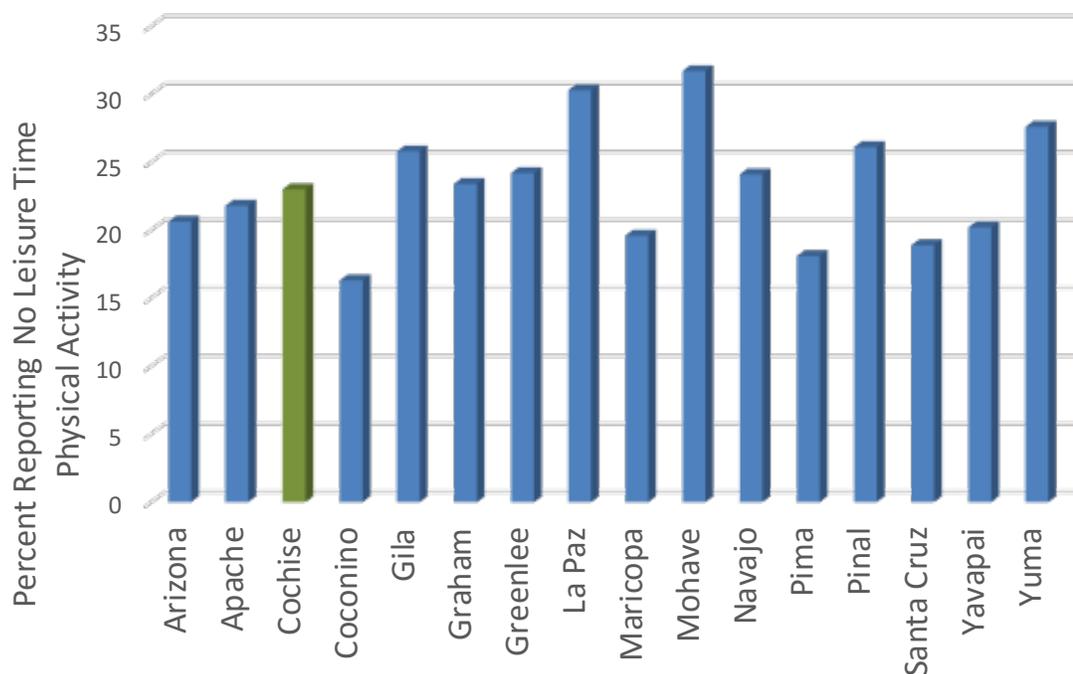
Source: Arizona Department of Health Services Community Profiles Dashboard. Access date: May 30, 2016

PHYSICAL ACTIVITY

In 2016, 23% of Cochise County reported no leisure time physical activity (Figure 17: 2016 Physical Inactivity). This corresponds with the 2012 Cochise County Health Assessment findings. The county ranks in the middle (7th) of all Arizona Counties and higher than the State as a whole, for percent of people who do not engage in leisure time physical activity³⁰ (Figure 17: 2016 Physical Inactivity: Arizona Counties.). The U.S. Department of Health and Human Services in their 2008 Physical Activity Guidelines for Americans, states that adults should participate in moderate-intensive aerobic exercise for a minimum of 30 minutes per day, five days a week to ward off chronic diseases. For children and teens, they recommend at least 60 minutes of physical activity per day, every day. Walking and biking are accessibly, effective means of meeting these guidelines for the betterment of physical and mental health³¹.

Lack of physical activity is a significant contributor to obesity-related chronic disease including diabetes, COPD, and hypertension. High blood pressure, heart disease, anxiety and depression. Some cancers, including colorectal, breast and endometrial, and lung cancer, have been found to be more prevalent among those that are physically inactive. Examples of physical activities provided include running, calisthenics, golf, gardening, or walking for exercise³².

Figure 17: 2016 Physical Inactivity: Arizona Counties



Source: Robert Wood Johnson Foundation County Rankings and Roadmaps. Access date: April 4, 2016.

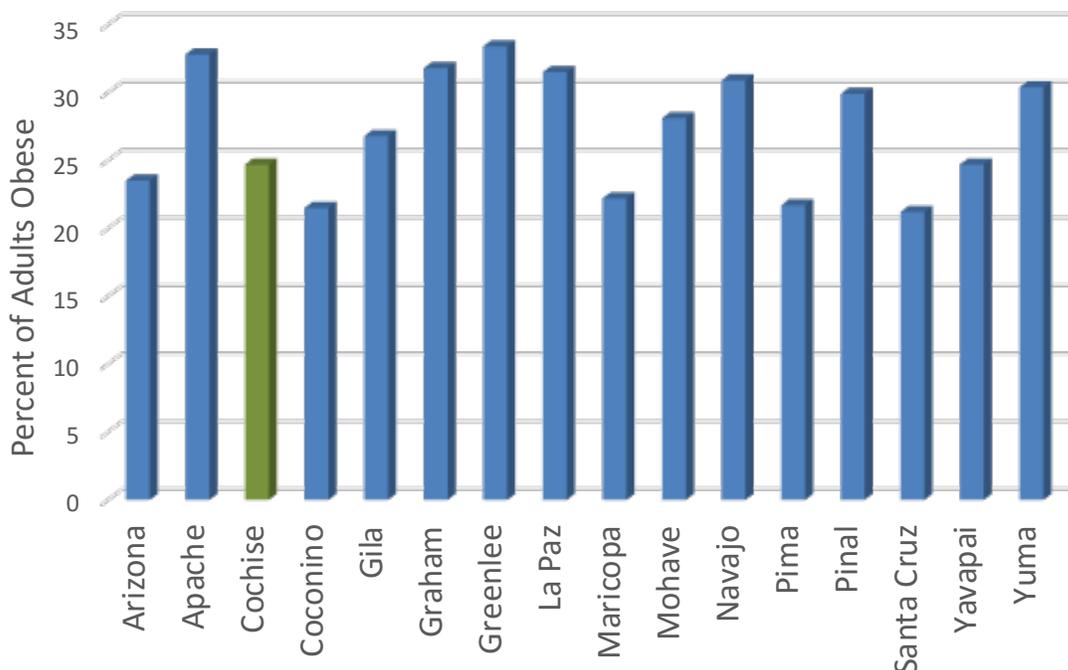
OBESITY

Obesity and diabetes were the top health concerns identified by Cochise County residents in a survey conducted as part of the 2012 Cochise County Health Assessment. The Journal of Rural Health found that rural Americans were more likely to battle obesity than urban dwellers- with 39 percent of adults living in rural areas self-report as obese, compared to 33 percent of adults living in urban areas³³.

While Cochise County has one of the lowest rates of obesity of all Arizona counties, one in four, or 25 percent of Cochise County's adults are obese³⁴ (Figure 18: Obesity Among Adults in Arizona Counties). Obesity is an important public health issue. Obesity and overweight can increase a person's risk for other serious health problems including heart disease, type 2 diabetes, high blood pressure, stroke, and some types of cancers. The risks are increased not only for adults, but also for teens and children, especially in the case of type 2 diabetes.

Body Mass Index (BMI) is used to determine if one is considered overweight or obese. An adult with a BMI of 25.0 to 29.9 is considered overweight, while an adult with a BMI of 30.0 or higher is considered obese. Individuals in the overweight category and close to being obese are at risk of developing many of the same symptoms as those referred to as obesity.

Figure 18: Obesity Among Adults in Arizona Counties

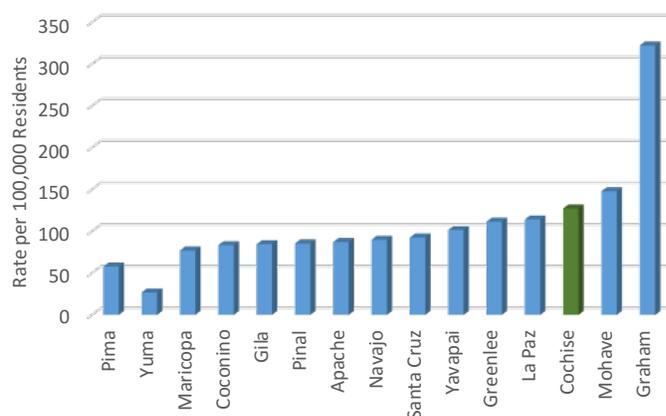


Source: Robert Wood Johnson Foundation County Rankings and Roadmaps. Access date: April 6, 2016

DIABETES

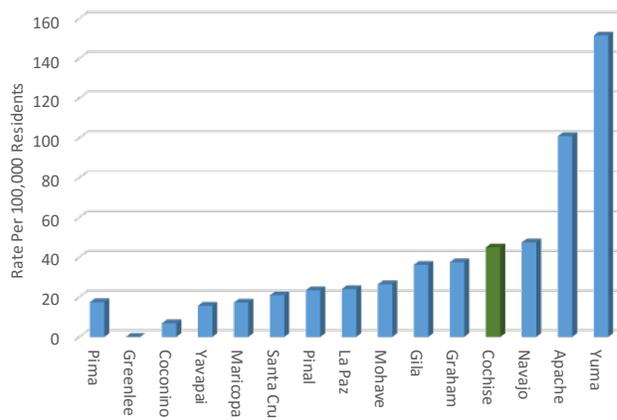
The most common form of diabetes is known as type 2 diabetes. Aside from genetics, obesity is the individual trait most associated with the diagnosis of diabetes. Type 2 diabetes is associated with individuals who are obese, inactive, and those with genetic risk factors. There is a higher risk of type 2 diabetes among some ethnic and racial groups including American Indians, African Americans, Hispanics/Latinos, Asian Americans and Pacific Islanders³⁵. While 13.4 percent of Cochise County’s population has been diagnosed with diabetes, another 8.02 percent of its residents are “pre-diabetic.” According to ADHS Cochise County has the third highest rate of uncontrolled diabetes (Figure 19: Short Term Complications From Diabetes per 100,000 Arizona Counties) and the fourth highest rate of complications due to diabetes in Arizona (Figure 20: Rates of Uncontrolled Diabetes per 100,000 Arizona Counties). Diabetes is a manageable chronic disease. Access to health care, staying physically active, and maintaining a balanced diet can help to control type 2 diabetes.

Figure 19: Short Term Complications From Diabetes per 100,000 Arizona Counties (2013)



Source: AZDHS Community Profiles Dashboard. Access Date June 25, 2016.

Figure 20: Rates of Uncontrolled Diabetes per 100,000 Arizona Counties (2013)

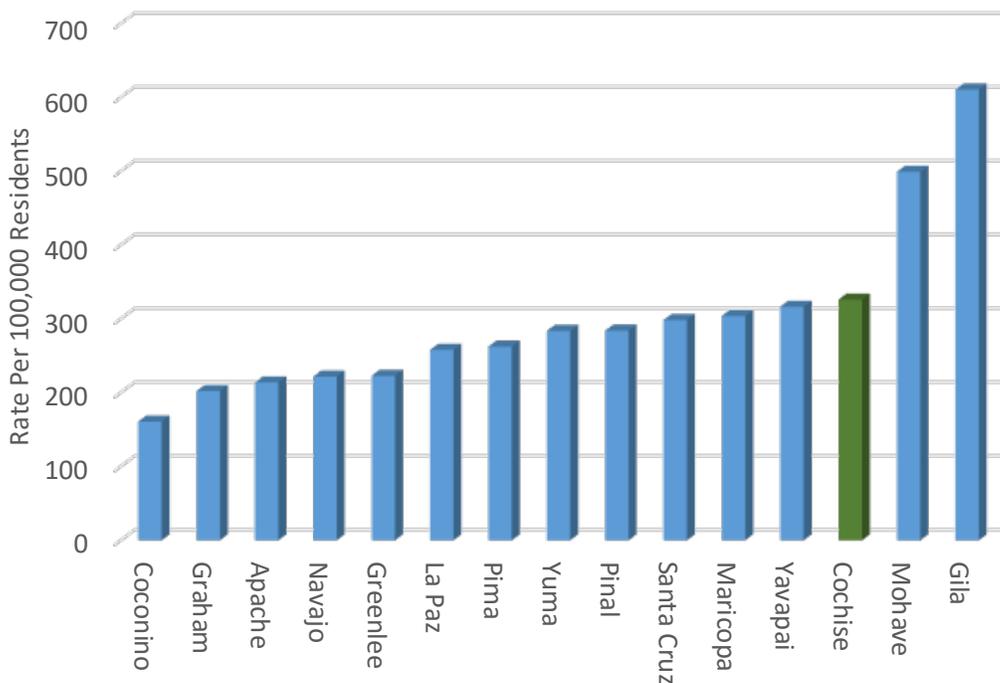


Source: AZDHS Community Profiles Dashboard. Access Date June 25, 2016.

HEART DISEASE & HYPERTENSION

Cardiovascular diseases claim more lives each year in the US than cancer and chronic lower respiratory diseases combined. Risk of heart disease can be reduced by maintaining physical activity, a healthy diet, and refraining from tobacco use. One in six Cochise County residents still smokes tobacco and Hypertension affects more people in Cochise County than in all but two of Arizona's counties (Figure 21: Hypertension per 100,000 Arizona Counties.).

Figure 21: Hypertension per 100,000 Arizona Counties (2013)



Source: AZDHS Community Profiles Dashboard. Access Date June 25, 2016.

ASTHMA

Cochise County falls in the middle of all Arizona counties with regards to the incidence of Asthma.³⁶ Asthma is a condition exacerbated by the amount of dust and particulates in the air. Sierra Vista is not within the Cochise County non-attainment area for PM-10 or PM-25, however it is a rural county that is impacted by blowing dust. While symptoms of the disorder may limit one's ability to be engage in rigorous exercise, studies show that light activities such as walking can actually lead to a reduction in symptoms over time³⁷.

CHSS WAIST TO HIP RATIO

According to the Nurses Health Study, measuring waist sizes was effective in predicting a person's risk of death from diseases like type 2 diabetes and heart disease³⁸. The waist to hip ratio measures abdominal fat surrounding the liver and other organs, which can lead to higher blood pressure, higher LDL cholesterol, higher blood glucose, and high triglycerides. The waist to hip ratio measures the circumference of one's waist, divided by the circumference of one's hips. If a person is outside of the "safe" range for that measurement, they are at higher risk for cardiovascular issues associated with carrying too much weight in their midsection. Men with a score of .95 or higher and women with a .8 or higher are considered at risk according to experts from the World Health Organization (WHO).

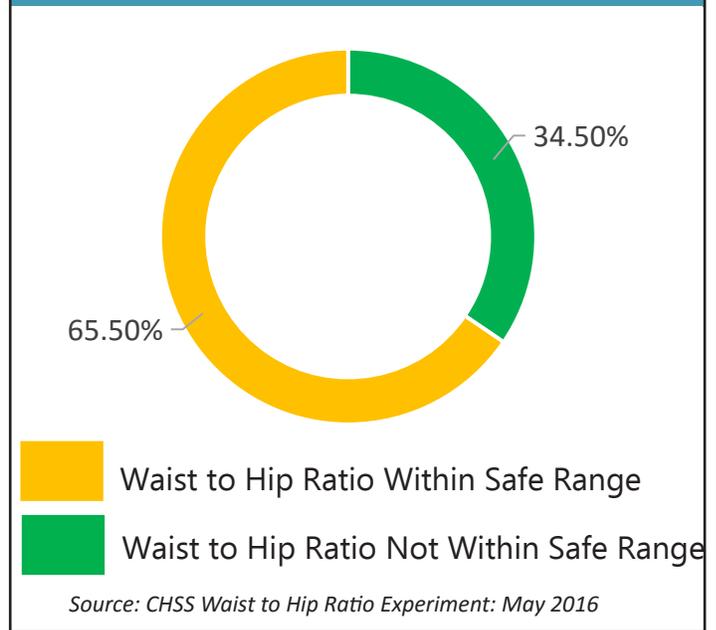
A waist to hip ratio study conducted for this HIA within Sierra Vista was conducted at various locations throughout the City and on the Fort, including the Sierra Vista's Farmer's Market, Cochise College Staff Wellness Fair, NAMI March for Mental Health, Ft. Huachuca Safety Fair, the West End Fair, the Women's Health Expo, and other meeting venues. Participants were self selected. Over 204 Sierra Vista residents throughout a three month period provided personal data. 34.5% of participants had a score which puts them at risk, while the other 64.5% had a low enough score to be considered not at risk (Figure 22: Waist to Hip Ratio Assessment).

ISOLATION AMONG THE ELDERLY POPULATION

Isolation among the elderly population was an issue identified as a result of stakeholder engagement in the HIA process. 24.2% of Sierra Vista's householders live alone and 11.3% of Sierra Vista's senior citizens are living alone.³⁹

Isolation or loneliness impacts physical health. Lonely people are at greater risk for heart attacks, metastatic cancer, Alzheimer's and other illnesses. Social isolation also turns up the activity of genes responsible for inflammation and turns down the activity of genes that produce antibodies to fight infection.⁴⁰ While social isolation does not appear to be significant in Sierra Vista - the Robert Wood Johnson Foundation reports that in 2014, Cochise County had the second highest rate of social associations (8.8 memberships per 10,000 persons) in Arizona - living alone does impact mobility, especially among the elderly and disabled⁴¹. The Bureau of Transportation Statistics found that in 2000, 12% of those with disabilities reported that the biggest issue with accessing needed transportation was no one to depend on.⁴² Older drivers

Figure 22: Waist to Hip Ratio Risk Assessment



living alone also have limits on their ability to see at night, or stiffness that prevents them from driving and depend on others to drive them as well as mobility options that do not require them to drive.⁴³

An important component of isolation is transportation. In 2013, 5.6% of Sierra Vista households had no vehicles available and 1.5% of two person households had no vehicle available. 12% of all two-person households and 15% of all households with three or more people had one car available.⁴⁴ Providing transportation options for this population is important; those with one car need options should their vehicle need repairs or break down; those with no vehicles need transportation options to be independent. A 2004 study by Children's, Women's and Seniors Health Branch of the British Columbia Ministry of Health found that socially isolated seniors often use fewer health and social services and that driving cessation was associated with a decrease in out-of-home activity levels, which, in turn, may have negative consequences such as isolation and ill health. The study also found that increasing evidence supports the idea that out-of-home activity levels affect health status, well-being and survival in old age. Furthermore, loneliness and immobility were the most commonly mentioned effects of the forfeiture of a drivers license by the elderly.⁴⁵

Lack of mobility options decreases access to goods and services such as medication, health care, or fresh food, making it difficult to maintain physical health. A review of the literature found in 25 separate studies, 10% to 51% of patients responded that access to transportation was a barrier to health care access. This is very significant because when patients cannot get to their health care provider, they miss the opportunity for evaluation and treatment of chronic disease states, changes to treatment regimens, escalation, or deescalation of care and, as a result, delay interventions that may reduce or prevent disease complications.⁴⁶

DISABLED POPULATION

In 2012, approximately 17% of the population in Sierra Vista reported having a disability. The American Community survey estimates that of the total disabled population, almost half have ambulatory difficulties, and of those with ambulatory difficulties, more than half are 54 years old or older. Sidewalks and facilities for people using wheelchairs are especially important to provide options for these individuals to access healthy food, medical care, and community and social activities that reduce isolation. A National Center for Biotechnology Information study of Transportation Patterns and Problems of People with Disabilities found the most significant transportation problems mentioned by disabled participating in a national study (either overall or for the non-use of public transit) are barriers in the pedestrian environment, which far outnumber reported problems with transit or paratransit modes⁴⁷.

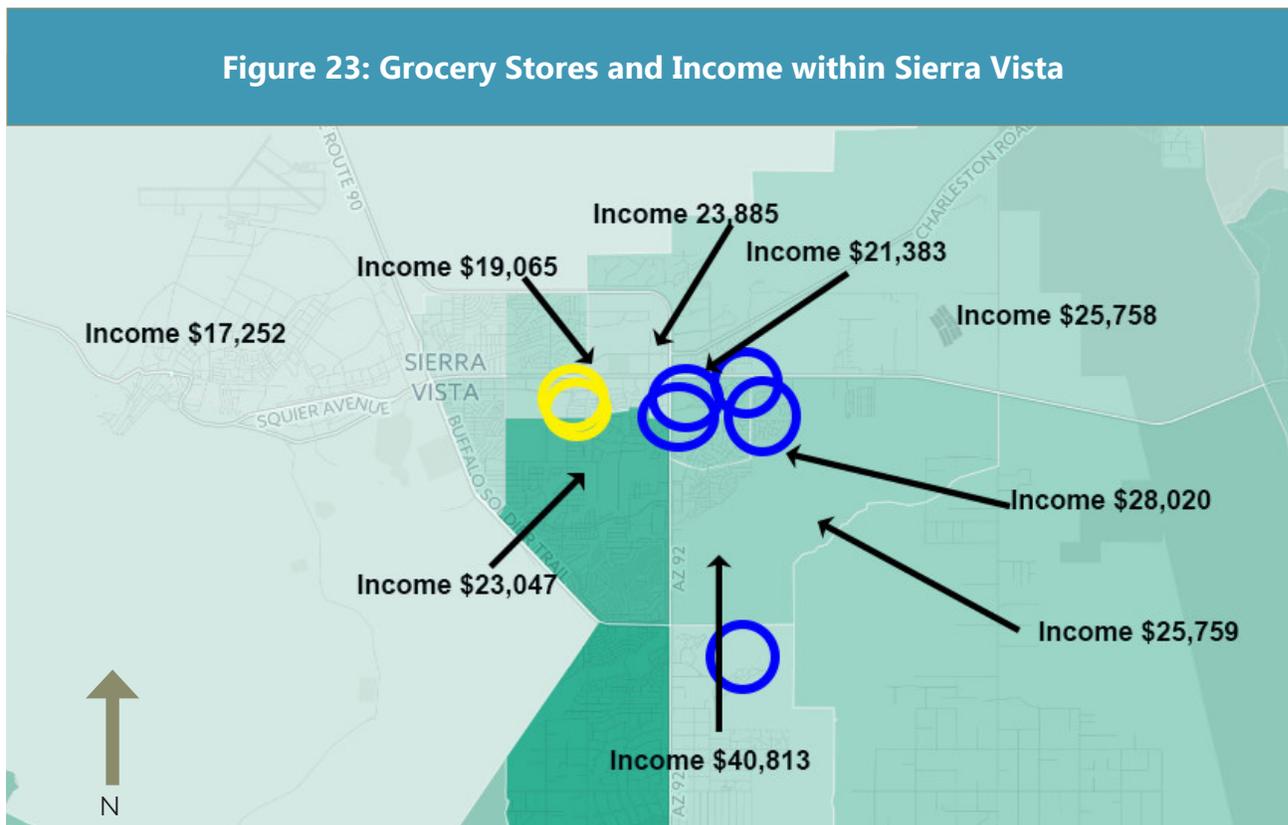
ACCESS TO HEALTHY FOOD

Numerous studies have researched the correlation in access to healthy food and diet with the incidence of obesity and overweight people in a community. Most of the studies concluded that living in closer proximity to healthy food retail, results in healthier eating habits and therefore, a lower risk of obesity or overweight.⁴⁸ Food insecurity can come as a result of poverty. The USDA defines a food desert as a "low-access community" where at least 500 people and/or at least 33% of the census tract population resides more than one mile from a supermarket or large grocery store (for rural census tracts, the distance is more than 10 miles).⁴⁹

Food Deserts are correlated with higher rates of obesity. Counties with the highest percentage of households living in food deserts (10 percent or more) had rates of adult obesity in 2008 that were nine percentage points higher than counties with the lowest percentage of households in food deserts, even after controlling for median household income, poverty rates, and racial and ethnic make-up of the population.⁵⁰

The majority of people with the lowest incomes in Sierra Vista do not live within 1/2 of a mile of a full service grocery store. Lower income people tend to have less transportation options, and the ability to walk to a grocery store increases the ability of this population to access healthy food. Nationwide, in 2001, households with an annual income of less than \$25,000 are almost nine times as likely to be a zero-vehicle household than households with incomes greater than \$25,000.⁵¹ In 2000 (the latest year for which this information is available) Sierra Vista had approximately 19% of all households with 2014 incomes less than \$25,000.⁵² Consequently, non-motorized transportation facilities and public transportation are important for this population group to access a healthy diet necessary to help control of chronic diseases. Figure 23 shows Sierra Vista Census tracts by income and the distance from a grocery store.

In stakeholder meetings, residents stated that the issue of access to healthy food is exacerbated by current land use patterns. Most of the commercial development within Sierra Vista is located along Fry Boulevard and along SR92; with the most active commercial areas located at the intersections of these two roads. Within the city-limits there are six grocers, not including the commissary on Fort Huachuca. These six grocers are all concentrated near Fry Blvd., with the



Source: My Sidewalk Maps, Google and Census 2010 Data

furthest one only .3 miles from the commercial corridor. Current public transportation service provides some access to these locations, but residents reported some challenges with access due to the location of the bus stop (far from the entrance to the grocery) and regulations limiting the number of bags that could be carried onto the bus. Because Sierra Vista is a mostly suburban community with a lower residential density per acre, thousands of households are not within walking distance from stores that sell healthy food.

HEALTH REPORTING FROM FORT HUACHUCA

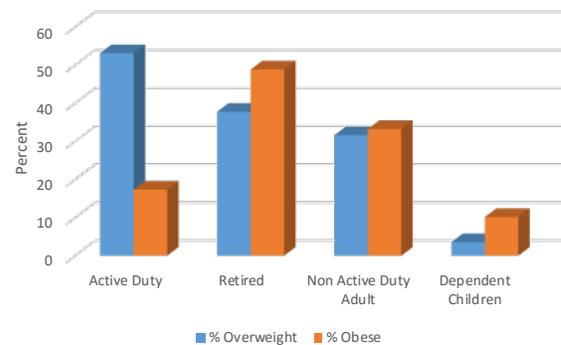
OBESITY ON FORT HUACHUCA

The percentage of over-weight and obese active duty personnel receiving care at the Raymond W. Bliss Army Health Center in 2014 was 53.13% (overweight) and 17.32% (obese).⁵³ (Figure 24: 2014 Obese and Overweight Military Personnel) Fort Huachuca personnel report that the high percentage of obese and overweight active duty personnel is a growing trend in the military with 1.6% (25,766) of active US military diagnosed as overweight or obese in 1998 – increasing to 5.3% (86,186) by 2010.⁵⁴ Roughly half (49%) of retired military are obese. 13% of on-base military children, based on data provided by Raymond W. Bliss Army Health Center, are either over-weight or obese.

CHRONIC DISEASE

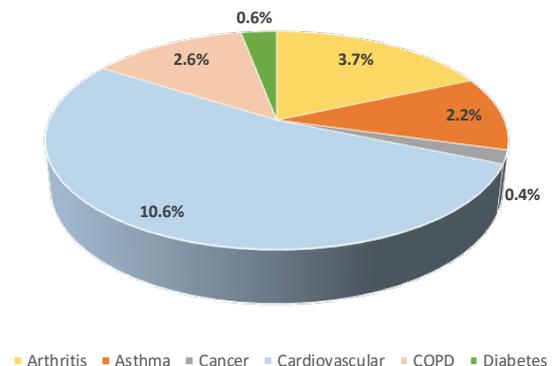
Chronic Diseases affect the population on Fort Huachuca, although these diseases are present in lower rates relative to the rest of Sierra Vista⁵⁵. From 2008 to 2014, 16.8% of active duty patients at Raymond W. Bliss Army Health Center were diagnosed with at least one chronic disease. (Figure 25: Chronic Disease Rates by Diagnosis Category) Obesity related diseases that can be managed with diet and exercise, such as cardiovascular disease and COPD, make up the largest portion of chronic diseases among the military at Fort Huachuca. The 2014 diabetes rate was modest at .6%. The percentage of active duty patients who were asthmatic was 2.2%. The

Figure 24: 2014 Obese and Overweight Military Personnel



Source: Raymond W. Bliss Army Health Center

Figure 25: 2014 Chronic Disease Rates by Diagnosis Category



Source: Raymond W. Bliss Army Health Center

hospital's findings suggests a drop in rates of asthma over time.

BEHAVIORAL HEALTH

The Raymond W. Bliss hospital estimates that in 2014, 11.8% of active duty patients were diagnosed with some sort of behavioral disorder. Data of behavioral disorder rates show 1.1% rate of substance disorder and 5.5% rate of mood disorders among active duty military. 5% had an anxiety disorder and approximately 3% were diagnosed with PTSD. This is comparable to Cochise County as a whole, where 12% of persons reported more than 12 days in 30 where their mental health was not good (includes stress, depression, and problems with emotions).⁵⁶ The Fort reports a higher rate of substance abuse than the county (.002% compared to 1.1%).

The Mayo Clinic states that walking is a type of physical activity that can help improve mood and that regular exercise probably helps ease depression.⁵⁷ Some of the ways that walking can ease depression cited by Mayo include:

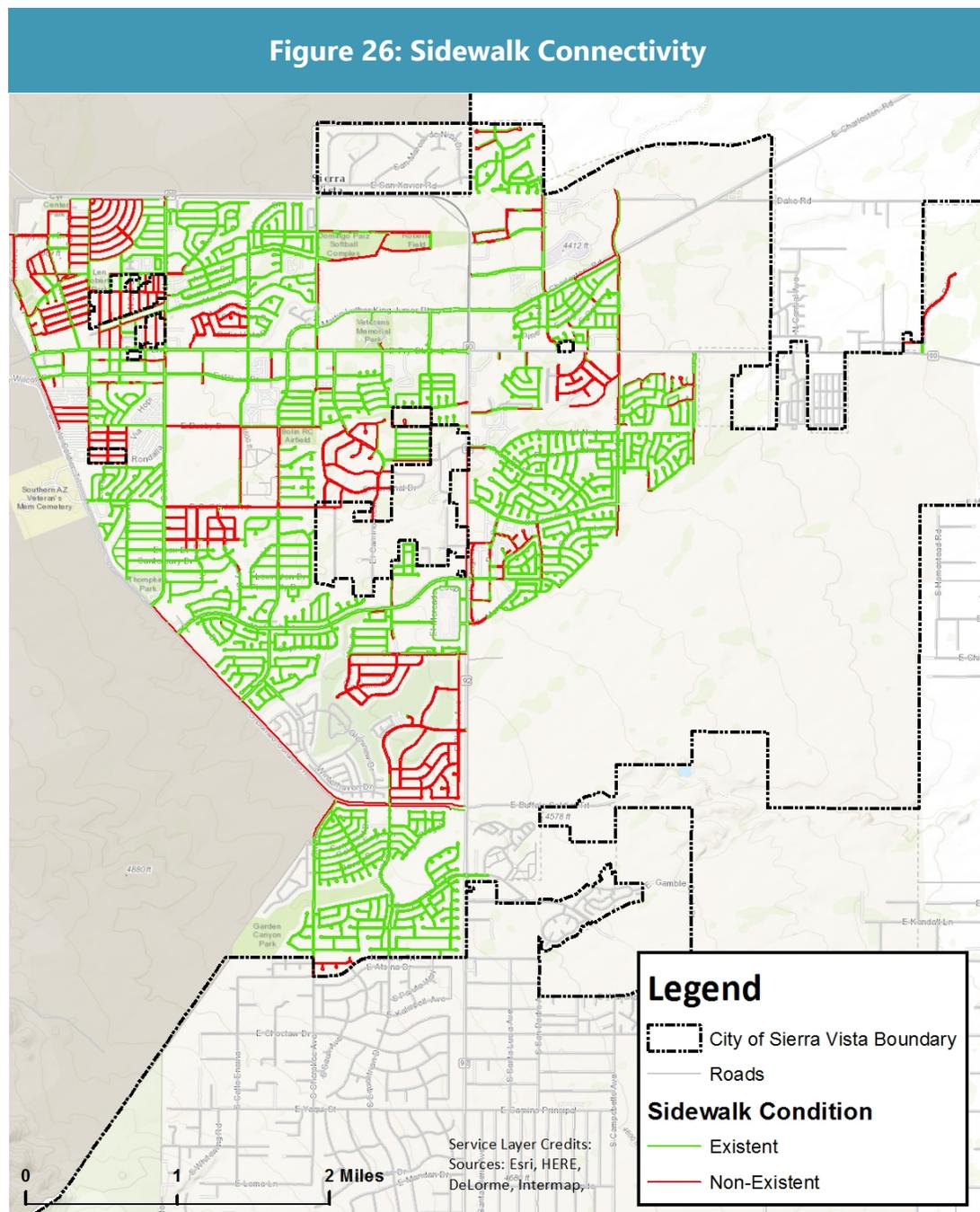
- Releasing feel-good brain chemicals that may ease depression (neurotransmitters, endorphins and endocannabinoids)
- Reducing immune system chemicals that can worsen depression
- Increasing body temperature, which may have calming effects

POTENTIAL PUBLIC HEALTH IMPACTS OF NON-MOTORIZED TRANSPORTATION FACILITIES AND POLICIES CONSIDERED BY THIS HIA

SIDEWALK IMPLEMENTATION PLAN

SIDEWALK CONNECTIVITY

The SVMPO Sidewalk Implementation Plan (Figure 26: Sidewalk Connectivity) ADA Compliance Analysis) shows the condition of Sierra Vista’s sidewalks. The green lines represent existing sidewalks and the red lines indicate areas where sidewalks are absent. (Figure 25) Areas with gaps in the sidewalk system include lower income residential areas around West Fry Boulevard as well as residential areas within walking distance of Fry Boulevard and SR 92, the city’s main commercial area.



Source: Sierra Vista Sidewalks Inventory and Implementation Plan 2015. Sierra Vista Metropolitan Planning Organization

The Sidewalk Implementation Plan includes 26 recommendations that are centered around the creation of new pedestrian-oriented infrastructure. All 26 of the recommendations in the Sidewalk Implementation Plan focus on improving connectivity near and around “high priority areas.” These “high priority areas” are based on the presence of schools, fixed transit routes, commercial areas, parks, and areas prone to traffic accidents.

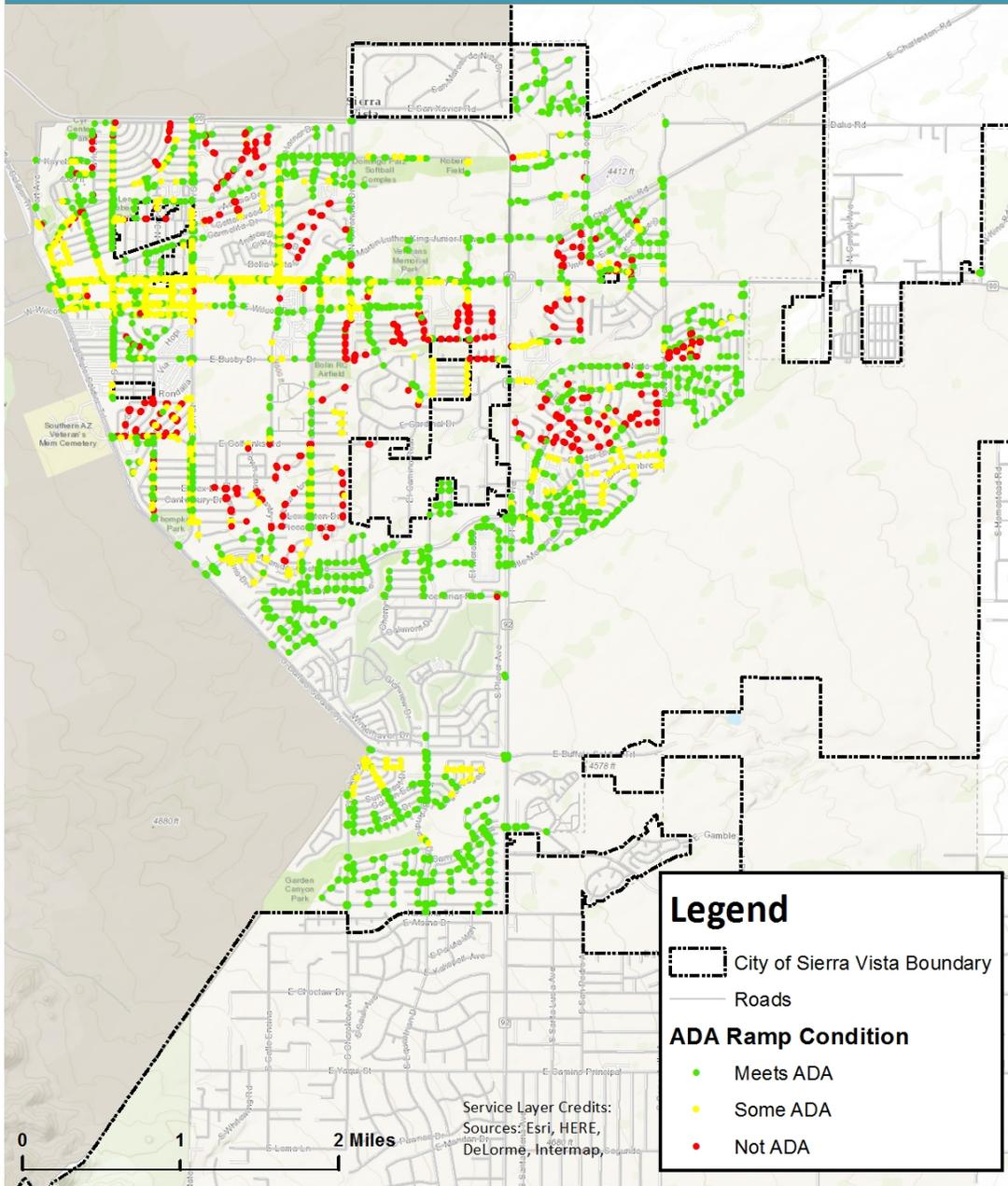
Increasing the availability and presence of sidewalks will help to increase walking. A 2001 study published in the American Journal of Public Health used data from the American Physical Activity Study to assess environmental determinants of physical activity found that the presence of sidewalks are positively associated with physical activity among 61% of all respondents. Other important factors included access to enjoyable scenery and streetlights.⁵⁸ The Bureau of Transportation Statistics found that in 2002 people who said their community had no sidewalks were four percent less likely to be walkers and people in communities without sidewalks were 22% more dissatisfied with how their community made walking safe.⁵⁹

Reducing interruptions in the sidewalk system will reduce impediments to walking that create real and perceived unsafe walking environments. A 2007 study of 750 mostly older adults published in the British Journal of Sports Medicine found that when tripping hazards were reduced along sidewalks, 26% of potential walkers would be more likely to walk within their neighborhood.³⁸ The 2012 National Survey of Bicyclist and Pedestrian Attitudes and Behavior found that tripping on an uneven or cracked sidewalks is the largest reason for pedestrian injuries while walking (24%), and tripping on stones or stepping in holes are the fifth and six most common reasons for pedestrian injuries while walking, accounting for a total of ten percent of all pedestrian injuries.⁶⁰

TRANSIT ACCESS

Sidewalks are also an integral component of a transit system. In 2014, the U.S. Census estimated that almost 10% of all Cochise County residents walked to work; and 2% used public transportation (includes taxi cabs). Many people walk to transit stops. As a means of comparison, in 2014 in Maricopa County, which includes Phoenix and many other urban areas, the U.S. Census estimated about 1.5% of all county residents walked to work. Phoenix includes Luke Air Force Base (as it is likely many people who walk to work in Sierra Vista live on the Fort); and Luke is not as large a percent of the population as Fort Huachuca is in Sierra Vista. However, this statistic points to the value of providing facilities for pedestrians in Sierra Vista and on Fort Huachuca. Many of the fixed transit stops in the city are surrounded by inadequate sidewalks, which create obstacles to accessing transit, and especially for those who are physically disabled. For example, neighborhoods on the east and west sides of S. Charmichael Ave, south of West Fry Boulevard, have neighborhoods without sidewalks adjacent to public transit stops. Many of the neighborhoods north of West Fry Boulevard, along both sides of North Avenue have no sidewalks. These are some of the lowest income areas within the city; and transit an important mobility option to access healthy food, community services and health care in lower income areas. A lack of sidewalks creates barriers to transit and makes in hard to access these necessary services for these communities.

Figure 27: Sidewalk ADA Compliance Analysis



Source: Sierra Vista Sidewalks Inventory and Implementation Plan 2015. Sierra Vista Metropolitan Planning Organization

ADA ACCESS

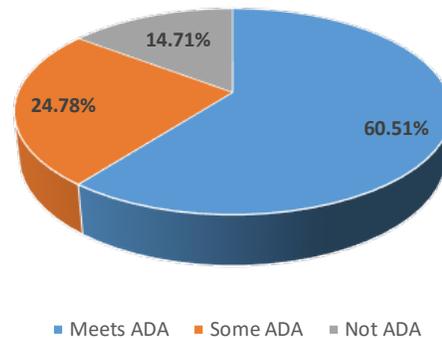
Among existing sidewalks in Sierra Vista, 14.71% do not accommodate Americans with Disabilities and 24.78% provide some ADA accommodations (Figure 27: ADA Compliance Sierra Vista and Figure 28: Percent of Sidewalk Ramps Meeting ADA Requirements Sierra Vista). Areas without facilities for the disabled include the areas surrounding the intersection of SR 92 and Fry Boulevard. The percent of 2010 disabled persons living in the census tract on the southeast corner of this intersection, where a large grocery store and other services are located is 18%. The percent of 2010 disabled population in the census tract that includes the southwest corner of this intersection is 19.8%. This corner includes a bookstore, an important social gathering place for the community. Limiting mobility options that provide access to these services for those with disabilities increases the risk of isolating this population group. Isolation is a health indicator that can lead to other poor health outcomes such as depression, substance abuse and suicide. Access to continuous sidewalks that provide access to public transportation and community services also enables those with disabilities who do not drive to have access to employment, education, healthcare, and community activities.

SAFE PEDESTRIAN AND BICYCLE ROUTES PLAN

Slightly more than 3% of all Cochise County residents bicycled to work in 2014. The percent of people bicycling to work in Cochise is almost 300 percent more than the number of people bicycling to work in Maricopa County; a much more urban area.⁶¹ The highest number of crashes between bicycles and vehicles and pedestrians and vehicles are along Fry Boulevard; where most of Sierra Vista retail and services are located (Figure 29: Pedestrian and Cyclist Collisions: Sierra Vista.). Improving the safety of bicycle and

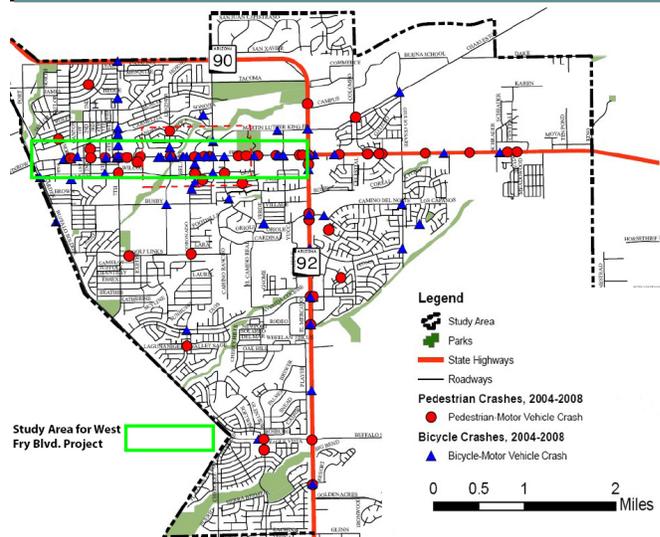
The percent of disabled persons living in the census tract on the southeast corner of the SR 92 and Fry Boulevard Intersection, where a large grocery store and other services are located is 18%. The percent of disabled population in the census tract that includes the southwest corner of this intersection is 19.8 percent. This corner includes a bookstore, an important social gathering place for the community.

Figure 28: Percent of Sidewalk Ramps Meeting ADA Requirements Sierra Vista 2015



Source: Sierra Vista Sidewalk Implementation Plan

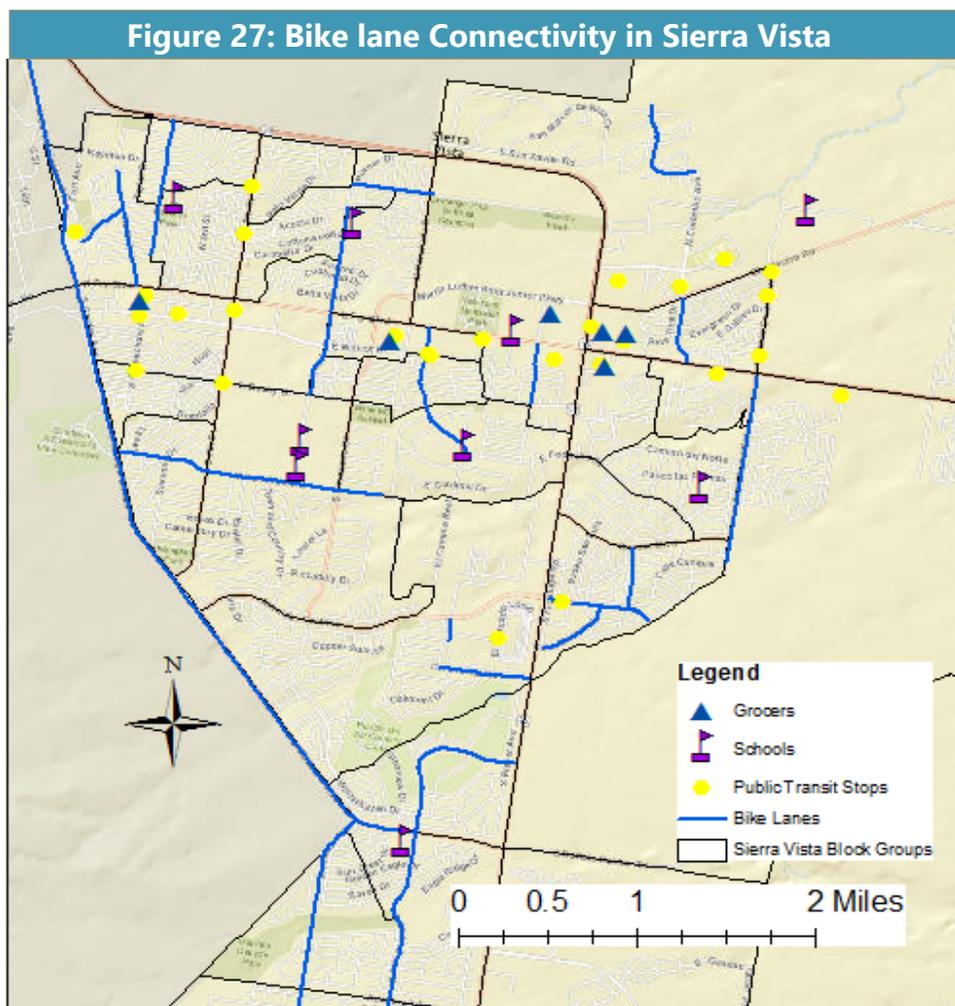
Figure 29: Pedestrian and Cyclist Collisions: Sierra Vista



Source: SVMPO Safe Bicycle and Pedestrian Routes Plan 2011

pedestrian facilities along this roadway will contribute to a reduction in mortality and improved community health.

The Safe Pedestrian and Bicycle Routes Plan makes active transportation more viable and safe in Sierra Vista. Studies show that there is both a perception of danger and a difference in accident rates among areas with and without basic bike infrastructure such as designated bike lanes. A study of Portland, Oregon cyclists found that fear of sharing the road with automobiles traveling at high speeds deters people from bicycling, even if it is something they would find enjoyable, or economically preferable.⁶² Many of the roads on the Fort and in Sierra Vista are two-lane, rural roads. It is likely that investments in bike-lanes and shared use paths can decrease injury rates and increase bicycle ridership as perception about the safety of active transportation on these streets improves. Two-lane rural roads have proven to have higher fatality rates for cyclists than urban streets, because of the tendency toward higher speeds.⁶³ Kalamazoo, Michigan found roads with bike lanes had injury rates 50% lower, while the risk of injury on protected bike lanes was a 90% lower. Shared use paths (off-street trails where cyclists, pedestrians, skaters, and other non-motorized modes mix) were found to reduce injury by 60%.⁶⁴



Source: SVMPO GIS

WEST FRY BOULEVARD CORRIDOR STUDY

The West Fry Boulevard Corridor Study includes retrofits to the street-scape that would widen sidewalks, and landscaping that would provide shade and separate pedestrians from traffic. Figure 30: West Fry Boulevard Conceptual Renderings shows how sidewalks could enhance the pedestrian environment along West Fry Boulevard. (Sierra Vista MPO. Fry Boulevard Corridor Study)

Research published by the American Planning Association, shows that enhanced streetscapes invite people to engage in more physical activity in communities.⁴⁴ In addition, street redesigns that include facilities for bicycle, pedestrians and transit (Complete Streets) are linked to positive economic effects on communities by increasing retail activity, property development, land values and tax revenues.

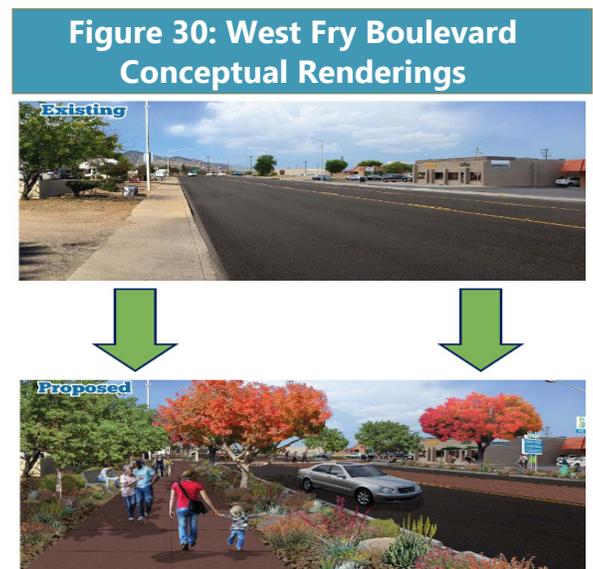
Pedestrian and cyclist collisions with vehicles are higher around West Fry Boulevard than in other areas of the city. Providing safe and attractive places to walk along West Fry Boulevard could decrease the number of traffic related injuries.

NORTH GARDEN AVENUE CORRIDOR STUDY

North Garden Avenue is located one block west of Buffalo Soldier Trail between West Fry Boulevard and Buffalo Soldier Trail. The approximately 1/2 mile of street provides access across a wash to West Fry Boulevard from the neighborhood just south of West Fry Boulevard, hotels and apartments located near the Historic West Fry Boulevard entrance to the Fort. This neighborhood is also one of the lower income neighborhoods in Sierra Vista. Improving access to West Fry Boulevard and the Fort along North Garden Avenue will make it easier for people to access this entrance to the Fort by bicycle and foot.

SIERRA VISTA ZONING ORDINANCE UPDATE

Land use is one of the most important determinants of people's choice of travel modes. The Federal Highway Administration University Course on Bicycle and Pedestrian Transportation states that in addition to ordinances that require bicycle parking and sidewalks, even more basic changes are needed for automobile parking requirements, street design standards, allowable land use densities, and transit-oriented developments. The FHWA identifies inclusion of bicycle and pedestrian facilities in piecemeal developments, internal bicycle and pedestrian circulation facilities in commercial and business developments, designing developments with multiple connections to main thoroughfares, on-site walkways for commercial developments, pedestrian access between developments, and adequate lighting for pedestrians and other standards to ensure land use codes support healthy transportation.⁶⁵



Renderings of Fry Blvd. Redesign. Source: svmpo.org

As Sierra Vista updates in land use and subdivision ordinances, providing bicycle and pedestrian connectivity, mixed uses, and higher densities in areas close to community services such as hospitals, grocery stores, parks, and gathering places could result in creating places that encourage people to walk or bike instead of drive.

POTENTIAL PUBLIC HEALTH IMPACTS OF PROPOSED PROJECTS ON FORT HUACHUCA

Fort Huachuca and community partners including the Department of Public Works, the School Superintendent, and the Healthy Community Committee identified roadway sections for future projects that will improve the viability of safe biking and walking. Representatives of the Fort report that pedestrians and cyclists use roads with high traffic volumes roads for travel and exercise. In many areas, these roadways lack facilities for bicycles and pedestrians (Figure 28: Fort Huachuca Bicycle and Pedestrian Collisions). The identified improvements will make it safer to walk and bicycle on the Fort, potentially increasing the number of people who walk and bike. Providing bicycle and pedestrian connections to base services enhance opportunities to access healthy food, recreation areas, and community spaces as well as increase physical activity for those who use them, could contribute to reducing obesity and obesity related chronic diseases on the Fort.

Figure 28: Fort Huachuca Bicycle and Pedestrian Improvements

| Location | Proposal |
|--|---------------------|
| Burns Street | All Death |
| H Street | Additional Sidewalk |
| (Bonne Blink to Old Post) | Additional Sidewalk |
| Arizona Street (Between Irwin St. & Brainaird Rd.) | Additional Sidewalk |
| Whitside Road | Bike Lanes, MUP |
| Hatfield Street (To Main Gate) | Bike Lanes, MUP |
| Allison to Winrow | Bike Lanes, MUP |



COL Johnston School
Missing sidewalk from neighborhood.



COMMUNITY PRIORITIES

An interactive website devoted to the HIA and discussing community health, two public meetings, and participation in events including the Chamber of Commerce Super Bowl Tailgate in February 2016, and the Chamber of Commerce Health, Wealth & Lifestyle Fair in March 2016 were used to inform the public of the HIA and solicit their participation in the HIA process.



Information about the HIA was provided at a table at the Chamber of Commerce Super-Bowl Tailgate in February, 2016.



A community meeting about the HIA held on January 28, 2016.

THIS PAGE INTENTIONALLY BLANK

6. RECOMMENDATIONS

INTRODUCTION

This chapter includes recommendations to assist in prioritizing the pedestrian project in the Sierra Vista Metropolitan Planning Organization Sidewalk Implementation Plan, and bicycle and pedestrian projects included in the West Fry Boulevard Corridor Study, and recommendations to promote healthy transportation facilities in Fort Huachuca. In addition to these recommendations, other recommendations that could be considered are the update of the zoning code, implementation of Safe Routes To School Programs, and other plans that promote non-motorized transportation are also included here.

RECOMMENDATIONS

Recommendations in this chapter focus on non-motorized transportation facilities that will have the greatest positive impacts on individual and community health by connecting people to healthy food, health care, and community services and activities. Greatest priority was given to those recommendations that benefit Sierra Vista's low income and elderly population, as the health of these groups is most impacted by access to non motorized transportation and transit.

Overall, the study recommendations will help make transportation in the Sierra Vista healthier and contribute to an increase in important health determinants including physical activity, mobility options, and a reduction in social isolation (Figure 29: Recommendations).

Figure 29: Recommendations

| PATHWAY/ HEALTH DETERMINANT | RECOMMENDATION | RATIONALE |
|--|---|---|
| All | <p>Sierra Vista Sidewalks Inventory and Implementation Plan</p> <p>Include census tract income, proportion of disabled, and persons over 65 in overall sidewalk connectivity priority area determination</p> | <p>Income, disability, and age are important corollaries of access to health care, healthy food, and obesity and obesity related diseases. Including these considerations in sidewalk priorities will help identify areas that need access to healthy and non-motorized transportation areas the most.</p> |
| 1, 4, 9, 10, 11 | <p>Sierra Vista Sidewalks Inventory and Implementation Plan</p> <p>Provide a connection between N. Carmichael Avenue where it terminates at N. Railroad Avenue to West Fry Boulevard.</p> | <p>The neighborhoods around N. Carmichael Avenue are the poorest in Sierra Vista (2010 median household income \$26,296. These are the latest numbers available at this level of geography). 8% of the city's 2010 disabled population lives in this relatively small census tract surrounding this area. Providing sidewalks to help these neighborhoods access public transportation along West Fry Boulevard, the West gate to the Fort, and services along Fry Boulevard.</p> |

Figure 29: Recommendations

| PATHWAY/ HEALTH DETERMINANT | RECOMMENDATION | RATIONALE |
|-----------------------------------|--|---|
| 1, 4, 9, 10, 11 | <p>Sierra Vista Sidewalks Inventory and Implementation Plan</p> <p>Provide additional sidewalk along Avienda Cochise between Paseo San Luis and Calle Mercancia, with ADA upgrades. (Project 1)</p> | <p>The area without a sidewalk is on both sides of Avienda Cochise. This connection would provide a continuous sidewalk to residents of an apartment complex and a residential subdivision continuous access to educational (PPEP Tech High School) medical facilities, retail, daycare, and public transportation services located along SR92.</p> <p>The recommendation also creates a continuous connection to SR92 across from the Sierra Vista Mall, so people can walk more safely to local retail. The Mall also includes a movie theater. Creating a safer pedestrian connection to this venue could result in more children walking to the movies, instead of relying on their parents to drive them. The increased physical activity from walking can contribute to a decrease in the obesity, the risk of obesity related chronic diseases, and isolation that can result in depression and depression related diseases such as substance abuse.</p> |
| 1, 4, 5, 9, 10, 11, | <p>Sierra Vista Sidewalks Inventory and Implementation Plan</p> <p>Provide additional sidewalk along SR92 between E. Hazen and Avendia Cochise, with ADA upgrades. (Project 4)</p> | <p>The recommended addition of a Multi-Use Path along the west side of SR 92 and within a quarter mile of the Sierra Vista Mall. Providing this sidewalk will help pedestrians travel more safely along the west side of SR 92, and create a continuous connection between the Sierra Vista Mall and the commercial area at the intersection of SR92 and Fry Boulevard. If more people are physically active via walking, biking, etc., it is likely to see a reduction in obesity and obesity related diseases. In addition, this physical activity is good for mental health. A strengthen sense of community is believe to be correlated with pedestrian-oriented design (CNU). Finally, Country Club pocket park is now more accessible for the subdivisions near-by. Parks are a great source of recreation.</p> |

Figure 29: Recommendations

| PATHWAY/ HEALTH DETERMINANT | RECOMMENDATION | RATIONALE |
|-----------------------------------|--|---|
| 1, 4, 9, 10, 11 | <p>Sierra Vista Sidewalks Inventory and Implementation Plan</p> <p>Provide additional sidewalk on S. Carmichael Ave between Sheila Lane and Timothy Lane, with ADA upgrades (Project 13).</p> | <p>The proposed sidewalk would provide a consistent walkway along S. Carmichael Boulevard to W. Fry Boulevard. This connection would provide some of the lowest income neighborhoods in Sierra Vista with a healthy transportation option to access transit along Carmichael Boulevard.</p> <p>A continuous sidewalk connection along South Carmichael Boulevard would provide safe access to East and West Fry Boulevard (Sidewalks and other pedestrian improvements are currently planned along West Fry Boulevard, and West Fry Boulevard connects to the West entrance to the Fort), to transit stops located along S. Carmichael Avenue, and to two small, specialty grocery stores located along Fry Boulevard.</p> <p>A continuous sidewalk along S. Carmichael Avenue would also create sidewalk access to Claramitaro and Tompkins Parks. The sidewalk could encourage more use of the park by children who can access it safely, and result in increased physical activity.</p> <p>5% of the city's disabled population lives in the triangular census tract bounded by 7th Street and Buffalo Soldier Trail and Fry Boulevard. Providing a continuous sidewalk along S. Carmichael will make it easier for those disabled persons who are unable to drive to access transit along S. Carmichael Avenue.</p> |

Figure 29: Recommendations

| PATHWAY/ HEALTH DETERMINANT | RECOMMENDATION | RATIONALE |
|-----------------------------------|--|--|
| 1, 4, 5, 8, 10, 11 | <p>Sierra Vista Sidewalks Inventory and Implementation Plan</p> <p>Provide additional sidewalk between N. Colombo Ave between E. Evergreen Dr. and E. Galieleo Dr. (Project 17)</p> <p>Provide sidewalks along both sides of Rainbow Way (Projects 19 and 20)</p> | <p>This recommendation provides a healthy transportation option in a neighborhood with one of the lower 2010 household incomes in the city. A sidewalk along N. Colombo Avenue will provide safe route for children to walk to school by connecting residential area to Berean Pre-School. This could result in increasing physical activity and decreasing obesity among this population group.</p> <p>A sidewalk along Colombo Avenue north of Fry Boulevard could increase safety and enhance to Fry Boulevard. If people feel safer walking to Fry Boulevard more people might walk or bike to the commercial areas along Fry Boulevard 1/2 mile to the east of the intersection of Fry Boulevard and N. Colombo Ave. The commercial areas include grocery stores and retail services.</p> <p>Rainbow way is the primary local street in this neighborhood and provides the only access to Fry Boulevard from this neighborhood. Sidewalks along both sides of rainbow way will provide access to Fry Boulevard for this neighborhood. Over 7.5% of the city's 2010 disabled population lives in the relatively small census tract that includes this neighborhood. Providing a continuous sidewalk for those who do not drive will make it easier for them to access the commercial areas 1/2 mile to the east of the Rainbow Wan and Fry Boulevard intersection.</p> <p>Three churches are located within 1/2 mile of the intersection of Colombo Avenue and Fry Boulevard), Providing a safe and continuous route from these neighborhoods along N. Colombo Avenue could result in increased social connections and reducing isolation for this population group.</p> |

Figure 29: Recommendations

| PATHWAY/ HEALTH DETERMINANT | RECOMMENDATION | RATIONALE |
|-----------------------------------|--|--|
| 1, 3, 4, 5, 7, 9, 10, 11, 12 | <p>Fry Boulevard Corridor Plan</p> <p>The Sierra Vista City Council Strategic Objective goal is to implement a plan to beautify public infrastructure that makes Fry Boulevard and North Garden Avenue more walkable and bike-able.</p> | <p>Fry Blvd. is Sierra Vista’s major commercial corridor. Enhancing the sidewalk infrastructure, will make West Fry Boulevard a more pleasant place to walk, and could increase pedestrian activity. An increase in pedestrian activity could increase business activity along West Fry Boulevard providing jobs for residents in nearby neighborhoods that which are among some of the lowest income neighborhoods in the city. An increase in income is associated with better health care access. Providing wider sidewalks and landscaping that separates pedestrians moving traffic and provides shade reduces the opportunities for pedestrian/vehicle collisions, makes the sidewalk feel safer (resulting in an increase of pedestrian activity) and could reduce exposure to UV rays associated with skin cancer. Providing bicycle lanes along West Fry Boulevard will enhance bicycle access to the Fort and access from the neighborhoods north and south of West Fry Boulevard to the commercial area approximately three miles to the east at the intersection of SR 92 and Fry Boulevard.</p> |

Sierra Vista Planned Update to the Zoning Ordinance

Figure 29: Recommendations

| PATHWAY/ HEALTH DETERMINANT | RECOMMENDATION | RATIONALE |
|-----------------------------------|---|--|
| 1,2,3,4,5,8, 11,12 | Require all development to provide ADA compliant sidewalks along local streets | Providing connections from new development to existing and planned paths and trails will help to make Sierra Vista more connected. It will enable more children to walk to school, and more residents |
| 1,2,3,4,5,8, 11,12 | <p>Provide connections from within all new development to existing and planned bicycle routes and shared use paths and trails.</p> <p>Provide bicycle and pedestrian connections between commercial developments</p> <p>Provide pedestrian facilities through parking areas located between the street and commercial buildings</p> <p>When possible, place buildings close to the street</p> | <p>to use healthy transportation options to access transit, health care, healthy food and community services. Providing healthy transportation options helps to reduce obesity and obesity related diseases such as diabetes and hypertension. Walking and bicycling increases social interaction and reduces isolation; which contributes to depression and related diseases such as substance abuse.</p> <p>Reducing the distance pedestrians have to travel from the street to a commercial building could encourage people to use transit or walk.</p> <p>Providing connections between commercial developments could result in people walking between them, instead of driving their car from one parking lot to another.</p> |
| 1,2,3,4,5,8, 11,12 | If a development can connect to planned or existing sections of an existing or a planned bicycle route, or shared use path or trail, require the development to provide the connection and allow public access.. | |

Figure 33: Fort Huachuca Recommendations

Figure 29: Recommendations

| PATHWAY/ HEALTH DETERMINANT | RECOMMENDATION | RATIONALE |
|-----------------------------------|--|--|
| All | Develop a "walk the Fort" program aimed at Fort residents and employees. Advertise the program through Fort literature and websites. | Providing information about the benefits of walking and bicycling to Fort residents will make them more aware of facilities that are available, and help to create a database that can be used to make Fort residents more aware of new facilities that may be close to them and they could easily access. This may help to increase the number of people who are aware of facilities as well as the number of people who might consider using these facilities and do not currently use them now. |
| 1, 3, 4, 5, 7, 9, 10, 11, 12 | Additional sidewalks on Burns Street | This recommendation provides connectivity between neighborhood and Fort Huachuca's commissary (grocery store). Providing access to healthy food can contribute to a reduction in obesity and obesity related diseases. |
| 1, 4, 5, 8, 10 | Additional Sidewalk connecting H Street and Col. Johnston | This recommendation provides a safe route for children and parents to walk to Col Johnston School. It also provides a connected sidewalk between the school, a residential area, ball fields, and a child care center. This will make it safer for children and parents to walk from school to the ball fields, and potentially increase physical activity. This could contribute to a reduction of childhood obesity. |
| 4, 5, 10, 11 | Additional sidewalk connecting Bonnie Blink to Old Post | Currently, there is sidewalk to Old Post, but the sidewalk ends at a subdivision. Providing a sidewalk will make this connection safer (reduce tripping hazards) and increase the appearance of safety, resulting in more pedestrian use. The sidewalk is a healthy transportation option that could result in reducing obesity and obesity related diseases. |
| 3, 4, 5, 10, 11 | Bike Lanes/ Shared use paths on Arizona Street (Between Irwin St. & Brainaird Rd.) | This creates a connection along Arizona Street from order to branch off to centralized areas/ locations that are frequently used. Pedestrians have a safer route, able to travel within clearly marked parameters. |
| 3, 4, 5, 10, 11 | Whitside Road bike lane/ Shared use path proposal | Connects the current shared use path that is being developed along major on-post arterial roads to other on post roads that connect to centralized areas/locations that are frequently used. |

Figure 29: Recommendations

| PATHWAY/ HEALTH DETERMINANT | RECOMMENDATION | RATIONALE |
|--|---|--|
| 3, 4, 5,10, 11 | Hatfield Street (To Main Gate) bike lane/Shared use path proposal | SR 90 is a main roadway that accesses the Fort on the north and is also a popular area with runners and cyclists. This shared use path would provide a 2.25 connection from the main access point into Fort Huachuca and connecting bicycle and pedestrian facilities. The shared use path would also provide a safer route for pedestrians, decreasing the potential for collisions between pedestrians and vehicles. Providing safe areas for recreational biking and walking can help to increase the frequency of these activity and result in reduced obesity and obesity related diseases. |
| 3, 4, 5,10, 11 | Allison to Winrow bike lane/ Shared use path proposal | Allison connects to Winrow near the Fry Boulevard entrance to Fort Huachuca and again when it turns into Lawlon Road in residential areas within the Fort. This is a popular area with runners and cyclists. This shared use path would provide a safer route than Winrow Road to access the residential areas of the Fort by bicycle or foot. Providing safe areas for recreational biking and walking can help to increase the frequency of these activity and result in reduced obesity and obesity related diseases. |

THIS PAGE INTENTIONALLY BLANK

6. Reporting

INTRODUCTION

This chapter describes how the results of this assessment are disseminated to entities that will be responsible for implementation of the Sierra Vista Plans and Policies included in this HIA. The primary mode to report the results of this study includes presentations to the Sierra Vista City Council, the Base Commanders, and Be Healthy Sierra Vista.

PRESENTATIONS

Presentations related to this study are shown in (Figure 30: Reporting). In addition, a web page soliciting input was created. The most effective forms of outreach were the face-to-face surveys and one-on-one meetings.

| Figure 30: Reporting | | | |
|--|------------------|--------------|---|
| Entity | Date(s) | Reporting By | Presented Topics |
| Steering Committee Meeting - Sierra Vista | January 28, 2016 | PLAN*et | Overview of SVMPO HIA and discussion of proposed scope |
| Public Event - Chamber of Commerce Tail-Gate | February 7, 2016 | SVMPO | Benefits of Physical Activity/ Healthy Transportation Options |

Figure 30: Reporting

| Entity | Date(s) | Reporting By | Presented Topics |
|-------------------------------|---------------|--------------|---|
| Public Meeting - Sierra Vista | April 7, 2016 | PLAN*et | Presented data on health in Sierra Vista and met with advocacy group Be Healthy! Sierra Vista for |
| Public Meeting - Sierra Vista | July 26, 2016 | PLAN*et | Benefits of Health |
| | | | |

IMPLEMENTATION ENTITIES

The primary entity responsible for transportation improvements in Sierra Vista is the City of Sierra Vista and the Sierra Vista Metropolitan Planning Organization (SVMPO). SVMPO and in some cases, Sierra Vista will be the implementing entity for the recommendations contained in this HIA. Be Healthy! Sierra Vista, who will advocate for ongoing implementation of this HIA

PUBLIC COMMENTS

At public meetings and through the website for this HIA community members provided input to this HIA through a website and by using dot on boards at events and community meetings. Appendix A includes a summary of comments received during the development of this HIA.



Public Comments provided about healthy transportation at Chamber of Commerce Tail-Gate Event in Sierra Vista

7. Monitoring and Evaluation

INTRODUCTION

This chapter includes identification of indicators that can be used to monitor and evaluate implementation of HIA recommendations; and an discussion of the efficacy of the HIA process.

IMPLEMENTATION RESPONSIBILITY AND TIMING

Figure 31: Implementation Responsibility and Timing identifies indicators that can be used to measure the efficacy of recommendations contained in this HIA, the entities that could collect data for the indicator, and how the data could be collected (implementation methodology).

It is understood that many of these recommendations are dependent on funding. However, monitoring to evaluate the impacts of these recommendations should be started now, so changes in community health can be measured.

Figure 31: Implementation Responsibility And Timing

| Pathway | Recommendation | Indicator | Responsible Entity | Implementation Methodology | Timing |
|-----------------|---|--|---|----------------------------|------------|
| All | <p>Sierra Vista Sidewalks Inventory and Implementation Plan</p> <p>Include census tract income, proportion of disabled, and persons over 65 in overall sidewalk connectivity priority area determination</p> | Increases in miles and connectivity of sidewalks and bike lanes in census blocks with higher than city average percent of population that is disabled, over age 65, and/or low income. | Sierra Vista Metropolitan Planning Organization (SVMPO) | Adoption | Short-term |
| 1, 4, 9, 10, 11 | <p>Sierra Vista Sidewalks Inventory and Implementation Plan</p> <p>Provide a connection between N. Carmichael Avenue where it terminates at N. Railroad Avenue to West Fry Boulevard.</p> | Ridership increases at the fixed transit stops with the help of Vista Transit. Monitor Census data and the transportation survey for changes in their mode share. | City of Sierra Vista | Funding | Short-term |

Figure 31: Implementation Responsibility And Timing

| Pathway | Recommendation | Indicator | Responsible Entity | Implementation Methodology | Timing |
|-----------------|---|---|----------------------|----------------------------|------------|
| 1, 4, 9, 10, 11 | <p>Sierra Vista Sidewalks Inventory and Implementation Plan</p> <p>Provide additional sidewalk along Avienda Cochise between Paseo Luis and Calle Mercancia with ADA upgrades. (Project 1)</p> | <p>PPEP High School could distribute transportation survey to students. Monitor Census data and the transportation survey for changes in the mode share of near-by residents.</p> | City of Sierra Vista | Funding | Short-term |
| 1, 4, 9, 10, 11 | <p>Sierra Vista Sidewalks Inventory and Implementation Plan</p> <p>Provide a Multi-Use Path along SR92 between E. Hazen and Avendia Cochise with ADA upgrades.</p> | <p>Monitor census data, transportation survey.</p> | City of Sierra Vista | Funding | Long-term |

Figure 31: Implementation Responsibility And Timing

| Pathway | Recommendation | Indicator | Responsible Entity | Implementation Methodology | Timing |
|-----------------|---|--|----------------------|----------------------------|------------|
| All | <p>Sierra Vista Sidewalks Inventory and Implementation Plan</p> <p>Provide additional sidewalk on S. Carmichael Ave. between Sheila Lane and Timothy Lane, with ADA upgrades (Project 13).</p> | <p>Ridership increases at the fixed transit stops with the help of Vista Transit. Monitor pedestrian activity on Fry Blvd and census data on transportation.</p> | City of Sierra Vista | Funding | Short-term |
| 1, 4, 9, 10, 11 | <p>Sierra Vista Sidewalks Inventory and Implementation Plan</p> <p>Provide additional sidewalk between N. Colo Ave. between E. Evergreen Dr. and E. Gal Dr. (Project 17)</p> <p>Provide sidewalks along both sides of Rainbow Way (Project 19, 20)</p> | <p>Monitor pedestrian activity on Fry Blvd.</p> <p>Monitor percent of children walking to school through school transportation surveys.</p> | City of Sierra Vista | Funding | Short-term |

Figure 31: Implementation Responsibility And Timing

| Pathway | Recommendation | Indicator | Responsible Entity | Implementation Methodology | Timing |
|------------------------------|--|---|-----------------------------|--|-----------------|
| 1, 3, 4, 5, 7, 9, 10, 11, 12 | <p>Fry Blvd. Corridor Plan</p> <p>Sierra Vista City Council Strategic Objective goal is to implement a plan to beautify public infrastructure that makes Fry Blvd. and North Garden Ave. more walkable and bike-able.</p> | <p>Pedestrian activity along Fry Blvd. and North Garden Avenue.</p> | <p>City of Sierra Vista</p> | <p>Adoption/ funding once final design for West Fry Blvd. and North Garden Ave. projects are completed</p> | <p>Mid-term</p> |

Figure 31: Implementation Responsibility And Timing

| Pathway | Recommendation | Indicator | Responsible Entity | Implementation Methodology | Timing |
|--------------------------|--|--|---|----------------------------|-----------|
| 1, 2, 3, 4, 5, 8, 11, 12 | <p>Update to the Zoning Ordinance</p> <p>Provide in the Sierra Vista Development Code mixed uses and higher density near activity centers</p> <p>Provide connections from within all new development to existing and planned bicycle routes and shared use paths and trails</p> <p>If a development can connect to planned or existing sections of an existing or a planned bicycle route, or shared use path or trail, require the development to provide the connection and allow public access</p> | Ensure that these updates to the zoning ordinance are submitted and adopted. | Be Healthy! Sierra Vista City of Sierra Vista | Advocacy Adoption | Long-term |

Figure 31: Implementation Responsibility And Timing

| Pathway | Recommendation | Indicator | Responsible Entity | Implementation Methodology | Timing |
|---------------------------------|--|--|--------------------|--|------------|
| All | Develop a “walk the Fort” program aimed at Fort residents and employees. Advertise the program through Fort literature and websites. | Mailing/email lists (hits) on awareness website Residents surveys to determine increaess in bicycling/ walking within the fort. | Fort Huachuca | Enhancement of existing Fort Information provided to residents | Short Term |
| 1, 2, 3, 4, 5, 7, 9, 10, 11, 12 | Fort Huachuca Additional sidewalks on Burns St. | Resident surveys to determine increases in bicycling/ walking within the base. | Fort Huachuca | Funding | Mid-term |
| 1, 4, 5, 8,10 | Fort Huachuca Additional sidewalk connecting H St. to Col. Johnson on Burns St. | Monitor percent of children walking to school through school transportation surveys. | Fort Huachuca | Funding | Short-term |

Figure 31: Implementation Responsibility And Timing

| Pathway | Recommendation | Indicator | Responsible Entity | Implementation Methodology | Timing |
|--------------------------|--|---|--------------------|----------------------------|------------|
| 4, 5, 10, 11 | Fort Huachuca Additional sidewalk connecting Bonnie Blink to Old Post | Resident surveys to determine increases in bicycling/walking within the base. | Fort Huachuca | Funding | Mid-term |
| 3, 4, 5, 10, 11 | Fort Huachuca Bike lanes/shared use paths on Arizona St. (Between Irwin St. and Brainaird Rd.) | | Fort Huachuca | Funding | Long-term |
| 3, 4, 5, 10, 11 | Fort Huachuca Bike lanes/shared Whitside Rd. bike lane/shared use path proposal. | | Fort Huachuca | Funding | Short-term |
| 3, 4, 5, 10, 11 | Fort Huachuca Hatfield St. (to Main Gate) bike lane/shared use path proposal. | | Fort Huachuca | Funding | Short-term |
| 1, 2, 3, 4, 5, 8, 11, 12 | Fort Huachuca Allison to Winrow bike lane/shared use path proposal. | | Fort Huachuca | Funding | Short-term |

IMPACT EVALUATION

As an HIA is implemented, and if baseline information is established, it can be monitored and over time, the effectiveness of its recommendations can be evaluated. At the conclusion of an HIA, the assessment process can be also be evaluated.

MEETING OBJECTIVES OF HIA

The primary objective of this HIA was to inform the SVMPO and the municipal government in Sierra Vista about healthy transportation options and the health impacts of potential transportation improvements recommended by the SVMPO in various planning documents.

A secondary objective of the HIA was to build community partnerships and support for health-relevant transportation recommendations. This objective has been met. For example, the Be Healthy! Sierra Vista advocacy group can play a role in advocating for ways to improve public health in Sierra Vista, such as adopting policies to encourage active transportation. Partnerships were also forged with health officials on the Fort whom can advocate for similar policies on Fort Huachuca.

A third objective of this HIA was to raise community awareness about the relationship between health and transportation. This objective was met. At the public meetings many residents discussed the importance of transportation options to their individual health.

ACCEPTANCE OF RECOMMENDATIONS

This HIA will be presented for adoption to the Sierra Vista MPO and the Sierra Vista City Council. The report will be presented to Be Healthy! Sierra Vista and proposed for presentation to Fort Huachuca.

OTHER IMPACTS/OUTCOMES

Through presentations of this HIA to entities and agencies in the region, transportation stakeholders, health, and human services providers have become more aware of the value of conducting HIAs as part of the decision making process. In many cases, stakeholders only knew about HIA through classes or word of mouth. Participation in this process provided first-hand experience where stakeholders could experience the value of this process.

Participation in this HIA process by CCHS and other entities has increased the capacity for conducting future HIAs in this region, and resulted in Be Healthy! Sierra Vista becoming advocacy group for better community health.

PROCESS EVALUATION

RESOURCES

This HIA was funded by the Arizona Department of Health Services through a CDC grant. The HIA was conducted from February 2016 to July 2016. The determination to conduct this HIA was made by the Arizona Department of Health Services through a competitive grant process.

The HIA was conducted by a consultant working with the SVMPO and its consultants as they identified the linkages between recommendations made in SVMPO transportation planning documents and community health. Because the consultant and HIA recipient worked closely on the development of the application for funding for this HIA, the execution of the HIA continued with close involvement from the recipient and the consultant.

AVAILABILITY AND QUALITY OF DATA

There is limited health data available for the City of Sierra Vista. When possible, data specific to Sierra Vista was used, supplemented with county wide data. The 2012 Cochise County Community Health Assessment provided helpful information. Some studies by the Cochise County Department of Health provided additional support for other findings. In the future, data could be collected by health providers at the county and the Fort that could help document the impact of providing more healthy transportation facilities. For example, a baseline could be established regarding obesity and obesity related chronic disease citywide, and as healthy transportation improvements are constructed, monitoring of these occurrence of these conditions could occur.

PUBLIC ENGAGEMENT

Public meetings were attended to varying degrees, dependent on location, date, and time. While Be Healthy! Sierra Vista and the Sierra Vista MPO were actively engaged in the development of this HIA. The Cochise County Department of Health was actively engaged and participated in this HIA process in order to build capacity for conducting other HIAs throughout the county.

The involvement of community members and groups such as cycling groups, health care providers, and other advocacy groups with large county-wide constituencies was solicited through meetings, hosting tables at community wide events, and digital and print outreach. This HIA focused mostly on Sierra Vista and not on the Cochise County. As a result, many of the advocacy groups were only marginally interested in the outcomes of the HIA. Other groups, such as cycling groups, were supportive, but only in as much as the HIA was in keeping with the very specific agendas of these groups (i.e., providing more recreational cycling trails). Connecting this HIA to the public engagement process and outcomes of a specific project may result in more engagement from stakeholders and the community..

Fort Huachuca staff were engaged throughout the process. New information for the Fort needed to be provided in a very specific format not supported by existing research. As a result, the Fort determined not to hear the results of this HIA. However, the HIA was provided to Fort Staff for review and comment. An HIA focused on specific projects at the Fort, supported with data from the Fort could potentially be of more interest to command at Fort Huachuca.

FORMULATION OF RECOMMENDATIONS

Recommendations in this HIA focused on providing implementation priorities for adopted plans such as the Sidewalk Implementation Plan and the Safe Bicycle and Pedestrian Routes Plan. The MPO requested that this HIA provide additional information regarding priorities for implementation of Plan recommendations. Priorities for this HIA with respect to these plans were developed based on vulnerable populations, and recommendations that could have the biggest impact on chronic disease that could be reduced through physical activity.

Additional recommendations incorporated public comment and ideas from research about how future planning, such as the zoning ordinance update, and in process plans such as the Fry Boulevard Corridor Study, could provide opportunities for physical activity city wide.

In some cases, such as the selection of priority areas for implementation of sidewalks, the HIA provided some recommendations that could impact the methodology through which priorities are developed. However, incorporation of these recommendations would required amendment of the Sidewalk Implementation Plan.

The recommendations in this HIA will be presented for adoption to the Sierra Vista City Council.

PROCESS EFFICACY

This HIA process resulted in an increase in the awareness of the relationship of health and physical activity and health and the Built Environment. Be Healthy! Sierra Vista had formally agreed to advocate for the implementation of this HIA. During the development of this HIA, county staff and staff from SVMPO participated in a training session to increase their ability to conduct HIAs. The county initiated a body mass survey. Surveys distributed at community presentations resulted in participants stating that they were more informed about the relationship between transportation and health. These surveys are located in Appendix E.

NOTES

1. http://www.cdc.gov/healthyplaces/types_health_assessments.htm
2. Urban Land Institute. Ten Principles for Building Healthy Places. <http://uli.org/wp-content/uploads/ULI-Documents/10-Principles-for-Building-Healthy-Places.pdf>.
3. Sidewalks: A Livability Fact Sheet. (n.d.). Retrieved from http://www.aarp.org/content/dam/aarp/livable-communities/documents-2014/Livability_Fact_Sheets/Sidewalks-Fact-Sheet.pdf
4. Litman, Todd Victoria Transport Policy for the American Public Transportation Association. Evaluating Public Transportation Health Benefits 14 June 2010 http://www.apta.com/resources/reportsandpublications/Documents/APTA_Health_Benefits_Litman.pdf
5. How Land Use and Transportation Systems Impact Public Health, A Literature Review of the Relationship Between Physical Activity and Built Form. <http://www.cdc.gov/nccdphp/dnpa/pdf/aces-workingpaper1.pdf>. Access Date July 5, 2016.
- 5a. Physical Activity and Health: A Report of the Surgeon General Physical Activity and Health: A Report of the Surgeon General. <http://www.cdc.gov/nccdphp/sgr/ataglan.htm>. Access date: July 5, 2016.
6. Flusche, Darren. The League of American Bicyclists. News from the League. January 23, 2010. <http://www.bikeleague.org/content/national-household-travel-survey-short-trips-analysis>
7. World Health Organization. Health Impact Assessment (HIA) . <http://www.who.int/hia/evidence/doh/en/>. Access date July 5, 2016.
8. Healthy People 2020. Determinants of Health. Retrieved June 22, 2015, from <https://www.healthypeople.gov/2020/about/foundation-health-measures/Determinants-of-Health#social>.
9. Chronic Disease Overview. CDC. <http://www.cdc.gov/chronicdisease/overview/>. Access date: July 5, 2016
10. Physical Activity and Health: A Report of the Surgeon General Physical Activity and Health: A Report of the Surgeon General. <http://www.cdc.gov/nccdphp/sgr/ataglan.htm>. Access date: July 5, 2016.
11. Pendall, Rolf, Hayes, Christopher, George, Arthur (Taz), McDade, Zac. Driving to Opportunity. Understanding Links among Transportation Access, Residential Outcomes, and Economic Opportunity for Housing Voucher Recipients.
12. Planning Complete Streets for an Aging America - AARP. (2015, April). Retrieved from http://www.aarp.org/home-garden/livable-communities/info-08-2009/Planning_Complete_Streets_for_an_Aging_America.html
13. American Community Survey. (2014). American FactFinder - Community Facts. Retrieved from http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml Access date July 5, 2016
14. AAA fact sheet. senior driving.aaa.com. access date: July 5, 2016
15. FHWA NHTS Brief - Mobility Challenges for Households. (2014). Retrieved from <http://nhts.ornl.gov/briefs/PovertyBrief.pdf>
16. United States Census. (2010). American FactFinder - Community Facts. Retrieved from http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml Access date February 2016.
17. 2012 American Community Survey 1-Year Estimates. U.S. Census. Sex By Age By Disability Status. B19101.
18. American FactFinder - Community Facts.
19. 2010-2014 American Community Survey 5-Year Estimates. Disability Characteristics. S1810. Access Date July 5, 2016.
20. Bureau of Transportation Statistics. Freedom to Travel. Data Analysis. http://www.rita.dot.gov/bts/sites/rita.dot.gov/bts/files/publications/freedom_to_travel/html/data_analysis.html. Access Date July 6, 2016.
21. American Fact Finder – Community Facts. Access Date July 6, 2016.
22. American Fact Finder. Health Insurance Coverage. 2010-2014 American Community Survey. S2701. Access Date July 5, 2016.

23. American Fact Finder – Community Facts. Access Date July 6, 2016.
24. AZDHS Leading Causes of Death. www.asdhs.gov/plan/report/ahs/ahs2013/pef/text2b.pdf. Access date July 5, 2016
25. Arizona Department of Health Services. (2009). ADHS Bureau of Public Health Statistics - Community Profiles Dashboard. Retrieved from <http://azdhs.gov/preparedness/public-health-statistics/profiles/index.php>
26. Robert Wood Johnson Foundation. (2016). Health Rankings | County Health Rankings & Roadmaps. Retrieved from <http://www.countyhealthrankings.org>. Access date July 5, 2016.
27. Ali, Mir M. Amialchuk, Aliaksandr, Heller, Lauren R. The Influence of Physical Activity on Cigarette Smoking among Adolescents: Evidence from Add Health. Oxford Journals. February 14, 2014.
28. Canadian Center for Addition and Mental Health. ADAPTT. Physical Activity and Smoking. Key Messages for Health Care Providers and Policy Makers. Fact sheet for healthcare providers.
29. Arizona Department of Health Services. (2009). ADHS Bureau of Public Health Statistics - Community Profiles Dashboard. Retrieved from <http://azdhs.gov/preparedness/public-health-statistics/profiles/index.php>
30. Robert Wood Johnson Foundation. (2016) Health Rankings | County Health Rankings & Roadmaps. Retrieved from <http://www.countyhealthrankings.org>. Access date July 4, 2016.
31. U.S. Department of Health. 2008 Physical Activity Guidelines for Americans Summary. <http://health.gov/paguidelines/guidelines/summary.aspx>. Access date July 5, 2016.
32. Warburton, Darren E.R. , Nicol, Crystal Whitney, Bredin, Shannon S.D. Health benefits of physical activity: the evidence. School of Human Kinetics, PMID: PMC1402378. March 14, 2006.
33. WONG, D. J., & Unit, A. N. (2012, September 14). Rural America Fatter Than Urban America. Retrieved from <http://abcnews.go.com/Health/rural-america-fatter-urban-america/story?id=17231029>
34. Robert Wood Johnson Foundation. (2016) Health Rankings | County Health Rankings & Roadmaps. Retrieved from <http://www.countyhealthrankings.org>. Access date July 5, 2016.
35. Chow, E. A., MD, Foster, H., MD, Gonzales, V., MD, & Mciver, L., MD, MPH. (2012, July 30). The Disparate Impact of Diabetes on Racial/Ethnic Minority Populations | Clinical Diabetes. Retrieved from <http://clinical.diabetesjournals.org/content/30/3/130>
36. Arizona Department of Health Services. (2009). ADHS Bureau of Public Health Statistics - Community Profiles Dashboard. Retrieved from <http://azdhs.gov/preparedness/public-health-statistics/profiles/index.php>
37. Boyd, Amy, Yan, Celeste, et al. Feasibility of exercising adults with asthma: a randomized pilot study. PMID: PMC3511803. Published online 2012 Aug 3. doi: 10.1186/1710-1492-8-13
38. Harvard T.H. Chan School of Public Health. (2016). Waist Size Matters | Obesity Prevention Source. Retrieved from <https://www.hsph.harvard.edu/obesity-prevention-source/obesity-definition/abdominal-obesity/>
39. American Fact Finder – Community Facts. Access Date July 6, 2016. Occupancy Characteristics. 2010-2014 American Community Survey. S2501.
40. Ellis Nutt, A. (2016, January 31). Loneliness grows from individual ache to public health hazard - The Washington Post. Retrieved from http://www.washingtonpost.com/national/health-science/loneliness-grows-from-individual-ache-to-public-health-hazard/2016/01/31/cf246c56-ba20-11e5-99f3-184bc379b12d_story.html
41. Robert Wood Johnson Foundation. (2016) Health Rankings | County Health Rankings & Roadmaps. Retrieved from <http://www.countyhealthrankings.org>. Access date July 5, 2016.
42. Bureau of Transportation Statistics. Freedom to Travel. http://www.rita.dot.gov/bts/sites/rita.dot.gov/bts/files/publications/freedom_to_travel/html/data_analysis.html.
43. AAA fact sheet. senior driving.aaa.com. access date: July 5, 2016
44. American Fact Finder. Household Size by Vehicles Available. 2010-2014. B08201.
45. Children's, Women's and Seniors' Health Branch, British Columbia Ministry of Health. (2004). Social Isolation Among Seniors: an emerging issue. Retrieved from http://www.health.gov.bc.ca/library/publications/year/2004/Social_Isolation_Among_Seniors.pdf

46. (Syed, Samina T., Gerber, Ben S., and Sharp, Lisa K. *Journal of Community Health*. Traveling Towards Disease: Transportation Barriers to Health Care Access. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4265215/>.)
47. Field, Marilyn J. and Jette, Alan M. *Institute of Medicine (US) Committee on Disability in America. The Future of Disability in America*. National Academies Press (US). 2007. ISBN-13: 978-0-309-10472-2
48. PolicyLink. (2013). *Access to Healthy Food: Why it Matters*. Retrieved from http://thefoodtrust.org/uploads/media_items/access-to-healthy-food.original.pdf
49. http://www.ers.usda.gov/dataFiles/Food_Access_Research_Atlas/Download_the_Data/Archived_Version/archived_documentation.pdf
50. *Socio-Economic Significance of Food Deserts* [Television series episode]. (2011, June 29). In PBS Newshour. PBS.
51. Bureau of Transportation Statistics. *Household, Individual, and Vehicle Characteristics. Highlights of the 2001 National Travel Survey*.
52. American Fact Finder – Community Facts. Access Date July 6, 2016.
53. Data provided by Fort Huachuca.
54. "Growing Obesity Rates in Military." *The Washington Post*. (n.d.). Retrieved from https://www.washingtonpost.com/world/national-security/growing-obesity-rates-in-military/2012/12/10/5a155a0c-4317-11e2-9648-a2c323a991d6_graphic.html
55. Data provided by Fort Huachuca.
56. Robert Wood Johnson Foundation. (2016) *Health Rankings | County Health Rankings & Roadmaps*. Retrieved from <http://www.countyhealthrankings.org>. Access date July 5, 2016.
57. Mayo Clinic. (n.d.). *Depression and anxiety: Exercise eases symptoms - Mayo Clinic*. Retrieved from <http://www.mayoclinic.org/diseases-conditions/depression/in-depth/depression-and-exercise/art-20046495>
58. Brownson, Ross C., Baker, Elizabeth A. Housemann, Robyn A, et al. *Environmental and Policy Determinants of Physical Activity in the United States*. *American Journal of Public Health*. December 2001. Vol. 91. No. 12.
59. *Sidewalks Promote Walking | Bureau of Transportation Statistics*. (n.d.). Retrieved from http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/special_reports_and_issue_briefs/issue_briefs/number_12/html/entire.html
60. *Br Journal of Sports Medicine*. (April 2007) Vol 41:9 pg 562-568 30. Retrieved from <http://bjsm.bmj.com/content/41/9/562.full.pdf>
61. American Fact Finder – Community Facts. *Commuting Characteristics by Sex. 2010-2014 American Community Survey*. 61S0801. Access Date July 6, 2016.
62. Portland Bureau of Transportation. *Four types of Transportation Cyclists in Portland*. (<http://www.portlandoregon.gov/transportation/article/158497>)
63. Abbey-Lambertz, K. (2016, June 16). *Cyclists Shouldn't Have To Risk Their Lives Just To Use The Road*. Retrieved from http://www.huffingtonpost.com/entry/kalamazoo-bike-crash-safety_us_575ea98ae4b0ced23ca882e6
64. Schmitt, A. (2012, October 22). *Study: Protected Bike Lanes Reduce Injury Risk Up to 90 Percent | Streetsblog USA*. Retrieved from <http://usa.streetsblog.org/2012/10/22/study-protected-bike-lanes-reduce-injury-risk-up-to-90-percent>
65. *Federal Highway Administration University Course on Bicycle and Pedestrian Transportation*. (2006, July). Publication No. FHWA-HRT-05-093. (2006, July). Retrieved from <http://www.fhwa.dot.gov/publications/research/safety/pedbike/05085/chapt5.cfm>

THIS PAGE INTENTIONALLY BLANK

APPENDIX A: COMMUNITY COMMENTS

FEBRUARY 7, 2016-SIERRA VISTA TAILGATE PARTY- HIA TABLE

On February 7, 2016, the HIA had a table at the first Sierra Vista Tailgate Party. This event was meant to get the community of Sierra Vista more involved in their surroundings. We saw this as a perfect opportunity to inform the community about the work of the HIA and what it means to Sierra Vista.

During the 6 hours that the event was held (from 10am-4pm) we were able to talk to about 50 people and explain how the HIA will inform policy decisions within the city, which will lead to a healthier Sierra Vista through changes in transportation. The community was very receptive and many thanked us for our efforts.

We also received several great ideas from residents. The following are some of the ideas:

- More activities for children.
- Create a splash park for kids in the downtown area, to get families out and about.
- The Canyon De Flores area does not have a park, but there is vacant land in the area that could be great for a park. See if the city owns the land and have the community develop it. It could be a great activity for the Eagle Scout troop.
- Love the bike paths, that's why we moved here. Add more and connect them throughout the city.
- Safer routes to schools would allow children to walk to school. See about adding more sidewalks that are not too close to the street.
- There is an issue with feral/wild dogs in the area, this is a big safety issue and a reason I will not let my children walk to school. What can we do about this?
- We need more shade trees that provide shade all year long on the multi-use paths. Fumes from cars can be shielded somewhat from these trees as well.
- Benches placed along the multi-use paths would allow people who cannot walk for long distances at a time to take a break while using the paths.
- There seems to be an issue with driver awareness and the multi-use paths. Drivers seems to be unaware of the roadway crossings of the paths. Installing a flashing light at the roadway crossing that is triggered when a walker or biker goes over a sensor in the path, would alert drivers to the people using the paths.

FROM APRIL 4, 2016 MEETING

- Sierra Vista HIA: Stakeholder Recommendations
- Food trucks that have groceries/healthy options as oppose to fast food parking on a regular basis.
- Textured sidewalks (brick) impair handicapped in chairs
- Need bike lanes from 7th Street to where markets are
- Bikes connection to markets through neighborhoods creates conflict
- Foothills to Avendia Cochese path on SR92 switches sides. Need path to create a loop
- Sierra Vista bus stopped going to Safeway so people have to walk all the way from Wilcox\
- Sidewalk overlay on google. Kmz
- Only 1 bus stop on Fry at Hastings
- More education about road sharing
- No safe place currently on Fry Blvd. for biking - should add bike lanes or multi-use paths
- No bike lanes in the city center
- Farmers market on weekends to deliver fresh produce/healthy food options
- Nothing to walk to near Herford- Put a grocery or loop on that side of Sierra Vista or another farmers market
- Create a produce booth where people can bring fresh produce
- Have people bring produce to community garden
- Need a walking path at veterans park
- Regularly scheduled walks in town- power walkers, mom group
- Bike paths at 7th street. Bike paths on SR92 - help people bike into base/centrally located
- Bike rental system - borrow a bike
- Have more community events

Appendix B: The Relationship Between Health and Transportation

Physical activity is a key determinant of health. The more active an individual, the less likely she or he is to experience chronic obesity related diseases. The CDC states that physical activity doesn't need to be very strenuous for an individual to reap significant health benefits. Even small increases in light to moderate activity, equivalent to walking for about 30 minutes a day, will produce measurable benefits among those who are least active. One of the easiest ways to increase how much we walk is to change our travel behavior from automobile dependent to automobile-independent.

Over the past decades, community and transportation planners have begun to focus on the symbiotic relationship between community design and transportation. This focus has resulted in a shift from communities that offered few mobility choices to communities that provide non-motorized, transit-based, and automobile options. According to the Center for Disease Control and Prevention (CDC), Physical activity also helps you stay at a healthy weight, reduce stress, sleep better, and feel better overall, according to U.S. Health and Human Services guidelines. This is important because the National Health Interview Survey indicates that 53 percent of adult men and 64 percent of adult women never get more than 10 minutes of vigorous physical activity per week.

Communities that provide safe, convenient, and comfortable transportation choices enable people to choose a transportation mode that is appropriate to trip distance and other conditions, such as weather, time allotted for the trip, and the surrounding environment. Studies have shown that communities that offer healthy transportation options correlate with lower rates of obesity and other chronic disease.

A 2009 Robert Wood Johnson Foundation study¹ on the link between transportation, physical activity and obesity includes these findings:

- Most studies of children and adolescents indicate that walking or bicycling to school is

related to higher physical activity

- More and better-quality sidewalks are associated with adults having both higher rates of walking and of meeting physical activity recommendations, and with a lower likelihood of being overweight. Similarly, the presence of bicycle lanes and paths is positively related to cycling,⁶⁵ and to more adults meeting physical activity recommendations.
- A survey of more than 11,500 participants in 11 countries found that residents of neighborhoods with sidewalks on most streets were 47 percent more likely to get moderate-to-vigorous physical activity at least five days per week for at least 30 minutes each day than were residents of neighborhoods with sidewalks on few or no streets. A review of 16 studies found that people who reported having access to sidewalks were 20 percent more likely to be physically active than those reporting no access to sidewalks.
- The health benefits of regular physical activity are far-reaching: reduced risk of coronary heart disease, stroke, diabetes, and other chronic diseases; lower health care costs; and improved quality of life for people of all ages. Regular exercise provides the opportunity for health benefits for older adults such as a stronger heart, a more positive mental outlook, and an increased chance of remaining indefinitely independent—a benefit that will become increasingly important as our population ages in the coming years.
- Building multi-use trails can lead to short- and long-term increases in walking and cycling...Furthermore, trails have been shown to be particularly beneficial in promoting physical activity among women and people in lower-income areas.
- With few exceptions, living near trails or having trails in one's neighborhood has been associated with people being 50 percent more likely to meet physical activity guidelines and 73 percent to 80 percent more likely to bicycle. In a nationally representative study, individuals who reported using trails at least once per week were twice as likely to meet physical activity recommendations as were those who reported using trails rarely or never.
- In a sample of pre-adolescent girls, proximity to trails was related to 4.8 percent more physical activity and a 1.4 percent lower body mass index.

The study concludes that:

- A substantial body of research shows that certain aspects of the transportation infrastructure—public transit, green-ways and trails, sidewalks and safe street crossings near schools, bicycle paths, traffic-calming devices, and sidewalks that connect schools and homes to destinations—are associated with more walking and bicycling, greater physical activity and lower obesity rates.
- Beyond improving local travel options, transportation infrastructure investments that support physical activity can result in increased recreational opportunities, improvements to individuals' health and decreased health care costs. In combination with infrastructure investments, programs that raise awareness and complement pedestrian and bicycle facilities are promising options for supporting physical activity. Specifically, Safe Routes

to School programs and the management of traffic in local neighborhoods and around schools have been shown to affect physical activity among children, adolescents and adults.

- Fast vehicle traffic is a significant barrier and danger to bicyclists and pedestrians. Measures to slow down traffic and to help pedestrians negotiate busy streets can be effective in increasing physical activity and improving safety.
- Addressing the decades-long decline in walking and bicycling for transportation requires changing the physical characteristics of our communities. Federal, state and local policies and funding that support the type of infrastructure investments and programs identified in this brief can help slow and perhaps even reverse this decline.

NOTES:

(Active Living Research Active Transportation. Research Brief 9/09/. Making the Link from Transportation to Physical Activity and Obesity. Spring 2009. http://activelivingresearch.org/sites/default/files/ALR_Brief_ActiveTransportation_0.pdf. Access Date October 2, 2015.

THIS PAGE INTENTIONALLY BLANK

Appendix C:

About Obesity & Chronic Disease

OBESITY

The term “Heart Disease” encompasses several conditions of the heart. In the United States, coronary artery disease is the most common ailment of the heart, frequently causing heart attack, failure and arrhythmias (Centers for Disease Control and Prevention [CDC], 2009). Coronary artery disease is caused when cholesterol is deposited along the walls of the coronary arteries (the arteries which supply blood to the heart), creating a build up of plaque and narrowing the blood supply available to the heart (Centers for Disease Control and Prevention [CDC], 2013). As the buildup of plaque continues and the heart muscle continues to get insufficient blood supply, the heart will eventually stop pumping, which is commonly called a heart attack (Centers for Disease Control and Prevention [CDC], 2013).

Most heart disease can be prevented by eating a healthy, high fiber diet, consisting of plenty of fruits and vegetables, and foods low in sodium and saturated fat. Another equally important component to the prevention of heart disease is regular physical activity. Those engaging in the recommended 2.5 hours of physical activity per week will have a significantly lower risk of developing heart disease.

Source: Centers for Disease Control and Prevention [CDC], 2013

BMI

A healthy body weight is determined by ratio between height and weight, also called Body Mass Index (BMI.) A normal or healthy BMI for adults falls within a range of 18.5 – 24.9%. Adults with a BMI in the range of 25-29.9% are classified as overweight and those with a BMI of greater than 30% are classified as obese. BMI for youth is calculated as Obese individuals have a much higher risk for heart disease, stroke, type 2 diabetes and some types of preventable cancer. The aforementioned chronic health conditions are considered some of the leading causes of preventable death in the United States. Obesity and the resulting health conditions cost \$147 billion annually according to figures amassed in 2008. An individual’s likelihood of becoming obese is influenced by three main factors: genetic characteristics, individual behaviors and their living and work environments.

Because weight and height change during growth and development, as does their relation to body fatness, a child’s BMI must be interpreted relative to other children of the same sex and age.

Source: (Centers for Disease Control and Prevention [CDC], 2014)

DIABETES

In the United States, diabetes is the seventh leading cause of death and is responsible for a myriad of other health problems. Complications from diabetes include, neuropathy (nerve damage), problems with the eyes/blindness, heart disease, kidney disease, high blood pressure, stroke and lower extremity amputation (Centers for Disease Control and Prevention [CDC], 2015) (American Diabetes Association, N.D.). 9.3% of the population in the United States, or 29.1 million people currently have diabetes, with 8.1 % being undiagnosed and unaware of their condition.

Source: Centers for Disease Control and Prevention [CDC], 2014).

ASTHMA

Hypertension is often called the “silent killer” because it has no obvious warning signs or symptoms (Centers for Disease Control and Prevention [CDC], 2015). Gila County residents have more than twice the morbidity rate for Hypertension than any other county in the state. According to 2013 data, Gila County has 610.7 hypertensive residents per 100,000 persons, in comparison with the Arizona state average of 299.5 residents per 100,000

Source: Arizona Department of Health Services [ADHS], Bureau of Public Health Statistics, 2013

Appendix D:

Stakeholder Engagement Plan

THIS PAGE INTENTIONALLY BLANK



HEALTH IMPACT ASSESSMENT COMMUNITY AND STAKEHOLDER ENGAGEMENT

SIERRA VISTA, ARIZONA

MARCH 9, 2016

PROCESS OVERSIGHT

| Stakeholder Engagement Activities | Format / Methodology | Purpose / Desired Outcome | Desired Participants | Proposed Date |
|---|---|-------------------------------|--|------------------|
| Meetings to take place every other week with project team | <ul style="list-style-type: none"> • Telephonic monthly • Written, provided with invoice • Regular team meetings with ADHS and SVMPO | Ongoing project communication | <ul style="list-style-type: none"> • ADHS • SVMPO • Sierra Vista City Council | Ongoing, monthly |

The oversight process is intended to be used throughout all the stages of the HIA

SCREENING

| Stakeholder Engagement Activities | Format / Methodology | Purpose / Desired Outcome | Desired Participants | Proposed Date |
|--|---|--|--|-----------------------------------|
| <p>Collaborate with SVMPO</p> <p>Coordinate with Fort Huachuca base health officer as well as medical professional practicing at local hospitals</p> | <ul style="list-style-type: none"> Contact medical professionals, Fort Huachuca's (Base) health officer and medical staff, and community leaders to request their participation in HIA Steering Committee and evaluate who else could contribute | <ul style="list-style-type: none"> Determine if the MPO has capacity to support/provide data for HIA | <ul style="list-style-type: none"> SVMPO Steering Committee Fort Huachuca Base Health Officer and related staff Gwen Calhoun, (Sierra Vista City Council) | <p>Grant Application Due Date</p> |
| <p>Examine opportunities for coordination with other, ongoing efforts such as Be Healthy! Sierra Vista and Medical Center</p> | <p>Contact Cochise County Health and Social Services to determine level of participation</p> | <ul style="list-style-type: none"> Determine level of interest in HIA within the health community Engage potential entities that can assist in implementation. Develop potential support for conducting the HIA | <ul style="list-style-type: none"> Be Healthy! Sierra Vista Other community health entities (Canyon Vista and Sierra Vista Medical Centers) | <p>Grant Application Due Date</p> |

Deciding whether an HIA is needed, feasible, and relevant



SCOPING

| Stakeholder Engagement Activities | Format / Methodology | Purpose / Desired Outcome | Desired Participants | Proposed Date |
|--|---|--|--|---|
| Solicit input from the community and Steering Committee and other health providers about important health issues | Present information to the Steering Committee on the relationship between community health and community design | Engage the City Council and MPO in providing transportation improvements that benefit health | <ul style="list-style-type: none"> • SVMPO Steering Committee • Cochise County Health and Social Services (Rosa Vickers) • Community members • Canyon Vista Medical Center • Sierra Vista Medical Group • Raymond W. Bliss Army Health Center • Hospice Centers • Sierra Vista Unified School District (SVUSD) | <ul style="list-style-type: none"> • Jan. 28, 2016 (Steering Committee and Community) • Feb. 7, 2016 Super Bowl tail-gate event |
| Research other studies to determine key health issues that might not be apparent to the community | Contact senior centers and hospices to understand elderly health needs | Determine health impacts to study relating to transportation | <p><i>Deciding which health impacts to evaluate and evaluation methodology</i></p> | |

SCOPING

| Stakeholder Engagement Activities | Format / Methodology | Purpose / Desired Outcome | Desired Participants | Proposed Date |
|---|--|---|--------------------------|---|
| <p>Educate the community about the relationship between community design and health</p> | <ul style="list-style-type: none"> • Host a project website • Increase Awareness of Community Health by: <ul style="list-style-type: none"> • Publishing article (s) in the local newspaper with Sierra Vista health facts and the address of the HIA website • Measure public opinion on health concerns by: <ul style="list-style-type: none"> • Providing information and opportunities to talk about health at community events • Put a survey about community health concerns on the project website. | <ul style="list-style-type: none"> • Expand the number of stakeholders so the entire community can participate in identifying health impacts • Raise Community awareness about the benefits of an HIA • Promote Civic activity and pride • Promote community partnerships | <p>Community members</p> | <ul style="list-style-type: none"> • Jan. 28, 2016 (Steering Committee and Community) • Feb. 7, 2016 Super Bowl tail-gate event |



ASSESSMENT

| Stakeholder Engagement Activities | Format / Methodology | Purpose / Desired Outcome | Desired Participants | Proposed Date |
|---|---|--|--|---|
| Objectively assess Impact of non-motorized Transportation on Community Health Concerns | <ul style="list-style-type: none"> • Work with local Councils of Government, hospitals, Health Departments to obtain, identify and analyze data and verify data sources • Asking Steering Committee to identify data resources • Asking the community how non-motorized transportation can benefit health • Examining with other HIAs to identify best practices for analysis | <ul style="list-style-type: none"> • Build fact based support for the connection between physical activity (i.e. non-motorized transportation) and positive health outcomes • Provide documentation for use to solicit grants and other funding • Document intuitive expectations with fact | <ul style="list-style-type: none"> • SVMPO • Be Healthy! Sierra Vista • Cochise Health & Social Services • SVUSD • Sierra Vista Medical Group • Canyon Vista Medical Center • Raymond W. Bliss Army Health Center | <ul style="list-style-type: none"> • Jan. 28, 2016 Steering Committee and Community meetings • Feb. 7, 2016 Super Bowl tailgate • April 7, 2016 Steering Committee, Be Healthy! Sierra Vista Meeting |
| Subjectively assess Impact of non-motorized Transportation on Community Health Concerns | <ul style="list-style-type: none"> • Ask the Community by Hosting a Health Impact Assessment Table at Community Events • Asking people about health concerns at a public meeting on the HIA | Understand what types of non-motorized transportation will best impact community health issues | Community Members | <ul style="list-style-type: none"> • April 7, 2016 Community meeting |

Using data, research and analysis to determine the magnitude and direction of potential health impact; offering recommendations to improve health conditions

RECOMMENDATIONS

| Stakeholder Engagement Activities | Format / Methodology | Purpose / Desired Outcome | Desired Participants | Proposed Date |
|---|--|--|--|--|
| Solicit and present ideas about to implement healthy transportation | <ul style="list-style-type: none"> • Present recommendations at a Steering Committee Meeting • Present recommendations at a Be Healthy! Sierra Vista • Present recommendations at a Community Meeting | <ul style="list-style-type: none"> • Solicit feedback on draft recommendations and refine them for inclusion in final HIA • Develop support for recommendations and potentially identify options for implementation • Initiate partnerships for recommendations | <ul style="list-style-type: none"> • Community • Steering Committee • Be Healthy! Sierra Vista • Fort Huachuca, Raymond W. Bliss Army Health Center • Sierra Vista Medical Group and other private medical providers • Community members | April 7, 2016 Steering Committee, Be Healthy! Sierra Vista, and Community Meetings |

Providing recommendations to manage the identified health impacts

ASSESSMENT

| Stakeholder Engagement Activities | Format / Methodology | Purpose / Desired Outcome | Desired Participants | Proposed Date |
|-----------------------------------|--|---|--|---|
| Present Final Report | <ul style="list-style-type: none"> • Present final report to SVM-PO Board • Present final report to Sierra Vista City Council • Present report at meeting of Be Healthy! Sierra Vista • Present report at a community meeting • Publish recommendations in local paper and on web site. | <ul style="list-style-type: none"> • Increase awareness of HIA recommendations • Develop support for recommendations and develop community support for their implementation • Identify potential support for short, medium, and long term recommendations • Increase awareness if the connection between physical activity and community design • Identify potential partnerships for implementation | <ul style="list-style-type: none"> • SVMPO, Steering Committee • Community • SVUSD • Fort Huachuca, Raymond W. Bliss Army Health Center • Sierra Vista Medical Group • Community | <ul style="list-style-type: none"> • 3rd Meeting of HIA Steering Committee |
| Provide final report | <ul style="list-style-type: none"> • Provide digital copy of the report to: <ul style="list-style-type: none"> • SVMPO • Be Healthy! Sierra Vista • County Health Department • City of Sierra Vista Planning Department | | | At completion of project |

Sharing the results, recommendations



MONITORING/EVALUATION

| Stakeholder Engagement Activities | Format / Methodology | Purpose / Desired Outcome | Desired Participants | Proposed Date |
|--|--|--|--|-------------------------|
| Present regular updates indicating progress of the HIA | In person presentations at public meetings | Adoption of policies which increase rates of non-motorized transportation use, in order to improve health outcomes | <ul style="list-style-type: none"> • Be Healthy Sierra Vista • Community • Fort Huachuca • SVMPA | After completion of HIA |
| Keep public and stakeholders informed | Partner with other communal organizations/communal leaders | Progress should be made available to the general public | Community | After completion of HIA |

Tracking how the HIA affects the decision and its outcomes

APPENDIX E: Process Evaluation

Sierra Vista Health Impact Assessment

January 28, 2016 Community Meeting

Process Evaluation

| Entry # | Community Health | Comments | Relationship | Comments | Purpose | Comments |
|--------------|------------------|---|--------------|-----------------------|---------|--|
| 1 | No | But I have a better understanding between Community Health Assesments & HIA's | Yes | | Yes | |
| 2 | Yes | | Yes | | Yes | |
| 3 | Yes | | Yes | | Yes | Good info. Leslie provided excellent facilitation. |
| 4 | Yes | | Yes | | Yes | Interesting-Will follow, thanks. |
| 5 | Yes | | Yes | | Yes | |
| 6 | Yes | Connections between walk/sidewalk & health/illness | Yes | Active transportation | Yes | Review of existing needs |
| 7 | Yes | | Yes | | Yes | |
| 8 | Yes | | Yes | | Yes | |
| 9 | Yes | | Yes | | Yes | |
| 10 | No | Knew too much to start with!:) | No | | Yes | Got the scope more nailed down (will send you the data I have) |
| TOTAL | 8/10 | 3 comments | 9/10 | 1 comment | 10/10 | 4 comments |

As a result of this meeting do you feel you have a better understanding of:

-Community Health?; The relationship between health and available transportation choices?; The purpose of this Health Impact Assessment?



Sierra Vista HIA

Community Meeting: April 7th, 2016

PROCESS EVALUATION

| | YES | NO |
|---|-----|----|
| This meeting improved my understanding of how transportation is related to health. | 12 | 2 |
| This meeting provided me with information about the relationship between physical activity and the health of my community | 13 | 1 |
| At this meeting, I was able to provide my ideas about how non-motorized transportation could be used to impact the health of my community. | 14 | 0 |
| At this meeting, I gained a better understanding of Health Impact Assessment. | 14 | 0 |

Other Comments?

Great presentation. Looking forward to supporting recommendations for our community and seeing some self-improvement.

Great presentation with great information.

Excellent presentation and needed information to the community

Was very good at giving answers. Need to get this out to more people.

Great presentation to make me aware of S.V. issues at hand. More multi-purpose bike and walking paths for safety

Always excellent to talk and brainstorm additional ideas to (understand) the connection between activity and health.

This is a good start!

Presentor was extremely knowledgable, concise and presented materla very well. My overall understanding and my ability to relate whjat was discussed to my community (improved). Very well done!

Can't wait to see final report!





Active Transportation in Sierra Vista & on Fort Huachuca Health Impact Assessment 2016



What is a Health Impact Assessment?



- **WHAT:** To inform, from a public health perspective, recommendations and/or decisions resulting from a specific policy, plan, or project.



- **WHY:** Broaden the discussion of improving health beyond individual health and behaviors by considering social, economic, and environmental factors that impact and enhance community health and well-being.



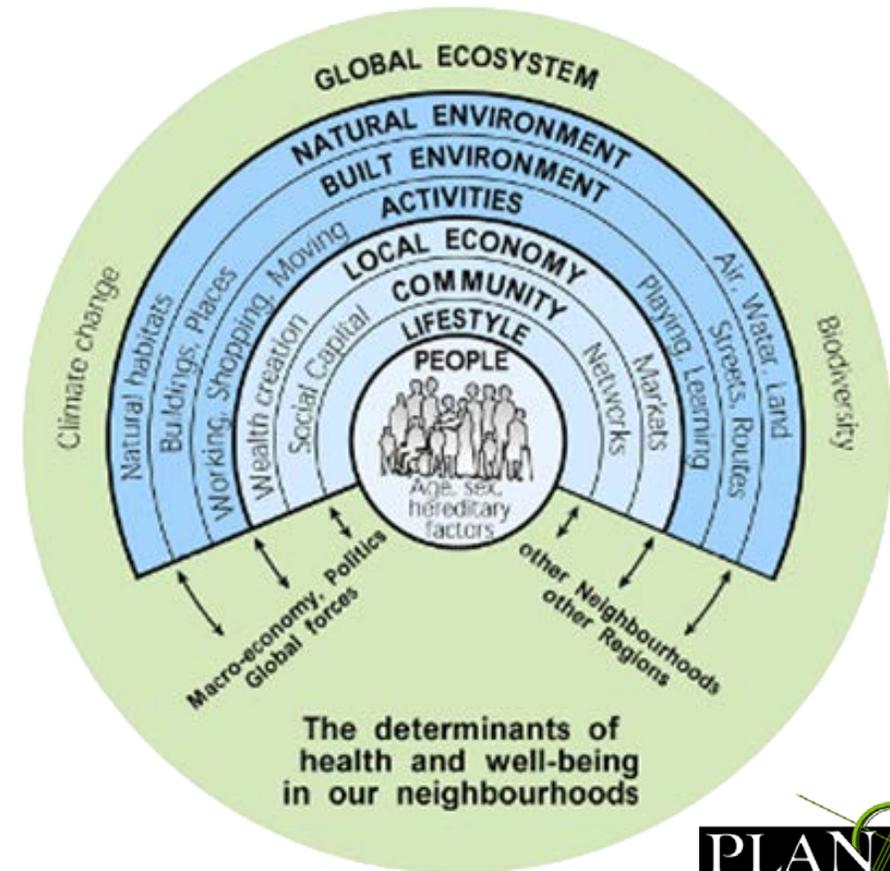
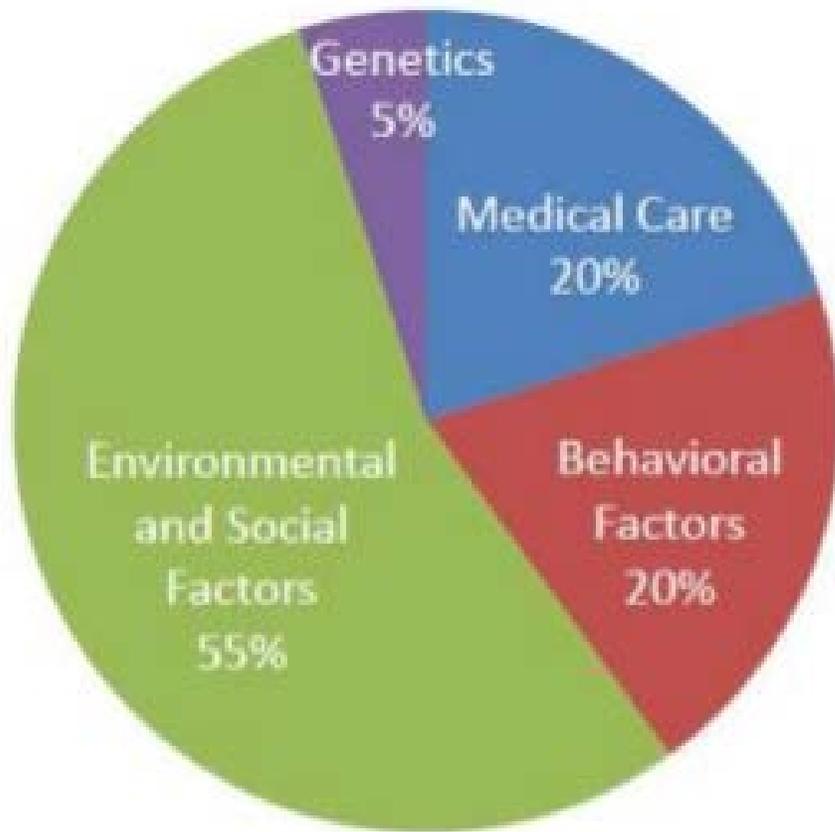
- **HOW:** Assess the multiple influences on community health that can occur as a result of social, economic, and environmental changes that could occur as a result of the proposal.

Source: http://www.cdc.gov/healthyplaces/types_health_assessments.htm

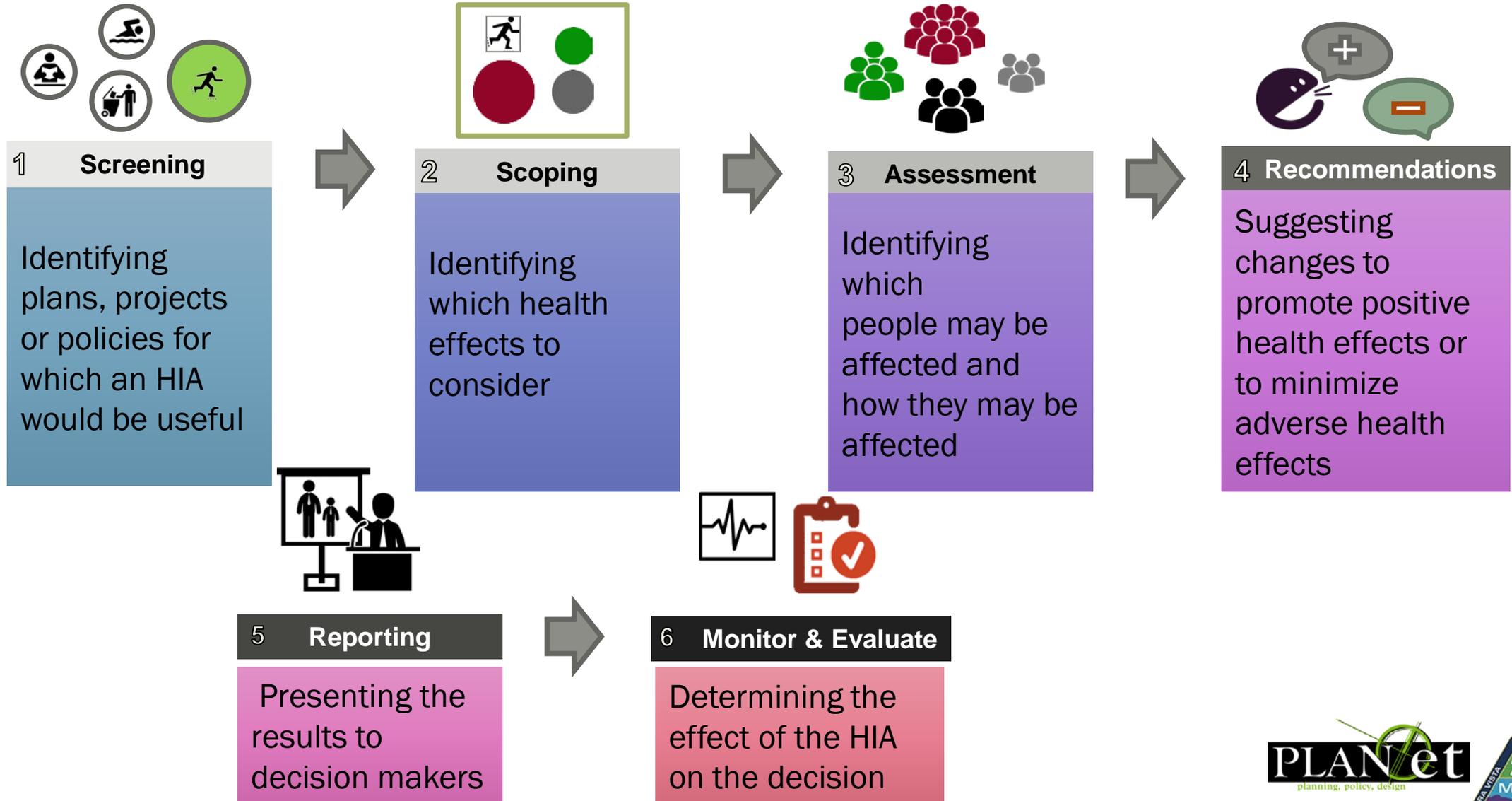
Picture from www.pewtrust.org



WHAT DETERMINANTS OUR HEALTH



HIA Process



Health & Active Transportation

- Physically active people live longer and have lower risks for heart disease, stroke, type 2 diabetes, depression, and some cancers. (1)
- Regular participation in aerobic exercise (such as walking) decreases overall levels of tension, elevate and stabilize mood, improve sleep, and improve self-esteem. (3)
- People with depression generally have lower fitness levels. Active transportation increases physical activity which benefits mental health. (4)
- Walkable / bike-able access to appropriate sites motivates people to participate in physical activity and to do so more frequently. (5)
- Of people with safe places to walk within ten minutes of home, 43% achieve physical activity targets, compared with just 27% of less walkable area residents. (6)



- (1) CDC- <http://www.cdc.gov/healthyplaces/healthtopics/physactivity.htm>
(2) Role of Built Environments in Physical Activity, Obesity, and Cardiovascular Disease. James F. Sallis, PhD; Myron F. Floyd, PhD; Daniel A. Rodríguez, PhD; Brian E. Saelens, PhD
(3) <http://www.adaa.org/understanding-anxiety/related-illnesses/other-related-conditions/stress/physical-activity-reduces-st>
(4) <https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/depression-and-exercise>
(5) http://www.cdc.gov/healthyplaces/types_health_assessments.htm
(6) Litman, Todd Victoria Transport Policy for the American Public Transportation Association

Purpose of this HIA

- Identify how active and healthy transportation options can impact Community Health in Sierra Vista and Fort Huachuca:
 - *Obesity and related chronic diseases such as diabetes and heart disease/ hypertension*
 - *Asthma*
 - *Isolation/Depression/Substance Abuse*
- Educate the community about the intersection between active transportation and their health.
- Inform decision-making related to transportation and land use planning in Sierra Vista
- Inform implementation of SVMPO's **Sidewalk Implementation Plan, Safe Bicycle and Pedestrian Routes Plan, the W. Fry Blvd. and North Garden Ave. Plans**, proposed development code update, and proposed projects on the Fort.



Desired Outcomes (Significance and Value)

Significance:

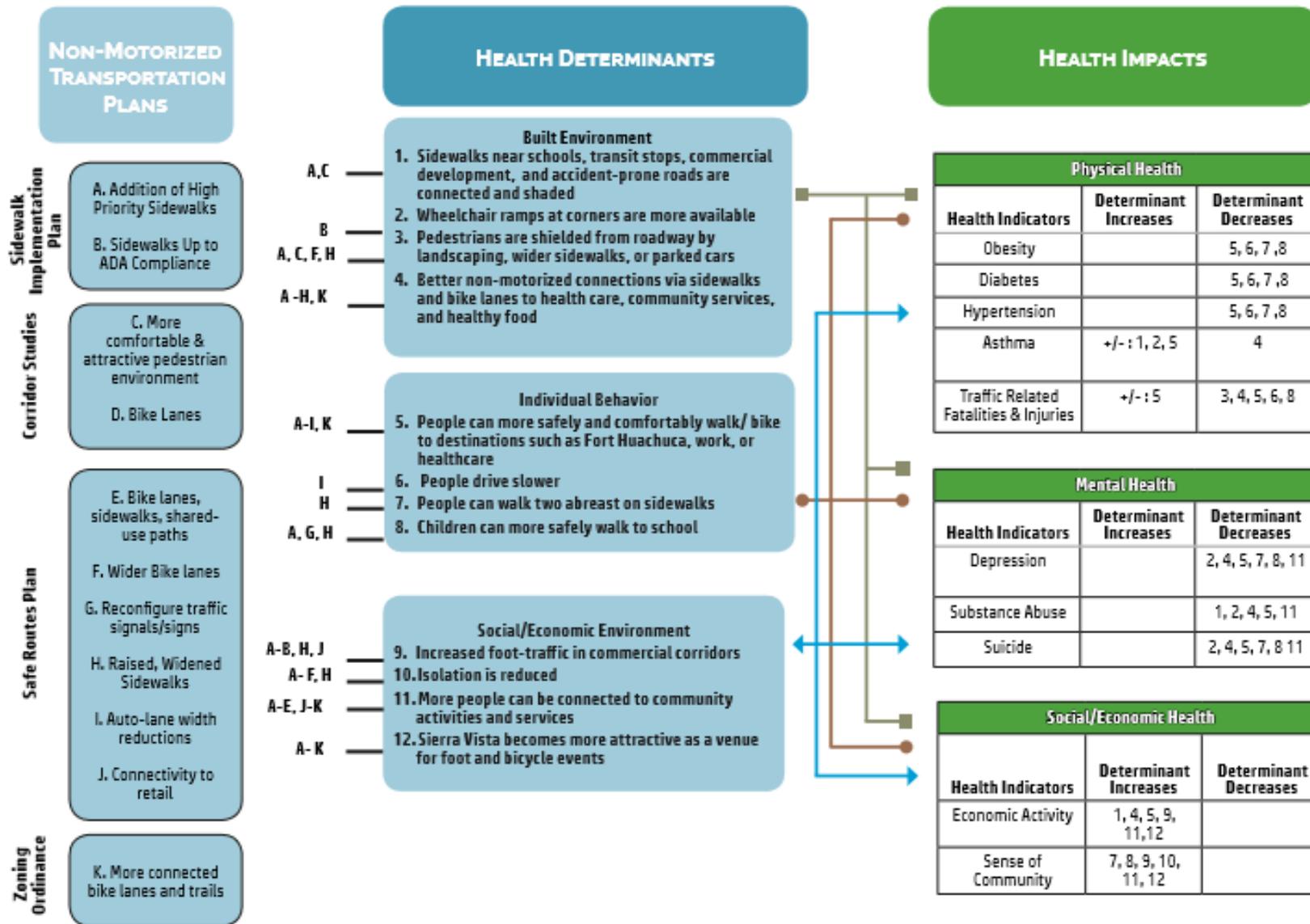
- HIA could affect the implementation of a variety of plans that will substantially change the non-motorized transportation environment in Sierra Vista.
- These policies will have health impacts on the residents of Sierra Vista (reduction in obesity, mental health, and better access to healthy food, etc.).

Value: The following projects can be evaluated...

- Sidewalk Implementation Plan
- Safe Bicycle and Pedestrian Routes Plan
- West Fry Boulevard Corridor Stud
- North Garden Avenue Corridor Study
- Future updates to the City of Sierra Vista's Development Code



Connecting Transportation to Health



Connecting Transportation to Health

Sidewalk Implementation Plan
Corridor Studies
Safe Bicycle and Pedestrian Routes
Plan
Ordinance Update

Determinants of Health
Impacted

Individual and Community
Health Impacts

Better connections for those who
do not drive to school, shopping,
and health care services

More and better connected ADA
compliant

Safer, more comfortable, and
more convenient sidewalks and
bike lanes

Better signalization and signing
for non-motorized traffic

More Connected Trails and Bike
Routes



Built Environment
Individual Behavior
Social and Economic
Environment



Physical Health

Obesity
Diabetes
Hypertension
Asthma
Traffic-related fatalities and
Injuries

Mental Health

Depression
Substance Abuse

Community Health

Economic Activity
Sense of Community



Data Types

Sierra Vista

- Demographics
- Waist to Hip Ratio Survey
- Transportation Surveys
- Existing Infrastructure Mapping
- Fort Huachuca Health Data

Cochise County

- Demographics
- Morbidity of Health Conditions
- Mortality from Health Conditions

Data Types

Sierra Vista

- Demographics
- Waist to Hip Ratio Survey
- Transportation Surveys
- Existing Infrastructure Mapping
- Fort Huachuca Health Data

Cochise County

- Demographics
- Morbidity of Health Conditions
- Mortality from Health Conditions

Data Types

Sierra Vista

- Demographics
- Waist to Hip Ratio Survey
- Transportation Surveys
- Existing Infrastructure Mapping
- Fort Huachuca Health Data

Sierra Vista

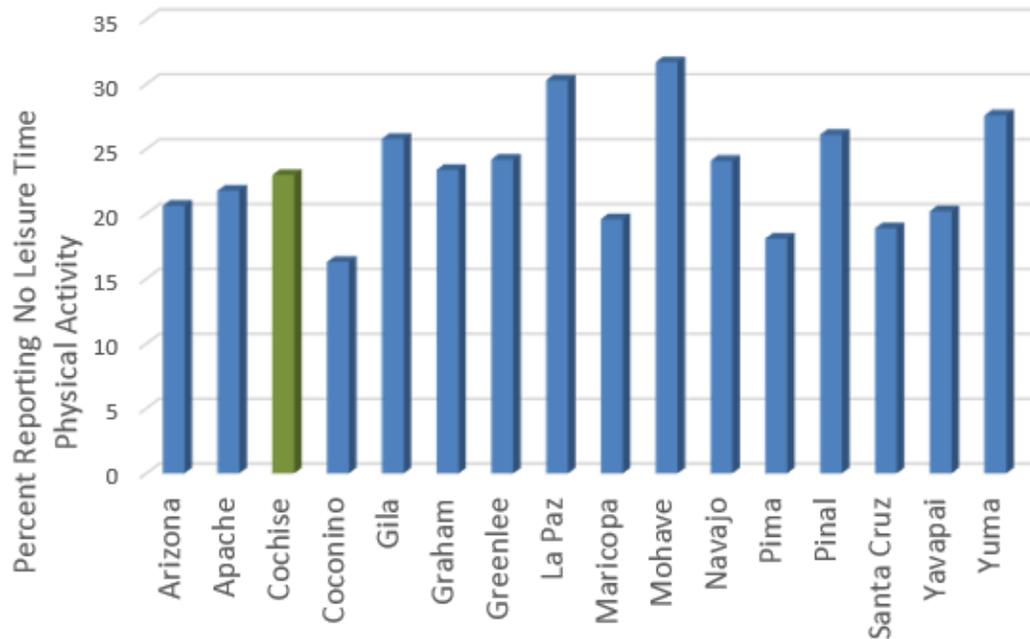
- Demographics
- Morbidity of Health Conditions
- Mortality from Health Conditions

Health Reporting: Cochise County

- **Physical Inactivity:** 23% of the population self-report being physically inactive. 27% have no access to exercise opportunities. (1)

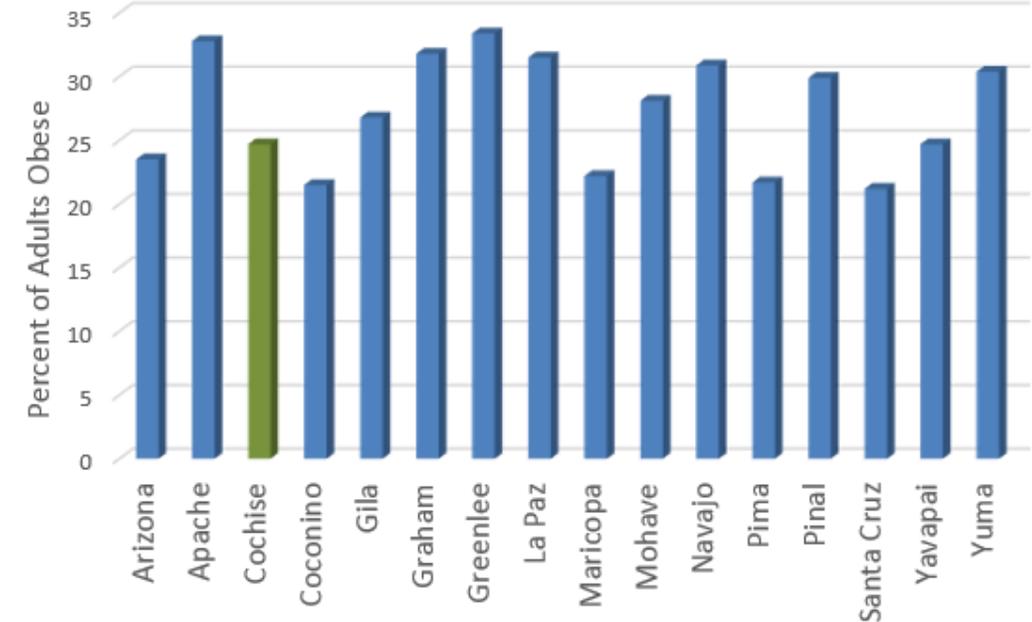
Obesity: 25% of the adult population in Cochise County is obese. 58.57% of Cochise residents are over-weight or obese. (2)

Figure 17: 2016 Physical Inactivity: Arizona Counties



Source: Robert Wood Johnson Foundation County Rankings and Roadmaps. Access date: April 4, 2016.

Figure 18: Obesity Among Adults in Arizona Counties

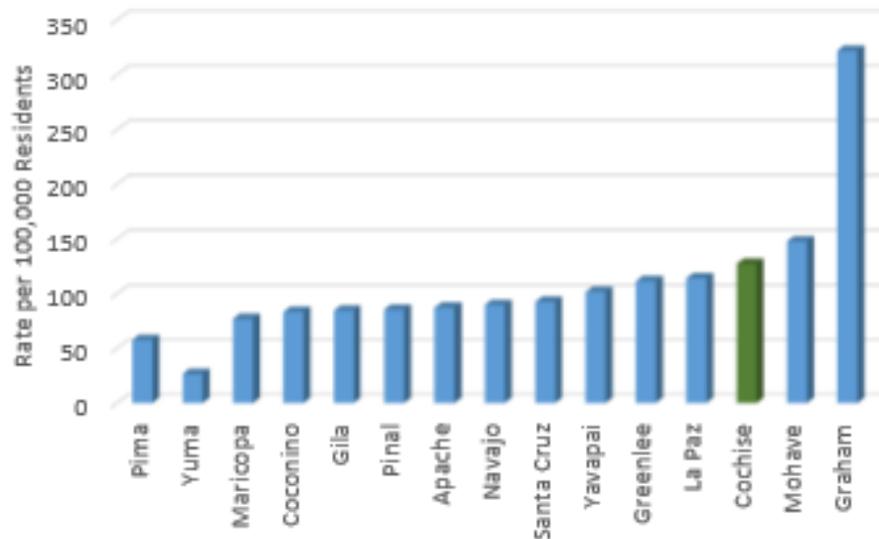


Source: Robert Wood Johnson Foundation County Rankings and Roadmaps. Access date: April 6, 2016

Health Reporting: Cochise County

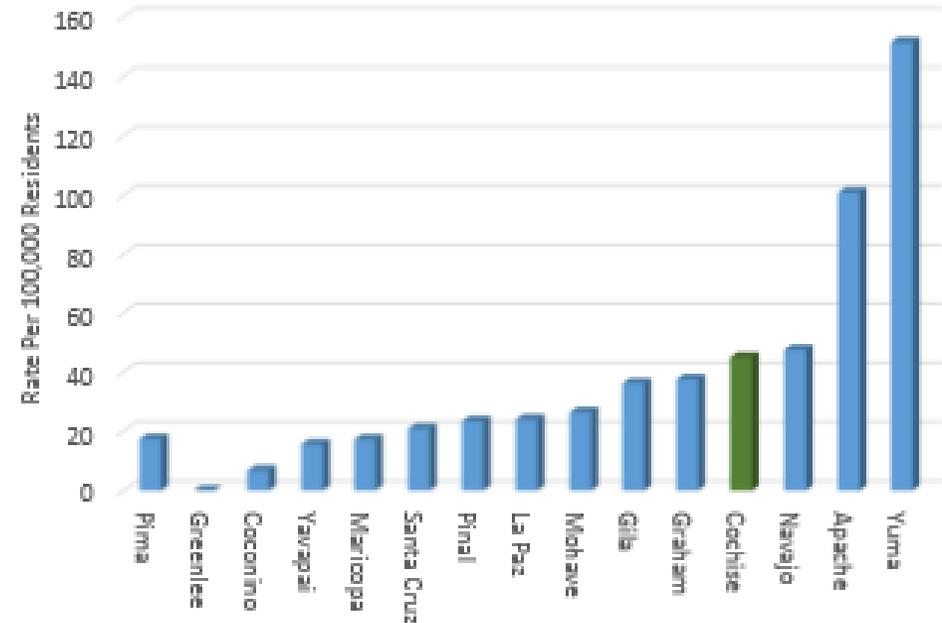
- **Diabetes Rate:** 13.4% of the population in Cochise County is diabetic. ⁽¹⁾
- **Uncontrolled Diabetes:** Cochise has the third most number of people , with complications from diabetes and the fourth largest number of people with uncontrolled diabetes.

Figure 19: Short Term Complications From Diabetes per 100,000 Arizona Counties (2013)



Source: AZDHS Community Profiles Dashboard. Access Date June 25, 2016.

Figure 20: Rates of Uncontrolled Diabetes per 100,000 Arizona Counties (2013)



Source: AZDHS Community Profiles Dashboard. Access Date June 25, 2016.

(1) Cochise County Health Assessment 2012

Health Reporting: Cochise County

Figure 18: Cochise County Morbidity Factors per 100,000 Persons (2013)

| Morbidity Factor | Rate per 100,000 Persons | | Rank (All Counties) | Causes |
|---|--------------------------|----------------|---------------------|--|
| | Arizona | Cochise County | | |
| COPD | 299.50 | 923.8 | 6 | Smoking, breathing in secondhand smoke, irritants, or chemicals (NIH) |
| Uncontrolled Diabetes | 20.10 | 45 | 3 | Genetics, obesity (National Diabetes Foundation) |
| Complications from Diabetes | 83.10 | 127.2 | 4 | Genetics, obesity (National Diabetes Foundation) |
| Hypertension | 299.50 | 326.1 | 3 | Obesity, lack of physical activity, alcohol. (NIH) |
| Congestive Heart Failure | 53.70 | 24.20 | 9 | Heart disease, hypertension (high blood pressure) (NIH) |
| Drugs | 289.30 | 242 | 8 | Mental illness, depression, social factors, genetics |
| Alcohol Use | 950.5 | 661.8 | 14 | Depression, mental illness, social factors, genetics |
| Chronic Diseases (arthritis, obesity, cancer) | 4,503.70 | 5,919.9 | 5 | Obesity, smoking, lack of physical activity, high cholesterol, alcohol (NIH) |

Source: Arizona Department of Health Services Community Profiles Dashboard. Access date: May 30, 2016

Health Reporting: Cochise County

Figure 15: Cochise County Mortality Factors per 100,000 Persons (2013)

| Cochise County | Indicator | Per 100,000 | Rank in AZ | Main Cause |
|----------------|------------------------------------|-------------|------------|---|
| Mortality | All Death | 737.9 | 7 | |
| | Chronic Lower Respiratory Diseases | 43.9 | 7 | Tobacco smoke, outdoor air pollution (WHO, 2015) |
| | Diabetes | 23.9 | 13 | Genetics, obesity |
| | Stroke | 40.1 | 2 | Age, high blood pressure, diabetes, smoking. (National Institute of Health) |
| | Hypertension | 8.7 | 6 | Obesity, lack of physical activity, alcohol. (NIH) |
| | Heart Disease | 179.4 | 3 | |
| | Drug Induced | 7.9 | 12 | Often brought on by depression/mental distress |
| | Suicide | 19.6 | 8 | Often brought on by depression/ mental distress |

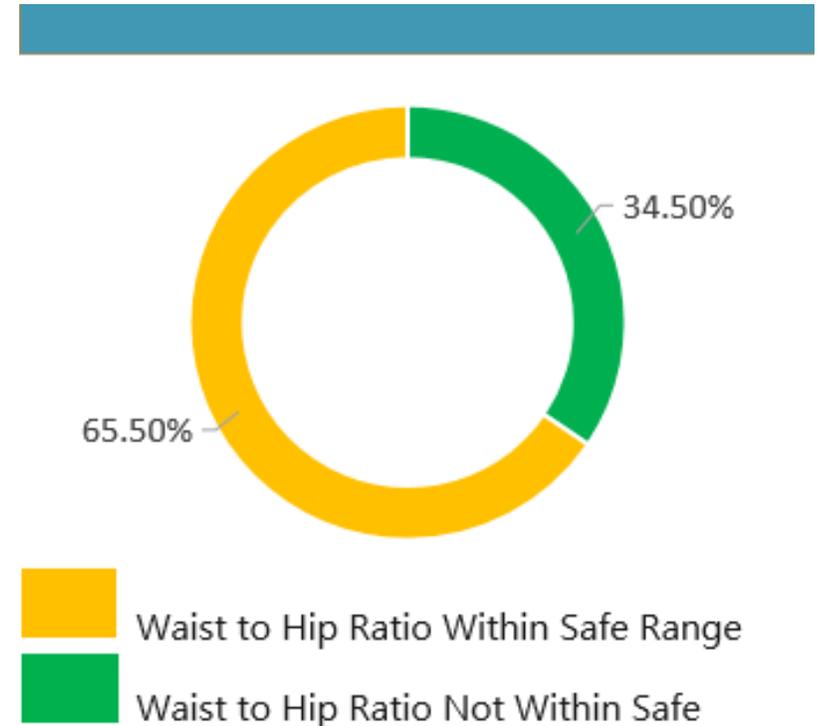
Source: Arizona Department of Health Services Community Profiles Dashboard. Accessed: June 18, 2016

COMMUNITY FEEDBACK

Cochise County Health & Social Services (CHSS) conducted a waist to hip ratio survey of over 200 Sierra Vista residents. (Respondents: 66.7% Female, 33.3% Male)

Waist to hip ratio measures abdominal fat surrounding the liver and other organs, which increase the risk of diseases like type 2 diabetes and heart disease.

WHR is found by dividing circumference of ones waist, by the circumference of ones hips. Men that score below 0.95 and women that score below a 0.80 are considered within the safe range.



Source: CHSS Waist to Hip Ratio Experiment: May 2016

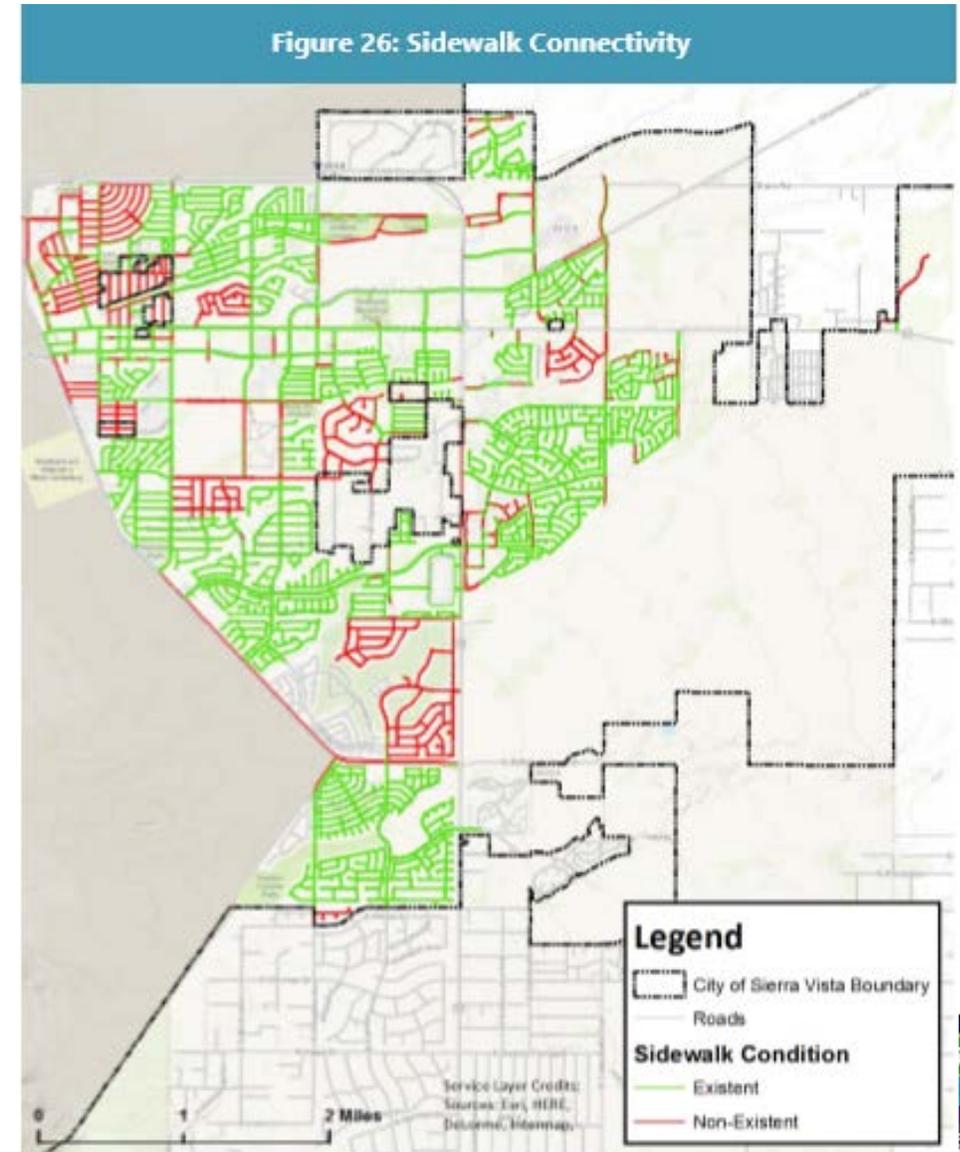
Sierra Vista Community Profile

- **Total Population: 47,314 (35% of Cochise County population)**
- **Median Age: Sierra Vista residents in 2010 was 32.9 years**
- **Median Income: \$58,818**
- **Uninsured 11%**
- **Physical Disability: 17% of the population**
- **No Access to a Car: 5.6% of the population**



Sierra Vista

- Sidewalk Implementation Plan includes 26 recommendations for new sidewalks
- Currently, fixed transit stops, schools, commercial areas, and parks in the city are surrounded by inadequate sidewalks, which create obstacles to accessing them.
- A 2001 study by the American Journal of Public Health found that 61% of respondents positively associate the presence of sidewalks with physical activity.
- According to the 2012 Survey of Bicyclists and Pedestrian Attitudes and Behavior, 24% of pedestrian injuries from walking occur from tripping on uneven or cracked sidewalks.



Source: Sierra Vista Sidewalks Inventory and Implementation Plan 2013. Sierra Vista Metropolitan Planning Organization



Sierra Vista Feedback: Bike & Walk

- No sidewalks or crosswalks on route to school is safety concern.
- The largest percentage of respondents walked everyday.
- Presence of sidewalks and crosswalks in a community could encourage more physical activity.

| Survey Question | Pueblo Del Sol | Joyce Clark |
|---|----------------|-------------|
| Students have to walk in the street? | 15% YES | 27% YES |
| See Missing Crosswalks on Route? | 26% YES | 48% YES |
| Kids feel safe walking or biking to school? | 5% NO | 7% NO |

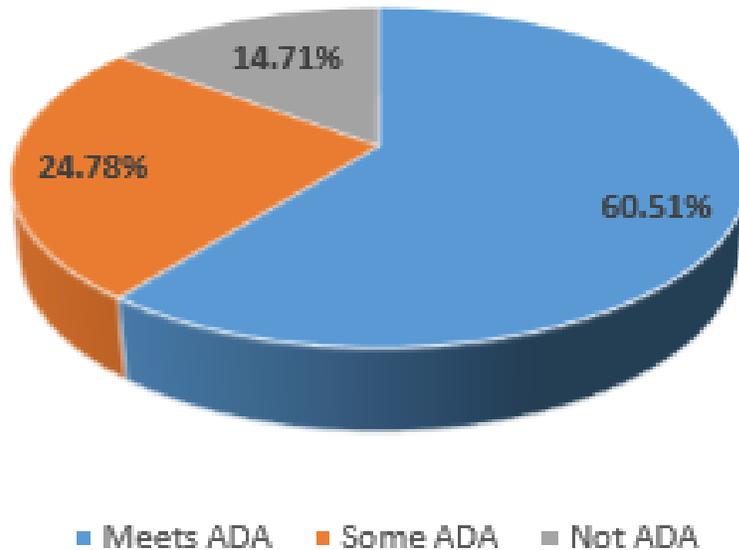
| How Often Do You Walk to School During the Week? | | | | |
|--|-------|-------|------------|----------|
| Number of days | 1 day | 2 day | 3 - 4 days | Everyday |
| | 15 | 8 | 9 | 30 |
| | 12 | 4 | 6 | 17 |



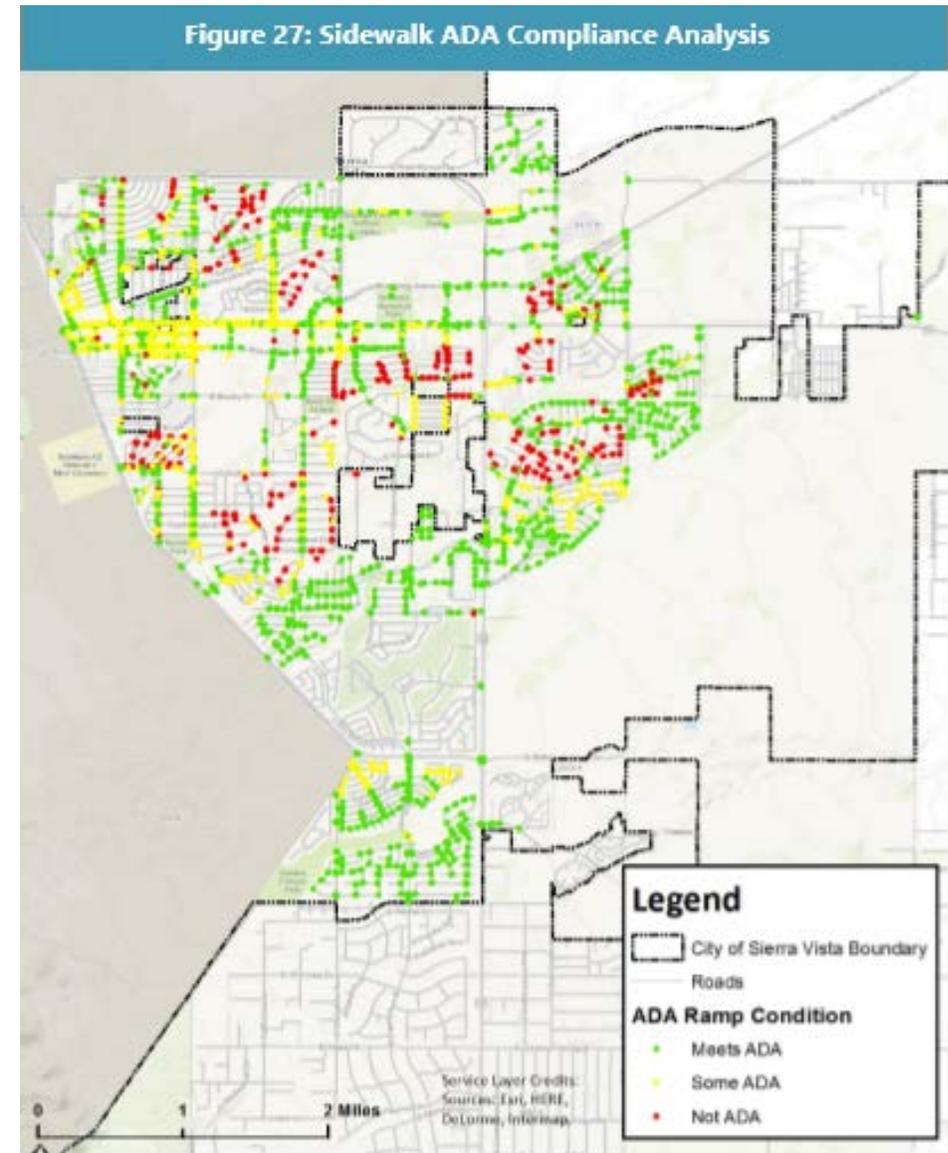
Sidewalks: ADA Compliance

SV

Some Census Tracts have a rate of physical disability as high as 1 in 5 residents.



Source: Sierra Vista Sidewalk Implementation Plan



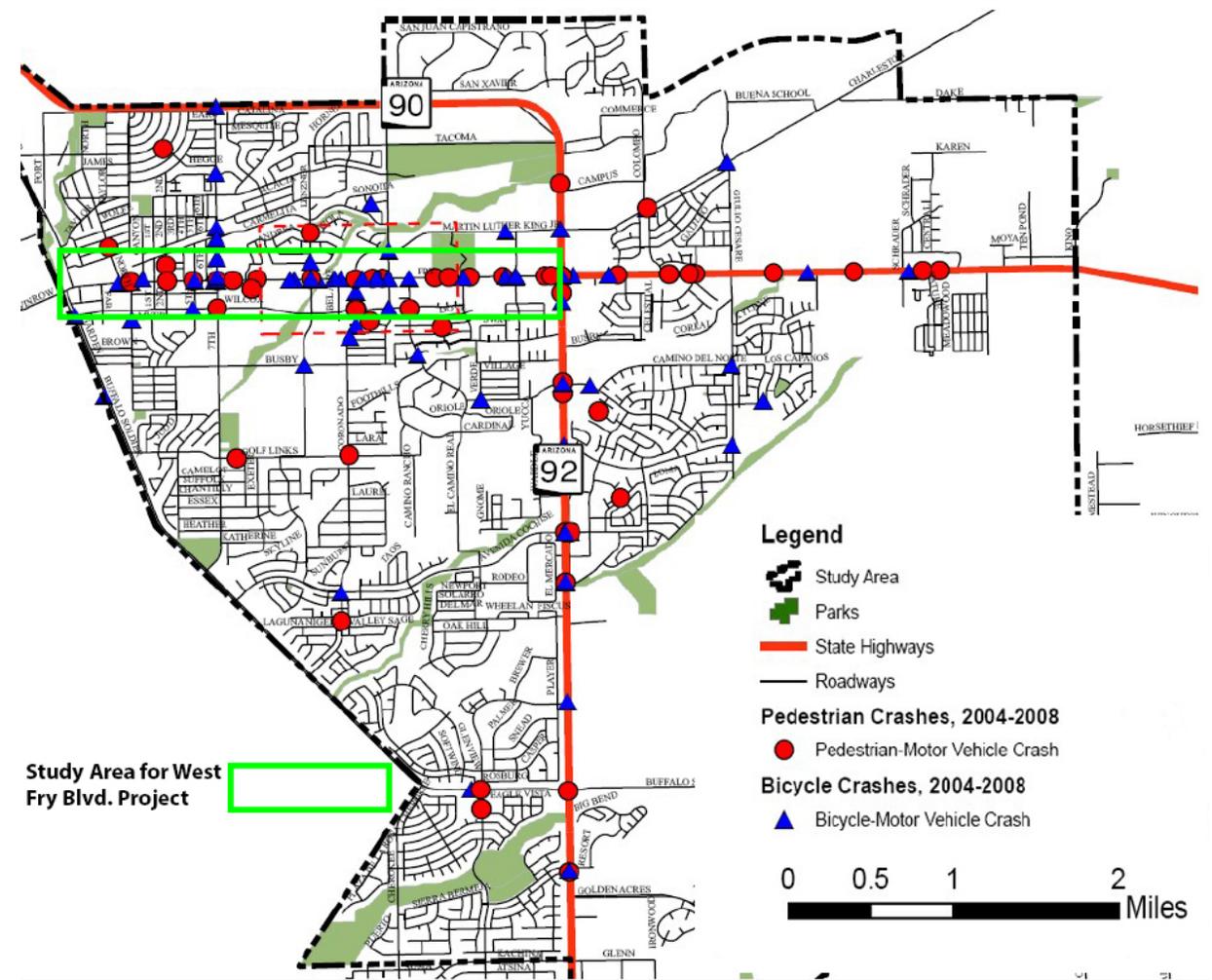
Source: Sierra Vista Sidewalks Inventory and Implementation Plan 2015. Sierra Vista Metropolitan Planning Organization



Safe Bicycle, Pedestrian Routes Plan

SV

- The highest number of crashes between bicycles and vehicles and pedestrians and vehicles are along Fry Boulevard; where most of Sierra Vista retail and services are located.

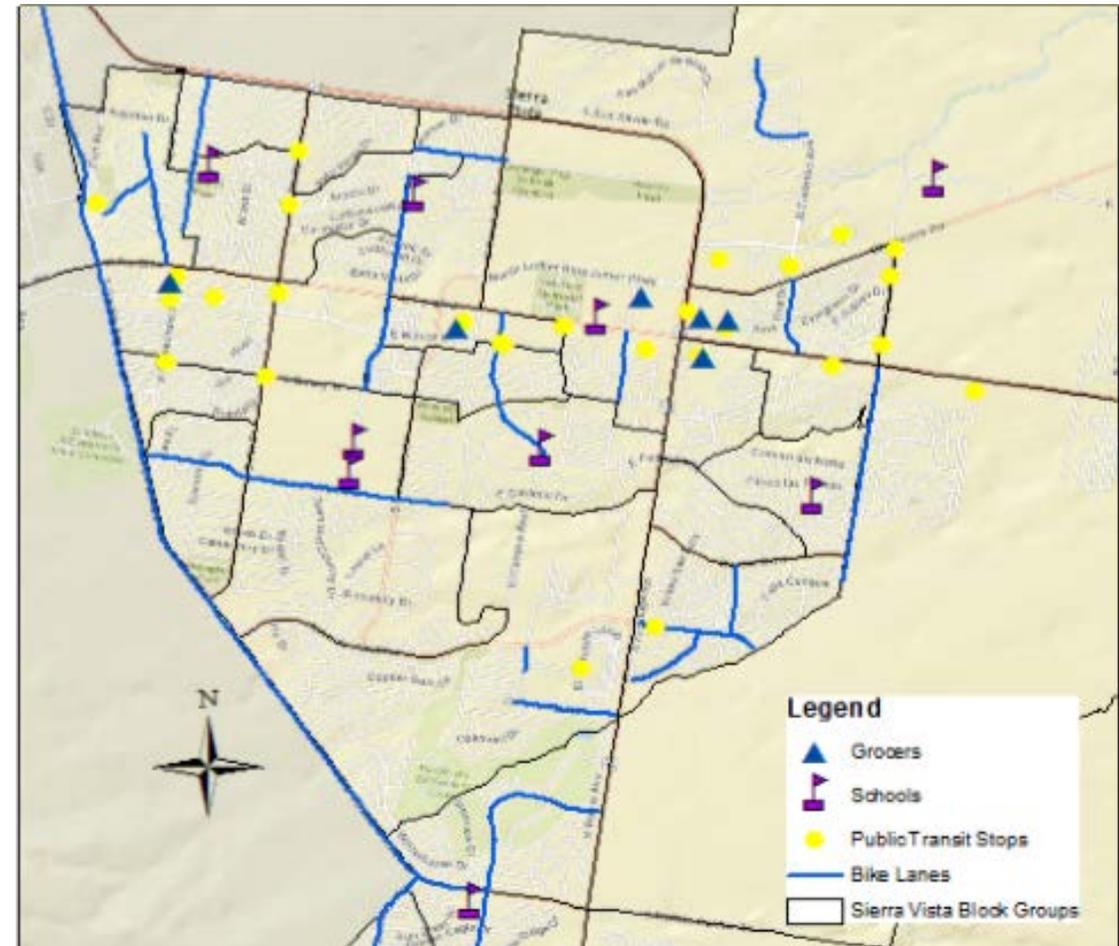


(1) Schmitt, A. (2012, October 22). Study: Protected Bike Lanes Reduce Injury Risk Up to 90 Percent | Streetsblog USA. Retrieved from <http://usa.streetsblog.org/2012/10/22/study-protected-bike-lanes-reduce-injury-risk-up-to-90-percent>

Safe Bicycle, Pedestrian Routes Plan

SV

- Roads with bike lanes had injury rates 50% lower.
- The risk of injury on protected bike lanes was a 90% lower.
- Shared use paths were found to reduce injury by 60%. ⁽¹⁾

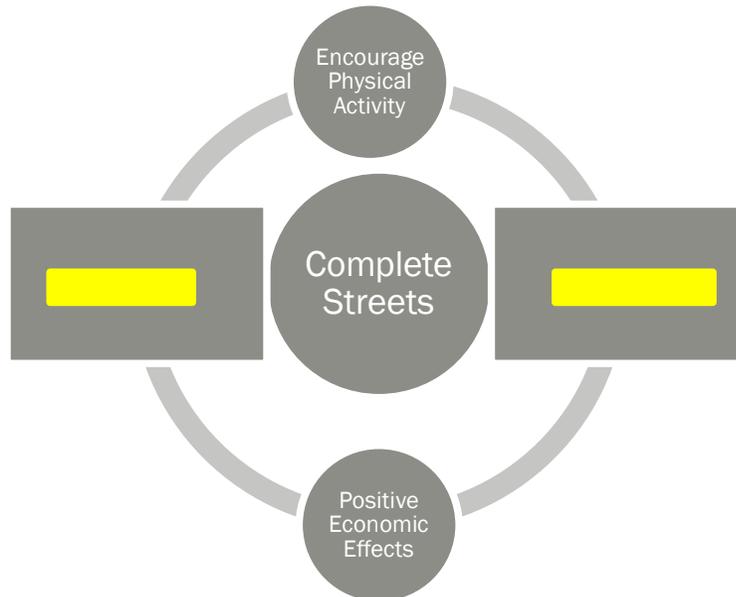


Source: SVMPO GIS

(1) Schmitt, A. (2012, October 22). Study: Protected Bike Lanes Reduce Injury Risk Up to 90 Percent | Streetsblog USA. Retrieved from <http://usa.streetsblog.org/2012/10/22/study-protected-bike-lanes-reduce-injury-risk-up-to-90-percent>

W. Fry Blvd. & N. Garden Ave. Redesign SV

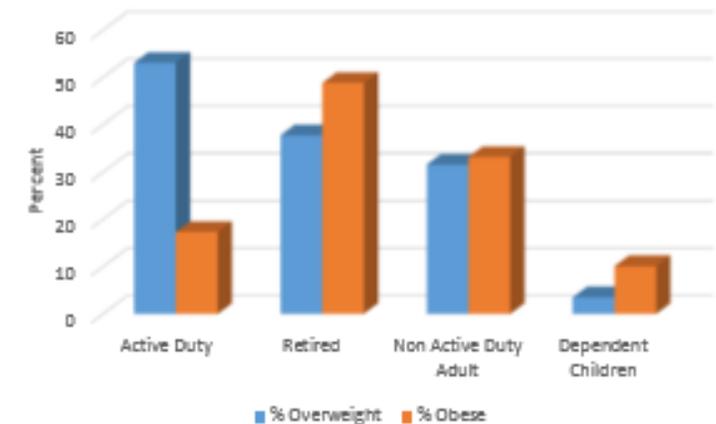
- West Fry Boulevard Corridor Study includes retrofits to the street-scape that would widen sidewalks, and landscaping that would provide shade and separate pedestrians from traffic.
- North Garden Ave. project has three options to redevelop a commercial area and foster a walkable urban environment through improved streetscape.



Health Reporting from Fort Huachuca

- 55% of the military population on Fort Huachuca are obese or overweight based on BMI.
- Obesity affects more than 1/3 of retired military and non-active duty military.
- More than half of all active military are overweight.
- Obesity affects 10% of all dependent children.

Figure 24: 2014 Obese and Overweight Military Personnel

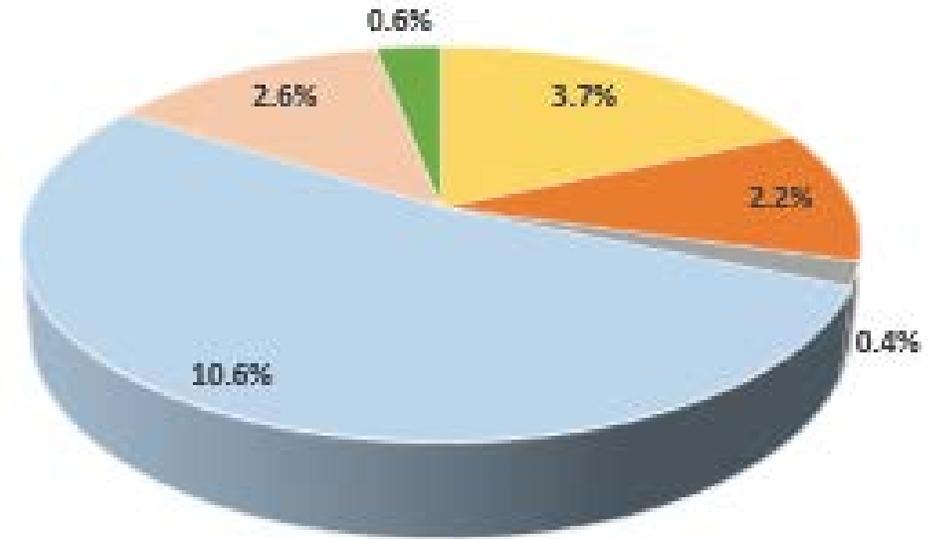


Source: Raymond W. Bliss Army Health Center

Health Reporting from Fort Huachuca

Obesity related diseases that can be managed with diet and exercise such as (cardiovascular disease and COPD) make up the largest portion of chronic diseases among the military at Fort Huachuca.

Figure 25: 2014 Chronic Disease Rates by Diagnosis Category



■ Arthritis ■ Asthma ■ Cancer ■ Cardiovascular ■ COPD ■ Diabetes

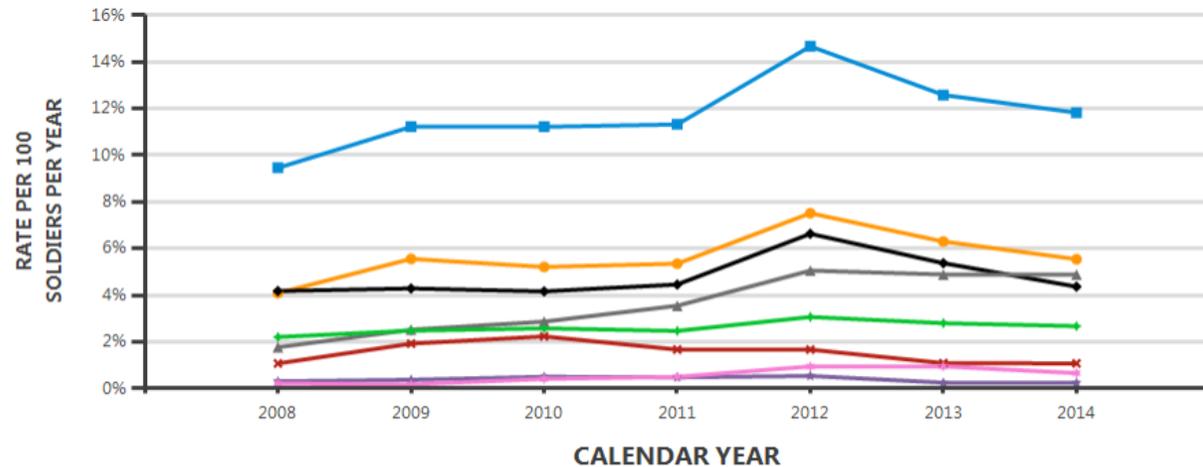
Health Reporting from Fort Huachuca

Behavioral Health problems that are reduced through social engagement and connection with community that occurs through face to face contacts comprise the largest portion of chronic diseases among the military at Fort Huachuca.

BEHAVIORAL HEALTH DIAGNOSIS RATES BY YEAR AND DIAGNOSIS CATEGORY, ACTIVE DUTY



Fort Huachuca // Calendar years 2008 - 2014



| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|--------------------------|------|-------|-------|-------|-------|-------|-------|
| ■ Any BH Disorder | 9.5% | 11.2% | 11.2% | 11.3% | 14.7% | 12.6% | 11.8% |
| ■ Mood Disorder | 4.1% | 5.6% | 5.2% | 5.4% | 7.5% | 6.3% | 5.5% |
| ■ Adjustment Disorder | 4.2% | 4.3% | 4.2% | 4.5% | 6.6% | 5.4% | 4.4% |
| ■ Other Anxiety Disorder | 1.8% | 2.5% | 2.9% | 3.5% | 5.1% | 4.9% | 4.9% |
| ■ Substance Disorder | 1.1% | 1.9% | 2.2% | 1.7% | 1.7% | 1.1% | 1.1% |
| ■ PTSD | 2.2% | 2.5% | 2.6% | 2.5% | 3.1% | 2.8% | 2.7% |
| ■ Personality Disorder | 0.3% | 0.4% | 0.5% | 0.5% | 0.5% | 0.3% | 0.2% |
| ■ Psychosis | 0.2% | 0.2% | 0.4% | 0.5% | 0.9% | 0.9% | 0.7% |

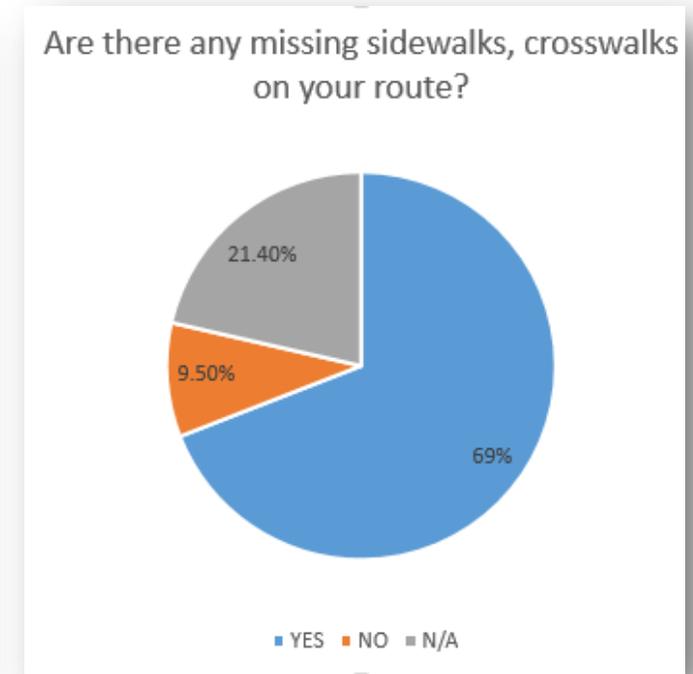
planning, policy, design



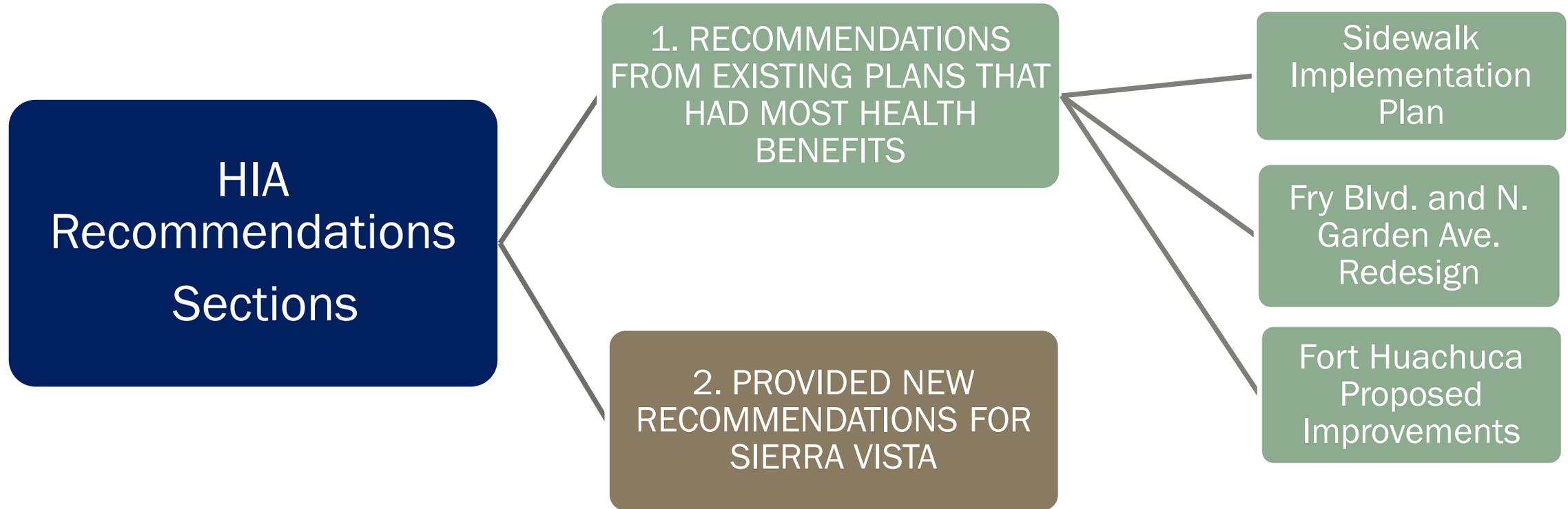
Sierra Vista Feedback: Bike & Walk

The majority of respondents to the survey do not live on Fort Huachuca (83.7%), and work on post (97.1%).

Out of this response rate 65% bike to work, 7% bike and walk to work.



Recommendations



- HIA recommendations include recommendations from adopted plans and other suggestions that would result in transportation options with the most health benefits. The recommendations for Fort Huachuca were provided by Fort staff.

Sidewalk Implementation Plan

Existing Plan Recommendation

| | Pedestrian Safety | Bicyclist Safety | SRTS | Access to healthy food | Access to parks/ services | Mobility for vulnerable populations | Access to Health Services |
|--|-------------------|------------------|------|------------------------|---------------------------|-------------------------------------|---------------------------|
| Provide a connection between N. Carmichael Avenue where it terminates at N. Railroad Avenue to West Fry Boulevard | ✓ | | | | ✓ | ✓ | |
| Provide additional sidewalk along Avienda Cochise between Paseo San Luis and Calle Mercancia, with ADA upgrades. | ✓ | | ✓ | | ✓ | ✓ | ✓ |
| Provide additional sidewalk along SR92 between E. Hazen and Avendia Cochise, with ADA upgrades. (Project 4) | ✓ | ✓ | | | ✓ | | |
| Provide additional sidewalk on S. Carmichael Ave between Sheila Lane and Timothy Lane, with ADA upgrades (Project 13). | ✓ | | | ✓ | ✓ | ✓ | |
| Provide additional sidewalk between N. Colombo Ave between E. Evergreen Dr. and E. Galieleo Dr. (Project 17) | ✓ | | ✓ | ✓ | ✓ | ✓ | |

Existing Plan Recommendation

Pedestrian Safety

Bicyclist Safety

SRTS

Access to healthy
food

Access to parks/
services

Mobility for
vulnerable
populations

Access to Health
Services

FRY BOULEVARD AND N. GARDEN AVE. REDESIGN

The Sierra Vista City Council Strategic Objective goal is to implement a plan to beautify public infrastructure that makes Fry Boulevard and North Garden Avenue more walkable and bike-able.

√

√

√

√

√

√

FORT HUACHUCA PROPOSED IMPROVEMENTS

Additional sidewalks on Burns Street

√

√

√

√

Additional Sidewalk connecting H Street and Col. Johnston.

√

√

√

Additional sidewalk connecting Bonnie Blink to Old Post

√

√

Bike Lanes/ Shared use paths on Arizona Street (Between Irwin St. & Brainaird Rd.)

√

√

Whitside Road bike lane/ Shared use path proposal

√

√

Existing Plan Recommendation

| | Pedestrian Safety | Bicyclist Safety | SRTS | Access to healthy food | Access to parks/ community services | Mobility for vulnerable populations | Reducing Isolation |
|---|-------------------|------------------|------|------------------------|--|-------------------------------------|--------------------|
| Hatfield Street (To Main Gate) bike lane/Shared use path proposal | √ | √ | | | | | |
| Allison to Winrow bike lane/ Shared use path proposal | √ | √ | | | | | |

New Recommendation

Rationale

Include census tract income, proportion of disabled, and persons over 65 in overall sidewalk connectivity priority area determination for Sidewalks

Income, disability, and age are important corollaries of access to health care, healthy food, and obesity and obesity related diseases. Including these considerations in sidewalk priorities will help identify areas that need access to healthy and non-motorized transportation areas the most.

Develop a “walk the Fort” program aimed at Fort residents and employees. Advertise the program through Fort literature and website

Providing information about the benefits of walking and bicycling to Fort residents will make them more aware of facilities that are available, and help to create a database that can be used to make Fort residents more aware of new facilities that may be close to them and they could easily access. This may help to increase the number of people who are aware of facilities as well as the number of people who might consider using these facilities and do not currently use them now.

New Recommendation

Rationale

Include census tract income, proportion of disabled, and persons over 65 in overall sidewalk connectivity priority area determination for Sidewalks

Income, disability, and age are important corollaries of access to health care, healthy food, and obesity and obesity related diseases. Including these considerations in sidewalk priorities will help identify areas that need access to healthy and non-motorized transportation areas the most.

Develop a “walk the Fort” program aimed at Fort residents and employees. Advertise the program through Fort literature and website

Providing information about the benefits of walking and bicycling to Fort residents will make them more aware of facilities that are available, and help to create a database that can be used to make Fort residents more aware of new facilities that may be close to them and they could easily access. This may help to increase the number of people who are aware of facilities as well as the number of people who might consider using these facilities and do not currently use them now.

New Recommendation

Rationale

Require all development to provide ADA compliant sidewalks along local streets

Provide connections from within all new development to existing and planned bicycle routes and shared use paths and trails.

Provide bicycle and pedestrian connections between commercial developments

Provide pedestrian facilities through parking areas located between the street and commercial buildings

When possible, place buildings close to the street

If a development can connect to planned or existing sections of an existing or a planned bicycle route, or shared use path or trail, require the development to provide the connection and allow public access

Providing healthy transportation options helps to reduce obesity and obesity related diseases such as diabetes and hypertension. Walking and bicycling increases social interaction and reduces isolation; which contributes to depression and related diseases such as substance abuse.

Reducing the distance pedestrians have to travel from the street to a commercial building could encourage people to use transit or walk.

Providing connections between commercial developments could result in people walking between them, instead of driving their car from one parking lot to another.

New Recommendation

Rationale

Develop a Safe Routes to School Plan and Program for Sierra Vista Unified School District and Fort Huachuca Accommodation Schools.

Adopt a Complete Streets Policy

A Safe Routes To School Plan will result in identified routes that include facilities that make it safe and enjoyable to walk to school. This could result in more children walking to school, and increased physical activity for youth. This could help to reduce childhood obesity.

Complete streets include facilities for all modes of travel. Increasing the availability of non-motorized transportation facilities throughout Sierra Vista and the Fort will result in more people walking or bicycling using safe facilities. This will help to reduce physical injuries from auto/pedestrian/bicycle collisions, increase physical activity and help reduce obesity-related disease. Shade is important to help mitigate potential effects from the sun.

Thank You!

