# KUNA DOWNTOWN CORRIDOR PLAN

Kuna, Idaho

October 31, 2012









## Kuna, Idaho

Prepared For:

Ada County Highway District City of Kuna

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In association with: Civil Survey Consultants, Inc.

Project No. 11962

October 31, 2012



#### **PREFACE**

The Kuna Downtown Corridor Plan was developed under the guidance of the Project Management Team (PMT) and Project Advisory Committee (PAC). PMT and PAC members are identified below, along with members of the consultant team. The PMT was responsible for reviewing all work products, providing direction to the project, facilitating the public workshops and open house, and making recommendations to the Kuna City Council and Ada County Highway District (ACHD) Commission for consideration of plan adoption. The PMT included representatives from the ACHD, the City of Kuna, the Idaho Transportation Department (ITD), and Valley Regional Transit (VRT). The PAC was responsible for reviewing all work products, providing input and recommendations to the PMT, and participating at the public workshops and open house. The PAC was made up of local citizens, business owners, and local officials. Thank you to the following PMT and PAC members for their instrumental involvement with the development of the Kuna Downtown Corridor Plan.

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A special thanks to the Kuna City Council and Ada County Highway District Commission for attending the work sessions and public meetings and providing input and guidance during the development of the plan.

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**Section 1** Introduction

#### **SECTION 1. INTRODUCTION**

The Kuna Downtown Corridor Plan (KDCP) is a transportation plan developed to identify how residents and visitors get to, through, and around the City of Kuna using all modes of travel. The goal of the KDCP is to identify projects and priorities for intersections; pedestrian, bicycle, and transit facilities; and truck routes along the Avalon Street-Main Street-Linder Avenue-Bridge Street corridor between School Avenue and Kay Avenue. The KDCP is organized into the following sections:

- Introduction
- Interagency and Public Involvement Program
- Background
- Concept Development and Evaluation
- Corridor Plan
- Implementation Strategy

Key items discussed in this section include an overview of the plan's study area, purpose and need, goals and objectives, study process, and supporting documentation.

#### **PROJECT STUDY AREA**

The City of Kuna is a community located approximately 16 miles southwest of Boise, Idaho, in Ada County. Its main connection to the Treasure Valley is State Highway (SH) 69 (also known as Kuna-Meridian Road), which is a north-south connection between the City and Interstate 84 (I-84). SH 69 becomes Avalon Street as it enters Kuna, then turns into Main Street through the study area, and finally becomes Bridge Avenue as it leaves the Downtown area to the west.

The KDCP focused on two distinct sub-areas within Kuna: (1) the Downtown area, which has been defined by the City of Kuna's planning process, and (2) the study corridor, which is defined as the overall Avalon Street-Linder Avenue-Main Street-

Bridge Street corridor between School Avenue and Kay Avenue. Figure 1 illustrates the study area.

#### **PURPOSE AND NEED**

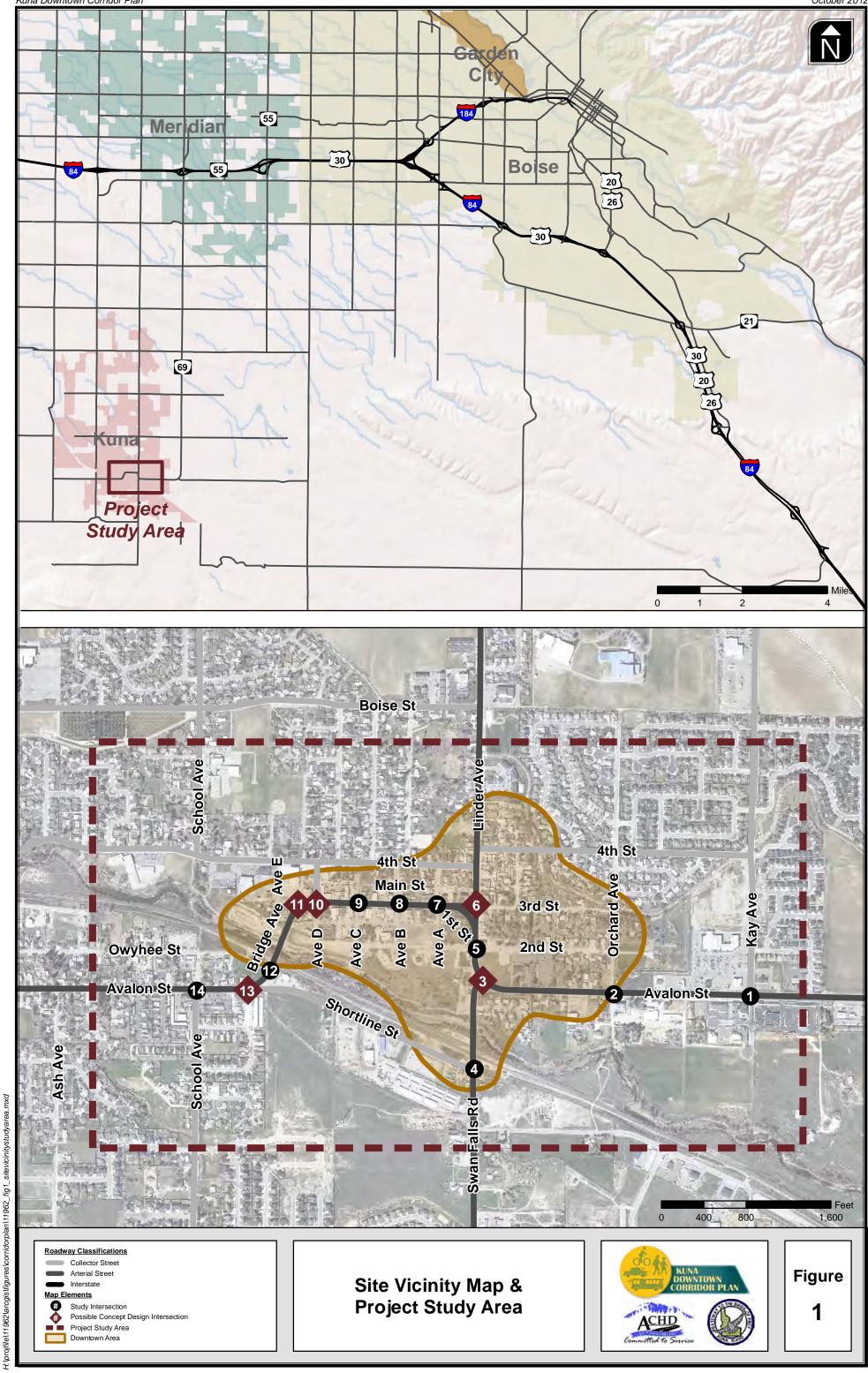
The population of Kuna has experienced considerable growth (average annual rate of 12.5%) over the last 20 years and is projected to continue to grow over the next 25 years (Reference 1). With this growth, the City has attracted new businesses and experienced an increase in traffic volumes and pedestrian and bicycle activity in the downtown. The existing Avalon Street-Linder Avenue-Main Street-Bridge Avenue corridor and intersections lack the capacity and multimodal connections to serve the future demand in the study area. This corridor is projected to become one of the busiest roads in the region with approximately 13,000 vehicles per day on Main Street to 23,000 vehicles per day on Avalon Street (East) by year 2035 (Reference 2).

#### **Purpose**

The purpose of this project is to effectively address the downtown areas multimodal and safety issues, serve existing and future business in downtown, serve expected population growth, and serve the growing demand of truck/agricultural traffic in the community. Key items included:

 Defining the current and desired function of Kuna's downtown transportation and access for all modes of travel – vehicles, bicycles, pedestrians, transit, trucks, and emergency services with the projected increase in the City's population and employment.





Kuna Downtown Corridor Plan

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- Identifying improvements that enhance the safety and operations for all modes of travel at intersections, pedestrian crossings, and atgrade railroad crossings on the corridor.
- Assisting all stakeholders to identify and prioritize design concepts for immediate and long-range improvements.
- Identifying desired Downtown parking operations for commercial businesses and public spaces.
- Identifying Downtown access management strategies.
- Providing early, often, and transparent communication to the stakeholders and public to achieve the desired community vision.

#### Need

The Project Purpose was demonstrated with the following Statement of Need:

- Regional and local plans project an increase in population and employment in the City of Kuna that cannot be accommodated without improvements to transportation facilities in the corridor and additional connections across Indian Creek.
- The lack of connectivity and accessibility for businesses, commuters, emergency services, and the public within the study area and across Indian Creek impact the corridor mobility and safety through the study area.
- The lack of a fully interconnected network of pedestrian and bicycle facilities within the study area limits the form and character of development, open space, parks, and recreation anticipated in regional and local plans.
- Inability of several unsignalized intersections on the corridor to accommodate future growth and meet local operating standards results in increased congestion and reduced intersection safety.
- Existing at-grade railroad crossings on Swan Falls Road and Bridge Avenue impact the travel time for emergency services and create

- excessive delays for all travel modes between the north and south parts of the City.
- Freight traffic typically uses the Avalon Street-Main Street-Linder Avenue-Bridge Avenue corridor as the main travel route and for parking in the center turn lane, which results in increased noise and traffic in the Downtown environment.
- Regional and local plans identify various intersection and corridor improvements for the study area, but do not prioritize these improvements.

#### **GOALS AND OBJECTIVES**

Specific KDCP goals and objectives were derived from transportation-related goals in applicable comprehensive and transportation plans for the study area and input from the PAC, PMT, and public. The goals and objectives described below were organized around key plan elements, including corridor alignment, streetscape features, land use/transportation integration, project implementation, and community/stakeholder involvement.



#### Corridor Alignment

- Improve mobility by accommodating through traffic and freight movement, as well as serve local community nodes.
- Ensure that the planning and design of transportation system improvements minimize environmental, cultural, and social impacts to the greatest extent possible.
- Provide flexibility in responding to changing socio-economic conditions and the opportunities and constraints represented by the various plans of the jurisdictions within and adjacent to the corridor.





#### Streetscape Features

- Improve traffic safety for all users.
- Support healthy and walkable communities.



# Land Use / Transportation Integration

- Protect the long-term function of the corridor.
- Ensure that the plan supports local economic development.



#### Plan Implementation

 Create an implementation plan to further transportation investments over time on the corridor.



#### Community / Stakeholder Involvement

 Engage the community and identify champions to carry the transportation concepts forward on the corridor.

#### PLAN DEVELOPMENT PROCESS

The project was initiated in September 2011 with a planned adoption by the City Council and ACHD Commission in September 2012. The general chronology of KDCP deliverables and activities is summarized in Figure 2.

#### SUPPORTING DOCUMENTATION

Analyses, evaluations, concept and designs conducted throughout the project were documented in technical memoranda. The technical memoranda were prepared in coordination with the PMT, PAC, and the public during regular meetings, public workshops, and the public open house. Data and information from these documents are referenced throughout the plan and can be found in the Technical Appendix and digitally filed at ACHD. This section includes a list of the documents and reports with a brief description of each item.

- **A. Project Overview Memorandum:** Provides an overview of the KDCP project, including the meeting schedule, anticipated deliverables, and roles and responsibilities of the consultant team.
- **B. Public Involvement Plan:** Addresses the public process proposed for use in developing the plan.
- C. Purpose and Need, Goals and Objectives, and Evaluation Criteria Memorandum: Presents products intended to guide the development of the KDCP, establish the Plan's policy direction, and identify a preferred alternative.
- D. Technical Memorandum #1, Review of Adopted Plans and Policies: Provides an overview of the plan and policy documents that affect the land use and transportation system in the City of Kuna.
- E. Technical Memorandum #2, Existing Conditions Analysis: Summarizes the existing transportation system conditions, documenting the current facilities and their operational and safety performance.
- F. Technical Memorandum #3, Future Conditions Analysis: Summarizes the future transportation system conditions, documenting programmed facility improvements, growth within the region, and anticipated operational performance.
- G. Evaluation of Initial Streetscape and Corridor Concepts Memorandum: Summarizes development and assessment of the 23 initial corridor alignment concepts and 22 possible streetscape cross sections.



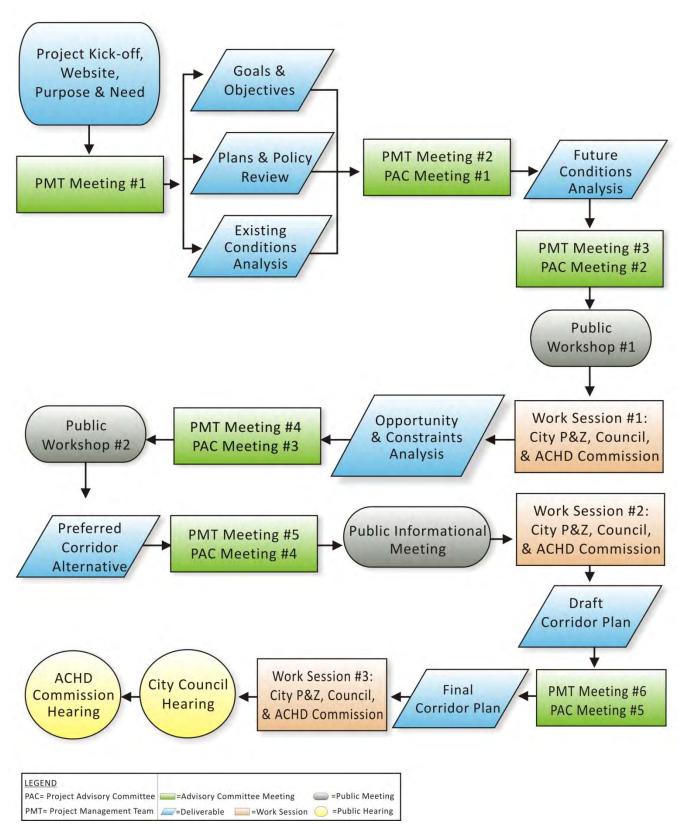


Figure 2 Project Road Map



- H. Technical Memorandum #4, Refined Evaluation of Recommended Corridor and Streetscape Concepts: Documents the refined evaluation of seven corridor concepts, eight Main Street streetscape concepts, intersection treatments at key study intersections, and the draft initial pedestrian and bicycle network.
- I. Technical Memorandum #5, Evaluation of Two Most Promising Corridor Concepts: Presents the evaluation and concept design of the two most promising corridor alternatives, including integration of the preferred streetscape, intersection, and pedestrian/bicycle concepts.
- J. PMT Meeting Minutes (Six): Each meeting minutes includes information about attendees, the agenda and supporting materials, discussion topics, PMT questions and comments, and action items.
- K. PAC Meeting Minutes (Five): Each meeting minutes includes information about attendees, the agenda and supporting materials, discussion topics, PAC questions and comments, and action items.
- L. Public Workshop Summaries (Two): Each summary provides information about the preparation, notification, and detailed outcomes of the public workshops.
- M. Public Open House Summary (One):
  Provides a summary of the preparation,
  notification, and detailed outcomes of the
  open house.
- N. Narrative of High Level Assessments of Storm Drainage, Utility and Geologic Impacts: Provides an overview of the existing and future storm drainage, utilities, and geologic elements associated with the corridor plan.





Section 2 Interagency and Public Involvement Program

#### SECTION 2. INTERAGENCY AND PUBLIC INVOLVEMENT PROGRAM

Interagency coordination and public involvement occurred through meetings of the PMT, PAC, and various stakeholders, public workshops and open house, a project website, surveys, mailer, outreach to the media, and informational sessions.

#### **OVERALL PLAN**

The following key questions helped establish a framework for obtaining and integrating the public and agency input into the plan:

- Corridor Values → What should be the theme or character of the corridor?
- Government Agency Coordination → How do we engage and address the needs of the City of Kuna and ACHD?
- Public Information/Involvement → How do we gain public acceptance of the plan?
- Property and Business Owner Outreach → How do we obtain buy-in from the existing land owners and businesses?

The goals of the plan included the following:

- Provide an open and transparent decisionmaking process
- Provide early and on-going opportunities for stakeholders
- Inform and encourage participation of all stakeholders
- Build widespread community understanding of opportunities, constraints, findings, and decisions.

The public involvement and agency coordination program was tailored by the consultant team around the 5D process: Desire, Discovery, Design, Discussion, and Documentation (refer to Figure 3).

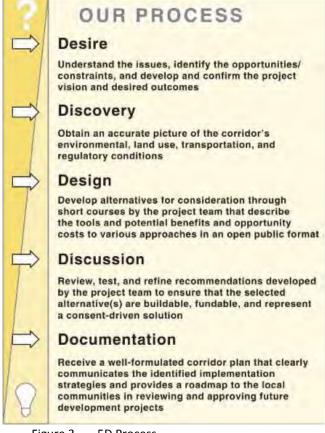


Figure 3 5D Process

A critical element of this program included implementation of a "Bottom Up" approach to agency, stakeholder, and public involvement (refer to Figure 4). This approach was used to help the stakeholders not only understand the corridor planning process, but also educate them on technical engineering, land use, and environmental constraints and allow them to actively participate in the development and selection of alternatives.



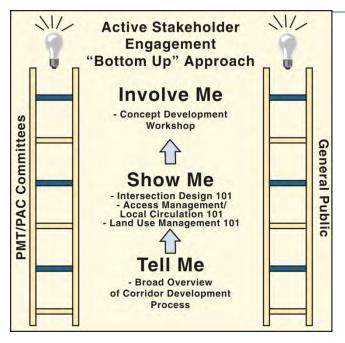


Figure 4 Stakeholder Engagement "Bottom Up" Approach

#### PROJECT MANAGEMENT TEAM

The PMT's role was to advise the consultant team on the technical elements of the project and make the final decisions regarding the overall project direction based on input from the consultant team, PAC, and the public. Six PMT meetings were held:

- October 13, 2011
- December 1, 2011
- February 2, 2012
- April 19, 2012
- June 22, 2012
- August 9, 2012

#### PROJECT ADVISORY COMMITTEE

The PAC provided a balanced representation of interests as well as a communication link with elected officials, citizens, and groups in the community. Members included agency staff representatives, representatives of local business groups, elected officials, and advocates of key interests, including transportation, social, and civic

groups. Responsibilities of PAC members included representing their constituents' perspectives during group deliberations, communicating project progress to them, and working to develop recommendations in the development of projects that are consensus based. Five PAC meetings were held:

- December 1, 2011
- February 2, 2012
- April 19, 2012
- June 22, 2012
- August 2, 2012

#### STAKEHOLDER MEETINGS

Additional feedback was obtained through a presentation/workshop with the Kuna Senior Center on March 2, 2012 (approximately 25 seniors attended) and a booth at the Kuna Farmers Market (approximately 30 visitors), on July 7, 2012. Prior to the public open house in June, ACHD staff went door-to-door to visit businesses (approximately 15) on the corridor to present the project and invite them to the open house.

# PUBLIC WORKSHOPS AND OPEN HOUSE

Two public workshops (shown in Figures 5 and 6) and one public open house (shown in Figure 7) were held during the development of the KDCP. The consultant team worked with ACHD and the City to ensure the public workshops and open house were advertised to citizens through a project mailer, media announcements, and a website. The two workshops and open house were held at Kuna High School. The opportunity to provide comments was available for two weeks after each workshop and open house.



Public Workshop #1 was held from 5:30 to 8:00 p.m. on February 2, 2012 and approximately 60 people attended. At this workshop, the public was introduced to the project and then developed the initial corridor and streetscape concepts for the study area. These initial concepts were developed by the public through a series of hands-on work stations. At the stations, they identified the number of travel lanes, location of pedestrian and bicycle facilities, intersection treatments, and streetscape elements for Main Street within the study area. From this workshop and other follow-up meetings, 19 comment sheets were received and 46 corridor concepts and 35 Main Street streetscape concepts were developed for the plan.

Public Workshop #2 was held from 5:30 to 8:00 p.m. on April 19, 2012 and approximately 35 people attended. The public was introduced to corridor concepts, eight streetscape seven concepts, intersection concepts, and the draft pedestrian and bicycle network developed from Public Workshop #1. Additionally, the attendees completed a workbook to identify the two most promising corridor concepts, four most promising streetscape concepts for Main Street, preferred intersection treatments, and the preferred pedestrian/bicycle network. From this workshop and other follow-up meetings, 27 comment sheets were received.

A public open house was held from 5:30 to 7:30 p.m. on June 21, 2012, to offer citizens the opportunity to review and comment on the two most promising corridor alternatives and the draft pedestrian and bicycle plan. Approximately 30 people attended the public open house. From this workshop and other follow-up meetings, 31 comment sheets were received. Summary information of the two workshops and open house are included in the alternatives section.



Figure 5 Public Workshop Display Boards



Figure 6 Public Workshop Participation



Figure 7 Public Open House Participation



#### **PROJECT WEBSITE**

ACHD produced and updated the project website with support from the consultant team. The project website was located at <a href="http://www.achdidaho.org">http://www.achdidaho.org</a>. The primary purpose of the website (Figure 8) was to provide a consistent and constant source for the latest information on the project and a location for the public to provide comments and input through the project duration.

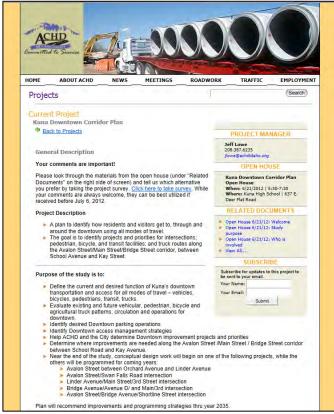


Figure 8 Project Website

#### **SURVEYS**

The consultant team developed two online surveys throughout the project. The first survey was an interactive map that ran from November 18<sup>th</sup> to December 27<sup>th</sup> to solicit input on existing conditions for pedestrian and bicycle patterns and facilities (Figure 9). Over 50 comments were received and included the following key themes:

- Provide bicycle and pedestrian paths along Avalon Street and Linder Avenue to improve connectivity between the areas inside and outside of downtown.
- Improve intersections through realignment or construction of roundabouts.
- Construct a railroad overpass and new bridge crossing.
- Improve the Kay Avenue/Avalon Street intersection with a traffic signal or enhanced pedestrian crossing.

The second survey was created to gauge public opinion on which initial corridor and streetscape concepts should move forward for further investigation (Figure 10). The survey was linked to the project website and ran from March 14<sup>th</sup> to 27<sup>th</sup>, 2012. 82 survey responses were completed by the public, PMT, and PAC (refer to Section 4 for details).

#### MAILERS AND NEWS RELEASES

ACHD developed mailers and news releases for use during the public involvement process. The mailers introduced the project, overall schedule, and identified the dates and locations for the two public workshops and open house. The mailers were mailed to approximately 7,000 residents and property owners, and news releases were provided to the Idaho Statesman and Kuna-Melba News.

#### INFORMATIONAL SESSIONS

Two informational presentations were held with the City Council and ACHD Commission during the project. These sessions were open to the public and provided the City Council and ACHD Commission with updates on the project, addressed any questions, and solicited input.



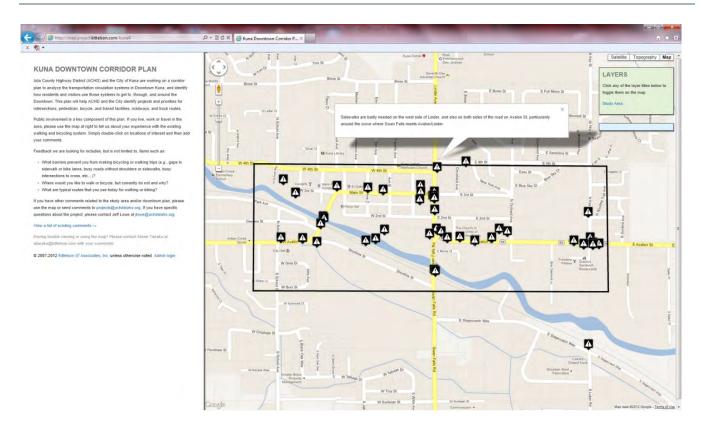


Figure 9 Interactive Map Survey



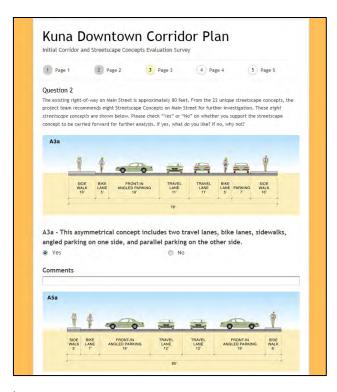


Figure 10 Initial Corridor and Streetscape Concepts Evaluation Survey





Section 3 Background

#### **SECTION 3. BACKGROUND**

This section provides a description of the plans and policies for the city, existing conditions, and future year 2035 traffic conditions. The transportation and land use plans were reviewed for policies and regulations applicable to the KDCP, specifically with regard to the transportation, land use, community vision, and design elements associated with each plan. The existing conditions analysis identifies the current conditions of the transportation facilities and land uses in the study area. The future analysis describes the expected traffic and land use conditions in the horizon year 2035 and provides a baseline for the alternatives evaluation.

#### PLANS AND POLICIES

The transportation and land use plans in Table 1 were reviewed for policies and regulations

applicable to this plan. Table 1 identifies the transportation, land use, community vision, and design standard elements associated with each plan. Details of this review can be found in *Technical Memorandum #1 – Review of Adopted Plans and Policies* in the Technical Appendix.

These plans and policies reveal that the city, county, regional, and state goals for future development in the City of Kuna have consistent themes to direct this plan. Overall, these plans and policies encourage the city to make development decisions that will connect the community to its city center (study area) and to the Treasure Valley.

A community vision is described in the Comprehensive Plan that includes a vibrant, multimodal downtown area for residents and the

Table 1 Transportation and Land Use Plans

	Transportation Elements	Land Use Elements	Community Vision	Design Standards
City of Kuna	•			
Comprehensive Plan (2009)	1	<b>√</b>	<b>√</b>	
County	•		•	·
ACHD Five-Year Work Plan (2011 – 2015)	<b>√</b>			
ACHD Capital Improvements Plan (2009)	1			
ACHD Roadways to Bikeways Plan (2009)	-J			√
ACHD Livable Street Design Guide (2009)	•	√	√	1
ACHD Pedestrian Bicycle Transition Plan (2005)	•			
ACHD Kuna Park-n-Ride Location Study (2011)	-J	√		
ACHD Policy Manual	1			√
Ada County Comprehensive Plan (2007)	-J	√	√	
Region				
COMPASS Communities in Motion 2035 (2010)	1		√	
VRT valleyconnect (2011)	-J		√	
State				
ITD Access Management Standards and Procedures for Highway Right-of-Way Encroachments (2011)	1			√



entire Ada County region. A multimodal transportation system should be provided with bicycle and pedestrian facilities in the downtown area, safe bicycle and pedestrian routes connecting downtown to areas within and outside Kuna, and transit lines and facilities that provide service within Kuna and the greater Ada County.

To promote safety, the comprehensive plan identifies re-routing truck traffic away from the downtown area and to consider access management. In addition to the multimodal connections, infrastructure improvements within and near the study area are programmed and described in the future conditions section of this chapter. In keeping with the vibrant downtown vision, the plans and policies identify that all infrastructure improvements should maintain existing open spaces and community areas.

#### **EXISTING CONDITIONS**

This section documents the current facilities in place and their operational and safety performance for all existing modes of travel. Details of this analysis can be found in *Technical Memorandum* #2 – Existing Conditions Analysis in the Technical Appendix.

#### Transportation System Inventory

A transportation system inventory was completed in order to identify site conditions and the current geometric characteristics of roadways within the study area. This inventory was performed through field visits, review of historical traffic and land use data, collecting traffic counts, and other reviews.

#### Land Use and Zoning

Zoning in the City of Kuna (shown in Figure 11 along with points of interest) splits the study

corridor into five main sections. The downtown area includes commercial and residential areas, the parks, and Indian Creek Greenbelt. The area south of downtown is zoned for commercial and manufacturing uses. An additional area zoned for commercial uses is located east of downtown. Northwest of downtown, the zoning is for public uses. The areas further away from the downtown and between these commercial, public, and manufacturing areas are mostly zoned for residential uses.

#### **Roadway Facilities**

Major roadways in the study area were identified and catalogued. Table 2 summarizes the characteristics of the roadway facilities.

#### Pedestrian and Bicyclist Facilities

Figure 12 shows the locations of the pedestrian and bicyclist facilities in the study area. There are intermittent sidewalks in the study area. Only Main Street and Kay Avenue have continuous sidewalks on both sides of the street. There are very few bicycle facilities within the study area. While there is the multi-use path along Indian Creek, Main Street is the only roadway with bicycle lanes. Most pedestrians and bicyclists observed in the field were walking or biking to and from school along Avalon Street (West), Bridge Avenue, Swan Falls Road, and Linder Avenue.

#### **Transit Facilities**

There is no transit provided by ValleyRide in the City of Kuna. Commuteride offers a vanpool program for commuters, and currently more than 100 vanpool riders use four informal Park & Ride sites around Kuna (Reference 3).

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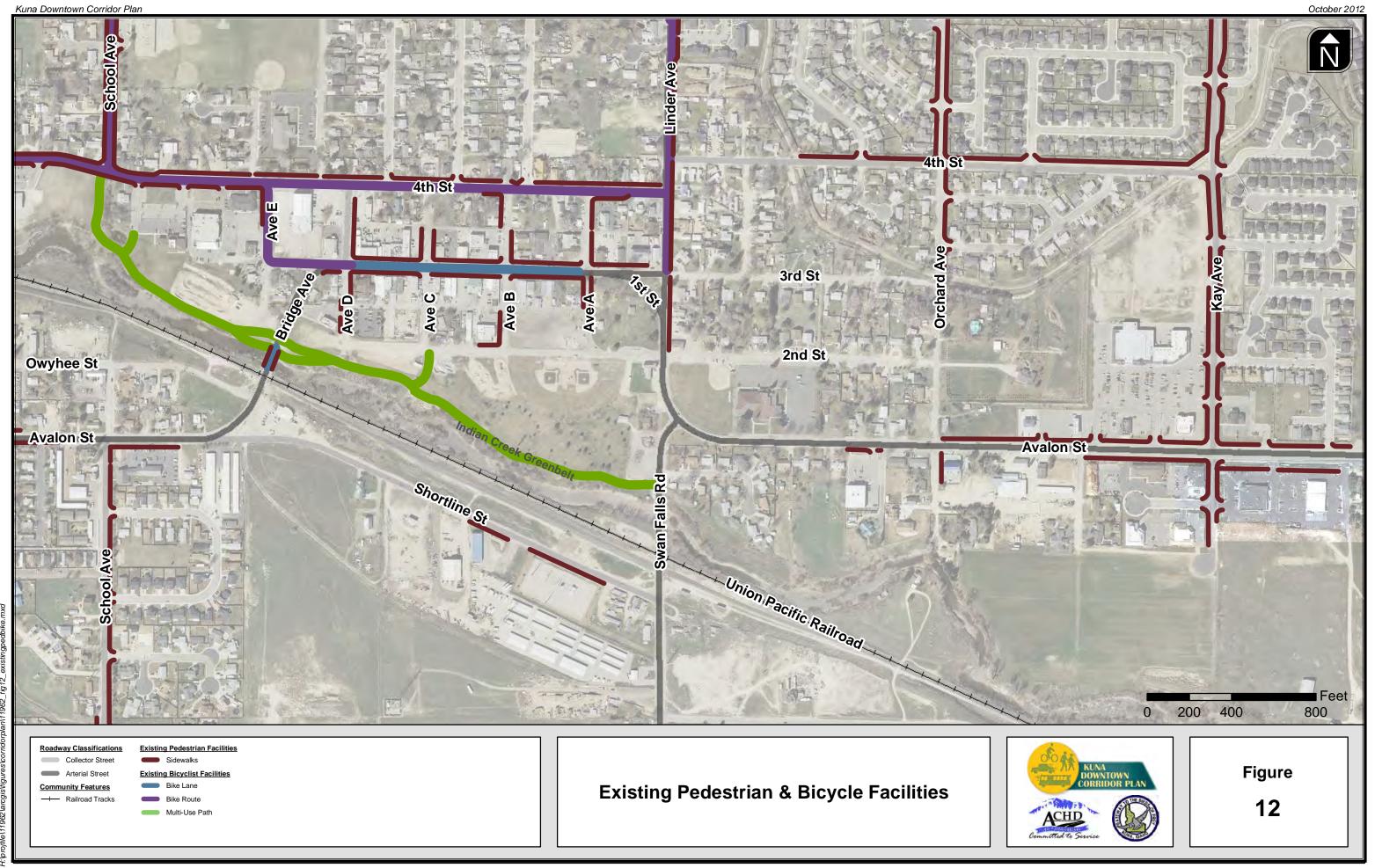


Table 2 Existing Transportation Facilities

Roadway	Classification <sup>1</sup>	Cross-Section (Lanes)	Speed Limit	Sidewalks	Bicycle Lanes	On-Street Parking
Avalon Street (East)	Principal Arterial / Minor Arterial	2-5	25-35	Partial	No	Partial
Avalon Street (West)	Minor Arterial	2	25-35	Yes	No	Yes
Main Street	Minor Arterial	3	25	Yes	Yes	Yes
Bridge Avenue	Minor Arterial	2	25	Partial	Partial	No
Linder Avenue	Minor Arterial	2	25	Partial	No	No
Swan Falls Road	Minor Arterial	2-3	35	No	No	No
Shortline Street	Major Collector	2	35	No	No	No
Kay Avenue	Major Collector	2-3	25	Yes	No	Partial
4 <sup>th</sup> Street	Major Collector	2	25	Partial	No	Partial
Avenue D	Major Collector / Local Street	2	UP <sup>2</sup>	Yes	No	Yes
School Avenue	Major Collector	2	25	Yes	No	Yes
Orchard Avenue	Local Street	2	25	Partial	No	Partial
2 <sup>nd</sup> Street	Local Street	2	10	No	No	No
3 <sup>rd</sup> Street	Local Street	2	25	No	No	No
Avenue A	Local Street	2	UP <sup>2</sup>	Partial	No	Yes
Avenue B	Local Street	2	UP <sup>2</sup>	Yes	No	Yes
Avenue C	Local Street	2	UP <sup>2</sup>	Partial	No	Yes
Avenue E	Local Street	2	UP <sup>2</sup>	No	No	No
Owyhee Street	Local Street	2	UP <sup>2</sup>	No	No	No

<sup>&</sup>lt;sup>1</sup>Community Planning Association of Southwest Idaho 2015 Federal Functional Classification Map (Reference 4).

#### **Parking Facilities**

Most drivers appear to park in the on-street spaces downtown rather than off-street parking lots provided behind the buildings. More vehicles were observed parked in the downtown during the lunch hour than during the weekday p.m. peak hour, and the majority of vehicles were parked in the western portion of downtown (near Avenues C and D).

#### **Railroad Facilities**

There is a Union Pacific Railroad (UPRR) rail line located south of the downtown area with two atgrade roadway crossings at Bridge Avenue and Swan Falls Road. A UPRR representative reported an average of 18 trains per day (9 day, 9 night) with train speeds ranging between 40 mph and 70 mph. When trains travel through the downtown area,

vehicle delays of one to three minutes were observed at the two crossing locations.

#### **Driveway Accesses and Businesses**

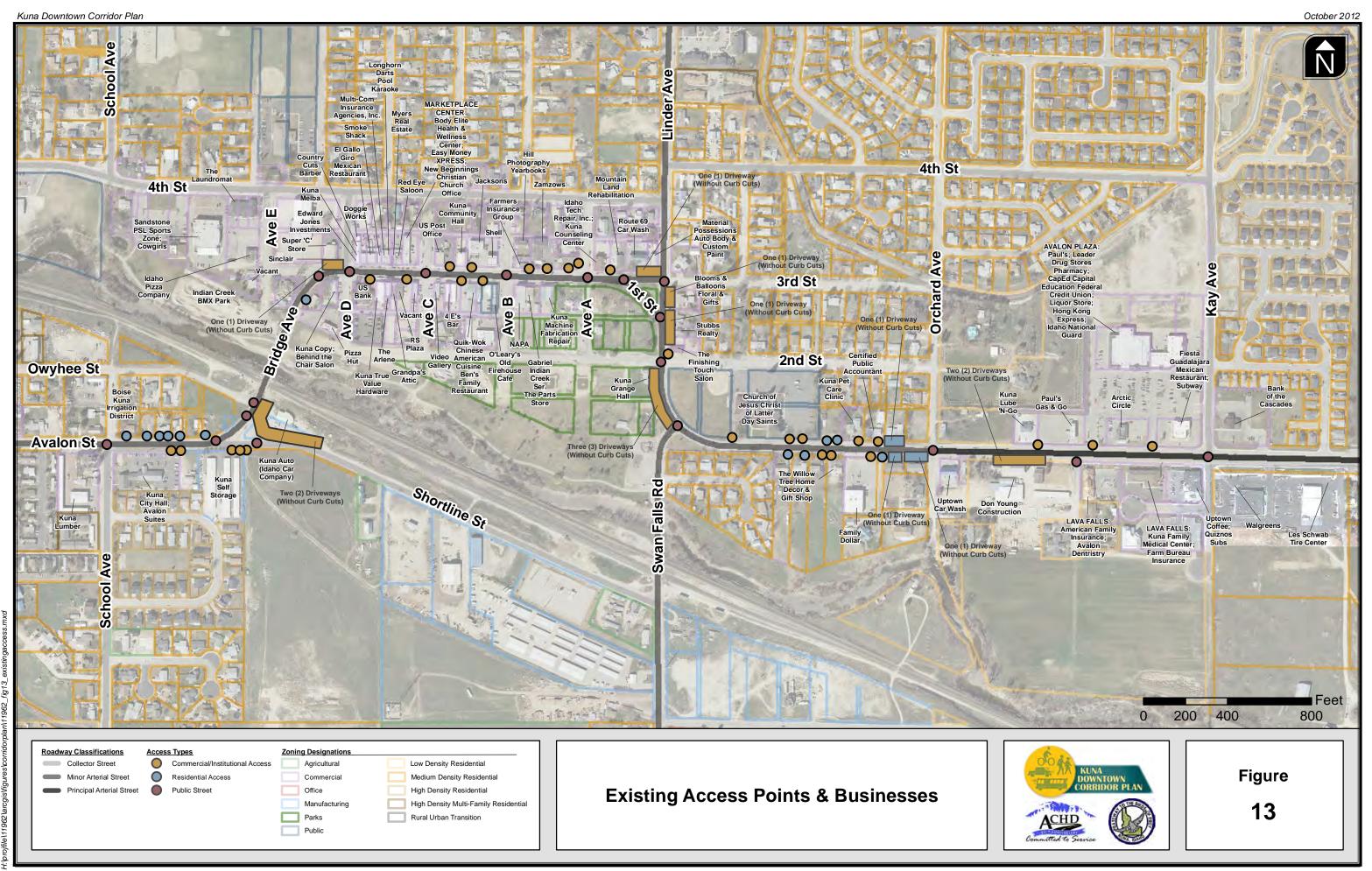
A field inventory of the existing access points, public streets, and businesses was conducted on the main corridor through the study area (as shown in **Figure** 13). There are five commercial/institutional accesses and one public street intersection on Avalon Street east of Orchard Avenue. There are 34 commercial/institutional accesses and 15 residential accesses on the corridor west of Orchard Avenue. Overall, there are 54 total driveway access points and 18 public street intersections along the corridor. Most of the corridor does not meet the ACHD and ITD access spacing standards for Arterials.



<sup>&</sup>lt;sup>2</sup>Unposted speed limit.

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Kuna Downtown Corridor Plan

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#### **Truck Routes**

The Avalon Street corridor is a route utilized by some trucks to travel through downtown Kuna and it carries approximately 2 to 3%, 2 to 4%, and 1 to 2% heavy vehicles during the weekday a.m., midday, and p.m. peak periods, respectively.

#### **Existing Operations Analysis**

Existing year volumes and operations were analyzed. Figure 14 shows the existing lane configuration and traffic control devices at the intersections, and Figures 15 and 16 summarize the existing volumes and traffic conditions at the study intersections during the weekday a.m. and p.m. peak hours, respectively.

All intersections currently operate at acceptable levels of service (LOS), except for the Swan Falls Road/Avalon Street intersection, which does not meet the ACHD LOS D standard. The intersection operates at a volume-to-capacity (v/c) ratio of 0.70 and LOS F during the weekday p.m. peak hour due to the delay for vehicles turning left from Swan Falls Road onto Linder Avenue.

#### Crash History

Crash data for 2006 through 2010 was obtained from ITD. Figure 17 illustrates the crash history in the study area. Crash data along the study corridor revealed that there were 49 crashes between 2006 and 2010. The intersections with more than four crashes over the past five years include 2<sup>nd</sup> Street/Linder Avenue, Swan Falls Road/Avalon Street, and Kay Avenue/Avalon Street. The Linder Avenue/Main Street and Bridge Avenue/Shortline Street intersections currently have skewed geometry and form three separate intersections at each location. This configuration currently limits the intersection sight lines for vehicles. The Swan

Falls Road/Avalon Street intersection has a steep grade on the south approach that influences the operation and safety of the intersection.

#### **Existing Stormwater Facilities**

Existing stormwater facilities were inventoried to establish the base conditions in the study area. Three drainage basins (2, 3, and 10) exist in and near the study area.

Drainage Basin 2 includes much of the older central core area of Kuna. Basin 2 drains westerly towards School Avenue and south to Indian Creek. Drainage Basin 3 generally includes the city park west and the commercial areas south of Main Street west of Linder Road, commercial development adjacent to East Avalon, Sunbird Village Subdivision, Zatica Subdivision, and Indian Creek Subdivision east of Linder/Swan Falls Road. Basin 3 runoff generally sheet-flows onto the adjoining shoulders and either percolates into the surrounding soils, or enters adjacent irrigation facilities. Drainage Basin 10 is mainly comprised of a narrow strip of land lying between the South Lateral and the Union Pacific Railroad tracks, along with some medium density residential development and agricultural land with scattered homes East of Swan Falls Road. Runoff flows to Indian Creek through existing culverts crossing under the railroad tracks.

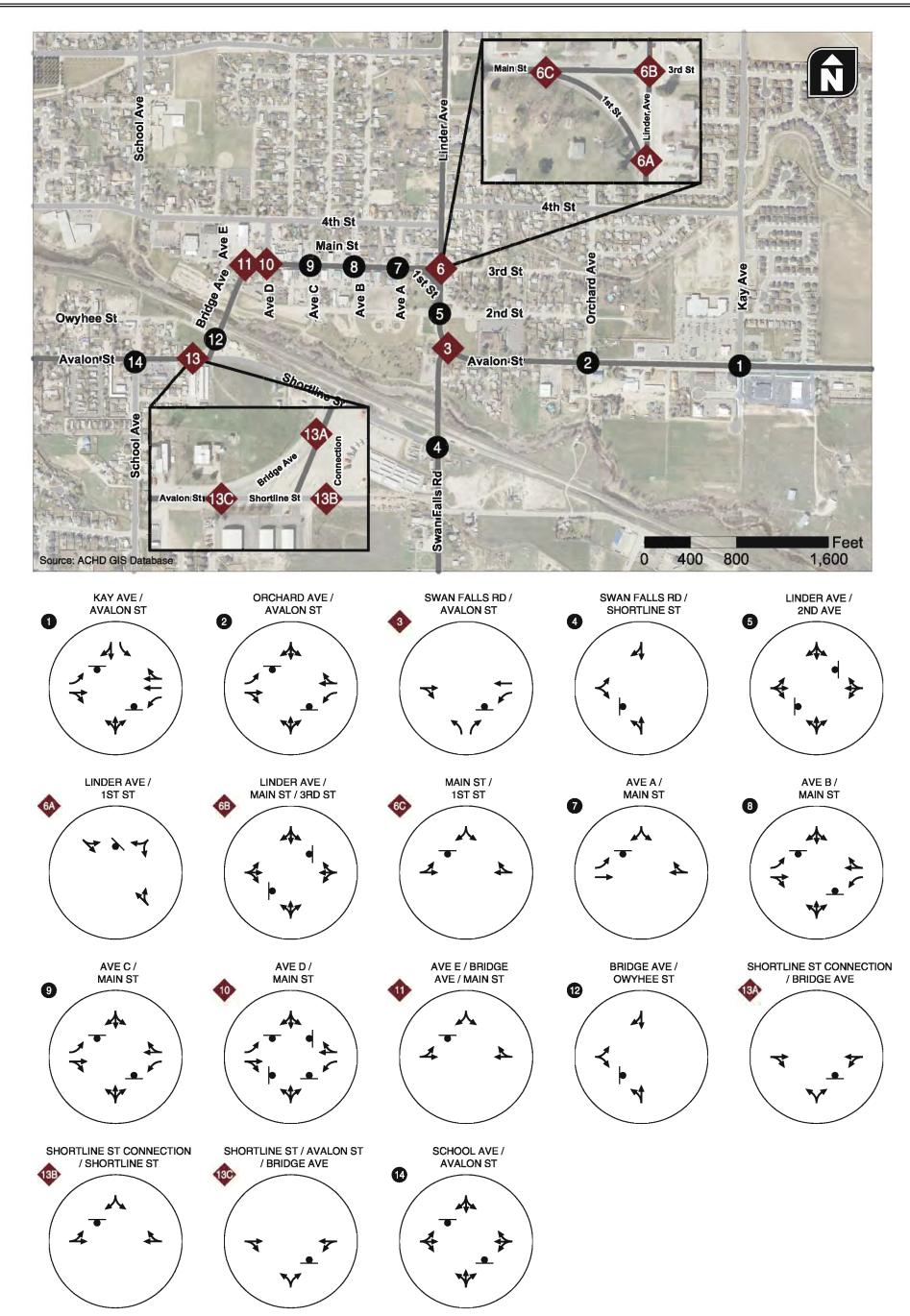
All three drainage basins, 2, 3, and 10, have limited capacity to serve future transportation improvements in the study area.

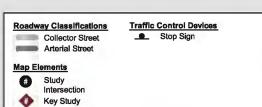


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Kuna Downtown Corridor Plan
October 2012

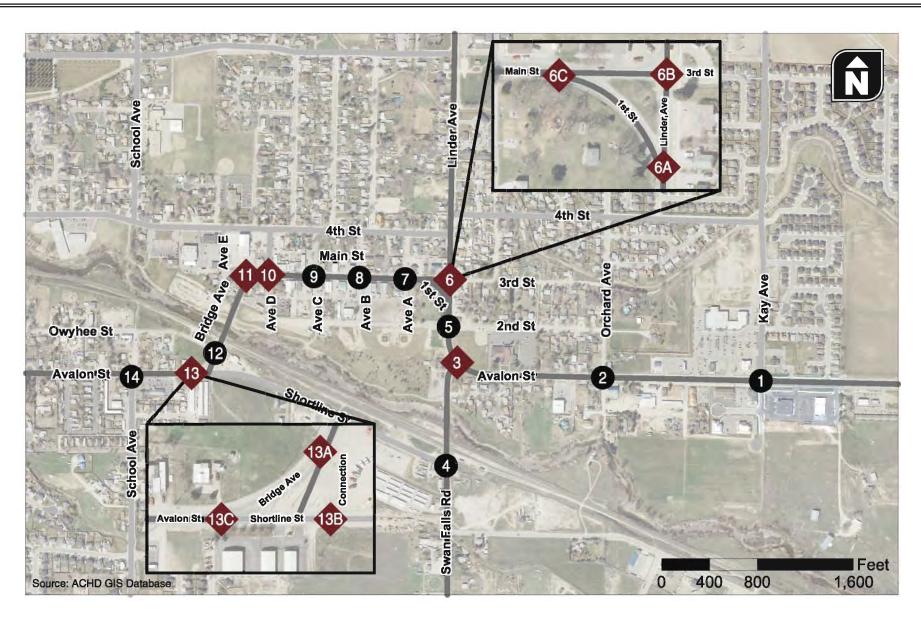


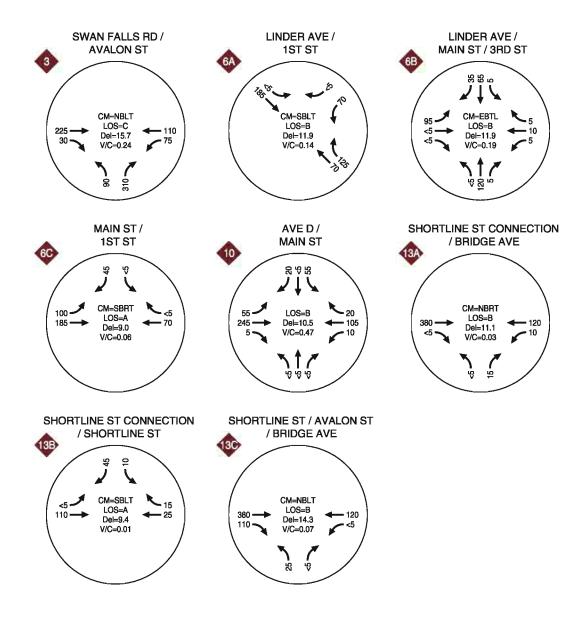


**Existing Lane Configurations** and Traffic Control Devices



Figure 14 Kuna Downtown Corridor Plan October 2012







Roadway Classifications
Collector Street

Operations
CM = Critical Movement (TWSC)

Map Elements Study # Intersection Key Study

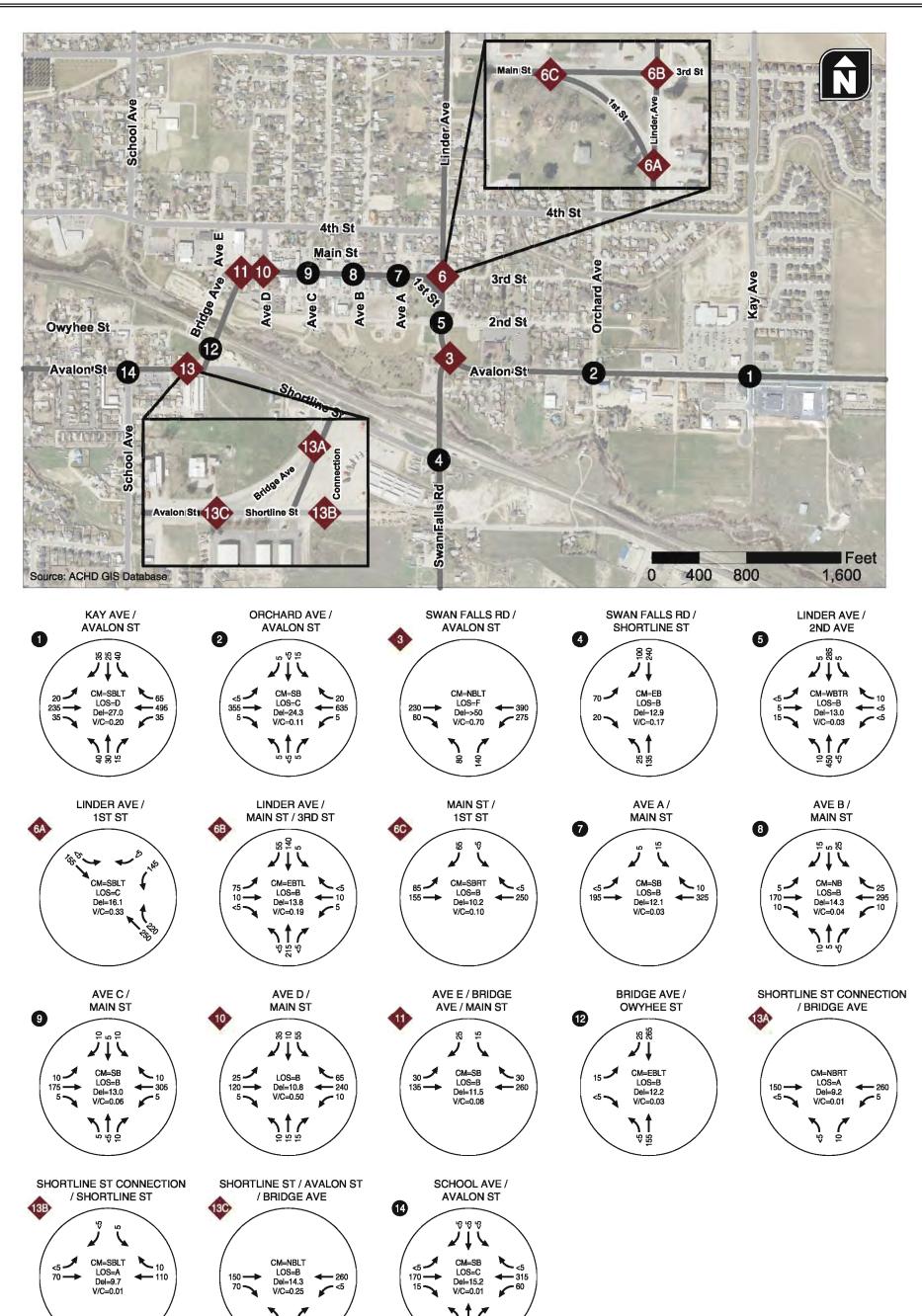
LOS = Intersection Level of Service (AWSC) / Critical Movement Level of Service (TWSC)

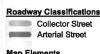
Del = Intersection Average Control Delay (AWSC) / Critical Movement Control Delay (TWSC)

V/C = Critical Volume-to-Capacity Ratio TWSC = Two-Way Stop Control AWSC = All-Way Stop Control

**Existing Traffic Conditions** Weekday AM Peak Hour







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Corridor

Downtown

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Map Elements Study # Intersection Key Study

Roadway Classifications
Collector Street
Collector Street
CM = Critical Movement (TWSC) LOS = Intersection Level of Service (AWSC) / Critical Movement Level of Service (TWSC)

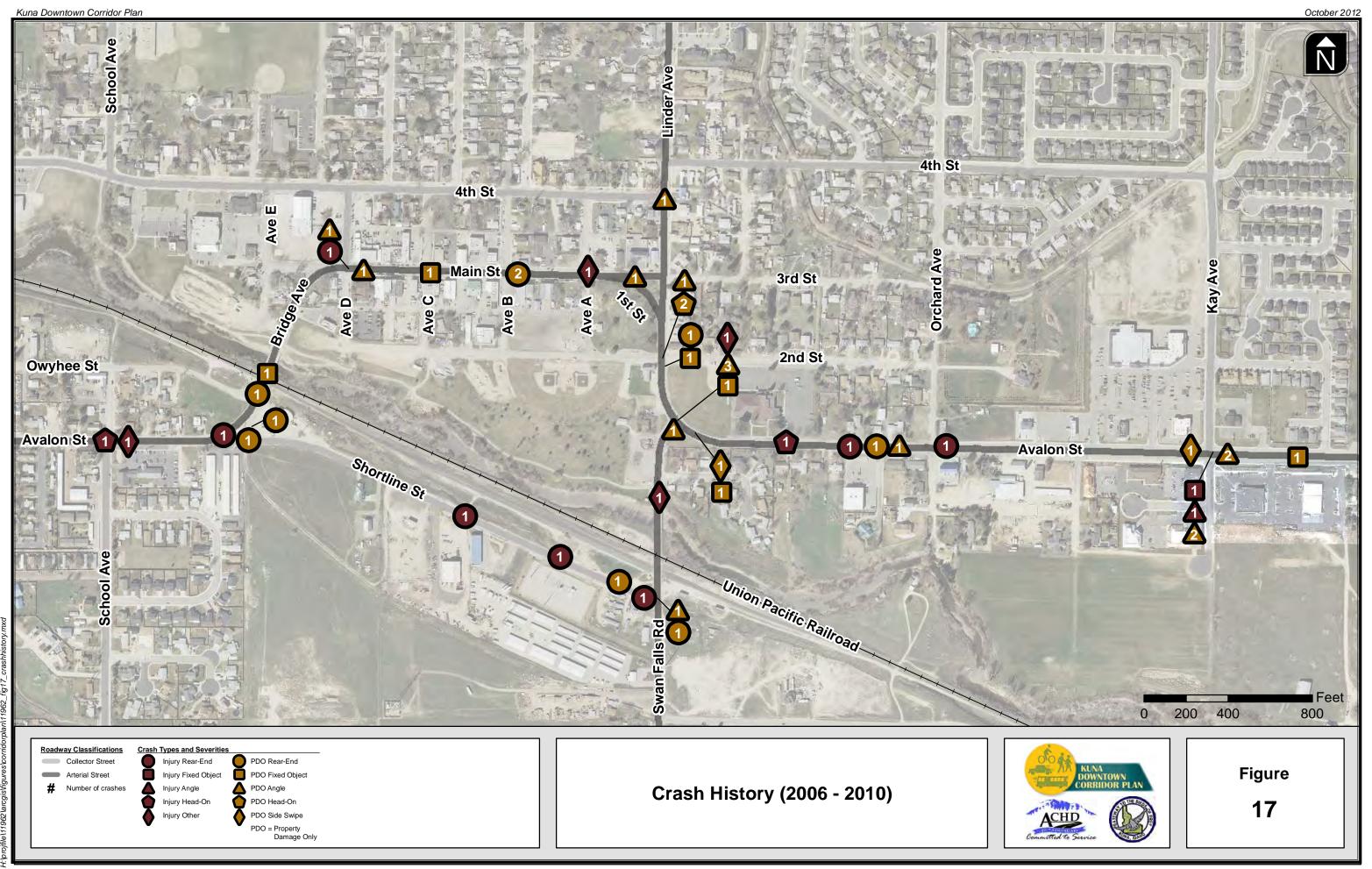
Del = Intersection Average Control Delay (AWSC) / Critical Movement Control Delay (TWSC) V/C = Critical Volume-to-Capacity Ratio TWSC = Two-Way Stop Control

AWSC = All-Way Stop Control

### **Existing Traffic Conditions Weekday PM Peak Hour**



**Figure** 16



#### **FUTURE YEAR 2035 CONDITIONS**

This section summarizes future conditions to provide a basis for comparing alternatives. Details of this analysis can be found in *Technical Memorandum #3 — Future Conditions Analysis* in the Technical Appendix.

#### **Planned Transportation Improvements**

There are several facility improvements identified in the plans and policies affecting the study area. Currently, most of the roadway, intersection, pedestrian, bicycle, transit, and freight facility improvements are unfunded. Figure 18 illustrates the programmed roadway and intersection projects in the study area. Figure 19 illustrates the planned pedestrian and bicycle projects in the study area.

#### Population and Employment Projections

The 2035 regional travel demand model was used to identify the population and employment characteristics assumed for the study area and City of Kuna, as well as for developing year 2035 forecast traffic volumes on the study roadways and intersections. The population and employment growth in the Kuna region was examined using seven Transportation Analysis Zones (TAZs), shown in Figure 20. Based on a review of this information, the City is projecting a total population and employment growth of 258% and 311%, respectively, over the next 23 years (2012 to 2035). Population and employment growth is expected throughout the City of Kuna, but the areas north and east of the downtown area are anticipated to have the most growth between 2012 and 2035.

#### **Future Traffic Operations**

Future year volumes and operations were analyzed in order to predict how the study area's

transportation system will operate in year 2035. Figure 21 illustrates the forecast year 2035 daily traffic volumes on the roadways. Table 3 summarizes the average daily traffic volumes at key locations in the study area for the years 2011 and 2035 traffic conditions.

Table 3 Year 2011 and 2035 Average Daily Traffic Volumes

Roadway Segment	Year 2011	Year 2035	Annual Growth
Avalon Street, between School Avenue and Shortline Street	7,580	19,000	3.9%
Main Street, between Avenues A and B	7,000	13,000	2.6%
Avalon Street, between Orchard Avenue and Swan Falls Road	12,915	21,710	2.2%
Shortline Street, between Avalon Street and Swan Falls Road	2,530	5,585	3.4%
Swan Falls Road, between Avalon Street and Shortline Street	8,010	12,425	1.8%

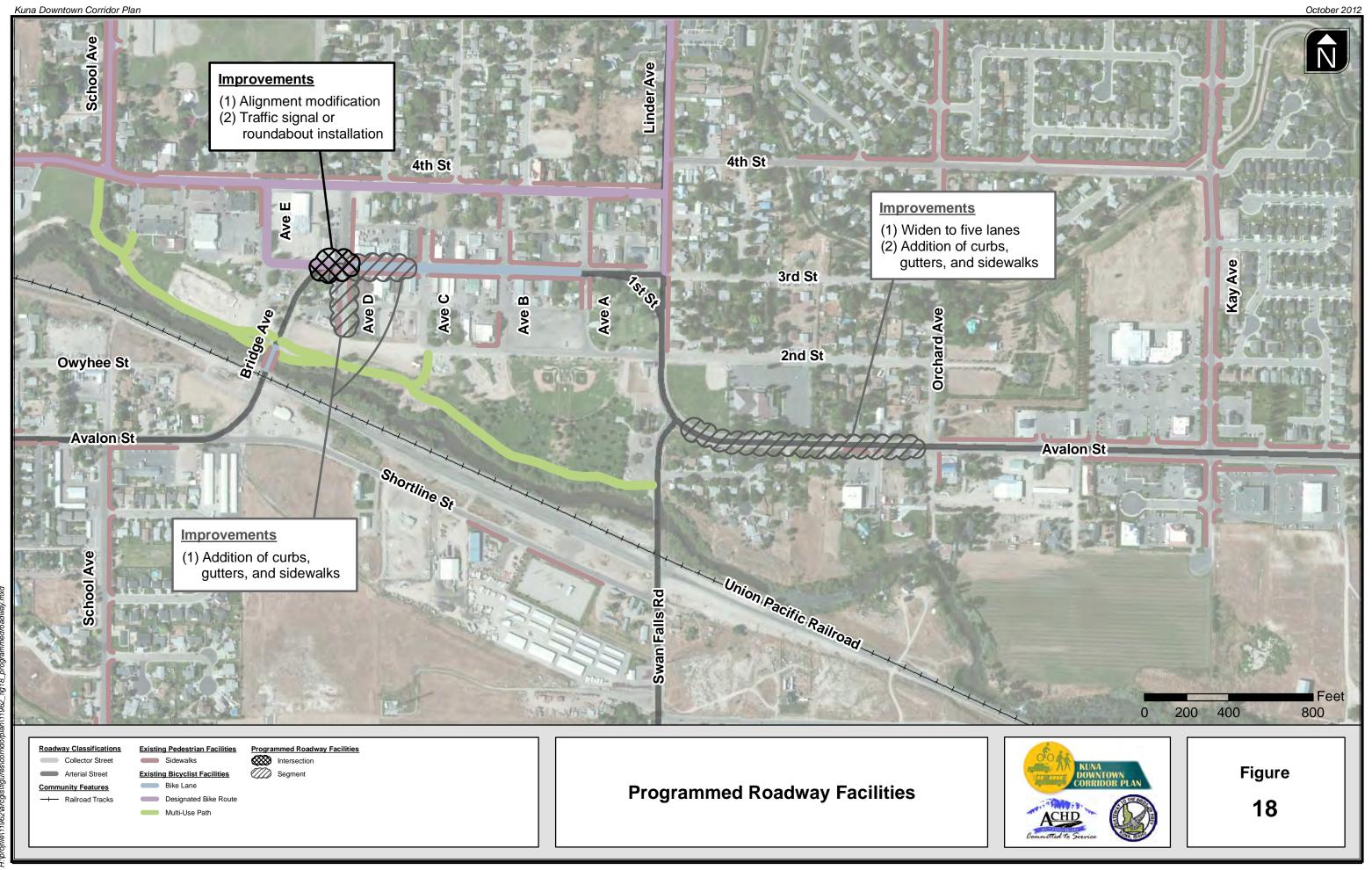
As shown in Table 3, the daily traffic volumes are anticipated to increase by approximately 2 to 4 percent per year on the study area roadways and range between 13,000 and 22,000 vehicles on Avalon Street.

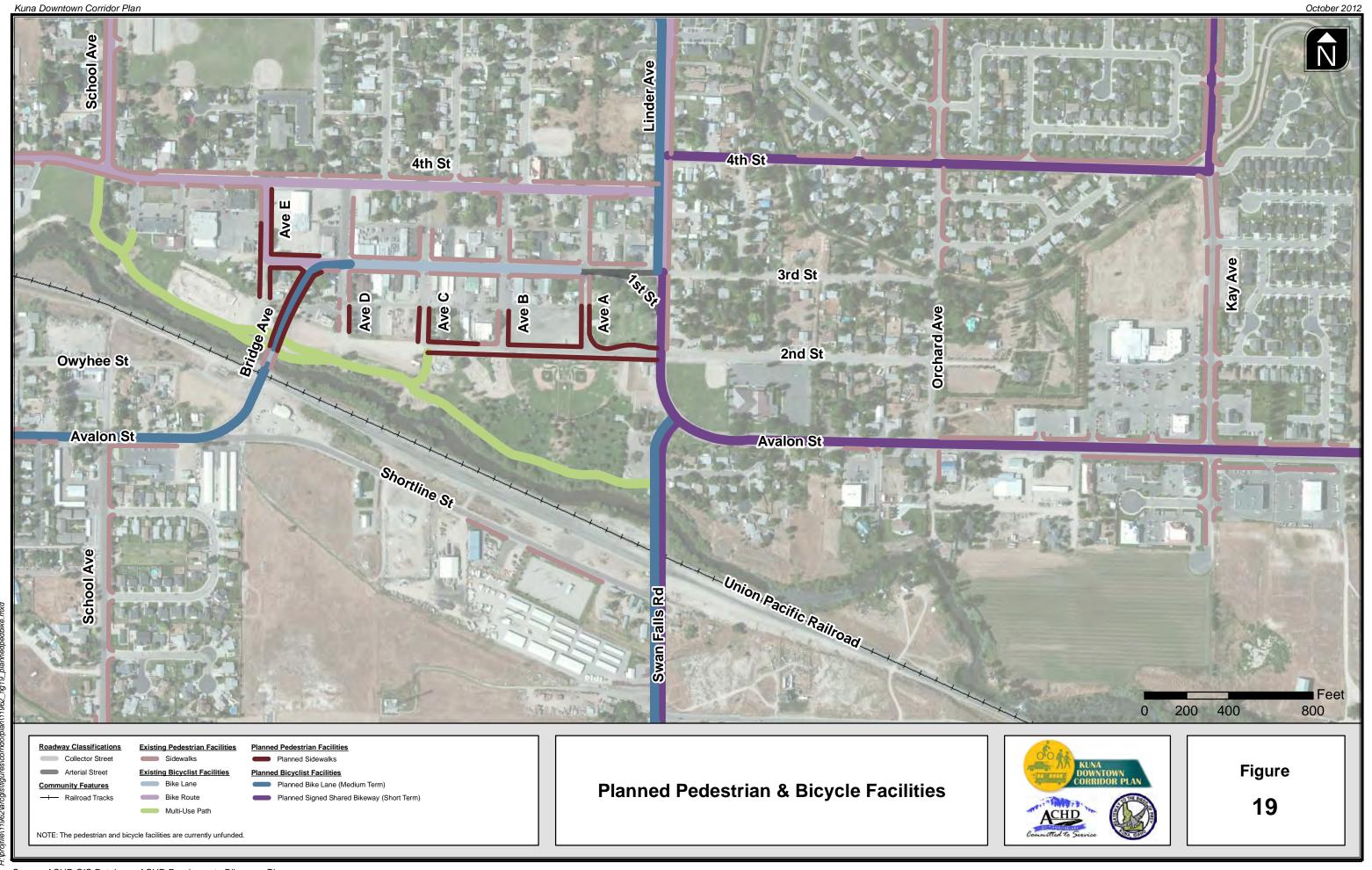
Figures 22 and 23 summarize the future year 2035 traffic conditions at the study intersections during the weekday a.m. and p.m. peak hours, respectively. Based on forecast year 2035 traffic conditions, seven study intersections are not anticipated to meet ACHD LOS standards. Analyses were performed to assess the LOS and vehicle queues and identify if a traffic signal or roundabout treatment would be a feasible option to accommodate the year 2035 forecast traffic volumes. Table 4 summarizes this operational assessment at the study intersections. As shown in Table 4, several of the intersections meet traffic signal warrants, but could also operate at an acceptable LOS with a single-lane or multilane roundabout in place.



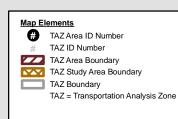
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Kuna Downtown Corridor Plan **Amity Rd** 1273 2035 17825 797 Diff. 16552 717 1300% 896% Lake Hazel Rd Columbia Rd Pop. 2012 7150 2035 10814 Emp. Pop. **Hubbard Rd** Diff. 3664 253 % Chg. 51% 160% Diff. 1879 Emp. 33% 132% 2012 1141 5080 Deer Flat Rd 2035 5700 2801 Deer Flat Rd Diff. 1660 % Chg. 2012 952 Kuna Rd 2035 3829 966 % Chg. 3764% King Rd Pop. Emp. 2035 3441 61 Diff. 2066 33 Kuna Mora Rd 118% 150% Kuna Cave Rd Pop. Emp. 2012 443 2035 791 Diff. 348 (-68)% Chg. 79% Nicholson Rd TOTAL Pop. Emp. 17696 1692 45702 Diff. 28006 3572 % Chg. 158% 211% 0.5

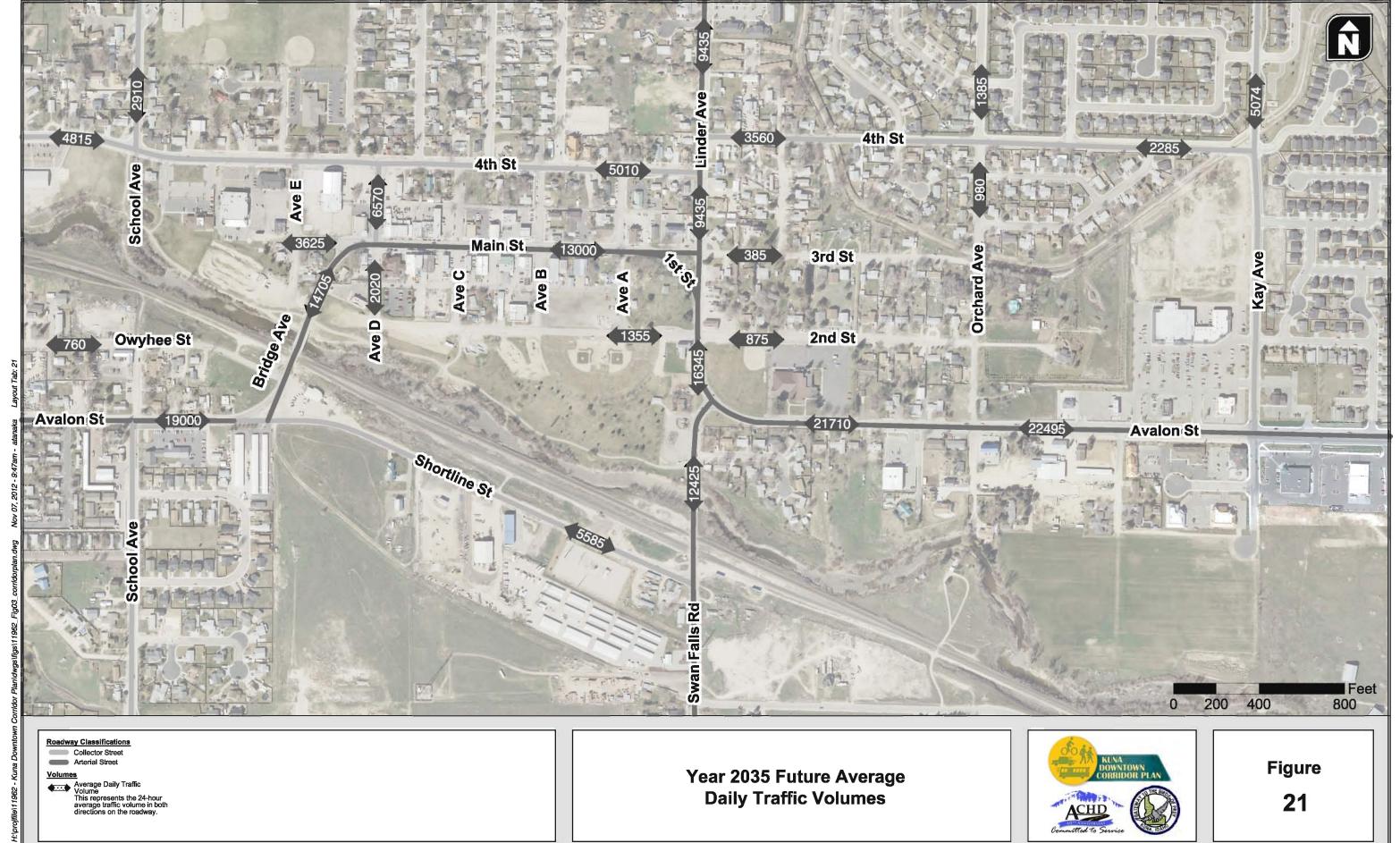


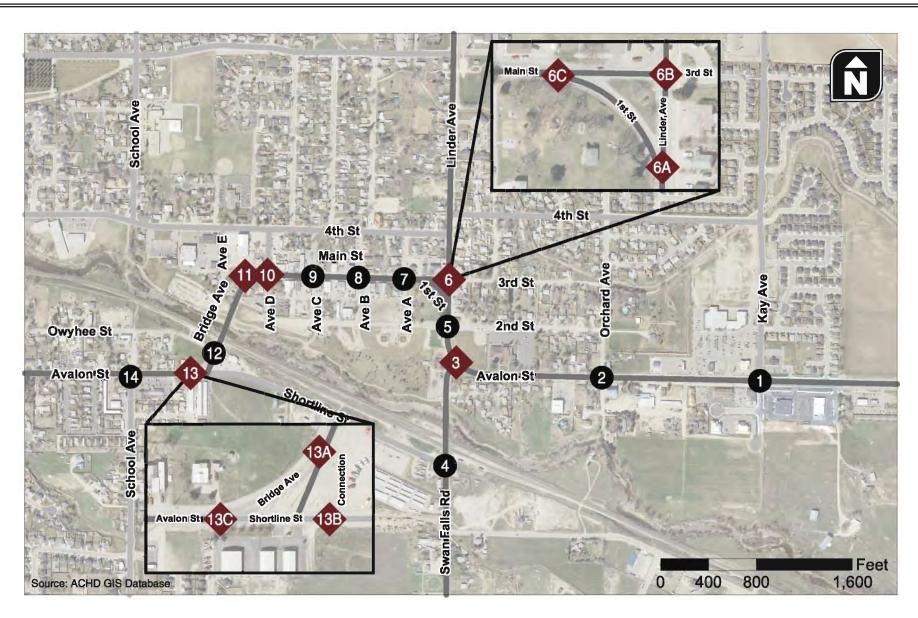
TAZ Population & Employment Growth

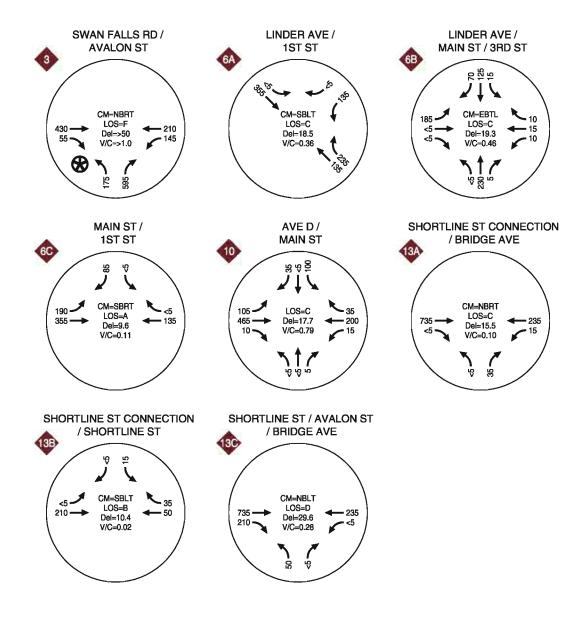


Figure 20

Kuna Downtown Corridor Plan







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### Roadway Classifications

Collector Street Arterial Street Map Elements

Study Intersection Key Study Intersection

Intersection Does Not Meet ACHD

Operations
CM = Critical Movement (TWSC) LOS = Intersection Level of Service (AWSC) / Critical Movement Level of Service (TWSC)

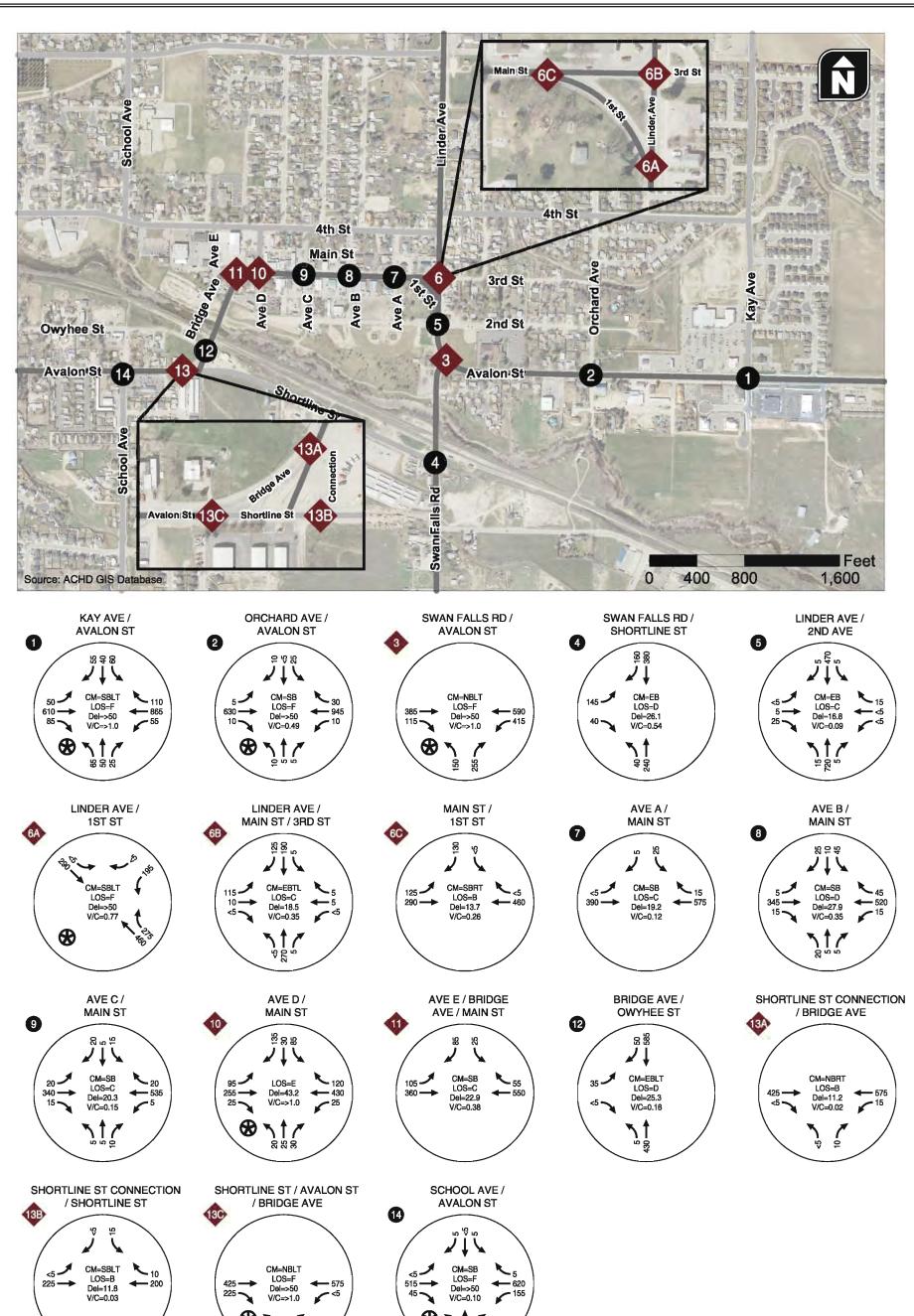
Del = Intersection Average Control Delay (AWSC) / Critical Movement Control Delay (TWSC)

V/C = Critical Volume-to-Capacity Ratio TWSC = Two-Way Stop Control AWSC = All-Way Stop Control

**Year 2035 Future Traffic Conditions, Weekday AM Peak Hour** 



**Figure 22** 



### Roadway Classifications

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Corridor

Downtown

Collector Street Arterial Street Map Elements

Study Intersection

Key Study Intersection Intersection Does Not Meet ACHD

Operations
CM = Critical Movement (TWSC) LOS = Intersection Level of Service (AWSC) / Critical Movement Level of Service (TWSC)

Del = Intersection Average Control Delay (AWSC) / Critical Movement Control Delay (TWSC) V/C = Critical Volume-to-Capacity Ratio

TWSC = Two-Way Stop Control AWSC = All-Way Stop Control

**Year 2035 Future Traffic** Conditions, Weekday PM **Peak Hour** 



**Figure** 23

Table 4 Year 2035 Traffic Conditions and Potential Intersection Treatments Summary

Intersection	Meets ACHD LOS Standards, Weekday PM Peak Hour <sup>1</sup>	Predicted to Have Queues that Affect Other Intersections	MUTCD Traffic Signal Warrants Met	Type of Roundabout Recommended - NCHRP 672 Planning-Level Analysis
(1) Kay Avenue/Avalon Street	No	Yes	Yes	Multilane
(2) Orchard Avenue/Avalon Street	No (under capacity)	No	No	-
(3) Swan Falls Road/Avalon Street <sup>2</sup>	No	Yes	Yes	Multilane
(4) Swan Falls Road/Shortline Street	Yes	No	Yes	Single-Lane
(5) 2 <sup>nd</sup> Street/Linder Avenue	Yes	No	No	-
(6) Linder Avenue/1 <sup>st</sup> Street/Main Street/3 <sup>rd</sup> Street	No (under capacity)	Yes	Yes	Single-Lane, but may need a Multilane
(7) Avenue A/Main Street	Yes	No	No	-
(8) Avenue B/Main Street	Yes	No	No	-
(9) Avenue C/Main Street	Yes	No	No	-
(10) Avenue D/Main Street	No	No	Yes	Single-Lane, but may need a Multilane
(11) Avenue E/Bridge Avenue/Main Street	Yes	No	Yes	-
(12) Bridge Avenue/Owyhee Street	Yes	No	No	-
(13) Bridge Avenue/Avalon Street/Shortline Street	No	Yes	Yes	Single-Lane, but may need a Multilane
(14) School Avenue/Avalon Street	No (under capacity)	Yes	Yes	Single-Lane, but may need a Multilane

 $<sup>^{\</sup>mathrm{1}}$  Existing lane configurations and traffic control devices assumed in the analysis.

Gray shading represents the intersections that are projected to not meet ACHD's LOS Standards.



 $<sup>^{\</sup>rm 2}$  Intersection does not meet LOS standard during the weekday a.m. peak hour.

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Section 4 Concept Development and Evaluation

#### SECTION 4. CONCEPT DEVELOPMENT AND EVALUATION

This section describes the process used for developing concepts, the concept evaluation process, and the selection of a preferred corridor alternative.

#### **OVERALL PROCESS**

The development of alternatives process used a bottom-up approach as presented earlier in the public involvement section, and began on February 2, 2012 with a series of meetings and Public Workshop #1. The PAC, PMT, and public were involved in the entire process of developing alternatives, from overview of the project process, to understanding various design elements, and finally participating in the concept development. These workshops (refer to Figure 24) were used to solicit various corridor, streetscape, and intersection concepts, which resulted in 46 corridor sketches and 35 Main Street streetscape crosssection diagrams (photos) for consideration. The concepts formed the basis for developing, refining, and ultimately selecting the preferred corridor alternative and streetscape cross-section. Figure 25 (next page) illustrates the alternative development and screening process used to identify a preferred corridor alternative.



Figure 24 Developing Concepts at Workshop #1

Based on the bottom up approach, the consultant team took the 46 corridor sketches and 35 Main Street streetscape cross-sections and identified common themes and overlapping trends to produce an initial group of 23 unique corridor concepts and 22 Main Street streetscape crosssections. The consultant team performed a highlevel assessment of these unique corridor concepts and Main Street streetscape cross-sections using the project evaluation criteria (described later in this section). In addition, these initial corridor and streetscape concepts were presented to and reviewed by the public and agency staff through an online survey (80 responses received) in March 2012. Based on the technical evaluation of the corridor and streetscape concepts and the input provided, the consultant team screened the concepts to seven corridor and eight Main Street streetscape concepts for further study.

The remaining seven corridor and eight Main Street streetscape concepts were refined and presented to the PAC, PMT, and public via a series of meetings and Public Workshop #2 on April 22, 2012. Based on the evaluation results and the public feedback, the two most promising corridor concepts (C2-3 and C6-8), four most promising Main Street streetscape concepts (S3a, S3d, S4a, and S4h), preferred intersection treatments, and pedestrian and bicycle network were identified for further study. At this stage of the alternatives development and evaluation process, the corridor concepts (C2-3 and C6-8), streetscape concept (S4a), and intersection treatments were brought together to form two corridor alternatives (C2-3 and C6-8). At the same time, refinements to the pedestrian and bicycle network proposed improvements continued and were integrated within the two corridor alternatives.



The two most promising corridor alternatives were further refined and evaluated and then presented to the public at the June 21<sup>st</sup>, 2012 Open House. Following the open house, the two most promising corridor alternatives and open house comments were presented and discussed with the PAC and PMT on June 22<sup>nd</sup>, 2012. Through these discussions and additional input received from the public through online survey responses, an information booth at the Farmer's Market, and information work sessions with the ACHD Commission and Kuna City Council in July 2012, Corridor Alternative C2-3 was identified as the preferred alternative for development of this plan.

Corridor Alternative C2-3 increases the capacity of the corridor by the following improvements:

- widens Avalon Street (East) to five lanes between Kay Avenue and Swan Falls Road,
- widens Linder Avenue to three lanes between Swan Falls Road and Main Street,
- widens Shortline Street to three lanes

- between Bridge Avenue and Swan Falls Road (part of the proposed truck route), and
- reconfigures Main Street with an 80-foot, three-lane cross-section that includes a 12foot center turn lane, 11-foot travel lanes with bicycle sharrows, 7-foot on-street parking, 6foot landscape buffer, and 10-foot sidewalks.

Additional improvements with Corridor Alternative C2-3 include the following:

- four signalized intersections (Kay Avenue/Avalon Street, Avenue D/Bridge Avenue, School Avenue/Shortline Street),
- three roundabout intersections (Swan Falls Road/Avalon Street, Linder Avenue/Main Street, Bridge Avenue/Shortline Street), and
- an interconnected bicycle and pedestrian network.

The remainder of this section summarizes the corridor and streetscape concepts developed throughout the process, and how and why certain concepts were selected or modified at the end of each stage are also discussed.

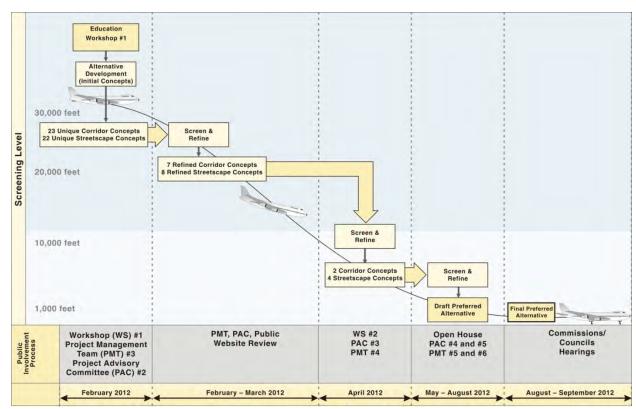


Figure 25 Alternative Development and Screening Process

#### **EVALUATION CRITERIA**

Evaluation criteria were developed in collaboration with the PMT and PAC to assess the corridor and streetscape concepts. Eleven criteria were used in the evaluation of alternatives and are described below:

- Vehicular Mobility (Non-Freight) Assesses the quality of flow for passenger vehicles.
- Freight Mobility Assesses the quality of flow for trucks.
- Pedestrian Mobility Assesses the ease of movement for pedestrians, including the addition of sidewalks or pathway connections.
- Bicycle Mobility Assesses the ease of movement for bicyclists, including the addition of bicycle connections.
- Local Access Assesses access to neighborhoods, businesses, and public facilities.
- Safety Assesses the safety for all modes of travel and access for emergency services.
- Impacts to Natural Environment Addresses the environmental impacts to the Indian Creek area, parks, and/or other open spaces.
- Impacts to Built Environment Addresses the impacts to right-of-way or impacts to structures.
- Land Use Compatibility Assesses the concept's consistency with the comprehensive plan and accommodation for future growth.
- Flexibility of Implementation Assesses the constructability and phasing of the concept
- Cost Effectiveness Qualitatively evaluates the relative overall magnitude of design and construction costs of the corridor elements.

Each corridor and streetscape concept was assigned a score of -1 (poor), 0 (fair), or 1 (good) depending on how the concept did or did not meet each of the specific evaluation criteria. These concepts were evaluated to assess each concept individually as well as relative to the other concepts to determine its effectiveness in meeting

the various project goals, objectives, and evaluation criteria. The scores in each category were summed to provide a total score for each concept.

# ALTERNATIVE DEVELOPMENT – INITIAL CONCEPTS

The consultant team reviewed all 46 corridor sketches developed through the PMT, PAC, and stakeholder meetings and the public workshop and consolidated them into 23 unique corridor concepts. Figure 26 shows the public developing concepts at Public Workshop #1.



Figure 26 Public Workshop #1

During initial concept development, these concepts focused on the Avalon Street/Linder Avenue/Main Street/Bridge Avenue corridor. Following this initial evaluation of these corridor concepts, the recommended corridor concepts were refined to include pedestrian and bicycle network improvements, local street connections, and intersection control types. Similarly, the consultant team reviewed all 35 streetscape concepts and consolidated them into 22 unique Main Street streetscape concepts.



#### **Unique Corridor Concepts**

The 23 unique corridor concepts for the Avalon Street/Linder Avenue/Main Street/Bridge Avenue corridor were categorized into six groups, as described below. The corridor concepts are denoted with a "C" followed by a number (i.e., 1, 2, 3, 4, 5, and 6) representing which group the concept is assigned to, then followed by a "-" and a number, representing the unique concept identification number within its assigned group.

**Group 1: Reduced Capacity on Main Street** – This group included a total of two concepts, labeled C1-1 and C1-2. Both concepts remove the center turn lane on Main Street, which results in a reduction to the cross-section from three vehicular travel lanes to two vehicular travel lanes.

Group 2: Increased Capacity on Avalon Street – This group included four concepts, labeled C2-1, C2-2, C2-3, and C2-4. Each concept includes some level of widening on Avalon Street to 3-lanes, 4-lane, and 5-lanes, which results in an increased capacity on the corridor.

Group 3: Increased Capacity on Avalon Street with Bridge/Avenue "E" Realignment — This group included two concepts, labeled C3-1 and C3-2. Both concepts are similar to Group 2, but include a realignment of Bridge Avenue with Avenue "E". These two concepts create a "T" intersection at Bridge Avenue and Main Street.

**Group 4: Downtown Couplet** - This group included two concepts, labeled as C4-1 and C4-2. Concept C4-1 includes a one-way couplet comprised of 2<sup>nd</sup> Street and Main Street and Concept C4-2 included a one-way couplet comprised of 4<sup>th</sup> Street and Main Street. Both concepts included widening Avalon Street Fast to five lanes.

**Group 5: Widening of Indian Creek Bridge** - This group included three concepts, labeled C5-1, C5-2,

and C5-3. Each concept included widening the Avalon Street corridor to 3-lanes, 4-lanes, or 5-lanes, and a widened (or new) bridge on Bridge Avenue over Indian Creek.

Group 6: Grade Separated Facilities – This group included ten concepts, labeled C6-1 through C6-10. These concepts included some type of new bridge crossing over Indian Creek and the railroad tracks via Bridge Avenue, Swan Falls Road, School Avenue, an extension of Avalon Street over the park area, and/or an Avalon Street bypass via an extension of Shortline Street to SH 69.

#### **Evaluation Results**

Based on the initial evaluation of the corridor concepts, the 23 unique corridor concepts were assigned into the following three categories:

- "Recommended for Further Review" were concepts that scored favorably in the evaluation and appeared to satisfy many of the project goals and objectives.
- "Under Consideration for NO Further Review" were generally neutral in the evaluation scoring and were looking for further direction from the PAC and PMT on whether they should be evaluated further.
- "Recommended for NO Further Review" were concepts that scored lowest in the evaluation and did not satisfy enough of the project goals and objectives.

Table 5 summarizes the consultant team's unique corridor concept recommendations for the Avalon Street/Linder Avenue/Main Street/Bridge Avenue corridor. The gray shading represents the corridor concepts recommended for further review.

Table 5 Consultant Team 's Initial Corridor Concept Recommendations

Initial Consultant Team Recommendations	Corridor Concepts
Recommended for Further Review	C1-2, C2-3, C2-4, C4-2, C5-2, C6- 6, and C6-8
Under Consideration for NO Further Review	C2-1, C2-2, C3-1, C3-2, C4-1, C5-1, C6-1, C6-2, C6-3, C6-5, C6-7, and C6-10
Recommended for NO Further Review	C1-1, C5-3, C6-4, and C6-9

#### **Unique Main Street Streetscape Concepts**

The 22 unique Main Street streetscape concepts were grouped into two distinct categories: "Asymmetrical" and "Symmetrical" concepts.

The "Symmetrical" concepts feature two, three-, and five-lane streetscapes with identical half-street cross-sections, while the "Asymmetrical" concepts generally placed the pedestrian and bicycle facilities, or on-street parking facilities on only one side of the roadway and feature two- and three-lane concepts.

The "Asymmetrical" streetscape concepts are denoted with an "A" and the "Symmetrical" streetscape concepts are denoted with an "S" prior to the concept number (i.e., 1a, 2a...). Some concept numbers include an "a", "b", "c' notation, which represents concepts that have the same cross-section width.

There were six "Asymmetrical" streetscape concepts labeled A1a, A2a, A3a, A3b, A4a, and A5a. All of these concepts have cross-section widths that range between 71 and 80 feet. There were sixteen "Symmetrical" streetscape concepts. These concepts include six streetscape concepts with a width less than 80 feet, eight streetscape concepts with a width equal to 80 feet, and two streetscape concepts with a width greater than 80 feet. 80 feet is the width of the existing right-of-way on Main Street.

#### **Evaluation Results**

Table 6 summarizes the initial consultant team's Main Street streetscape concept recommendations. The gray shading represents the streetscape concepts recommended for further review.

Table 6 Consultant Team 's Initial Streetscape Concept Recommendations

Initial Consultant Team	Main Street Streetscape
Recommendations	Concepts
Recommended for Further Review	A3a, A5a, S3a, S3b, S3c, S3d, S4a, and S4h
Under Consideration for NO Further	A1a, A4a, S1a, S2a, S4c, S4e,
Review	and S4f
Recommended for NO Further	A2a, A3b, S4b, S4d, S4g,
Review	S5a, and S6a

#### Online Survey Results of Concepts

After evaluating the unique corridor and streetscape concepts developed from Public Workshop #1, seven corridor concepts (C1-2, C2-3, C2-4, C4-2, C5-2, C6-6, C6-8) and eight Main Street streetscape concepts (A3a, A5a, S3a, S3b, S3c, S3d, S4a, S4h) were identified for further evaluation and were presented to the PMT, PAC, and public via an online survey posted from March 14 to March 27, 2012. A total of 82 surveys were completed and the survey results are presented in Tables 7 and 8. The gray shading represents the four concepts that received the highest support from the survey.

Table 7 Initial Corridor Concepts Recommended for Further Evaluation

Corridor Concept	Yes	No
C1-2	56%	44%
C2-3	60%	40%
C2-4	52%	48%
C4-2	50%	50%
C5-2	63%	37%
C6-6	68%	32%
C6-8	68%	32%



Table 8 Initial Streetscape Concepts Recommended for Further Evaluation

Streetscape Concept	Yes	No
A3a	54%	46%
A5a	47%	53%
S3a	65%	35%
S3b	49%	51%
S3c	51%	49%
S3d	61%	39%
S4a	66%	34%
S4h	66%	34%

As shown in Tables 7 and 8, the PMT, PAC, and the public supported carrying forward the seven corridor recommended concepts and recommended streetscape concepts for further evaluation. Additionally, the top four initial corridor concepts included two at-grade corridor concepts (C2-3 and C5-2) and two grade-separated concepts (C6-6 and C6-8). The top four initial streetscape concepts included S3a, S3d, S4a, and S4h, which all include some form of landscaping (i.e., median or buffer between the parking and sidewalk) and either bike lanes or bicycle sharrows on Main Street. Details of this evaluation can be found in Technical Memorandum - Evaluation of Initial Streetscape and Corridor Concepts in the Technical Appendix.

## CONCEPT SCREENING AND REFINEMENT – ROUND #1

The seven corridor concepts (C1-2, C2-3, C2-4, C4-2, C5-2, C6-6, C6-8) and eight Main Street streetscape concepts (A3a, A5a, S3a, S3b, S3c, S3d, S4a, S4h) identified at Public Workshop #1 and through the online survey were further refined prior to the next set of meetings and Public Workshop #2. Figure 27 shows the breakout sessions at Public Workshop #2. Figures 28 and 29 illustrate the seven refined corridor concepts.

Figure 30 illustrates the refined Main Street streetscape concepts.



Figure 27 Public Workshop #2

This initial evaluation was performed through independent analysis to assess each corridor concept individually and relative to the other concepts to determine their effectiveness in meeting the various project goals, objectives, and evaluation criteria. Table 9 summarizes the evaluation results presented at Public Workshop #2.

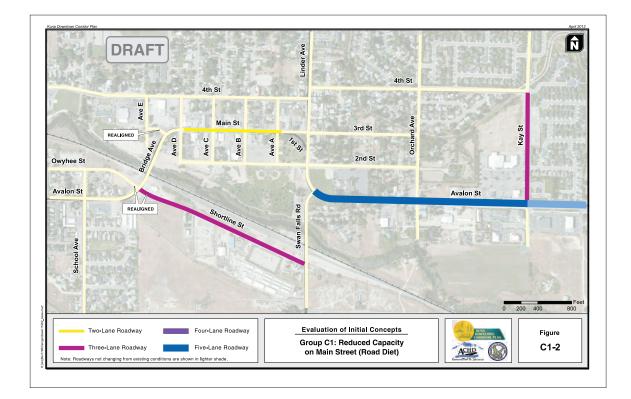
Table 9 Refined Evaluation Matrix of Corridor Concepts

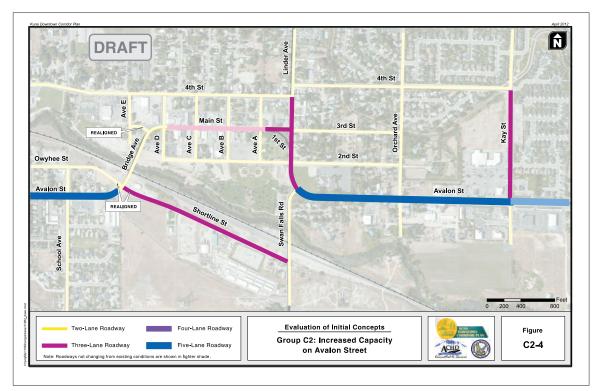
Evaluation Criteria	C1-2	C2-3	C2-4	C4-2	C5-2	C6-6	C6-8
Vehicular Mobility (Non-Freight)	-0.5	0.5	0.5	0.5	0.5	1	1
Freight Mobility	-0.5	-0.5	-0.5	-0.5	-0.5	1	1
Pedestrian Mobility	0.5	0.5	0.5	1	1	0.5	0.5
Bicycle Mobility	0.5	0.5	0.5	0.5	1	0.5	0.5
Local Access	0	0.5	0.5	0	1	1	1
Safety	0	0	0	0.5	0	0	0
Impacts to Natural Environment	1	1	0.5	0.5	0.5	-1	-1
Impacts to Built Environment	1	0.5	-0.5	-0.5	-0.5	-1	-1
Land Use Compatibility	0	0	0	0	0	0	0
Flexibility of Implementation	1	1	0	0	-0.5	-1	-1
Cost Effectiveness	1	0.5	0	0	0.5	-1	-0.5
Corridor Concept Total Score	4.0	4.5	1.5	2.0	2.0	0	0.5

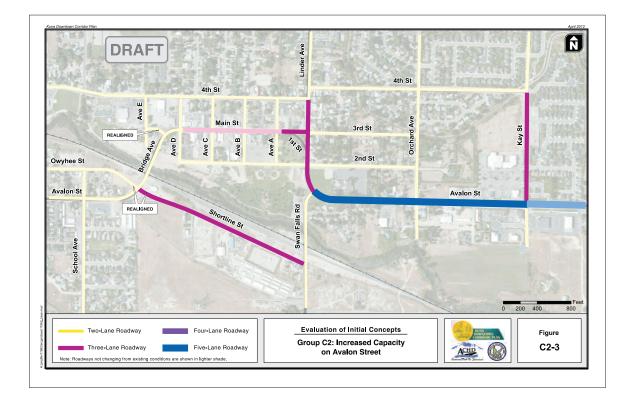


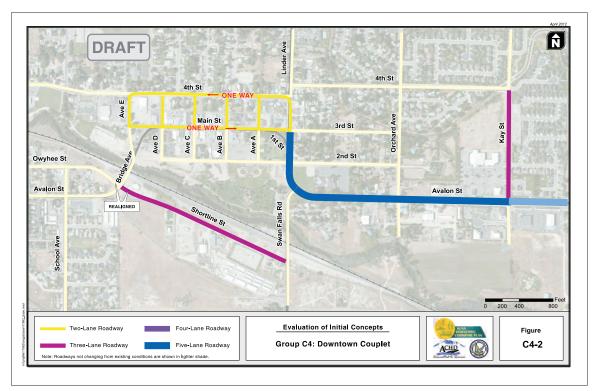
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Two-Lane Roadway

Three-Lane Roadway

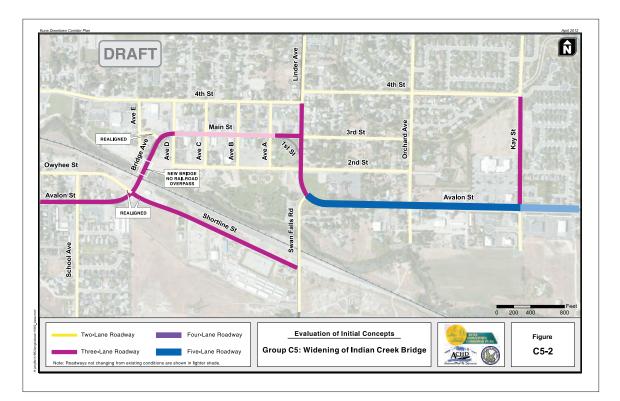
Five-Lane Roadway

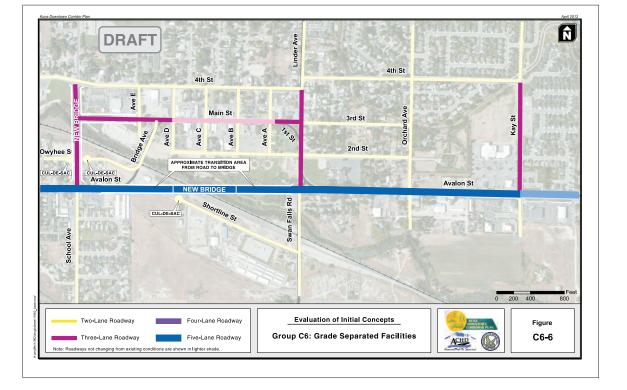
Refined Corridor Concepts
C1-2, C2-3, C2-4, C4-2

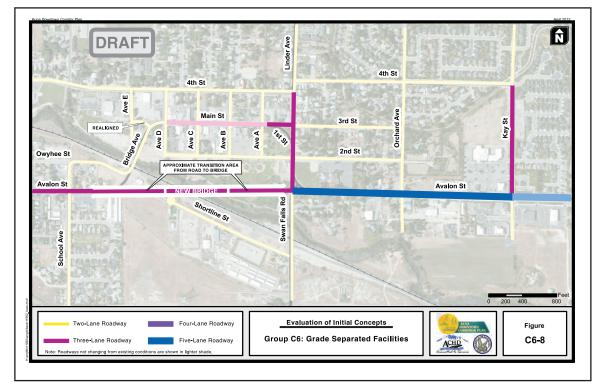


Figure

28







Two-Lane Roadway

Three-Lane Roadway

Five-Lane Roadway

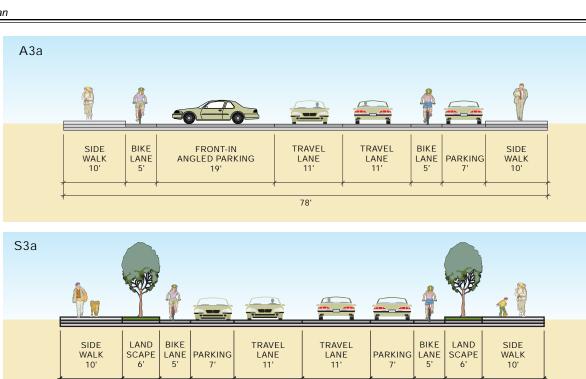
Refined Corridor Concepts
C5-2, C6-6, C6-8

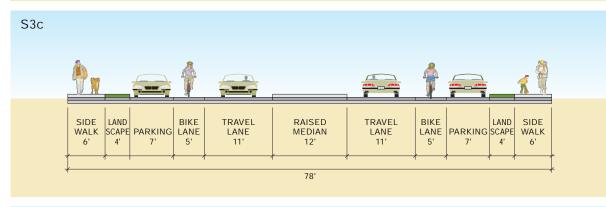


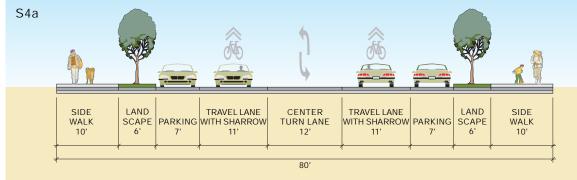
Figure

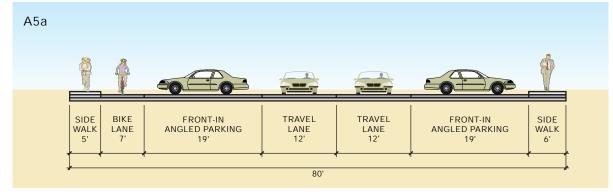
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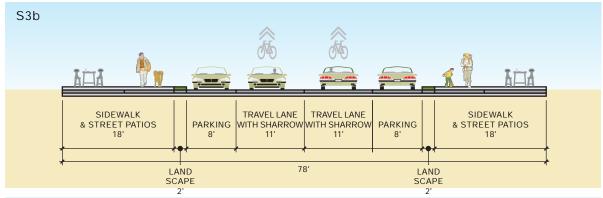
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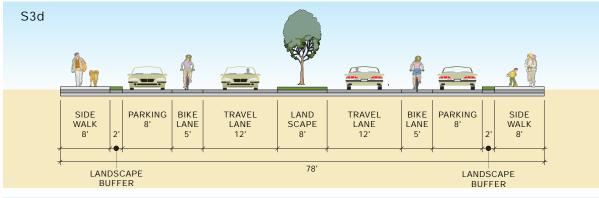


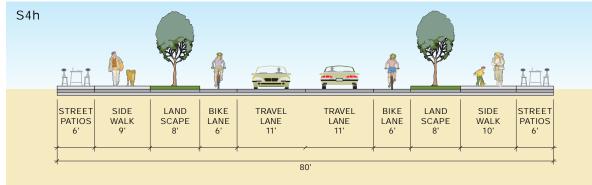












Refined Streetscape Concepts
A3a, A5a, S3a, S3b, S3c, S3d, S4a, S4h



Figure

30

Kuna Downtown Corridor Plan

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Based on the initial evaluation of the concepts, the consultant team initially recommended corridor concepts C1-2 and C2-3 and the streetscape concepts S3a, S4h, S3d, and S4a for more detailed design and analysis. These concepts were presented to the PMT, PAC, and the public through a series of meetings and at Public Workshop #2.

The following key outcomes were identified from these meetings and the 27 comment sheets received:

- Corridor Concept C1-2 (59%), C2-3 (90%), C5-2 (28%), and C6-8 (28%) received the highest support for further analysis.
- Approximately 50% of the responses preferred a grade-separated railroad crossing in downtown.
- The four streetscape concepts (S3a-68%, S3d-65%, S4a-85%, and S4h-67%) received the highest support for further analysis.

Table 10 summarizes the preferred intersection treatments at the key study intersections based on responses from the PMT, PAC, and public.

Table 10 Recommended Intersection Concepts

Intersection	No Change	Roundabout	Traffic Signal
Kay Avenue & Avalon Street	5 (21%)	2 (8%)	17 (71%)
Swan Falls Road & Avalon Street	1 (4%)	13 (57%)	9 (39%)
Linder Avenue & Main Street	2 (11%)	15 (79%)	2 (11%)
Avenue D & Main Street	5 (23%)	2 (9%)	15 (68%)
Bridge Avenue & Shortline Street	7 (30%)	13 (57%)	3 (13%)
School Avenue & Avalon Street	5 (23%)	4 (18%)	13 (59%)

The consultant team identified that corridor concept C1-2 should be replaced with corridor concept C6-8 based on support for a grade-separated crossing in downtown. The four recommended streetscape concepts received the highest support from the public, PMT, and PAC.

Therefore, the consultant team moved forward with corridor concepts C2-3 and C6-8, the streetscape concepts S3a, S4h, S3d, and S4a, and recommended intersection concepts shown in Table 10 for more detailed design and analysis.

Additionally, the following key themes were identified by the public on the pedestrian and bicycle network improvements plan:

- Provide bicycle and pedestrian paths along Avalon Street and Linder Avenue to improve connectivity between the areas inside and outside of downtown.
- Improve ease in getting through skewed intersections, either through realignment of those intersections or through the construction of roundabouts.
- Improve the Kay Avenue/Avalon Street intersection with a traffic signal or enhanced pedestrian crossing.
- Extend the greenbelt to the west to Deer Flat Road and to the east to Stroebel Road.
- Provide enhanced pedestrian crossings on 4th Street in front of the library and at the intersections of 4<sup>th</sup> Street/Linder Avenue and 2<sup>nd</sup> Street/Linder Avenue.

Details of this evaluation can be found in *Technical Memorandum #4 – Refined Evaluation of Recommended Corridor and Streetscape Concepts* and *Technical Memorandum #5 – Evaluation of Two Most Promising Corridor Concepts* in the Technical Appendix.

# CONCEPT SCREENING AND REFINEMENT – ROUND #2

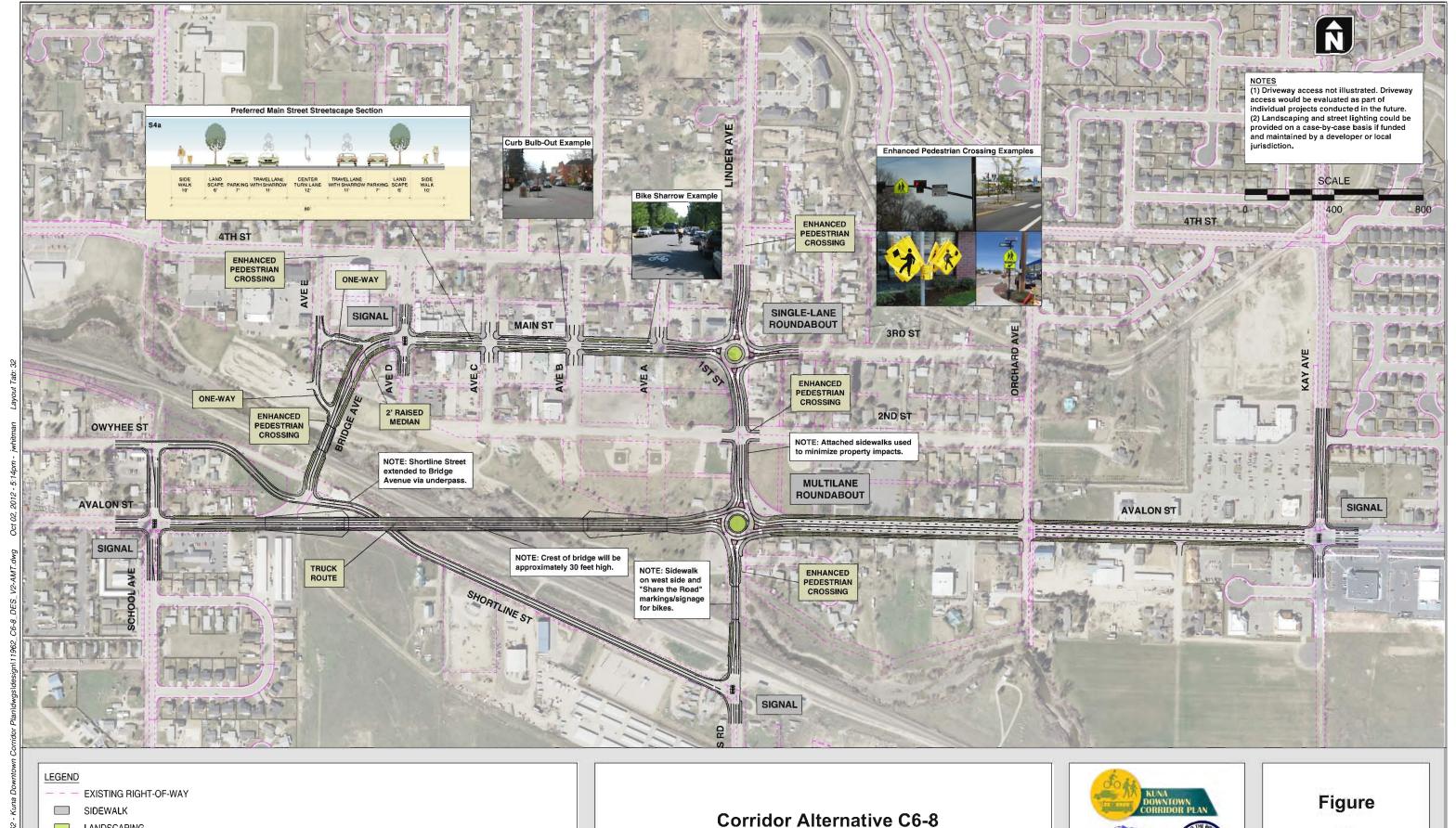
Based on the feedback received from the PMT, PAC, and the public, the two most promising corridor alternatives carried forward for further evaluation and concept design were Corridor Alternative C2-3 and Corridor Alternative C6-8, shown in Figures 31 and 32, respectively.



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LANDSCAPING

SPLITTER ISLAND

The two corridor alternatives reflect the S4a streetscape concept for Main Street and the following intersection concepts at the key study intersections:

- Kay Avenue & Avalon Street Traffic Signal
- Swan Falls Road & Avalon Street Roundabout
- Linder Avenue & Main Street Roundabout
- Avenue D & Main Street Traffic Signal
- Bridge Avenue & Shortline Street Roundabout
- School Avenue & Avalon Street Traffic Signal
- Swan Falls Road & Shortline Street Traffic Signal

All other intersections in the study area remain with the same traffic control as shown in existing conditions. The streetscape concept and intersection controls are shown in Figures 31 and 32. The two major intersection treatments identified for the two corridor alternatives include traffic signals and roundabouts.

Traffic signals provide operational and pedestrian crossing benefits, as well as the ability to be interconnected with the traffic control at the railroad crossings. Roundabouts provide several benefits, including:

- Safety benefits consistently shown in comprehensive studies to have significantly fewer fatal and injury crashes.
- Operational benefits typically have lower overall delay compared to signalized intersections, especially at non-peaks.
- Environmental benefits roundabouts result in fewer stops, less time idling, and less vehicular emissions than signalized intersections.
- Complementary with community values roundabouts provide opportunities for aesthetic enhancements such as artwork and landscaping.

Table 11 (next page) presents a basic overview of the roadway segments and intersections for the Corridor Alternatives C2-3 and C6-8. For a more detailed plan refer to Figures 31 and 32.

The two corridor alternatives have many similar design elements that can work together for a long-term vision of the downtown. The major difference is the addition of a grade-separated railroad crossing under Corridor Alternative C6-8. Similar to the process for the initial and refined concepts, further design, analysis, and evaluation were performed for the two corridor alternatives.

Table 12 (next page) presents a summary of the evaluation results for the two corridor alternatives, C2-3 and C6-8.

As shown in Table 12, Corridor Alternative C2-3 receives a total score of 4.5, providing a number of noticeable improvements to the corridor and only receiving a negative score for the freight mobility criteria. Corridor Alternative C6-8 receives a total score of 1.5, with significant improvements to overall mobility on the corridor, but also with significant impacts to both the natural and built environments and a much higher overall cost than Corridor Alternative C2-3.

At the June 21<sup>st</sup>, 2012 Open House, July 7<sup>th</sup>, 2012 Farmer's Market, and June 2012 PMT and PAC meetings, the two most promising corridor alternatives, evaluation results, and draft pedestrian and bicycle network improvements were presented to the public, stakeholders, and agency staff for discussion and selection of a preferred corridor alternative. Figures 33 and 34 illustrate the activity at the Public Open House and Farmer's Market, respectively.



Table 11 Overview of Concept Design of Corridor Alternatives C2-3 and C6-8

Segment/Intersection	Corridor Alternative C2-3	Corridor Alternative C6-8	
Road	dway Segments		
Avalon Street (Kay Avenue to Swan Falls Road)	Five-lane section with bike I	anes and detached sidewalks	
Linder Avenue (Swan Falls Road to Main Street)	Three-lane section with bike	lanes and detached sidewalks	
Main Street (Linder Avenue to Avenue "D")	1	oncept S4a) with bike sharrows and I sidewalks	
Bridge Avenue (Avenue "D" to Shortline Street ( <i>C2-3</i> ); Avenue "D" to School Avenue ( <i>C6-8</i> )		d detached sidewalks (attached across dge)	
Avalon Street (Shortline Street to School Avenue)	Three-lane section with bike lanes and detached sidewalks	Not Applicable	
Shortline Street (Swan Falls Road to Avalon Street)	Three-lane section with bike lanes and detached sidewalks	Three-lane section with bike lanes and detached sidewalks	
Swan Falls Road (Avalon Street to Shortline Street)	Two-lane section with bike lanes (except across bridge) and a det sidewalk on the west side only (attached across bridge)		
Avalon Street (East) to Avalon Street (West) via a new crossing	Not applicable	Three-lane section with bike lanes and attached sidewalks (New bridge)	
Ir	ntersections		
Kay Avenue/Avalon Street	Traffi	c Signal	
Orchard Street/Avalon Street	Two-Way S	Stop-Control	
Swan Falls Road/Avalon Street	Multilane Roundabout (Three-leg)	Multilane Roundabout (Four-leg)	
Linder Avenue/2 <sup>nd</sup> Street	Two-Way Stop-Control (Enhanced Pedestrian Crossing)		
Linder Avenue/Main Street/3 <sup>rd</sup> Street	Single-Lane	Roundabout	
Avenue "D"/Main Street	Traffi	c Signal	
Avenue "E"/Main Street	Two-Way Stop-Control (Realigned)		
Bridge Avenue/Shortline Street/Avalon Street	Single-Lane Roundabout	"T" intersection with Owyhee	
School Avenue/Avalon Street	Traffi	c Signal	
Shortline Street/Swan Falls Road	Traffic Signal		



Table 12 Corridor Alternatives C2-3 and C6-8 Evaluation Results

	Score		Score		
Evaluation Criteria	C2-3	C6-8	Evaluation Summary		
Vehicular Mobility (Non-Freight)	0.5	1	C2-3: Moderate roadway capacity; at-grade railroad crossings add delay C6-8: Greatest roadway capacity; grade-separated railroad crossing		
Freight Mobility	-0.5	1	Both Concepts: Center turn lane provided on Main Street for delivery truck storage C2-3: Truck route via Shortline Street; at-grade railroad crossings add delay C6-8: Direct truck route via grade-separated railroad crossing		
Pedestrian Mobility	0.5	0.5	Both Concepts: Good connectivity and sidewalk additions  C2-3: Challenges with at-grade railroad crossings  C6-8: Challenges with grade-separated connections		
Bicycle Mobility	0.5	0.5	Both Concepts: Bike lanes added to most of the corridor  C2-3: Challenges with at-grade railroad crossings  C6-8: Challenges with grade-separated connections		
Local Access	0.5	1	Both Concepts: Center turn lane provided on Main Street C2-3: Good access provided on east portion of corridor C6-8: Good access provided throughout the corridor		
Safety	0	0	Both Concepts: Some safety enhancements, including pedestrian and bicycle facilities, enhanced pedestrian crossings, roundabouts, and traffic signals  C2-3: No change in connection for emergency services  C6-8: Improved connection for emergency services; higher speed facility on Avalon Street; larger intersection at Swan Falls Road/Avalon Street		
Impacts to Natural Environment	1	-1	C2-3: Minimal impacts C6-8: High impacts to the Indian Creek Greenbelt, Grange Hall, Kuna ball park, and creek area		
Impacts to Built Environment	0.5	0	C2-3: Low to medium impacts (2 to 3 structures impacted) C6-8: Medium impacts (3 to 4 structures impacted)		
Land Use Compatibility	0	0	Both Concepts: Meets some of the objectives of the City's and ACHD plans		
Flexibility of Implementation	1	-0.5	C2-3: Simple phasing during construction C6-8: Complex phasing & coordination due to construction of bridge		
Cost Effectiveness	0.5	-1	C2-3: Low to medium costs C6-8: High costs		
Corridor Concept Total Score	4.5	1.5	Evaluation Scoring Scale: -1 (poor), 0 (fair), or 1 (good)		





Figure 33 Two Most Promising Corridor Alternatives, Public Open House



Figure 34 Display Booth at the Farmer's Market

The key outcomes from the Public Open House, Farmer's Market, and meetings included the following:

- Corridor Alternative C2-3 received 61% support, while Corridor Alternative C6-8 received 39%.
- The draft pedestrian and bicycle network received 88% support for approval.
- Support for a grade-separated railroad crossing in downtown or another location exists, but this project should be included in the upcoming Indian Creek Railroad Crossing Study programmed by ACHD for 2013.

Based on the cumulative information, Corridor Alternative C2-3 was selected as the preferred corridor alternative and used in the development of the corridor plan and implementation strategy presented in Sections 5 and 6.

Details of this evaluation can be found in *Technical Memorandum #5 – Evaluation of Two Most Promising Corridor Concepts* in the Technical Appendix.





**Section 5** Corridor Plan

#### **SECTION 5. CORRIDOR PLAN**

This section presents the overall Corridor Plan for downtown Kuna based on the Preferred Corridor Alternative C2-3. Specifically, the plan identifies the following elements:

- Corridor improvement plan
  - Roadway segments
  - Intersection treatments
  - Streetscape cross-sections
  - o Truck route
  - Access management considerations
- Pedestrian and bicycle network
- Conceptual construction cost estimates
- Other design considerations

The Corridor Plan provides a comprehensive set of transportation improvements to establish the long-term vision for downtown Kuna and to serve the growing multimodal travel needs within the area for the next 20 years and beyond. The plan was developed with extensive public involvement through the alternative screening and evaluation process described in this report.

#### CORRIDOR IMPROVEMENT PLAN

The conceptual design for the Corridor Plan improvements is shown in Figure 35. This figure displays 1"=400' (on 11"x17" paper) scale drawing of the preliminary (15% level) horizontal design, including intersection layouts, pedestrian and bicycle facilities, and approximate right-of-way needs. Additional information, such as drainage facilities and enhanced pedestrian crossing locations are identified as well.

#### **Roadway Segments**

The street cross sections and improvement projects for the major roadway segments in the study area are identified in Table 13.

Table 13 Summary of Roadway Segment Improvements

Project #	Roadway Segment	Location	Description
AR-1	Avalon Street	Kay Avenue to Swan Falls Road	Five-lane section with bike lanes and detached sidewalks
AR-2	Linder Avenue	Swan Falls Road to Main Street	Three-lane section with bike lanes and detached sidewalks
AR-3	Main Street	Linder Avenue/ 3 <sup>rd</sup> Street to Avenue D	Three-lane section with bike sharrows and detached sidewalks
CP-7	Bridge Avenue	Avenue D to Shortline Street/ Avalon Street	Two-lane section with bike lanes and detached sidewalks (attached across bridge)
I-6 and I-7	Avalon Street	Shortline Street to School Avenue	Three-lane section with bike lanes and detached sidewalks
CR-1	Shortline Street	Swan Falls Road to Avalon Street	Three-lane section with bike lanes and detached sidewalks
I-2, CP-4, B-1, and I- 8a /I-8b	Swan Falls Road	Avalon Street to Shortline Street	Two-lane section with bike lanes (except across bridge) and a detached sidewalk on the west side only

#### Intersection Treatments

Table 14 summarizes the long-term intersection treatments for the corridor plan.

Table 14 Summary of Intersection Improvements

Project #	Intersection	Traffic Control Type
I-1	Avalon Street & Kay Avenue	Traffic Signal
-	Avalon Street & Orchard Avenue	Two-way Stop Control
I-2	Avalon Street & Swan Falls Road	Multilane Roundabout
-	2 <sup>nd</sup> Street & Linder Avenue	Two-way Stop Control
I-3	Linder Avenue & Main Street/3 <sup>rd</sup> Street	Single-lane Roundabout
-	Main Street & Avenue A	Two-way Stop Control
-	Main Street & Avenue B	Two-way Stop Control
-	Main Street & Avenue C	Two-way Stop Control
I-4	Main Street & Avenue D	Traffic Signal
I-5	Bridge Avenue & Avenue E	Two-way Stop Control
1-2	Bridge Avenue & Owyhee Street	Two-way Stop Control
I-2	Bridge Avenue/Avalon Street & Shortline Street	Single-lane Roundabout
I-7	Avalon Street & School Avenue	Traffic Signal
I-8b	Shortline Street & Swan Falls Road	Traffic Signal





Kuna Downtown Corridor Plan

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Figure 37 illustrates the intersection control types and lane configurations at the study intersections. Figure 38 summarizes the traffic operations during the weekday p.m. peak hour at the study intersections under year 2035 traffic conditions.

As shown in Figure 38, all intersections are projected to meet the ACHD LOS Standard with the identified intersection control types and lane configurations.

## **Streetscape Sections**

The streetscape sections within the Corridor Plan were developed based on ACHD Policy Manual with minor exceptions as necessary to avoid significant impacts to bridge or building structures. Table 15 summarizes the number of lanes and right-of-way for the streetscape cross-sections on Avalon Street (East), Linder Avenue, Main Street, Avalon Street (West), and Shortline Street.

Table 15 Summary of Streetscape Sections

Roadway	Segment	# of Travel Lanes	Right-of- Way (feet)
Avalon Street (East)	Kay to Swan Falls	5	96
Linder Avenue	Swan Falls to Main	3	70
Main Street	Avenue A to Avenue D	3	80
Avalon Street (West)	Shortline to School	3	70
Shortline Street	Avalon to Swan Falls	3	70

The Main Street streetscape cross-section between Linder Avenue and Avenue D is shown in Figure 36. The streetscape includes a three-lane section with bicycle sharrows, on-street parking, landscaping, and sidewalks within the existing 80 feet of right-of-way with no impacts to existing structures. Further discussion of the remaining streetscapes is presented with the project prospectus sheets in Appendix A.

#### Truck Route

One of the goals of this plan is to improve mobility and downtown livability by accommodating through traffic and freight movement. The Corridor Plan identifies a truck route and the necessary improvements to create it. The truck route uses Shortline Street and Swan Falls Road to route trucks away from downtown. To facilitate this truck route, intersection, roadway, wayfinding, and community outreach projects have been identified in the plan. Figure 39 illustrates the truck route for the Corridor Plan.

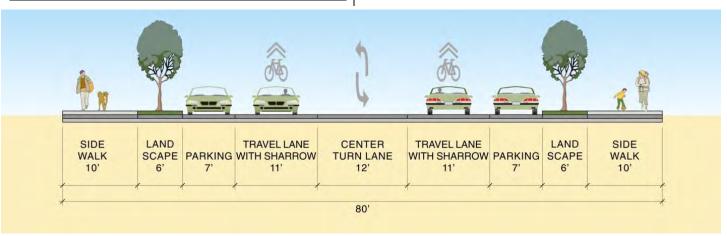
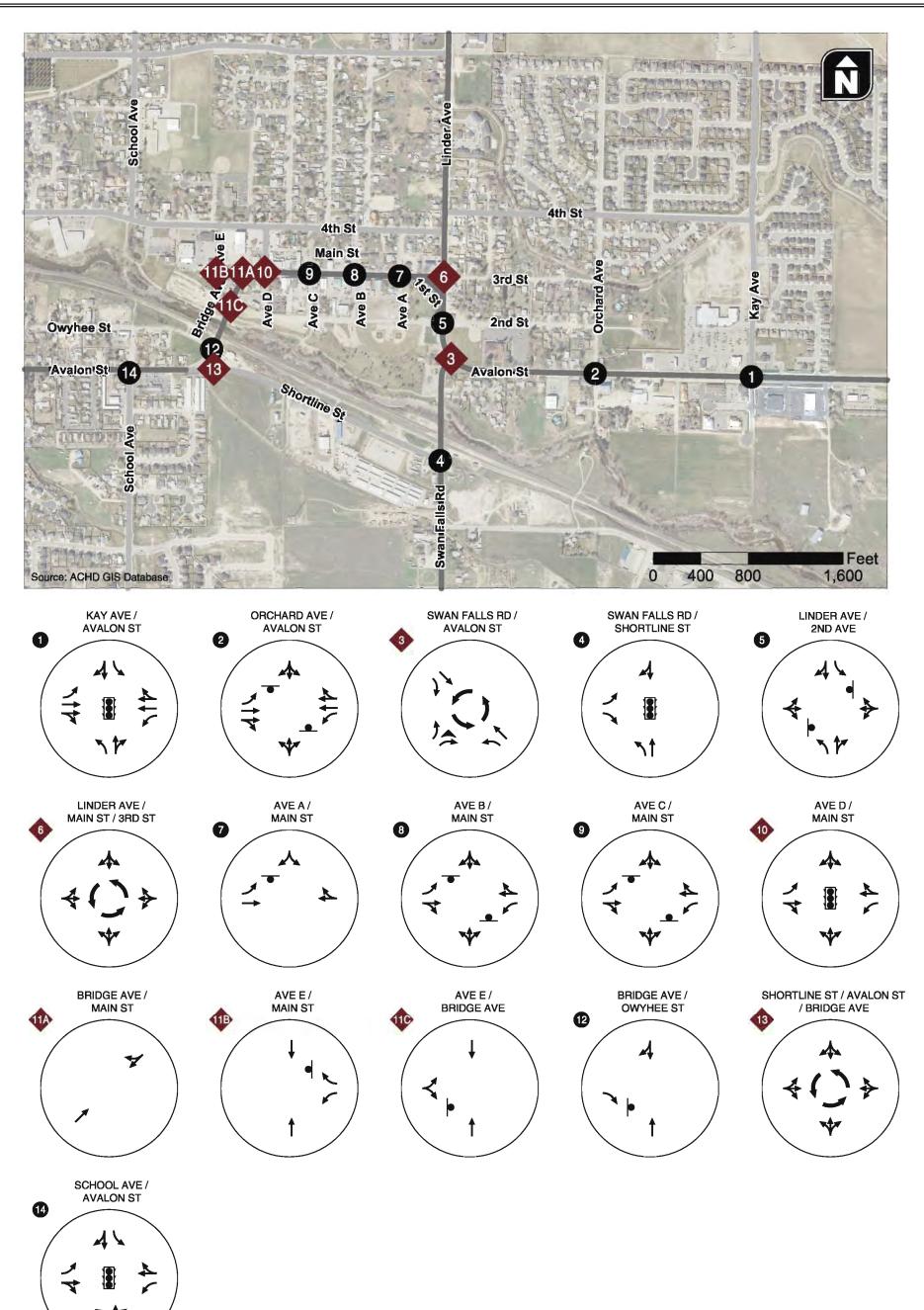


Figure 36 Main Street Streetscape Cross-Section





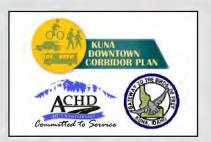
Kuna Downtown Corridor Plan





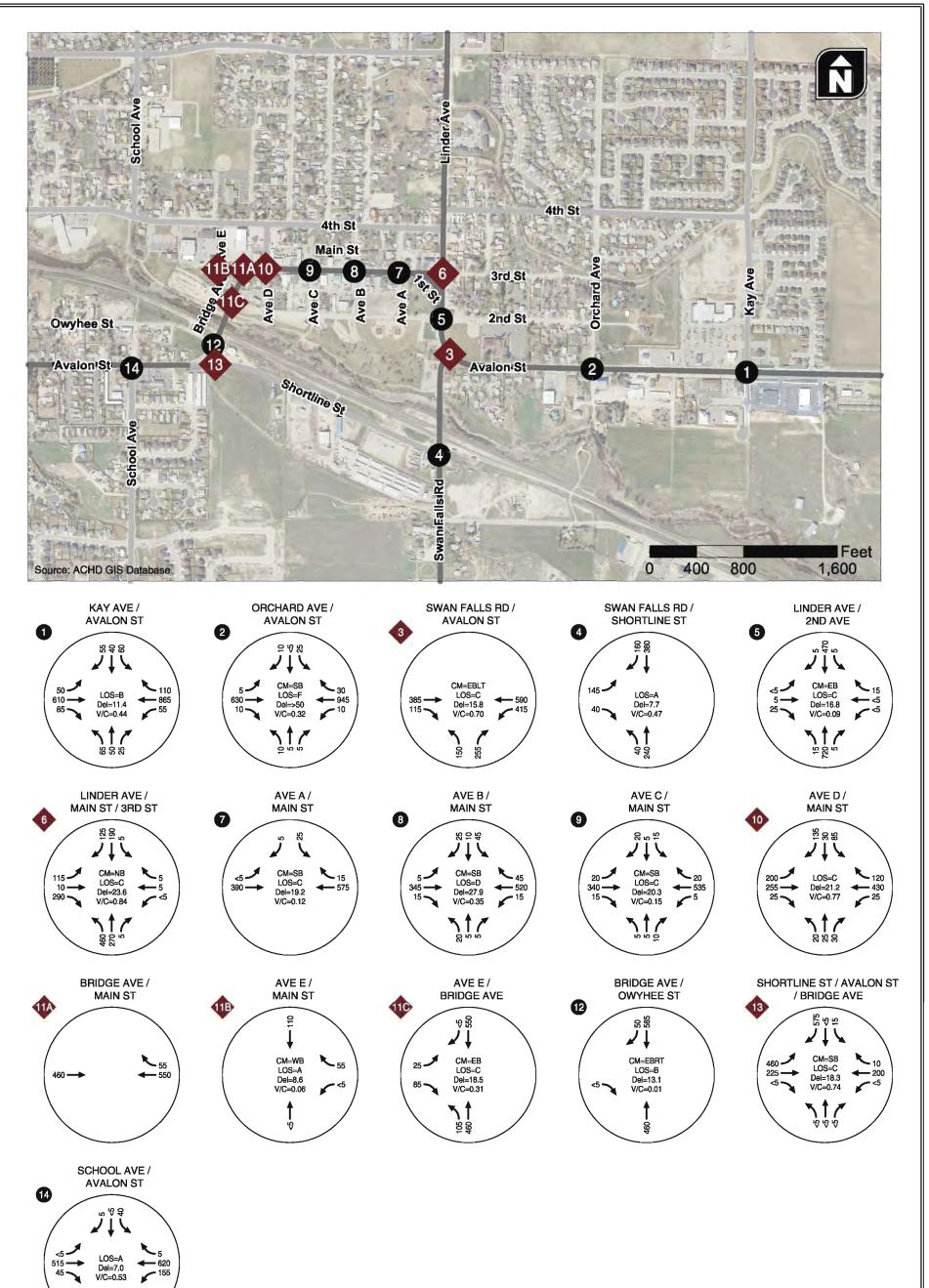


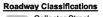
Corridor Plan
Lane Configurations and
Traffic Control Devices



Figure

Kuna Downtown Corridor Plan October 2012





Collector Street Arterial Street

### Map Elements Study

Intersection Key Study Intersection

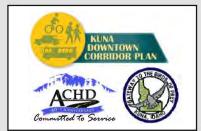
Operations
CM = Critical Movement (TWSC/RDBT)

LOS = Intersection Level of Service (AWSC) / Critical Movement Level of Service (TWSC/RDBT) Del = Intersection Average Control
Delay (AWSC) / Critical Movement
Control Delay (TWSC/RDBT)
V/C = Critical Volume-to-Capacity Ratio
TWSC = Two-Way Stop Control

AWSC = All-Way Stop Control

RDBT = Roundabout

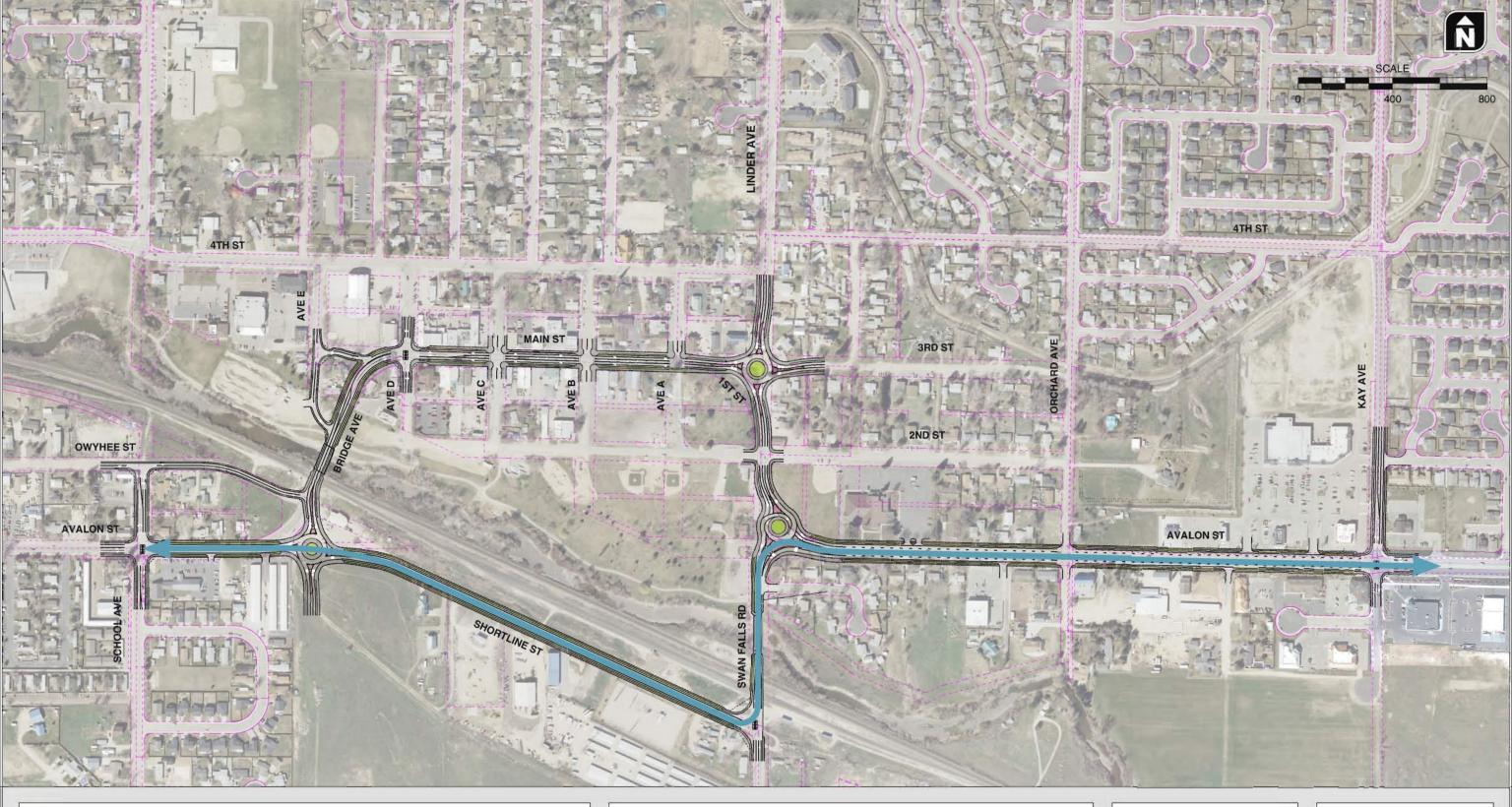
**Year 2035 Traffic Conditions** with Corridor Plan **Improvements Weekday PM Peak Hour** 



**Figure** 38

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Kuna Downtown Corridor Plan October 2012





EXISTING RIGHT-OF-WAY



LANDSCAPING



SPLITTER ISLAND TRUCK ROUTE

**Corridor Plan Truck Route** 



**Figure** 

39

Kuna Downtown Corridor Plan



# **Access Management Considerations**

In order to achieve the access management goals outlined in the ACHD Policy Manual and ITD's access management standards, several considerations need to be evaluated as improvements are made to the corridor and/or additional private development land use actions occur.

 Avalon Street (East), between Orchard Avenue and Kay Avenue is classified by ITD as a Principal Arterial, Type IV facility, which restricts access spacing to a ½-mile.

All other facilities in the area fall under ACHD's jurisdiction and maintain the following access spacing standards:

- Avalon Street (East) to Avalon Street (West) is designated a minor arterial and maintains minimum spacing of 1,320 feet for unsignalized collector streets, 660 feet for local streets, and 330 feet for driveways.
- Shortline Street is designated a major collector and maintains a minimum spacing from signalized intersections of 220 feet for rightin/right-out driveways and 440 feet for fullmovement driveways, and 150 feet for driveways near unsignalized intersections.

These access management considerations will guide the evaluation of public and private driveway locations and internal circulation routes for properties located adjacent to the corridor that are likely to develop or redevelop in the future.

As traffic volumes increase with new development and regional growth, access management can help maintain the operational integrity and safety of the primary roadways. Redevelopment or capital improvements will trigger the need to evaluate and determine how to modify access to move in the direction of meeting the access spacing standards and long-term vision of driveway consolidation. Some tools to consider as redevelopment or capital

improvements occur include the use of cross access easements/shared access, temporary access, and the use of frontage/backage and local access service roads.

# PEDESTRIAN AND BICYCLE NETWORK PLAN

Figure 41 illustrates the pedestrian and bicycle network plan. For the enhanced pedestrian crossings shown in the plan, the following treatments are recommended for refinement in the design stage. These treatments can increase the visibility between motorists and pedestrians and provide a more comfortable crossing for pedestrians.

The **Pedestrian Hybrid Beacon (PHB)** (formerly referred to as a HAWK crossing) is a signalized crossing that provides pedestrians with a protected means of crossing the road, while minimizing delay to vehicular traffic (Figure 40).

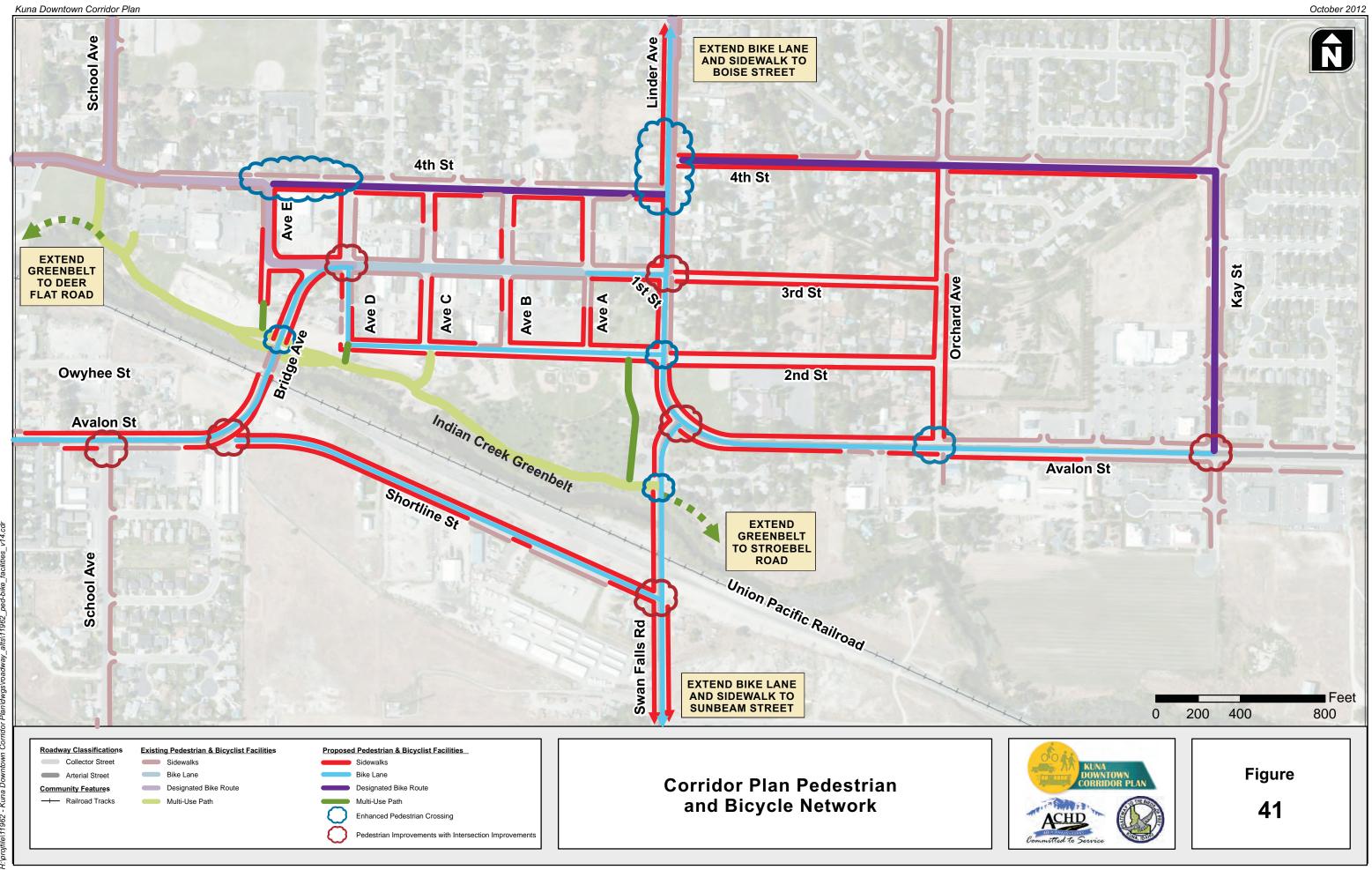


Figure 40 Pedestrian Hybrid Beacon in Ada County

**Pedestrian flags** are typically colored yellow or orange and are used by pedestrians at crosswalks to help alert oncoming drivers. Figure 42 illustrates the use of pedestrian flags at a pedestrian crossing.







Kuna Downtown Corridor Plan





Figure 42 Use of Pedestrian Flags

**Raised median islands** provide a refuge area in the middle of a crosswalk for pedestrians while crossing the street. Figure 43 illustrates a raised median island for a pedestrian crossing.



Figure 43 Pedestrian Crossing with a Raised Median Island

**Bulb outs/curb extensions** create additional space, improve visibility, and reduce crossing distances for pedestrians. Figure 44 illustrates a bulb out at an intersection with on-street parking.



Figure 44 Pedestrian Crossing with Bulb Outs /
Curb Extensions

# CONCEPTUAL CONSTRUCTION COST ESTIMATE

Table 16 (next page) summarizes the conceptual construction cost estimates for the capital projects in the Corridor Plan. Table 17 (next page) summarizes the conceptual construction cost estimates for the community program projects in the Corridor Plan. Further discussion on the cost estimates for each project is presented with the project prospectus sheets in Appendix A.

The total costs for the 14 capital projects (shown in Table 16) are estimated at approximately \$15.9 million (includes \$2.5 million for right-of-way costs). The total costs for the 26 community program projects (shown in Table 17) are estimated at approximately \$3.6 to \$4.4 million (includes \$0.26 million for right-of-way costs). The community program cost estimates do not include cost estimates for the four Greenbelt extension projects, CP-23, CP-24, CP-25, and CP-26 as they are City projects and CP-12 and CP-13 as these two projects are under construction.



Table 16 Summary of Corridor Plan (Capital Projects) Improvement Costs

Project #	Location	Improvement	Construction Cost (\$)	ROW Cost (\$)	Total Cost (\$)
I-1	Avalon Street & Kay Avenue	Install traffic signal	\$500,000	\$150,000	\$650,000
AR-1	Avalon Street (Kay Avenue to Swan Falls Road)	Widen to five lanes	\$3,130,000	\$390,000	\$3,520,000
I-2	Avalon Street & Swan Falls Road	Install multilane roundabout	\$1,250,000	\$120,000	\$1,370,000
AR-2	Linder Avenue (Swan Falls Road to Main Street)	Widen to three lanes	\$440,000	\$265,000	\$705,000
I-3	Main Street/Linder Avenue /3 <sup>rd</sup> Street	Install single-lane roundabout	\$1,000,000	\$270,000	\$1,270,000
AR-3	Main Street (Linder Avenue to Avenue D)	Reconstruct with three lanes	\$1,970,000	\$40,000	\$2,010,000
I-4	Main Street & Avenue D	Install traffic signal	\$500,000	\$10,000	\$510,000
I-5	Avenue E/Bridge Avenue	Realign and channelize intersections	\$330,000	\$150,000	\$480,000
I-6	Bridge Avenue/Avalon Street/ Shortline Street	Install single-lane roundabout	\$1,000,000	\$150,000	\$1,150,000
I-7	Avalon Street & School Avenue	Install traffic signal	\$500,000	\$80,000	\$580,000
CR-1	Shortline Street (Bridge Avenue to Swan Falls Road)	Widen to three lanes	\$2,030,000	\$640,000	\$2,670,000
I-8a	Shortline Street & Swan Falls Road	Construct curb return improvements for trucks	\$80,000	\$110,000	\$190,000
I-8b	Shortline Street & Swan Falls Road	Install traffic signal	\$500,000	\$110,000	\$610,000
B-1	Swan Falls Road Bridge Widening	Widen bridge to provide sidewalks and bike lanes	\$200,000	\$0	\$200,000

Table 17 Summary of Corridor Plan (Community Program Projects) Improvement Costs

Project #	Location	Improvement	Construction Cost (\$)	ROW Cost (\$)	Total Cost (\$)
CP-1	Orchard Street/Avalon Street	Install enhanced pedestrian crossing	\$10,000 - \$150,000	\$0	\$10,000 - \$150,000
CP-2	2 <sup>nd</sup> Street/Linder Avenue	Install enhanced pedestrian crossing	\$10,000 - \$150,000	\$0	\$10,000 - \$150,000
CP-3	Indian Creek Greenbelt at Bridge Avenue	Install enhanced pedestrian crossing	\$10,000 - \$150,000	\$0	\$10,000 - \$150,000
CP-4	Swan Falls Road Bridge	Add sidewalk, share the road signs, markings	\$30,000	\$0	\$30,000
CP-5	Linder Avenue/4 <sup>th</sup> Street	Install enhanced pedestrian crossing	\$10,000 - \$150,000	\$0	\$10,000 - \$150,000
CP-6	4 <sup>th</sup> Street (Avenue D to Avenue E)	Install enhanced pedestrian crossing	\$10,000 - \$150,000	\$0	\$10,000 - \$150,000
CP-7	Bridge Avenue (Avenue D to Bridge)	Add bike lanes	\$95,000	\$100,000	\$195,000
CP-8	Bridge Avenue (Shortline Street to Bridge)	Add new pedestrian connection	\$70,000	\$20,000	\$90,000
CP-9	Orchard Avenue (Avalon Street to 4th Street)	Add sidewalks	\$230,000	\$0	\$230,000
CP-10	2 <sup>nd</sup> Street (Orchard Avenue to Linder Avenue)	Add sidewalks	\$280,000	\$0	\$280,000
CP-11	3 <sup>rd</sup> Street (Orchard Avenue to Linder Avenue)	Add sidewalks	\$280,000	\$0	\$280,000
CP-12	4 <sup>th</sup> Street (Kay Avenue to Orchard Avenue)	Add sidewalks	-	-	Under construction
CP-13	4 <sup>th</sup> Street (Orchard Avenue to Linder Avenue)	Add sidewalks	-	-	Under construction
CP-14	Linder Avenue (4 <sup>th</sup> Street to Boise Street)	Add sidewalks	\$200,000	\$70,000	\$270,000



Project #	Location	Improvement	Construction Cost (\$)	ROW Cost (\$)	Total Cost (\$)
CP-15	Linder Avenue (4 <sup>th</sup> Street to Boise Street)	Add bike lanes	\$280,000	\$70,000	\$350,000
CP-16	Swan Falls Road (Shortline Street to Sunbeam Street)	Add sidewalks	\$410,000	\$0	\$410,000
CP-17	Swan Falls Road (Shortline Street to Sunbeam Street)	Add bike lanes	\$310,000	\$0	\$310,000
CP-18	Southeast Downtown Blocks (Main Street and 2 <sup>nd</sup> Street)	Add sidewalks on Avenue A and B	\$160,000	\$0	\$160,000
CP-19	Southwest Downtown Blocks (Main Street and 2 <sup>nd</sup> Street)	Add sidewalks on Avenue C and Avenue D	\$210,000	\$0	\$210,000
CP-20	2nd Street and Avenue D (Avalon Street to Main Street)	Add bike lanes	\$300,000	\$0	\$300,000
CP-21	North Downtown Blocks (Main Street and 4 <sup>th</sup> Street)	Add sidewalks on Avenues A, B, C, and D	\$300,000	\$0	\$300,000
CP-22	Avenue E Blocks (Main Street and 4 <sup>th</sup> Street)	Add sidewalks on Avenues D and E	\$90,000	\$0	\$90,000
CP-23	Indian Creek Greenbelt (East Downtown)	Add an asphalt-pathway connection	-	-	-
CP-24	Indian Creek Greenbelt (West Downtown)	Add an asphalt-pathway connection	-	-	-
CP-25	Indian Creek Greenbelt (East)	Extend greenbelt to to Stroebel Road	-	-	-
CP-26	Indian Creek Greenbelt (West)	Extend greenbelt to Deer Flat Road	-	-	-

#### OTHER DESIGN CONSIDERATIONS

As the Corridor Plan enters final design, the following storm drainage, utility, and geological considerations of implementation need to be considered.

# High-Level Assessment of Storm Drainage Impacts

The following is a brief summary of the anticipated impacts on storm drainage with the construction of the improvements in the Corridor Plan as well as the two recommended storm drainage concepts to be determined during final design. For a more detailed summary, including maps of existing facilities and drainage basin areas, refer to the Technical Appendix.

### **Storm Drain Concepts**

Concept 1 consists of typical storm drainage facilities including storm drain inlets and piping systems discharging to retention/detention facilities that discharge at predevelopment rates to

Indian Creek. Three separate systems would be required as follows:

- Improvements South of Indian Creek between School Avenue and Swan Falls Road
  - Standard collection and piping system that discharges to a linear facility located along the northerly side of Shortline Street adjacent to the railroad tracks;
- Issues: shallow soils; underlying basalt; property ownership by the Union Pacific Railroad; water quality;
- Estimated construction cost: \$350,000 to \$450,000.
- Improvements North of Indian Creek between Bridge Street and Linder Road
- Standard collection and piping system that discharges to a facility located along the northerly bank of Indian Creek;
- Issues: shallow soils; underlying basalt; impacts to the Kuna City Park and BMX facility; property ownership by the Union Pacific Railroad; water quality.
- Estimated construction cost: \$350,000 to \$450,000.
- Improvements North of Indian Creek between Linder Road and Kay Avenue



location.

discharges to multiple facilities located along the northerly bank of Indian Creek; One facility could be a linear facility running east from Swan Falls Road adjacent to Indian Creek in the existing un-opened right-of-way landscaped with native grass, plants and shrubs that would retain all run-off during low frequency events, and detain run-off during significant events with a controlled discharge into Indian Creek. One facility could be a retention/detention basin located adjacent to Indian Creek at the end of Orchard Street on undeveloped private land acquired for the One facility project. could be retention/detention basin located adjacent to Indian Creek at the end of Kay Avenue on

Standard collection and piping system that

It is common to incorporate a linear type storm drainage facility (swale) that would parallel the greenbelt. With proper design and landscaping the facility would be an amenity the to area. In addition, small retention/detention facilities could constructed at the ends of Orchard Street and Kay Avenue, similar to small ponds. Again, these could be landscaped and incorporated into the greenbelt system.

undeveloped private land acquired for the project. In this area, it is anticipated that the

City would extend the greenbelt in this

- Issues: shallow soils; underlying basalt; topography issues; acquisition of private property; and water quality.
- Estimated construction cost: \$350,000 to \$450,000.

Concept 2 would incorporate "green street" design features into the new roadway improvements. Possible features include:

Construction of depressed border strips between the back of curb and sidewalk that would collect all or portions of the storm runoff and percolate the water into the surrounding soils. The depressed border strips would be landscaped with low maintenance plants, shrubs and trees.  Utilization of a permeable concrete paver system as part of the roadway section to percolate storm water into the surrounding soils.

If "green street" design features are incorporated into the improvements it is very likely they will only be suitable for portions of the project and some elements of Concept 1 will also be necessary.

# High-Level Assessment of Utility Impacts

The following is a brief summary of the anticipated impacts on utilities with construction of the Corridor Plan. For a more detailed summary, including maps of existing facilities, refer to the Technical Appendix.

- Intermountain Gas Corridor Plan impacts anticipated for underground gas facilities include adjustment of valve boxes to grade and adjustment of gas mains due to conflicts with roadway improvements.
- Idaho Power Corridor Plan impacts anticipated for power facilities include relocation of poles and overhead wiring due to roadway widening, and relocation of street lighting.
- Century Link (telephone) Corridor Plan impacts anticipated for underground telephone facilities include adjustment of manholes, riser boxes, and telephone cables due to conflicts with roadway improvements.
- Sanitary Sewer Corridor Plan impacts anticipated for sanitary sewer facilities include adjusting manholes to grade and possible relocation of the lift station at the intersection of Linder/Swan Falls Road and Morris Court. Concept level estimated construction cost is \$10,000 to \$70,000, largely dependent upon relocation of the lift station.
- Potable Water Corridor Plan impacts anticipated for potable water facilities include adjusting valve boxes to grade, relocating fire hydrants outside the roadway improvements, and relocating water mains at conflicts with new storm drain piping. Concept level



- estimated construction cost is \$30,000 to \$50,000.
- Pressure Irrigation No Corridor Plan impacts to the existing pressure irrigation system are anticipated at this time.

# High-Level Assessment of Geological Conditions

All of the soils within the corridor are fine grained silt loam overlying cemented hardpan layers and basalt. There are essentially no "free draining" granular soils within the project limits and there are areas identified as rock outcrop generally located adjacent to Indian Creek. Geological conditions in Kuna create significant utility and storm drain challenges. The fine grained silt loam soils have slow percolation rates ranging from 0.5 to 2.0 inches per hour that severely restrict the ability to utilize subsurface percolation facilities to dispose of storm water. Any excavation within the project area is likely to encounter cemented hardpan and/or basalt bedrock. All project planning must include a study to approximate rock to be encountered and a budget item for rock excavation.







**SECTION 6** Implementation Strategy

# **SECTION 6. IMPLEMENTATION STRATEGY**

This section describes the phased implementation strategy for achieving the long-term transportation vision for downtown Kuna. The phasing plan identifies how the various roadway, intersection, pedestrian, and bicycle projects could be implemented for the Corridor Plan. Additionally, each project has a corresponding prospectus sheet to support the overall implementation strategy. The implementation plan elements describes the steps that should be taken by the ACHD and City of Kuna to ensure that all of the identified projects are coordinated with other studies, projects, and land use actions and implemented accordingly.

### PHASING PLAN

The phasing plan has been developed around a future year 2035 planning horizon and is divided into three phases of improvements: near-term, medium-term, and long-term. A total of 40 projects are identified with this plan and a brief summary of the phasing is presented below.

For each phase, a prioritization of the projects was developed through input from the PAC and PMT. The project prioritization is categorized by a high, medium, and low priority within each near-term, medium-term, and long-term. The high priority projects are the projects that would occur first followed by the medium and low priorities.

The projects identified in the plan are categorized by the following lettering scheme to match ACHD's Five-Year Work Plan:

- I Intersection
- AR Arterial Roadway
- CR Collector Roadway
- B Bridge
- CP Community Program

Tables 18 and 19 (next two pages) summarize the near-term, medium-term, and long-term capital and community program projects, respectively, for this plan. Figure 45 shows all of these projects on the downtown map.

To support the implementation strategy, a project prospectus sheet has been developed for each of the 40 projects. The project prospectus sheets include the following information:

- Project #, Name, Purpose, and Timeframe
- Planning Background
  - o Is the project part of a past plan?
  - Programmed construction year, if applicable
  - o Functional classification
  - o Daily traffic volumes, if applicable
- Project details (right-of way, length, drainage)
- Project criteria met (Mobility, Safety, Multimodal, and Livability)
- Project location by map
- Project illustrations by concept design and/or photo

All project prospectus sheets are included with this report in Appendix A.

# Near-term Improvements (0 to 10 years)

The near-term phasing represents an approximate timeline of the next ten years for planning, design, and construction of the identified improvements. The near-term phase includes five capital projects and eleven community program projects. As shown in Table 18 (next page), the capital projects include the following:

- Single lane roundabout at Linder Avenue/Main Street/3<sup>rd</sup> Street intersection (I-3)
- Traffic signal at Kay Avenue/Avalon Street intersection (I-1)
- Widening of Avalon Street East to five lanes (AR-1)



Table 18 Implementation Schedule of Corridor Plan (Capital Projects) Improvements

Phasing	Priority	Project #	Project Name	Description	Construction Cost (\$)	ROW Cost (\$)	Total Cost (\$)
Near	High	I-1	Kay Avenue/Avalon Street Traffic Signal	Install a traffic signal at intersection	\$500,000	\$150,000	\$650,000
Near	High	I-3	Linder Avenue/Main Street/3rd Street Single- Lane Roundabout	Construct a single lane roundabout at intersection	\$1,000,000	\$270,000	\$1,270,000
Near	Medium	I-2	Swan Falls Road/Avalon Street Multilane Roundabout	Construct a multilane roundabout at intersection	\$1,250,000	\$120,000	\$1,370,000
Near	Medium	AR-1	Avalon Street Widening, Kay Avenue to Swan Falls Road	Widen to five lanes with bike lanes and sidewalks	\$3,130,000	\$390,000	\$3,520,000
Near	Low	I-8a	Shortline Street/Swan Falls Road Curb Return Improvements	Construct curb returns to improve truck mobility at intersection	\$80,000	\$110,000	\$190,000
Medium	High	I-4	Avenue D/Main Street Traffic Signal	Install a traffic signal at intersection	\$500,000	\$10,000	\$510,000
Medium	High	I-5	Avenue E/Bridge Avenue Realignment & Channelization	Realign Avenue E and install channelization on Bridge Avenue	\$330,000	\$150,000	\$480,000
Medium	Medium	AR-2	Linder Avenue Widening, Swan Falls Road to Main Street	Widen to three lanes with bike lanes and sidewalks	\$440,000	\$265,000	\$705,000
Medium	Low	I-6	Bridge Avenue/Avalon Street/Shortline Street Single-Lane Roundabout	Construct a single lane roundabout at intersection	\$1,000,000	\$150,000	\$1,150,000
Medium	Low	AR-3	Main Street Streetscape Enhancements, Linder Avenue to Avenue D	Reconstruct three lanes with landscaping, wider sidewalks, onstreet parking, and bike sharrows	\$1,970,000	\$40,000	\$2,010,000
Long	High	B-1	Swan Falls Road Bridge Widening	Widen bridge to add sidewalks and bike lanes	\$200,000	\$0	\$200,000
Long	High	CR-1	Shortline Street Widening, Bridge Avenue to Swan Falls Road	Widen to three lanes with bike lanes and sidewalks	\$2,030,000	\$640,000	\$2,670,000
Long	Medium	I-8b	Shortline Street/Swan Falls Road Traffic Signal	Install a traffic signal at intersection	\$500,000	\$110,000	\$610,000
Long	Low	I-7	Avalon Street/School Avenue Traffic Signal	Install a traffic signal at intersection	\$500,000	\$80,000	\$580,000

Table 19 Implementation Schedule of Corridor Plan (Community Program) Improvements

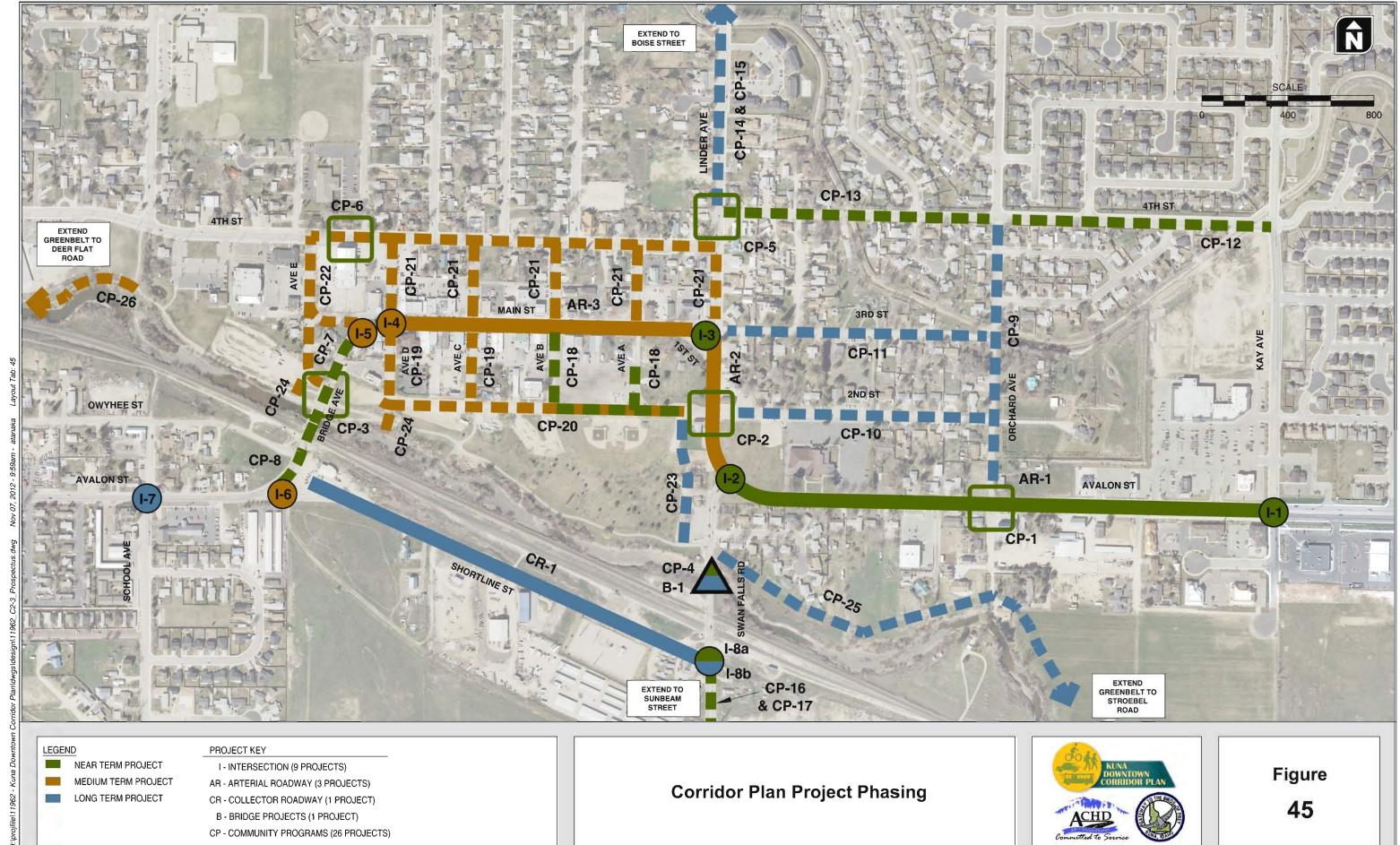
Phasing	Priority	Project #	Project Name	Description	Construction Cost (\$)	ROW Cost (\$)	Total Cost (\$)
Near	High	CP-1	Orchard Street/Avalon Street Enhanced Pedestrian Crossing	Install enhanced pedestrian crossing	\$10,000 - \$150,000	\$0	\$10,000 - \$150,000
Near	High	CP-2	2nd Street/Linder Avenue Enhanced Pedestrian Crossing	Install enhanced pedestrian crossing	\$10,000 - \$150,000	\$0	\$10,000 - \$150,000
Near	High	CP-3	Indian Creek Greenbelt at Bridge Avenue Enhanced Pedestrian Crossing	Install enhanced pedestrian crossing	\$10,000 - \$150,000	\$0	\$10,000 - \$150,000
Near	High	CP-4	Swan Falls Road Bridge Enhancement	Add sidewalk and share the road signage and markings for bikes	\$30,000	\$0	\$30,000
Near	High	CP-5	Linder Avenue/4th Street Enhanced Pedestrian Crossing	Install enhanced pedestrian crossing	\$10,000 - \$150,000	\$0	\$10,000 - \$150,000



Phasing	Priority	Project #	Project Name	Description	Construction Cost (\$)	ROW Cost (\$)	Total Cost (\$)
Near	High	CP-6	4th Street Between Avenue D and Avenue E Enhanced Pedestrian Crossing	Install enhanced pedestrian crossing	\$10,000 - \$150,000	\$0	\$10,000 - \$150,000
Near	High	CP-8	Bridge Avenue Pedestrian Connection, Shortline Street to Bridge Avenue Bridge	Add new pedestrian connection	\$70,000	\$20,000	\$90,000
Near	High	CP-12	4th Street Sidewalk Addition, Kay Avenue to Orchard Avenue	Add sidewalks	-	-	Under construction
Near	High	CP-13	4th Street Sidewalk Addition, Orchard Avenue to Linder Avenue	Add sidewalks	-	-	Under construction
Near	Medium	CP-7	Bridge Avenue Sidewalk and Bike Lane Addition, Avenue D to Bridge Avenue Bridge	Add bike lanes	\$95,000	\$100,000	\$195,000
Near	Medium	CP-16	Swan Falls Road Sidewalk Addition, Shortline Street to Sunbeam Street	Add sidewalks	\$410,000	\$0	\$410,000
Near	Medium	CP-17	Swan Falls Road Bike Lane Addition, Shortline Street to Sunbeam Street	Add bike lanes	\$310,000	\$0	\$310,000
Near	Low	CP-18	Southeast Downtown Blocks Sidewalk Addition	Add sidewalks on Avenue A and B between Main Street and 2nd Street	\$160,000	\$0	\$160,000
Medium	High	CP-20	2nd Street and Avenue D Bike Lane Addition, Avalon Street to Main Street	Add bike lanes	\$300,000	\$0	\$300,000
Medium	Medium	CP-19	Southwest Downtown Blocks Sidewalk Addition	Add sidewalks on Avenue C and Avenue D between Main Street and 2nd Street	\$210,000	\$0	\$210,000
Medium	Medium	CP-24	Indian Creek Greenbelt Connection to West Downtown Pathway Additions	Add an asphalt-pathway connection from the Indian Creek Greenbelt to Avenue D and the proposed Avenue E extension	-	-	-
Medium	Medium	CP-26	Indian Creek Greenbelt Extension to Deer Flat Road Pathway Addition	Add an asphalt-pathway connection from the Indian Creek Greenbelt to Deer Flat Road	-	-	-
Medium	Low	CP-21	North Downtown Blocks Sidewalk Addition	Add sidewalks on Avenue A, Avenue B, Avenue C, and Avenue D between Main Street and 4th Street	\$300,000	\$0	\$300,000
Medium	Low	CP-22	Avenue E Block Sidewalk Addition	Add sidewalks on Avenue D and Avenue E between Main Street and 4th Street	\$90,000	\$0	\$90,000
Long	High	CP-14	Linder Avenue Sidewalk Addition, 4th Street to Boise Street	Add sidewalks	\$200,000	\$70,000	\$270,000
Long	High	CP-15	Linder Avenue Bike Lane Addition, 4th Street to Boise Street	Add bike lanes	\$280,000	\$70,000	\$350,000
Long	Medium	CP-10	2nd Street Sidewalk Addition, Orchard Avenue to Linder Avenue	Add sidewalks	\$280,000	\$0	\$280,000
Long	Medium	CP-11	3rd Street Sidewalk Addition, Orchard Avenue to Linder Avenue	Add sidewalks	\$280,000	\$0	\$280,000
Long	Low	CP-9	Orchard Avenue Sidewalk Addition, Avalon Street to 4th Street	Add sidewalks	\$230,000	\$0	\$230,000
Long	Low	CP-23	Indian Creek Greenbelt Connection to East Downtown Pathway Addition	Add an asphalt-pathway connection from the Indian Creek Greenbelt to 2nd Street	-	-	-
Long	Low	CP-25	Indian Creek Greenbelt Connection to Stroebel Road Pathway Addition	Add an asphalt-pathway connection from the Indian Creek Greenbelt to Stroebel Road	-	-	-



Kuna Downtown Corridor Plan



Kuna Downtown Corridor Plan



- Multilane roundabout at Swan Falls Road/Avalon Street intersection (I-2)
- Curb return improvements at the Shortline Street/Swan Falls Road intersection (I-8a)

The total estimated cost is approximately \$7.3 million (includes \$1.3 million for right-of-way costs) for the near-term capital projects.

As shown in Table 19 (previous pages), the community program projects include the following high priority projects:

- Five locations with enhanced pedestrian crossings, including:
  - o 2<sup>nd</sup> Street/Linder Avenue (CP-2)
  - Linder Avenue/4<sup>th</sup> Street (CP-5)
  - Orchard Street/Avalon Street (CP-1)
  - Indian Creek Greenbelt at Bridge (CP-8)
  - o 4<sup>th</sup> Street between Avenues D and E (CP-6)
- Add sidewalk and share the road signage and markings for bikes on the Swan Falls Road bridge (CP-3)
- Provide sidewalks and bike lanes on Swan Falls Road between Shortline Street and Sunbeam Street (CP-16 and CP-17)
- Add sidewalks to sections of Avenues A and B between Main Street and 2<sup>nd</sup> Street (CP-18) and 4<sup>th</sup> Street between Linder Avenue and Kay Avenue (CP-12 and CP-13, projects are under construction).

The total estimated cost is approximately \$1.25 to \$1.95 million (includes \$0.12 million for right-of-way costs) for the near-term community program projects.

## Medium-term Improvements (10 to 20 years)

The medium-term phasing represents an approximate timeline of the next ten to twenty years for planning, design, and construction of the identified improvements. In the medium-term, the plan includes five capital projects and seven community program projects. As shown in Table 18, the capital projects include the following:

- Traffic signal at Avenue D/Main Street intersection (I-4)
- Realignment and channelization improvements at Avenue E/Bridge Avenue intersection (I-5)
- Widening of Linder Avenue to three lanes (AR-2)
- Single lane roundabout at Bridge Avenue/Avalon Street/Shortline Street intersection (I-6)
- Streetscape enhancements to Main Street (AR-3)

The total estimated cost is approximately \$4.6 million (includes \$0.4 million for right-of-way costs) for the medium-term capital projects.

As shown in Table 19, the community program projects include several sidewalk and bike lanes projects and a couple new connections for the Indian Creek Greenbelt. The total estimated cost is approximately \$0.9 million (no right-of-way costs identified) for the medium-term community program projects.

# Long-term Improvements (20 to 25 years)

The long-term phasing represents an approximate timeline of the next twenty to twenty-five years for planning, design, and construction of the identified improvements. In the long-term, the plan includes four capital projects and eight community program projects. As shown in Table 18, the capital projects include the following:

- Widening of the Swan Falls Bridge to include sidewalks and bike lanes (B-1)
- Widening of Shortline Street to three lanes (CR-1)
- Traffic signal at Shortline Street/Swan Falls Road intersection (I-8b)
- Traffic signal at Avalon Street/School Avenue intersection (I-7)

The total estimated cost is approximately \$4 million (includes \$0.8 million for right-of-way costs) for the long-term capital projects.



As shown in Table 19, the community program projects include several sidewalk and bike lanes projects and some additional connections for the Indian Creek Greenbelt. The total estimated cost is approximately \$1.4 million (includes \$0.14 million for right-of-way costs) for the long-term community program projects.

Overall, the total construction costs for the near-term, medium-term, and long-term phases of the Corridor Plan are estimated at approximately \$19 to \$20 million (includes \$2.75 million for right-of-way costs).

#### IMPLEMENTATION PLAN ELEMENTS

This section describes the key implementation steps to ensure project development occurs for the downtown corridor plan, including coordination with an upcoming Indian Creek Railroad Crossing Study, private development actions, Capital Improvements Plan / Five-Year Work Plan, and monitoring process for future updates.

# Coordination with Indian Creek Railroad Crossing Study

Several grade separated crossing alternatives were developed and evaluated during the development of this Corridor Plan. A grade separated crossing (depending on location) can improve the north/south mobility, emergency vehicle access, and travel time and reliability for users, but may have significant impacts to the natural and built environment, downtown businesses, and compatibility with land uses. Although a gradeseparated crossing alternative was not selected as a preferred alternative for the downtown corridor plan, there is interest from the PMT, PAC, and the public to evaluate the different grade-separated crossing alternatives in downtown and at other locations to the west and east of downtown.

Currently, ACHD has programmed the Indian Creek Railroad Crossing Study for fiscal year 2013. This study should include a broader evaluation of potential grade-separated crossing locations within the City. Potential locations include, but are not limited to:

- Ten Mile Road
- Extension of SH 69
- Extension of Avalon Street (Alternative C6-8 from this study)
- Linder Avenue to Swan Falls Road Crossing

Study elements should include an evaluation of the following: mobility, safety and emergency services, access and connectivity for users, travel time and reliability, natural and built environmental, visual impacts, business impacts, land use compatibility, right-of-way and construction costs, and funding options. Additionally, active public engagement and an expanded PAC and PMT should be considered for continuity between the two projects.

As the Indian Creek Railroad Crossing Study begins, ACHD and the City should utilize the analysis and findings in this Corridor Plan as an initial step in developing the overall project approach and assumptions. Through the study process and adoption, a review of the Corridor Plan should be conducted to identify any potential changes to the Corridor Plan with the adoption of the Indian Creek Railroad Crossing Study.

# **Private Development Actions**

The following section outlines the transportation requirements for development and land use amendment applications and describes how the City of Kuna and ACHD should coordinate in reviewing these applications. The corridor plan provides a framework for new development and land use applications to understand the



transportation needs and improvements in the study area.

The implementation of the Corridor Plan through private development land use actions and/or land use amendments will follow the development application and approval procedures of the City of Kuna and ACHD. The Corridor Plan through its adoption will serve as the transportation element and provide guidance for identifying the necessary transportation facility provisions (e.g., right-of-way, improvements, traffic control devices, etc.) associated with a specific land use action(s) and amendment(s). However, the Corridor Plan's adoption would necessitate the local agency with land use jurisdiction to consider the following when reviewing and approving specific land use actions:

Right-of-Way Dedication Requirements: Right-of-way dedications should be consistent with the Corridor Plan and developed in the Corridor Plan (refer to Figure 35) and specific capital and community program projects identified in Tables 16 and 17. Any deviations to the Corridor Plan should be coordinated with the ACHD.

# Capital Improvement Plan / 5-Year Work Plan

The implementation of the Corridor Plan by the ACHD will be initiated by associated project(s) being incorporated into the Capital Improvement Plan (updated every three years) and Five-Year Work Plan (updated annually). Once the project(s) is incorporated into these two plans, ACHD can initiate a design and construction project that is consistent with the concept-level design projects developed in the Corridor Plan (refer to Figure 35) and specific capital and community program projects identified in Tables 16 and 17. Any deviations to the Corridor Plan should be coordinated with the ACHD.

# **Monitoring Process**

The purpose of the corridor plan is to ensure that adequate safety and capacity is provided for highway users throughout the year 2035 horizon. While general monitoring thresholds are included within the plan to assist agencies in reviewing the need and timing of phased implementation, the corridor plan should remain dynamic and responsive to development and changes to the adopted land use and transportation plans. To accomplish this goal, a monitoring process should be agreed upon by the City and ACHD in an Inter-Governmental Agreement that identifies triggers for reviewing the corridor plan and how development within the surrounding area will be reviewed and coordinated with all parties.

Periodically, the Corridor Plan implementation program will need to be evaluated to ensure it is meeting the needs of ACHD and the City. Events that will trigger a review of the Corridor Plan include:

- Evaluation of an Indian Creek Railroad Crossing.
- Every fifth year from the date of Corridor Plan adoption or its latest update.
- Identified safety issues as noted by periodic review of crash data, statewide ranking and prioritization, and findings from traffic impact studies.
- Identified mobility failures as noted through periodic agency review and findings from traffic impact studies.
- Comprehensive Plan and Zone change applications.
- Updates to the City of Kuna Comprehensive Plan.
- Subarea and/or corridor studies conducted in the area.







**Appendix A Project Prospectus Sheets** 

Project #: I-1 Project Name: Kay Avenue/Avalon Street Traffic Signal Signalizing the intersection benefits vehicular mobility and capacity. It may also Timeframe: Near-Term **Project Purpose:** address crashes caused by drivers failing to yield to other vehicles or pedestrians. **Planning Background Project Costs** FYWP: Funded: N/A \$500,000 N **Construction Year:** Const./Eng: CIP: N BMP: Ex. ADT N/S: 2,320 ROW: \$150,000 Ex. ADT E/W: 10,190 Functional Classification N/W: **Major Collector** Other: Functional Classification E/W: **Principal Arterial Total Cost:** \$650,000 **Project Details** ROW (sq.ft.): 7,900 Length: N/A Drainage: Use existing system **Project Criteria Met** ☑ Safety ☐ Livability **Related Projects:** AR-1 **Project Location AVALON ST Project Illustration AVALON ST** Notes:

Project #: I-2 Project Name: Swan Falls Road/Avalon Street Multilane Roundabout Constructing a multilane roundabout has safety benefits over signalizing the Timeframe: **Near-Term Project Purpose:** intersection, enhances aesthetics, and improves vehicular mobility and capacity. **Planning Background Project Costs** Υ¹ \$1,250,000 FYWP: Funded: **Construction Year:** See note 1 Const./Eng: CIP: N BMP: N Ex. ADT N/S: 8,010 ROW: \$120,000 Ex. ADT E/W: 12,915 Functional Classification N/S: **Minor Arterial** Other: Functional Classification E/W: **Minor Arterial Total Cost:** \$1,370,000 **Project Details** ROW (sq.ft.): 13,750 N/A No existing system. Potential detention pond in park. Length: Drainage: **Project Criteria Met** ☑ Safety □ Livability **Project Location Related Projects:** AR-1; AR-2 **CP-11** CP-20 € 2ND ST 2ND ST **CP-10** 

#### **Project Illustration**



Notes:

<sup>1</sup>FYWP identifies "Kuna Downtown Traffic Improvements" Project, which has an option for a concept design at one of four intersections (including the Swan Falls Road/Avalon Street intersection) among other projects.



Linder Avenue/Main Street/3<sup>rd</sup> Street Single-Lane Roundabout Project #: I-3 Project Name: Constructing a single-lane roundabout has safety benefits over signalizing the Timeframe: **Near-Term Project Purpose:** intersection, enhances aesthetics, and improves vehicular mobility and capacity. **Project Costs Planning Background** Υ¹ \$1,000,000 FYWP: Funded: **Construction Year:** See note 1 Const./Eng: CIP: N BMP: N Ex. ADT N/S: 5,255 ROW: \$270,000 Ex. ADT E/W: 7,000 Functional Classification N/S: **Minor Arterial** Other: TBD<sup>2</sup> Functional Classification E/W: Minor Arterial/Local Street **Total Cost:** \$1,270,000<sup>2</sup> **Project Details** ROW (sq.ft.): 9,550<sup>2</sup> N/A Length: Drainage: No existing system **Project Criteria Met** ☑ Safety ☐ Multimodal □ Livability AR-2; AR-3; CP-11; CP-18; **Project Location Related Projects:** CP-21 3RD ST AR-3 2ND ST

## **Project Illustration**



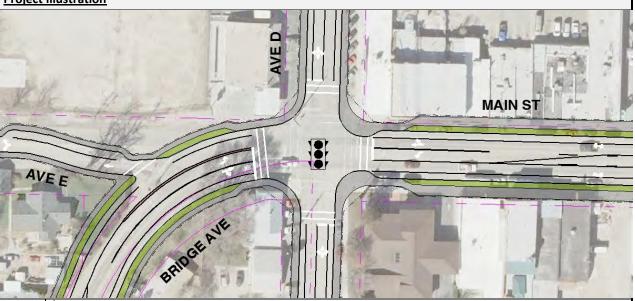
Notes

<sup>1</sup>FYWP identifies "Kuna Downtown Traffic Improvements" Project, which has an option for a concept design at one of four intersections (including the Linder Avenue/Main Street/3<sup>rd</sup> Street intersection) among other projects.

<sup>2</sup>One structure impacted on the northwest corner of the intersection. One structure impacted on the southeast corner of the intersection. Structure and relocation costs to be determined by ACHD.

Project #: I-4 Project Name: Avenue D/Main Street Traffic Signal Signalizing the intersection benefits vehicular mobility and capacity. It may also Timeframe: Medium-Term **Project Purpose:** address crashes caused by drivers failing to yield to other vehicles or pedestrians. **Planning Background Project Costs** Υ¹ \$500,000 FYWP: Funded: **Construction Year:** See note 1 Const./Eng: CIP: N BMP: N Ex. ADT N/S: 2,425 ROW: \$10,000 Ex. ADT E/W: 7,000 Functional Classification N/S: Major Collector/Local Street Other: Functional Classification E/W: **Minor Arterial Total Cost:** \$510,000 **Project Details** ROW (sq.ft.): 200 Length: N/A Use existing system on east side. No existing system on west side. Drainage: **Project Criteria Met** ☑ Safety □ Livability **Project Location Related Projects:** I-5; AR-3; CP-19; CP-21 **CP-20** 

#### **Project Illustration**



Notes:

<sup>1</sup>FYWP identifies "Kuna Downtown Traffic Improvements" Project, which has an option for a concept design at one of four intersections (including the Avenue D/Main Street intersection in combination with the Avenue E/Main Street intersection) among other projects.



Project #: I-5 Project Name: Avenue E/Bridge Avenue Realignment & Channelization Realignment and channelization improves safety. Potential for combination with Timeframe: Medium-Term **Project Purpose:** Project I-4. **Planning Background Project Costs** Υ¹ \$330,000 FYWP: Funded: **Construction Year:** See note 1 Const./Eng: CIP: N BMP: N Ex. ADT N/S: 6,555 ROW: \$150,000 Ex. ADT E/W: 1,740 Other: Functional Classification N/S: **Minor Arterial** Functional Classification E/W: **Local Street Total Cost:** \$480,000 **Project Details** ROW (sq.ft.): 8,250<sup>2</sup> Length: 600' No existing system. Potential detention pond north of Indian Creek. Drainage: **Project Criteria Met** ☐ Mobility ☑ Safety ☐ Multimodal □ Livability **Project Location Related Projects:** I-4; CP-7; CP-22 4TH ST

### **Project Illustration**



Notes:

<sup>1</sup>FYWP identifies "Kuna Downtown Traffic Improvements" Project, which has an option for a concept design at one of four intersections (including the Avenue D/Main Street intersection in combination with the Avenue E/Main Street intersection) among other projects.

<sup>2</sup>ROW requirements assume area within Railroad ROW.



Project #: I-6 Project Name: Bridge Avenue/Avalon Street/Shortline Street Single-Lane Roundabout Constructing a single-lane roundabout has safety benefits over signalizing the intersection, and improves vehicular mobility and capacity. The roundabout layout Timeframe: Medium-Term **Project Purpose:** emphasizes Shortline Street as the preferred route, and a new south leg provides access for future development. **Planning Background Project Costs** Υ¹ Funded: **Construction Year:** \$1,000,000 FYWP: See note 1 Const./Eng: CIP: N BMP: Ν Ex. ADT N/S: 6,555 ROW: \$150,000 Ex. ADT E/W: 7,580 **Functional Classification N/S: Minor Arterial** Other: Functional Classification E/W: Minor Arterial/Major Collector **Total Cost:** \$1,150,000 **Project Details** 22,200<sup>2</sup> ROW (sq.ft.): N/A Length: Drainage: No existing system. Potential detention pond north of Shortline St. **Project Criteria Met**  Multimodal ☑ Safety CR-1; CP-8 **Project Location Related Projects:** 



#### **Project Illustration**



Notes:

DOWNTOWN CORRIDOR PLAN

<sup>1</sup>FYWP identifies "Kuna Downtown Traffic Improvements" Project, which has an option for a concept design at one of four intersections (including the Bridge Avenue/Avalon Street/Shortline Street intersection) among other projects.

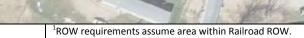
<sup>2</sup>ROW requirements assume construction of south leg to approximate end of splitter island.

Project #: I-7 Project Name: **Avalon Street/School Avenue Traffic Signal** Signalizing the intersection benefits vehicular mobility and capacity. It may also Timeframe: Long-Term **Project Purpose:** address crashes caused by drivers failing to yield to other vehicles or pedestrians. **Planning Background Project Costs** FYWP: Funded: \$500,000 N **Construction Year:** N/A Const./Eng: CIP: N BMP: N Ex. ADT N/S: 135 ROW: \$80,000 Ex. ADT E/W: 7,580 **Major Collector** Functional Classification N/S: Other: Functional Classification E/W: **Minor Arterial Total Cost:** \$580,000 **Project Details** ROW (sq.ft.): 7,650<sup>1</sup> Length: N/A Drainage: Use existing system **Project Criteria Met** ☑ Safety □ Livability **Project Location Related Projects:** N/A **OWYHEE ST** KUNA AVE **Project Illustration AVALON ST** <sup>1</sup>ROW requirements assume realignment of School Avenue. Notes:



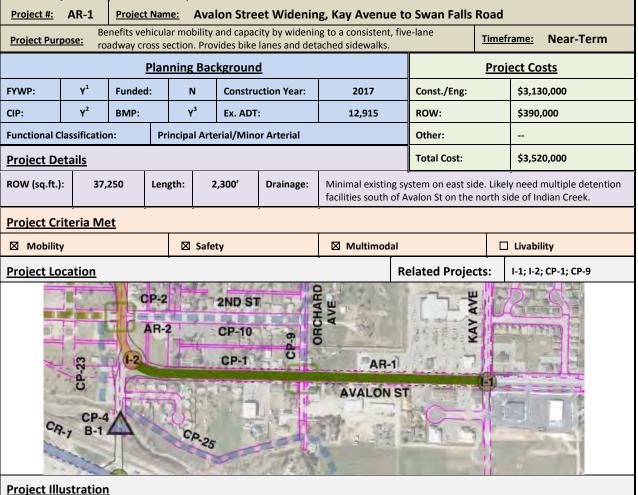
Project #: I-8a Project Name: **Shortline Street/Swan Falls Road Curb Return Improvements** Constructing curb returns improves the functionality of the intersection for truck traffic. Providing a functional truck route on Shortline Street improves livability Timeframe: **Near-Term Project Purpose: Planning Background Project Costs** Funded: FYWP: N N **Construction Year:** N/A Const./Eng: \$80,000 CIP: 8,010 N BMP: N Ex. ADT N/S: ROW: \$110,000 Ex. ADT E/W: 2,530 **Functional Classification N/S:** Minor Arterial Other: Functional Classification E/W: **Major Collector Total Cost:** \$190,000 **Project Details** ROW (sq.ft.): 7,600<sup>1</sup> N/A Length: Drainage: No existing system **Project Criteria Met** ■ Multimodal □ Livability ☑ Safety **Project Location Related Projects:** I-8b; CR-1; CP-16; CP-17 I-8a 1-8b **Project Illustration** <sup>1</sup>ROW requirements assume area within Railroad ROW. Notes:

Project #: I-8b **Project Name: Shortline Street/Swan Falls Road Traffic Signal** Signalizing the intersection benefits vehicular mobility and capacity. It may also Timeframe: Long-Term **Project Purpose:** address crashes caused by drivers failing to yield to other vehicles or pedestrians. **Planning Background Project Costs** \$500,000 FYWP: N Funded: **Construction Year:** N/A Const./Eng: CIP: N BMP: N Ex. ADT N/S: 8,010 ROW: \$110,000 Ex. ADT E/W: 2,530 Functional Classification N/S: **Minor Arterial** Other: Functional Classification E/W: **Major Collector Total Cost:** \$610,000 **Project Details** ROW (sq.ft.): 7,600<sup>1</sup> Length: N/A Drainage: No existing system **Project Criteria Met** ☑ Safety □ Livability **Project Location Related Projects:** I-8a; CR-1; CP-16; CP-17 SHORTLINE ST & CP-17 **Project Illustration** SWAN FALLS RD SHORTLINEST



Notes:







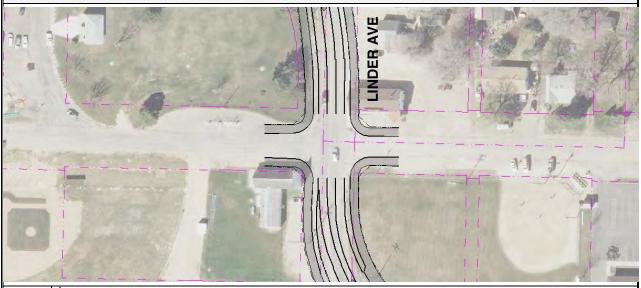
<sup>1</sup>FYWP identifies "Kuna Downtown Traffic Improvements" Project, which includes option for widening Avalon Street between Kay Avenue and Swan Falls Road among other projects.

<sup>2</sup>CIP identifies Avalon Street widening from two- to three-lanes from Linder Avenue to Orchard Avenue in years 2022-2026. <sup>3</sup>BMP identifies Avalon Street between Swan Falls Road and the County Line as a location for a medium to long-term (occurring in 15 to 50 years) planned signed shared bikeway.



Project #: AR-2 Project Name: Linder Avenue Widening, Swan Falls Road to Main Street											
Benefits vehicular mobility and capacity by widening to a consistent three-lane roadway cross section between proposed roundabouts at Swan Falls Road/Avalon Street and Linder Avenue/Main Street/3 <sup>rd</sup> Street. Provides bike lanes and sidewalks.  Timeframe: Medium-Term											
Planning Background Project Costs											
FYWP:	FYWP: Y <sup>1</sup> Funded: N Construction Year: N/A										\$440,000
CIP:	N	вмр:	١	/ <sup>2</sup> E:	x. ADT:		5,235		ROW:		\$265,000
Functional C	lassificatio	n:	Minor A	Arterial					Other:		TBD <sup>3</sup>
Project De	<u>etails</u>								Total Cost:		\$705,000 <sup>3</sup>
ROW (sq.ft.)	: 1,7	700	Length:	350	0'	Drainage:	No existing syst	em.	Potential deter	ntion p	ond in park.
Project Cr	iteria Me	et .		<del>-</del>							
⊠ Mobility	/		⊠	Safety			Multimoda	al			Livability
Project Lo	cation							Re	elated Projec	ts:	I-2; I-3; AR-1; AR-3; CP-2; CP-10; CP-11; CP-18; CP- 20; CP-21

### **Project Illustration**



<sup>1</sup>FYWP identifies "Kuna Downtown Traffic Improvements" Project, which includes option for widening Linder Avenue between Swan Falls Road and Main Street among other projects.

<sup>2</sup>BMP identifies a long-term (occurring in 25 to 50 years) planned bike lane project along Swan Falls Road/Linder Avenue between Mora Canal and Boise Street.

<sup>3</sup>One structure impacted on the northeast corner of the intersection. One structure impacted on the southwest corner of the intersection. Structure and relocation costs to be determined by ACHD.

DOWNTOWN CORRIDOR PLAN

Project #: AR-3 **Project Name:** Main Street Streetscape Enhancements, Linder Avenue to Avenue D Addition of landscaping, wider sidewalks, and bike sharrows to Main Street enhances multimodal travel for pedestrians and bicyclists, as well as improves the built Timeframe: Medium-Term **Project Purpose:** environment and livability downtown. **Planning Background Project Costs** Υ¹ FYWP: Funded: N **Construction Year:** 2017 Const./Eng: \$1,970,000 CIP: N BMP: N Ex. ADT: 7,000 ROW: \$40,000 **Functional Classification: Minor Arterial** Other: **Total Cost:** \$2,010,000 **Project Details** ROW (sq.ft.): 1,950 Length: 1,300' Drainage: Enhance existing system. Potential drainage pond in park or consider use of "green street" collection & percolation system. **Project Criteria Met** ☐ Mobility □ Safety □ Livability I-3; I-4; CP-18; CP-19; CP-**Project Location Related Projects:** 4TH ST CP-1 2ND ST **CP-20 Project Illustration** S4a SIDE LAND TRAVEL LANE CENTER TRAVEL LANE LAND SIDE WALK SCAPE PARKING WITH SHARROW TURN LANE WITH SHARROW PARKING SCAPE WALK 10' 12' 10' 80 MAIN ST <sup>1</sup>FYWP identifies "Kuna Downtown Traffic Improvements" Project, which includes option for improvements to Main Street among Notes: other projects.

Project #: CR-1 **Project Name:** Shortline Street Widening, Bridge Avenue to Swan Falls Road Benefits vehicular mobility and capacity by widening to a three-lane roadway cross section capable of accommodating truck traffic. A functional truck route on Shortline Timeframe: Long-Term **Project Purpose:** Street improves livability downtown. Provides bike lanes and detached sidewalks. **Planning Background Project Costs** Funded: FYWP: N N **Construction Year:** N/A Const./Eng: \$2,030,000 CIP: 2,530 ROW: N BMP: N Ex. ADT: \$640,000 **Functional Classification: Major Collector** Other: **Total Cost:** \$2,670,000 **Project Details** ROW (sq.ft.): 40,750 Length: 1,850' Drainage: No existing system. Potential drainage pond north of Shortline St. **Project Criteria Met**  □ Livability □ Safety I-6; I-8a; I-8b; CP-8; CP-16; **Project Location Related Projects:** AR-2 CA-1 SHORTLINE ST 1-8a I-8b **CP-16 Project Illustration** SHORTLINEST Notes:



Project #: B-1 Project Name: Swan Falls Road Bridge Widening Widening of the bridge to provide sidewalks and bike lanes in both directions as well Timeframe: Long-Term **Project Purpose:** as potentially adding vehicular capacity if future need is evident. **Project Costs Planning Background** FYWP: Funded: \$200,000 N **Construction Year:** N/A Const./Eng: Υ¹ CIP: N BMP: Ex. ADT: 8,010 ROW: **Functional Classification: Minor Arterial** Other: **Project Details Total Cost:** \$200,000 ROW (sq.ft.): 0 Length: 150' Drainage: No existing system **Project Criteria Met** ☑ Safety **⊠** Multimodal □ Livability CP-4; CP-23; CP-25 **Related Projects: Project Location** 

## **Project Illustration**



<sup>1</sup>BMP identifies a long-term (occurring in 25 to 50 years) planned bike lane project along Swan Falls Road/Linder Avenue between Mora Canal and Boise Street.



Project #:	CP-1	Project N	lame:	Orchard St	eet/Avalor	Street Enhar	ced Pedestriar	n Cross	sing	
Project Pur	Ins	stalling an educing pote tential for	enhanced ential cor	strians by	ans by					
	<u> </u>	<u>P</u> l		Project Costs						
FYWP:	Y <sup>2</sup>	Funded:	1	Const./Eng:		\$10,0	000 - \$150,000			
CIP:	N	ВМР:			N/S: E/W:	550 12,915	ROW:	ROW:		
Functional C		-	Local St Principa	reet Il Arterial/Min	or Arterial		Other:			
Project De	etails	<u>.</u>					Total Cost:		\$10,000 - \$150,000	
ROW (sq.ft.)	: (	) [	ength:	N/A	Drainage:	No existing syst	em			
Project Cr	iteria Me	e <u>t</u>								
☐ Mobilit	У		×	Safety		Multimod	al		Livabi	lity
Project Lo	cation						Related Proje	cts:	AR-1; (	CP-9
				AV	ND ST	CP-1				

## **Project Illustration**



<sup>1</sup> From ACHD Community Programs Scoping Report: Pedestrian actuated crossing on Avalon Street at Orchard Street provides safe access to citizens accessing commercial destinations to the north.

<sup>2</sup>FYWP identifies "Kuna Downtown Traffic Improvements" Project, which includes the option for improvements to Avalon Street among other projects.

2<sup>nd</sup> Street/Linder Avenue Enhanced Pedestrian Crossing Project #: CP-2 Project Name: Installing an enhanced pedestrian crossing improves safety for pedestrians by reducing Timeframe: **Near-Term Project Purpose:** potential conflicts between pedestrians and other modes of travel.<sup>1</sup> **Planning Background Project Costs** Υ² \$10,000 - \$150,000 FYWP: Funded: **Construction Year:** N/A Const./Eng: CIP: N BMP: N Ex. ADT N/S: 5,235 ROW: Ex. ADT E/W: 760 Other: Functional Classification N/S: **Minor Arterial** Functional Classification E/W: **Local Street Total Cost:** \$10,000 - \$150,000 **Project Details** ROW (sq.ft.): 0 Length: N/A Drainage: No existing system **Project Criteria Met** ☐ Mobility ☑ Safety ☐ Livability AR-2; CP-10; CP-18; CP-**Project Location Related Projects:** 20; CP-23



#### **Project Illustration**



<sup>1</sup>From ACHD Community Programs Scoping Report: Pedestrian actuated signal and crosswalk to provide safer access to those crossing Linder to access the park or other public destinations.

<sup>2</sup>FYWP identifies "Kuna Downtown Traffic Improvements" Project, which includes option for improvements to Linder Avenue between Avalon Street and Main Street among other projects.

Project #: CP-3 Project Name: Indian Creek Greenbelt at Bridge Avenue Enhanced Pedestrian Crossing Installing an enhanced pedestrian crossing improves safety for pedestrians by **Timeframe:** Near-Term **Project Purpose:** reducing potential conflicts between pedestrians and other modes of travel. **Planning Background Project Costs** Υ¹ FYWP: Funded: **Construction Year:** N/A \$10,000 - \$150,000 Const./Eng: CIP: N BMP: Ex. ADT: 6,555 ROW: **Functional Classification: Minor Arterial** Other: **Project Details Total Cost:** \$10,000 - \$150,000 ROW (sq.ft.): 0 Length: N/A Drainage: No existing system **Project Criteria Met** ☐ Mobility ☑ Safety **⊠** Multimodal □ Livability CP-7; CP-8; CP-22 **Related Projects: Project Location** 

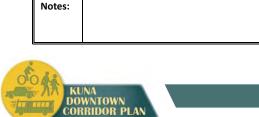
## **Project Illustration**



<sup>1</sup>FYWP identifies "Kuna Downtown Traffic Improvements" Project, which includes option for improvements to Bridge Avenue between Avalon Street and Main Street among other projects.



Project #: CP-4 **Project Name:** Swan Falls Road Bridge Enhancement Provides "Share the Road" markings/signage for bicyclists and sidewalk on west side. Near-Term Timeframe: Project Purpose: **Planning Background Project Costs** FYWP: **Construction Year:** N/A \$30,000 N Funded: N Const./Eng: CIP: 8,010 ROW: Ν BMP: Ν Ex. ADT: **Functional Classification: Minor Arterial** Other: **Total Cost:** \$30,000 **Project Details** ROW (sq.ft.): Length: 150' Drainage: No existing system **Project Criteria Met** ☐ Mobility □ Safety Multimodal □ Livability **Related Projects:** B-1; CP-23; CP-25 **Project Location Project Illustration** 



Project #: CP-5 Project Name: Linder Avenue/4 <sup>th</sup> Street Enhanced Pedestrian Crossing											
Project Purpose:  Safety for pedestrians by reducing potential conflicts between pedestrians and other modes of travel.  Installing an enhanced pedestrian crossing improves safety for pedestrians by reducing potential conflicts between pedestrians and other modes of travel.  Timeframe: Near-Term											
	-		Planning		Project Costs						
FYWP:	N	Funded	i:	N Cor	struction Year:	N/A	Const./Eng:	Const./Eng: \$10,000 - \$150,000			
CIP:	N	BMP:		N Ex.	ADT N/S:	5,255	ROW:		-		
				Ex.	ADT E/W:	2,400					
Functional C	lassificatio	n N/S:	Minor	Arterial			Other:	Other:			
Functional C	lassificatio	n E/W:	Major	Collector							
Project De	etails						Total Cost:		\$10,000 - \$150,000		
ROW (sq.ft.)	: (	)	Length:	N/A	Drainage:	No existing syst	em				
Project Cr	iteria Me	<u>et</u>									
☐ Mobility	у		×	al	☐ Livability						
Project Lo	cation			Related Proje	cts:	CP-13; CP-14; CP-15; CP- 21					



# **Project Illustration**



<sup>1</sup>From ACHD Community Programs Scoping Report: Provide crosswalks and ADA compliant ramps on Linder at East 4<sup>th</sup> Street, and West 4<sup>th</sup> Street for pedestrians accessing downtown.

4<sup>th</sup> Street Between Avenue D and Avenue E Enhanced Pedestrian Crossing Project #: CP-6 **Project Name:** Installing an enhanced pedestrian crossing improves safety for pedestrians by reducing potential conflicts Timeframe: Near-Term **Project Purpose:** between pedestrians and other modes of travel.1 **Planning Background Project Costs** Funded: FYWP: \$10,000 - \$150,000 N N **Construction Year:** N/A Const./Eng: CIP: BMP: Ex. ADT: 2,400 ROW: N N **Functional Classification: Major Collector** Other: **Total Cost:** \$10,000 - \$150,000 **Project Details** ROW (sq.ft.): 0 Length: N/A Drainage: No existing system **Project Criteria Met** ☑ Safety ☐ Livability ☐ Mobility CP-21; CP-22 **Project Location Related Projects:** 

#### **Project Illustration**



<sup>1</sup>From ACHD Community Programs Scoping Report: Enhance pedestrian crosswalk treatment at N Locust Avenue for pedestrians accessing school district office and downtown.



Bridge Avenue Sidewalk and Bike Lane Addition, Avenue D to Bridge Avenue **Project Name:** Project #: CP-7 **Bridge** Addition of bike lanes and detached sidewalks enhances safety for pedestrians and Timeframe: Near-Term **Project Purpose:** bicyclists. **Planning Background Project Costs** Υ¹ FYWP: Funded: **Construction Year:** N/A Const./Eng: \$95,000 Y<sup>2</sup> CIP: N BMP: Ex. ADT: 6,555 ROW: \$100,000 **Functional Classification: Minor Arterial** Other: **Total Cost:** \$195,000 **Project Details** 5,250<sup>3</sup> ROW (sq.ft.): Length: 940' Drainage: No existing system. Potential drainage pond north of Indian Creek. **Project Criteria Met** ☐ Mobility ☑ Safety □ Livability **Project Location Related Projects:** I-5; CP-3; CP-8; CP-22



## **Project Illustration**



<sup>1</sup>FYWP identifies "Kuna Downtown Traffic Improvements" Project, which includes option for improvements to Bridge Avenue between Avalon Street and Main Street among other projects.

<sup>2</sup>BMP identifies a long-term (occurring in 25 to 50 years) planned bike lane project along Kuna Road/Avalon Street between Black Cat Road and Main Street.

<sup>3</sup>ROW requirements assume area within Railroad ROW.



Bridge Avenue Pedestrian Connection, Shortline Street to Bridge Avenue **Project Name:** Project #: CP-8 **Bridge** Addition of a pedestrian connection between the proposed roundabout at the Bridge Avenue/Avalon Street/Shortline Street intersection and the Bridge Avenue bridge Timeframe: Near-Term **Project Purpose:** provides connectivity for the pedestrian network and enhances safety for **Planning Background Project Costs** Y<sup>1</sup> Funded: \$70,000 FYWP: N **Construction Year:** N/A Const./Eng:  $\mathbf{Y}^{\mathbf{2}}$ CIP: N BMP: Ex. ADT: 6,555 ROW: \$20,000 **Functional Classification: Minor Arterial** Other: **Total Cost:** \$90,000 **Project Details** ROW (sq.ft.): 2.700 Length: 850' Drainage: No existing system. Potential drainage pond north of Shortline St. **Project Criteria Met**  Multimodal ☐ Livability ☐ Mobility Safety **Project Location Related Projects:** I-6; CP-3; CP-7 **Project Illustration** <sup>1</sup>FYWP identifies "Kuna Downtown Traffic Improvements" Project, which includes option for improvements to Bridge Avenue between Avalon Street and Main Street among other projects. Notes: <sup>2</sup>BMP identifies a long-term (occurring in 25 to 50 years) planned bike lane project along Kuna Road/Avalon Street between Black Cat Road and Main Street.



<u>Project Name:</u> Orchard Avenue Sidewalk Addition, Avalon Street to 4<sup>th</sup> Street Project #: CP-9 Addition of sidewalks enhances the safety for pedestrians and livability of the street. Timeframe: Long-Term Project Purpose: **Planning Background Project Costs** FYWP: **Construction Year:** N/A \$230,000 Ν Funded: N Const./Eng: CIP: 550 ROW: Ν BMP: Ν Ex. ADT: **Functional Classification: Local Street** Other: **Total Cost:** \$230,000 **Project Details** ROW (sq.ft.): Length: 2,040' Drainage: No existing system **Project Criteria Met** ☐ Mobility ☑ Safety □ Livability AR-1; CP-1; CP-10; CP-11; **Related Projects: Project Location** CP-12; CP-13 AR-1 **Project Illustration** 



2<sup>nd</sup> Street Sidewalk Addition, Orchard Avenue to Linder Avenue Project #: CP-10 Project Name: Addition of sidewalks enhances the safety for pedestrians and livability of the street. Timeframe: Long-Term Project Purpose: **Planning Background Project Costs** FYWP: Funded: **Construction Year:** N/A \$280,000 Ν N Const./Eng: CIP: Ex. ADT: 490 ROW: Ν BMP: N **Functional Classification: Local Street** Other: **Total Cost:** \$280,000 **Project Details** ROW (sq.ft.): Length: 2,500' Drainage: No existing system **Project Criteria Met** ☐ Mobility ☑ Safety □ Livability AR-2; CP-2; CP-9; CP-18; **Related Projects: Project Location** CP-20; CP-23 AR-1 **Project Illustration** Notes:



3<sup>rd</sup> Street Sidewalk Addition, Orchard Avenue to Linder Avenue Project #: CP-11 Project Name: Addition of sidewalks enhances the safety for pedestrians and livability of the street. Timeframe: Long-Term Project Purpose: **Planning Background Project Costs** FYWP: Funded: **Construction Year:** N/A \$280,000 Ν N Const./Eng: CIP: Ex. ADT: 215 ROW: Ν BMP: Ν **Functional Classification:** Other: **Local Street Total Cost:** \$280,000 **Project Details** ROW (sq.ft.): Length: 2,500' Drainage: No existing system **Project Criteria Met**  Multimodal ☐ Mobility ☑ Safety □ Livability I-3; AR-2; AR-3; CP-9; CP-**Related Projects: Project Location** 18; CP-21 **Project Illustration** Notes:



4<sup>th</sup> Street Sidewalk Addition, Kay Avenue to Orchard Avenue Project #: CP-12 **Project Name:** Addition of sidewalks enhances the safety for Timeframe: **Near-Term Project Purpose:** pedestrians and livability of the street.1 **Planning Background Project Costs Construction Year:** 2012 FYWP: Funded: Const./Eng: Y<sup>2</sup> CIP: BMP: N Ex. ADT: 1,095 ROW: Ν **Functional Classification: Major Collector** Other: **Total Cost:** Under Construction<sup>3</sup> **Project Details** ROW (sq.ft.): 0 1,250' Length: Drainage: Under construction **Project Criteria Met** ☐ Mobility ☑ Safety □ Livability **Related Projects:** CP-9; CP-13 **Project Location Project Illustration** 

<sup>1</sup>From ACHD 2013-2017 FYWP: Construct curb, gutter, and sidewalk on the south side of 4<sup>th</sup> Street from Linder Avenue to existing improvements on the east side of the Teed Lateral in order to improve safety for pedestrians, including students in the Hubbard Elementary School attendance area.

**Notes:** <sup>2</sup>FYWP has 4<sup>th</sup> Street from Linder Avenue to Kay Avenue programmed for curb, gutter, and sidewalk improvements with a construction year of 2012.

<sup>3</sup>Under construction at time of Plan Adoption - Refer to ACHD's 4<sup>th</sup> Street, Linder Avenue to Kay Avenue Project (Contract No. CT212-29, Project No. 8090028)



4<sup>th</sup> Street Sidewalk Addition, Orchard Avenue to Linder Avenue Project #: CP-13 **Project Name:** Addition of sidewalks enhances the safety for Timeframe: Near-Term **Project Purpose:** pedestrians and livability of the street.1 **Planning Background Project Costs** 2012 FYWP: Funded: **Construction Year:** Const./Eng: Y<sup>2</sup> CIP: BMP: N Ex. ADT: 1,705 ROW: Ν **Functional Classification: Major Collector** Other: **Total Cost: Project Details** Under Construction<sup>3</sup> ROW (sq.ft.): Length: 1,250' Drainage: **Under construction Project Criteria Met** ☐ Mobility ☑ Safety Multimodal □ Livability CP-5; CP-9; CP-12; CP-14; **Project Location Related Projects:** CP-15; CP-21 **Project Illustration** <sup>1</sup>From ACHD 2013-2017 FYWP: Construct curb, gutter, and sidewalk on the south side of 4<sup>th</sup> Street from Linder Avenue to existing improvements on the east side of the Teed Lateral in order to improve safety for pedestrians, including students in the Hubbard Elementary School attendance area. <sup>1</sup>FYWP has 4<sup>th</sup> Street from Linder Avenue to Kay Avenue programmed for curb, gutter, and sidewalk improvements with a Notes: construction year of 2012. <sup>2</sup>Under construction at time of Plan Adoption - Refer to ACHD's 4<sup>th</sup> Street, Linder Avenue to Kay Avenue Project (Contract No. CT212-29, Project No. 8090028)



Appendix A. Project Prospectus Sheets

Project #:	CP-14	Project N	lame: Lin	der Aven	iue Sidewa	lk Addition, 4 <sup>t</sup>	th Street 1	to Boise	Stree	et	
Project Pur	pose: Ad	ldition of si	idewalks enha	lity of the s	treet. <u>T</u>	Γimefra	ame:	Long-Term			
		<u>P</u>	lanning Bad		Project Costs						
FYWP:	N	Funded:	N	Const	t./Eng:		\$200,	.000			
CIP:	N	ВМР:	N	Ex. ADT:	:	5,255	ROW	:		\$70,0	00
Functional C	lassificatio	n:	Minor Arteri	ial			Other	r:			
Project De	etails						Total	Cost:		\$270,	000
ROW (sq.ft.)	): 13,	.600 L	Length:	1,700'	Drainage:	No existing syst	tem				
Project Cr	iteria Me	<u>et</u>									
☐ Mobilit	у		⊠ Safe	ety		☑ Multimoda	al			Livabil	lity
Project Lo	cation						Related	l Projects	s: (	CP-5; C	CP-13; CP-15; CP-21
Project III	EXTEND TO BOISE STREET										



Project Name: Linder Avenue Bike Lane Addition, 4<sup>th</sup> Street to Boise Street Project #: CP-15 Addition of bike lanes enhances safety for bicyclists. Potential for combination with Timeframe: Long-Term **Project Purpose:** Project CP-14. **Planning Background Project Costs** FYWP: Funded: **Construction Year:** N/A Const./Eng: \$280,000 N Υ¹ CIP: N BMP: Ex. ADT: 5,255 ROW: \$70,000 **Functional Classification: Minor Arterial** Other: **Project Details Total Cost:** \$350,000 ROW (sq.ft.): 13,600 Length: 3,400' Drainage: No existing system **Project Criteria Met** ☐ Mobility ☑ Safety **⊠** Multimodal □ Livability CP-5; CP-13; CP-14; CP-21 **Project Location Related Projects:** EXTEND TO BOISESTREET

# **Project Illustration**



<sup>1</sup>BMP identifies a long-term (occurring in 25 to 50 years) planned bike lane project along Swan Falls Road/Linder Avenue between Mora Canal and Boise Street.



Project #: CP-16 Project Name: Swan Falls Road Sidewalk Addition, Shortline Street to Sunbeam Street Addition of sidewalks enhances safety for pedestrians Timeframe: Near-Term **Project Purpose:** and livability of the street.1 **Planning Background Project Costs** FYWP: \$410,000 N Funded: **Construction Year:** N/A Const./Eng: CIP: N BMP: Ex. ADT: 8,010 ROW: **Functional Classification: Minor Arterial** Other: **Project Details Total Cost:** \$410,000 ROW (sq.ft.): 0 Length: 3,700' Drainage: No existing system **Project Criteria Met** ☐ Mobility ☑ Safety □ Livability I-8a; I-8b; CR-1; CP-17 **Related Projects: Project Location** 1-8a EXTEND TO STREET **Project Illustration** <sup>1</sup>From ACHD Community Programs Scoping Report: Provide sidewalk on west side of Swan Falls Road from Shortline Street to Sunbeam Street for pedestrians accessing civic and commercial destinations to the north.



Project #: CP-17 Project Name: Swan Falls Road Bike Lane Addition, Shortline Street to Sunbeam Street Addition of bike lanes enhances safety for bicyclists. Potential for combination with Timeframe: Near-Term **Project Purpose:** Project CP-16. **Planning Background Project Costs** FYWP: Funded: **Construction Year:** \$310,000 N N/A Const./Eng: Υ¹ CIP: N BMP: Ex. ADT: 8,010 ROW: **Functional Classification: Minor Arterial** Other: **Project Details Total Cost:** \$310,000 ROW (sq.ft.): 0 Length: 3,700' Drainage: No existing system **Project Criteria Met** ☐ Mobility ☑ Safety □ Livability I-8a; I-8b; CR-1; CP-16 **Related Projects: Project Location** 1-8a EXTEND TO STREET

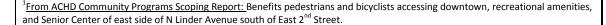
# **Project Illustration**



<sup>1</sup>BMP identifies a long-term (occurring in 25 to 50 years) planned bike lane project along Swan Falls Road/Linder Avenue between Mora Canal and Boise Street.



Project #: CP-18 Project Name: Southeast Downtown Blocks Sidewalk Addition Addition of sidewalks on Avenue A and Avenue B between Main Street and 2<sup>nd</sup> Street and on 2<sup>nd</sup> Street between Avenue B and Linder Avenue enhances safety for Timeframe: Near-Term **Project Purpose:** pedestrians and benefits the connectivity of the pedestrian network and livability downtown.1 **Planning Background Project Costs** Funded: **Construction Year:** \$160,000 FYWP: N N/A Const./Eng: CIP: Ex. ADT: ROW: Ν BMP: Ν \_\_ --**Functional Classification: Local Streets** Other: --**Total Cost:** \$160,000 **Project Details** ROW (sq.ft.): 1,440' 0 Length: Drainage: No existing system. Potential drainage pond in park. **Project Criteria Met**  □ Livability ☐ Mobility ☑ Safety I-3; AR-2; AR-3; CP-2; CP-**Project Location Related Projects:** 10; CP-11; CP-20; CP-21 **Project Illustration** 









2<sup>nd</sup> Street and Avenue D Bike Lane Addition, Avalon Street to Main Street Project #: CP-20 Project Name: Addition of bike lanes enhances safety for bicyclists. Timeframe: Medium-Term Project Purpose: **Planning Background Project Costs** FYWP: **Construction Year:** \$300,000 Ν Funded: N N/A Const./Eng: CIP: 880 ROW: Ν BMP: Ν Ex. ADT: **Functional Classification: Local Streets** Other: **Total Cost:** \$300,000 **Project Details** ROW (sq.ft.): Length: 3,600' Drainage: No existing system. Potential drainage pond in park. **Project Criteria Met** ☐ Livability ☐ Mobility ☑ Safety AR-2; CP-2; CP-10; CP-18; **Related Projects: Project Location** CP-19; CP-23; CP-24 2ND ST **Project Illustration** Notes:



Project #:	CP-21	Project	Name	<u>:</u> Nor	th Dow	ntown Bloc	ks Sidewalk A	ddition				
Project Pur	Addition of sidewalks on Avenue A, Avenue B, Avenue D between Main Street and 4 <sup>th</sup> Street and on 4 <sup>th</sup> Street between Avenue D and Linder Avenue enhances safety for pedestrians and benefits the connectivity of the pedestrian network and livability downtown.  Timeframe: Medium-Term											
		<u> </u>	Plann		Proj	ect Co	ists					
FYWP:	N Funded: N Construction Year: N/A Const./Eng: \$300,000										,000	
CIP:	N	вмр:		N	Ex. ADT	Γ:		ROW:				
Functional C	lassificatio	n:	Local	Streets				Other:				
Project De	<u>etails</u>							Total Cost:		\$300,	,000	
ROW (sq.ft.)	): (	0	Lengt	:h: 2	2,425'	Drainage:		g system. Potentia treet" collection &			in park or consider tem.	
Project Cr	iteria Me	<u>et</u>										
☐ Mobility	у			⊠ Safe	ty		Multimoda	al		Livabil	lity	
Project Lo	cation							Related Proje	cts:	I-3; I-4; CP-19;	; AR-3; CP-5; CP-18; CP-22	
	CP-6  NAIN ST AR-3  L-3											
Project Illi	ustration	1				757 ATK	The second second	- N. C. C.			1000	
Notes:												



Project #: CP-22 **Project Name:** Avenue E Block Sidewalk Addition Addition of sidewalks on Avenue D and Avenue E between Main Street and 4th Street and on 4<sup>th</sup> Street between Avenue E and Avenue D enhances safety for pedestrians Timeframe: Medium-Term **Project Purpose:** and benefits the connectivity of the pedestrian network and livability downtown<sup>1</sup>. **Planning Background Project Costs**  $\mathbf{Y}^{2}$ FYWP: Funded: **Construction Year:** TBD Const./Eng: \$90,000 CIP: Ν BMP: Ex. ADT: ROW: Ν **Functional Classification: Local Streets** Other: **Total Cost:** \$90,000 **Project Details** ROW (sq.ft.): 0 Length: 800' No existing system. Potential drainage pond north of Indian Creek. Drainage: **Project Criteria Met** ☐ Mobility ☑ Safety □ Livability **Related Projects:** I-5; CP-3; CP-6; CP-24 **Project Location** 



#### **Project Illustration**



<sup>1</sup>From ACHD Community Programs Scoping Report: Curb, gutter, sidewalk, and bike lane to provide direct connectivity for pedestrians and cyclists north of W Main Street to the greenbelt and BMX bike track.

<sup>2</sup>FYWP has Avenue E between Main Street and 4<sup>th</sup> Street programmed for curb, gutter, and sidewalk improvements.

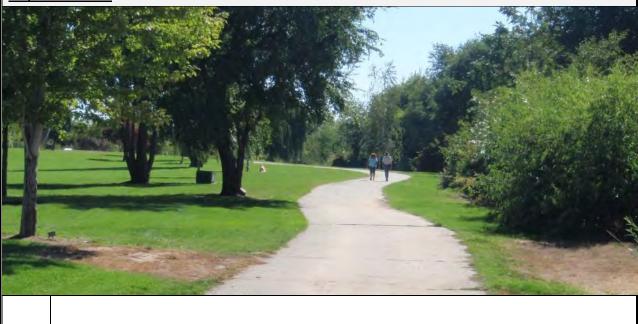


Appendix A. Project Prospectus Sheets

Project #: CP-23 Project Name: Indian Creek Greenbelt Connection to East Downtown Pathway Addition												
Project Purp	Project Purpose: Adding an asphalt-pathway connection from the Indian Creek Greenbelt to 2 <sup>nd</sup> Street will enhance pedestrian and bicyclist connections.											
		ļ	Plannin		Project Costs							
FYWP:	N	Funded	l:	N	Constru	ction Year:	N/A	Const./Eng:	Const./Eng:			
CIP:	N	BMP:		N	Ex. ADT	:	N/A	ROW:				
Functional C	assificatio	n:	N/A	Other:	Other:							
Project De	tails							Total Cost:		Not estimated		
ROW (sq.ft.)	: 6,2	250	Length:	(	600'	Drainage:	N/A	-		-		
Project Cri	Project Criteria Met											
☐ Mobility ☐ Safety							Multimodal			□ Livability		
Project Lo	Project Location Related Projects: CP-2; CP-18; CP-20											
2ND ST												



# **Project Illustration**





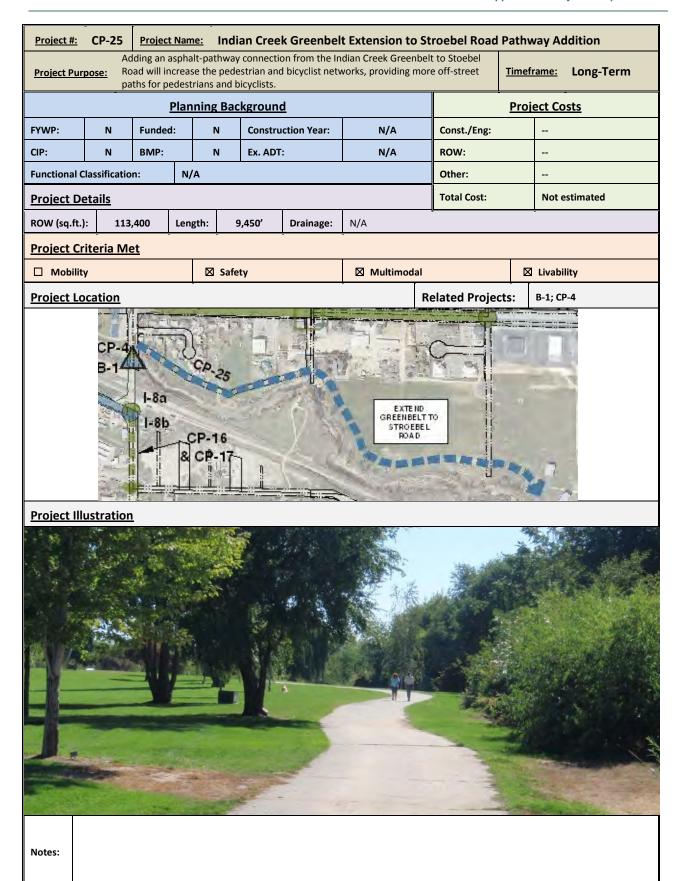
Project #: CP-24 Project Name: Indian Creek Greenbelt Connection to West Downtown Pathway Additions Adding an asphalt-pathway connection from the Indian Creek Greenbelt to Avenue D and the proposed Avenue E extension will enhance pedestrian and bicyclist Timeframe: Medium-Term **Project Purpose: Planning Background Project Costs** FYWP: Funded: N N **Construction Year:** N/A Const./Eng: CIP: BMP: N Ex. ADT: N/A ROW: Ν --**Functional Classification:** N/A Other: **Total Cost:** Not estimated **Project Details** ROW (sq.ft.): 2,400 Length: 200' Drainage: N/A **Project Criteria Met** ☑ Safety Multimodal □ Livability ☐ Mobility CP-19; CP-20; CP-22 **Project Location Related Projects:** 

#### **Project Illustration**





Appendix A. Project Prospectus Sheets





Project #: CP-26 Project Name: Indian Creek Greenbelt Extension to Deer Flat Road Pathway Addition Adding an asphalt-pathway connection from the Indian Creek Greenbelt to Deer Flat Road will increase the pedestrian and bicyclist networks, providing more off-street Timeframe: Medium-Term **Project Purpose:** paths for pedestrians and bicyclists. **Planning Background Project Costs** FYWP: Funded: N N **Construction Year:** N/A Const./Eng: CIP: BMP: N Ex. ADT: ROW: Ν N/A --**Functional Classification:** N/A Other: **Total Cost:** Not estimated **Project Details** ROW (sq.ft.): 143,400 Length: 11,950' Drainage: N/A **Project Criteria Met** ☑ Safety Multimodal □ Livability ☐ Mobility **Project Location Related Projects:** N/A EXTEND GREENBELTTO DEER FLAT ROAD **Project Illustration** 





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