



## Study Sponsored By

### **A multidisciplinary City of Tucson Team led by the**

Tucson Department of Transportation  
*Janice A. Miller, Project Manager*  
Comprehensive Planning Task Force

### **in cooperation with the**

City Manager's Special Projects Division  
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*Valerie Vidal, Aide Representative*  
Ward Office 3 (Councilmember Jerry Anderson)  
*Frank Soltys, Aide Representative*  
Ward Office 6 (Councilmember Fred Ronstadt)  
*Michael Guymon, Aide Representative*



## Study Guided By

### **The Stone Avenue Citizen Task Force**

Amphitheater Neighborhood Assoc. - *Mark Aubrey*  
Balboa Heights Neighborhood Assoc. - *N. Jane Baker*  
Dunbar/Spring Neighborhood Assoc. -  
*Jonathan Crowe (Co-chair)*  
Feldman's Neighborhood Assoc. - *Carolyn Campbell*  
Grant Road Neighborhood Assoc. - *Joseph La Mantia*  
Keeling Neighborhood Assoc. - *Sally Day (Co-chair)*  
Lumberlost Neighborhood Assoc. - *Cazlin Robbins*  
Ocotillo/Oracle Neighborhood Assoc. - *Newell Bradley*  
West University Neighborhood Assoc. - *Sarah Evans*  
Member-at-Large - *Grant McCormick*  
Stone Avenue Business Owners - *John McKinley,*  
*Paul Martinez, Betty Jo Grygutis, Dan Peterson*  
Citizens Transportation Advisory Committee -  
*Diahn Swartz, Joe Weidman*  
Metropolitan Chamber of Commerce - *Tim Healy*  
Pima Community College, Downtown Campus - *Bob Earl*  
Tucson Black Chamber of Commerce - *Michael Butler*  
Tucson Urban League - *Elizabeth Hightower*

### **Also involved:**

Amphitheater School District, Bicycle Advisory Committee,  
Citizens Downtown Oversight Committee, Tucson Arts  
District

Note: Task Force members volunteered more than 750 hours (approx. 19 work weeks) to participate in meetings and other activities that led to the formulation of the recommendations presented in these Study Cards.

## Consultant Services Provided By

### **A multidisciplinary team led by**

Parsons Brinckerhoff, project coordination, transportation planning, civil engineering, & public involvement  
*Rebecca R. Ruopp, Project Manager*

### **with**

Dr. Barbara Becker, economic development  
Curt Lueck & Associates - traffic analysis & alternative transportation  
Bob Vint & Associates - urban design, historic preservation, & public art  
TMHS Associates - streetscape & landscape design  
Kaneen Advertising & Public Relations - media relations & study card production

### **Special thanks to**

the Flamingo Hotel (Travelodge)  
on North Stone Avenue for hosting  
the Citizen Task Force meetings.



**Have questions about the study results?  
Contact the City of Tucson  
Comprehensive Planning Task Force  
at 791-4505.**

### *Stone Avenue's History*

Stone Avenue is a historically important roadway corridor in central Tucson. As one of the oldest corridors in the city, it has accommodated a range of uses through the years. In the late 19th century, a streetcar line ran along Stone Avenue and served as a primary attraction for industrial and commercial enterprises. These businesses, which were originally scattered among residences along Stone Avenue, eventually dominated the street front. Over time the corridor transformed into the center of automotive-related businesses, ranging from dealerships to specialty services to junkyards. In the early 1900's, the avenue was designated as part of State Highway

80 and later Highway 89. Stone Avenue was in its heyday. Motels, restaurants, and other uses catering to travelers located along the roadway. Then, in the 1950's Interstate 10 was built. Travelers bypassed Stone Avenue, and the corridor began to deteriorate. The large automotive dealerships moved, and the motels and restaurants closed or downscaled. What remained were small businesses, such as automotive specialty services and discount retail, interspersed with some institutional, social service, and residential uses. Today, the avenue no longer carries a state highway designation, and all public responsibilities for the corridor rest with the City of Tucson.



*Stone Avenue Citizen Task Force monthly meeting.*

### *How the Study Got Started: The Stone Avenue Coalition*

Although Stone Avenue's vitality has dwindled over the years, it remains a highly visible north/south corridor into Downtown Tucson, and it serves as the common link for neighborhoods that lie to the east and west of the avenue from 6th Street to Wetmore Road. These neighborhoods have offset their limited financial resources with time, energy, and a commitment to improving their surroundings. In recent years, however, the residents have observed that the deterioration along Stone Avenue is making their efforts to improve the neighborhoods increasingly difficult. To combat this trend, eight neighborhood associations came together to form the Stone Avenue Coalition. The coalition was dedicated

to pursuing improvements on Stone Avenue that would benefit both residents and businesses and return the avenue to its historical prominence as a gateway corridor.

The coalition approached the City of Tucson for help. Impressed with the dedication of the coalition and recognizing the importance of the corridor to the city as a whole, the Mayor & Council funded a multi-disciplinary study with the goal of identifying a series of actions that could be implemented over time to upgrade Stone Avenue.

# Study Background

## Summary of Study Goals & Recommendations

This matrix presents a summary of the recommendations that grew out of the Stone Avenue Corridor Study and indicates how each contributes

to key goals for the corridor as identified by members of the Task Force and of the general public who participated in various study activities.

RECOMMENDATIONS	GOALS	Strengthen corridor continuity & identity	Contribute to beautification of corridor	Contribute to "greening" of corridor	Increase shade	Encourage pedestrian activity	Encourage bicycle activity	Encourage increased bus use	Provide uses that meet neighborhood needs	Strengthen individual neighborhood identity	Celebrate and preserve historic resources	Encourage economic development	Increase after-hour activity	Limit right-of-way impact on adjacent properties	Seek measures to calm traffic	Make safer	Relieve congestion	Address drainage issues
Four-travel-lane cross section with varying length landscape islands and continuous bike lanes and sidewalks Continuous, ADA accessible, 6-foot sidewalks Reduction in number of access points along Stone Avenue		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>	<input type="radio"/>				<input type="radio"/>			<input type="radio"/>			<input type="radio"/>	
Landscape islands at various intervals Raised median pedestrian crossings (e.g., PELICAN) Raised median bicycle crossings (e.g., TOUCAN)		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>									<input type="radio"/>	<input type="radio"/>		
5-foot bike lanes with signage, markings, and/or colored blue Local street north/south bicycle route alternatives Street trees		<input type="radio"/>					<input type="radio"/>								<input type="radio"/>	<input type="radio"/>		
Pedestrian nodes Green nodes Markers noting points of historic and other interest along pedestrian way		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>	<input type="radio"/>							
Landscaping of adjacent drainage ways Widening confined to major intersections Traffic signal timing adjustments			<input type="radio"/>	<input type="radio"/>													<input type="radio"/>	<input type="radio"/>
Underground utilities and fix sagging lines where possible Bus pullouts at locations of heavy use or transfers High quality bus shelters at all stops		<input type="radio"/>	<input type="radio"/>		<input type="radio"/>			<input type="radio"/>								<input type="radio"/>		
Additional bus service Public art integrated in nodes and artistic treatment of functional elements Neighborhood entry markers		<input type="radio"/>	<input type="radio"/>					<input type="radio"/>										
Special treatment of high point at Jacinto to accentuate north/south views Special gateway treatment at Stone/Speedway intersection Special district designation to allow more flexible zoning, design guidelines, and financial incentives to encourage economic development		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>			<input type="radio"/>		<input type="radio"/>						
Creative alternatives to existing parking accommodations Vacant lot and underutilized property development and redevelopment Mixed-use development (prototype)		<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>			<input type="radio"/>			<input type="radio"/>	<input type="radio"/>					
Adaptive reuse development (prototype)		<input type="radio"/>									<input type="radio"/>	<input type="radio"/>						

# Study Background

## *How the Study Was Conducted*

In undertaking the study, the City of Tucson built on the Stone Avenue Coalition's efforts, reaching out to involve an even wider group of citizens and businesses through the formation of a citizen task force. The Stone Avenue Corridor Task Force membership, which totaled 23, represented a cross section of people who live, work, or have an active interest in the corridor. Similarly, the City Study Team included representatives from a variety of departments, who could address the different elements that contribute to making a corridor more livable, such as streetscape beautification, economic development, urban design, historic preservation, and public art. Working collaboratively through a series of meetings, workshops, and open houses, the City Study Team and the Citizen Task Force first examined existing conditions within the corridor,



*Citizen Task Force and City Study Team on bus tour of the Stone Avenue corridor.*

next identified key goals for revitalization, and finally created a set of recommendations to meet those goals. (Note: A matrix summarizing the goals and recommendations is included in this card.)

## *Study Recommendations*

The study recommendations, which are elaborated in these Study Cards, were presented to the Tucson Mayor & Council on Monday, June 26, 2000. The Mayor & Council approved the recommendations and requested that several follow-up steps be taken. The first two steps included appointing a

Stone Avenue Coordinator and continuing the City Study Team to help with the implementation of the recommendations. The third step was to pursue funding for the infrastructure improvements; the fourth step was to develop a proposal for the designation of a special district to help foster economic development; and the fifth step was to prepare an interim brochure to inform developers who have an interest in new construction or renovation on Stone Avenue about the study objectives. As of the preparation of these Study Cards, the appointment of a coordinator and the continuation of the City Study Team had been carried out, and the other three steps were being actively pursued.



*This view along Stone illustrates the corridor's historic linkage to the Downtown from the north.*

**Have questions about the study results?  
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at 791-4505.**

### Goal

To provide improvements that address vehicular operational issues in balance with improvements to increase alternative mode access, as well as contribute to the livability, aesthetics, safety, and economic vitality of the corridor.

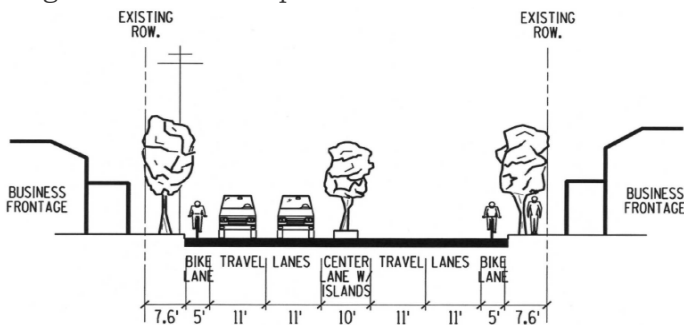


Vehicles headed south on Stone and pedestrians walking east across Stone at Stone/Speedway intersection.

### Recommendations

**Adopt a typical cross section for the corridor comprised of four travel lanes and a center lane with landscape islands of varying lengths and locations, and, on both sides of the road, continuous bicycle lanes and sidewalks.**

The recommended cross section offers enhanced pedestrian crossing opportunities and traffic calming benefits through the extensive use of landscape islands. Further “greening” of the corridor, public art, and pedestrian, bicycle, and transit amenities will be integrated into the improvements.



In those areas where landscape islands are introduced, the existing center-turn lane will be eliminated. Special attention will need to be given to designing this configuration to address safety and capacity issues.

**Balance the provision of moderate capacity improvements for vehicular flow at major intersections with user-friendly pedestrian and bicycle crossings.**

All intersection design should include high-standard provisions for making pedestrian and bicyclist crossing at the intersections easier and safer. Such provisions should address signal timing that allows pedestrians to make complete crossings of the

intersections in one green signal phase and facilitates the crossing of people with disabilities.

To best promote alternative modes of transportation while providing moderate capacity improvements at the larger intersections along Stone Avenue, the number of lanes added should be minimized. Intersection approaches should have no more than two through lanes with single left-turn and right-turn lanes. In the case of the **Stone/Speedway and Stone/Grant intersections**, each should have no more than dual left-turn lanes, two through lanes, and one right-turn lane (or some combination of this number of lanes).

**Control access from cross streets and driveways to improve flow and safety for all transportation modes along Stone Avenue.**

Improved control of access will reduce potential conflict points between all users of the roadway and sidewalk area, and should provide increased opportunities for landscaping by minimizing the number of driveways along the corridor.

**Driveway Openings** The City of Tucson should work with property owners to evaluate the number of driveways per property and, where feasible, to reduce that number to meet, or preferably to exceed, current city standards. Unused curb cuts for driveways should be closed, and any redeveloped or rezoned properties should be brought into compliance with code requirements for driveways and on-site parking. Closing of curb cuts can also, in some cases, allow properties to increase the number of on-site parking spaces by reducing the number of parking aisles. The city, in coordination with property owners, should pursue the consolidation of curb cuts for driveways and, where feasible, the joint use of driveways serving adjoining properties.

# Roadway Improvements

## Recommendations Continued

**Local Street Intersections** Neighborhoods along the corridor are laid out primarily in a simple grid pattern, which results in an excessive number of local street intersections with Stone Avenue in some locations. The spacing of local street intersections is closest along the more historic southern portion of the corridor where the block lengths are short. The number of local street intersections could be reduced to help minimize traffic intrusion into the adjoining neighborhoods and to help improve the operational performance of Stone Avenue.

The City of Tucson has a process in place for assessing the feasibility of fully or partially closing a local street. Included is the collection of neighborhood traffic data with which a strategy for access management can be prepared jointly by the neighborhoods and city staff. In developing an access management plan, the city considers such factors as access to neighborhoods and commercial areas, traffic intrusion into the neighborhoods, emergency and service vehicle access, and pedestrian, bicycle, and transit use.

**Where parking is affected by streetscape enhancements, replace lost spaces through assemblage of property, through reorganization of off-street parking areas for more efficient parking, and/or through the utilization of fully or partially closed streets for angled parking.**



Some parking spaces will be lost when the recommendation for continuous sidewalks is implemented. Alternative parking arrangements should be developed in close consultation with affected property and business owners.

## Questions and Answers on Transportation Issues Related to the Stone Avenue Corridor

**How much traffic is there along the corridor on a typical weekday?** In 1999, the traffic ranged from about 20,000 vehicles per day near the Tucson Mall to about 32,000 vehicles per day near the Downtown. According to surveys, nearly 20 percent of all trips within the corridor are by bicycling, walking, and taking public transit.

**How well does the corridor function today?** Based on the volumes and the current four-travel-lane cross section, Stone Avenue operates at an acceptable level of service. During rush hour, however, several signalized intersections perform poorly. The most congestion occurs in the roadway segment between Drachman Street and Speedway Boulevard. The intersections along the corridor north of Sixth Street operate acceptably, with the exception of the Stone/Speedway and Stone/Grant intersections, which exceed congestion standards.

**How is the corridor used?** Surveys indicate that residential neighborhoods, businesses, and institutions within the area between Oracle Road and First Avenue rely extensively on Stone Avenue. The avenue is not used as a major commuter route per se, but does serve as a link for traffic traveling between major east-west and north-south routes. Stone Avenue is a busy Sun Tran bus route, with transit centers at each end of the corridor. It is also a new bike route due to the recent striping of

portions of Stone Avenue to include bike lanes. An actively used bike route crosses Stone Avenue at University Boulevard, and another bike route crosses at Blacklidge Drive.

**What is the traffic forecast for Stone Avenue?** Regional traffic forecasts for the Year 2020 indicate that the number of vehicles per day in the busiest segment of Stone Avenue could increase by about one-third. These forecasts are based on very aggressive assumptions about increased employment in the Downtown area. Parallel corridors, including First Avenue and Oracle Road, are expected to have similar traffic volume growth rates.

**How well will the corridor work in the future if the recommendations presented in this Study Card are implemented?** The Study Team believes that the corridor will function acceptably and safely, while concurrently supporting goals of neighborhood protection, economic development, and aesthetic enhancement.

**Have questions about the study results?  
Contact the City of Tucson  
Comprehensive Planning Task Force  
at 791-4505.**

# Alternative Transportation

## Bicycles, Pedestrians, & Transit

### Goal

**To increase safety, access, and opportunities for bicycling, walking, and bus ridership thereby encouraging greater alternative transportation use.**

Providing better quality alternative mode facilities and services will provide a strong visual and physical statement that the use of alternative transportation in the Stone Avenue Corridor is actively encouraged.



*Reduce impediments along street front.*

Currently, there are numerous impediments to using alternative transportation along or across Stone Avenue. These impediments include lack of sidewalks, obstacles such as utility poles in the shoulders and sidewalks, lack of shade, discontinuous bicycle lanes, discontinuous local street bicycle routes, difficult street crossings for pedestrians and bicyclists, lack of bus shelters and benches, and limited and infrequent bus service. Even with these impediments, however, Stone Avenue has higher alternative mode use than many areas of the city.

### Recommendations

#### Bicycle Facilities

**Provide 5-foot bicycle lanes on both sides of Stone Avenue for the length of the corridor and for all intersection approaches along and across the corridor.** (See typical cross section in Study Card titled *Roadway Improvements*.)

**Provide painted or dyed bicycle lanes, enhanced signage, and stenciled lanes at major intersections to help reduce bicycle/vehicle conflicts.**

Painted bicycle lanes, which are recommended to be blue based on current practice in some U.S. and European cities, provide substantial safety benefits at major intersections. In addition to enhancing visibility of the bicycle lanes, continuous blue lanes will make the road appear narrower and help calm traffic speeds.

**Develop nearby north-south local street routes that can serve child, recreational, and other bicyclists seeking an alternative to the more commuter-oriented Stone Avenue bicycle route.**

These local bicycle routes should be developed as near to Stone Avenue as possible. The City of Tucson should work with individual landowners to secure easements and/or right-of-way to establish bicycle routes from Downtown Tucson to Wetmore Road and the Rillito River Park. These connections will provide benefits to pedestrians also.



*Provide continuous bike lanes.*

#### Pedestrian Facilities

**Provide continuous sidewalks with a minimum width of 6 feet on both sides of Stone Avenue for the length of the corridor.**

The sidewalks should be shaded as much as possible through landscaping, building overhangs and awnings, arcades, and other such elements to facilitate walking trips to work, school, shopping, and bus stops, or for leisure. Impediments to pedestrian movement should be removed throughout the corridor.



*Provide continuous sidewalks.*

#### Bicycle Pedestrian Roadway Crossings

**Provide raised median refuges, signalized if warranted, to facilitate safe crossing for bicyclists and pedestrians at several locations along Stone Avenue.**

Raised median refuges help to reduce the “barrier effect” of the roadway, serve as devices to help calm traffic, and, if landscaped or artistically treated, improve the overall visual quality of the corridor.



# Alternative Transportation

## Recommendations Continued

A general goal is to have raised median crossings at one or more locations between the signalized intersections, or at distances no greater than one-quarter mile from the intersections.

**Toucan Crossings:** University Boulevard is a designated bicycle route and the intersection of Stone and University is a major bicycle and pedestrian crossing. A specialized crossing known as a “toucan” is recommended for this location. The toucan is a signalized crossing that allows pedestrians and bicyclists to cross the intersections while drivers are restricted from crossing. Side street medians and raised islands are required to prohibit all side street traffic crossing movements and only permit right

turns. Blackledge Drive is also a designated bicycle route. A toucan is recommended for installation at the Stone/Blackledge intersection in the future when the bicycle and pedestrian demand warrants it.



Improve pedestrian and bike crossings.

**Pelican Crossings:** Another type of specialized crossing, known as the “pelican,” is used to improve crossing opportunities for pedestrians. Pelicans are located in the median of roadways and include two separate traffic signals activated by pedestrians. The first signal stops traffic on half of the roadway and allows pedestrians to cross that half, while the traffic on the other half is allowed to continue. Once in the median, pedestrians then activate the second signal that stops traffic on the second half of the roadway. This allows the pedestrians to complete their crossing. Along Stone Avenue, some locations that should be considered for pelican installation include between Elm Street and Lester Street, between Lester Street and Ventura Street, between Jacinto Street and Kelso Street, between Navajo Road and Yavapai Road, and just south of Calle Arizona.

**Provide decorative or painted crosswalks at other locations along Stone Avenue that do not warrant raised and/or signalized crossings.**

**Time traffic lights at signalized intersections to facilitate complete pedestrian crossings on the green phases of the traffic signals, and to facilitate crossing by persons with disabilities.**

Achieving this goal will affect signal progression along the corridor and vehicular movement, but the trade-off is considered necessary to promote safety and encourage people to more regularly consider walking as an option.

### Transit Facilities & Service

**Provide improved quality bus shelters at every bus stop.**

Encourage bus shelter design that emphasizes shade and, where appropriate, neighborhood identity.

Designate names for bus shelters based on neighborhood or other applicable place names to reinforce a sense of place and identity. Promote the adopt-a-shelter program for neighborhoods and businesses to assist with the maintenance of bus shelters along Stone Avenue.



Locate shelters at bus stops.

**Construct bus pullouts to City of Tucson standards at high use stops and transfer stops.**

Bus stops and pullouts should generally be located as close as possible to street intersections and should be placed on the far sides of intersections. This allows a bus to wait for a red light to stop through traffic, thus creating a gap in the traffic flow sufficient for the bus to re-enter the through traffic lanes. If a situation warrants a mid-block stop, it should be accompanied by a mid-block pedestrian crossing.

**Reduce the time between buses (i.e., headways) from 30 minutes to 15 minutes during off-peak hours and to 10 minutes during peak hours when demand warrants.**

The City of Tucson should consider flexible route transit service, possibly with the ability to deviate from fixed bus routes along Stone and provide service within adjacent neighborhoods. Smaller, more maneuverable transit buses are more appropriate for this type of service.

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## Recommendation

Optimize the number and length of constructed landscape islands down the center of Stone Avenue.

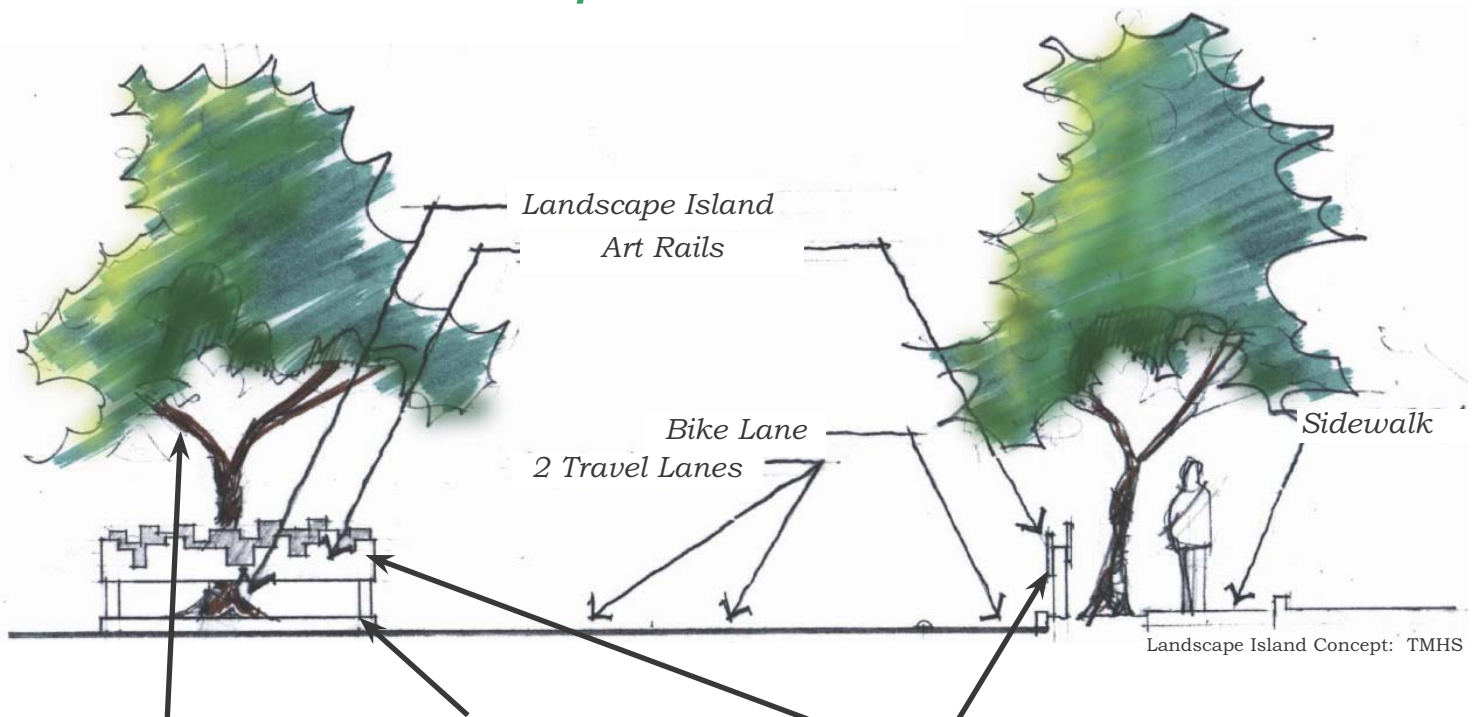
## What Are Landscape Islands?

Landscape islands are “mini-medians” consisting of cutouts in the asphalt within the limits of the center lane. These cutouts will vary in length and can be at grade for water harvesting or raised with curbing.

Landscape islands, which are intended to be primarily spaces for landscape, serve the following important functions:

- Provide visual relief from large expanses of paving.
- Contribute to the “greening” of the corridor.
- Create a ribbon of continuity along the corridor.
- Help calm traffic by creating the appearance of a narrowing in the roadway.
- Contribute to the overall vibrancy, safety, and desirability of the area.

## What Is in a Landscape Island?



### Street Trees

Street trees are closely spaced within the island to emphasize the sense of green and shade. (See Study Card titled *Street Trees*.)

### Concrete Header or Curb

A concrete header at grade or a raised curb protects the edge of the asphalt.

### Art Rails

Customized guardrails are used to protect the cars from the trees and the trees from the cars. These rails can be treated as public art and designed to complement both their immediate location and the overall aesthetics of the corridor.

### Lighting

Accent lighting incorporated into the landscape islands can spotlight the street trees and art rails and provide nighttime interest.

# Landscape Islands

## What Are Key Guidelines for Designing Landscape Islands?

A team consisting of a landscape architect, an artist, an engineer, and representatives of adjacent neighborhoods and appropriate city departments should undertake the design, location, and installation of landscape islands. Together this team



Art Rail Concept: TMHS

will be able to address the range of relevant issues from location to beautification to engineering safety standards. Guidelines for planning the landscape islands follow.

**1** Landscape islands should be a minimum of 50 feet long and may be longer (up to 250 feet) if traffic circulation and access needs are met.

**2** A minimum of three trees, with a minimum 36-inch box size, should be planted within each island. Five or more trees would be preferable. The trees should have strong, naturally upright canopies and be species approved by the city. Care should be taken to assure that trees meet city requirements for roadway visibility.

**3** Two-foot-deep root guards should be used around each tree to protect paving.

**4** “Art rails,” which are customized traffic protection devices, should be utilized to protect trees from cars and cars from trees. These rails provide the opportunity to plant trees in areas that would be off limits to trees without such protection. An artist, in close consultation with fellow team members, should design the art rails to reflect an overall corridor theme or an individual neighborhood theme, while meeting all the applicable standards for guardrails. Artistic opportunities in designing art rails include color, material, and form.

**5** The use of groundcovers and shrubs in landscape islands should be minimized for three reasons. First, these plants will compete visually with the art rail. Second, they will be difficult to maintain within these relatively narrow, center road islands. Third, shrubs used in streetscapes generally have a limited life and low survival rate.

**6** Ground plane treatment should be one-quarter-inch-minus decomposed granite. Larger materials could create a hazard if they get into the travel lanes.

**7** Uplighting can be utilized in a landscape island. Uplighting that spotlights the trees would enhance the nighttime traffic calming function of the islands and would make the area feel more enlivened and safe during the evening hours.

## How Can the Islands Be Installed and Maintained?

Because the landscape islands will be located in the center lane of Stone Avenue, they will be the responsibility of the City of Tucson to install and maintain. Planning the placement of the islands to allow appropriate business access, to provide a sense of continuity throughout the corridor, and to calm traffic will take time. Funding should be sought for the design of the islands in the near future.



Landscape Island Example

Once the design plan is completed, the islands could be installed throughout the project in one phase or in multiple phases depending on available funds.

The design guidelines for landscape islands should be used in the final design of the City of Tucson’s Stone/Speedway Gateway Improvement Project.

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## Recommendation

Create pedestrian nodes that provide shade, comfort, and water, as well as public art where appropriate, to encourage pedestrian activity along the corridor.

## What Are Pedestrian Nodes?

Pedestrian nodes are points where pedestrian-related amenities are grouped to increase the perception of an active, urban corridor and to encourage more walking, bicycling, and transit use. Amenities may include shade-oriented bus shelters, seating, drinking fountains, landscaping, public art, information displays, and bicycle rest stops. Not all locations require all amenities.

Pedestrian nodes serve the following important functions:

- Strengthen the emphasis on alternative mode use in the corridor.
- Contribute to the “greening” of the corridor.
- Provide “true” shade during the hottest months.
- Contribute to the overall vibrancy, safety, and desirability of the area.

These nodes should occur where single uses or a combination of uses lead to higher levels of pedestrian activity, such as the Amphitheater High School, Pima Community College Downtown Campus, student housing adjacent to Stone Avenue, and bus stops.



Examples of pedestrian nodes and related elements.

# Pedestrian Nodes

## What Is in a Pedestrian Node?

This drawing illustrates elements that might be found in a pedestrian node. This particular node incorporates a high-use bus shelter as a central feature. Not all pedestrian nodes, however, need to include a bus stop.

### Drinking Fountain

Drinking fountains provide an important enhancement for the pedestrian, bicyclist, or waiting bus rider, particularly in the hot summer months. The drinking fountain should be incorporated in a prominent location within the node and should include a chiller where possible.

### Seating

Seating, beyond that offered in the bus shelter, is provided as benches, walls, or some other form consistent with and complementary to the overall design of the node.

### Lighting

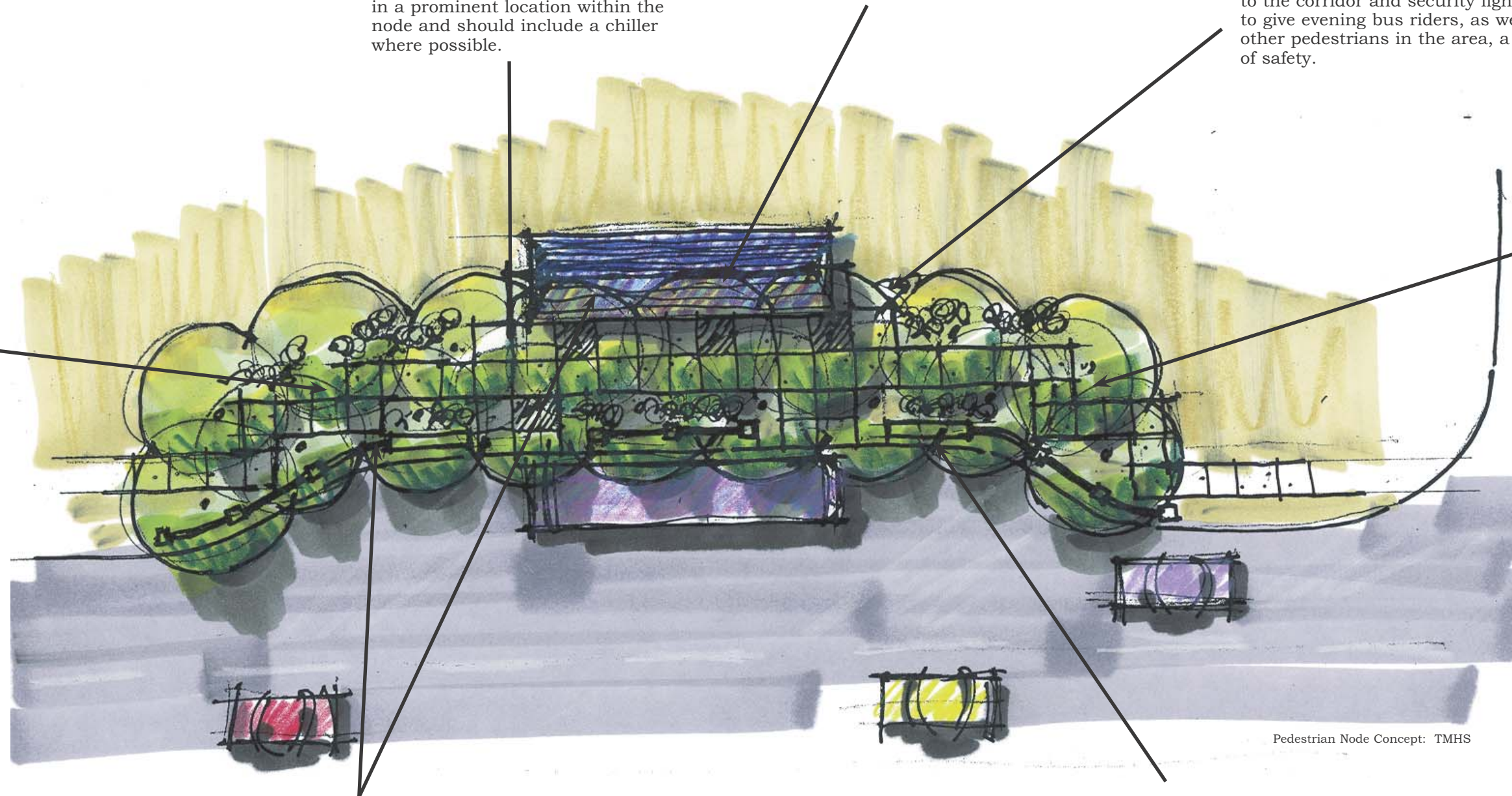
Node lighting includes both accent lighting to provide nighttime interest to the corridor and security lighting to give evening bus riders, as well as other pedestrians in the area, a sense of safety.

### Landscaping

Varied and prominent landscaping is important in making the node a strong visual element in the corridor, as well as a comfortable setting from which to observe urban life, wait for a bus, or catch one's breath. The landscaping includes street trees, node trees, and accent shrubbery.

### Shade-Oriented Elements

This node is designed to provide generous protection from the afternoon sun through a bus shelter with broad overhangs and closely spaced nodal trees on the west and south sides of the shelter. Wherever possible, seating is oriented to the north and south.



Pedestrian Node Concept: TMHS

### Public Art

The pedestrian node includes artistic expression through a variety of means, including creative identification and information display, choice of materials, art rails, and sculptural elements that may be incorporated within a structure or be free standing.

### Bus Shelter Identification

Naming a bus stop helps make the facility a more integral part of the neighborhood and can provide a sense of ownership. Bus stop names should be based on neighborhood names, prominent destinations such as Amphitheater High School or Pima Community College Downtown Campus, or other names as appropriate. The name may be included on a sign wall, a kiosk, or an appendage to the bus shelter. Other information could also be displayed, including bus routes, schedules, and maps depicting, for instance, the location of the node within the corridor and other points of interest along the corridor.

# Pedestrian Nodes

## What Are Key Guidelines for Designing Pedestrian Nodes?

A team, consisting of a landscape architect, an engineer, an artist, and representatives of adjacent neighborhoods, businesses, and appropriate city departments should be formed to undertake the design of an individual pedestrian node. Following are some key guidelines the team should consider.

**1** Pedestrian nodes should be located where higher pedestrian densities exist or are forecasted. Such locations may include high-use bus stops or transfer points, schools, larger multi-use complexes, and active retail areas.

**2** Pedestrian nodes should include a combination of street trees and node trees to create a dense canopy of shade. This is more than an amenity in the southern Arizona climate, it is a necessity.

**3** Pedestrian nodes should incorporate shrubs and groundcovers. These shrubs and groundcovers should be protected from pedestrian traffic, either by their location or by a strong definition of pedestrian spaces vs. plant spaces.

**4** Where possible, pedestrian nodes should combine uses to increase the density and activation of the space. For instance, in the vicinity of a school, a pedestrian node might combine a bus stop, rest area for bicyclists, and a place in which friends meet. High use and extended hours of use of these pedestrian nodes will increase the perception of Stone Avenue as an active urban corridor.

**5** Pedestrian nodes should include such furnishings as drinking fountains, trash cans, and benches to increase the users' sense of comfort. Seating should be arranged to accommodate groups of 2-4 people and should be shaded from the afternoon sun.

Careful thought should be given to the amount of seating provided because too much unused seating may detract from the goal of creating an active urban area.

**6** Pedestrian nodes should incorporate "art rails" (i.e., customized guardrails), walls, and other elements as needed to meet engineering safety standards. These elements should be designed to accentuate a neighborhood's identity and contribute to the overall sense of a cohesive corridor. (See Study Card titled *Landscape Islands* for more information on the "art rail.")

**7** All pedestrian nodes and related facilities should be accessible to people with disabilities in compliance with the Americans with Disabilities Act.

**8** All plants should be selected from the recommended Stone Avenue plant palette. (See Study Card titled *Plant Palette*.)

## How Can Pedestrian Nodes Be Installed and Maintained?

Pedestrian nodes can be developed for specific locations and can be installed once a design is completed and funding is secured. Pedestrian nodes should be developed in conjunction with uses that generate high numbers of pedestrians, such as high-use bus stops, schools, and large private developments. In some cases, pedestrian nodes might be implemented through a partnership between the city, Sun Tran, and a private developer of a

high density use, such as a mixed-use development.

Nodes associated with bus stops or other street frontage would generally be located in city right-of-way and, therefore, would be maintained by the city. However, cooperative efforts for maintenance could be established between owners of properties that generate pedestrians most likely to take advantage of these nodes.

Maintenance of a pedestrian node with a bus shelter might be undertaken in association with the adopt-a-bus shelter program. This program is being recommended as a way to increase the care of future bus shelters along the Stone Avenue Corridor.

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## Recommendation

Create green nodes that provide attractive landscaped areas, with public art and other amenities, to enhance the corridor.

## What Are Green Nodes?

Green nodes are places that add visual appeal to the streetscape. These nodes may occur on public or private property where there is room to install additional landscape. They may be located in larger spaces – such as in a vacant lot or a deep setback area – or in a smaller space – such as a planter adjacent to side street parking. Green nodes contribute to the overall beautification of the corridor, but some may also be used for demonstration projects to try out a particular plant species or maintenance technique.



Green nodes serve the following important functions:

- Provide visual relief from large expanses of paving.
- Contribute to the “greening” of the corridor.
- Add interest to the corridor and further encourage pedestrian activity.
- Provide opportunities for more diversity in the corridor landscaping.
- Contribute to the overall vibrancy, safety, and desirability of the area.

## What Is in a Green Node?

### Street Trees

Street trees provide the common link between the node and the surrounding streetscape.

### Node Trees

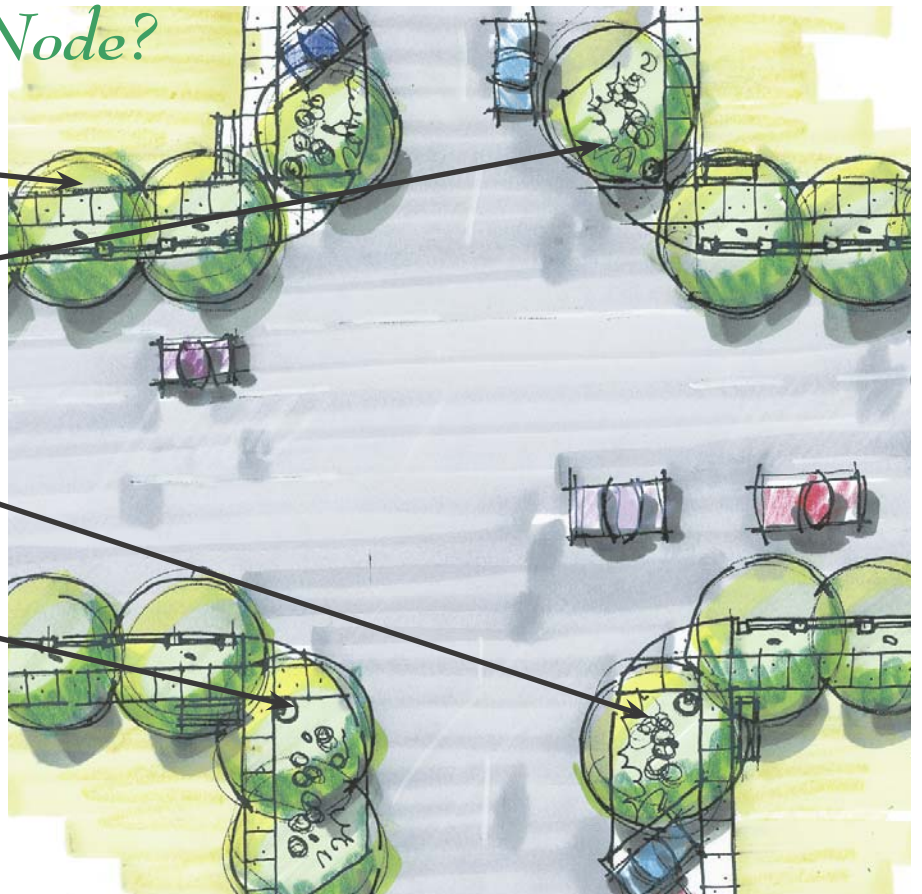
Node trees serve as accent landscaping or to provide special emphasis within the node.

### Color/Accent Planting

Specialty color or accent planting allows diversity while contributing to the overall “greening” of the corridor.

### Trail Marker or Signage

A green node can provide the setting for specialized elements, such as a marker identifying a particular neighborhood or a historic site. (See Study Card titled “Rolling Stone Trail.”)



# Green Nodes

## What Are Key Guidelines for Designing Green Nodes?

**1** Green nodes should be encouraged at locations where relief from hardscape is needed. These areas include roadway segments where sidewalks abut the curb or where the sidewalks are particularly wide.

**2** Green nodes should incorporate shrubs and groundcovers, but do not always have to include trees. Where adjacent street trees provide sufficient shade, green nodes may contain shrubs and groundcovers only.

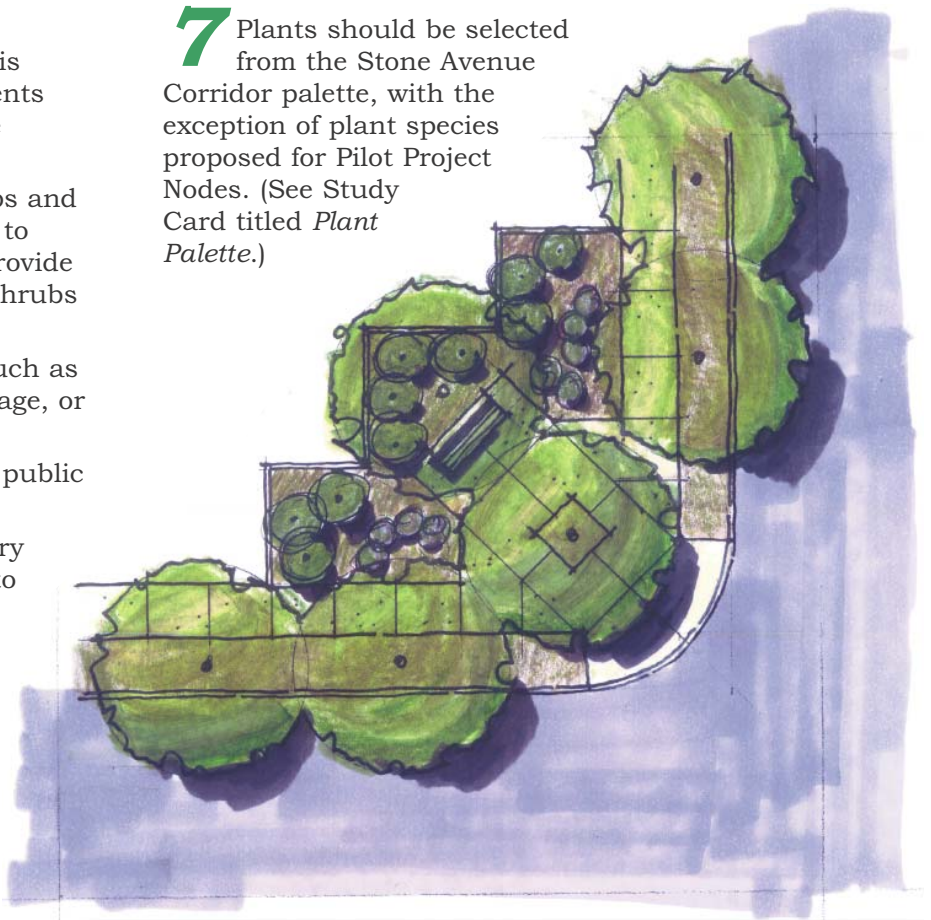
**3** Green nodes may contain amenities such as pedestrian seating or information signage, or they may simply function as green spaces.

**4** Green nodes may be located on either public or private property.

**5** The space green nodes occupy may vary greatly in size, ranging from planters to corner right-of-way. Such right-of-way may become available in conjunction with an intersection project, a street closing, a wide setback area, or a vacant lot.

**6** Any green node that contains pedestrian amenities should be accessible to people with disabilities in compliance with the Americans with Disabilities Act.

**7** Plants should be selected from the Stone Avenue Corridor palette, with the exception of plant species proposed for Pilot Project Nodes. (See Study Card titled *Plant Palette*.)



Green Node Corner Concept: TMHS

## How Can Green Nodes Be Installed and Maintained?

Because green nodes come in a variety of sizes and can be constructed on public or private property, they should be among the proposed streetscape elements that start to be implemented in the near future.

Green nodes can be:

- Planned in conjunction with new development or redevelopment of property adjacent to Stone Avenue.
- Incorporated into public construction work, such as proposed full or partial side street closings.

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- Championed by a neighborhood association for an important neighborhood entry location. Financial assistance might be sought from the City of Tucson, or for more modest node designs, funds might be raised through neighborhood association activities or business donations. Recognition of such efforts might be given through green node plaques and/or mentioned in the local media.

Green nodes should be maintained through a combination of low maintenance design, innovative techniques such as water harvesting, and cooperative efforts between the City of Tucson, adjacent businesses, and nearby neighborhood associations.



## Recommendation

Plant groupings of closely spaced trees along Stone Avenue at varying intervals not to exceed 100 feet.

## What Are Street Trees?

Street trees are large upright trees that are intended primarily to be stand-alone landscape elements. Street trees will be most effective in providing “true” shade and a commanding visual contrast between dense landscaping and open space when planted in groups. These trees should be located to maximize shade for pedestrians. Locations could include between the street and the sidewalk, between the

sidewalk and adjacent properties, and in the center of the street. (For discussion of the latter, see the Study Card titled *Landscape Islands*.) Street trees can be incorporated into new development projects, redevelopment projects, and public improvement projects. Street trees serve the following important functions:



- Provide visual relief from large expanses of paving.
- Contribute to the “greening” of the corridor.
- Provide dense shade when planted in groups.
- Separate pedestrians from motor vehicles.

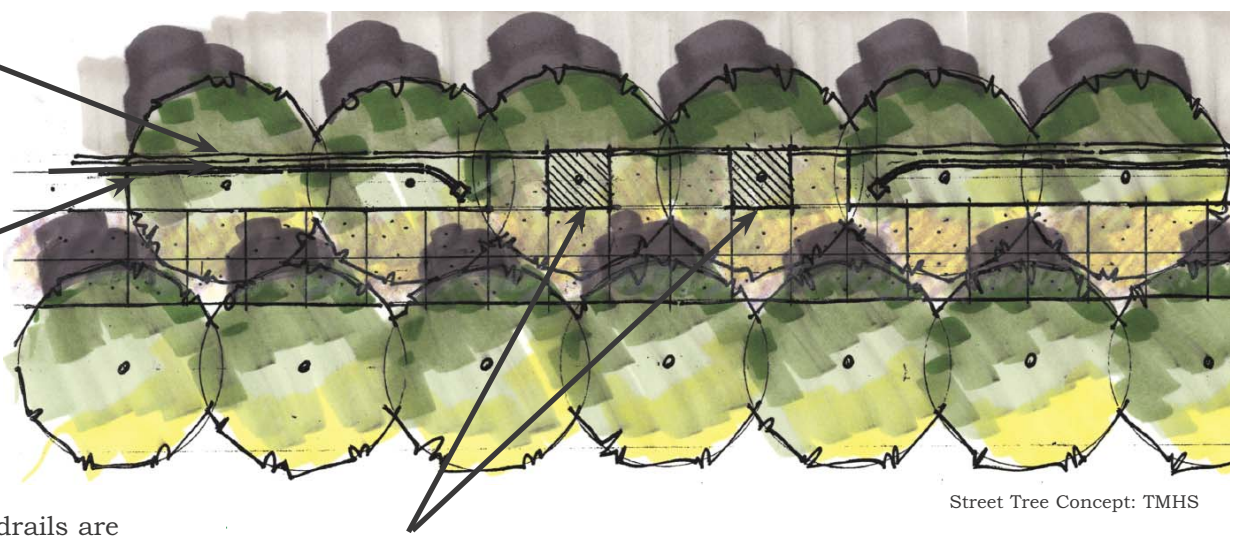
## What Is Included in Planting Street Trees?

### Trees

Trees are large upright varieties with a long life, low maintenance needs, and drought tolerant characteristics.

### Art Rail

Because Stone Avenue has limited right-of-way, street trees will sometimes need to be located immediately adjacent to the road. “Art rails” that meet the specifications of guardrails are used to protect the cars from the trees and the trees from the cars. These rails are treated artistically to complement both their immediate location and contribute to the overall aesthetics of the corridor.



Street Tree Concept: TMHS

### Tree Grates

Tree grates are generally slotted iron grates that fit flush with the adjacent sidewalk and allow water and air to reach the ground surface around the trees. These grates should only be used where large expanses of concrete surround

the street tree locations or heavy pedestrian use is anticipated.

### Lighting

Accent lighting can be incorporated with street trees to enliven the street and to highlight the more heavily used pedestrian areas.

# Street Trees

## What Are Key Guidelines for Using Street Trees?

While the location and installation of street trees are quite flexible, an evenly spaced line of trees throughout the corridor is not recommended for two reasons. First, the need to keep businesses visible would prohibit close enough spacing to provide effective shade. Second, Stone Avenue is distinguished in part by its diversity of parcel sizes, land uses, and building types. Uniform landscaping would detract from rather than complement this diversity. Following are the guidelines for the location of street trees.

**1** Street trees should be planted with consideration for the sun angles and desired shade locations. For example, street trees planted on the east side of Stone Avenue will provide more pedestrian shade if they are located between the street and the sidewalk.



**2** Street trees should be tightly spaced where shade is most needed. Street trees can be spaced further apart or not planted where pedestrian shade is not a primary goal.

**3** Street trees should reflect adjacent pedestrian activities. For example, trees should be located and spaced to provide meaningful shade at bus stops.

**4** Street trees should be planted on the sides of Stone Avenue at those locations where landscape islands have been installed in the center of the road. This will further enhance the traffic calming effect of the center islands by reinforcing the visual perception of the narrowing of the road at these locations. (See Study Card titled *Landscape Islands*.)

**5** “Art rails” (i.e., customized guardrails) should be utilized to allow planting of trees close to the curb line. This maximizes available landscape space and provides a narrow streetscape cross section.

**6** Wherever possible, new development or redevelopment should create a shaded environment for pedestrians and bicyclists. As such, street trees should be incorporated into all new projects along the corridor.

**7** Street trees should be incorporated into projects that include the addition of new sidewalks along the corridor.

**8** Street trees should be a minimum of 36-inch box size. This will reduce the time at which a tree is “at risk” from poor maintenance, improper watering, staking, etc. Starting with larger trees will provide more shade sooner.

**9** Street trees should be planted with two-foot-deep root guards in locations where the trees’ roots could affect the sidewalk or street paving.

**10** Tree grates should be used where trees are planted in openings within the sidewalk.

**11** Street trees should be selected from the recommended plant palette for the Stone Avenue Corridor. (See Study Card titled *Plant Palette*.)

## How Can Street Trees Be Installed and Maintained?

Some street trees should be able to be incorporated into the Stone Avenue streetscape in the near future by requesting that developers plant them in conjunction with new development or redevelopment projects. In addition, opportunities to demonstrate the use of large upright trees for shade and visual contrast should be sought in the City of Tucson Stone/Speedway Gateway Improvement Project and in the Stone/Grant portion of the Pima County Grant Road Improvement Project.

Street trees are also recommended for inclusion in the landscape elements described in other cards. (See the

Study Cards titled *Landscape Islands*, *Green Nodes*, and *Pedestrian Nodes*.)

Street trees located in the city’s right-of-way would be under the care and maintenance of the city, while those on private property would be the responsibility of the property owner.

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## Recommendation

Provide a plant palette for use in planning the various landscape elements proposed for the corridor, including *Landscape Islands*, *Pedestrian Nodes*, *Green Nodes*, and *Street Tree* groupings. (See separate Study Cards on each of these elements.)



*Typical grouping with Smooth Edged Agave, Lantana, and Salvia species*

## Guidelines for Plant Selection

**1 Size and Shape** – The ultimate size and shape of the plant should be suitable for the size and shape of the landscape area. For example, wide, low trees do not work well in narrow spaces where pedestrian shade is desirable.



*Typical grouping with Lantana, Sweet Acacia, Red Bird, and Red Oak*

**2 Health and Hardiness** – Plants should be selected based on their resistance to disease, pests, and other debilitating factors. Plants that require excessive maintenance or pruning to achieve their form should be avoided.

**3 Climatic and Microclimatic Suitability** – Plants should be selected that are suitable to the desert climate and are on Pima County's list of approved drought tolerant plants. Factors include ability to withstand temperature extremes, minimal supplemental water requirements (drip system only), and ability to withstand hot sun. Plants should also be appropriate to microclimatic conditions such as reflected heat.

**4 Aesthetics** – Plants should have an attractive form, color, or feature.

**5 Safety** – Plants should not create an undue hazard. These hazards include weak limbs, large thorns, and poisonous fruits.

# Plant Palette

## Recommended Plant Palette



Red Oak

### Street Trees

- Acacia smallii – Southwestern Sweet Acacia
- Brachychiton populneus – Bottle Tree
- Quercus buckleyii – Red Oak

### Accent Shrubs

- Dasyliirion wheeleri – Desert Spoon
- Agave weberi – Smooth Edged Agave
- Hesperaloe parviflora – Red Yucca
- Agave vilmoriniana – Octopus Agave



Desert Spoon

### Green and Pedestrian Node Trees

- Acacia smallii – Southwestern Sweet Acacia
- Cercidium floridum – “Desert Museum” – Desert Museum Palo Verde
- Eucalyptus spathulata – Narrow Leaf Gimlet
- Olneya tesota – Ironwood
- Prosopis glandulosa – Honey Mesquite
- Prosopis velutina – Native Mesquite

### Color Shrubs

- Calliandra californica – Baja Fairy Duster
- Caesalpinia pulcherrima – Red Bird
- Cassia spp. – Cassia
- Dasyliirion wheeleri – Desert Spoon
- Hesperaloe parvifolia – Red Yucca
- Lantana spp. – Trailing Lantana
- Leucophyllum spp. – Texas Ranger, Sage
- Salvia spp. – Salvia, Sage
- Verbena rigida – Verbena



Sage

### Pilot Project Nodes

Pilot Project Nodes offer an opportunity to introduce unique plant species not found in this list, as well as experimental

growing techniques. Such projects should contribute to the overall effort to create a distinct, greener, self-sustaining, and more beautiful corridor. These projects could be initiated by neighborhoods or

businesses and funded through sources that support special projects. Pilot project species and/or growing techniques that prove successful should be considered for integration into the Stone Avenue landscape on a more regular basis.

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## Overall Goal

Transform Stone Avenue from a declining corridor to a thriving urban corridor by creating a balance of uses that:

- Serves adjacent neighborhoods.
- Capitalizes on nearby educational institutions and Downtown.
- Enhances businesses that are compatible with residential uses.



Looking south along Stone Avenue toward Downtown Tucson.

## Recommendations

**Stone Avenue should be designated as a special district to allow a combination of transportation, streetscape, and economic development improvements to be coordinated and occur simultaneously when possible.**

Create a special district that will allow revisions to existing zoning codes (for example, parking and signage requirements); utilize targeted incentives and funding; customize design standards; and allow property owners to decide on the creation of special funds through tax increases to accomplish specific goals. By creating a special district, emphasis can be placed on retaining the special characteristics of this historic corridor through the creative reuse of existing buildings and by allowing multiple, unrelated businesses to share parking facilities. Without a special district in which codes can be adapted to address the conditions of this historic corridor, the ability to both retain the unique characteristics of Stone Avenue and achieve economic success will be greatly diminished.

**Major development projects are needed to make a significant impact on Stone Avenue.**

Target commercial or mixed-use developments as the catalyst needed to make a significant impact on Stone Avenue. The commercial ventures should not be big box development. Instead the businesses should be single or multiple with adjoining walls and located close to the street front.

Each economic development project needs to be large enough – at least one half block – to make an impact on the streetscape and the amount of activity in the surrounding area. Well-placed major development projects will encourage investors, including small investors, by making the statement that Stone Avenue is a corridor in which it is worthwhile to invest. New development will also serve to enhance existing businesses.

**Major development projects must be planned and designed to support urban life and encourage use of alternative modes of transportation.**

Attract potential customers who travel through the corridor and who live in the adjacent neighborhoods by providing mixed-use developments that combine different commercial or commercial and residential uses. With a mix of uses within walking distance of each other, pedestrian activity should increase, reinforcing the visual message that this is a thriving area. Through design, commercial projects, particularly those with retail services, can be made accessible from both the Stone Avenue and the neighborhood sides, which should further encourage pedestrian and bicycle use. Specialty grocery stores, coffee shops, and restaurants are examples of services desired by corridor residents that should also appeal to commuters.

# Economic Development

## Recommendations Continued



**A mix of retail, commercial, and residential uses should be encouraged throughout the corridor and on individual sites. To provide guidance regarding appropriate uses and design along the corridor, prototypes should be adopted. (See Study Cards titled *Urban Design Concepts*, *Mixed-Use Development Prototype*, and *Adaptive Reuse Development Prototype*.)**

**Building Reuse** – Reuse of historic buildings will help maintain the distinct character of the corridor. The existing configuration of the buildings will determine the way in which the buildings will be reused. For example, older buildings located along the southern portion of the study corridor present a distinct urban form close to the street. These buildings generally provide a front entrance close enough to the public right-of-way that the sidewalks can be shaded through the use of awnings and other façade treatments. True shade should contribute to greater pedestrian traffic. These buildings can also be opened up in back to allow easy access by residents from adjacent neighborhoods.

**Vacant Lot Infill** – The many vacant lots along the corridor can be used to create pockets of mixed use and other forms of economic development. Smaller vacant lots can also provide mid-block parking to serve new and existing businesses.

Together the creative use of underutilized buildings and vacant lots will help revitalize the corridor and reverse the impression of an area in decline. Following are some recommendations on the size and location of economic development projects throughout the corridor.

**6<sup>th</sup> Street to Drachman Street** – In this segment of the corridor, there should be two major economic development projects to reverse the appearance of an area in decline and to capitalize on the proximity to the Downtown. Each project should be a minimum of one block. There are several blocks of abandoned or underutilized buildings that present the best opportunity to make a significant impact on the corridor.



**Drachman Street to Grant Road** – Along this stretch of Stone, there should be a minimum of one major economic development project located on a lot no smaller than one half block. At the time this card was being prepared, there was one very large vacant lot on the market in this area. This particular lot would be a good site for a major mixed-use project that could serve as a model for other mixed-use projects throughout Tucson.



# Economic Development

**Grant Road to Prince Road** – In this segment, there should be a minimum of one major economic development project located on a lot no smaller than one half block. This segment of Stone Avenue includes several larger intersections with adjacent abandoned or underutilized buildings. The city may have to assist developers in amassing enough land for a successful project.



**Prince Street to Wetmore Road** – Here the emphasis should be on residential infill. This area has significant pressure from commercial uses in all directions. Since services are relatively close to the residences in this area, the city's focus should be on promoting development that creates a greater proportion of home ownership to help ensure the stability of the surrounding neighborhoods.



**The City of Tucson must provide assistance and incentives to insure that model projects occur along Stone Avenue.**

Consider tools that allow assemblage of land to form parcels large enough for significant development projects. In Arizona, cities such as Tempe and Mesa have used the power of eminent domain to get development underway in declining areas. Funding for development can be pursued through such sources as:

- **108 Loan:** This loan is given by the United States Department of Housing and Urban Development (HUD) for areas specified as “Action Zones.” A city can take a loan up to five times its Community Development Block Grant (see CDBG below). The city should also apply for an Economic Development Initiative (EDI) Grant, which can secure the 108 loan because the loan cannot be repaid by user fees or any other direct user penalties. A 108 loan can be used only for dispersed low-income housing and commercial revitalization.
- **TEA-21:** Given by the United States Federal Highway Administration (FHWA), money from the Transportation Efficiency Act (TEA-21) can be used to reduce environmental impacts of transportation and create strategies that encourage private sector development patterns for more efficient transportation systems.
- **CDBG:** A Community Development Block Grant is money from the federal government that is allocated to cities for a variety of uses. The City of Tucson can redistribute CDBG funds that it already receives or apply for more funding to undertake economic revitalization projects. Presently the city uses its CDBG funds to assist non-profit organizations within the city.
- **Joint Public/Private Cooperatives:** Cooperatives can be organized to market and implement redevelopment projects. This allows municipal fiscal resources and land acquisition powers to be coupled with the private sector in planning and negotiation. In Tucson, such organizations currently include the Downtown Development Corporation and the Business Development Finance Corporation.

# Economic Development



*Neighborhood-scale businesses of earlier days. Intersection of Stone Avenue and 3rd Street.*

## Recommendations Continued

- **Back to Basics:** This is an existing City of Tucson program that targets investment in concentrated areas to help revitalize and stabilize older neighborhoods. Back to Basics funds are distributed by the city to selected neighborhoods to provide or enhance such infrastructure as sidewalks and lighting. This program can strengthen linkages between neighborhoods and commercial areas.
- **Revolving Loan Funds:** The city can take existing revolving loan funds and apply them to designated areas as seed fund investment, similar to the downtown revolving loan fund.
- **Business Development Finance Corporation:** This is a city-sponsored, non-profit corporation that gives loans ranging from several thousand up to \$50,000 for business start-ups. The corporation determines eligibility and level of funding on an individual case basis.
- **Special Tax District:** Merchants can choose to create a special tax district. Excess tax money is returned to the special tax district to be applied to projects within the district. These districts are created and terminated by the merchants within the district and by the city.

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## Recommendations

**1** Require design that (a) reinforces urban character, including densities that provide sufficient population to support increased alternative transportation use and a greater mix of commercial and retail uses, and (b) promotes urban form that allows easy access to adjacent land uses by pedestrians and clear visibility of the uses for all passers-by. Design proposals for properties adjacent to Stone Avenue should demonstrate sensitivity to nearby neighborhoods.

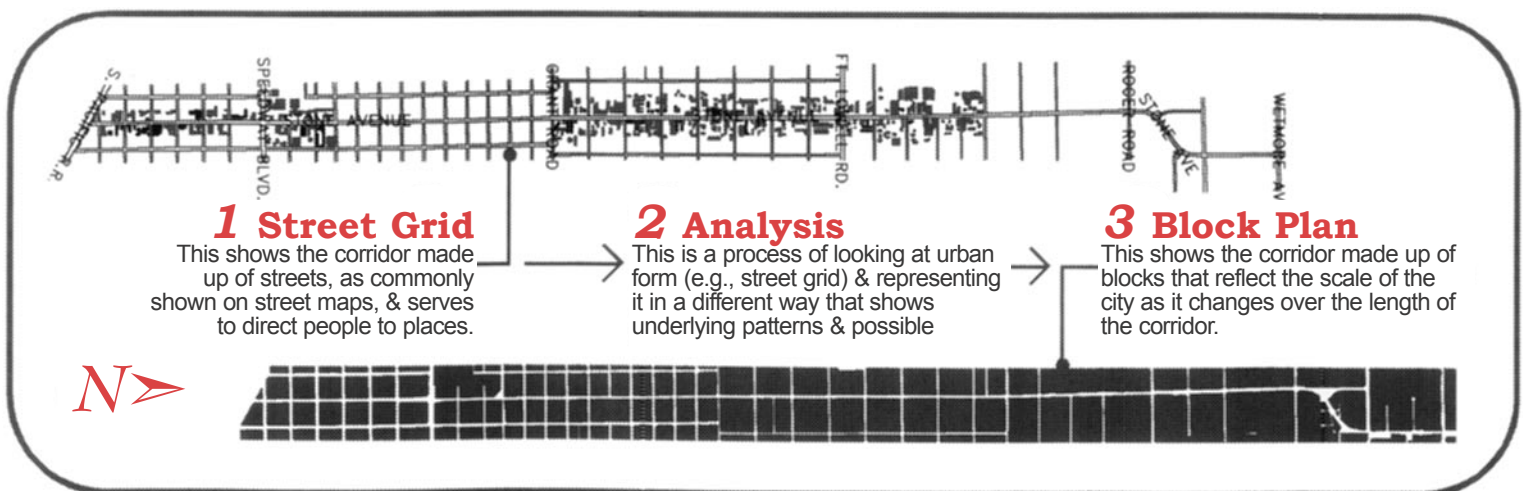
**2** Focus on vacant lots and underutilized properties to fill in gaps along the corridor (i.e., infill development) with the objective of stabilizing land uses and encouraging economic development where needed most.

**3** Seek opportunities to celebrate the history of Stone Avenue through preservation and creative use of older buildings, unusual signage, and other distinctive elements within the corridor.

**4** Incorporate individual pieces of public art and artistic treatment of functional elements, such as pavement, into both public and private projects. Where appropriate, use artistic treatments to help strengthen the identities of the neighborhoods.

## Urban Form Analysis

Stone Avenue is an urban corridor made up of varied land uses, block types and sizes, and multiple parcel arrangements and sizes. The urban form analysis helps in understanding the corridor's constituent parts and the corridor as a whole. The analysis process is introduced in the diagram below and further elaborated in the following pages.



# Urban Design Concepts

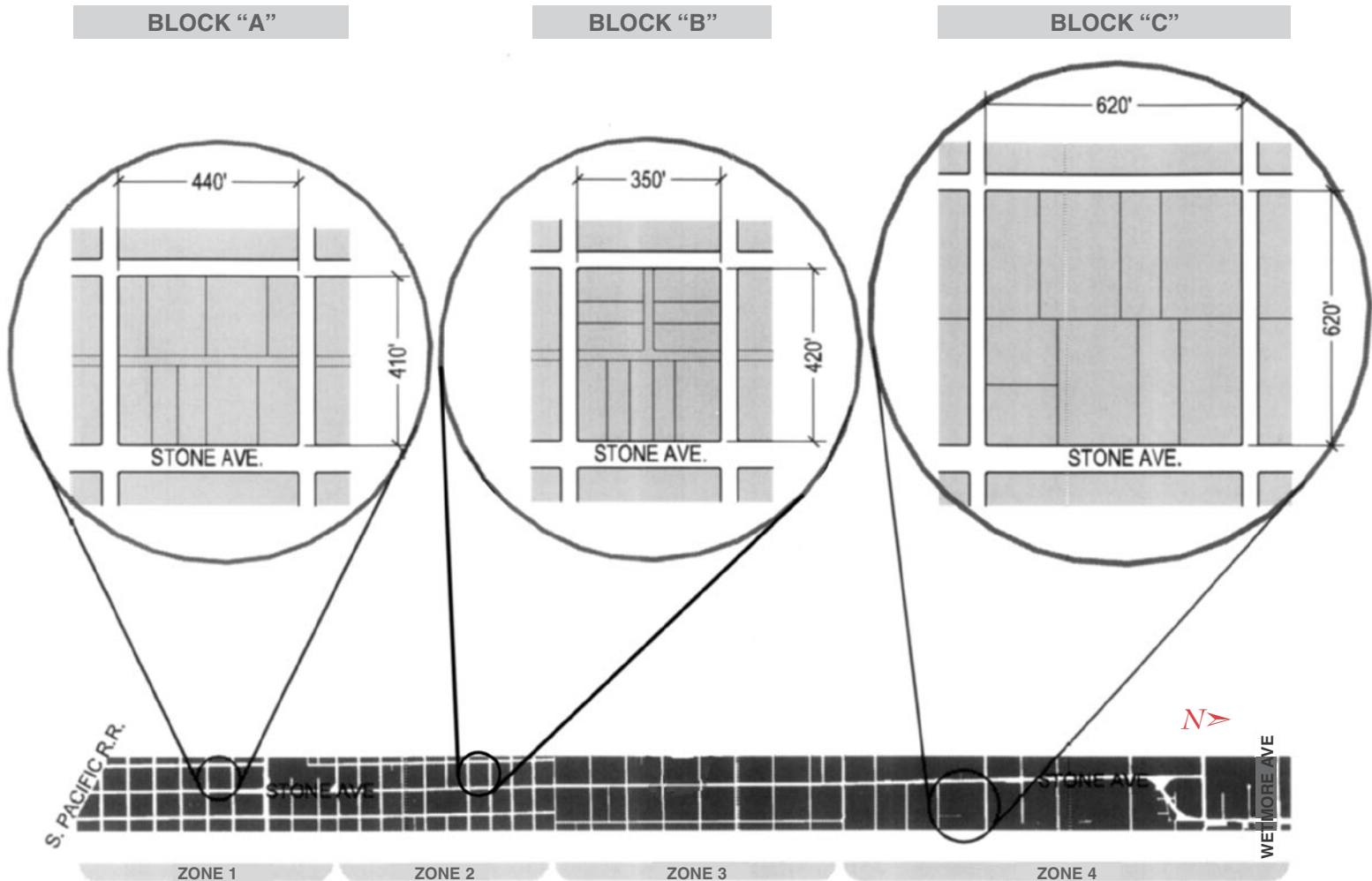
## Urban Form Analysis Continued Block Types

### Block Types "A" & "B"

- Incorporated 1900-1940's.
- **Historic city block** organized around alley and narrow residential lots (50' wide typical) that have become a mix of residential and commercial sized lots (50' - 150' wide).
- Lots facing Stone Avenue that are currently **undersized** for commercial/ residential (<100' wide) should be assembled and/or properties linked with shared off-street parking.

### Block Type "C"

- Incorporated 1940's-1970's.
- **Historic ranch** and undeveloped properties organized into large city blocks with wide suburban lots (100'-150' wide) and irregular depth (see parcel plan on other side).
- These suburban sized lots provide both the stability of larger residential property owners and the flexibility for potential commercial developments. **No recommendation** at the block scale is required.



# Urban Design Concepts

## Prototype Developments

**Q** How do we better use existing commercial buildings short on parking?

**A** *Urban Mini-Plaza Prototype* featuring renovated buildings framing an outdoor plaza area that integrates pedestrian activities with some parking. (See Study Card titled *Adaptive Reuse Development Prototype*)

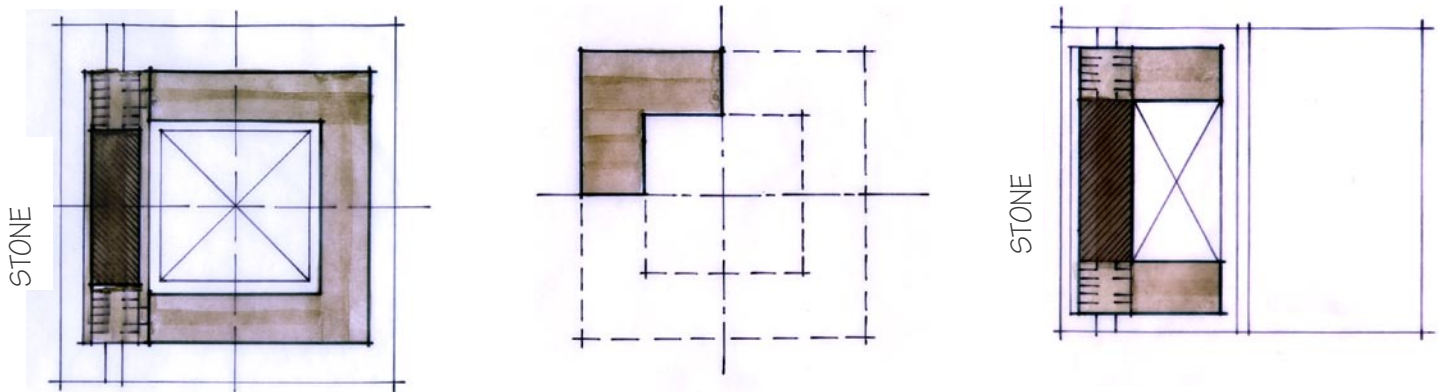


*Cut-Away View of Building-Plaza-Building*

This illustration shows the adaptive reuse of existing commercial buildings by having them open onto a pedestrian-friendly plaza that provides off-street parking.

**Q** How do we increase density to support neighborhood retail, increase the use of alternative transportation, and create a more active street front during and after work hours?

**A** *Mixed-Use Development Prototype* combining residential, retail, and office uses. (See Study Card titled *Mixed-Use Development Prototype*.)



"COMPLETE" SCHEME  
FULL BLOCK, TYPE A OR B,  
ZONES 1 & 2

0 Ft. 100

DIVISION OF PROTOTYPE

"PARTIAL" SCHEME  
1/2 BLOCK, TYPE A OR B,  
ZONES 1 & 2

*Plan View Diagrams*

These diagrams show the possible layouts of a mixed-use development and how this prototype has the flexibility to fit on multiple sites along Stone Avenue.

# Urban Design Concepts

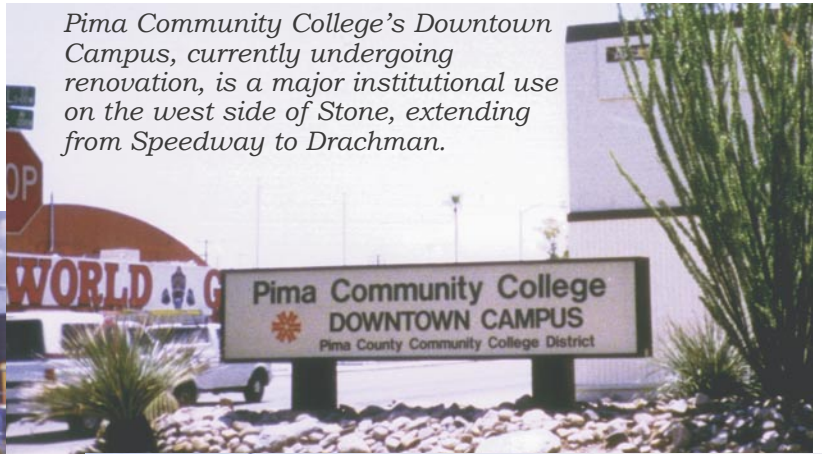
## Stone Photos

These images reflect both the variety of land uses and diversity in parcel sizes that exist along Stone Avenue today.

*Smaller parcels serving varied commercial uses are typical in the older portion of Stone between 6th and Drachman.*



*Pima Community College's Downtown Campus, currently undergoing renovation, is a major institutional use on the west side of Stone, extending from Speedway to Drachman.*



*Between Speedway and Grant on Stone, the parcels become larger and accommodate a mix of commercial and industrial uses. In the foreground is the former Ellis Metals yard, now a vacant site of over 3.5 acres.*



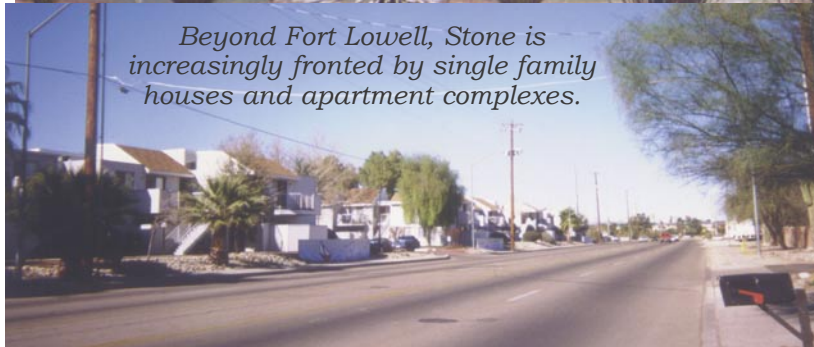
*Once a major location for automobile dealerships in Tucson, Stone is still home to many automotive-related services.*



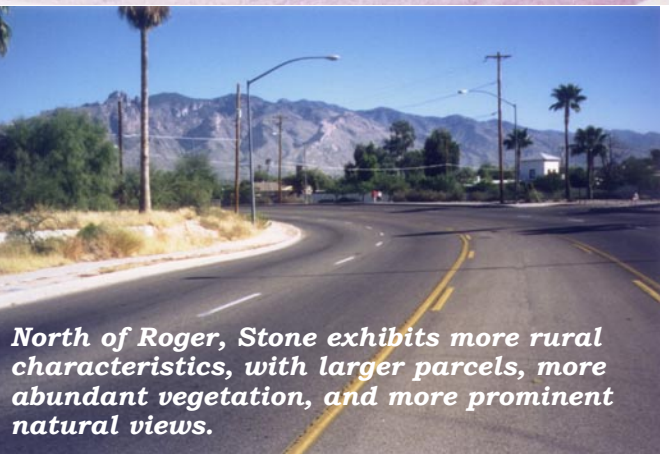
*Amphitheater High School, another large institutional use on Stone, is located in a generally residential area.*



*Beyond Fort Lowell, Stone is increasingly fronted by single family houses and apartment complexes.*



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*North of Roger, Stone exhibits more rural characteristics, with larger parcels, more abundant vegetation, and more prominent natural views.*



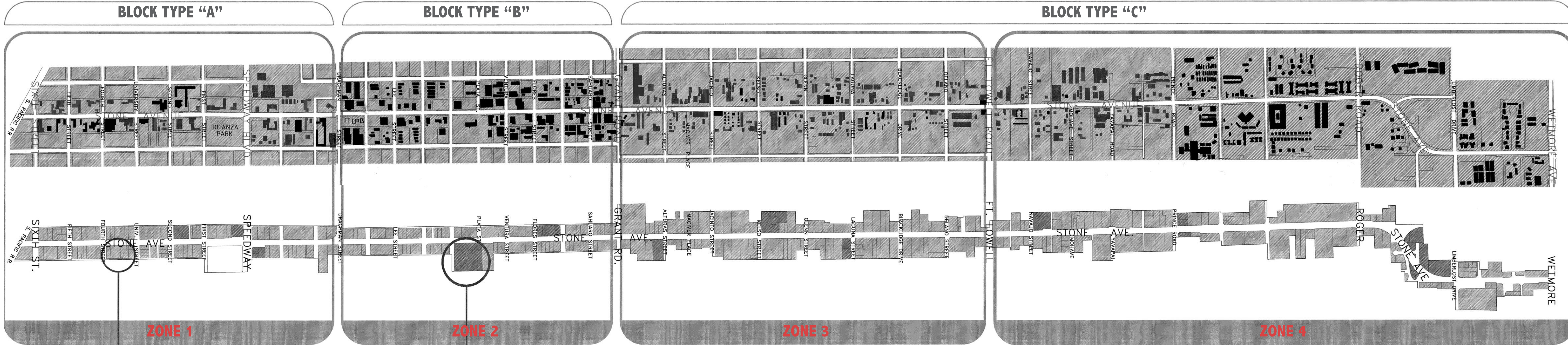
BLOCK TYPE "A"

BLOCK TYPE "B"

BLOCK TYPE "C"

Street & Bldg. Plan

Parcel Plan



Prototype Adaptive Reuse of Existing Commercial Buildings  
**Urban Mini-Plaza** (See separate Study Card.)

- Conceptual Site: 712-720 N. Stone Avenue
- Existing commercial/retail space to be opened up to off-street parking and shared public space.
  - Potential benefits include improved use of historic commercial buildings through a balance of pedestrian and automobile traffic. This would encourage both preservation and the use of alternative modes of transportation.

Prototype Infill of Vacant Land  
**Mixed-Use Residential Development** (See separate Study Card.)

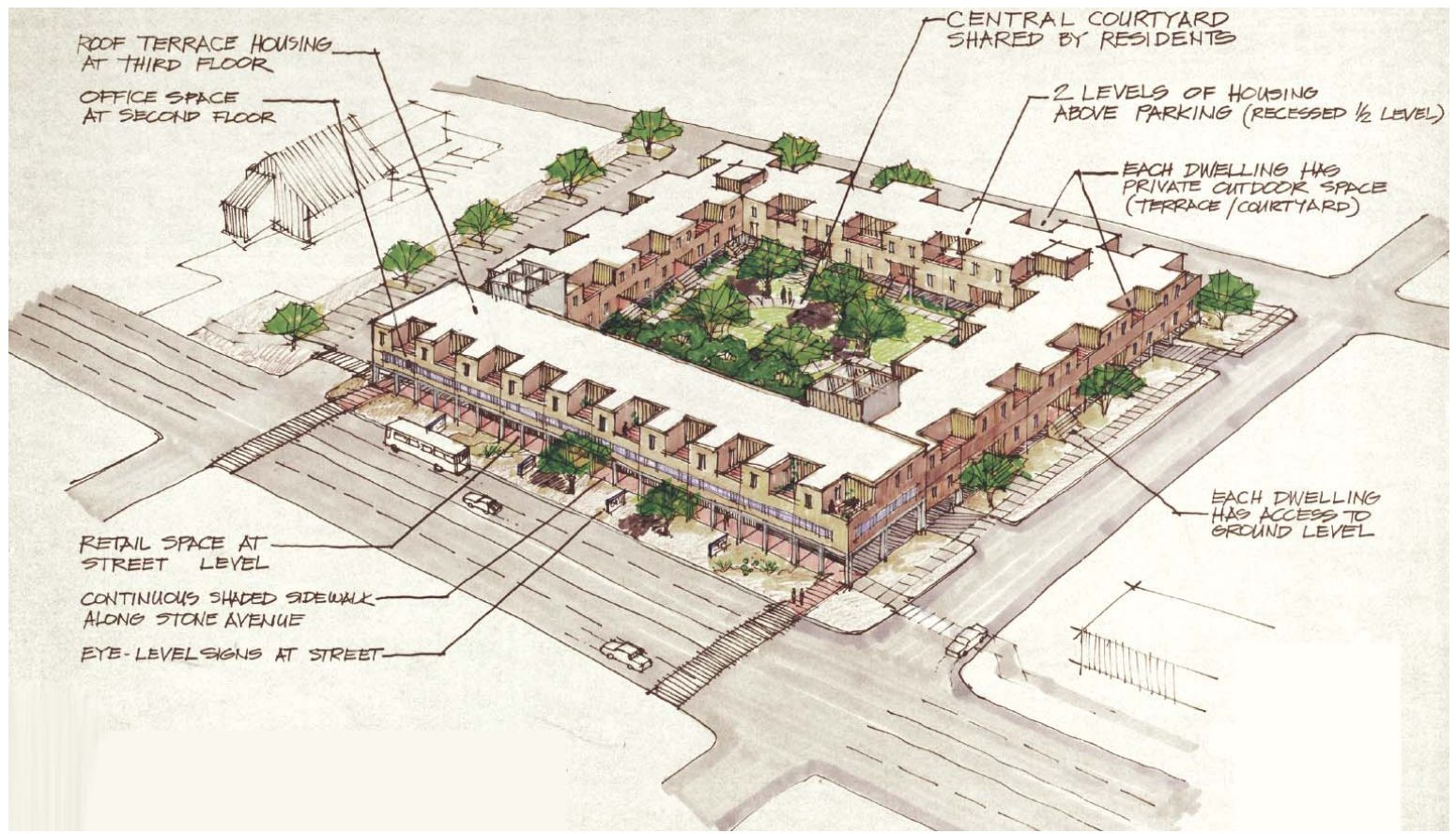
- Conceptual Site: 1800 N. Stone Avenue
- Industrial vacant lot to be re-developed as mixed-use development with streetfront retail and offices, and 2-story residential courtyard to rear. Off-street parking to be located beneath building 1/2 floor.
  - Potential benefits include a more pedestrian-friendly, transit-oriented development that begins to define the street edge through its building mass and program organization.

Sites for Potential Development  
**Catalogue of Vacant Lots**

The darker diagonally striped areas indicate vacant or underutilized lots along the Stone Avenue Corridor as recorded by a windshield survey taken in the spring of 2000. This survey is neither definitive nor an indication of property value; rather it is simply a record of the lots' "public face" to the corridor. This public face affects how people perceive the corridor's vitality and, consequently, their decisions about investing in the area.

Study Zone Demarcation  
**Zones 1-4**

The approximately 4-mile long study corridor was divided into four "zones" to help facilitate the review of issues. These zones, which were geographically divided along major cross streets, reflect the progression of Stone Avenue's development over the years.



Stone Avenue Corridor Mixed-Use Infill Prototype Aerial Perspective Sketch.

Bob Vint & Associates, Architects

## Urban Design Principles

### Infill of Vacant Land with Mixed-Use Commercial & Residential

- A** Create a mixed-use structure that combines ground floor retail space with professional offices above on the street side and higher density housing (i.e., two to three stories) surrounding a large, shared courtyard. Provide private patios or roof terraces for individual dwellings.
- B** Construct buildings along Stone Avenue street front to define space of urban corridor, including awnings or arcades to provide shaded sidewalks for passers-by.
- C** Locate parking beneath housing units with cars recessed one-half level to:
  - Make land on site available for gardens and courtyards, rather than for surface parking.
  - Provide coverage for cars.
  - Allow air movement, which helps alleviate fumes.

- D** Park to each side of retail/offices, rather than directly in front of building along street.
- E** Design structure to respond to climate for passive-solar orientation, sun angles, prevailing breezes and views to the Catalina Mountains, Tucson Mountains, and Downtown.
- F** Provide mixed-income housing, with approximately one-third affordable and two-thirds market-rate housing units. For the recommended mixed-use prototype, this would yield 20 affordable units and 40 market-rate units, which is consistent with City of Tucson and U.S. Department of Housing and Urban Development goals to disperse affordable housing, rather than to concentrate it.

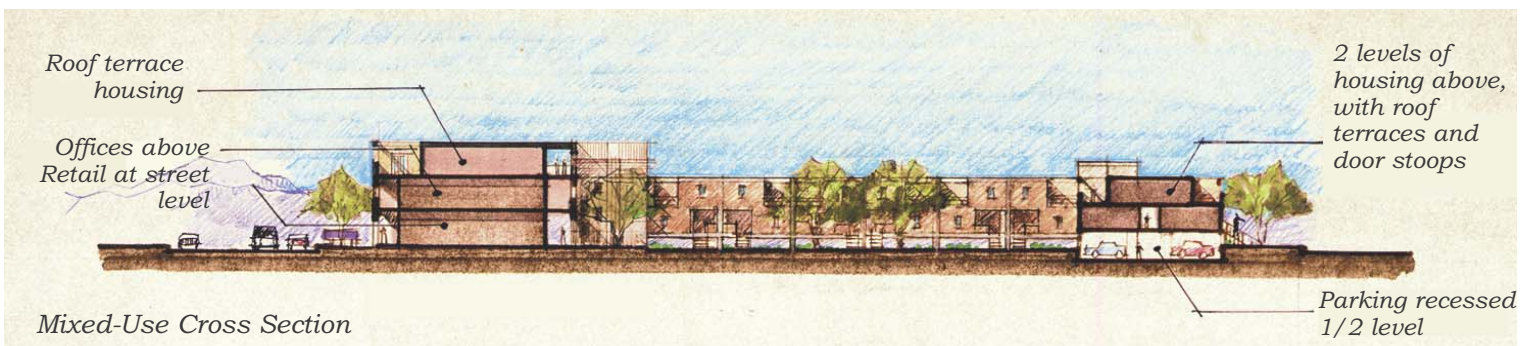
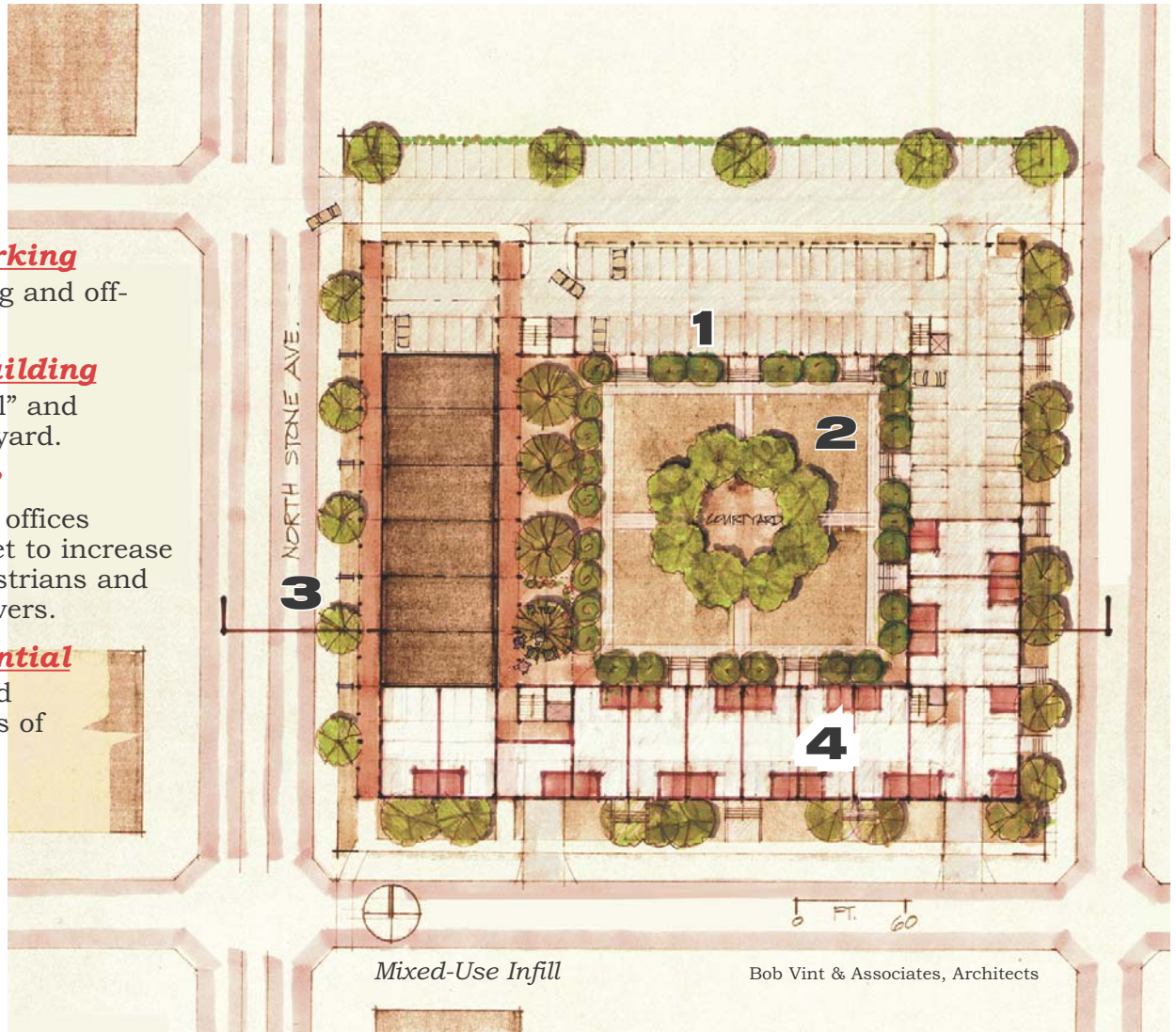
# Mixed-Use Development Prototype

## Mixed-Use Summary

- Ground-floor retail on Stone: 10,800 sq.ft.
- Offices above: 18,000 sq.ft.
- 60 housing units (owner-occupied condominiums – 40 market-rate, 20 affordable).
- 120 parking spaces below building; 60 additional at grade.
- Approx. 3.59 acres – 16.7 res./acre density.
- Shaded sidewalk along Stone.
- Shared central courtyard.

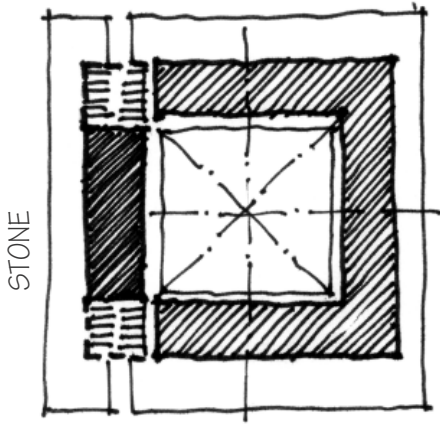
### Key Notes:

1. **Subgrade Parking** beneath housing and off-street parking.
2. **Courtyard Building** with “street wall” and protected courtyard.
3. **“Street Wall”** with shops and offices brought to street to increase access for pedestrians and visibility for drivers.
4. **Mixed-Residential** with market and subsidized units of different sizes.



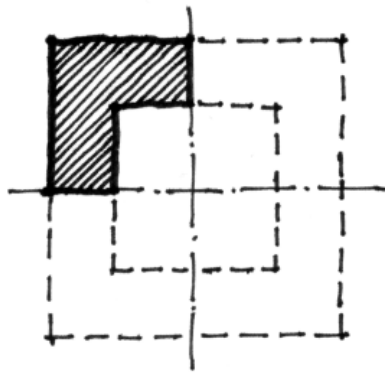
# Mixed-Use Development Prototype

## Variations of Prototype

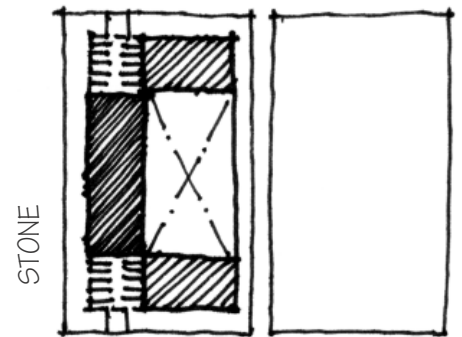


"COMPLETE" SCHEME  
FULL BLOCK, TYPE A OR B,  
ZONES 1 & 2

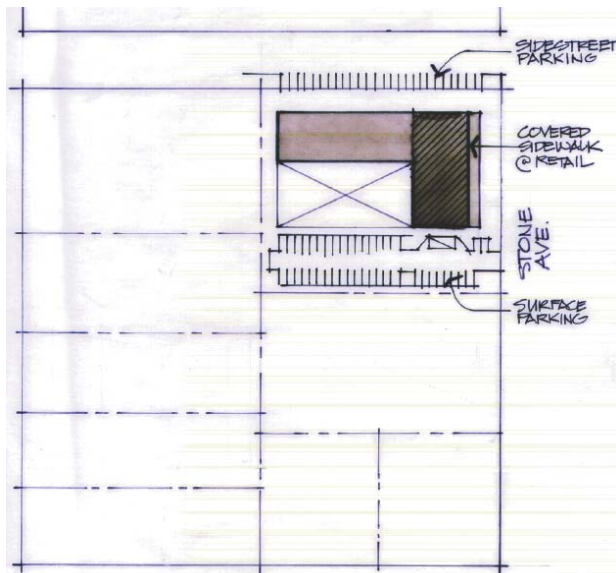
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DIVISION OF PROTOTYPE

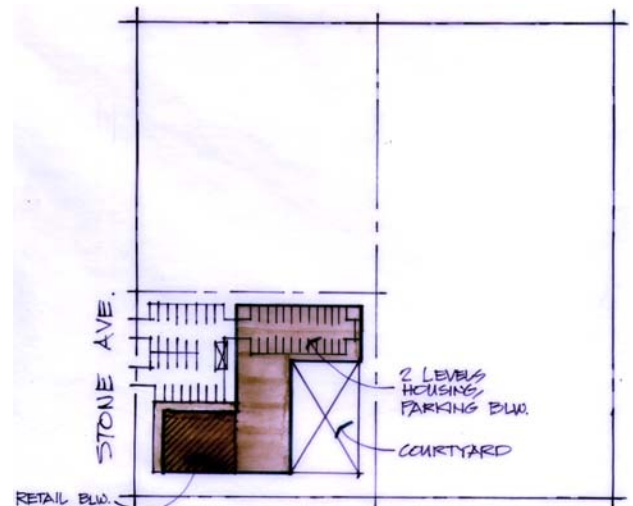


"PARTIAL" SCHEME  
1/2 BLOCK, TYPE A OR B,  
ZONES 1 & 2



"L" SHAPED SCHEME  
PARTIAL BLOCK, TYPE C,  
ZONE 3

### KEY



"OFF-SET" SCHEME  
PARTIAL BLOCK, TYPE C,  
ZONES 3 & 4

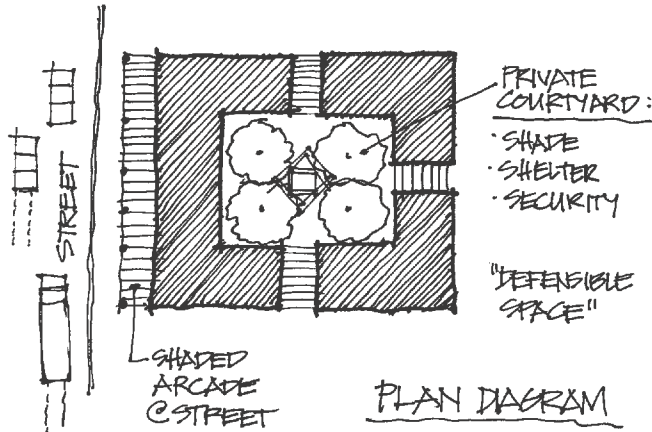
**Notes:**  
Most lots in Zones 1, 2, & 3 are undersized and may require assembly into larger parcels to allow this scale of development. (See Study Card titled *Urban Design Concepts* for more information on zones and block types.)



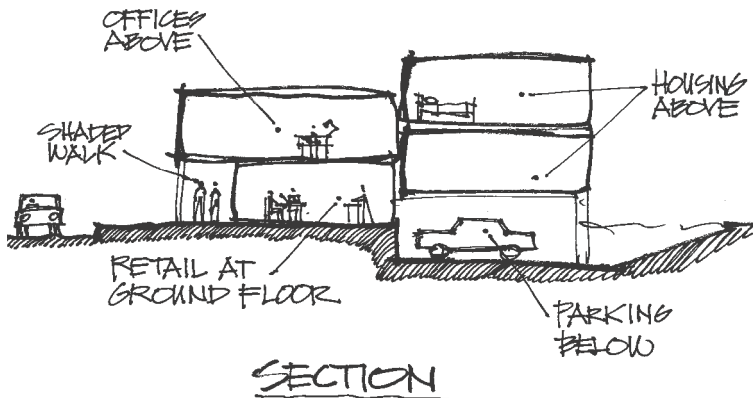
# Mixed-Use Development Prototype

## Urban Design Concepts

### ● CREATE URBAN LIVING ENVIRONMENTS



### ● MIXED-USE DEVELOPMENT



### ● DEFINE SPACE OF STREET



## Land Use Code Issues

- Provide code flexibility through the creation of a "special district" for the Stone Avenue Corridor. (See Study Card titled *Economic Development*.)
- Reduce parking requirements by 25% to 33%, which is possible with increased use of alternative modes of transportation.
- Increase lot coverage percentages and floor area ratios to permit higher density and more efficient use of land. This must be considered case-by-case, since requirements will be project specific.
- Reduce property set-back distances to permit street wall.

## Checklist for Mixed-Use

- Build on vacant land – infill existing city.
- Provide high density land use (2-3 stories).
- Incorporate courtyards and terraces.
- Provide street wall/shaded sidewalks.
- Combine residential and commercial uses to increase economic activity.
- Offer mixed-rate housing .

**Have questions about the study results?  
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Comprehensive Planning Task Force  
at 791-4505.**



Bob Vint & Associates, Architects

## Urban Design Principles

### Adaptive Reuse of Existing Commercial Buildings

- A** Remodel and reuse existing historic commercial buildings that are built to the street front and define the space of the street corridor.
- B** Use alternative parking arrangements including:
- Closing an adjacent side street up to the first street that parallels Stone Avenue to provide angled parking.
  - Creating a centralized “parking/pedestrian plaza” mid-block, with special pedestrian-friendly paving, such as brick or pressed concrete, and trees for shade and visual relief. Storefronts should open onto this plaza as well as onto the street. The plaza should be more than a parking lot. It should be a pleasant place to be, whether at a sidewalk café or passing through on bike or foot or by car.
  - Locating small parking lots on vacant land nearby to avoid the feeling of a suburban strip mall.

- C** Create inviting pedestrian connections to neighborhoods, with views into the Mini-Plaza via tree-lined shaded walks.
- D** Seek businesses that cater to neighbors, students, and area employees, e.g., coffee shops, copy stores, CD/music stores, bookshops, restaurants, clothing stores, and larger specialty retail stores.

### Land Use Code Issues

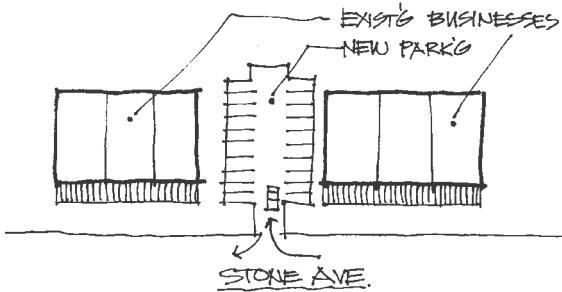
- Provide code flexibility through the creation of a “special district” for the Stone Avenue Corridor. (See Study Card titled *Economic Development*.)
- Reduce parking requirements by 25% to 33%, which is possible with increased use of alternative modes of transportation.
- Provide adjacent parking, e.g., located on side street or vacant lots.
- Increase allowable lot coverage to permit more intensive land use necessary for Mini-Plaza.
- Pursue land assembly and selective demolition to create necessary common space for Mini-Plaza.

# Adaptive Reuse Development Prototype

## Urban Design Concepts

### ● PARKING ALTERNATIVES

- REDUCE CITY PARKING REQUIREMENT ALONG STONE AVE.
- CREATE MID-BLOCK PARKING AREAS ON VACANT LAND.



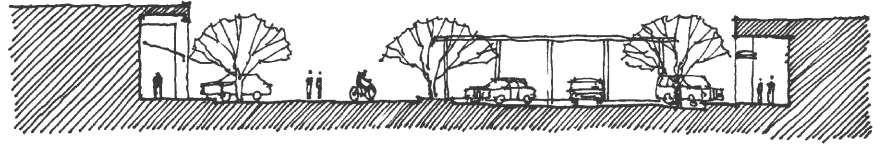
### Key Notes:

1. **Off-Street Parking** adjacent to new shops.
2. **Adjacent Parking** with necessary screening.
3. **Pedestrian-Friendly Plaza** with landscaping, paving, and ramada.
4. **New Shops** with services and merchandise oriented more to adjacent neighborhoods.
5. **Signage** along street and storefronts visible to vehicular traffic.

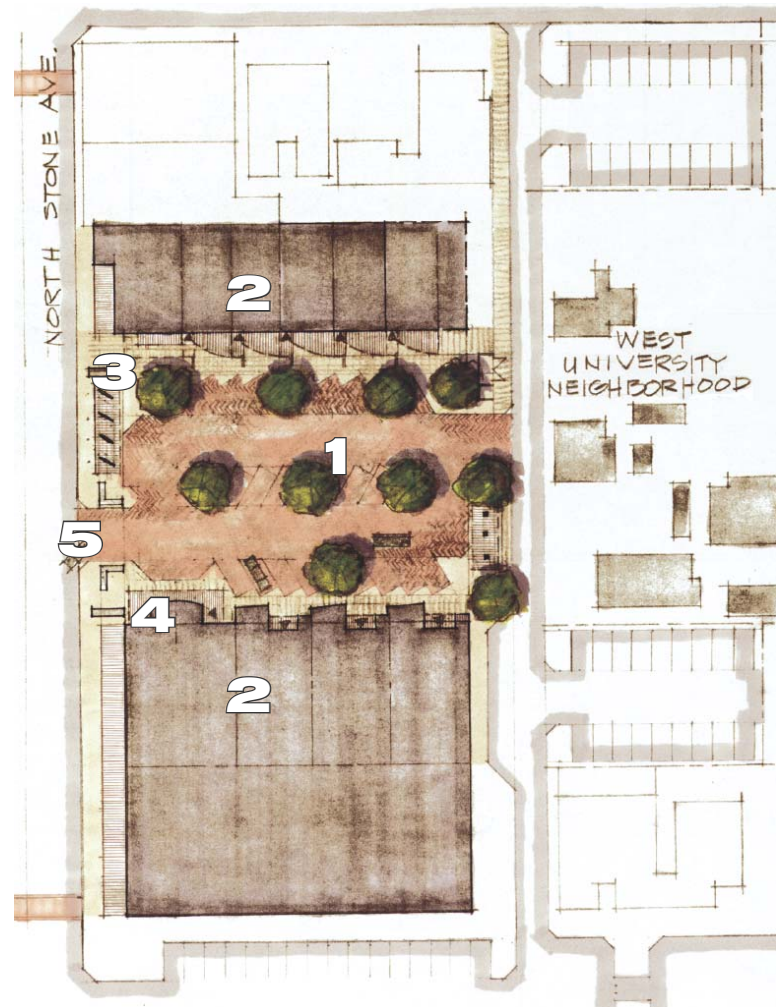
## Checklist For Mini-Plaza

- Pursue adaptive reuse of underutilized commercial space and adjacent vacant lots through creation of multi-use public spaces.
- Provide desirable public spaces with amenities such as shade trees, seating areas, and covered walks.
- Provide pedestrian linkages between Mini-Plaza and adjacent neighborhood.
- Create street edge/shaded sidewalks.

### ● BUILDING-PLAZA-BUILDING



CROSS SECTION



Urban Mini-Plaza

Bob Vint & Associates, Architects

**Have questions about the study results?  
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Comprehensive Planning Task Force  
at 791-4505.**

## Goal

**Preserve historic buildings and structures along Stone Avenue to strengthen the corridor’s identity and sense of place.**

Stone Avenue cuts through a cross section of Tucson’s history. The record of this development can be seen in the adjoining neighborhoods. Like tree rings, bands of urban growth express the passage of time and differing socioeconomic conditions that shaped their formation. North from the historic railroad bridge at 6<sup>th</sup> Street, there are four districts in close proximity to Stone that have been designated historic at the national and/or local level.

- Tucson Warehouse Historic District  
(National & Local)
- West University Historic District  
(National & Local)
- Dunbar/Spring Historic District  
(National & Local)
- Feldman’s Addition Historic District  
(National)



Stone Avenue historic underpass at 6th Street. Photo: 1936

## Recommendations

**The City of Tucson, through the Citizen and Neighborhood Services, should apply for a multiple property nomination to the National Register of Historic Places.**

The two central criteria for historic preservation are significance and integrity. Sites or structures 50 years old or more are worth saving if: (1) they are significant for association with a historical event, as exemplary of a type of design or construction, or as the work of a recognized master architect/builder, and (2) if they retain integrity of location, design, setting, materials, workmanship, feeling, and association.

For much of the corridor, new and old buildings are interspersed. The greatest concentration of historic structures is on the east side of Stone Avenue from 6<sup>th</sup> Street to Speedway Boulevard. In spite of a reasonable quantity of historic structures, there are few buildings that exist within a historic fabric. Except for De Anza Park at Speedway & Stone (a contributing site in the West University Historic District), no recognized historic properties are located on Stone Avenue itself. Even along bordering historic

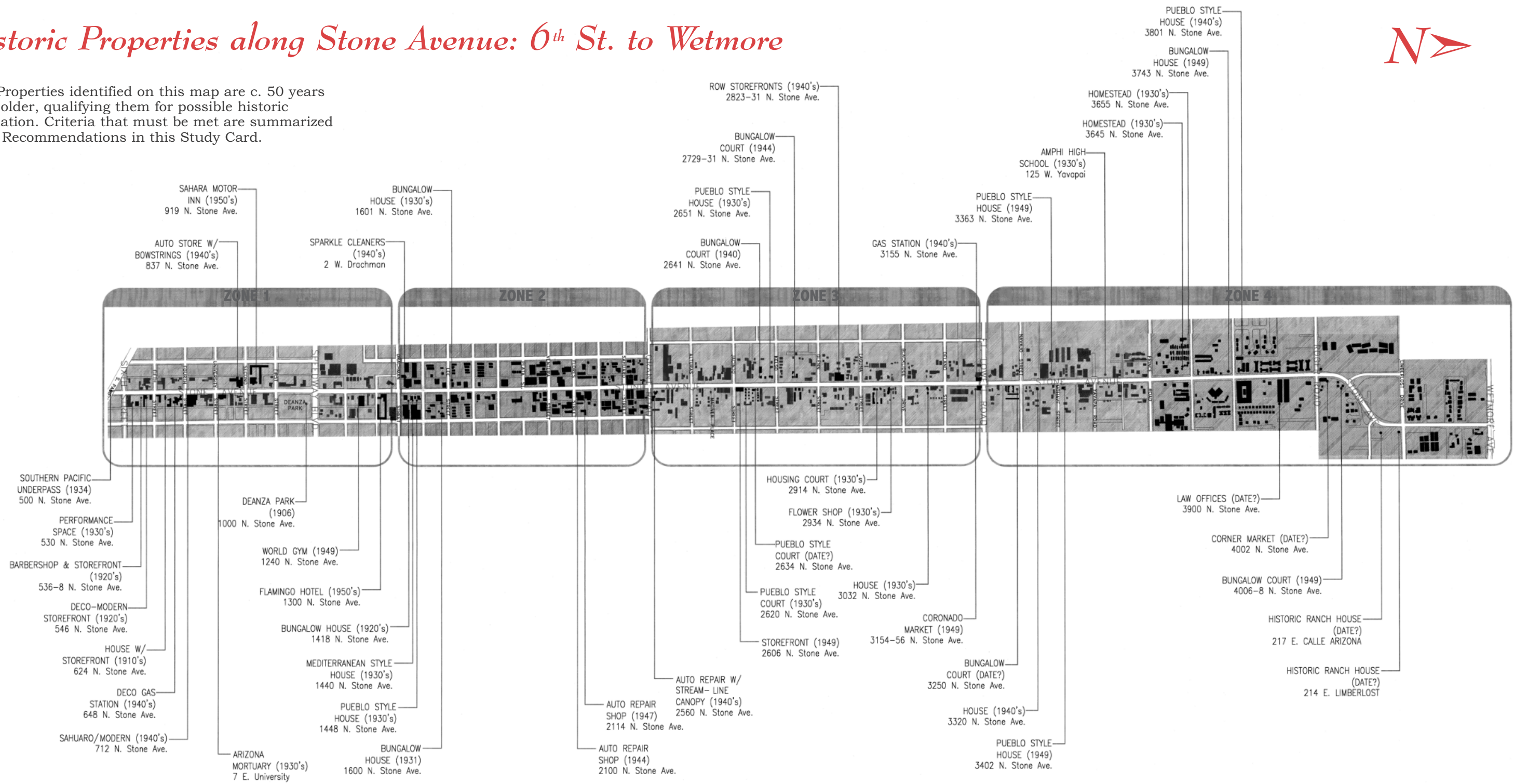
districts, there are not large concentrations of historic buildings that present a coherent streetscape. A few groupings do exist, and these should be given first attention (see centerfold map). Individual building types may have importance on their own, such as corner markets or early pre-fabricated metal gas stations. The fragmented quality of historic stock is indicative of the fragmented character of land use in the corridor in general.

Taken individually, structures along Stone Avenue may not have sufficient significance and integrity to warrant inclusion in the National Register of Historic Places. However, taken as a whole within the historic context of the development of Tucson along the corridor, a multiple-property nomination could be written to create a “Stone Avenue Historic Corridor.” The historic context to be developed would relate to transportation and the urbanization of Tucson over the first half of the 20th century. The designation would confer historic status to each contributing structure and provide owners with certain benefits. These benefits are summarized on the back of this Study Card.

## Historic Properties along Stone Avenue: 6<sup>th</sup> St. to Wetmore



Note: Properties identified on this map are c. 50 years old or older, qualifying them for possible historic designation. Criteria that must be met are summarized under Recommendations in this Study Card.



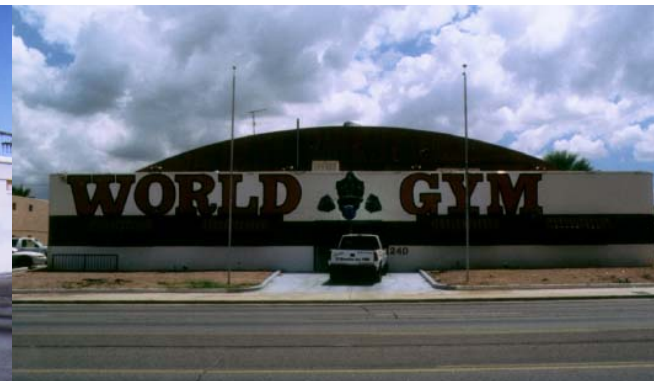
648 N. Stone • 1930's Art Deco

712 N. Stone • 1940's Commercial Storefront

1240 N. Stone • Streamline-Moderne w/ bowstring truss roof

1300 N. Stone • 1950's Roadside Motor Hotel

2620 N. Stone • 1930's Housing Court, Mediterranean Revival



# Historic Preservation

## Recommendations Continued

**Maintain the historic building/street setback to define the space of the street as an urban corridor.**

This recommendation is particularly applicable along the corridor between Sixth Street and Grant Road.

**Create the “Rolling Stone Trail” self-guided historic tour.**

(See Study Card titled “Rolling Stone Trail.”)

**Maintain historic properties with support of Arizona Heritage Fund (AHF) Matching Grants from the Arizona State Historic Preservation Office (SHPO).**

See contact information for the Arizona SHPO on this page.

**Promote adaptive reuse of historic properties as an important element in the revitalization of the corridor.**

See Study Card titled *Adaptive Reuse Prototype* for an example of how historic properties on Stone Avenue might be adapted for contemporary uses.

## Potential Benefits of Historic Preservation for Property Owners

- 50% property tax reduction with historic status.
- Federal income tax credits available for rehabilitation projects.
- Arizona Heritage Fund matching grants for maintaining or purchasing historic properties.
- Available through the Arizona SHPO.

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Comprehensive Planning Task Force  
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## Potential Liabilities of Historic Preservation for Property Owners

- If standards are not followed, a property can be “de-listed.” This means the property would not be eligible for the historic property tax reduction or for other historic preservation grants. There is, however, no legal repercussion beyond de-listing.
- Additions and repairs must follow the Secretary of the Interior’s Standards for Rehabilitation. Neighborhood Advisory Boards and the Tucson-Pima County Historical Commission review modifications for compliance.

## Contacts Regarding Historic Preservation

### City

Comprehensive Planning Task Force  
Historic Preservation Officer,  
Ms. Marty McCune  
345 E. Toole Avenue, 1<sup>st</sup> Floor  
PO Box 27210, Tucson, AZ 85726-7210  
Phone: (520) 791-4505

### City/County

Tucson-Pima County Historical Commission  
Chairperson, Dr. Teresita Majewski, Ph.D.  
City Clerk: Boards & Commissions Office  
PO Box 27210, Tucson, AZ 85726-7210  
Phone: (520) 791-4121

### County

Pima County Cultural Resources Office  
Linda Mayro, Manager  
201 N. Stone Avenue, 7<sup>th</sup> Floor, Tucson, AZ 85701-1207  
Phone: (520) 740-6451

### State

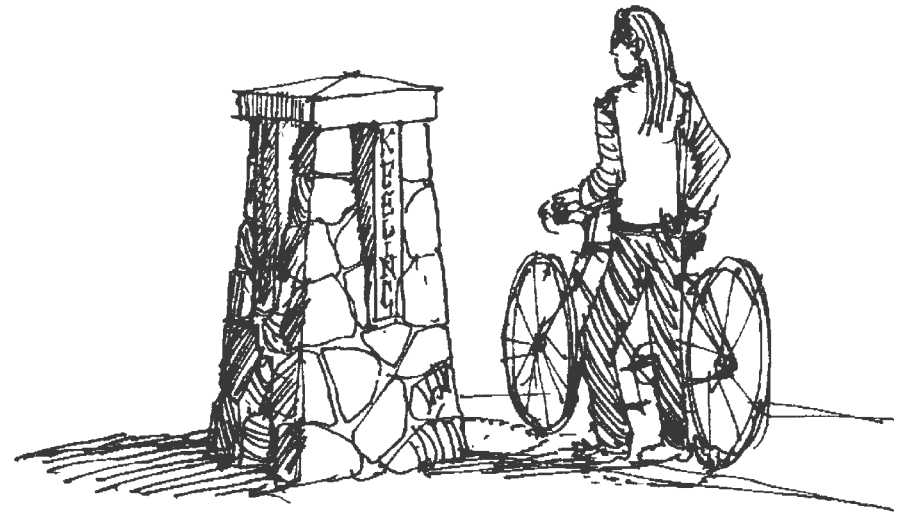
Arizona State Historic Preservation Office (SHPO)  
State Historic Preservation Officer, James Garrison  
Arizona State Parks  
1300 W. Washington Street, Phoenix, AZ 85007  
Phone: (602) 542-4009

### Federal

The Arizona SHPO (see above) has responsibility for overseeing and implementing the National Historic Preservation Act of 1966, including Arizona nominations for the National Register of Historic Places and the Secretary of the Interior’s Standards for Rehabilitation.

## Goal

To commemorate the history of Stone Avenue as one of the oldest corridors in the City of Tucson.



## Recommendation

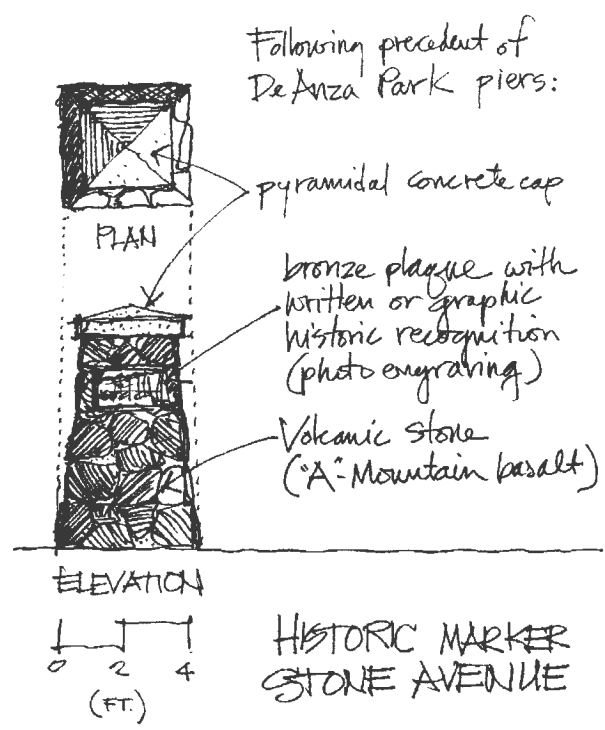
**Create a series of historic markers that together would create the “Rolling Stone Trail.”**

- The “trail” would be accessed by walking or bicycling, thereby further encouraging the use of alternative transportation along the Stone Avenue Corridor.
- Markers should be tied together geographically and/or chronologically.
- Markers must be durable. Text and photos might be “etched” in metal or in some other way made permanent. Markers must be mounted to be as vandal proof as possible.
- A trail guide would be developed and made available at various public places, such as the Tucson Convention and Visitors Bureau and public libraries.

- Students could be used to help research the history and write the trail guide as part of a school or after-school program. A video program could be developed as a mini-documentary with interviews from people who have stories that help make the history of Stone Avenue come alive. This could be used in school curriculums and shown on the City of Tucson cable channel.
- Funding for the trail could be pursued through both public and private sources. For example, individuals or businesses might sponsor

one or more markers, neighborhoods might raise money to mark a site of relevance to residents, and educational institutions might contribute in-kind services for research. Once a plan is in place, markers could be funded and installed individually.

- Over thirty potential sites and/or event locations have been identified for possible marking. These are listed on the reverse side of this card.



# “Rolling Stone Trail”

## *Possible Sites/Events to Be Marked on “Rolling Stone Trail”*

*Note: Sites/events of historic significance along Stone Avenue both within and beyond the specific boundaries of this corridor study are included in this listing.*

<b>SITE/EVENT</b>	<b>MARKER LOCATION in relation to Stone Avenue</b>	<b>COMMENTARY ON SIGNIFICANCE</b>
Site of Colonel John Finkle Stone home Center of Tucson	Southeast corner of McCormick Street Congress Street	First house on Stone Avenue.  One time center of downtown activity – base of addressing for the metropolitan region.
Site of 1st automobile use in Arizona Territory	Southeast corner of Pennington Street	On December 30, 1899, Dr. Hiram Fenner drove first automobile from the railroad depot to his home on this corner.
Stone as the route to Camp Grant Town site platting	Alameda Street Council Street	Indian wars and Camp Grant massacre.  Origin of Stone Avenue as a street. Council was transition point between Stone Ave. & Eighth Ave.; later it all became Stone Ave.
One-way Stone Avenue	Franklin Street & Toole Avenue	History of one-way streets in Downtown Tucson.
Southern Pacific Railroad crossing Tucson Arroyo	Underpass North of Sixth Street	Grade crossing prior to underpass, building of underpass.  Location and significance of the bridge over the arroyo.
Site of streetcar/bus barn	Northeast corner of 5th Street	Location and history of the streetcar barn.
Site of Apache Tire Company Historic gas station Paving/widening over the years	Northwest corner of 5th Street Southeast corner of 4th Street University Boulevard	Location of a Tucson landmark, the “flying red horse” – highway business.  Highway business.  Aerial photos show varying widths of Stone Avenue in 1930.
Site of early cemeteries De Anza Park Central Drive-In Site	Southwest corner of Speedway Southeast corner of Speedway Northwest corner of Speedway	Three relocations of Tucson cemeteries prior to Evergreen Cemetery. History of early Tucson parks and selection of De Anza Park site. Highway business, local gathering place for cruising Speedway.
World Gym  Historic Motels	Between Helen and Mabel Streets, east side Southeast and northeast corners of Mabel Street	Former bowling alley, good example of historic commercial building.  Highway businesses.
Stone as a U.S. highway	Drachman Street	Highway turned west at this location – trace development and later abandonment of Stone Avenue as a U.S. highway.
Historic residential  Historic bungalows	Three residences on southeast corner of Adams Street Northeast and northwest corners of Lee Street	Concentration of residences – history and transition of land use along the corridor.  History and transition of land use along the corridor.
Historic auto repair shops Supreme Cleaners Site	East side, north of Flores Street Southeast corner of Grant Road	Auto related businesses.  Explosion destroyed building. One of the worst industrial accidents in Tucson’s history.
Grant Road – arterial street Historic commercial storefront	Grant Road Northeast corner of Jacinto Street	Evolution of arterial streets in Tucson.  Typical storefront built near or on the right-of-way line of the arterial street.
Auto courts Adobe house Historic greenhouse	East side, north of Jacinto Street Southwest corner of Kelso Street Southeast corner of Blackledge Street	Early form of lodging for automobile travelers. Land use evolution – good example of an early adobe residence. Good example of specialty commercial building.
Paul Bunyan statue Amphitheater Schools	Northwest corner of Glenn Street Northeast corner of Prince Road	Local landmark – folk art. History of early Amphitheater schools, the school district, and this area of town.
Pastime Park	Pastime Road	Early development of this area and its relation to the Veterans Hospital at Pastime Park.
Original Stone Avenue  Historic ranch building	Southwest corner of Thurston Lane Southeast corner of Limberlost	Thurston Lane is on the original location of Stone Avenue, which continued directly north to Limberlost where it ended.  History of early ranches along the Rillito River.

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