

# Staff Report

PZ14-00001 (DEV) Tlaquepaque North  
Summary Sheet: Conceptual Review



**City Of Sedona Community &  
Economic Development Department**  
102 Roadrunner Drive Sedona, AZ 86336  
(928) 282-1154 • Fax: (928) 204-7124

**Meeting Date:** March 18, 2014

**Hearing Body:** Planning and Zoning Commission

**Action Requested:** Conceptual Review of Development Review Application

**Staff Recommendation:** None at this time

**Location:** 301-321 State Route 179

**Parcel Number:** 401-18-030L, M, & N

**Applicant:** Tlaquepaque Partners, LLC  
PO Box 1868; Sedona, AZ 86339

**Authorized Agent:** Design Group Architects, Max Licher  
376 Jordan Road; Sedona, AZ 86336

**Project Summary:** Demolition of 2 existing buildings, construction of 3 new buildings, and remodel of 1 existing building, along with associated site improvements

**Site Size:** ± 1.065 acres

**Sedona Community Plan Designation:**  
Commercial

**Current & Proposed Zoning:** General Commercial (C-1)

**Current Land Use:** General Retail

	<u>Area zoning</u>	<u>Area land uses</u>
<b>North:</b>	C-1	Creekside Plaza
<b>Northeast:</b>	RS-10b	Undeveloped – Oak Creek
<b>East:</b>	C-1	Center for the New Age
<b>South and West:</b>	C-1	Tlaquepaque

**Report Prepared By:** Cari Meyer, Associate Planner

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The applicant is requesting Conceptual Development Review for the proposed Tlaquepaque North Project at 301-321 State Route 179, north of the existing Tlaquepaque Arts and Crafts Village. The project site consists of 3 separate parcels – APN 401-18-030L (Parcel L), APN 401-18-030 M (Parcel M), and APN 401-18-030N (Parcel N) – See Attachment 1 (Vicinity & Aerial Maps). Parcel L is the eastern parcel, Parcel M is the middle parcel, and Parcel N is the western parcel. Each parcel has one building.

This project would involve removing the buildings on Parcels L and M, remodeling the building on Parcel N, and constructing 3 new buildings, for a total area of 9,200 square feet of commercial space (See Attachment 2.c – Conceptual Site Plan). The site would be designed in the same style as the existing Tlaquepaque Village. In addition to the new buildings, the project could involve improving the existing pedestrian crossing of State Route 179 in front of Tlaquepaque.

Key issues for the proposal are:

- Requesting parking reductions based on the project’s location in a pedestrian oriented area (as identified by the Community Plan and the Sedona Main Street and Character Districts Design Manual) and an excess of 108 parking spaces at the existing Tlaquepaque Village, which is owned by the applicant
- Ensuring that the anticipated increase in pedestrian traffic is appropriately handled
- Determining the most appropriate method of improving the pedestrian crossing of State Route 179 (if needed) and determining the party responsible for maintenance (ADOT, City of Sedona, or the applicant)
- Renovation considerations of the one building to remain (currently occupied by Crystal Enlightenment), given its location within a designated floodway<sup>1</sup> of Oak Creek
- Construction considerations of new buildings within the designated floodplain<sup>2</sup> of Oak Creek (but out of the floodway)
- Exceptions requested to the City’s color regulations to allow for the new development to match the existing Tlaquepaque Village, as the color used at Tlaquepaque has a light reflectance value (LRV) that exceeds the maximum allowable LRV allowed by the Sedona Land Development Code (SLDC).
- Exceptions requested to the City’s height regulations to allow for screening of rooftop equipment on the new buildings. The SLDC has additional height restrictions when the finished floor of a building is higher than the adjacent road surface. However, due to the grade of the road, the applicant does not believe compliance with this requirement would allow for proper screening of rooftop equipment.

### Attachments:

1. Vicinity Map & Aerial View
2. Application Documents (provided by the applicant)
  - a. Letter of Intent

<sup>1</sup> A floodway is “the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than 1 foot in height (as defined by FEMA)

<sup>2</sup> A floodplain is the total area required to pass the base flood through a natural watercourse, wash, canyon, ravine, arroyo or other potential flood hazard area

- b. Tlaquepaque Overall Site Plan (Existing and Proposed)<sup>3</sup>
  - c. Tlaquepaque North Conceptual Site Plan<sup>3</sup>
  - d. Tlaquepaque North Conceptual Elevations (New Buildings)<sup>3</sup>
  - e. Tlaquepaque North Conceptual Elevations (Remodeled Building)
  - f. Tlaquepaque Pictures (Existing)
  - g. Existing Parking Analysis
  - h. Tlaquepaque North Traffic Generation Report, dated February 19, 2014
  - i. Pedestrian Crossing Study: SR 179 between Tlaquepaque and Proposed Tlaquepaque North
  - j. Tlaquepaque North Survey and Flood Levels
3. Letters of Serviceability
- a. Sewer Availability (City of Sedona Public Works), dated February 20, 2014
  - b. Arizona Water Company, dated February 12, 2014
  - c. APS (Electric), dated February 18, 2014
  - d. UniSource Energy (Natural Gas), dated February 18, 2014
4. Staff Evaluation of Colors at Tlaquepaque Village

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<sup>3</sup> An 8½" x 11" copy is included in the printed packet. A full size copy is available for review at the Community & Economic Development Department office.

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Conceptual Review



## City Of Sedona Community & Economic Development Department

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### **PURPOSE OF A CONCEPTUAL REVIEW**

The purpose of the Conceptual Review is to give the Planning and Zoning Commission and the general public an opportunity to familiarize themselves with, and provide comment on, a development proposal in its early, conceptual stage of design. The process also affords the applicant an opportunity to become aware of major issues, concerns and suggestions prior to the completion of more detailed plans for comprehensive development review. This creates a more timely mechanism through which early design concepts may be revised to reflect area concerns.

At the Conceptual Review stage of a project, Staff does not evaluate for full conformance with specific code sections or provide a recommendation on the project. However, Staff comments are noted in *italics* throughout this Staff Report.

### **BACKGROUND**

The property proposed for redevelopment currently consists of three separate parcels that have historically been used for variety of retail and commercial uses. All buildings were built prior to the City's incorporation, therefore very little information exists on the original construction of these buildings. The majority of information contained in this report regarding the existing buildings has been provided by the applicant.

Each parcel currently has one building. Parcel L has an approximately 1,633 square foot building currently housing the Crystal Sound and Healing Center. Parcel M has an approximately 651 square foot building currently being used by Sedona Pines as a timeshare/visitor information center. Parcel N has an approximately 1,881 square foot building currently housing Crystal Enlightenment on the Creek.

#### ***Sedona Main Street and Character Districts Design Manual***

The Sedona Main Street and Character District Design Manual was developed with the intention of providing a guide to development in areas of the City identified as Character Districts. These guidelines include general principles for Site Design (including building orientation and parking), Architectural Styles, Landscaping, and Signs.

This site is located within the State Route 179 Character District. This district is characterized by the Oak Creek Corridor, Sycamore and Cottonwood trees, commercial developments with an eclectic style and diverse scale, and the pedestrian scale of the development. Character defining features for this district include territorial style architecture, red rock and river rock, board and batten siding, wood shingle roofs, one and two story structures, pedestrian oriented developments, varying setbacks, panoramic views, covered walkways, and low-level signage.

#### ***Community Plan Considerations***

Though this project is not a rezoning, the Community Plan may still be used as a guiding document in evaluating this project. The project site is designated as Commercial on the Future Land Use Map and is located in an area that could be considered a part of either Community Focus Area 6: Ranger Road or Community Focus Area 9: Schnebly Hill.

In addition, this project is within the Heart of Sedona Planning Area. Though never officially adopted by the City, the Heart of Sedona plan is often referred to and includes ideas for the redevelopment of properties in this area.

## **SITE CHARACTERISTICS (EXISTING)**

- The project site consists of 3 separate parcels for a total of approximately 1.065 acres.
- Current uses include general retail (Crystal Enlightenment and Crystal & Sound Healing) and a timeshare office (Sedona Pines visitor/activity center).
- The property is a part of the Hart's Village Subdivision (originally subdivided in 1953).
- The buildings were built between 1974 and 1981 (based on Coconino County records).
- The property is accessed via two separate driveways directly off State Route 179.
- A portion of the property is in the floodway and nearly all of the property is in the floodplain.
- The existing parking lot is paved with a combination of asphalt, dirt, and gravel.
- There are a number of large, mature sycamore trees on site.

## **DEVELOPMENT PROPOSAL**

The applicant is proposing to remove two of the existing buildings, remodel the one remaining building, and build three new buildings. After redevelopment, the property would have a total of 9,200 square feet of commercial space. The new commercial space would be split between a restaurant with outdoor dining, a small market/deli, and retail space. In addition to the buildings, the western driveway would be relocated further north and parking and landscape areas would be added. As a part of this project, the applicant would be consolidating the three existing parcels into one parcel.

### ***Phasing***

The project is proposed to be developed in a single phase.

### ***Access and Traffic***

- Vehicular access to the site is via State Route 179.
- The eastern driveway would remain in the same location. The western driveway would be relocated further north.
- Both driveways would be right-in, right-out due to the existing median in State Route 179.
- Shephard Wesnitzer, Inc. (SWI) prepared a Traffic Generation Report for this project (Attachment 2.h). This report contains the following:
  - Vehicular and pedestrian traffic are anticipated to increase due to this project.
  - The State Route 179 Character District emphasizes pedestrian connections.
  - It is assumed that a significant number of patrons will access the site using the existing crosswalk.
  - State Route 179 has a posted speed limit of 25 miles per hour at this location.
  - The new project is anticipated to generate an additional 62 AM peak hour and 83 PM peak hour trips (this is calculated over and above what the existing development already generates).

### ***Pedestrian Traffic***

- *As the applicant's request for reduced parking is partially based on the walkability and pedestrian traffic in the area, the applicant has been asked to more thoroughly address the pedestrian*

component of the project. In particular, Staff asked the applicant to address the increase in pedestrian traffic and what improvements could be made to pedestrian circulation in the area.

- SWI prepared a Pedestrian Crossing Study for this project (Attachment 2.i). This report contains the following:
  - Pedestrian traffic is expected to increase approximately 300% due to the new development.
  - 90% to 95% of current pedestrians use the existing crosswalk
  - Adding crosswalks is not being recommended due to the location of the turning lanes, the width of the median, and the potential to further reduce the capacity of SR 179
  - Barriers in the median were ultimately not considered due to the location of the turning lanes and driveways
  - The recommended approach is to encourage use of the crosswalk rather than discourage jaywalking. This could be accomplished using the following methods:
    - Provide more clearly defined routes through Tlaquepaque leading to the crosswalk
    - Increase visibility of the crosswalk using lighting and/or a vertical component in the median.
    - Increase visibility of preferred routes through sidewalk improvements or aesthetic improvements, including public art or landscaping
    - Improve signage to direct pedestrians to the crosswalk.
- State Route 179 is owned by the Arizona Department of Transportation (ADOT) and any changes within the right-of-way (ROW) would have to be approved by them.
- ADOT has indicated they will only approve changes in the ROW if the City assumes responsibility for ongoing maintenance. The applicant has indicated that they would be willing to enter into an agreement with the City to accept that responsibility.

### **Parking**

- Based on the proposed uses and a reduction of 15% for shared parking, the applicant has calculated a requirement of 52 parking spaces.
- A total of 40 spaces have been provided on site, a deficit of 12 parking spaces.
- There are 348 parking spaces at the existing Tlaquepaque Village (owned and operated by the applicant), an excess of 108 spaces as calculated by the applicant. The applicant is proposing that employees of businesses at the project site be required to park in the existing employee parking lot, which is accessed off of Brewer Road and connects to Tlaquepaque via a pedestrian bridge (See Attachment 2.b – Overall Site Plan). As the applicant anticipates approximately 12 employees for the new businesses, the applicant believes that requiring employees to use the employee parking lot will address the parking deficiency.
- *SLDC 912.03 gives various scenarios under which off-site, shared, or reduced parking may be considered.*
  - *Off-site parking (SLDC 912.03.A) is allowed within 300 feet of a project site provided the properties are not separated by a collector or arterial roadway.*
  - *Shared parking (SLDC 912.03.B) is allowed for separate uses located on the same or adjacent properties and must be in accordance with the current Institute of Transportation Engineers (ITE) Standards for shared parking.*
  - *Reduced parking (SLDC 912.03.E) may be considered if the area has an unusually large number of pedestrian or transit trips and the reduction will not increase traffic or on-street parking in adjacent areas.*
    - *The Verde Lynx has a stop at Tlaquepaque.*
- The materials for the parking areas are proposed to be concrete pavers.

- Parking areas have been laid out to preserve existing trees.
- The applicant has requested a 3 foot reduction in parking aisle width at the corner at the east end of the parking lot in order to save an existing sycamore tree.
  - *SLDC 912.05.L: The requirements of this section {pertaining to parking lot design} may be modified by the Director or City Engineer in order to retain existing trees or native vegetation within the parking area, if in the opinion of the Director or City Engineer, a potential safety concern is not present.*

### **Preliminary Grading and Drainage Report and Plan**

- *A preliminary grading and drainage report and plan will be required at the next stage of review.*

### **Wastewater Disposal**

- The property is currently connected to the City's Wastewater System. The City's Public Works Department has confirmed that the expanded development will be able to connect. (Attachment 3.a: Sewer Availability)

### **Land Development Code and Design Review Manual Compatibility**

- The buildings will be designed in the same style as the existing Tlaquepaque Center.
- The applicant has requested an exception from the City's Color Requirements (SLDC 904) in order to match the existing Tlaquepaque buildings.
  - *The LRV of the existing Tlaquepaque buildings is difficult to determine due to the variations in the stucco finish. Based on Staff's evaluations, the colors used were found to generally be in the range of 40% to 50% LRV, though some areas fall outside of that range. For a comparison of the existing buildings to colors with known LRVs, see Attachment 4.*
- The applicant has requested an exception to a height requirement (SLDC 903.03.A.5.b) that limits portions of buildings within 10 feet of a setback to 15 feet in height. This exception would allow for full screening of rooftop equipment.
  - *This requirement is applicable if the finished floor of the building is higher than the adjacent road. Staff has asked for clarification on the elevation of the adjacent road in order to determine if this restriction would be applicable and if an exception would be needed.*
  - *State Route 179 has a significant slope along the west side of the project site which results in the road at the northwest corner of the site being significantly higher than the majority of the site. Based on this topography, it is reasonable to assume that cars driving on State Route 179 at this point would be able to see the tops of the proposed buildings.*
- *A comprehensive evaluation for compliance with the Land Development Code and the Design Review Manual will be conducted at the next stage of review.*

### **Vegetation and Landscaping**

- The building placement and parking lot layout of the project has been designed to preserve the majority of the existing vegetation on-site.
- The applicant anticipates being able to preserve all but one of the existing trees on site.
- *A full landscaping plan will be required at the next stage of review.*

### **Signage**

- Potential sign locations have been noted on the site plan.
- *A sign plan will be required at the next stage of review.*

### **Outside Lighting**

- *A full lighting plan will be required at the next stage of review.*

### **Mechanical Equipment**

- Major mechanical equipment will be roof mounted and screened by building parapets.
- Trash dumpsters are shown on the site plan within trash enclosures.
- *If an exception to SLDC 903.03.A.5.b regarding heights of buildings within 10 feet of the setback is needed and not granted, the applicant may need to propose an alternate method of screening mechanical equipment.*

### **Building Within the Floodway and Floodplain**

- The building proposed to be remodeled is within the designated floodway of Oak Creek. There is an existing floodwall and a recent survey showed that the finished floor of that building is approximately 3 inches above the regulatory water level for a 100 year flood. This building may be remodeled within its existing footprint, subject to criteria set by FEMA (Federal Emergency Management Agency).
- The proposed new buildings will be built within the floodplain but out of the floodway. They will be designed to FEMA requirements, which include a finished floor that is 1 foot above flood level.
- Additional signage is required for the parking areas due to the location within the floodplain.

### **Public Input**

- *Project documents submitted by the applicant were placed on the Current Projects page of the Community & Economic Development Department website.*
- *Property owners within 500 feet of the subject properties were notified of the Conceptual Review.*
- *The property was posted with a Notice of Public Hearing and a notice was published in the Red Rock News on February 28, 2014.*
- *All notices contain contact information or a way to submit comments. As of writing this report, Staff has not been contacted by any members of the public regarding this project.*
- *The applicant will be required to complete a Citizen Participation Plan at the next stage of review.*

## **REVIEWING AGENCY COMMENTS AND CONCERNS**

Conceptual Review plans are routed to reviewing agencies for comments. At this stage, comments generally involve what each review agency will expect to see in the submittal packet for final review. Due to the condensed time frame of the conceptual review, comments from the reviewing agencies are not available to distribute to the Commission prior to the hearing. Staff will provide an overview of all comments received during the Conceptual Hearing on this project.

## REVIEW GUIDELINES

If the project moves forward past the Conceptual Phase, the following will be requested from the Planning and Zoning Commission:

**DEVELOPMENT REVIEW**      Approval from the Planning and Zoning Commission

### DISCUSSION (DEVELOPMENT REVIEW GUIDELINES)

While the Commission is not being asked to take action on this project at this stage, the following is included to inform the Commission about the scope of and guidelines for review of this project. In considering an application for Development Review approval, the review process is guided by the following criteria noted in Section 401.06 of the Land Development Code:

- 1. The degree to which all of the applicable provisions of this Code and all other ordinances have been complied with.*
- 2. The degree to which the proposed development of buildings, uses or structures conforms to the design standards as set forth by the Design Review Manual.*
- 3. The degree to which the proposed development integrates the proposed built environment into the natural environment with minimal disturbance to view corridors, existing native vegetation and/or established landscaping, the natural topography of the site, natural drainage ways, known wildlife habitats, rock outcrops, and other natural features.*
- 4. The degree to which the proposed development integrates into, and is compatible with, the built form of surrounding properties and existing developments with regard to building height and character, landscaping, signage, building materials, historical structures or features, and pedestrian and vehicular circulation.*
- 5. That the proposed use is in general conformance with applicable goals, objectives and recommendations described in the Community Plan and adopted specific plans.*
- 6. The degree to which proposed vehicular ingress, egress, internal traffic circulation, off-street parking facilities, loading and service areas and solid waste collection are designed to promote public safety and convenience.*
- 7. The degree to which pedestrian circulation is facilitated both on and off-site through interconnected passages, pathways and plazas, and is designed to promote public safety and convenience.*
- 8. The degree to which the proposed development addresses concerns cited by participating reviewing agencies with jurisdiction in the areas of public health and safety.*

### **Staff Recommendation**

None at this time (Conceptual Review)



# Vicinity Map

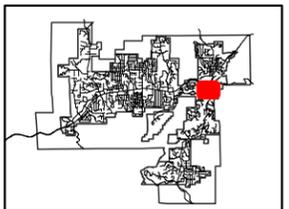
Parcel #  
401-18-030L-M-N  
Tlaquepaque  
North

-  Parcel #401-18-030L-M-N
-  Zoning Boundary
-  Building Footprint
-  Parcel Boundary
-  Trail
-  Street Centerline



0 50 100 Feet

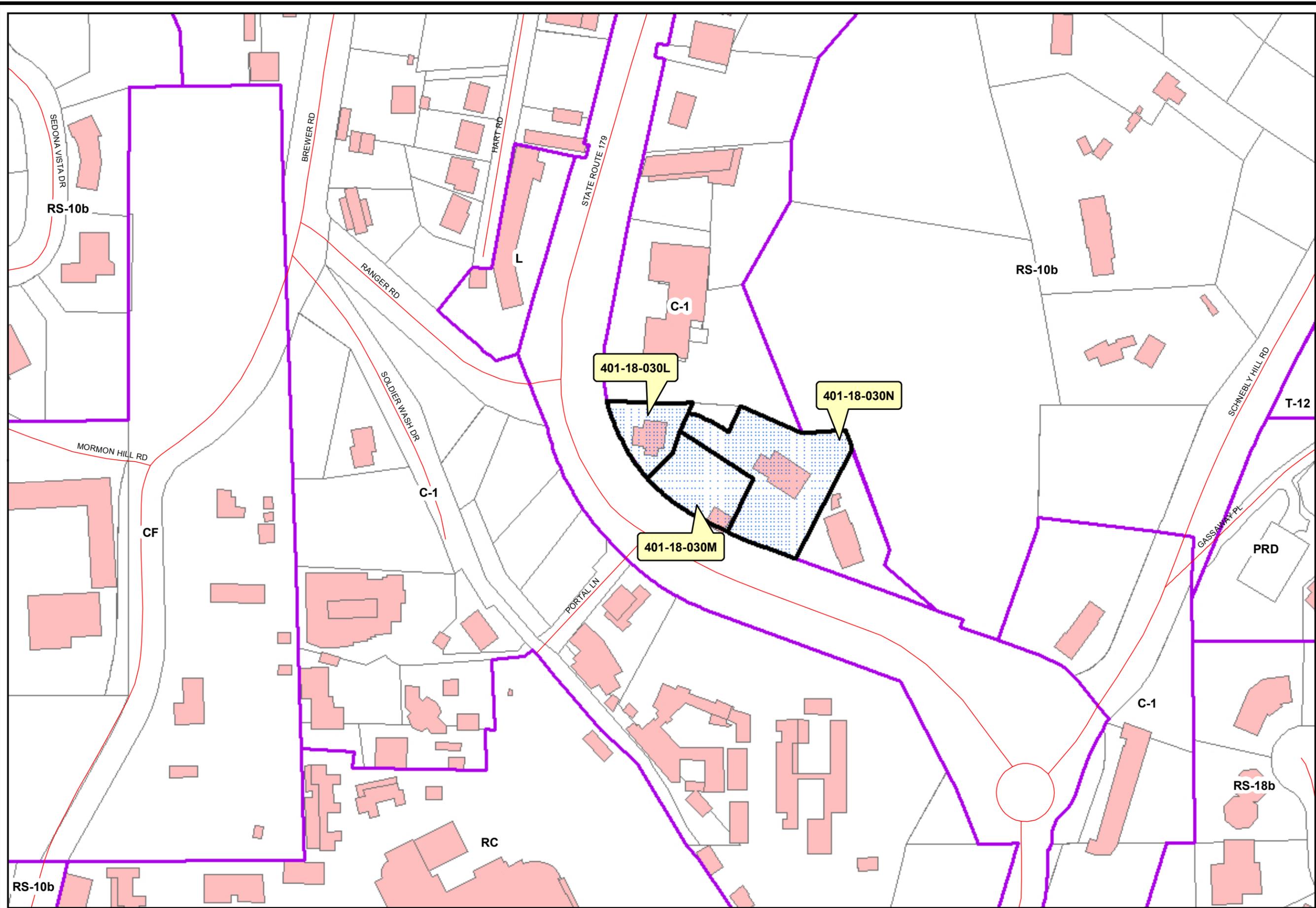
City Index



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# Aerial View

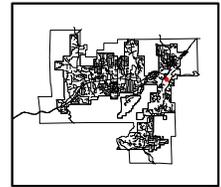
Parcel  
#401-18-030L/M/N  
Tlaquepaque  
North

-  Parcel #401-18-030L/M/N
-  Parcel Boundary
-  Street Centerline



0 15 30 Feet

City Index



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# Tlaquepaque North

## Conceptual Development Review

### Letter of Intent

14 February 2014

#### INTRODUCTION & PROJECT DESCRIPTION

Tlaquepaque Partners LLC is proposing to develop 1.065 acres across SR 179 to the north of their existing development as an expansion of Tlaquepaque, both in mix of uses and in architectural theme. The use as proposed is allowable within the existing C-1 zoning entitlement. The new development will be compatible with current and proposed planning goals for the area, and will further the pedestrian fabric and improve the quality of experience over that currently existing on the property.

Three buildings currently exist on the property (approx. 3750 sq. ft., retail use), two of which will be removed. The third building will be retained and remodeled within its existing footprint. Three new buildings will be constructed, creating a total of four buildings, housing a combination of retail galleries, a boutique market/deli, and a restaurant. The new buildings will reflect the architectural style and patterns of Tlaquepaque, as will the parking, pedestrian courtyard, and landscaped environment. The remodeled building will be embellished to reflect the historic style of the old pumphouse on the adjacent property just to the north, with river-stone veneer and a pitched, barn-like roof. Parking will have two entrances, one at each end of the property, allowing for through flow of vehicles and servicing. No new deceleration lanes are proposed or needed; we do not want to impact the existing sycamore trees along the highway, and traffic is moving slowly enough in this stretch that deceleration is not required for turning movements.

## PROJECT STATISTICS

Parcel size: Currently, the proposed site consists of (3) separate parcels, totaling 46,385 sq. ft. (1.065 acres). See attached survey map by Cornerstone: Job # 10-307. The parcels will be combined as part of this project.

Building sizes:	Building A (Retail)	1800 sf	
	Covered Porch		320 sf
	Building B (Retail)	2400 sf	
	Covered Porch		260 sf
	Restaurant	3000 sf	
	Covered Porch		300 sf
	Existing (Deli/Market)	1400 sf	
	(Pub. Restrooms)	400 sf	
	Covered Porch		560 sf
	Information Booth	200 sf	
Total	9200 sf	1440 sf	

Lot Coverage: 19.8% (25% allowable)

Parking reqt:	Retail:	4400 sf @ 1/250 sf =	17.6
	Market/Deli:	1800 sf @ 1/250 sf =	7.2
	Restaurant:	3000 sf @ 1/100 sf =	30.0
	Outdoor Dining:	1200 sf @ 1/200 sf =	6.0

Total = 61 spaces

Shared parking reduction (approx. 15%)  
= -9 spaces

Total required = 52 spaces

Parking provided on site: = 40 spaces

Parking deficit: = 12 spaces

Excess spaces at Tlaquepaque: = 108 spaces

## PARKING AND PEDESTRIAN DISCUSSION

Tlaquepaque and the proposed expansion both are within the “Heart of Sedona” planning area, and within one of the proposed Focused Activity Centers (FAC) in the current Community Plan revision. This area is in the center of the Uptown Creek Area’s pedestrian district, and future development is expected to further the walkability of the area and improve pedestrian amenities. We believe that this proposal will do just that, and help fill a current “gap” in the pedestrian fabric along the north side of SR 179 across from Tlaquepaque. In such a district, there is good reason to consolidate parking where it makes the most sense, and let sensitive parcels not be over-developed with pavement, to the detriment of the pedestrian fabric. In our case, Tlaquepaque already has an excess of parking consolidated both for customers and employees, which we propose to use. The 12 space deficit on the Annex site approximates the estimated number of employees needed to service the proposed development, and they can be required by lease to use the designated lot across the street.

There is no doubt that the Tlaquepaque North development will also increase other pedestrian crossings of SR 179, as customers parking on one side may want to explore shops on the other. Increasing pedestrian traffic is preferable to increasing vehicular traffic in such a location. There currently exists a designated crosswalk opposite the primary pedestrian entrance to Tlaquepaque on the south, which terminates just east of the Tlaquepaque North parcel on the north. A current study by Shepherd Wesnitzer Engineering (SWI) shows that 85-90% of pedestrians use this crosswalk, with a small amount jaywalking at other locations along this stretch of roadway. A goal of Tlaquepaque Partners will be to improve the existing crossing, as well as pedestrian routes to this location, such that jaywalking is minimized even further, and safety is increased in the district. It does not appear that there is a second safe location for another crossing to the west, nor would it be recommended from the standpoint of maintaining optimum vehicular traffic flow.

The following are particular solutions currently being discussed by the owners, architects, engineers, and ADOT:

- Discourage/prohibit pedestrian traffic along Portal Lane between the Tlaquepaque parking area crosswalk and SR 179, so that people don't end up at that location wanting to cross. Create a crosswalk across Portal Lane at the SR 179 intersection (none currently exists there), so that pedestrians along that side of the road are more easily directed on eastward to the designated crosswalk area.
- Improve the pedestrian pathway within the western portion of Tlaquepaque to bring pedestrians to SR 179 at a location closer to or at the designated crosswalk.
- Change the surface material/texture of the designated crosswalk to make it more visually apparent.
- Add low masonry walls in the median refuge area to also improve visibility, make the pedestrians feel safer, and improve the visual character of the pedestrian infrastructure.
- Add a street light pole centered over this pedestrian area, for all of the same reasons.
- Perhaps add pedestrian activated directional flashing lights at the crosswalk for additional safety (but only if needed after all of the above more visually appealing solutions are implemented).

Changes in pavement across the highway will only be permissible to ADOT if the City accepts responsibility for their maintenance. One possibility is that Tlaquepaque and other future business owners in the district could enter into a development agreement with the City (as middleman) to accept responsibility for the maintenance of such improvements and any others in the ROW. There may be other landscape improvements that are possible within the ROW that could help direct pedestrians to the appropriate location for crossing.

#### FLOODWAY ISSUES AND THE REMODELED BUILDING

The building proposed for renovation is the one currently occupied by Crystal Enlightenment, and a substantial portion of its footprint is within the designated floodway of Oak Creek. A retaining/floodwall also exists in front of the building, and has protected a landscaped area there between the building and the creek since it was constructed in 1968. A flood/hydrology study of the property has been recently

completed by Pender Engineering, which shows that the existing floor elevation of the building is approximately 3 inches above the regulatory water level for the 100 year flood. As long as the building is flood-proofed (since it is less than 1 foot above flood level), FEMA regulations will allow us to remodel the structure within its existing footprint. The specific implications in this case are that the exterior basement access is eliminated and sealed, no mechanical equipment is allowed in the basement (now treated more as a “crawl space”), and removable door dams are provided to seal the exterior openings. The existing building walls are masonry, so they meet the definition of flood-proof. Discussions are ongoing with Joe Rumann, Engineering Supervisor in the Coconino County Community Development Department, about the details of these requirements.

The new buildings will be located within the floodplain, but out of the floodway. Per FEMA requirements, they will be designed such that their finish floors are a minimum of one foot above the regulatory flood levels provided on the map provided by Pender Engineering. Parking areas within the floodplain will be signed as required.

## DESIGN PATTERNS AND ISSUES

For the most part, Tlaquepaque embodies much of the architectural patterning in Sedona’s Design Review Manual; in fact, it was one of the early inspirations for the human scale and pedestrian friendly design patterns that were adopted in the manual. Our goal is to make the three new buildings appear as a seamless extension of the original “historic” development and its subsequent expansions. However, there are a few places where doing so may require some exemption from specific regulations in the City Code. One is color; the existing patinated creamy stucco is lighter than the City’s LRV limit would allow. In this case, we would ask, due to both the shady sycamore tree filled location, and the importance of architectural continuity, that this LRV requirement be waived, as long as we match the look of the existing buildings across the street.

There is a City Code requirement that all structures within the first 10 feet back from the front setback be held to a 15 feet maximum height.

We would also like to request a minor variance to this at the west end of Building B, and allow one of the building masses there to rise high enough (22') so that the roof behind the parapet is screened from the southbound cars coming down the hill from the Y. Again, since we are building under sycamores that are probably 50-60 feet tall, and some of these trees are between the building and the road, we do not feel that we would be creating uncomfortable scale issues from either pedestrian or vehicular perception at this location. We would not be blocking any views from other parcels.

The existing building remodel will have a contrasting architectural pattern, based on the historic stone buildings found in the area. It will have an immediate resonance with the adjacent pump house. We are considering removing the existing second story for architectural simplicity on the exterior, and so that the interior can have a continuous open "barn-like" volume. This mixture of styles already has precedence in the area, and will reflect the sequence of Sedona's history.

We are trying to save the majority of the existing sycamore trees on the site; in fact, the conceptual site plan shows only one of the smallest trees removed. In order to save the rest of the trees, we will need to also have a minor reduction in parking aisle width in one location, where a tree well will project 3 feet into the required 26 feet width for a two way aisle. This happens at a corner in the lot, where cars will be already at their slowest speed, and they should be able to negotiate this obstruction easily. The parking surface will be concrete pavers, with curbs in some areas and without curbs in others, more like the existing Tlaquepaque where pavers are flush to building footprints. The central area will be created as a pedestrian plaza, with the same paving texture crossing a "traffic calmed" driveway between the two parking sections, with a fountain in the middle much like those in Tlaquepaque.

We believe that Tlaquepaque North will be a positive addition to the Heart of Sedona, and help create good public space and amenities near the creek for both residents and visitors.

Mike Bower, Max Licher, Design Group Architects, & Max Bacon, for  
Tlaquepaque Partners LLC

Attachments:

1. Overall Tlaquepaque Site Plan (showing SR 179 & existing context)
2. Conceptual Site Plan 1" = 30'
3. Conceptual street elevation of 2 buildings
4. Conceptual remodel elevation of historic building
5. Photos of Existing Tlaquepaque for Building Patterns
6. Tlaquepaque Parking Study (showing excess)
7. SWI Trip Generation Study (July 2013) -  
    This was done based on an earlier iteration of the development concept, with slightly different areas, but not enough to make a substantial difference.
8. SWI Pedestrian Traffic Study (Feb. 2014)
9. Survey of Property (showing current 3 parcels)
10. Flood Level Survey of Property
11. Legal Descriptions of 3 parcels
12. Letter of Authorization from Property Owner
13. Letters of Serviceability from Utilities
14. Required GIS Location Map & Mailing Labels



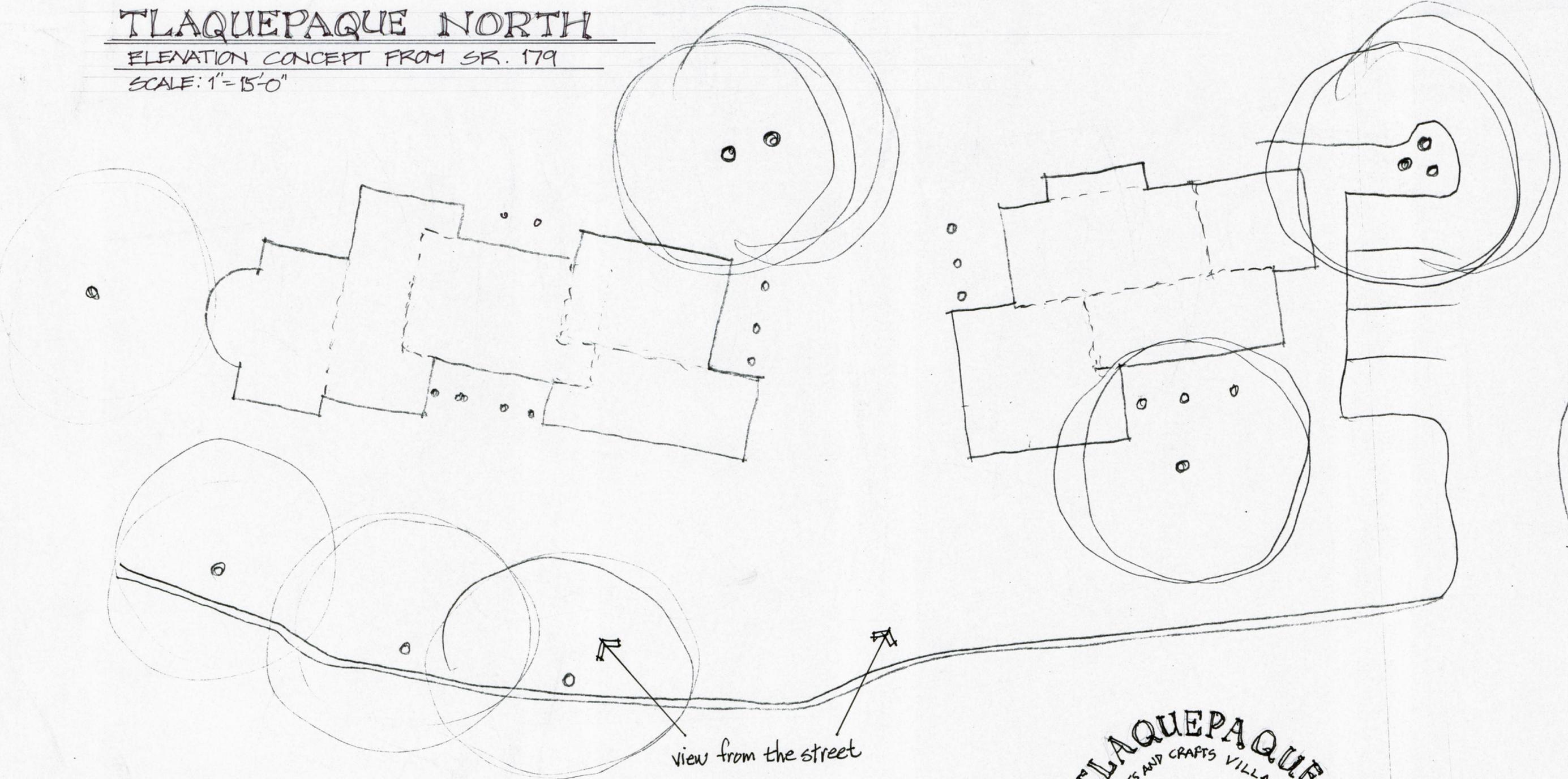




# TLAQUEPAQUE NORTH

ELEVATION CONCEPT FROM SR. 179

SCALE: 1" = 15'-0"



TLAQUEPAQUE  
ARTS AND CRAFTS VILLAGE



# TLAQUEPAQUE NORTH

REMODEL CONCEPT FOR EXIST. BUILDING

SCALE: 1/8" = 1'-0"



# Tlaquepaque

Photos of existing buildings to serve as architectural patterning for for the 3 new buildings at Tlaquepaque North



**TLAQUEPAQUE  
PARKING ANALYSIS**

**EXISTING PARKING PROVIDED**

<u>Lot</u>	<u>Total # of Space</u>	<u>Includes</u>	
		<u>HC Spaces</u>	<u>Employee Spaces</u>
TLAQUEPAQUE	133	4	6
PORTAL LANE	96	4	
EMPLOYEE	119		
<b>TOTAL TLAQ PARKING</b>	<b>348</b>	<b>8</b>	<b>6</b>
TLAQUEPAQUE NORTH	48	3	
<b>GRAND TOTAL (All Parcels)</b>	<b>396</b>	<b>11</b>	<b>6</b>

**EXISTING BUILDING FLOOR AREAS**

TLAQUEPAQUE MAIN

Retail / Office	36,309 sf
Multi-Use Roof Terrace	2,640
Restaurant	13,635
<b>Total Leaseable Floor Area</b>	<b>52,584 sf</b>
Maintenance Buildings And Greenhouses	4,240
<b>Total Tlaq Building Floor Areas</b>	<b>56,824 sf</b>

TLAQUEPAQUE NORTH

Crystal Enlightenment	1,881 sf
Timeshare / Retail	651
Retail	1,633
<b>Total Annex Floor Areas</b>	<b>4,165 sf</b>

**PARKING SPACES REQUIRED**

TLAQUEPAQUE MAIN

	<u>Area</u>	<u>Rate</u>	<u># Spaces Re'qd.</u>
Retail / Office and Roof Terrace	38,949 sf	@ 1/250 =	156
Restaurant	13,635 sf		
Less 15% of 38,949 =	(5,842)		
Adjusted Restaurant Floor Area	7,799 sf	@ 1/100 =	78
Maintenance / Green Houses	4,165	@ 1/750 =	6
<b>TOTAL PARKING REQUIRED*</b>			<b>240</b>
Total Parking Provided			348
EXCESS Parking Available			108

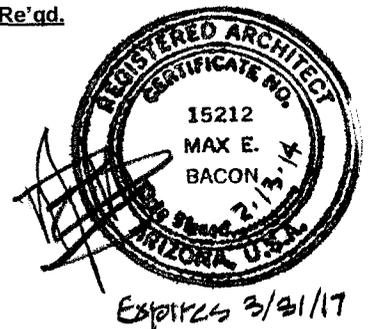
\*8 H.C. Required. 8 H.C. spaces provided.

TLAQUEPAQUE NORTH

	<u>Area</u>	<u>Rate</u>	<u># Spaces Re'qd.</u>
Total Retail Floor Area	4,165 sf	@ 1/250 =	17
<b>TOTAL PARKING REQUIRED*</b>			<b>17</b>
Total Parking Provided			48
EXCESS Parking Available			31

\*2 H.C. spaces required. 3 H.C. spaces provided.

**GRAND TOTAL EXCESS PARKING AVAILABLE** 139  
( All Parcels )



Expires 3/31/17



Shephard ▲ Wesnitzer, Inc.

75 Kallof Place  
Sedona, AZ 86336

P.O. Box 3924  
Sedona, AZ 86340

928.282.1061  
928.282.2058 fax

www.swiaz.com

*Engineering an environment of excellence.*

Wendy Lippman,  
General Manager & Resident Partner  
Tlaquepaque  
P.O. Box 1868  
Sedona, AZ 86339

February 19, 2014  
SWI # 13194

Re: Tlaquepaque North  
Revised Traffic Generation Report

Dear Wendy:

The purpose of this letter is to present a revised forecast of the change in traffic to the proposed Tlaquepaque North generated traffic as compared to the existing land use, and to discuss site access and circulation. This revision is due to proposed changes to the project plan indicating revised floor areas for the proposed buildings.

The current site where the Tlaquepaque North is proposed is 1.06 acres and has three retail spaces comprising 4,741 square feet. The proposed project will replace two of the existing retail buildings with three new buildings for additional retail space and a new restaurant for a total of four buildings on the site. The site is located on the north side of State Route 179 (SR 179) between Ranger Road and Schnebly Road in Sedona, Arizona. This area has a combination of heavy vehicle traffic and pedestrian traffic both of which are expected to increase with the proposed project. The adjacent SR 179 is a major artery that connects Sedona with the Village of Oak Creek with a posted speed of 25 mph.

The site is located in the SR 179 Character District in Sedona, which emphasizes pedestrian orientated features. It is connected to Tlaquepaque via a pedestrian crosswalk constructed during the SR 179 re-construction several years ago. The crosswalk is located approximately 40 feet east of the property. It is assumed that a significant number of patrons will access the site via the crosswalk from the south side of the S.R. 179.

#### *TRIP GENERATION*

Existing traffic conditions at the site were determined using the Institute of Transportation Engineers (ITE) *Trip Generation Manual, Eighth Edition* land use code 814: Specialty Retail Center. The current total weekday trips for 4,741 square feet of space was determined to be 240 trips which included 139 AM peak hour trips and 24 PM peak hour trips.

Similarly, proposed traffic conditions were determined for 5,800 square feet of *Specialty Retail Center*, Land Use Code 814 and 4,200 square feet of *High-Turnover (Sit Down) Restaurant*, Land Use Code 932.

The *Specialty Retail Center*, Land Use Code 814, is predicted to generate 286 weekday trips including 144 AM peak hour trips and 29 PM peak hour trips. The *High-Turnover (Sit-Down) Restaurant*, Land Use Code 932, is predicted to generate a total of 534 weekday trips including 57 AM peak hour trips and 78 PM peak hour trips.

Using the existing land uses as a trip credit toward the proposed Tlaquepaque North generated traffic (subtract existing trips from proposed trips) results in an additional 579 weekday trips including a net gain of 62 AM peak hour trips and a net gain of 83 PM peak hour trips. See the attached Trip Generation Tables for a full summary of generated trips.

#### **SITE ACCESS AND CIRCULATION**

There are currently two driveways along SR 179 that provide access to the site. The proposed re-development would utilize the easternmost of the existing access points, close the other existing access point and create one new driveway near the north-western corner of the site. The location of the closed driveway will be used for pedestrian access to the proposed buildings. SR 179 access points are currently right-in, right-out only. Proposed access points will remain right-in, right-out only.

S.R. 179 through the vicinity is divided and disallows left turn movements to this site. All movements into and out of the site will be right turn only.

Braking site distance from the proposed, new northwestern driveway to the east was measured to be in excess of 300 feet. Recommended intersection sight distance for 25mph design speed is 300 feet according to AASHTO Intersection sight distance at at-grade intersections (Case IIIA, required sight distance along a major highway). See the attached Conceptual Site Plan for an overview of the proposed layout.

#### **PARKING**

Parking for Tlaquepaque North will be split between the existing parking areas south of SR 179 and 40 new spaces proposed at the Tlaquepaque North site. Tlaquepaque currently has a surplus of 108 parking spaces. After development of Tlaquepaque North the surplus will be 96. Consistent with Tlaquepaque policy, Tlaquepaque North employees will park in the employee parking lot located south of Soldier Wash.

Please call if you have any questions or comments.  
Sincerely,



Attachments: TABLES 1, 2 & 3 – TRIP GENERATION, EXISTING, PROPOSED & CHANGE  
Tlaquepaque Existing Conditions, Max Bacon, Architect  
Tlaquepaque Parking Analysis, Max Bacon, Architect  
Tlaquepaque North Conceptual Development Review, Max Bacon, Architect



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SEDONA

COTTONWOOD

FLAGSTAFF

PRESCOTT

KINGMAN

**TABLE 1 - TRIP GENERATION FOR EXISTING CONDITIONS**

LAND USE	ITE CODE	VARIABLE	TIME PERIOD	EQUATION	% ENTERING	TOTAL	AM TOTAL	AM		PM TOTAL	PM		SAT PEAK TOTAL	SAT PEAK	
								in	out		in	out		in	out
<b>RETAIL</b>	<b>814</b>														
Variable = 1000 sq ft		4.741	Weekday	42.78(X)+37.66	50%	240									
Speciality Retail Center			AM Peak	4.91(X)+115.59	48%		139	67	72						
			PM peak	5.02(X)	56%					24	13	10			
			Saturday Pea	42.04(X)	50%								199	100	100
<b>Total Trips</b>						<b>240</b>	<b>139</b>	<b>67</b>	<b>72</b>	<b>24</b>	<b>13</b>	<b>10</b>	<b>199</b>	<b>100</b>	<b>100</b>

**TABLE 2 - TRIP GENERATION FOR PROPOSED TLAQUEPAQUE ANNEX**

LAND USE	ITE CODE	VARIABLE	TIME PERIOD	EQUATION	% ENTERING	TOTAL	AM TOTAL	AM		PM TOTAL	PM		SAT PEAK TOTAL	SAT PEAK	
								in	out		in	out		in	out
<b>RESTAURANT</b>	<b>932</b>														
Variable = 1000 sq ft		4.2	Weekday	T=127.15(X)	50%	534									
High-Turnover (Sit-Down) Restaurant			AM Peak	T=13.53(X)	52%		57	30	27						
			PM peak	T=18.49(X)	54%					78	42	36			
			Saturday Pea	T=14.07(X)	53%								59	31	28
<b>RETAIL</b>	<b>814</b>														
Variable = 1000 sq ft		5.8	Weekday	42.78(X)+37.66	50%	286									
Speciality Retail Center			AM Peak	4.91(X)+115.59	48%		144	69	75						
			PM peak	5.02(X)	56%					29	16	13			
			Saturday Pea	42.04(X)	50%								244	122	122
<b>Total Trips</b>						<b>820</b>	<b>201</b>	<b>99</b>	<b>102</b>	<b>107</b>	<b>58</b>	<b>49</b>	<b>303</b>	<b>153</b>	<b>150</b>

**TABLE 3 - CHANGE IN TRIP GENERATION**

	TOTAL	AM TOTAL	AM		PM TOTAL	PM		SAT PEAK TOTAL	SAT PEAK	
			in	out		in	out		in	out
<b>Change in Total Trips</b>	<b>579</b>	<b>62</b>	<b>32</b>	<b>30</b>	<b>83</b>	<b>45</b>	<b>38</b>	<b>104</b>	<b>54</b>	<b>50</b>



**TLAQUEPAQUE  
PARKING ANALYSIS**

**EXISTING PARKING PROVIDED**

Lot	Total # of Space	Includes	
		H.C. Spaces	Employee Spaces
TLAQUEPAQUE	133	4	6
PORTAL LANE	86	4	
EMPLOYEE	119		
<b>TOTAL TLAQ PARKING</b>	<b>348</b>	<b>8</b>	<b>6</b>
<b>TLAQUEPAQUE NORTH</b>	<b>48</b>	<b>3</b>	
<b>GRAND TOTAL (All Parcels)</b>	<b>396</b>	<b>11</b>	<b>6</b>

**EXISTING BUILDING FLOOR AREAS**

**TLAQUEPAQUE MAIN**

Retail/Office	38,308 sf
Multi-Use Roof Terrace	2,640
Restaurant	13,635
<b>Total Leasable Floor Area</b>	<b>54,584 sf</b>
Maintenance Buildings And Greenhouses	4,165
<b>Total Tlaq Building Floor Areas</b>	<b>58,749 sf</b>

**TLAQUEPAQUE NORTH**

Crystal Enlightenment	1,881 sf
Timeshare / Retail	651
Retail	1,633
<b>Total Annex Floor Areas</b>	<b>4,165 sf</b>

**PARKING SPACES REQUIRED**

**TLAQUEPAQUE MAIN**

	Area	Rate	# Spaces Req'd
Retail / Office and Roof Terrace	50,940 sf	@ 1/250 =	159
Restaurant	13,635 sf		
Less 15% of 28,949 *	(5,842)		
Adjusted Restaurant Floor Area	7,799 sf	@ 1/100 =	78
Maintenance / Green Houses	4,165	@ 1/150 =	6
<b>TOTAL PARKING REQUIRED*</b>			<b>243</b>
Total Parking Provided			348
<b>EXCESS Parking Available</b>			<b>105</b>

\*6 H.O. Required, 8 H.G. spaces provided.

**TLAQUEPAQUE NORTH**

	Area	Rate	# Spaces Req'd
Total Retail Floor Area	4,165 sf	@ 1/250 =	17
<b>TOTAL PARKING REQUIRED*</b>			<b>17</b>
Total Parking Provided			48
<b>EXCESS Parking Available</b>			<b>31</b>

\*2 H.C. spaces required, 3 H.C. spaces provided.

**GRAND TOTAL EXCESS PARKING AVAILABLE** 138  
(All Parcels)



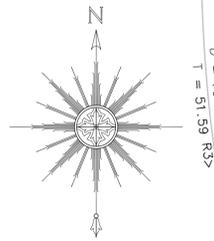
Exp 2/15/14



**SURVEYOR'S CERTIFICATE**

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION, DURING THE MONTH OF JULY, 2010 IN CONFORMANCE WITH THE ARIZONA BOUNDARY SURVEY MINIMUM STANDARDS ADOPTED IN FEBRUARY OF 2002.

DATE OF SURVEY: 07/07/2010  
 MARTIN T. ETCHEVERRY  
 LS 33783  
 EXPIRES: 06/30/2011



LINE	LENGTH	BEARING
L1-M	11.54'	N 23°59'30" E
<L1-R2>	11.54'	N 24°24'22" E
<L1-R5>	11.71'	N 24°12'03" E
L2-M	15.00'	N 35°36'39" E
<L2-R2>	15.05'	N 36°01'31" E
<L2-R3>	15.00'	N 36°16'30" E
<L2-R5>	15.00'	N 36°16'30" E
L3-M	69.21'	S 86°57'35" E
<L3>	69.25'	N 86°37'30" W
<L3-R5>	69.24'	N 86°37'30" W
<L4-R1>	19.92'	N 43°36'00" E
L5-M	2.40'	N 43°36'00" E
L6-M	6.18'	S 43°11'31" W
<L6-R8>	6.18'	S 41°22'14" W
<L6-R9>	6.18'	S 41°22'14" W

CURVE	LENGTH	RADIUS	DELTA	CH DIR	CHORD
<C1-R8,R9>	5.04'	303.10'			
<C2-R8,R9>	137.06'	303.10'			
C3-M	8.00'	303.10'	1°30'46"	S68°46'40"E	8.00'
<C3-R8,R9>	7.58'	303.10'			
C4-M	37.46'	170.00'	12°37'26"	N81°00'49"W	37.38'
<C4-R1,R3>	37.31'	170.00'	12°34'30"		
C5-M	141.37'	303.10'	26°43'28"	S54°39'33"E	140.10'
C6-M	61.96'	170.00'	20°53'00"	N64°34'52"W	61.62'
<C6-R2>	61.96'	170.00'			
<C6-R3,R5>	61.96'	170.00'			
C7-M	308.10'	88.18'	16°24'02"	S48°41'32"E	87.89'
<C7-R2>	308.10'	88.18'			
C8-M	308.10'	132.43'	24°37'38"	S28°17'40"E	131.41'
<C8-R8>	308.10'				

**LEGEND**

- ⊙ - FOUND 1/2" REBAR WITH NO IDENTIFICATION
- ⊙ - FOUND 1-1/4" PIPE WITH NO IDENTIFICATION
- ⊙ - FOUND 5/8" REBAR WITH PLASTIC CAP STAMPED "LS 28728"
- ⊙ - FOUND 1/2" REBAR WITH PLASTIC CAP STAMPED "LS 32230"
- ⊙ - FOUND 1/2" REBAR WITH ALUMINUM TAG STAMPED "LS 32230"
- ⊙ - FOUND 1/2" REBAR WITH ALUMINUM TAG STAMPED "LS 32224"
- ⊙ - FOUND 5/8" REBAR WITH ILLEGIBLE CAP
- ⊙ - SET 1/2" REBAR WITH PLASTIC CAP STAMPED "LS 32230"
- - CALCULATED POSITION NOTHING FOUND OR SET
- ⊙ - WATER VALVE
- ⊙ - IRRIGATION CONTROL VALVE
- ⊙ - FIRE HYDRANT
- ⊙ - LIGHT POLE
- ⊙ - UTILITY POLE
- ⊙ - GUY
- M - MEASURED DIMENSION
- <R1> - RECORD DIMENSION PER DOCUMENT RECORDED IN INSTRUMENT #3298913, CCR
- <R2> - RECORD DIMENSION PER DOCUMENT RECORDED IN INSTRUMENT #3014793, CCR
- <R3> - RECORD DIMENSION PER DOCUMENT RECORDED IN ARTESANIA PLAT CASE 3 MAP 193A INSTRUMENT # 900849
- <R4> - RECORD DIMENSION PER SURVEY RECORDED IN HART'S VILLAGE PLAT INSTR# 900126, CCR
- <R5> - RECORD DIMENSION PER DOCUMENT RECORDED IN INSTRUMENT # 3155838, CCR
- <R6> - RECORD DIMENSION PER DOCUMENT RECORDED IN INSTRUMENT # 3516432, CCR
- <R7> - RECORD DIMENSION PER DOCUMENT RECORDED IN INSTRUMENT # 928659, CCR
- <R8> - RECORD DIMENSION PER ADOT PROJECT PLAN S-238-805
- <R9> - RECORD DIMENSION PER DOCUMENT RECORDED IN INSTRUMENT # 3445789, CCR
- XX/XXX - DOCUMENT RECORDED IN BOOK XX OF OFFICIAL RECORDS PAGE XXX, CCR
- INSTR. # - DOCUMENT INSTRUMENT NUMBER OF OFFICIAL RECORDS, CCR
- CCR - COCONINO COUNTY RECORDER
- # - ITEM NUMBER IN TITLE REPORT
- TCE - TEMPORARY CONSTRUCTION EASEMENT

COCONINO COUNTY RECORDER  
 Recorded at the Request of  
 CORNERSTONE SURVEYING &  
 ENGINEERING, INC.  
 \_\_\_\_\_ A.D. 2009  
 at \_\_\_\_\_ o'clock  
 Book \_\_\_\_\_ of Land Surveys  
 Page \_\_\_\_\_  
 RECORDS OF COCONINO COUNTY,  
 ARIZONA  
 Candace Owens  
 County Recorder  
 Deputy Recorder

EXPIRES 6/30/2011  
 REGISTERED LAND SURVEYOR  
 33873  
 MARTIN T. ETCHEVERRY  
 ETCHEVERRY  
 ARIZONA U.S.A.

	NAME	DATE
DESIGN	JMG	7/30/2010
DRAWN	JMG	7/30/2010
CHECKED	MTE	7/30/2010
REVISED		

DWG. NAME: 10-307-MAX-BACIN.DWG

**RESULTS OF SURVEY**  
 in the Southeast Quarter of Section 7,  
 Township 17 North, Range 6 East  
 of the Gila and Salt River Base and  
 Meridian, Coconino County, Arizona



1010 N. Main Street  
 Cottonwood, Az. 86326  
 PH: 928-649-0949  
 Fax: 928-639-3801

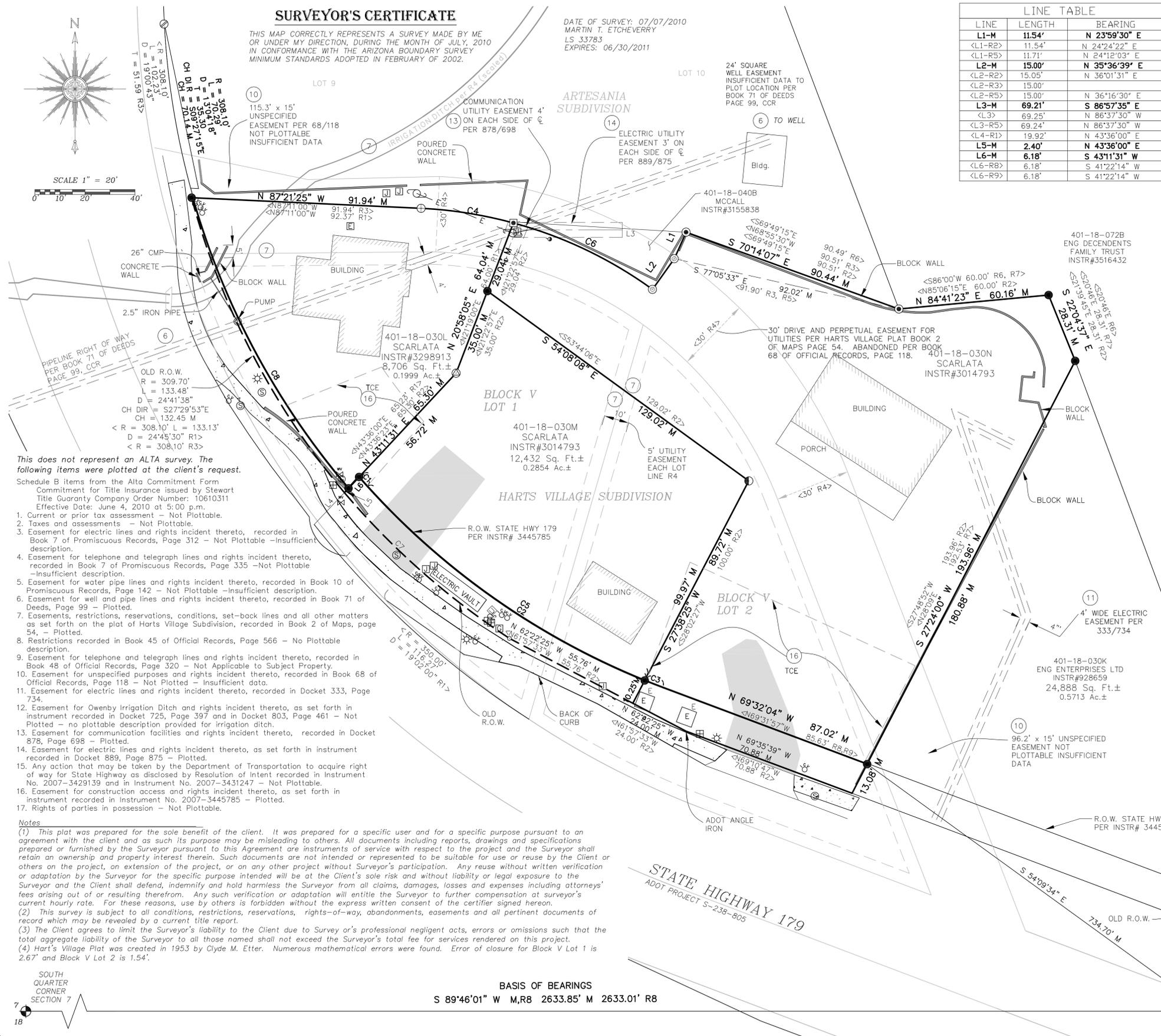
JOB NUMBER: 10-307 APN: 401-18-030L,M,N

CLIENT	SHEET	SECTION	TOWNSHIP	RANGE
BACON	1 of 1	7	17N	6E

Gila & Salt River Base & Meridian

**Notes**  
 (1) This plat was prepared for the sole benefit of the client. It was prepared for a specific user and for a specific purpose pursuant to an agreement with the client and as such its purpose may be misleading to others. All documents including reports, drawings and specifications prepared or furnished by the Surveyor pursuant to this Agreement are instruments of service with respect to the project and the Surveyor shall retain an ownership and property interest therein. Such documents are not intended or represented to be suitable for use or reuse by the Client or others on the project, on extension of the project, or on any other project without Surveyor's participation. Any reuse without written verification or adaptation by the Surveyor for the specific purpose intended will be at the Client's sole risk and without liability or legal exposure to the Surveyor and the Client shall defend, indemnify and hold harmless the Surveyor from all claims, damages, losses and expenses including attorneys' fees arising out of or resulting therefrom. Any such verification or adaptation will entitle the Surveyor to further compensation at surveyor's current hourly rate. For these reasons, use by others is forbidden without the express written consent of the certifier signed hereon.  
 (2) This survey is subject to all conditions, restrictions, reservations, rights-of-way, abandonments, easements and all pertinent documents of record which may be revealed by a current title report.  
 (3) The Client agrees to limit the Surveyor's liability to the Client due to Surveyor's professional negligent acts, errors or omissions such that the total aggregate liability of the Surveyor to all those named shall not exceed the Surveyor's total fee for services rendered on this project.  
 (4) Hart's Village Plat was created in 1953 by Clyde M. Etter. Numerous mathematical errors were found. Error of closure for Block V Lot 1 is 2.67' and Block V Lot 2 is 1.54'.

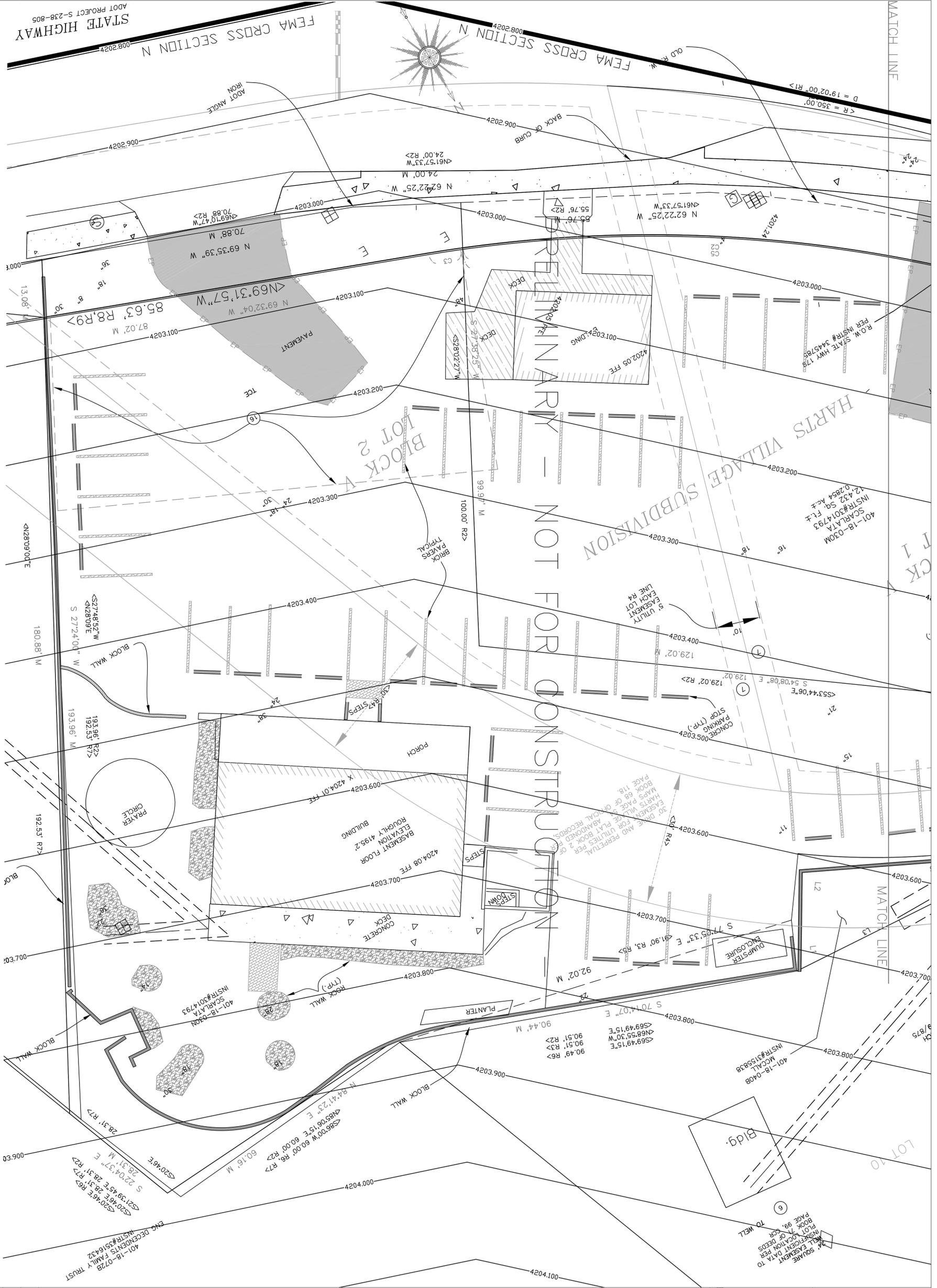
BASIS OF BEARINGS  
 S 89°46'01" W M,R8 2633.85' M 2633.01' R8







ADOT PROJECT S-238-805  
STATE HIGHWAY



REGULATORY ELEVATION WITH  
FLOODWAY CROSS SECTIONS

NAME	DATE
DESIGN	TLP 01-27-14
DRAWN	
CHECKED	
REVISED	

EXHIBIT B

**TLP**  
PENDER  
ENGINEERING

Tom L. Pender, P.E.  
P.O. Box 1245  
Cottonwood, AZ 86326  
(928) 639-0776

SCALE-1"=10' HORIZ.



102 Roadrunner Drive  
Sedona, Arizona 86336  
www.SedonaAZ.gov

February 20, 2014

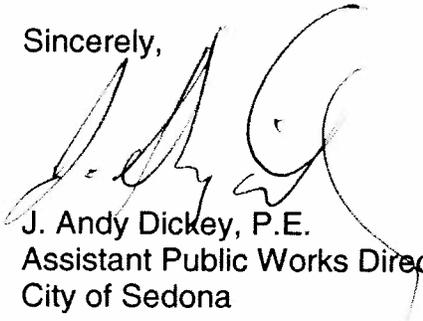
TLAQ Partners, LLC  
PO Box 1868  
Sedona, AZ 86339

Attention: Wendy Lippman, Managing Partner  
SUBJECT: SEWER AVAILABILITY FOR THE PROPOSED TLAQUEPAQUE EXPANSION  
TO EXISTING PARCEL NUMBERS 401-18-030L, 401-18-030M, AND 401-18-030N

In response to your email dated February 11, 2014, regarding the above mentioned Tlaquepaque Expansion, City of Sedona sewer service is currently available to these three parcels.

If you have any questions, please contact me at (928) 203-5039, or email [adickey@sedonaaz.gov](mailto:adickey@sedonaaz.gov).

Sincerely,



J. Andy Dickey, P.E.  
Assistant Public Works Director/Assistant City Engineer  
City of Sedona

JAD/dkp

cc: Charles Mosley, PE MPA, Public Works Director/City Engineer (e-copy)  
David Peck, Assistant Engineer (e-copy)  
Kelly Parlin, Interim Wastewater Superintendent (e-copy)  
File: SR 179 - Street File

# ARIZONA WATER COMPANY

65 COFFEE POT DRIVE, SUITE 7, SEDONA, AZ 86336-4554

PHONE: (928) 282-7092 • FAX: (928) 282-6131 • TOLL FREE: (800) 649-8393 • [www.azwater.com](http://www.azwater.com)

February 12, 2014

Tlaquepaque  
Attn: Wendy Lippman  
PO Box 1868  
Sedona, AZ 86339

Re: Domestic Water Service to 301, 313, 321 State Route 179  
APN's 401-18-030N, 401-18-030M, 401-18-030L

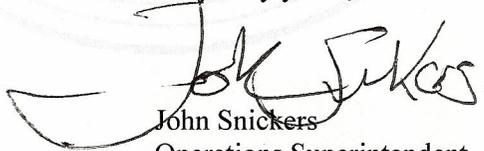
Dear Ms. Lippman:

Arizona Water Company (the "Company") certifies that the above-described property is located within its Certificate of Convenience and Necessity in Sedona, Arizona, and that it will provide water service to the property in accordance with the Company's tariffs and the Arizona Corporation Commission's rules and regulations. It will be the responsibility of the developer to provide the funds to install the necessary water facilities, and the Company assumes no liability to install those facilities if the funds are not advanced by the developer.

The design of the water distribution system must comply with the Company's standard specifications that are on file at the Arizona Department of Environmental Quality. Both preliminary and final water system designs must be approved by the Company.

It will also be the responsibility of the developer to meet all the requirements of regulatory agencies having jurisdiction over Arizona subdivisions and of Arizona statutes applicable to subdivided or unsubdivided land, including, but not limited to, requirements relating to a Certificate of Assured Water Supply, as set forth in the Arizona Groundwater Management Act, A.R.S. §45-576.

Very truly yours,



John Snickers  
Operations Superintendent  
[jnickers@azwater.com](mailto:jnickers@azwater.com)

tt  
Enclosure

---

E-MAIL: [mail@azwater.com](mailto:mail@azwater.com)

1/15/09  
FKS:afh  
E-3-1-1



1250 E. State Route 89A  
Cottonwood, AZ 86326

February 18, 2014

Wendy Lippman  
Tlaquepaque  
PO Box 1868  
Sedona, AZ 86339

Re: APN 401-18-030L  
APN 401-18-030M  
APN 401-18-030N

Dear Wendy,

The above referenced project is located in Arizona Public Service Company's electric service area. The Company extends its lines in accordance with the "Conditions Governing Extensions of Electric Distribution Lines and Services," Schedule 3, and the "Terms and Conditions for the Sale of Electric Service," Schedule 1, on file with the Arizona Corporation Commission at the time we begin installation of the electric facilities.

Application for the Company's electric service often involves construction of new facilities for various distances and costs depending upon customer's location, load size and load characteristics. With such variations, it is necessary to establish conditions under which Arizona Public Service will extend its facilities.

The policy governs the extension of overhead and underground electric facilities to customers whose requirements are deemed by Arizona Public Service to be usual and reasonable in nature.

Please give me a call at 928-646-8463 so that we may set up an appointment to discuss the details necessary for your project.

Sincerely,

A handwritten signature in cursive script that reads "Sandy Finley".

Sandy Finley  
Customer Project Manager  
Verde District



February 18, 2014

Wendy Lippman  
Tlaquepaque General Manager  
P. O Box 1868  
Sedona, AZ 86339

RE: Tlaquepaque Conceptual Development #2

Dear Wendy

From the site plan that you sent me and our engineer there is a vacant gas riser at 301 State Route 179 and there is an existing meter at 313 State Route 179 that should be able to serve your new purposed project.

The Restaurant will need to plan on piping to the meter loop at 313 State Route 179.

Please keep me posted as this project progresses, and if you or your Architect have any question please call me at 928-203-1215.

Sincerely

A handwritten signature in blue ink that reads "Irene Freeman".

Irene Freeman  
Planner

# Staff Evaluation of Colors at Tlaquepaque Village



City Of Sedona Community & Economic Development Department  
102 Roadrunner Drive Sedona, AZ 86336  
(928) 282-1154 • Fax: (928) 204-7124





Shephard ▲ Wesnitzer, Inc.

75 Kallof Place  
Sedona, AZ 86336

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Sedona, AZ 86340

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928.282.2058 fax

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## Pedestrian Crossing Study

**SR 179**  
Between  
**Tlaquepaque**  
and  
**Proposed Tlaquepaque North**

Prepared for

**Tlaq Partners**  
P.O. Box 1868  
Sedona, AZ 86339



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## 1.0 PURPOSE

The purpose of this report is to:

- Determine existing pedestrian movements across SR 179 in the vicinity of Tlaquepaque including pedestrians using the existing crosswalk and those crossing SR 179 outside the crosswalk
- Estimate future pedestrian movements across SR 179 assuming the proposed Tlaquepaque Annex is constructed on the property north of SR 179 from the existing Tlaquepaque Retail Marketplace
- Present recommends for modifications to the pedestrian facilities to improve safety and encourage the use of the crosswalk
- Discuss site access and circulation from a pedestrian standpoint

## 2.0 PROJECT DESCRIPTION

The Tlaquepaque Retail Center is located on the south side of SR 179 approximately ¼ mile south of the intersection of SR 179 and SR 89A. The existing center occupies approximately 7 acres, including retail space and parking.

Tlaquepaque ownership proposes to re-develop approximately 1.06 acres of land currently utilized as retail space and parking north of SR 179. The proposed re-development project is currently known as “Tlaquepaque Annex”.

SR 179 between Tlaquepaque and Tlaquepaque Annex was re-constructed between 2007 and 2010. The re-construction included a roundabout northeast of Tlaquepaque, new vehicular and pedestrian bridges across Oak Creek, median separated travel lanes in each direction, new left turn bays leading into the eastern entrance to Tlaquepaque, Portal Lane, and Ranger Road from the northbound lane of SR 179, new sidewalks on both sides of SR 179, and a pedestrian crosswalk located approximately midway between Portal Lane and Oak Creek.

The Tlaquepaque Annex site currently has three retail spaces comprising 4,741 square feet. The proposed project will replace two of the existing retail buildings with three new buildings for additional retail space and a new restaurant for a total of four buildings on the site with a total useable floor space of 9,981 square feet. The site is located in the SR 179 Character District in Sedona, which emphasizes pedestrian orientated features. It is assumed that a significant number of patrons will access the site via the crosswalk from the south side of the S.R. 179. Parking for the Annex is proposed to be shared with Tlaquepaque. Annex employees will park in the existing

This area has a combination of heavy vehicle traffic and pedestrian traffic both of which are expected to increase with the proposed project. The adjacent SR 179 is a major artery that connects Sedona with the Village of Oak Creek with a posted speed of 25 mph.

### 3.0 SCOPE OF SERVICES

#### 3.1 EXISTING PEDESTRIAN COUNTS

During discussions with City of Sedona Engineering staff at the outset of this study it was agreed that counts should be made during one of the busy, holiday weekends including a Saturday. The Friday and Saturday after Thanksgiving was agreed as the dates of the counts. Of particular interest to City of Sedona Engineering staff was the number of pedestrians crossing SR 179 using the crosswalk vs. the numbers crossing elsewhere.

SWI enlisted the services of Traffic Data Services (TDS) to assist with obtaining the pedestrian crossing counts. TDS set up three Miovision “Scout” Video Collection Units (cameras) to capture pedestrian movements between the west end of the Oak Creek Pedestrian Bridge and just west of Portal Lane. Camera set up locations included:

- Camera 1, 180 feet west of the crosswalk to capture pedestrians between 180 feet and 40 feet west of the crosswalk
- Camera 2, 60 feet west of crosswalk to capture pedestrians between 40 feet west of the crosswalk and camera 3.
- Camera 3, 50 feet east of crosswalk to capture pedestrians between camera 3 and the roundabout

Cameras were mounted on light poles with lenses angled to capture pedestrians. All video was processed by Miovision. Cameras were set to record data from 8:45 AM until 5:45 PM each day November 29 and 30, 2013. Tabular data indicating numbers of pedestrians crossing SR 179 and the locations of the crossings is included in the Appendix. Video files are available if requested. Data is tabulated in 15 minute intervals.

Total Pedestrian Crossing Counts for the two days are:

Date	Total Pedestrians Crossing SR 179	Total Pedestrians in Crosswalk	Total Pedestrians Outside Crosswalk	Percentage of Pedestrians Outside Crosswalk	Total Southbound Pedestrians	Total Northbound Pedestrians
11/29/2013	621	598	23	3.7	344	277
11/30/2013	485	442	43	9.7	255	230

Overall, for the two days monitored, the percentage of pedestrians using the crosswalk was very high and the pedestrians crossing other than the crosswalk quite low.

The video files indicate that a large percentage of the pedestrians crossing in one direction later crossed back to where they originated. Pedestrians who crossed SR 179 east of the crosswalk appeared to have approached from the east and returned toward the east. Those who crossed west of the crosswalk northbound tended to approach from Portal Lane and southbound tended to walk down Portal Lane after crossing SR 179. In all cases observed, pedestrians who crossed SR 179 other than in the crosswalk utilized the median breaks at the left turn bays and used the median end caps for refuge when vehicles approached.

It should be noted that the dates counted are considered to be the peak annual days. The Thanksgiving weekend is usually one of the busiest of the year for out of town visitors and shopping.

Existing daily Tlaquepaque patron counts are not available. However, the restaurants within Tlaquepaque maintain records of daily patronage. Daily restaurant counts coincidental with the pedestrian counts were obtained from the four Tlaquepaque restaurants. Tlaquepaque General Manager, Wendy Lippman, estimates that approximately 30% of Tlaquepaque patrons dine at one of the restaurants. Therefore, dividing the number of restaurant patrons by 0.30 yields an estimate of the total number of Tlaquepaque patrons. The restaurant patron counts and estimated Tlaquepaque patrons are tabulated below.

Date	Restaurant Patron Count	Tlaquepaque Patron Estimate
11/21/2013	554	1,847
11/29/2013	1907	6,357
11/30/2013	1765	5,883

It should be noted that 11/21/2013 was considered to be a slow day, so average day patron counts would lie somewhere between 554 and 1907.

### 3.2 FUTURE PEDESTRIAN PROJECTIONS

There is very little, published data relative to pedestrian activity in specialty retail shopping centers, particularly in centers separated by a major thoroughfare. Therefore, SWI has made the following assumptions in estimating future pedestrian activity in the vicinity of Tlaquepaque:

- Pass-by pedestrian activity would increase proportionately to vehicular traffic increases
- The architectural similarity between the existing Tlaquepaque shopping center and the proposed Tlaquepaque North would bind the two and increase interactive pedestrian activity between the two.
- 10% of patrons who park on the south side of SR 179 would venture to the north side
- 40% of patrons who park on the north side of SR 179 would venture to the south side
- ITE suggests the average vehicle occupancy to be 1.59 persons per vehicle

SWI tabulated vehicular Trip Generation models using the Institute of Transportation Engineers (ITE) *Trip Generation Manual, Eighth Edition* land use code 814: *Specialty Retail Center* and *Land Use Code 932: High-Turnover (Sit Down) Restaurant* for the combined Tlaquepaque and Tlaquepaque North for both the existing condition and the built out condition to determine change in pass-by pedestrian. Similar tabulations were generated for the existing Tlaquepaque and proposed Tlaquepaque North to determine interactive pedestrian activity. The results are shown in Tables 1-5.

Table 1 compares existing condition, counted pedestrians on a Saturday to ITE projected vehicular Saturday Trips to develop a ratio of pass-by pedestrians to vehicle trips. Pass-by pedestrian traffic was calculated to be 15.58% of vehicle trips. That ratio was then used in Table 2 to determine the number of pass-by pedestrian trips for the developed condition.

Tables 3 and 4 calculate the numbers of interactive pedestrian trips (those pedestrians who park and shop on one side of SR 179 then cross SR 179 to the other side and back.

Table 5 sums the changes to develop a grand total of pedestrian trips across SR 179 in the Tlaquepaque vicinity.

TABLE 1 - TRIP GENERATION FOR EXISTING CONDITIONS TLAQUEPAQUE & TLAQUEPAQUE NORTH COMBINED													
LAND USE	ITE CODE	VARIABLE	TIME PERIOD	EQUATION	% ENTERING	WEEKDAY TOTAL	AM TOTAL	AM		PM TOTAL	PM		SAT TOTAL
								in	out		in	out	
<b>RESTAURANT</b>	<b>932</b>												
Variable = 1000 sq ft		13.6	Weekday	T=127.15(X)	50%	1729							
High-Turnover (Sit-Down) Restaurant			AM Peak	T=13.53(X)	52%		184	96	88				
			PM peak	T=18.49(X)	54%					251	136	116	
			Saturday	T=158.37(X)	50%								2154
			Saturday Peak	T=14.07(X)	53%								
<b>RETAIL</b>	<b>814</b>												
Variable = 1000 sq ft		43.6	Weekday	T=42.78(X)+37.66	50%	1903							
Speciality Retail Center			AM Peak	T=4.91(X)+115.59	48%		330	158	171				
			PM peak	T=5.02(X)	56%					219	123	96	
			Saturday	T=42.04(X)									1833
		57.2		<b>Total Vehicle Trips</b>		<b>3632</b>	<b>514</b>	<b>254</b>	<b>260</b>	<b>470</b>	<b>258</b>	<b>212</b>	<b>3987</b>
Passby Pedestrian Traffic Crossing SR 179			Saturday	Counted									621
Pedestrian Traffic Crossing SR 179				Proportionate to Vehicle Trips	15.58%	566	80	40	40	73	40	33	621

TABLE 2 - TRIP GENERATION FOR PROPOSED CONDITIONS TLAQUEPAQUE & TLAQUEPAQUE NORTH COMBINED													
LAND USE	ITE CODE	VARIABLE	TIME PERIOD	EQUATION	% ENTERING	WEEKDAY TOTAL	AM TOTAL	AM		PM TOTAL	PM		SAT TOTAL
								in	out		in	out	
<b>RESTAURANT</b>	<b>932</b>												
Variable = 1000 sq ft		17.8	Weekday	T=127.15(X)	50%	2263							
High-Turnover (Sit-Down) Restaurant			AM Peak	T=13.53(X)	52%		241	125	116				
			PM peak	T=18.49(X)	54%					329	178	151	
			Saturday	T=158.37(X)	50%								2819
<b>RETAIL</b>	<b>814</b>												
Variable = 1000 sq ft		45.1	Weekday	T=42.78(X)+37.66	50%	1967							
Speciality Retail Center			AM Peak	T=4.91(X)+115.59	48%		337	162	175				
			PM peak	T=5.02(X)	56%					226	127	100	
			Saturday	T=42.04(X)	50%								1896
		62.9		<b>Total Vehicle Trips</b>		<b>4230</b>	<b>578</b>	<b>287</b>	<b>291</b>	<b>556</b>	<b>305</b>	<b>251</b>	<b>4715</b>
Pedestrian Traffic Crossing SR 179				Proportionate to Vehicle Trips	15.58%	659	90	45	45	87	47	39	734
Current Passby Pedestrian Traffic Crossing SR 179 From Table 1						566	80	40	40	73	40	33	621
<b>Change in Passby Pedestrian Trips Due to Tlaquepaque North Expansion</b>						<b>93</b>	<b>10</b>	<b>5</b>	<b>5</b>	<b>13</b>	<b>7</b>	<b>6</b>	<b>113</b>

**TABLE 3 -INTERACTIVE PEDESTRIAN TRIP GENERATION TLAQUEPAQUE**

LAND USE	ITE CODE	VARIABLE	TIME PERIOD	EQUATION	% ENTERING	WEEKDAY TOTAL	AM TOTAL	AM		PM TOTAL	PM		SAT TOTAL
								in	out		in	out	
<b>RESTAURANT</b>	<b>932</b>												
Variable = 1000 sq ft		13.6	Weekday	T=127.15(X)	50%	1729							
High-Turnover (Sit-Down) Restaurant			AM Peak	T=13.53(X)	52%		184	96	88				
			PM peak	T=18.49(X)	54%					251	136	116	
			Saturday	T=158.37(X)	50%								2154
<b>RETAIL</b>	<b>814</b>												
Variable = 1000 sq ft		43.6	Weekday	T=42.78(X)+37.6	50%	1903							
Speciality Retail Center			AM Peak	T=4.91(X)+115.5	48%		330	158	171				
			PM peak	T=5.02(X)	56%					219	123	96	
			Saturday	T=42.04(X)	50%								1833
		57.2	<b>Total Vehicle Trips</b>			<b>3632</b>	<b>514</b>	<b>254</b>	<b>260</b>	<b>470</b>	<b>258</b>	<b>212</b>	<b>3987</b>
N-S Interactive Pedestrian Traffic				Proportionate to Vehicle Trips	<b>10%</b>	<b>578</b>	<b>82</b>	<b>40</b>	<b>41</b>	<b>75</b>	<b>41</b>	<b>34</b>	<b>634</b>

**TABLE 4 -INTERACTIVE PEDESTRIAN TRIP GENERATION FOR TLAQUEPAQUE NORTH**

LAND USE	ITE CODE	VARIABLE	TIME PERIOD	EQUATION	% ENTERING	WEEKDAY TOTAL	AM TOTAL	AM		PM TOTAL	PM		SAT TOTAL
								in	out		in	out	
<b>RESTAURANT</b>	<b>932</b>												
Variable = 1000 sq ft		4.2	Weekday	T=127.15(X)	50%	534							
High-Turnover (Sit-Down) Restaurant			AM Peak	T=13.53(X)	52%		57	30	27				
			PM peak	T=18.49(X)	54%					78	42	36	
			Saturday	T=158.37*(X)	50%								665
<b>RETAIL</b>	<b>814</b>												
Variable = 1000 sq ft		5.8	Weekday	42.78(X)+37.66	50%	286							
Speciality Retail Center			AM Peak	4.91(X)+115.59	48%		144	69	75				
			PM peak	5.02(X)	56%					29	16	13	
			Saturday	42.04(X)	50%								244
			<b>Total Vehicle Trips</b>			<b>820</b>	<b>201</b>	<b>99</b>	<b>102</b>	<b>107</b>	<b>58</b>	<b>49</b>	<b>909</b>
N-S Interactive Pedestrian Traffic				Proportionate to Vehicle Trips	<b>40%</b>	<b>521</b>	<b>128</b>	<b>63</b>	<b>65</b>	<b>68</b>	<b>37</b>	<b>31</b>	<b>578</b>

**TABLE 5 - TOTAL PEDESTRIAN ACTIVITY ATTRIBUTED TO PROPOSED TLAQUEPAQUE NORTH**

PEDESTRIAN SOURCE	WEEKDAY TOTAL	AM TOTAL	AM		PM TOTAL	PM		SAT TOTAL
			in	out		in	out	
Current Passby Pedestrian Traffic Crossing SR 179 (From Table 1)	566	80	40	40	73	40	33	621
Change in Passby Pedestrian Trips (From Table 2)	93	10	5	5	13	7	6	113
Change in N-S Interactive Pedestrian Trips From Tlaquepaque (Fom Table 3)	578	82	40	41	75	41	34	634
Change in N-S Interactive Pedestrian Trips From Tlaquepaque North (From Table 4)	521	128	63	65	68	37	31	578
<b>Total Expected Pedestrian Trips</b>	<b>1758</b>	<b>299</b>	<b>148</b>	<b>152</b>	<b>229</b>	<b>126</b>	<b>104</b>	<b>1946</b>

### 3.3 ACCIDENT HISTORY

Sedona Police Department records were obtained to establish the history of accidents in the vicinity of Tlaquepaque. Records were provided for the past three years for the stretch of SR 179 from the Schnebly Hill Road Roundabout to the Ranger Road intersection. In all, twenty accidents were reported in the past three years. Narrowing the report to the study area, between Oak Creek Bridge and Portal lane reduces the number of reported accidents to nine. None of the reported accidents included pedestrians. Tabulation of the Sedona Police Department Accident Data January 2011-December 2013 is included in the Appendix.

## 4.0 RECOMMENDATIONS

### 4.1 SAFETY

SWI has projected Future Pedestrian activity in the Tlaquepaque vicinity will increase significantly due to the expansion of the Arts & Crafts Village to the north side of SR 179. The projections show an increase in pedestrians from 621 to 1946 on a Saturday, an increase of nearly 300%.

According to the pedestrian data collected on November 29 and 30, 2013, 90% to 95% of pedestrians crossing SR 179 in the vicinity of Tlaquepaque utilize the existing crosswalk. Tlaquepaque's goals include increasing that percentage and improving the safety of the crossing.

One thought of improving safety was to add crosswalks at the locations where jaywalking tended to occur. That solution was quickly dismissed for several reasons.

- First, the locations are at existing turn lanes where motorist activity is heightened and the addition of pedestrians would add to the complexity of the turning movements.
- Second, the medians at the ends of the turn bays are narrow and would offer no safe landing zone at the midpoint of SR 179.
- Third, the addition of more crosswalks would tend to reduce the capacity of SR 179.

Most of the pedestrians crossing SR 179 outside the crosswalk were observed at Portal Lane, or near the eastern entrance to Tlaquepaque. Both locations are coincident with breaks in the median at the left turn bays that enable entrance to Tlaquepaque by northbound motorists.

The implementation of median barriers and landscape barriers along the sidewalks were considered as a way to discourage jaywalking. However, due to the locations of the left turn bay, median openings and the driveway locations (both north and south of SR 179), SWI believes the barriers to be ineffective.

A more realistic approach to increasing crosswalk usage may be to encourage its use rather than discourage jaywalking. Several options have been identified that would encourage pedestrians to move toward the existing crosswalk. Those include:

- Discourage pedestrian movement along Portal Lane by encouraging pedestrian movement through Tlaquepaque providing more clearly defined routes within Tlaquepaque that would improve visibility to the crosswalk.
- Increase the visibility of the crosswalk with additional lighting and a vertical component at the median rest stop to draw attention to the crosswalk.
- Increase the visibility of the preferred routes by modifying the existing sidewalk and adding different surface texture to the route.
- Improve the aesthetics along the routes toward the crosswalk to provide interest possibly through the addition of art in public places along the route or through the use of intensified landscaping.
- Improve signage that would a) better inform pedestrians of the location of the crosswalk, and b) inform pedestrians of the consequences of jaywalking.

Additional safety features for the crosswalk should also be considered. The Federal Highway Administration publication “Rectangular Rapid Flash Beacon (RRFB) dated May, 2009 cites the benefits of installation of RRFB’s at crosswalks when used in conjunction with other warning signs, particularly at mid-block crosswalks. A copy of the report can be found in the appendix.

Discussions with ADOT, Flagstaff District Traffic Engineer, Kent Link, and City of Flagstaff Traffic Engineer, Jeff Bauman, have reinforced the level confidence in the use of RRFB’s at the Tlaquepaque crosswalk location.

It is our understanding, however, that any improvements or changes made within ADOT’s SR 179 right-of-way would require a commitment by the City of Sedona to accept the maintenance responsibility for those improvements.

This concludes SWI’s Study of SR 179 pedestrian activity as it relates to the proposed expansion of Tlaquepaque to the north side of SR 179.

## APPENDIX

### Sedona Police Department Accident Data January 2011-December 2013

Accident Date and Time	Accident Address House Number	Accident Address Street Name	Accident Type	Accident Total Injuries	Accident Case Number	
5/18/2011 21:27	251	SR 179	Non-Injury	0	2011-00002162	
6/8/2011 11:35		SCHNEBLY HILL RD/SR 179	Injury	1	2011-00002547	Car/MC
7/2/2011 14:16		RANGER RD/SR 179	Non-Injury	0	2011-00003010	
7/3/2011 13:56		SR 179/RANGER RD	Non-Injury	0	2011-00003031	
7/29/2011 19:34	160	PORTAL LN	Non-Injury	0	2011-00003469	
8/7/2011 10:59		SR 179/SCHNEBLY HILL RD	Non-Injury	0	2011-00003609	
10/9/2011 10:28		SR 179/PORTAL LN	Injury	2	2011-00004811	2 Cars
11/4/2011 8:15		SR 179	Non-Injury	0	2011-00005279	
11/25/2011 19:48	336	SR 179	Non-Injury	0	2011-00005623	
4/17/2012 19:00		SR 179/RANGER RD	Non-Injury	0	2012-00002131	
5/1/2012 18:56	160	PORTAL LN	Non-Injury	0	2012-00002449	
7/23/2012 12:08		SR 179/RANGER RD	Non-Injury	0	2012-00004123	
2/12/2013 13:07		SR 179/SCHNEBLY HILL RD	Injury	1	2013-00000594	2 Cars
3/21/2013 14:10		SR 179/PORTAL LN	Non-Injury	0	2013-00001194	
4/5/2013 17:36		SR 179/SCHNEBLY HILL RD	Injury	1	2013-00001453	2 Cars
6/14/2013 14:39		SR 179/SCHNEBLY HILL RD	Non-Injury	0	2013-00002833	
9/19/2013 10:23	336	SR 179	Injury	1	2013-00004737	2 Cars
11/29/2013 12:22		SR 179/SCHNEBLY HILL RD	Injury	1	2013-00006097	2 Cars
12/3/2013 13:00	336	SR 179	Non-Injury	0	2013-00006165	
12/27/2013 14:10		SR 179/PORTAL LN	Injury	1	2013-00006486	Car/Bicycle

Total: 20





# Rectangular Rapid Flash Beacon (RRFB)

## Purpose

According to the National Highway Traffic Safety Administration, there were a total of 14,340 pedestrian fatalities and 193,000 pedestrian injuries resulting from pedestrian-vehicle crashes nationwide during the 2004-2006 period. Rectangular Rapid Flash Beacons (RRFB) can enhance safety by reducing crashes between vehicles and pedestrians at unsignalized intersections and mid-block pedestrian crossings by increasing driver awareness of potential pedestrian conflicts.

## Alternative Names

Light Emitting Diode (LED) Rapid-Flash System, Stutter Flash or LED Beacons.

## Operation

- RRFBs are user-actuated amber LEDs that supplement warning signs at unsignalized intersections or mid-block crosswalks. They can be activated by pedestrians manually by a push button or passively by a pedestrian detection system.
- RRFBs use an irregular flash pattern that is similar to emergency flashers on police vehicles.
- RRFBs may be installed on either two-lane or multi-lane roadways.

## Potential Benefits

- RRFBs are a lower cost alternative to traffic signals and hybrid signals that are shown to increase driver yielding behavior at crosswalks significantly when supplementing standard pedestrian crossing warning signs and markings.
- An official FHWA-sponsored experimental implementation and evaluation conducted in St. Petersburg, Florida found that RRFBs at pedestrian crosswalks are dramatically more effective at increasing driver yielding rates to pedestrians than traditional overhead beacons.
- The novelty and unique nature of the stutter flash may elicit a greater response from drivers than traditional methods.
- The addition of RRFB may also increase the safety effectiveness of other treatments, such as the use of advance yield markings with YIELD (or STOP) HERE FOR PEDESTRIANS signs. These signs and markings are used to reduce the incidence of multiple-threat crashes at crosswalks on multi-lane roads (i.e., crashes where a vehicle in one lane stops to allow a pedestrian to cross the street while a vehicle in an adjacent lane, traveling in the same direction, strikes the pedestrian), but alone they only have a small effect on overall driver yielding rates.



This summary is one in a series describing Innovative Intersection Safety Treatments. The summaries identify new technologies and techniques to improve intersection safety developed since NCHRP Report 500, Volumes 5 and 12, were published in 2003 and 2004, respectively. These treatments show promise for improving safety but comprehensive effectiveness evaluations are not yet available.



**Figure 1:** Activated, solar-powered RRFB on a center island at an unsignalized intersection—beacons flash using an irregular flash pattern that is similar to emergency flashers on police vehicles



**Figure 2:** Activated, solar-powered, roadside RRFB at a mid-block crosswalk



**Figure 3:** Combined roadside and median system of solar-powered RRFB

## Learn More

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## See Also:

[http://mutcd.fhwa.dot.gov/resources/interim\\_approval/ia11/stpetersburgprpt/intro.htm](http://mutcd.fhwa.dot.gov/resources/interim_approval/ia11/stpetersburgprpt/intro.htm)  
[http://www.stpete.org/pdf/ite\\_paper\\_07.pdf](http://www.stpete.org/pdf/ite_paper_07.pdf)

## Agency Experience

“An Analysis of the Effects of Stutter Flash LED Beacons to Increase Yielding to Pedestrians Using Multilane Crosswalks,” along with “The Use of Stutter Flash LED Beacons to Increase Yielding to Pedestrians at Crosswalks,” presented at the Transportation Research Board Annual Meeting in 2008, summarized the results of two studies on the effects of RRFBs when used to supplement standard pedestrian crossing warning signs at crosswalks<sup>1</sup>.

The former found that going from a no-beacon arrangement to a two-beacon system, mounted on the supplementary warning sign on the right side of the crossing, increased yielding from 18 percent to 81 percent. There was a further increase in yielding behavior, with a four-beacon system (with two beacons on both the right and left side of the crossing) to 88 percent. “An Analysis of the Effects of Stutter Flash LED Beacons to Increase Yielding to Pedestrians Using Multilane Crosswalks” also evaluated the sites over a 1-year period, and found that there was little to no decrease in yielding behavior over time.

## Implementation Considerations

- Including RRFBs on the roadside increases driver yielding behavior significantly. Including RRFBs on a center island or median as well can further increase driver yielding behavior, although with a lower marginal benefit than roadside beacons.
- RRFBs can use manual push-buttons or automated passive (e.g., video or infrared) pedestrian detection, and should be unlit when not activated.
- RRFBs typically receive power by standalone solar panel units, but may also be wired to a traditional power source.

## Manual on Uniform Traffic Control Devices (MUTCD) Specifications

- The MUTCD gave interim approval to RRFBs for optional use in limited circumstances in July 2008. The interim approval allows for usage as a warning beacon to supplement standard pedestrian crossing warning signs and markings at either a pedestrian or school crossing; where the crosswalk approach is not controlled by a yield sign, stop sign, or traffic-control signal; or at a crosswalk at a roundabout.
- The MUTCD interim approval memo also contains other provisions for the implementation of the device and should be reviewed ([http://mutcd.fhwa.dot.gov/resources/interim\\_approval/ia11/fhwamemo.htm](http://mutcd.fhwa.dot.gov/resources/interim_approval/ia11/fhwamemo.htm)).

## Costs

- Cost is approximately \$10,000 to \$15,000 for purchase and installation of two units (one on either side of a street). This includes solar panels for powering the units, pad lighting, indication units (for both sides of street) with RRFBs in the back and front of each unit, signage on both approaches, all posts, and either passive infrared detection or push buttons with audio instructions.
- Costs would be proportionately higher for additional units placed on a median island, etc.

<sup>1</sup>The two known studies of stutter flash were both conducted in Florida—one in Miami Beach and one in St. Petersburg. They are:

Sherbutt, J., R. Van Houten, and S. Turner. “An Analysis of the Effects of Stutter Flash LED Beacons to Increase Yielding to Pedestrians Using Multilane Crosswalks.” Presented at the Transportation Research Board Annual Meeting, Washington, DC, 2008.

Van Houten, R., R. Ellis, and E. Marmolejo. “The Use of Stutter Flash LED Beacons to Increase Yielding to Pedestrians at Crosswalks.” Presented at the Transportation Research Board Annual Meeting, Washington, DC, 2008.

# TLAQUEPAQUE PEDESTRIAN MOVEMENT STUDY

SR 179 PEDESTRIAN CROSSING COUNTS

OAK CREEK BRIDGE TO PORTAL LANE

SR 179 PEDESTRIAN CROSSING COUNTS NEAR TLAQUEPAQUE, SEDONA, ARIZONA

Date	Time	West of Crosswalk Southbound	West of Crosswalk Northbound	In Crosswalk Southbound	In Crosswalk Northbound	East of Crosswalk Southbound	East of Crosswalk Northbound
11/29/2013	9:00 AM	0	0	3	0	0	0
11/29/2013	9:15 AM	0	1	0	0	0	0
11/29/2013	9:30 AM	0	0	0	0	0	0
11/29/2013	9:45 AM	0	0	3	0	0	0
11/29/2013	10:00 AM	0	0	5	0	0	2
11/29/2013	10:15 AM	0	0	3	3	0	0
11/29/2013	10:30 AM	0	0	3	4	0	0
11/29/2013	10:45 AM	0	0	5	0	0	0
11/29/2013	11:00 AM	0	0	7	0	2	0
11/29/2013	11:15 AM	4	0	0	10	0	0
11/29/2013	11:30 AM	0	0	7	0	3	0
11/29/2013	11:45 AM	0	0	0	13	0	0
11/29/2013	12:00 PM	0	0	5	4	0	0
11/29/2013	12:15 PM	0	0	13	16	0	0
11/29/2013	12:30 PM	4	0	16	7	0	0
11/29/2013	12:45 PM	1	0	2	10	0	0
11/29/2013	1:00 PM	0	0	3	4	0	0
11/29/2013	1:15 PM	0	0	14	9	0	0
11/29/2013	1:30 PM	0	0	13	12	0	0
11/29/2013	1:45 PM	0	0	10	9	0	0
11/29/2013	2:00 PM	0	0	12	5	0	0
11/29/2013	2:15 PM	0	0	18	7	0	3
11/29/2013	2:30 PM	2	0	13	20	0	0
11/29/2013	2:45 PM	0	0	9	4	0	0
11/29/2013	3:00 PM	2	0	12	14	0	0
11/29/2013	3:15 PM	0	0	3	16	0	0
11/29/2013	3:30 PM	0	0	20	24	0	0
11/29/2013	3:45 PM	0	0	25	9	0	0
11/29/2013	4:00 PM	0	0	5	11	0	0
11/29/2013	4:15 PM	0	0	12	7	0	0
11/29/2013	4:30 PM	0	0	7	5	0	0
11/29/2013	4:45 PM	0	0	15	6	0	0
11/29/2013	5:00 PM	0	0	9	14	0	0
11/29/2013	5:15 PM	0	0	16	8	0	0
11/29/2013	5:30 PM	0	0	18	19	0	0
11/29/2013	5:45 PM	0	0	20	2	0	0
<b>TOTALS</b>		<b>13</b>	<b>0</b>	<b>326</b>	<b>272</b>	<b>5</b>	<b>5</b>
Total In Crosswalk		598			Total Southbound		344
Total Outside Crosswalk		23			Total Northbound		277
Percentage Outside Crosswal		3.7%					

## TLAQUEPAQUE PEDESTRIAN MOVEMENT STUDY

SR 179 PEDESTRIAN CROSSING COUNTS

OAK CREEK BRIDGE TO PORTAL LANE

SR 179 PEDESTRIAN CROSSING COUNTS NEAR TLAQUEPAQUE, SEDONA, ARIZONA

Date	Time	West of Crosswalk Southbound	West of Crosswalk Northbound	In Crosswalk Southbound	In Crosswalk Northbound	East of Crosswalk Southbound	East of Crosswalk Northbound
11/30/2013	9:00 AM	0	0	0	1	0	0
11/30/2013	9:15 AM	0	0	11	2	0	0
11/30/2013	9:30 AM	2	0	0	0	0	0
11/30/2013	9:45 AM	0	0	0	0	0	0
11/30/2013	10:00 AM	0	2	4	0	0	0
11/30/2013	10:15 AM	0	0	0	1	0	0
11/30/2013	10:30 AM	0	0	1	0	0	0
11/30/2013	10:45 AM	0	1	3	8	0	0
11/30/2013	11:00 AM	0	1	8	0	0	0
11/30/2013	11:15 AM	0	0	10	0	0	0
11/30/2013	11:30 AM	0	0	8	7	0	0
11/30/2013	11:45 AM	2	3	5	0	0	0
11/30/2013	12:00 PM	0	0	6	5	0	0
11/30/2013	12:15 PM	0	1	5	10	0	0
11/30/2013	12:30 PM	2	0	5	13	0	3
11/30/2013	12:45 PM	0	0	8	2	0	0
11/30/2013	1:00 PM	0	0	8	3	0	0
11/30/2013	1:15 PM	0	2	7	12	0	0
11/30/2013	1:30 PM	0	0	4	7	0	0
11/30/2013	1:45 PM	0	0	3	14	0	0
11/30/2013	2:00 PM	4	1	2	5	0	1
11/30/2013	2:15 PM	0	0	13	0	1	0
11/30/2013	2:30 PM	1	0	9	8	0	3
11/30/2013	2:45 PM	0	0	8	0	0	0
11/30/2013	3:00 PM	0	1	7	11	1	0
11/30/2013	3:15 PM	0	0	23	21	0	0
11/30/2013	3:30 PM	0	2	5	4	0	0
11/30/2013	3:45 PM	0	2	3	7	0	0
11/30/2013	4:00 PM	0	0	6	28	0	0
11/30/2013	4:15 PM	5	0	11	9	0	0
11/30/2013	4:30 PM	0	0	5	22	0	0
11/30/2013	4:45 PM	0	0	13	5	1	0
11/30/2013	5:00 PM	0	0	3	9	0	0
11/30/2013	5:15 PM	0	0	5	0	0	0
11/30/2013	5:30 PM	0	0	8	3	0	0
11/30/2013	5:45 PM	1	0	5	3	0	0
<b>TOTALS</b>		<b>17</b>	<b>16</b>	<b>222</b>	<b>220</b>	<b>3</b>	<b>7</b>
Total In Crosswalk		442				Total Southbound	255
Total Outside Crosswalk		43				Total Northbound	230
Percent Outside Crosswalk		9.7%					