

4,000 Years Of Menlo Park History, Tucson AZ



4,000 Years of Menlo Park's History, Tucson AZ

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Fig 1. Girls cool off in the Santa Cruz, around 1900 ⁴⁸ (Photo from Arizona Daily Star)

Introduction to a history of Menlo Park, a Tucson, Arizona Neighborhood.

Most well-researched family trees rarely exceed the two centuries of American history and their ancestors' immigration stories. Astoundingly, the Menlo Park neighborhood of Tucson, Arizona by contrast, yields a record of human habitation 20 times that long. Who were the people that lived here before us and why did our neighborhood remain habitable through several millennia? This story has been compiled to share some knowledge of these peoples, their daily lives and ingenuity, along with the environmental and human advances that forced changes to their ways of life, as well as contributions to our present and future lives in this unique homeland.



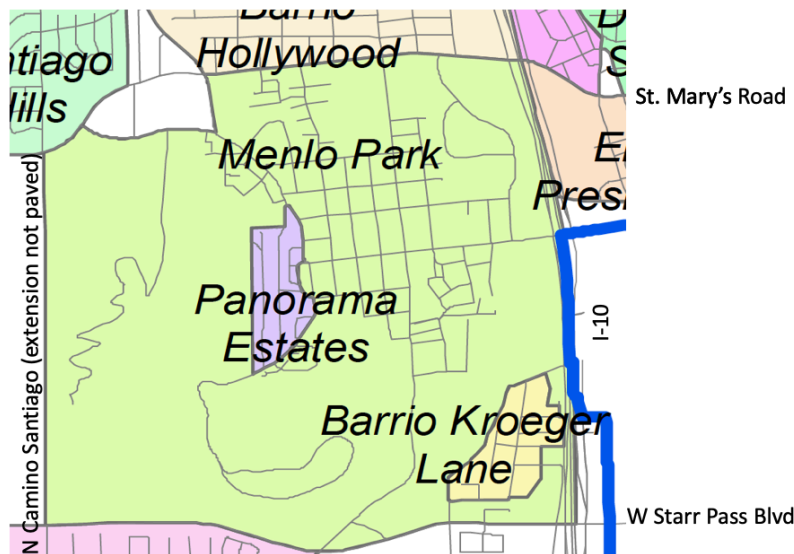
Fig 2. Menlo Park looking southwest. The hill at the top left with the letter “A” and 1920s quarry pit is Sentinel Peak. The larger hill to the right of Sentinel Peak is Tumamoc Hill. The Santa Cruz River serpentine across the bottom of the photograph. ¹

(Photo from Archaeology Southwest Magazine)

This summary of the history of Menlo Park starts with the prehistoric societies based on local archaeologists' exceptional field research. Their work delineates a history of several identifiable indigenous cultures that lived in this location. In recorded time, the San Agustín Mission built at the base of Sentinel Peak established this area as the birthplace of what we now call Tucson, a town which has grown in all directions and continues to develop within Menlo Park. The name Sentinel Peak came from the Spanish name for the landmark hill beside a river, *Picacho del Sentinela*, for its practical advantage as a lookout. Tucsonans have rich recorded histories, available from many sources, illuminating the town's growth from prehistoric roots. Volumes of

valley-wide Tucson history exist. However, this chronicle focuses on the specific history of people and events relating primarily to the geographical area defined by the Menlo Park neighborhood, and the river that enabled continuous human occupation here. As a result, some well-known broader Tucson area historical figures are missing from this geographically dedicated discussion.

Before retreating to ancient history, people often ask where the curious name of Menlo Park originated. Henry E. Schwalen, a pioneer real estate investor in 1905, assigned the name. Schwalen had read about Menlo Park, California, which caught his imagination as an appealing travel destination. But illness forced a lengthy delay for recuperation under the care of the sisters of Saint Mary's Hospital. He settled instead on the west side of the Santa Cruz River where he set about to establish his version of the imagined west coast Menlo Park. More stories about colorful Henry follow in his chapter of this saga of 20th-century development. Thomas Edison's lived in another Menlo Park in New Jersey, also named after the California community. The original name dates to an Irish town, the prior home to its original Californian 1851 settlers.



Map 1. A map illustrating the boundaries of the current Menlo Park neighborhood, shown in light green, bound clockwise by Saint Mary's Road to the north, the I-10 interstate, 22nd Street on the side and the west border of Tumamoc Hill, containing "A" Mountain and Tumamoc Hill. ²
(Photo from Tucson Ward 1 website modified by author)

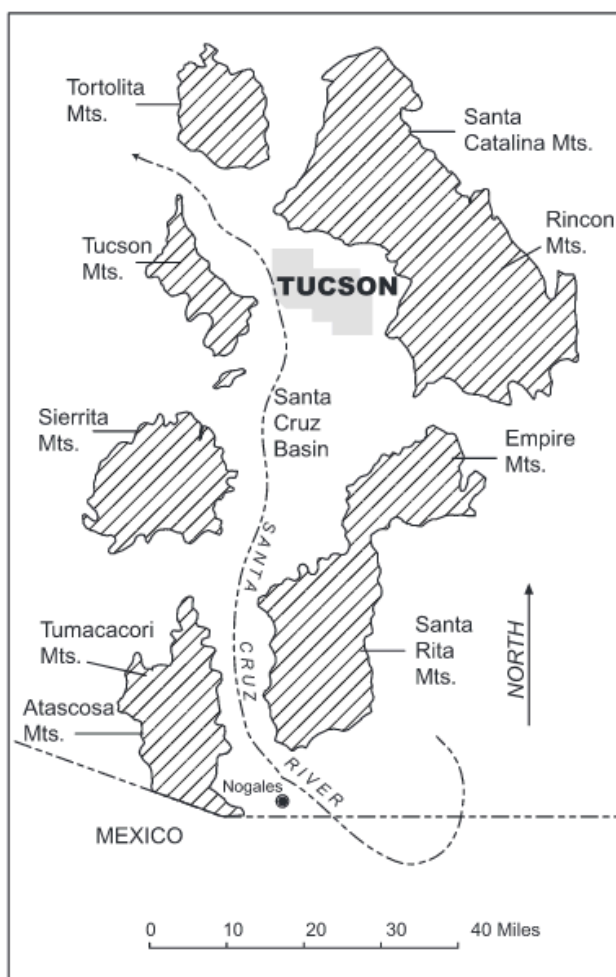
Ancient Times

Prehistoric human communities located at the base of Sentinel Peak left behind fragments of some of the earliest known pottery in the Southwest United States. There is evidence for the longest known consecutively cultivated geographical location in the United States. (An accurate time continuity of early nomadic occupation cannot be proven.) These people also designed and built the earliest irrigation canals found north of central Mexico. All to be found within Menlo Park. This history is well worth noting, celebrating, and sharing, and not only by Tucsonans. This remarkable location is of such historical and cultural significance that it warrants public recognition of its cultural importance even beyond our fair city and state.

Rio Santa Cruz

First and foremost, the unquestioned reason for the extraordinarily long history of near-continuous human occupation in the Menlo Park area is the Santa Cruz River. This river's meandering path over a hundred millennia created lush and fertile alluvial plains made up of sands, clays, and gravels deposited over time by its surrounding mountain watersheds. The Santa Cruz flowed year-round until a century ago. Groundwater over-draught has now reduced the river to a dry bed except during heavy rains falling south of Tucson. The name of the river is believed to have come from a settlement that included indigenous peoples as well as a Spanish army garrison called Santa Cruz.⁴

The Santa Cruz River originates near this lost settlement in the San Rafael Valley southeast of the Santa Rita Mountains near the Mexico border. Its path turns south into Mexico, then north up toward its underground confluence with the Gila River north of Marana. Few places in the prehistoric southwest offered such abundant flood-irrigatable fields, so this broad, lush valley of the Holocene (post-Ice Age) river likely attracted the earliest humans to its banks.



Map 2. Northward Flow of the Santa Cruz River and Surrounding Mountain Ranges⁵

(Photo from Thomas G. McGarvin Geological Survey report)

Archaeological Studies

Spanish explorers and missionaries left us some rare records of their observations about artifacts they found and the peoples that they encountered and lived among.

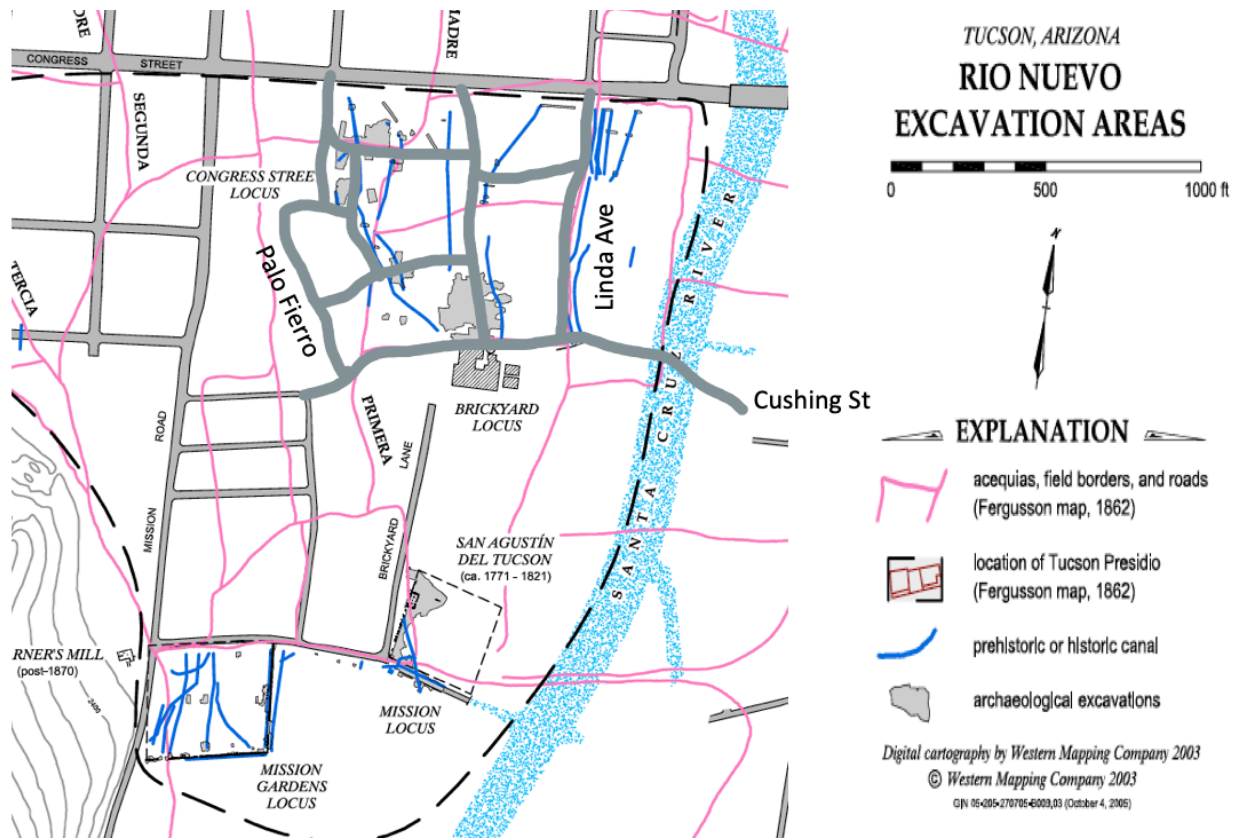
Fortunately, several professional studies have occurred in the Menlo Park area in the last 70 years, primarily in the open spaces south of West Congress Street, providing us with scientific knowledge of ancient cultures. It is only practical to search for archaeological sites and openly excavate them in the undisturbed vacant lands that existed in the south side of the neighborhood, although prehistoric pithouses, canals, and cultural artifacts probably exist under most of Menlo Park. One sampling was reported when some test trenching in 2005 at a parcel located between Alameda Street and Franklin Street west of Grande Avenue resulted in the discovery of numerous Hohokam canals. ³ (pg 90) Large swaths of vacant land on the south end of Menlo Park were likely archeologically rich, however are now obscured by early 20th century agriculture, clay mining for bricks, and large post-World War II landfills. Some areas were spared fortunately.

Between 1949 and 1956, the University of Arizona archeologists began to study an area in Menlo Park that had once been occupied by the Spanish. From earlier documents, they were able to map the location of the Spanish era San Agustín Mission. These maps included the mission walls and a building identified as the *Convento*, (a priest's residence also used as a school and warehouse), and a chapel. The Arizona Historical Society explored the western side of the San Agustín Mission in 1967, exposing a granary and western compound wall foundation. These and other excavations south of Mission Lane yielded no public formal reports, and information regarding artifacts found is currently unknown.

The most comprehensive formal studies were conducted between 2000 and 2003 by Desert Archaeology, Inc. The original Rio Nuevo District, a state-funded reinvestment program established in 1999 by a ballot referendum, contracted with Desert Archaeology, Inc. to perform comprehensive formal studies. This Rio Nuevo Archaeology project had the objective of gathering data needed to mitigate the effects of planned development in downtown areas. The study resulted in a collection of papers compiled into a single 852-page online report. ³ Without this in-depth study, we would have little readily available knowledge of our extraordinary local ancient history. After the completion of the study, all sites were re-buried. Many of the buried discoveries of pit houses and canals are now also covered by homes, businesses, and roads thus preserving the ancient sites for future generations of archaeologists. This 852-page report of data is the basis for most of the pre-history background for this chronicle in a much condensed and hopefully more digestible format.

The author offers appreciation for the community of private Southwestern-US focused archaeology groups based in Tucson. Many individuals have worked with more than one of these organizations. The Appendix modestly attempts to recognize most of these organizations and a few of their diligent contributors.

Area of the 2000-2003 Rio Nuevo Archaeology Project



Map 3. Four loci of archaeological investigation of the Rio Nuevo Archaeology project, 2000 – 2003 in the Menlo Park neighborhood. Collectively these 4 loci are designated the Clearwater Site. (The Clearwater name comes from a 1920's era swimming pool located near the large rock quarry.) Streets named after the project was finished are overlaid on the map.

(Image from the Rio Nuevo 2000-2003 Clearwater Archaeology report and authors notes)

The four loci of the 2000-2003 investigation starting from the north moving to the to south are:

1. The Congress Street Locus is currently under the Mercado District neighborhood. This area contained significant prehistoric canal systems and 4,100-year-old and later pithouses.
2. The 20th century era Brickyard Locus is located approximately below the intersection of Avenida del Convento and Cushing Street. This was the site of a pressed-brick factory started in the 1890s by architect Quintus Monier and operated until 1962. The northside yards of the factory protected a precious resource of ancient pithouses.
3. The west-side remains of the late 1700s San Agustín del Tucson Mission, 80% of which was destroyed before the investigation by the blading of soil for top-cover for a 1950s landfill. This formerly walled area contained the Convento, a chapel, a granary, gravesites, prehistoric pit houses, and Chinese trash pits.
4. The Mission Garden and surrounding area which contained the Spanish-designed but native-built wall foundations, also providing extensive ancient resources.

Overview of Prehistoric Cultures that Lived in the Menlo Park Area

The end of the Ice Age and the beginning of the Holocene occurred about 12,000 years ago. Evidence of increased human migration southward through the Americas appears in this period. About 9,000 years ago, the climate in the Tucson area was wetter and cooler than today. The Santa Cruz provided sheet flooding which resulted in a broad valley of tall grass marshes, or *cieneegas*, supporting riparian vegetation and fauna. The southwest has likely experienced a climate over the last 4,000 years that is like today. Still, the mostly uninterrupted flow of water in the riparian drainages like the Santa Cruz supported near-continuous human habitation. ⁶ Even as late as a century ago, notes written the 1880s by a well-educated Army regular and later schoolmaster, John Springs, claim that large fish and waterfowl were abundant in lakes fed by the Santa Cruz in Tucson. The hunting and fishing available from near-perennial river fed lakes which were rich sources of protein for the locals even at this late date of human history.⁸

The surface water in the Santa Cruz in the Menlo Park area was more dependable than most stretches of the river. A shelf of impermeable Oligocene volcanic rock extends from the base of Sentinel Peak to under the course of the river. The water pushed toward the surface due to this effect that geologists call a “reach.” ⁹ The next nearest reach was located by Bac (San Xavier Mission) due to the similar presence of Martinez Hill on the east side of the river. There is a correlation between these areas of increased probability of surface water and human habitation. ¹⁰

The following table highlights what we now know about the chronology of our Menlo Park predecessors. More details of each era follow with dedicated chapters for each.

Era	Earliest Dates (approximate)	Diet	Points (arrow and dart heads) /Pottery/trade	Habitation
<u>Paleoindian</u>	12,000 B.C.E.	Large game. Points found at woolly mammoth and bison kill sites around Tucson indicated that these earliest hunters moved through this area.	Fluted Clovis, discovered initially north and south of Menlo Park, however cultural artifacts are limited as sites are typically buried deep and not easily found.	Temporary campgrounds used by nomadic groups of hunter gatherers.
<u>Middle Archaic</u>	7,500 B.C.E.	Wild plant gathering and small animals	Darts and atlatls predated arrival of bow and arrow technology.	Little is known as sites are buried in deep alluvial sediments

Table 1. Characteristics and chronology of prehistoric Menlo Park Cultures

Era	Earliest Dates (approximate)	Diet	Points/Pottery/trade	Habitation
<u>Early Agricultural</u> (formerly called Late Archaic) Periods are San Pedro and Cienega	2,100 B.C.E.	Maize domestication with very early canal irrigation. Native mustard, amaranth and mesquite seeds, mesquite pods, and agave hearts were gathered and cooked. Deer and rabbits were hunted.	Cienega, Cortaro, Empire and San Pedro points were common in local excavated sites as well as flakes and tools. Marine shell jewelry indicates trade networks existed.	Small round or oval submerged pithouses with elevated entrances. Large internal storage pits are common. Large round structures were likely used for communal purposes.
<u>Early Ceramic</u> Periods are early and late Agua Caliente	50 C.E.	Cultivated crops included beans, squash, cotton, and agave. Flood plains near the river and improved canals were used.	Widespread use of undecorated ceramic containers began in this period, reducing the need for storage pits. Increased trade of shells, turquoise, and obsidian.	Better constructed more permanent pithouses, and larger communal structures.
<u>Huhugam</u> 9 periods identified	500 C.E.	Maize and agave continued to be mainstays with the discovery of rock wall delineated fields and highly engineered canal systems. A major canal likely connected the river to fields as far as where Saint Mary's Hospital is today. These were maintained for several centuries.	Development of decorated red-on-brown ware ceramics of various shapes intended for multiple purposes. By 1,450 C.E. the Huhugam tradition disappeared from the archaeological record. (Artifacts left by the Huhugam people are described as Hohokam tradition items.)	Pithouses began to be clustered around multiple central courtyards. Ballcourts and mounds were constructed, the closest to Menlo Park were excavated at the nearby Julian Wash Cultural site.

Table 1. (continued) – Characteristics and chronology of prehistoric Menlo Park Cultures

Archaic People

The only Early Archaic (7500-6500 B.C.E.) site known in the Tucson Basin is found in Ruelas Canyon, south of the Tortolita Mountains. However, the Rio Nuevo project excavations revealed Middle Archaic evidence dating between 3500 and 2100 B.C.E. in the Santa Cruz floodplain. The floodplain sites are deeply buried by alluvial sediments, suggesting more of these sites are present, however undiscovered due to the lack of any remaining near-surface evidence of their existence. Other study sites of this period have yielded more complete carbon dating data. These records aided in the dating of a handful of Middle Archaic culture artifacts uncovered in the Clearwater excavations. ³ (pg 496)

Petroglyphic rock art of the Middle Archaic style is abundant on both Sentinel Peak and Tumamoc Hill and is distinctive from other sites in the valley. Art of this period, limited to geometric patterns, did not yet have depictions of humans or animals. Interpretation of all rock art leaves a lot to conjecture, and the meaning of the Middle Archaic patterns is particularly mysterious other than its apparent use for ceremonial instruction. ⁶

Ceramic containers of this period were used to carry water to the tops of these two hills. Dating methods indicate that this culture had been growing maize well before it introduced ceramics. ⁶ The corn grown in this era had hard kernels, like popcorn. It was brought north with Mexico migrations. This early maize was probably not yet structurally useful for grinding into flour.

Clearwater loci pithouses dating back 4,100 years also contained fired clay figurines which place the ceramic artifacts earlier in time than any others found in the Southwest U.S. to date. Ancient grinding stones retained no remnants of organic material. They were likely used to grind hard seeds for food and pigments. Rabbits were the most common game supplementing native plant foods and maize. They were hunted with darts as bows had yet to be introduced into this region. ¹¹ *Atlatls* or spear-throwing sticks, that acted as an extension of the thrower's arm, provided the required velocity of the thrown dart. ¹² Dart or spear points (stone tips) were larger than later bow and arrow points. A replica dart point is seen at the bottom of Fig 4.



Fig 3. Diagram of atlatl components
(Photo from google.com search)

The earliest canals found in the Clearwater locus date back to Middle Archaic culture, 3,500 B.C.E., establishing them as the oldest known north of central Mexico at the time of the investigation. The next section for subsequent occupation periods provides more details about the study of ancient canals. The study of this era's canals and the seeds, pollen, and corn remains from Clearwater sites leads to the assumption that Santa Cruz overbank flooding onto the moisture-retaining clay soils on the upper banks allowed the indigenous proto-agriculturalists to cultivate weedy native plants and eventually corn during the summer months. ³ (pg 780-782) These deeply hidden Archaic excavations start the clock on the claim for near-continuous occupation by farming cultures at the Sentinel Peak riverbank for over four thousand years.

Early Agricultural People

The Rio Nuevo project unearthed two villages dating between 2,000 and 2,100 years ago representing the 'Cienega' period of the Early Agricultural era. They were located near the San Agustín Mission site and under the Brickyard (see Map 1). The Mission locus revealed 124 pit houses, 43 of which were excavated, with details documented in the Rio Nuevo project report.³ An extensive collection of artifacts was found in burial sites and semi-oval pithouses that had interior and exterior storage pits. Artifacts retrieved from the excavations included distinctive Cortaro, Empire, San Pedro, and Cienega projectile points and a range of ground stone and flaked stone tools and ornaments. The presence of marine shell jewelry suggests trade networks existed as far away as the Pacific Ocean and the Gulf of California. Improved agriculture practices increased with the dependence on maize, while gathered wild plants, amaranth seeds, mesquite seeds, and pods, and agave hearts supplemented their diet. Hunting technology advanced to allow adding small deer as a protein source.³ (pg 89) Beans, squash and cotton arrived later in this period.



Fig 4. Replica Points made by Allen Denoyer of Archaeology Southwest
(Image from Archaeology Southwest Magazine, Tucson Underground)

Pit houses of this period had floors that were dug a few feet below ground level. The builder dug a ring of post holes, presumably with wooden digging sticks and fitted the holes with driftwood posts salvaged from the river nearby. The desired length of the posts could have been adjusted by burning away the excess pole length rather than by cutting. It is not clear whether the roofs were formed by bending smaller sticks or with cross beams. The larger structures suggest the use of cross beams. Grass and layers of clay covered the house. It is not uncommon to find a second ring of post holes, presumably needed for reinforcement of the structure over its time of use. At abandonment, the homes were burned to the ground. It is unclear what the purpose of intentional burning may have been. Some were assumed to have burned down while still in use due to the number of artifacts found inside. Accidental burnings may have occurred with coals brought into

the house for heat or cooking. These riverside pithouse sites are typically buried under several feet of alluvial sediment, leaving no surface clues to their presence. As soil is stripped down in layers, a layer of burned dome material is an indication to archaeologists that the foundation of a pit house may exist below. Archaeology Southwest Inc. archaeologists recently re-created the construction of pithouses and then set them afire as an experiment to test whether burning down a pithouse today provides a similar footprint to those abandoned a few thousand years ago.¹³ Utility trenching teams might be the first to see evidence of ancient habitation. Archaeologists can also use trenching to locate concentrations of ancient sites. Where a pit house is suspected, a front loader bucket with a sharp blade would scrape the surface away until the burnt remains of the house's collapsed dome are exposed. From there, the site can be manually uncovered with care.^{3 (pg 75)} Some organic post base material can survive in the post holes from this era, unlike the earlier Middle Archaic. This wood often has been successfully radiocarbon dated to assist in estimating its age.^{3 (pg 109)}



Fig 5. Construction of pit house. Artwork by Robert B. Ciaccio of Archaeology SW, Tucson Underground¹⁴

(Image from Archaeology Southwest Magazine, Tucson Underground)

Rim sherds indicate that the earliest local ceramics were mostly palm-sized bowls and cups, possibly for ceremonial saguaro wine and herbal teas. Local herbs identified by pollen collected at the strata of these houses include tobacco, datura (hallucinogenic), creosote bush, globemallow, Mormon tea, morning glory, pigweed, sage, sumac, and tansy mustard. Alternatively, such small vessels possibly could have been used to hold food, ceremonial drink, flowers or even to transport burning coals.^{3 (pg 389)} Pottery from this age lacked temper, making it more difficult to date the sherds.^{3 (pg 382)} Temper helps a pot survive the firing process, resist cracking and limit breakage throughout the life of the vessel. The most common prehistoric temper types are sand, limestone, shell, and crushed potsherds. (Sherds within sherds.)

Excavations in the San Agustín Mission and the Congress Street loci exposed 14 canals built during the Cienega period of the Early Agricultural era. These canals were also often littered with stone flakes, ground stone, animal bones, charcoal, and ceramics consistent with the culture that built the canals. The identification of ostracods, a flat 1mm freshwater 'seed' shrimp, is commonly used by biogeologists as a bio-stratification tool for determining dates, duration of use, and water

chemistry that flowed in ancient canals. When a prehistoric canal is crosscut by trenching, the floor and walls of the canal are not apparent to the untrained eye. These canals were not lined; so, experts look for a change in soil colors resulting from sediments of the irrigation flows or from subsequent floods that buried the canals in differentiating sediment. Once a canal is located by cross-cutting, archaeologists can follow its course by horizontal excavation. The archaeologists that studied the San Agustín Mission locus Cienega phase canals believe that they were opportunistically used canals for diverting floodwaters from the river during high water stages. Later occupying peoples constructed canals to divert the perennial flow of the river. ^{3 (pg 660-665)}

Occupants of Clearwater valued obsidian volcanic glass, starting with the Cienega period and continuing with all subsequent cultures up to and including the Spanish settlers. Flakes from obsidian are as sharp as surgical blades. Obsidian does not naturally occur in the Tucson basin. UC Berkeley scientists generated a catalog of obsidian sources in the Southwest using x-ray spectrometry to identify location-specific trace elements from the various natural sources of obsidian. The Cienega phase obsidian found in the Rio Nuevo project includes those brought from Los Vidrios (Pinacate volcanos, Sonora), the Tank Mountains (in today's Yuma military training grounds), and Government Mountain (San Francisco volcanic range, northern Arizona). ³⁴ Los Vidrios obsidian may have been gathered on expeditions to the Gulf of California for marine shells. Shells from this closest seawater source were used to make jewelry found at many Cienega phase sites. ^{3 (pg 740)} The Gulf of California was a long, hot, dry, and physically demanding walk across the Gran Desierto. Ancient people and even modern O'odham were able to traverse this inhospitable desert by knowing the location of water holes, *tinajas*, protected in narrow canyons. ⁷

Later date Hohokam obsidian artifacts were determined to have come from the Saucedo Mountains (halfway to Yuma), the mountains around Superior, and the Blue River (Gila Wilderness). Spanish period obsidian came from Los Vidrios, the Tank Mountains, Burro Creek (Kingman, AZ), and Mule Creek (Gila Wilderness). ^{23 (pg 743-5)} Our predecessors in Menlo Park either traveled far or exchanged with traders from distant reaches of the Southwest for this precious natural glass. ¹⁵

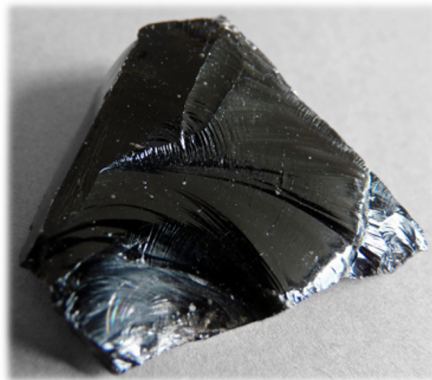


Fig 6. Example of a raw piece of obsidian glass
(Photos from Wikipedia.com)

Human burials from this Early Agricultural period were fit into small oval pits with the deceased placed in tightly flexed positions.^{3 (pg 519)} Archaeologists found evidence of red ochre and oddly large versions of mortars and *metate* broken at the time of burial and placed over the remains. These burials usually lacked personal ornaments except for one infant found buried with beads shaped like animal claws and a juvenile with a shell necklace. Graves of this era showed no evidence of cremation, and none of the excavated burial sites contained ceramics.

Several local tribes claim affinity with the Hohokam and Archaic traditions. The Tohono O’Odham Nation was the lead claimant to any discovered burial contents. They represented the other indigenous groups when remains were uncovered. Bioarcheologists conducted burial excavations. They performed all investigations in-field to minimize disturbance of remains; however, some remains were uncovered by utility trenching. Following analysis, all human remains and associated burial items are repatriated to the Tohono O’Odham Nation.^{3 (pg 747)} Of the Early Agricultural periods, 2 graves were found in the San Agustín del Tucson Mission loci, 3 in the Mission Garden, 4 in the Congress Street locus, and 5 in the Brickyard locus. Ages ranged from around 6 months to possibly one as old as 50 years. However accurate aging is difficult to determine. Chipped molars suggest hard food or food with hard inclusions was eaten, and possibly teeth were used as tools for various tasks.^{3 (pg 752)}



Fig 7. Verlon Jose, Vice-Chair of the Tohono O’Odham Nation, blesses the ancient fields at the Sunset Road archaeology site. The Tohono O’Odham and local archaeological groups work closely during cultural excavations. Whenever studies uncover aboriginal graves, funerary, and sacred objects, they are repatriated to the Nation with the minimum disturbance to the objects found.

(Photo from Archaeology Southwest Magazine, Tucson Underground)



One of several bedrock mortars holes at the base of the Sentinel Peak quarry (Author’s photo)

Early Ceramic period

Ten Early Ceramic era pit houses, dating 1,900-1,500 years ago, were found in the San Agustín Mission locus and the Brickyard loci. A significant increase in size may indicate that some structures served communal or ceremonial purposes. Architectural features became more substantial, perhaps as an indication of more permanent settlements.^{3 (pg 87)} Pit houses of this era are less common elsewhere in the Tucson Basin.

The first widespread use of ceramics marks the transition from the Early Agricultural to the Early Ceramic era. Undecorated plain-ware pottery was widely used in the Tucson Basin by about C.E. 50, marking the start of the Agua Caliente phase (50-500 C.E.). Large well-crafted fired pots were likely a significant development for the storage of grains, and this probable usage is supported by a scarcity of storage pits in the Early Ceramic houses.^{3 (pg 614)} Several sherds from a large vessel were found in one small pit.

An abundance of stone grinding artifacts, 2/3 of which were broken, were found for this era. Many still contained pigment from minerals ground for coloration of bodies or vessels; hematite (for red ochre) and limonite (for yellow to brown dyes). Investigators also found fragments of mica and turquoise.^{3 (pg 483)} An improved species of 'floury' maize appeared. As in improvements for house building techniques, the irrigation canals identified as Agua Caliente phase were thought capable of extending farther away from the river.

Shell bracelets account for nearly 90 percent of the finished shell artifacts associated with the Ceramic period. Artisans hallowed out the center disk of *Glycymeris*, a white flat clamshell found in the Gulf of California, leaving the perimeter as a bracelet.^{3 (pg 507-519)}



Fig 8. An example of 1) *Glycymeris maculate* shell. *Glycymeris gigantea* were used by native people of this era, however today gigantea is rarely found in the ancient gathering grounds 2) *Glycymeris* shell bracelet¹⁶
(These examples are not from Clearwater excavations.)

(Photos from Wikipedia.com)



Fig 9. Clearwater archaeologists uncovered several thousand animal bone fragments, seven of which were carved into game pieces, perhaps for betting. The markings seem to indicate numerical values. Unfortunately, too few marked pieces were found to decipher a counting system.¹⁷

(Photo from Archaeology Southwest Magazine, Tucson Underground)

Huhugam Occupation

Huhugam is the O’Odham name for the people that arrived at the base of Sentinel Peak and began farming about 1,250 years ago. Hohokam refers to the *archaeological tradition* that comprises the material items, structures, and artwork that were left by these people on the landscape. This local society are believed to have migrated from the Phoenix area. Generations of researchers have discovered Hohokam settlements throughout Southwestern Arizona and elsewhere in the Tucson Basin. However, it was primarily in the Clearwater loci where the Huhugam left evidence of being master canal builders. They were the first of the cultures to design canal headgates at the Santa Cruz River. The use of headgates was a significant advancement for farming. Rather than capture occasional floodwaters that came over the river’s soil embankments, water was now made available to the fields and villages for more continuous use.^{3 (pg 665)} An extensive canal uncovered under the Mission Garden running diagonally from southeast to northwest extended far from the river. Its cross-sectional area was greater than 2 square yards and may have been capable of diverting the entire flow of the river between highwater flood conditions. This canal could have supplied water to fields near today’s Saint Mary’s Hospital.^{3 (pg 50, 58)} The size and depth of the Hohokam canals represented significant investments of organized labor and required specialized stone tools for digging. These canals were maintained for centuries, indicating a highly stable society.^{3 (pg 660)}



Fig 10. Depiction of a Huhugam farmer attending to canals in a maize field. Artwork by Robert B. Ciaccio of Archaeology SW, Tucson Underground ¹⁴ (Image from Archaeology Southwest Magazine, Tucson Underground)

Archaeologists also investigated large canals from the Huhugam era just south of Congress Street where residential development occurred shortly after the Rio Nuevo project. They theorize that the varying density of dwellings imply the residential Hohokam villages were located north of Sentinel Peak, while farmers tending fields and canals used less numerous structures found near the river. More Hohokam houses and artifacts were found during the same 2000-2003 Rio Nuevo project's excavation near the Presidio in the downtown area, indicating that the Huhugam culture was broadly distributed on both sides of the river.



Fig 11. A crosscut exposure of a Hohokam canal from the 2000-2003 San Agustín Mission project. Darker soil indicates where flood sediment filled the canal. ³ (pg 282)

(Image from the Rio Nuevo 2000-2003 Clearwater Archaeology report)

A bell-shaped pit, a hearth, 8 cremations and burials, 2 caches of stone hoes, and 2 pit houses also verify Huhugam presence within the Mission Garden site. The human remains were repatriated to the Tohono O’Odham Nation. The Mission Garden area was a reliable and renewable location for centuries of agriculture after the Huhugam, and likely a significant number of Hohokam artifacts have been lost to Spanish and post-Spanish era cultivation of the fields in this location.^{2 pg 56)} More notably, based on reports from the 1940s, the area south of the Mission Garden still contained significant surface Hohokam artifacts, now lost to the 1950s landfill located on the site.^{2 pg 89)}

Underneath the Brickyard foundation, 3 additional pit-houses, 8 canals sections, and 1 burial site from the Huhugam era were located to add to the project inventory.

Because technology and societal advancement were so profound within the Huhugam ‘era’, it is divided into 4 periods of approximately two centuries each:

Pioneer	500 – 750 C.E.
Colonial	750 – 950 C.E.
Sedentary	950 -1150 C.E.
Classic	1150 – 1450 C.E.

For perspective, the length of each of these periods is approximately equal to the timeline of the United States of America progression. Each period is divided by archaeologists into 2 or 3 phases to further delineate social and technological advancements.^{3 (pg 86)}

The full story of these four periods would fill volumes, all with their own evolving cultural attributes. Tucson archaeologists often specialize for their entire careers on one single period. Following are only a few advancements attributed to the Huhugam occupation.

New funerary practices appeared in the Huhugam era and changed throughout the 4 periods. Over time cremation of human remains replaced burials. Cremation pits often contained unique artifacts associated with death rituals such as clay and wood figurines.^{3 (pg 453)}

Crops grown by the Huhugam included wild corn, squash, tepary beans, native cotton, devil’s claw, panic grass, amaranth, tobacco, and agave. All were drought tolerant. These plants could be grown in washes often with the only source of water being the occasional rains. Most of these crops were later adopted by the O’Odham.⁸¹

Huhugam artisans embellished pottery with highly distinctive geometric figures and life forms of birds, humans, and reptiles. The base structure of the local vessels is “red-on-brown”, and evidence of these locally crafted pots has been found, due to trade, throughout the Tucson Basin. The vessels were made in many sizes for specific purposes. Polishing stones were used to achieve a glossy surface. It is conceivable that the skill in the firing and painting of the pottery led to specialization and even early commerce within the society that lived in the Menlo Park area.^{3 (pg 88)} Hohokam bowls of the Pioneer period also exhibited subdivided patterns, possibly based on cosmological beliefs.^{3 (pg 389)}



Fig 12. Hohokam pottery sherds found in the plow-zone within the Mission Garden ³ (pg 56)

(Photo from the Rio Nuevo 2000-2003 Clearwater Archaeology report)



Fig 13. Hohokam petroglyphs from the summit of Tumamoc Hill ¹⁸

(Photo from University of Arizona Tumamoc Hill Geodatabase report)

The most dramatic changes occurred in the Classic period. Adobe above-ground structures, large ceremonial earthen platform mounds, and ball courts were constructed. No above-ground buildings were located within the agrarian Clearwater loci. Classic period pit-houses remained in use in this farming location. 2 ball-courts have been located to the south at the present confluence of the Julian Wash with the Santa Cruz River.

Based on Clearwater loci and surrounding studies, the archaeologists report another indication of the evolving social structure of the Huhugam. Pit-houses were now clustered into formalized courtyard groups and organized into more significant village divisions, each with their own cooking area and cemetery.

Historic Era of Menlo Park

It is convenient to discuss more recent history of the Menlo Park area by outlining the distinct time periods, below:

Period	Dates	Culture	Language	Architecture
Proto History	1450	People known as Sobaipuri occupied the Menlo Park area.	spoke Pimian language.	Adobe covered oval jacal surface houses rather than pithouses
Spanish	1539	It is believed that the explorer Marcos de Niza passed through Tucson as he followed the Santa Cruz, encountering the indigenous peoples living by the river. In 1694 Father Kino was the earliest missionary to encounter the Sobaipuri village that was called " <i>Chuk Son</i> ". By the 1780s Spanish colonists started to arrive and established farms on the banks of the Santa Cruz. They also raised cattle and mined the surrounding hills.	Pimian and Spanish	In 1770 Juan Bautista de Anza arrived at this village to start construction of the San Agustín Mission. By 1793 a Convento (common building and school) and chapel was completed. The walled gardens allowed cultivation of corn, vegetables, wheat, and fruit. By 1831 the San Agustín Mission was abandoned.
Mexican	1821	Mexico gained independence from Spain. The local settlers continued to farm and ranch, under the Mexican flag.	Spanish	The Presidio on the east side of the river was now used for protection from Apache raiders. Farmers built adobe homes in the farms and ranches on the west side of the river.

Table 2. Characteristics of Historic Menlo Park Communities

Period	Dates	Culture	Language	Architecture
American Territorial	1865	The Mexican American War began in 1846 and the U.S. eventually claimed much of the Southwest. The Gadsden Purchase of 1854 transferred ownership of Tucson to the United States of America territories. Tucson became the territorial capital in 1867. In 1880 the Southern Pacific Railroad reached Tucson resulting in the arrival of Anglo-American settlers.	Spanish, Chinese and English	The US Army established their primary post at Fort Lowell in 1873 in their campaign to control the Apache. In Tucson, adobe was the primary building material. Saint Mary's Hospital opened to serve railroad workers and later became a mecca for TB sufferers. Tucson population was 7,000. In 1903 Carnegie established the Desert Laboratory on Tumamoc Hill.
Arizona Statehood	1912	The state's name is believed to derive from the O'Odham word <i>alī ṣonak</i> meaning small spring. Arizona became the 48th state.	Spanish, English	Eastern traditional designs and imported materials replace adobe for new construction.

Table 2. (continued) - Characteristics of Historic Menlo Park Communities

Proto History

Little historical record exists for the culture that continued to farm the banks of the Santa Cruz for the two centuries between the departure of the Huhugam and the arrival of the Spanish. This window of local culture is called the proto-history period. What is known is based on oral history, and the notes of the first Spanish historians to arrive in Southern Arizona.

Spanish explorer Marcos de Niza encountered Sobaipuri groups when he traveled north along the San Pedro River Valley in 1539. Sobaipuri is considered one of the earliest known pre-O'Odham indigenous cultures. Some research points to the possibility that the Sobaipuri date back to the fourteenth century which places them within the time frame of the Huhugam.¹⁹

According to oral accounts and other investigations near Bac, the Sobaipuri lived in oval adobe-style huts rather than pithouses. Like pithouses, the framework of the 'jacal' houses were constructed of wood poles, with adobe daubing on the exterior surface.

Sobaipuri pottery was often fired with casts of burned-out organic temper, had medium-to-thick vessel walls, and rim coils which were folded from the neck of the vessel for a distinctive top band. Sobaipuri potsherds were found in the Clearwater project. Temper included sand and/or crushed sherds, called grog. Dating by style and material is uncertain as Tohono O'Odham potters also made vessels exhibiting these attributes.

Tohono O'Odham Local History

The Tohono O'Odham lived in the Menlo Park and San Xavier Mission areas along the Santa Cruz for centuries and still claim these locations as part of their cultural heritage. The preferred spelling by the O'Odham is with two capitalized "O"s. The majority of Tohono O'Odham people currently reside on their sovereign nation lands primarily east of Tucson. Their nation crosses three Arizona counties and an international boundary. The Tohono O'Odham continue to stridently defend independence in their own governance and have United States Supreme Court decisions that clearly provide them with claims to the Santa Cruz water rights.

The genetic connection of the Huhugam and various O'Odham tribes has not been established scientifically, still, current-day O'Odham respect and honor the Huhugam as their predecessors and ancestors.¹⁹

A continuity of historic Tohono O'Odham crops exist from prior cultures including desert-hardy corn, squash, tepary beans, agave, and amaranth. Once the Spanish arrived, the O'Odham were introduced to winter crops: *i'ittoi* onion, pea, and winter white wheat. Later they added watermelon, sorghum, honeydew, barley, and wild greens to their fields.⁸¹ On their desert lands they hunted pronghorn antelope, gathered hornworm larvae, and trapped pack rats for sources of protein.¹⁰

Tohono O'Odham sherds found in the San Agustín Mission area was often so small that they were hard to identify as having specific functions.^{3 (pg 441)} The shallow soil where these late age relics are found has been disturbed by early 1900 plowing. The function of local pottery vessels could be correlated to less damaged pottery from nearby archaeological sites. The traditional functions of food storage and water transportation are assumed to have been an important use for their pottery. Below is a cup retrieved from the same 2000-2003 project that also included the excavation of the Presidio downtown. Tucson's Spanish, Mexican, and American residents up to the 1880 arrival of the railroad made extensive use of water and food storage, cooking, and serving vessels produced by O'Odham potters.^{3 (pg 439)}



Fig 14. O'Odham Black-on-red Cup recovered from the Presidio excavation^{3 (pg 411)}

(Photo from Archaeology Southwest Magazine, Tucson Underground)

Spanish Period

Between 1535 and 1604 Spanish explorers such as Cabeza de Vaca and his companion Estebanico, a Moroccan slave, and later Marcos de Niza, and Francisco Vázquez de Coronado traveled north from Sonora on separate explorations of today's southwestern United States. They may have been the first Europeans to see the Northern Piman Indian agrarian settlements including those near Tucson.¹⁹ While the Spaniards often made a note of their encounters with indigenous peoples, the Piman speakers at Sentinel Peak probably would have been of little interest to them. The earliest explorers' main objective was not only to locate indigenous peoples but also liberate from them any treasuries of precious metal. The first missionary to see this area, as far as anyone knows, was Father Eusebio Kino, a Jesuit priest also from Spain.

Piman is one of four languages spoken by native people of the O'odham group that extended across northern Sonora from the 15th to 19th centuries. Sobaipuri is one sub-group of that period. Modern people that identify with this ancestral Piman culture include those of the Tohono O'odham Nation (residents of San Xavier del Bac and lands west of Tucson to the Ajo Mountains and, extending south into Mexico). Also, the Akimel O'odham (formerly identified as the Pima, whose Gila River Indian Reservation is located south of Phoenix.)¹⁹ Some references associate the Akimel as agrarian communities living near water and the Tohono as semi-nomadic desert and mountain dwellers, although Tohono peoples did originally live along the Santa Cruz River.⁷⁸ A portion of the Tohono O'odham reservation includes the 111 square miles that surrounds the San Xavier Mission.

Kino probably first passed by the village of *Chuk Son*, a Sobaipuri community at the base of the 'Black Mountain', our Sentinel Peak or "A" Mountain, in November 1694. The purpose of his travel on that journey was to explore the northern reach of the Santa Cruz River from his base at another Sobaipuri community, Bac (the future location of Kino's San Xavier del Bac Mission). Bac was located about 12 miles to the south of the current Menlo Park neighborhood across the Santa Cruz River from Martinez Hill. No notes written by Father Kino have been found relating to his first encounter with this peaceful Sobaipuri settlement. In those times, cottonwoods shaded most of the river path from Bac to near the Gila River confluence, a pleasant day's travel on horseback.²⁰

In September 1698, Father Kino and his military escort leader, Captain Diego Carrasco, made the first known written references to Tucson. Like other communities or landmarks that he considered worthy of recording, he assigned a saint's name to this village, "San Cosme del Tucson". The origin of the Spanish assigned name 'Tucson' derived from the Sobaipuri village name *Chuk Son*. The translation of *Chuk Son* is believed to mean the spring at the base of the Black Mountain (Sentinel Peak). Kino greeted the people of Tucson again on March 7, 1699. At that time Lieutenant Juan Matheo Manje, his military escort on this journey, noted passing "four settlements one league apart" between Bac and Oiaur (a broadly spread-out village to the north of Sentinel Peak between the foot of Tumamoc and where the Miracle Mile overpass is today). Kino again visited the area of Menlo Park on November 1, 1699, this time with his superior, Father Visitor Antonio Leal, to show him the place he called San Cosme del Tucson. After laying the stone

foundations of the first Christian church north of Sonora in Bac on April 30, 1700, he traveled to Oiaur and on his return the same day he stopped to baptize 6 children in Tucson. ²¹ San Xavier Mission was the first Spanish mission to be built within the current boundaries of the United States.

This Tucson village (Menlo Park today) likely represented the typical settlement pattern of a *rancheria*, where people lived near the river in tall brush and barely within sight of one another. Kino wrote that the area had “splendid fields” which were like the ones at Bac. Both Bac and Tucson had equivalent size Sobaipuri populations, a little under 1,000 each at the time. Father Kino was clearly an extraordinary man, fearless and blessed with boundless energy and curiosity. He treated the Sobaipuri kindly, certainly more so than the missionaries that would arrive later. He deserves his legendary reputation as the first European visitor to have spent time in the Tucson area and to befriend the Sobaipuri. Kino, the gentle priest, is also honored in a dozen townships to the south of Tucson upon which he also bestowed the names of saints. ²⁰

When Eusebio F. Kino wrote to the viceroy of New Spain in 1703 urging appropriation of funds for ten more missionaries for Upper Pimería, he did not mention Tucson. Bac was the primary focus of Kino’s final decade of work in Arizona. Father Kino died in Magdalena, Mexico in 1711. He had opened the way for later mission expansion. Meanwhile, all remained quiet in Tucson for several decades.

German Jesuit Father Bernhard Middendorf was in residence at San Ignacio de Sonoitac (near present-day Patagonia) when that *visita*, or ‘visiting mission’, was abandoned. Under orders from Governor Mendoza, Father Middendorf gathered up the ecclesiastical possessions at San Ignacio and set out for Tucson, a newly designated *visita*; a mission deemed in need of a resident priest. ²² He is the only Jesuit priest to have spent time in Tucson, arriving briefly in late spring, 1757. Middendorf enticed approximately 70 families to his planned San Agustín Mission with gifts of dried meat, wild fruits, and birds' eggs. Middendorf slept under the stars until he was able to construct a simple hut, probably not too different in design from local dwellings that preceded him. He conducted Mass under a typical Mexican style *ramada*. Middendorf had a distinct disadvantage toward the advancing of his mission as he had not taken the time to learn the Piman language during his stay at the southern missions. He was stunned to have been attacked by hundreds of rebellious Piman parishioners in the fall of that year. With only 10 escort soldiers, the riot forced him to retreat to Bac. ²¹

Novels, movies, and legends have romanticized the relationship between the Spanish foreigners and the indigenous people that they met. The newcomers attempted to exercise their spiritual calling with the objective of civilizing the native populations. With less pious intent, the Spanish royalty often saw missionary work as a path to financial gain, even to the point of imposing servitude as part of the new subjects’ religious education. The early priests observed that the Native Americans did not practice long-term monogamous sexual relationships. They drank, possibly in excess, an alcoholic cactus juice, particularly in the summer rain celebrations. Although they did not appear to have a religion, they held on to what the missionaries called an endless list of magical beliefs. This behavior naturally was seen as un-Christian, and the men of the cloth hoped conversion would save their souls and improve the well-being of their adopted people. Records left by the Spanish indicated that the Sobaipuri were peaceful in nature. Frustration was expressed as they also were described as “impassive in everything”, at least as judged by the decidedly more

motivated Jesuits and Franciscans with their Euro-centric education and ardent goals of expanding religious belief to the New World.

In 1757 Mexican Army Captain Francisco Elias Gonzales persuaded several hundred Sobaipuris to relocate from their aboriginal home in the San Pedro Valley to the Santa Cruz valley, with a majority arriving at Tucson. This action was to protect the Sobaipuris from the increasingly aggressive Apache. The Apache had been forced west from their plain's territory by the even more aggressive Comanche warriors, that had mastered bareback riding Spanish horses. This consolidation of Sobaipuris aided the Spanish military-effort by shrinking the territory they needed to defend from Apache depredations. Even with the increased number of new members of the local community, diseases including measles and smallpox continued to reduce the overall regional population of all indigenous tribes.

A complication in the Spanish New World expansion occurred in 1767 when King Charles III ordered the expulsion of the Jesuits from the Americas and introduced as their replacement the Franciscans. The Jesuit's missionary philosophy was to provide materially for the indigenous people and to discipline them as children to bring them into the Christian fold. The natural outcome of this goal, along with the mandate for more efficient crop production and increased trade, led to maintaining a state of near enslavement of their flock. In contrast, Franciscans thought that it was best to allow the Native Americans to become independent tax-paying subjects of the crown. In theory, even the Apache would see the error of their ways and conform. This was the age of the Spanish Enlightenment. Therefore, the previous Jesuits' methods had to go.²¹

In 1770, under the direction of the great future explorer and politician Juan Bautista de Anza, the citizens of Tucson were directed to start the construction of a protective walled area in Tucson to defend against the relentless Apache raiders. The Spanish wished to gather the increasingly scattered Piman settlers who had been moving northward to avoid both Spanish rule and Apache attacks. Those that were recruited were relocated to Tucson. The new walled area later christened the San Agustín del Tucson Mission was the first major European-style construction in Tucson. The Mission was located just north and east of today's reconstructed Mission Garden. The first dwelling the Native Americans built was for the Spanish Franciscan Friar, Francisco Garcés. In 1772 construction of a central chapel was started within the Mission grounds. Since there were no large timbers available locally for construction purposes, the adobe building used many interior pillars to support roof *vigas* or pole-style beams. The chapel was completed in 1793. The construction of a two-story convento followed, as well as the protective Mission walls.

Later a granary, kitchen, and other buildings were added inside the Mission walls. Outside the Mission, the walls of a protected garden were constructed. All the labor was conscripted from the locals. The Convento served as the residence of the priest. This two-story building was believed to have also served as a school for the local indigenous people. Many regional citizens were attracted to the area by the new buildings. The relative safety provided within the walls of San Agustín Mission and the availability of Spanish products were both novel and valued. Surrounding the Mission, Spanish and Native American farmers grew corn, wheat, and vegetables, and cultivated fruit orchards within the impressive walled garden.²¹

Over time the pressure from the Apache increased. The military decided that the San Agustín Mission offered inadequate protection, so in 1775, the site for the Presidio of Tucson was selected on the eastern higher elevation flanks of the Santa Cruz River, currently in today's downtown Tucson. In 1776, as the American Declaration of Independence was being adopted, Spanish soldiers from the older presidio at Tubac moved north to help with the construction of the new defensive fortress and some residential structures within the new presidio. The Presidio de Tucson came under three significant attacks by the Apache between 1779 and 1782. Although the San Agustín Mission area was no longer useful for protection against attack, it was still relevant as the center of agriculture. Spanish settlers continued to migrate north to Tucson to claim a share of the lush riverside, to mine building materials from the nearby hills and cut wood from the mesquite bosques to south of today's Menlo Park.²¹

A fitting summary of the Spanish period is found in Luis Alberto Urrea's *The Devil's Highway*:

“When the white man came, they brought with them their mania for record keeping. They made their way across the land, subduing indigenous tribes, civilizing the frontier. Missionaries brought the gentle word of the Lamb. Cavalrymen bravely tamed the badlands, built military outposts, settlements, ranches, and towns. Cowboys rode the wind.”

Who was Saint Augustine? Augustine of Hippo (354 – 430) was a Roman African, early Christian theologian, and philosopher from Numidia (Tunisia) whose writings influenced the development of Western Christianity and Western philosophy and eventually inspired the leaders of the Protestant Reformation. His feast day is 28 August, the day on which he died. He is considered the patron saint of brewers, printers, theologians, sore eyes, and several cities and dioceses. One of Augustine's many quotes: “The world is a book. Those that do not travel have read only one page.”



The San Agustín del Tucson Mission – computer simulation
Image from Archaeology Southwest, Preservation Archaeology Blog “Tucson: Ancient, Historic, and Modern”

Construction of the San Agustín Mission

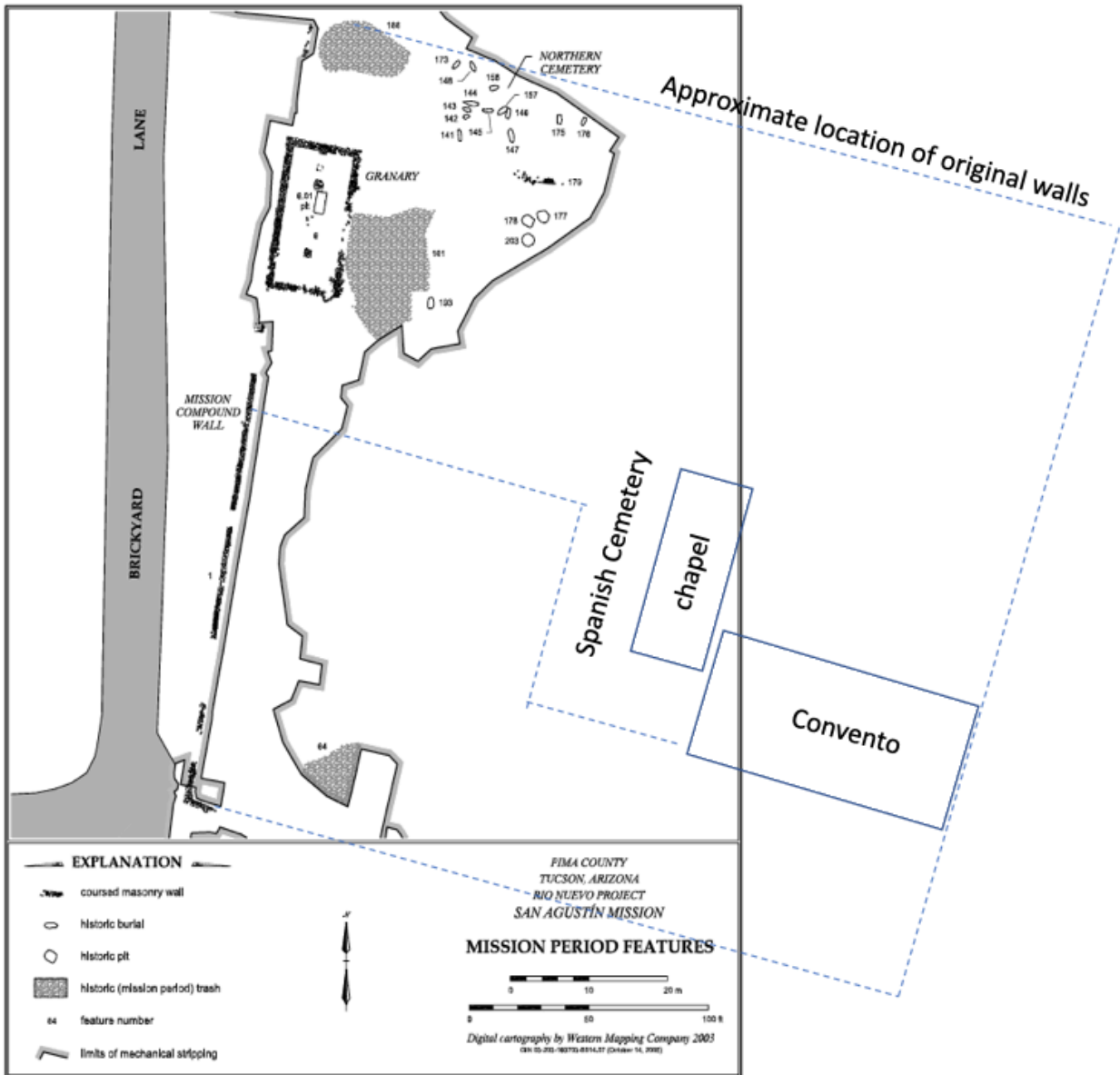
In a 1967 Arizona Historical Society study, the foundations of the Granary and the western part of the San Agustín Mission walls were located. Extensive details of the wall construction and adjacent pithouses were recorded at that time. A map of the later 2000-2003 Rio Nuevo San Agustín Mission area excavations is shown on the next page.

The location of the Convento and Chapel were known from earlier photographs. Only the 95-meter length of the western section of the San Agustín Mission wall and Granary intact foundations remain buried today. As a result of operations for a 1950s landfill, earthmover blading for fill destroyed the eastern 80% of the Mission foundations. At the time of the 1967 evaluation, only portions of the wall were visible at the surface. Much foundation damage had occurred. A century's worth of debris covered the area. The old foundation rocks came from the foothills of Sentinel Peak. The foundations were exposed by the archaeologists with the removal of soil on either side of the foundations. The rock foundations of the San Agustín Mission Granary were exposed and at least 5 central column bases were located. Afterward, the foundations were covered back over with the soil originally removed for the study. Based on the historical data of the Mission location, the original mission wall and Convento perimeters were marked by students using landscaping rocks sitting atop the ground.³ These boundary markers corresponding to the dotted lines on Map 3, surprisingly remained undisturbed for about 50 years until they were removed for a construction equipment roadway for the Caterpillar Headquarters project. The contractor replaced the rocks marking the San Agustín Mission area after completing the project and removing their heavy equipment. The walls boundary rocks are often obscured by weeds. When they are fully visible, the size of the original Mission walls is impressive. The future plans for this plot of historic land remains unknown.



Fig 15. The foundation of the Mission Granary

(Photo from the Rio Nuevo 2000-2003 Clearwater Archaeology report)



Map 4. The 2001 excavation features of the remaining section of the San Agustín Mission wall, the Granary, and an adjacent prehistoric cemetery. ³ (pg 134) The area within the shadowed lines indicate ground that was not disturbed by landfill operations. Appended to this map are estimated locations of the now missing foundations of mission walls and buildings, indicated by dotted lines. ³ (pg 771) The shapes and locations are approximate. Landscape stones currently identify more precise boundaries and are worth visiting to gain an appreciation of the size of the Mission, approximately 2 football fields in area. The location of the San Agustín Mission site can be seen in Map 2 on page 7.

(Image from the Rio Nuevo 2000-2003 Clearwater Archaeology report and authors notes)

Mission Garden Walls

During the 2000-2003 Rio Nuevo study by Desert Archaeology Inc., investigators located most of the foundations of the original Mission Garden walls. These survived the landfill operations. See the map on page 7 for the location of this site. The original foundations were nearly a yard wide and measured about 5 rocks width at the lowest level. Three courses of foundation rock remained in most areas. In the place of mortar, which was not available at this time, smaller stones and clay filled gaps in the foundation. Smaller flatter rocks were used for the top course of the foundation to provide a level surface for the adobe blocks used for the original walls. Foundations for 6 buttresses were uncovered along the inside of the walls. It is believed that buttresses were used for lateral wall support and were placed approximately every 12 yards of wall length. As reported earlier, a wealth of evidence of prehistoric cultures was uncovered below the surface of the Mission Garden area. Also, a couple of post-Spanish structures were found inside the perimeter of the old walls. One such discovery included the floor of a mid to late 1800s house and the other a foundation of a small 1930s house possibly occupied until around 1950. ³

The design and manufacture of the reconstructed Mission Garden were initiated after the 2000-2003 archaeological evaluation. Care was taken to avoid future damage to the many layers of earlier cultural features buried beneath the garden's original layers of soil. The overall dimensions of the original 1770 foundations were replicated for the Mission Garden reconstruction. The modern walls were offset by 20 feet to the southeast of the original reburied foundations to protect the 250-year-old foundations. The reconstructed modern-technology block walls were completed in 2008 by the Sundt company (coincidentally the final owners of the Monier brickyard). All the archaeological resources are now safely capped with a top layer of garden soil.



Fig 16. A section of the exposed Mission Garden original wall foundation ³ (pg 151)

(Photo from the Rio Nuevo 2000-2003 Clearwater Archaeology report)

The Final Days of the San Agustín Mission Convento and Chapel

By the early nineteenth century, due to competition for fertile land by the Spanish and harsh treatment from the missionaries, the local Sobaipuri began to move away from the San Agustín Mission. Some remained around Bac and others migrated to more arid lands toward the west. These early refugees are regarded to be ancestors of today's Tohono O'odham. Not until 1916 where the O'odham given title to their 4,000 square miles of aboriginal lands. The delay of the designation was the result of the tribe never having been at war with the U.S. and therefore lacking a need for a peace treaty.²¹ The Spanish king's expulsion of the Franciscan Order came in 1828, however already 8 years earlier the San Agustín Mission had been abandoned. An account from 1843 describes the Chapel as falling down, and the roof of the Convento was failing. The Chapel was reduced to ruins in the following decades. The builder of Leopoldo Carrillo's residence adjacent to the Convento had extracted roof timbers from the Convento for use in its construction, thus hastening the erosion of the Convento. The ruins were a popular place to visit by the locals, and stories were recorded of family picnics held there around the end of the 19th century. The building may have also suffered from the 1887 earthquake centered in Sonora, and from treasure seekers that dug around its walls. As the old building received no effort at preservation over the next century, by the 1950s, all that remained was a single wall. That final remnant was bulldozed for the landfill.



Fig 17. Convento in 1890
(Photo from Arizona Historical Society)

In the 1940s, a visitor to Tucson from New England exclaimed; "Your beautiful mission is no more! What have you done? In the East, we would have enshrined such a structure forever."⁷⁹



Fig 18. A locally popular photograph by Carlton Watkins that was taken from the east slope of Sentinel Peak in the 1880s. This shows the Santa Cruz floodplains, agricultural plots, and some of the Spanish era adobe structures still standing. Recorded maps of these farm plots show how they expanded as the young town of Tucson grew. One map is seen on page 33. Menlo Park continued to be the breadbasket of the Tucson community until the end of the century. ²⁴

(Photo from Arizona Historical Society)

Mexican Period in Menlo Park

In 1821, after 11 years of war, Mexico gained independence from Spain. Tucson was part of the lands won by the Mexican government in the *Treaty of Córdoba*. Those earlier settlers that had come from Sonora to the banks of the Santa Cruz at the foot of the Black Mountain continued their farming, ranching, and mining activities, however now lived under the Mexican flag. The Treaty set off a series of struggles in Mexico City that postponed any form of new representative government for the northern frontier. Any local delegations were unproductive in helping their citizens as Mexico was split by ideological models for their new constitution. Liberals favored a republic, and conservatives wanted a monarchy headed by a European prince. The Republic won out, eventually, however at the cost of hindering much influence or providing significant aid to the community of Tucson.



Tucson would live under Mexican rule for only 33 years. There was one exception in this period that lasted for only a few days in December of 1846. The “Capture of Tucson” occurred during the Mexican-American War when the American General Philip Cooke marched the US Army’s 360 strong “Mormon Battalion” into town, after having just survived the now humorous “Battle of the Bulls” at the San Pedro River. (Bulls, as in wild cattle.) Once the US company moved on northward to complete their goal of establishing a wagon train route from Santa Fe to San Diego, Tucson was immediately reclaimed by the Mexican troops that had peacefully stepped aside. No shot was ever fired. 1846 was the year of the Mexican American War or *Guerra de Estados Unidos contra Mexico* (“War of the United States Against Mexico”). The war resulted from the United States’ audacious annexation of Texas justified by a treaty dispute. By 1848, militarily weak Mexico was forced to cede its northern territories from the Rio Grande to the Pacific, except the southern strip that Tucson occupied.

In December 1853, six years after the Mexican American War, the Gadsden Purchase, also called the Treaty of La Mesilla, was signed which transferred an additional 30,000 square miles of northern territory (now including Tucson) to the United States’ New Mexico Territory. Scholars claim that the U.S. negotiators had in mind obtaining ownership of a reasonable stretch of terrain for future railroads for connecting the American coasts, however an additional motivation was to acquire the maximum amount of real estate with the minimum number of new citizens’ and their needs.

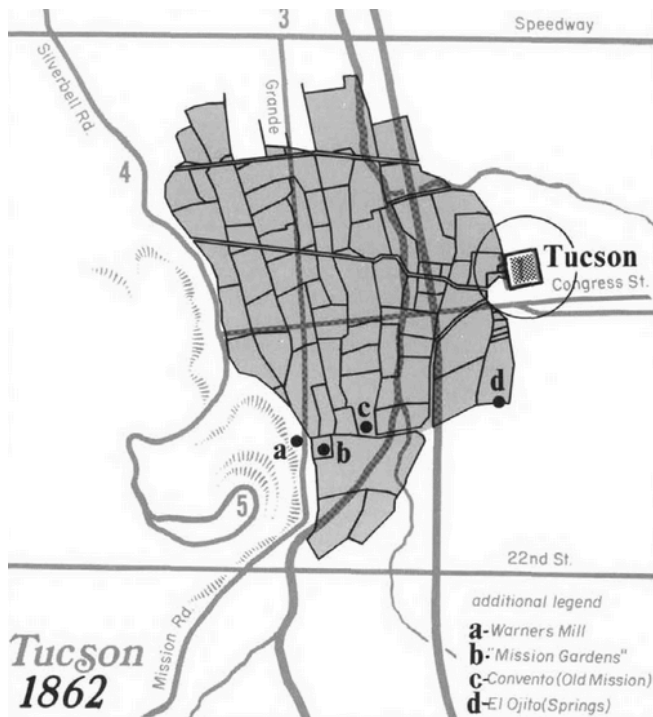
Menlo Park’s early Spanish speaking settlers came from Sonora and other missions in southern Arizona. They were soldiers and farmers. Some were born Spanish in the New World while others were products of ethnic mixture. Regardless of background, all were tested desert survivors seeking to live independently along Sonoran streams and rivers. Many were expert campaigners against the Apaches and former defenders of the Spanish royalty’s interests. Unlike the other east-coast European migrants who trickled into Tucson over the century, these early citizens understood precisely what life is going to be like when they settled and raised families along the only semi-dependable water source, the Rio Santa Cruz.²⁵ The Santa Cruz River was then, as it is today, acknowledged as the lifeblood of Tucson’s manifestation. The city’s source of water today resides 400-800 feet below the old river’s sandy stream bed.

Various native peoples still lived in and around Tucson, including peaceful Apache, *Apaches de Paz*, or *Mansos*, although deadly skirmishes with the outlying raiding bands continued until the end of the 19th century. Journeys on the trade road to Sonora were risky as Apache raiders awaited almost invisibly in roadside bushes to attack and then rob, injure, or even kill travelers.⁸ Nor can history forget that the early European settlers decimated native populations with alien diseases and warfare. There were few innocent cultures in the centuries of struggles to dominate the landscape.

The clay soil of the river’s banks retained water which aided the growing of crops despite only occasional rain-sourced surface water. The river is described as running only dependably in late summer seasons and in a few favored locations, like at the foot of Sentinel Peak, where the river resurfaced only to fade into the sandy bed downstream. The water table was shallow. Consequently, the riverbanks still provided adequate grass for cattle and horses and mesquite *bosques* for firewood and building material. When needed, wells could be dug. A good spring existed on the east side of the river which became the recreation retreat of Carrillo Gardens.⁵ No

record remained of the Tucson namesake spring that had originated from the foot of Sentinel Peak, nor have geologists determined its original location. *Zanjeros*, or water supervisors, were elected and would divert surface water into downstream fields one by one via the headgates of *acequias* (canals).

Water was not always provided when it was wanted. Instead, the available water could be portioned equitably. The Mexican subsistence family farms had to be flexible and willing to share the resource and were hopeful that they could get through dry periods together. Imported (non-native) winter crops included white wheat, barley, chickpeas, lentils, onions, and garlic. Summer crops were adapted corn, beans, squash, pumpkins, chili peppers, tobacco, and cotton. Menlo Park *sembradors*, literally sowers of seed or farmers, shared ownership in a *común de agua* (community irrigation system) consisting of 3 main *acequias madres* (mother canals). Being the first families to settle by the river, Menlo Park residents had priority to access the irrigation water. Downstream to the north, hay was grown when floodwaters were available. ²⁷



Map 5. Menlo Park farms in 1862 ²⁷
(Image from the City of Tucson report)

The mining of minerals on the two local hills never appeared to create much wealth. Limited extractions of copper, gold, silver, lead and other metallic elements were mined closer to the central caldera within today's Tucson Mountain Park. Possibly the nearby Menlo Park community served as a convenient home base for these early miners. Menlo Park's signature volcanic hills and rock quarries will be discussed in greater detail.

Although little history was written by Tucsonenses (Tucson Mexican families), social anthropologists have studied what documents have survived, interviewed descendants, and examined artifacts left behind in some early citizen's homes. One such illustrative study was done for the Soledad Jácome Familia. Soledad was a poor seamstress raising four daughters. The excavation study was conducted by J. Homer Theil for *Desert Archaeology Inc.* ²⁸ Soledad, born

in 1840, never married her partner Juan because the town did not have a priest in residence to marry them. This was a common predicament for the isolated mid-century citizens. She lost two daughters, one at birth and another to smallpox in 1870. Juan and Soledad lived on the east side near today's Art Museum, however their struggle for a basic living was likely indicative of the common effort on both sides of the river. Their one-room 1860 house had mud-covered saguaro ribs for a roof. In the 1870s the roof was reinforced with packing crates. Muslin cloth was tacked to the crates to minimize the dried mud from flaking and falling into the room. Standard features for homes of that time were corner fireplaces, high ceilings, and doors placed opposite each other for air circulation in warmer weather. Juan had either left the family or died in the 1870s. Soledad was forced to support herself and her daughters as a seamstress. She rented out four small rooms that had been added to the house for additional income. The trash pit in her yard revealed discarded buttons, straight and safety pins, scissors, a folding measuring stick, and a pin holder made of bone. The low quality of the buttons found suggest that Soledad likely worked on repairing inexpensive clothing; however, her daughter Isadora later was known for her skill at making Mexican wedding dresses, surely a skill learned from her mother. Census records indicate that although Soledad was illiterate, her daughters attended school. School supplies were also found buried in the backyard. Soledad suffered from heart problems for two years before her death in January 1911. Among the medicine bottles found in the backyard was one labeled "Dr. Miles New Heart Cure," an elixir that contained 11% alcohol, 5% glycerin, and some sugar. This was likely the limit of medical care available in the frontier town.²⁸

As the Mexican community's influence waned in the 1890s, one of those who helped to raise their voice was Carlos Velasco. He had been the editor of *El Fronterizo* for a couple of decades. In 1894, with compatriots, he organized the *Alianza Hispano-Americana* which became involved in causes to advance the Mexican American position in the community. By 1944, their membership had grown to 20,000 across six states and Mexico.²¹

Early Anglo visitors to Tucson encountered mud-colored homes, and many considered the citizens unsophisticated. What was not appreciated was these Tucsonenses had long mastered how to survive on the land, and to do so without any outside help and materials. The government of Mexico City lay 1500 miles to the south, so they were isolated by distance, deserts, and mountains. Their national treasury was nearly exhausted because of their war of independence followed a little over two decades later by the Mexican American War in 1846. The isolated community living on the banks of the Rio Santa Cruz had learned to deal with both sudden floods and drought. As desert researcher Craig Childs noted, there are still two ways to die in the desert; either of thirst or by drowning. With only a small Mexican garrison, many times the citizens had to deal with the havoc of Apache raids on their own. The Mexican *colonia* of Tucson, toughened by hardships, had formed a society that endured despite their isolation. They were successful enough not to be overcome culturally by the initial influx of Anglo immigration. The east coast immigrants were Germans, French, Italians, and Anglos. The label Anglo is used, although this next wave of newcomers was from diverse European backgrounds. The 'Anglo' designation is also convenient because most of the immigrants spoke English. Still, Mexican communities held on as the majority of Tucson populace into the early 1900s. In contrast to other Southwest towns originally settled by Sonoran transplants, Tucsonenses maintained positions of authority and business leadership well into the Territorial period.²⁵ Familiar names of successful families include Otero, Jacome, Soza, Laos, and Carrillo.

Leopoldo Carrillo

A well-known example of such an individual and one associated with the west-side was Leopoldo Carrillo. Leopoldo did as much to develop the young township in the 1870s and 1880s as anyone. Leopoldo arrived in Tucson in 1859, six years after the Gadsden Purchase. His birthplace was Moctezuma, Mexico, and he lived later in Magdalena, Sonora where he married. He must have had a keen businessman's sense of finance and an abundance of energy. Until his death in 1890 he acquired enough holdings, either by a Mexican or an Anglo, to be called the owner of an empire. At his entrepreneurial prime, he owned many diverse businesses and ranches as far apart as Sabino Canyon and San Xavier. He was also the landlord of over 100 houses that he had built, most in the area more recently called Barrio Viejo. Most significant to the Menlo Park area he possessed considerable farmland along the west side of the Santa Cruz River. Much of it was leased to Chinese farmers. Throughout his life, Carrillo had a personal interest in horticulture. The local festivities of San Agustín were often supplied with his excellent peaches and grapes. Of the several festivals that marked the catholic calendar, the celebration of San Agustín was special and often lasted a week. Members of the congregation marched around the downtown plaza led by a statue of the saint decorated by flowers and carried by four selected members.⁸⁴ In 1880 the city decided that the annual festival had become too rowdy and that the event would have to be moved outside of the city.⁸⁵

One chapter in Carrillo's life is riveting. In 1875 he was kidnapped for ransom by a Mexican revolutionary, Don Escalante. Leopoldo's wife Jesusita Carrillo was able to raise the \$5,000 payment by selling the family jewels.²⁹ However, Escalante responded by increasing the ransom amount to \$7,000 and all of Carrillo's cattle. After the money was delivered, Escalante kept Leopoldo captive and threatened to kill him anyway. Carrillo drafted instructions for how his family was to recover his body, however he succeeded in escaping before that was necessary. He found his way to the surrounding Sonoran mountains disguised as a Native American. He was aided by his knowledge of the Opatá language. He obtained a horse from a friend and was able to return safely to Tucson and his wife and family.³¹ Jesusita and Leopoldo had nine children.

Leopoldo's farmhouse in Menlo Park was located on the south side of present-day West Mission Lane, east of Mission Garden. Leopoldo was living and probably farming there when he purchased the house in 1871. Earlier, he was able to survive the Confederate occupation of Tucson during the Civil War even though he was an outspoken Union sympathizer.³³ Near the site of the San Agustín Mission, an 1880 photograph taken from Carrillo's back yard showed a ditch running along the northern side of West Mission Lane. All traces of Carrillo's house, which was demolished in the 1940s, were entirely gone by the time of the 2000-2003 archaeological excavation. Fortunately, aerial photographs taken just before its removal accurately show its location. From the Rio Nuevo Report; "The house was visited in 1937 as a part of the Works Progress Administration's (WPA) work on the Historic American Buildings Survey (HABS) in Tucson. The resulting floor plans, façade drawings, and photographs document the structure in detail and are available from the Library of Congress." This data will be invaluable should the house be reconstructed.^{3 (pg 54)}

Leopoldo died in 1890. In a 1930 newspaper story honoring Leopoldo, four grandchildren were listed as residing in the area; Arturo, an undertaker; Joaquin, a merchant; Lionel, a policeman; and Matilda Carrillo. ³⁰ Five generations later, Carrillo family members are still operating their businesses in Tucson, notably generations in mortuary services leading up to today's Tucson Mortuary. Some members of the extended Carrillo family are said to still live in Menlo Park.

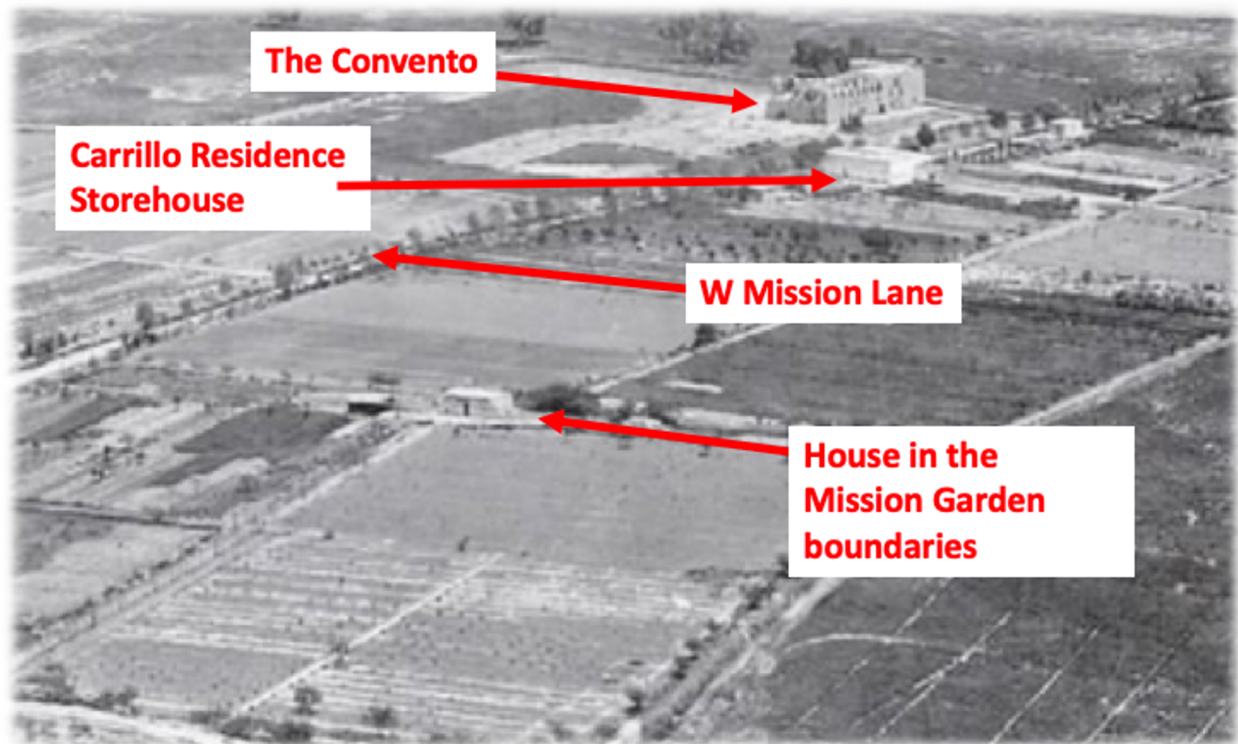


Fig 19. Carrillo House photograph, from Carlton Watkins's 1880 photo. The Carrillo storehouse was an icehouse cooled by water from Warner's Mill. ²⁶ (pg 27)
(Photo from the Arizona Historical Society and author notes)

Mexican Society at the Turn of the 20th Century

From 1860 to 1880, which included the periods of the Gadsden Purchase and the Civil War, the population of Spanish surnamed citizens of Tucson increased by almost 700% to 4469. This growth was dominated by significant migrations of settlers continuing to flow north from Sonora. As an agricultural community mainly living within its means, their story survived primarily through oral history. This strong foundation of social bonds and economic interests established a rich heritage. ²¹

In 1880, Tucson's stop on the Southern Pacific Railroad began opening the community to shipments of goods previously unavailable. Products produced locally became less price competitive and had lower quality than the imported commodities. Local producers and businesses started to fail. The San Diego to Tucson telegraph was operational for seven years prior to the railroad's completion. Nothing changed life in western towns more than the arrival of the rails and telegraph lines. These became the new means for conducting commerce. Old enterprises such as farming suffered. New businesses arose. More Anglos familiar with the new enterprises came both

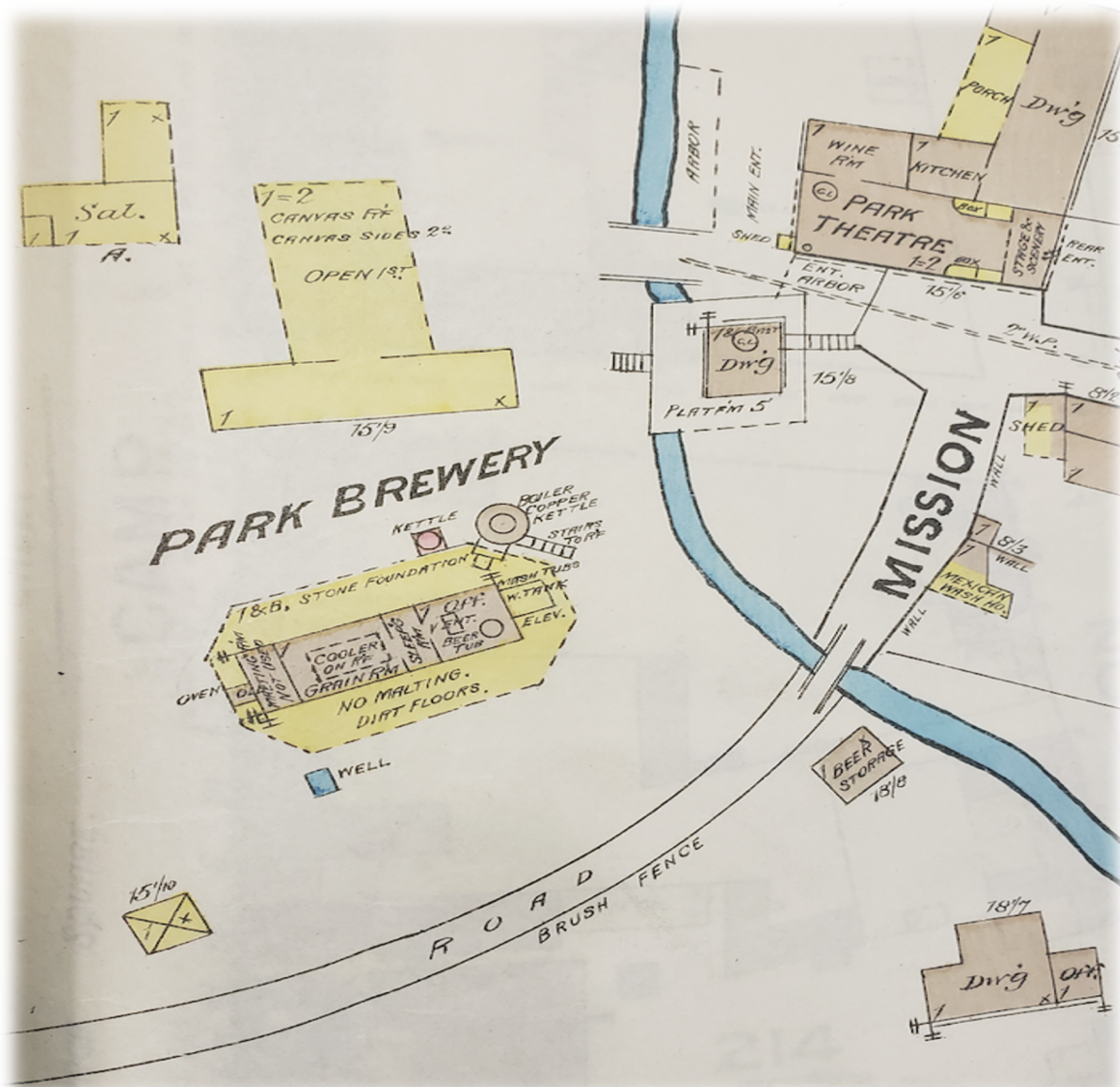
from the east, and post 49er California gold-rushers also arrived from the west. They were seeking financial opportunities and land ownership. The Atchison, Topeka and Santa Fe railroad began operating in Tucson the year after the Southern Pacific arrived.³

The advent of the rail age, along with the unsustainable demand on the river's resources was a double blow to the Menlo Park Mexican American farming community. This decline of a free-flowing river ended the old way of farms being irrigated by the river. The new economic reality drove the subsistence farmers from their riverbank farms to jobs and homes outside of the old communities. Records of water-rights lawsuit testimonies made by farmers in the 1880s, most of them Mexican, portray a traditional agrarian society in a losing battle to survive in the manner that their parents and grandparents had.²⁵

Although the Mexican Americans had strong roots in the Menlo Park community, between the 1880s and World War I, they fell victim to this radically different economy. It was one that now demanded hard labor for the extraction of natural resources that were increasingly exported by rail. The addition of a branch connecting Phoenix to the Southern Pacific did not occur for another decade, so initially Tucson provided the export materials and workforce for Southern Arizona. Mining, cotton, and beef were the new ways to survive, and these required hard physical labor, with dangerous work conditions that paid low wages. The economic pressure on the local workers increased even more as industries were willing to hire workers from Sonora at even lower pay. During the decade beginning in 1890, there was an economic depression. One result was a scarcity of even the poor paying jobs. The local industries, except for the railroads, were immune from union organization. Educational opportunities were limited or unaffordable, particularly if all members of the family were needed to participate in the labor market at an early age. It took almost half a century for the Tucsonenses to break through this economic subordination, and finally achieve increasing upward mobility.³ Nevertheless, before statehood, local Mexicans such as Francisco Solano Leon, Juan and Jesus Maria Elias, and Mariano Samaniego served in the Territorial Legislature.²⁵

In the mid 19th century Menlo Park residents were predominately Spanish speaking. And a century later, post-World War II census data showed that again 68% of Menlo Park households were self-declared as Hispanic. But between the arrival of trains and the conclusion of World War I, they had lost their foothold in the historic neighborhood. Following is an approximate 100-year chronology of significant change of demographics in the Menlo Park area:

- Starts with early Sonoran-rooted historic agricultural subsistence communities,
- followed by the environmentally and economically forced abandonment of farms,
- leading to early 1900s acquisition of vacant land for speculation by newcomers committed to the promotion (but unexpected slow development) of affordable segregated residential real estate. This period of Euro-American development resulted in a wealth of bungalow construction that continues to be one of Tucson's best concentrations of this style today.
- Due to the improving economy after World War II, many homes in Menlo Park were purchased by people who were either bilingual or only spoke Spanish. Therefore, Menlo Park became Tucson's most upscale Mexican *barrio*.²¹



Map 6. 1886 Sanborn insurance map showing the extent of important commercial enterprises on the western edge of urban Tucson without much reference to current day Menlo Park. The blue channel is not the Santa Cruz River, rather an irrigation canal close to where North Granada Avenue is today. The Mission Road was a dirt path leading to the San Agustín Mission area. The Brush Fence was a northern boundary marker commonly used to delineate river water rights on both sides of the Santa Cruz River. To the north of the brewery, the map indicated “Chinese Shanties” without bothering to add any outlines of the building themselves. (Image from University of Arizona Special Collections Library)



Fig 20 and 21. West Congress Street, looking east, as seen from the northern end of the Powderhouse Hill ridge located between Sentinel Peak and Tumamoc Hill. George Roskrige took the upper photo around 1890. A row of cottonwoods runs along the West Branch of the Santa Cruz which indicates this tributary of the Santa Cruz and therefore the Santa Cruz River must have been farther east than it is today. Today the West Branch is channeled to the main river channel south of Sentinel Peak. Currently, there would be no opportunity for the West Branch to pass between Sentinel Peak and the Santa Cruz River. The lower photo from the same perspective was taken in the 1930s by E. Ronstadt. Agriculture appears to have been replaced by low-density home sites. The Santa Cruz is still barely visible in the distance. The ancient flood plain had now evolved into an arid, sparse terrace above the river, ready for urbanization.²⁶

(Photos from the Arizona Historical Society)

Early Chinese Citizens in Menlo Park

The railroad brought the first Chinese laborers to Tucson. Chinese immigrants were chiefly responsible for the laying of the railroad tracks across the deserts and mountains of the west. Of the 900 Chinese employed by the train companies at the time the railways arrived at Tucson, about 120 made Tucson their home. Historians know of about 35 that became commercial gardeners in Menlo Park, leasing land to grow their crops. These original Chinese settlers were primarily men. Of those that went into the laundry business, most washed clothes directly in the Santa Cruz. ³ (pg 543)

In 1995 Desert Archaeology Inc. was called out to examine an underground Chinese house site that was partially uncovered while trenching work was done for a new storm drain. This buried house had a trash pit containing Chinese artifacts. The location was near the circular intersection of South Grande Avenue and West Cushing Street. In 2001 another excavation uncovered more Chinese artifacts at the Leopoldo Carrillo house site on West Mission Lane. These items were likely discarded by the men who had leased Carrillo's land for gardening. Uncovered artifacts included complete, undamaged woks, teapots, and rice and sauce bowls; basic implements for preparing food. In the late 1800s the Chinese were described as exceptionally industrious. They produced most of the produce consumed across the river in Tucson. While there remain some records of the daily life of the Chinese that worked in town, there are nearly no journal entries about the Menlo Park farmers. Therefore, the contents of the Carrillo House trash pits are especially valuable since they give us a glimpse into their domestic lives. ³ (pg 543)



Fig 22. Sauce jars and rice bowls removed from the Clearwater Chinese trash pit.
(Photo from the Rio Nuevo2000-2003 Clearwater Archaeology report)

The Clearwater pit was a well that had run dry and it was used as a convenient trash pit. Trash pits are archaeologists' 'treasure troves'. Among the items found in this pit were: 302 Chinese stoneware jars, 271 alcoholic beverage bottles, 210 stoneware fragments, 113 glass food bottles, 112 tin cans, and several dozen categories of household items. It seems the farmers were fond of alcoholic drink. The use of opium was also common based on 'paraphernalia' uncovered, such as pipes. Some of the beer bottles could be traced to European origins dating from 1880 to 1890. Other bottles for cooking sauces were imported from China. Such was the global economy even in these early times. Based on the number of whole jars and bottles, we can assume that the contents

were valued more than the containers. Surprisingly, the limited amount of soil in the well also contained 664 Native American potsherds; all believed to be part of the local soil amalgam. Recovered metal barrel loops support the belief that the Chinese farmers preferred wooden barrels for water storage and transportation. Their Mexican-American neighbors still favored fired clay *ollas* produced in significant quantities by the Tohono O’Odham.^{3 (pg 543)}

The supply stores of the Chinese community were able to import cookware and foods, including soy sauce, spices, and dried cuttlefish. The farmers consumed some desert plants and certainly ate more vegetables than their neighbors, whose sustenance was centered around peppers, corn, and beans. The Chinese farmer’s meat protein also included a greater and likely a healthier variety. Bones were excavated from the trash pits that came from cows, pigs, as well as turtles, cats, and fish.^{3 (pg 543)}



Fig 23. Chinese vegetable vendor’s wagon for selling produce in town, and an example of required citizen documentation.³⁸
(Photos from the Arizona Historical Society)

A regrettable aspect of the history of the Chinese in Tucson is well documented. Arizona Daily Star editorials from 1882 were shameful in retrospect for their offensive descriptions of the Chinese citizens.³⁵ While they were admired for their work tenacity, the new Chinese were generally resented and poorly treated in some quarters. It became a delicate, almost daily, challenge for the Chinese newcomers to avoid deportation back to China. After two decades of physically demanding labor on the railroads, a federal law passed in 1882 prohibited new Chinese immigration. The law was exploited to now rid the country of the previously essential railroad workers. Local Chinese had the constant burden of proving that they had already earned their US citizenship. Not all had obtained the necessary papers containing their portraits. Businessmen protected some, however many were deported. Official documents detail cruel treatment and even violence by some in the Tucson community against the Chinese that managed to remain. Some Chinese shopkeepers in town were even murdered. The friction resulted primarily from their resistance to assimilate, which was not helped by the discrimination they had to endure. Some only wanted to work hard and accumulate enough money to eventually return to China.^{36, 37}

The two archaeology excavations on the west side indicated that the Chinese farmers were likely armed with pistols and rifles. There were nine classifications of ammunition found in the sites. This personal protection likely represented a credible, effective deterrent to many unwanted encounters. No note was found of firearm violence instigated by the farmers in the literature.^{3 (pg}

⁵⁴³⁾ The population of Chinese residents in Tucson was reduced from 1,153 in 1880 to 254 in 1900 due to immigration laws passed after they had been admitted to the country. As severe as their treatment, in the Tucson area was, the Chinese in Mexico suffered even harsher treatment. This situation came to a breaking point during the 1921 Mexican Revolution. Thousands of Chinese were driven across the porous border. A grateful General Pershing recruited many hundreds of those that left Mexico in his repulsion of Poncho Villa. These expelled Chinese were able to supply food and materials needed by the American troops, possibly earning some small reward of retribution for their earlier eviction. It is uncertain how many that left Mexico settled in Tucson. In 1913 California passed laws that prevented any alien born residents from owning or leasing land for more than 3 years, followed up with even stricter laws 7 years later. In Tucson during the early 1900s, enforcement of such laws was more relaxed. California refugees could find a home and work in Tucson. The network of Chinese families in the Old Pueblo finally began to reestablish itself after the turn of the century.³⁸

Despite early harassment and discrimination, the Chinese that persevered after 1880 were able to arrange to have their wives and children come from China. Some traveled back to China to marry, returning to run their businesses here. Those hardy Chinese settlers and their families that stayed and survived in Tucson adopted and supported new arrivals into their tightly woven community. By the early 1900s 37 Chinese families owned businesses in Tucson. As is typical, generation after generation strived to assimilate locally. Eventually, many descendants have become local civic leaders.³⁷

Territorial Period

Prior to the 1854 Gadsden Purchase The Mexican border was defined by the Gila River. The Gadsden Purchase established the present international boundary between Mexico and the New Mexico Territory which included today's New Mexico and Arizona. The U.S. Army established its first outpost in the surrounding Tucson area in 1856 specifically for their campaign to pacify the Apache. Tucson's Territorial Period was the 58-year window between the Gadsden Purchase and the 1912 admission of Arizona to the United States.²¹ (Arizona was the last state admitted to the contiguous Union). Yet even this period of history was not without its temporary disruption of governmental jurisdiction.

During the Civil War, the Confederacy needed gold to finance their continued purchase of weapons from the British. There was gold in California, and the west coast was attractive as a potentially less-challenged naval outlet. The Confederates needed to secure a southern supply route connecting Texas to California. They were initially able to capture the eastern part of the New Mexico Territory by driving out Union troops in Mesilla, New Mexico. Without the Union garrison for protection, the Apache resumed their raiding of the local Rio Grande farmers and ranchers, forcing many of these predominately Anglo settlers to flee to Tucson. Ironically these refugees were followed by a portion of the same disruptive Confederate troops. Union forces departed Tucson in anticipation of the advancing rebels, only after they burned down the Rowlett brothers flour mill on the West Branch of the river, situated at the SE corner of Sentinel Peak. The intent was to destroy many operations that would have potential value for the Confederate forces. By February 1862, after 6 months of occupation, the designation of a "Confederate Territory of

Arizona” was proclaimed by Jefferson Davis. California Unionists came east to confront and defeat the Confederates in May of that year at the Battle of Picacho Pass. The war in the East also concluded in this same month. The U.S. House of Representatives created the United States Arizona Territory. Although they claimed Tucson for less than a year, the Confederates managed to disrupt business operations significantly. The latest unwelcome new government had claimed nearly all local business and military assets.

In the days before the trains arrived, both Mexican and Anglo merchant suppliers depended heavily on mule trains from the Sonoran port of Guaymas and from Yuma. They often partnered to share business skills and hauled goods to Tucson by wagon on a well-established *camino* that paralleled the Santa Cruz River as far as the border. Most of the earliest Anglos to settle in Tucson were males, and they took Mexican women as wives. Many of these Anglo-named families preferred to adopt their wives’ family Mexican heritage, even with names like Corbett, Warner, Smith, Brady, O’Reilly, Ronstadt, and Sweeney.³³

The Decline of the Santa Cruz River

In the late 1800s, agricultural intensity began to have its effect on the Santa Cruz River. The river that sustained multiple cultures over the past 4,000 years was no longer sufficient to serve the newcomers’ demands for water. Entrepreneurs knew how to exploit water for more than agricultural purposes. They did not understand the fragile ecological dynamics of the river and the wisdom of low-water-use crop selection and management. Their more experienced Mexican neighbors’ land-use practices were considered inefficient. A series of projects led to the final destruction of the river over the next couple of decades.²¹

Up to the early 1880s water tables near the river remained shallow, and private hand-dug wells served the needs of households and small businesses. The situation became more precarious, and lawsuits started to threaten communities as feelings about easy access to water changed with population growth and the eventual installation of dams across the river. As more and more people settled in the valley, the depletion of the Great Mesquite Forest upstream had begun, and the marsh and grasslands were degraded due to overgrazing. By 1885 the railway had brought in 10,000 cattle. The prime real estate for grazing was along the various desert stream banks. Historically bosques and marshes slowed the river’s and arroyos’ flow. That natural regulation was now increasingly being eradicated. One great irony with the arrival of the Anglo technology was the wood-fired well pump. This invention simultaneously hastened the decline of both the water table and some of the mesquite *bosques*.³⁹

The result of the loss of natural regulation was that flows fluctuated significantly more in rainy seasons. The steam beds and *arroyos* now began to undercut into deeper channels with each violent flood surge. There would be no recovery from this natural effect of river hydraulics. The citizens’ reaction was to start building dams. Entrepreneurs Fred Maish and Driscoll repaired a masonry dam across the river in 1884, located a mile south of the current Menlo Park boundary. The backed up river formed Silver Lake. For a while, this was a pleasant resort area on the west side of the river. The release of water from this dam supplied an older flour mill, previously built by Jimmie Lee. Soon the daunting challenge of maintaining this commerce presented itself. The dam banks washed out 2 years later in 1886, again in 1890. By 1900 the resort burned, and Silver Lake was

gone. ⁴⁰ The artificial floods from the dam failures, complete with ducks, fish, and whole trees, likely created more channel downcutting downstream in the Menlo Park area.



Fig 24. Silver Lake, 1881. Located on the west side of the river, about a mile south of current day Menlo Park by Silver Lake Road ⁴¹
(Photo from the Arizona Historical Society)

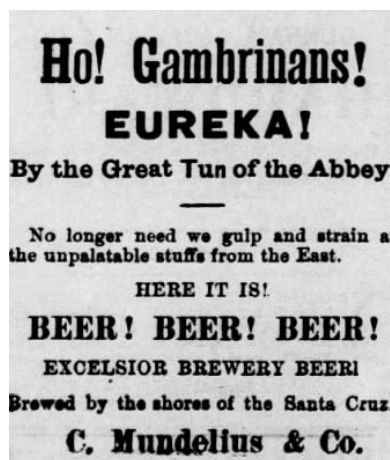


Fig 25. Excelsior Beer was brewed and sold by Conrad Mundelius north of Silver Lake. This ad ran often in 1880 editions of the Arizona Daily Star. The brewery, yet another use of the river's water, likely lived an even shorter existence than Silver Lake.

Solomon Warner re-built another older dam across the West Branch of the Santa Cruz at the base of Sentinel Peak to supply power to his flour mill in 1874. ²⁶ The original dam was the 1859 project of William and Alfred Rowlett, then Tucson's first water powered mill designed to compete with the mule powered mills in town. Discontent arose over the disruptive effect Warner's dam had on irrigation operations downstream. D. O. Dalton, the *zanjero*, or water overseer, quit his job rather than enter the fray.

More trouble came as a group of Chinese gardeners was leased farmland in Menlo Park from Sam Hughes, Leopoldo Carrillo, and W.C. Davis. Davis was a hardware store owner with the nickname “Dry Wash” Davis. He had a habit of rubbing his hands together as he was conducting a deal. The Chinese were truck farmers, which meant they specialized in crop selections intended to be ‘trucked’ into town for sale. This practice was more water-intensive and required watering every day, rather than just on occasion as was the practice on the local subsistence farms. The Chinese farmers manually transported water drawn directly from the river to their fields’ canals using barrels and yokes. They bypassed the *zanjeros* using a method most others were unwilling to employ. Bishop Jean-Baptiste Salpointe and the Sisters of St Joseph were one of the influential victims of the water shortage downstream at St Mary’s Hospital. As the commercial farms grew, the three landlords were the individuals that received the main push-back from the community. The hard-working Chinese farmers were admired for their determination to succeed in their enterprise. The landlords knew the increasing value of water and they owned much of the west side farmland south of Saint Mary’s. They boldly appointed themselves “water commissioners”. They went as far as trying to cut off all downstream water to predominately Mexican farms north of Menlo Park. Lawsuits ensued, and at the end of the deliberations ‘first water users’ rights were reinstated under the doctrine of prior appropriation. The Chinese farmers continued to farm after the lawsuits. ^{21, 3 (pg 54)}

Leopoldo Carrillo’s more famous gardens, his namesake, were located across on the east side of the river slightly north of Sentinel Peak. Carrillo Gardens was a popular 8-acre public park in the 1870s. A dammed pond area fed by an artesian spring was called *el Ojito*. The spring and wells failed, possibly because of the strong 1887 earthquake. The Drachman family bought the land and named the area Elysian Grove which operated until declining income due to Prohibition closure. The Carrillo Elementary School was built in in this location in 1930 and is still in use. Some of Leopoldo Carrillo’s homes are still occupied nearby in the *Barrio El Hoyo*, the ‘Hole’. The name comes from its natural depression, one that likely resulted in a large pond in earlier days.



Fig 26. Carrillo Gardens – Photo by Willis Hayes ⁴¹
(Photo from the Arizona Historical Society)

In 1850 the river next to the heart of Tucson was lined with cottonwoods. By 1900, the river was mortally damaged by shallow well pumping. Perennial surface water flow no longer reached the Congress Street bridge. It took only 50 years for the Anglo exploitation of the valley’s abundant

and critical natural resource to be exhausted. In 1881, as the river surface water was no longer dependable, entrepreneurs went underground. Sylvester Watts constructed a 'water farm' on the west bank of the Santa Cruz. Several wells were dug in a 700-acre plot north of Irvington Road.⁴² A pumping station, a standpipe for gravity flow, and a redwood flume that crossed the river contributed to successfully delivering well water to downtown in September 1882. This source of water was the first service provided by Tom Jeffords's Tucson Water Company. Water was diverted from the west-side's shallow water table for the benefit of the growing town.²¹ Warner sees an immediate drop in the water available for his mill and builds his dam in response. It was not until 1900 that Tucson had any sewer lines and when these were installed, they dumped wastewater directly into the Santa Cruz.⁸⁵ In 1903, businessman Levi Manning who would become the mayor of Tucson 3 years later, dug 20-foot-deep wells at the base of Sentinel Peak. These wells provided the water for west side fields through "Manning's Ditch", a concrete-lined canal. The operation was more formally known, puzzlingly, as the East Side Canal. Outside investors formed Tucson Farms Company and purchased Manning's interests in 1911, and they constructed a new series of 19 wells that crosscut the water table upstream from Sentinel Peak.⁸⁵ The deepest wells now had to be dug 150 feet down. These wells were connected underground, and electric pumps pushed the water through a 4-foot concrete siphon pipe under the river at the site of the old flume. The water was sold to farmers, however the enterprise eventually failed. The Flowing Wells Irrigation District then purchased the remaining interests. The wells of Flowing Wells were in Menlo Park! They expanded the distribution system, however a 1940 flood along the Santa Cruz River destroyed the waterworks and thus ended locally irrigated farming for good.

43

In the mid-1980s, Tohono O'Odham Nation attorneys discovered a 1907 Supreme Court decision called the Winters Doctrine. In principle, the Winters Doctrine gave the Tohono O'Odham rights to much of the groundwater in the Santa Cruz River Valley. Before the arrival of Central Arizona Project water in 1993, the City of Tucson was the largest city in the country that depended exclusively on well water. The surrounding Pima County farmers shared in tapping into the same declining resource.⁸⁰ The city systematically purchased farmland to secure sufficient additional water rights required to supply a growing population and economy. As the city acquired more adjacent farmland, it dug deeper wells. Eventually, the water table fell below a level that the Tohono O'Odham growers could economically access.

Many of the Nation's farmers went out of business. With the Winters Doctrine in hand, the Nation began a long series of negotiations with Tucson and the federal government to agree on a fair distribution of the sub-surface water. After President Carter and Reagan initially refused to provide funds, President Reagan eventually approved the spending for delivering Colorado River water to Tucson via the Central Arizona Project, or CAP. In exchange for allowing the city and commercial farmers to continue to pump deep fossil water, the Tohono O'Odham Nation was promised thousands of acre-feet of CAP water. Despite these agreements, the construction of canals to provide reservation access to the CAP continue to be delayed indefinitely. As a result, relations between the Tohono O'Odham Nation and adjacent communities remain highly strained. More recently the state's CAP commission forced the Nation, and others with previously granted rights, to accept future CAP reductions.⁷⁸ Arizona's allotment of Colorado River water will undoubtedly be reduced due to prior unrealistic multi-state agreements unfavorable to Arizona's claim to CAP allocations. Western states' overall water demand is expected to continuously exceed supply.

Solomon Warner

A discussion of Menlo Park history must include a prominent character in the 1880 boom times, Solomon Warner. Warner's background prior to his arrival in Tucson included stints as a young Mississippi River boatman, a California 49er, employment in Panama and Nicaragua as a mason, and finally an assignment to transport a shipment of goods from San Francisco to Tucson. He arrived on a 13-mule train as the Mexican troops were preparing to leave Gadsden Purchase lands. He was the first Anglo to open an imported merchandise shop in Tucson, however when the Confederate Army arrived, his property was seized after he refused to pledge an oath to the South. He fled and married a wealthy woman in Mexico and returned to Tucson. Unfortunately, he suffered a life-long crippling injury from an Apache attack on the journey. One of his best-known ventures after resettling in town was repairing the Maish and Driscoll dam and installing a grist mill for grinding flour. While operational, the mill produced 2,000 pounds of flour a day under the brand of Mission Flouring Mills. The 300-acre lake that his dam created was large enough for sailing small boats. John Springs stocked the local lakes with fish shipped in on the railroad.⁸⁵ The lake attracted hunters and fishermen for the fowl and fish.⁴⁴ The mill business did not work out commercially, partially because of the arrival of the railroads' supply of lower-priced commodities. He shut down the mill operation six years after building the dam. Eventually, floods and the re-channeling of the river eroded away all remains of the dam and the cottonwoods that grew around the lake. He spent his final years working on the design of a perpetual motion machine. Due to his strong work ethic, which some described as obsessive, he neglected his health. Despite this, he managed to live to the age of 87. He died in 1899. In 1929, Stephan Orchoa, the owner of the mill house and Warner's adjacent home, dismantled the upper walls of the mill house since they had become a dangerous play area for the local children.¹⁹ Today the lower walls still stand, hidden in the brush. The mill house was built with the local volcanic basalt and was most likely mortared in place by the 'mason' himself.⁴⁵ Sections of Warner's millrace were uncovered in the Rio Nuevo project near the San Agustín Mission wall. Documents detailing the millhouse's floorplan still exist. Warner's mill and house are located on the west side of South Grande across from the Mission Garden. Warner's attractive house is the oldest registered house in Menlo Park Historic District having been built in 1877. It was constructed of adobe and is still occupied.



Fig 27. Salomon Warner's mill was a 2-story building with sections of wall 3 feet deep.⁴⁴ Prehistoric Agricultural Era petroglyphs and bedrock mortars are located nearby. (Photo from the Arizona Historical Society)

Health Seekers Come to Menlo Park

Hordes of people that suffered from tuberculosis started to arrive in Tucson and the Menlo Park area in the 1890s. They were euphemistically called the 'health-seekers'. Most were desperate for relief that the dry air that the western deserts provided. During this time, there were few better options for treatment. Seekers usually arrived in Tucson on the railroad. Cities in the west needed more people and welcomed newcomers for the contributions that they made to the local economy. Competitive advertisements for towns with restorative climates ran in the East to attract all newcomers. Sanitoriums opened across the desert and foothills of the west, including Tucson. New businesses were established to provide care for the new arrivals. Tucson Medical Center was initially a TB sanatorium situated far from town, out in the desert. Soon inadequate housing became a problem. The degree of illness was as varied as was the patients' ability to pay for care and lodging. Tent cities arose for the less wealthy seekers. Their pathways were dusty and avoided by visitors. The camps were often dark at night. One assumes some of these gloomy campsites offered a heartbreaking existence for the worst off. Those that failed to recover from the disease had their places taken by new sufferers. Early treatments for those that could afford them included breathing from oxygen tanks and radioactive baths. The first vaccine for tuberculosis was introduced in 1906. However, it was slow to be made available except for soldiers and school children in the larger cities. These medically effective treatments may not have arrived in Tucson until after World War II.

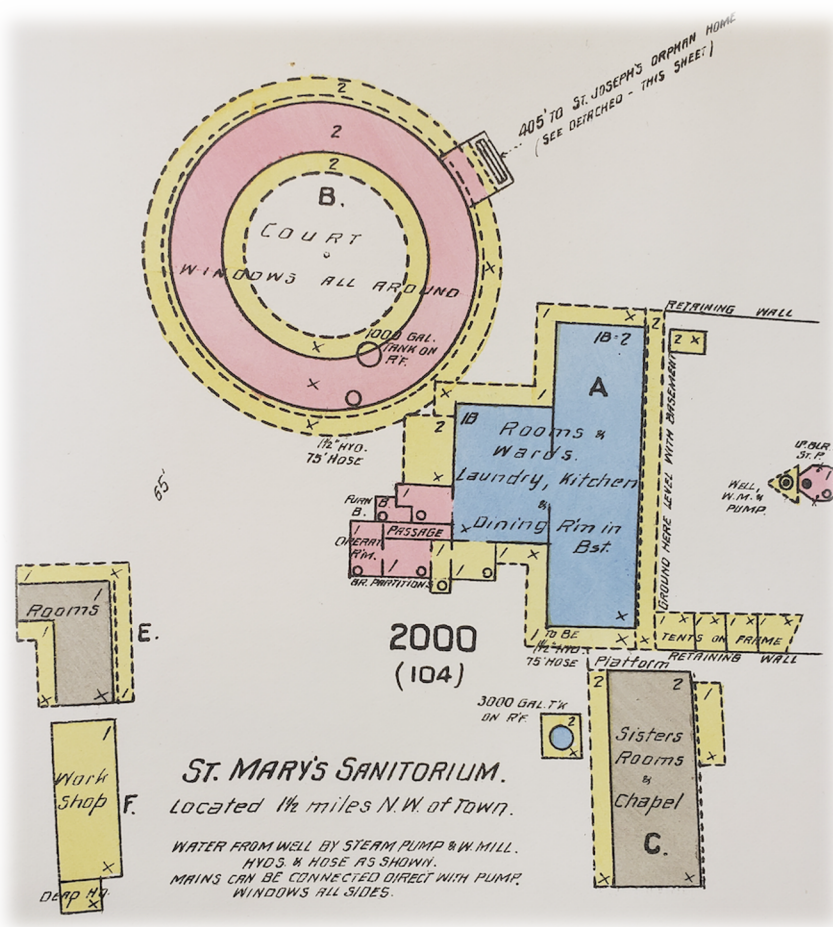


Fig 28. Saint Mary's Hospital designed by Dr. Hiram Fenner was opened in 1880 to care for the railroad workers. This was photo was from 1900. ⁴⁶
(Photo from Arizona Historical Society)

The Southern Pacific Railroad asked Bishop Jean-Baptiste Salpointe, the Vicar Apostolic of Arizona, to build a hospital for its workers. Tucson's halfway location on the new rail system made it a desirable location for a hospital. The bishop had the hospital constructed before the arrival of the railroad company's first patients in 1880. Four of the Sisters of Saint Joseph of Carondelet assisted two doctors at the new Saint Mary's Hospital situated at the northwest corner of today's Menlo Park. The bishop sold Saint Mary's to the Sisters in 1882 for \$20,000. They promised to preserve the name and purpose of the building for 99 years. The hospital continued to grow. In 1900, a sanatorium was added for the improved treatment of the increasing number of tuberculosis

sufferers that were settling on the open land adjacent to the hospital.⁴⁰⁾ The east-west road that led to the hospital was called Sister's Road, then Hospital Road, before it was renamed Saint Mary's Road.²¹

Bishop Salpointe retired to Saint Mary's in 1897 after writing his final manuscript. This was also the year that his downtown Tucson cathedral's gothic transformation was completed. The bishop lived at Saint Mary's for another year, dying at the age of 73. He was buried under the altar of Saint Augustine Cathedral, and his body was later moved to Holy Hope Cemetery in 1967 when the cathedral was under renovation.



Map 7. 1919 Sanborn map of Saint Mary's Hospital, although the 1901 map was identical, only in poor condition. The top of the map points toward the east where the hospital grounds were bordered by a dirt path, now Silverbell Road. The rotunda contained screened rooms for patients. It was added after the construction of the original building and was demolished in 1950. These new screened rooms were designed for improved air circulation. The yellow sections of the main buildings may have been canvas tent rooms. Wood and steel trellis bridges were built to span the Santa Cruz River for both Sister's Road and for West Congress Street in 1901. Both were often damaged by floods, followed by long delays after their repair. Although the river was a dry wash between rains, the west side residents felt isolated, and economic progress was slow to develop on this side of the river.

(Image from University of Arizona Special Collections Library)

Henry Schwalen – Founder of the Menlo Park Neighborhood

Health-seekers tended to be poor, however wealthier patients could afford rooms at Saint Mary's Hospital. Some could even later buy or build cottages nearby. The health-seekers eventually played a role in the development of the Menlo Park neighborhood. After the turn of the century, several of Tucson's pioneers came with enough wealth to start buying land in the area. One of these, Henry E. Schwalen, moved his family from Wisconsin in 1904 to seek improvement for his respiratory health. While recovering at Saint Mary's, he purchased a three-room adobe farmhouse on Melwood Avenue and 21 acres of surrounding land (A photo of this house is in the Architecture chapter on page 70). His wife, Elizabeth, and their four children Harold, Irma, Walter, and Alice raised chickens to provide income, hatching as many as a hundred chicks a day using electric incubators. As Henry recovered, he continued to purchase more land adjacent to his initial investment. He became good friends and an eventual investment partner with Manuel King, another notable name in the founding of the Menlo Park neighborhood. Manuel had migrated from California and had been successfully acquiring ranch land in the Altar Valley through homesteading, eventually holding deed more than 100,000 acres. In Menlo Park area Manuel owned a similar amount of land as Henry. He was also a founder of Tucson Iron Works which is believed to have been originally located on the block now occupied by the Rialto Theatre ⁴⁹. A subsequent location for the better-known Tucson Iron Works was the block northwest of East 18th Street and South 1st Ave. This incarnation of the business appears on old maps as the “Iron Works owned by Albert Steinfeld. & Co”.

The two Menlo Park landholders combined their assets to initiate the first real estate promotion of the Menlo Park neighborhood. Two other significant landowners in the area were Cirilio Solano Leon and Leon Boudreaux. Cirilio's father was a Spanish soldier stationed at the Presidio and later worked as a cattleman, landowner, newspaperman. Cirilio homesteaded a ranch that is currently the El Rio Golf Course bordering the north side of Menlo Park. Mr. Boudreaux came from Louisiana and acquired the parcel that is roughly the western third of Menlo Park, long called the McKee Addition. No information was found regarding the original owner McKee. Boudreaux was a builder and contractor. His family briefly occupied two of his homes that were constructed of Sentinel Peak volcanic rock. Both houses still stand. One is on the hillside of Silverbell Road, and the other is a striking house on Melwood Avenue, north of Congress Street. ⁴⁷ See page 70.

A significance often overlooked; Silverbell Road is a part of the Juan de Anza National Historic Trail that connected Tubac to San Francisco. This ancient pathway traces de Anza's post-Agustín Mission march of Sonoran citizens and their families to help populate California for Spain.

Several factors prevented the original 1906 Menlo Park development effort from progressing as originally planned. Before the early 1940s realtors on the east side of the river would not promote west-side development. Downtown real estate was in higher demand and still affordable. A significant barrier to progress was the Congress Street bridge over the Santa Cruz River. After the bridge was destroyed by floods in 1901 and 1915, poor access to the platted lots slowed development. The worsening depression of the World War I period was another factor. In the early 1920s Schwalen and King sold their interests in the development company that they had formed.

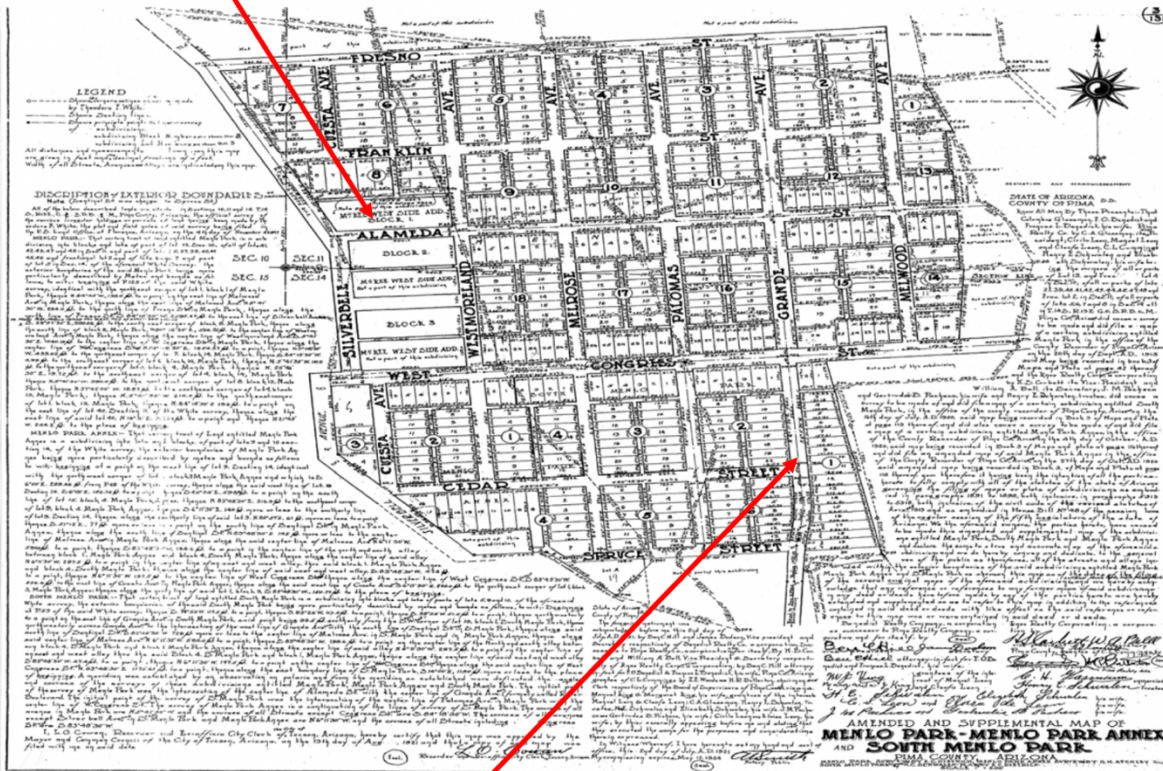
The City of Tucson did not enforce strict zoning laws until the 1930s, which gave the earlier Menlo Park development plan the distinction as being the original Tucson subdivision to self-impose building standards through deed restrictions. The strategy was to offer potential buyers a neighborhood where strong standards would be maintained. Ironically there was initial hesitation among buyers who were wary of too many rules. Menlo Park was also the first sub-division to be master planned with cast iron water lines, thanks to Henry's son Harold Schwalen, a UA civil engineer and soil sciences graduate. Harold lived on Melwood Avenue and went on to become the head of the University's Agricultural Engineering Department. Harold later received several citations and awards for his contributions in the 1960s. Some of the new deed restrictions required setbacks not seen in downtown rowhouse properties. Also, the zoning laws required that construction values of new homes could not be less than \$2,000. Sadly, there was an exclusion of people of "Negro descent" and Mexican Americans were only allowed to own property in a Philip S. Hughes promoted South Menlo Park sub-division. Eventually, these restrictions designed to protect values, did start to encourage growth. Buyers during the historical era (1905-1941) came from many professions, including teachers, professors, and business owners of all varieties. The addition of secondary small rental cottages was popular. Menlo Park continued to be allowed to have sanitorium status after the city implemented new zoning.⁴⁷



Fig 29. A bridge within sight of Sentinel Peak, likely on Saint Mary's Road, washed out in a 1915 flood adding to the west side's sense of disconnection. Is the smokestack on the shore part of the Tucson Pressed Brick Company?⁴⁸
(Photo from Arizona Daily Star)

In the thirties and forties, an area south of Sentinel Peak (just outside of today's Menlo Park) started to be settled by African American homesteaders, including Hiram Banks. His property was later subdivided and called Hiram Banks Acres, bordered by San Juan Trail, Via Elenora, Calle Sombrero, and San Jacinto Drive. Many African Americans settled in this neighborhood after World War II because the developer, James Benefield, worked to build low-cost housing for veterans, especially for minorities.⁸² The prior established neighborhood that welcomed African American families was Dunbar Springs where there was a "Colored School" designed by Henry Jaastad. Graduates were not allowed to attend high school until 1920 at which time classes were segregated and studies limited to sports and band. UA finally allowed African Americans to attend classes in 1932 but they were not allowed to live in the dormitories or eat in the dining hall.⁸⁵

McGee addition 1906



Pacheco addition 1915

Map 9 Amended and Supplemental Map of Menlo Park Annex and South Menlo Park, August 13, 1921, Pima County

(Image from 2010 National Register of Historic Places and authors notes)

The earliest developers in The Menlo Park Area were Frank G. McGee, started in 1913 with plats extending west of Silverbell (outside of Menlo Park.) In 1914, Philip S. Hughes, an early resident of Tucson from California, founded the P.S. Hughes addition. This multi-talented individual apparently served Pima County as deputy treasurer and a member of the Board of Supervisors. His addition became known as "Barrio Sin Nombre" ("No-Name Neighborhood"). In 1915, third-generation Arizonan and Tucson pavement contractor Jesus Maria Pacheco and his wife, Gertrude Bustamante Pacheco, platted Pacheco Addition This small subdivision "disappeared" as it was replatted when incorporated into South Menlo Park in 1920.⁴⁷ Mexican Americans were not excluded in this part of Menlo Park. There were no sidewalks, paved streets, or street lighting in either the North or South Menlo Park subdivision initially. Much of the improvements would not be fully complete until the urban renewal that occurred in the 1970s.⁸⁵

Quintus Monier's Brickyard

In 1894 Bishop Jean-Baptiste Salpointe contacted Quintus Monier, a noted architect in Santa Fe and a devoted Catholic. The bishop enticed Monier to relocate to Tucson so he could design and build the Saint Augustine Cathedral. Instead of using traditional adobe, Monier required fired brick as his primary building material. Brick was not available in southern Arizona and was too expensive to transport in large quantities. Monier must have understood the chemistry of brick making as he formed his own Tucson Pressed Brick Company. There was a plentiful supply of the proper type of clay and sand on the banks of the Santa Cruz within sight of the old Convento. He may not have known that the factory he built was situated directly over 4,000 years of human agarian history! His gothic style cathedral was completed in 1897 with a brick exterior, a year before the bishop's death. This initial exterior appearance was before the expanded design with its signature spires, eventual copper domes and cream-colored plaster.⁵⁰



Fig 30. Quintus Monier.

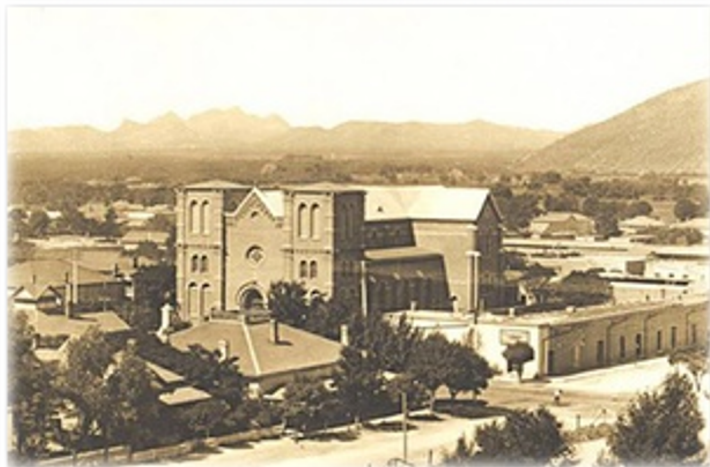
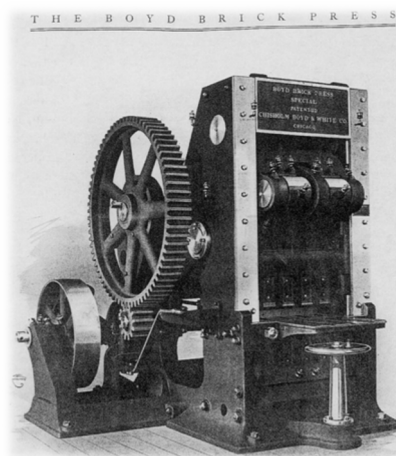


Fig 31. Monier's Saint Augustine Cathedral
(Photos from wikipedia.org)

Following this successful project, the demand for high-quality bricks boomed. This increase of business was well served by a city ordinance requiring new building foundations to be constructed with either cut stone or brick. Monier's Tucson Pressed Brick Company was not without competition, although it was the first and did become the most successful supplier in southern Arizona for over 70 years. Production reached 20,000 bricks a day. Many bricks were shipped by rail to Bisbee during its boom days. Bricks were mechanically pressed in a mold, dried, and fired to achieve their great compressive strength.⁵¹ Much of the University of Arizona campus buildings constructed before 1961 were supplied by the brickyard, first under the ownership of Quintus Monier, and eventually by the last owner of TPBC, John Sundt, and the Sundt Corporation.³ (pg 90-2)

Monier's factory was centered where today's West Cushing Street and South Avenida del Convento intersect. The buildings were later dismantled, and all the above-ground traces removed. Archaeological testing as part of an "A" Mountain drainage project in 1995 resulted in the discovery of subsurface remains of the brickyard, exposing several scove kilns for green bricks, a

transformer house, a dry pan, an elevator, and an engine room. ³ (pg 90-2) Substantial portions of the factory were uncovered in the summer of 2002 as part of the Rio Nuevo archaeology project, including the foundations for the pug mill (for tempering), offices, outhouses, borrow pits, drying racks, and a fuel pit. Pieces of machinery and samples of bricks, railroad tracks, cornice pieces, and tiles were recovered. ³ (pg 218-220) As previously reported, this location was then continued to be excavated deeper down to reveal, strata by strata, dwellings for multiple prehistoric cultures. Prehistoric studies are documented in a 1996 paper and later in the 2000-2003 Rio Nuevo archaeology report. ³



Figs 32-34. Bricks drying prior to firing, finished product, and the type of press used at TPBCO ^{52, 53} (Photo from Diehl and Diehl report)

Nearby sand and clay pits had been dug for providing the brick-making raw materials. After the removal of the brick factory, the city used the clay mining pits as a part of its expanding downtown landfills.

Another successful Menlo Park brick enterprise was the DeVry Brick Company at 1001 West Saint Mary's on the SE corner of Bonita Ave. Lewis DeVry started making bricks by hand. Eventually, his 3,000 square foot kiln could hold 500,000 bricks at a time. Bricks require nearly a month to fire in these kilns. DeVry's construction business also provided material for architects of new University of Arizona buildings. Lewis's son Irving continued the DeVry Brick business until the 70s. ⁴⁷ In addition, the Grabe Brick Company, noted on Map 5, operated within today's Menlo Park boundaries up to 1963 before moving operations.

If you ever find a brick stamped "TPBCO", "LD&Co" for Louis DeVry, or "G.B.Co." for Grabe Brick, keep it, it is valuable, at least among Menlo Park collectors.

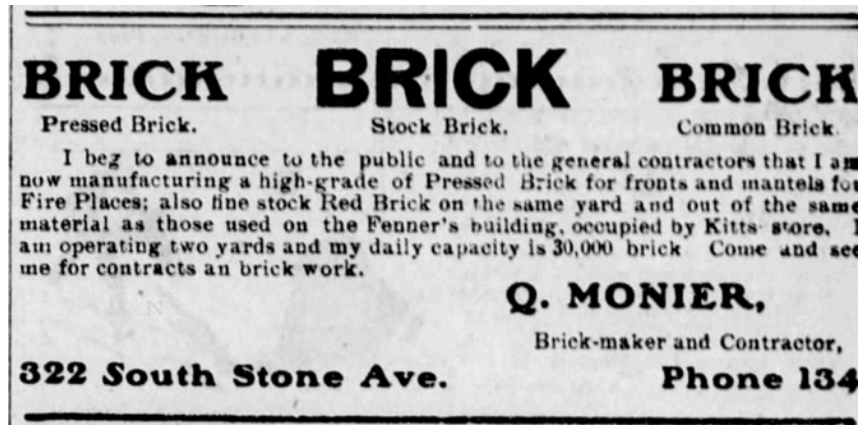
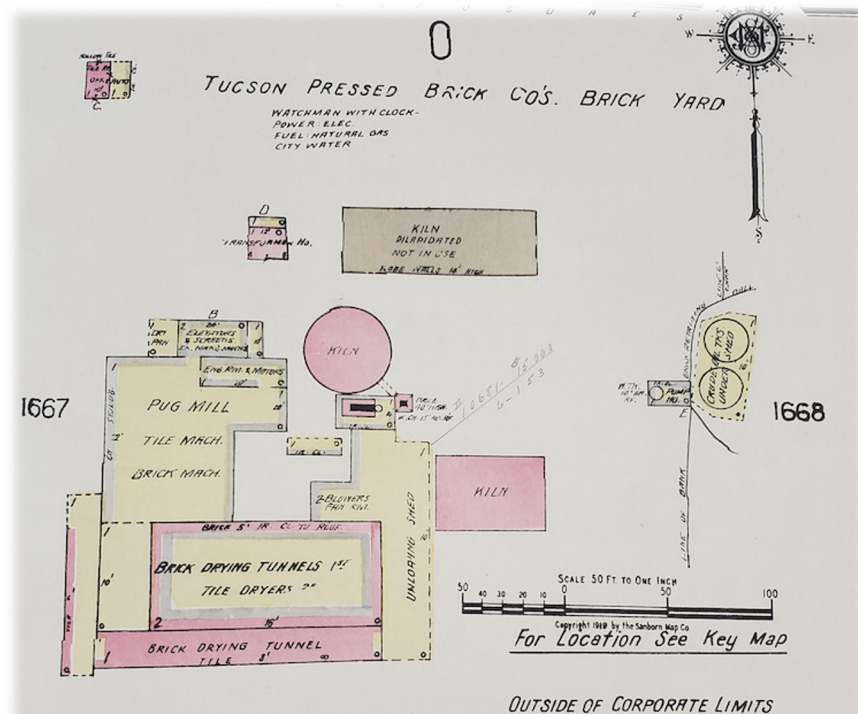


Fig 35. Monier brick ad, Daily Star, May 27, 1903

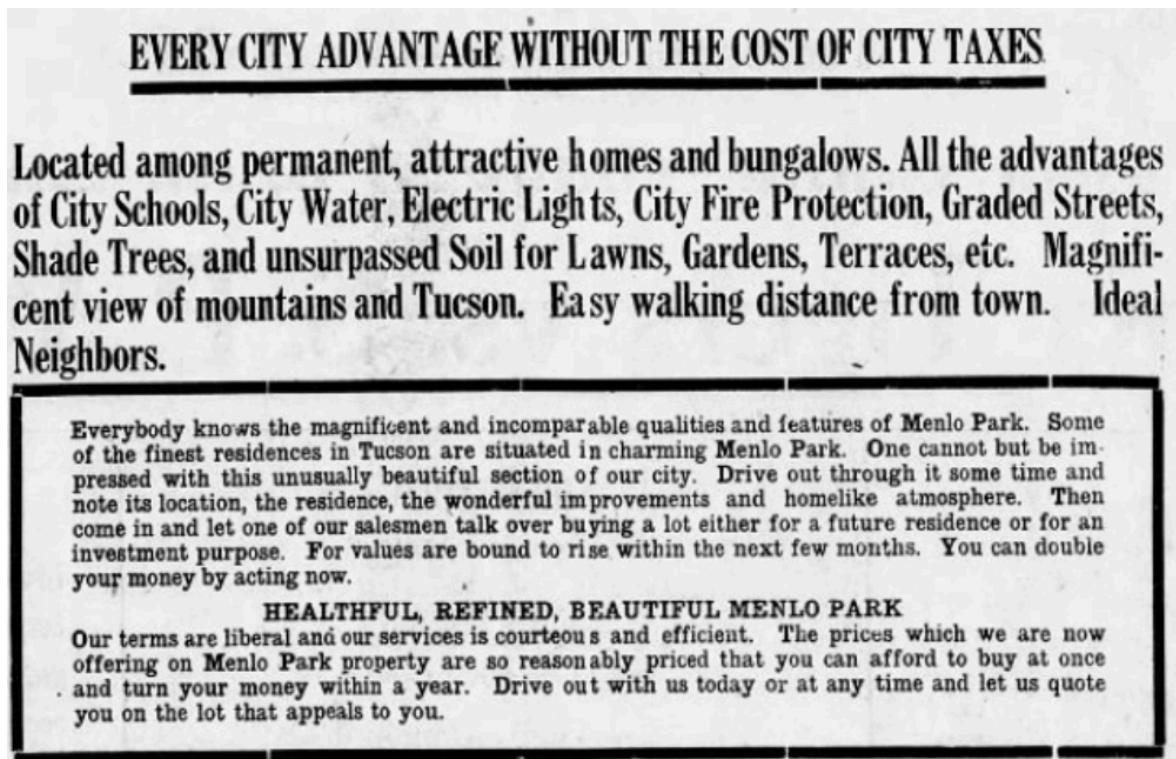


Map 10. 1919 Sanborn map details of the Tucson Pressed Brick Company (Image from University of Arizona Special Collections Library)

Arizona Statehood

The admission of the Arizona Territory into the United States in 1912 was good news to the Menlo Park community. The citizens were probably pleased with the economic progress that occurred downtown. Following World War I, 1914 to 1918, the decade brought the addition of two downtown landmarks, the Hotel Congress and the Rialto Theater. Shortly after, the Temple of Music and Art was completed, and Charles Lindbergh visited Tucson. The United States and Pima County courthouses were completed by 1929, followed by the elegant 8-story Spanish Revival style Pioneer Hotel at 100 North Stone, which was constructed with Tucson Pressed Brick Company bricks. Meanwhile, Menlo Park was home to property owners who experienced a quieter less confining alternative to city life across the river.

Menlo Park, Post World War I



EVERY CITY ADVANTAGE WITHOUT THE COST OF CITY TAXES

Located among permanent, attractive homes and bungalows. All the advantages of City Schools, City Water, Electric Lights, City Fire Protection, Graded Streets, Shade Trees, and unsurpassed Soil for Lawns, Gardens, Terraces, etc. Magnificent view of mountains and Tucson. Easy walking distance from town. Ideal Neighbors.

Everybody knows the magnificent and incomparable qualities and features of Menlo Park. Some of the finest residences in Tucson are situated in charming Menlo Park. One cannot but be impressed with this unusually beautiful section of our city. Drive out through it some time and note its location, the residence, the wonderful improvements and homelike atmosphere. Then come in and let one of our salesmen talk over buying a lot either for a future residence or for an investment purpose. For values are bound to rise within the next few months. You can double your money by acting now.

HEALTHFUL, REFINED, BEAUTIFUL MENLO PARK

Our terms are liberal and our services is courteous and efficient. The prices which we are now offering on Menlo Park property are so reasonably priced that you can afford to buy at once and turn your money within a year. Drive out with us today or at any time and let us quote you on the lot that appeals to you.

Fig 36. Advertisement in Arizona Daily Star, May 21, 1921

Henry Schwalen donated the land for the Menlo Park Elementary School at 1100 West Fresno Street. The original school built in 1918 had only two rooms and served 30 to 50 students. (See photo on page 91.) In 2019 a centennial celebration at the school brought back over 400 former students. One of the attendees said that he recalled that the teachers were mostly Irish and that although 'they ran a tight ship, they were also fondly remembered for being innovative in their teaching methods'. Before this school was built, local students attended Davis Elementary School at Saint Mary's Road and Granada Avenue. Both schools still exist. Older students attended Safford Junior High in the Armory Park neighborhood and Tucson High, which was Tucson's only high school at that time.

Menlo Park School was most recently operated by the Intermountain Academy which serves autistic and other special needs children. Intermountain Academy moved to Commerce Loop in 2019. The 100-year-old Menlo Elementary School is owned by Tucson Unified School District; however, they currently have no plans for reopening for classes. The building currently houses district security personnel and may become a family resource center in the future.

The Ward 1 City Council Office, 940 West Alameda Street, originally was Tucson Fire Station #4. Henry Schwalen also provided the land for this Spanish Colonial Revival building. The city completed the construction in 1929. The nearby Arizona School for the Deaf and Blind and Saint Mary's Hospital depended on this fire station for protection. The firehouse was the favorite field trip for the students at Menlo Park Elementary School.



Fig 37. Menlo Park's original Fire Station. Its firetruck was relocated to the Midtown station. Six full-time firemen were employed. Menlo Park today is now served by the Headquarter station on Cushing Street across the river. Tucson Fire Dept. Station #4 was moved north to Grant Road. (Photo from Arizona Daily Star)



Fig 38. An example of the American-LaFrance auto triple combination pump used by the original Tucson Fire Dept #4 in Menlo Park. This model carried a 100-gallon tank and a pump that could empty the tank in 10 seconds. (Photo from wikipedia.org)

Menlo Park's most historic church, at 1232 West Alameda, is the Methodist Episcopal Church, which opened its doors around 1925. This was the first church built in Menlo Park since the San Augustín Mission chapel was abandoned over 100 years earlier. Locals knew the church as 'Iglesia Methodista'. The historic building still exists at this location, has services, and displays a 'United Methodista' sign. The only other church, the Ranch style *Iglesia Bautista del Redentor* on South Grande was built in 1958. Catholic worshipers have always had to venture to east of the river.

Clearwater Swimming Pool

Recreation in the early 1900s centered around family time. The cottonwood-shaded banks of the river made for fine picnic outings.



Fig 39. A family outing by the shore of the Santa Cruz
(Photo from Arizona Historical Society)

There was a grand swimming pool located south of Clearwater Drive, just east of Grande Ave. The oval shaped pool opened in 1910. It was popular until the 1930s. Folks came from all over town to cool off at the Clearwater Pool. The Austad family created the pool by excavating a depression at the foot of Sentinel Peak and lining it with concrete. The exact location of the pool is uncertain. It is likely that the pool was located southeast of the traffic circle where W Cushing Street and S Grande Avenue intersect. The pool was complete with tower and spring diving boards. The pool was drained frequently, and expelled water irrigated the Austad family's watermelon field. The pool offered picnic tables shaded by cottonwoods and the family provided changing stalls and sold concessions. The water that filled the pool came from a shallow well.⁴⁷ The pool was solar heated, a feature ahead of its time. Austad installed metal water tanks on the south side of the pool and the freshwater for the pool was heated by the sun as it passed through the tanks.

Historian Bonnie Henry reports in a June 28, 1989, Daily Star interview with Eugene Molina, 74 at the time, about when the pool's dance hall burned down. "It was a frame building, with a tin roof and a lot of colored drapes hanging from the ceiling. Just before the flames began to flicker, the building had been the scene of a massive marathon dance. It had been going on for a week. They had a band and a jukebox there. The people danced and danced. As they got exhausted, they'd pass out and were eliminated. When the fire broke out – perhaps caused by careless smoking - about 15 or 20 couples were still on the dance floor. They got everyone out safely, and the couples kept on dancing. Then they were taken in the back of a truck – still dancing – to the Silver Slipper, out on East Broadway."

The pool was never used after the fire. It sat empty for years until one of the Austad boys finally filled it in and built homes on the site of the pool. A nearby street name memorializing the pool West Clearwater Drive, was reduced to a short residential frontage road when The Cushing Street Bridge opened, and West Cushing Street was extended to South Grande Ave in its place.

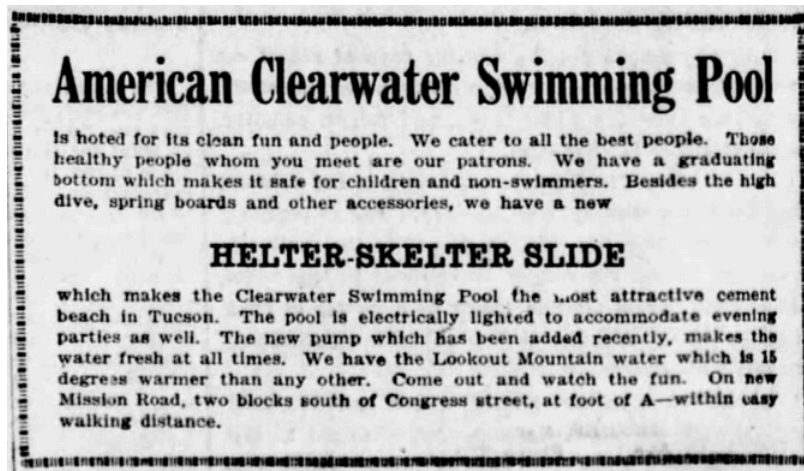


Fig 40. Ad from September 3, 1919, Arizona Daily Star

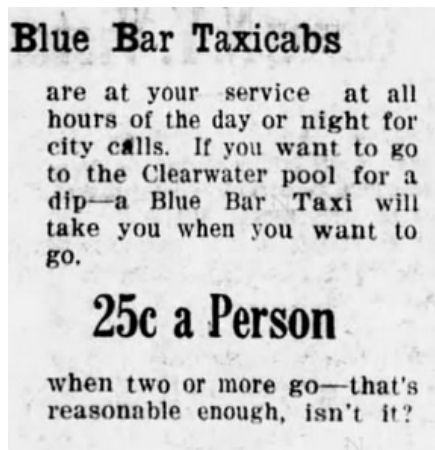


Fig 41. Ad from August 22, 1926, Arizona Daily Star. Clearwater pool was popular with downtown residents too.



Fig 42. The Austad's pool business continued well after the Clearwater pool closed. Ad in the April 4, 1956 Arizona Daily Star

"A" Mountain – Almost Became a Private Resort

Jim Dobson was a real estate broker that worked for the firm that took over Henry Schwalen's Menlo Park development company. He lived at 1004 West Alameda Street, a Spanish Revival house that is wonderfully preserved today. Jim had the ambitious idea that he could own and develop Sentinel Peak, ultimately turning the top of the hill into a resort. The near no-cost method of acquiring the land was the result of his successful 1922 filing for a stone-and-timber claim. These were limited to 160 acres, so his wife Christine filed for another 40 acres. They effectively owned 200 of the full 272-acre mountain. These claims were allowed by the state land office for land that was not useful for farming. Nearly no one in town knew that this was happening at the time. The University's annual "A" celebration lead by football coach Pop McKale had begun years earlier. The hill was popular with Tucson citizens for climbing and exploring. The fine views were enjoyed as much then as they are today. Opponents to Dobson's plot knew of the old Native

American *trincheras*, or defensive walls, remnants of which could be found near the top at the time. There were stories of the Confederate Army's sentry post at the top that had a canvas canopy stretched out for shade. Some of the low boulder walls may have still been in place. This hill had historical significance. Understandably, Dobson's dubious scheme was not popular, therefore civic clubs and power players in town took action to upend the ploy. Ironically, it was the city that first proposed in 1905 that a hotel could be built at the top of the peak.

Dobson was clever, and he had the foresight to hire the City Attorney to represent him. That made it very difficult for the city to act. The 1872 Village of Tucson survey did not include Sentinel Peak; therefore, the owner of the hill was the federal government, and at first the city appeared powerless to fight the claims. Dobson left town for a while, deciding that California was probably a better place to be for a while. As if this tale was not dramatic enough, Jim and his brother finally did reappear in town in August 1925. They had just entered their real estate office when a good acquaintance, Alfred Shackelford, ran into the office and shot Jim three times. Alfred turned himself in for the murder with the claim that Jim Dobson was having an affair with his wife, Agnes. The trial was the talk of the town. The hard evidence of an affair was sketchy except for the fact that for some reason Jim Dobson had taken out a life insurance policy with Agnes Shackelford as the beneficiary.

The determination that Alfred Shackelford's violent action was a result of mental suffering due to the affair led to his acquittal. There was a cheerful ovation in the courtroom, the Shackelfords left with arms linked. Somehow, the insurance company agreed to award the widow Christine Dobson the \$7,500 insurance money instead of Agnes. The city's challenge to incorporate Sentinel Peak into its boundaries eventually was successful, and the Dobson claim was nullified. At hearings in the state land office, the city's winning argument was based on the requirement that stone-and-timber claims must first show the land to be unoccupied. Everyone certainly knew the hill had been enjoyed by of families for a century. Ultimately evidence was provided that many ancient peoples and even Civil War soldiers lived there well before the claims were filed.⁵⁵

UA civil engineering students built the "A" on the peak in 1916.⁸⁵ Around 1931, the city paved the old dirt road up "A" Mountain that had been used since the 1880s.⁵⁶

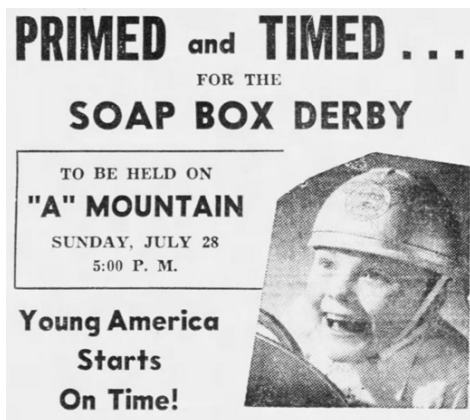


Fig 43. July 28, 1940, Daily Star announcement. We can only imagine the top speed of the winner.

“A” Mountain Quarry

Well before these land claim events, from the late 1800s to the 1930s, the stone quarry on the northeast ridge of Sentinel Peak was mined for volcanic rock. Initially, the hard basalt rocks were used for building material all over town for exterior façades, pillars, and property boundary walls. Extensive architectural use of this quarry rock can be seen today in three historic Menlo Park homes. In addition, the rock was popular for buildings on the University of Arizona campus and the surrounding neighborhoods. The rock was crushed at the quarry. Smaller rocks were used for foundations, and even smaller material was mixed with concrete. A few of the rock crusher foundation bolts are still evident adjacent to the quarry. Vie Griffith's construction company operated the quarry in its final days of operation. Griffith was also the Pima County Assessor at the time.⁵⁷

The rock was blasted out by dynamite, and it was reported that the explosions caused cracks in houses throughout Menlo Park. A July 1927 newspaper article reported that some rocks blasted from the quarry showered onto the Clearwater swimming pool a quarter of a mile away. Swimmers were in the pool at the time.⁵⁸ Henry Schwalen became opposed to the mining and campaigned to have it stopped. The city closed the privately-owned quarry. The rest of the mountain was designated a city park. The quarry and surrounding 20-acres remain in private ownership. At one time the quarry pit was much deeper. In the 1940s the city disposed of unwanted fill dirt in the pit. The storage room with a metal door still seen in the larger pit was used for storing dynamite well after the quarry was closed.⁵⁹

A local family that owned the quarry and adjacent land since the 1950s supported two proposed projects for the quarry.

In 1987, World Entertainment Services applied to the city to permit an “A” Mountain Amphitheater that would seat 15,000 spectators. The ward councilman at the time said that the parking lot alone would cover the “A” Mountain landfill. Other council members worried it would pose too much competition to the convention center. Mike Love of the Beach Boys was a supporter of the idea.⁶⁰ It was proposed that guards on horseback would ride along the rim to prevent people from trying to sneak into a show and possibly fall to their death. The sound level of rock concerts was a concern to the neighborhood who were initially fascinated by the concept. Residents rejected the idea mainly because they were opposed to “out-of-town developers coming in with grand plans for their backyard”.

In September 2004, Michael Joplin, brother of the late Janis Joplin, proposed building an artist community in the main quarry. He would have funded the project from the Joplin family trust. Guidance for this project came from Simon Donovan, the creator of the Rattlesnake pedestrian bridge east of downtown. The community would have the goal of offering a retreat for the artists who had recovered from substance abuse. The proposed name was *The Quarry: Artists in Recovery*. The owner of the quarry went on record as supporting the project. A respected local architect, Bob Vint, proposed that living units could have been built into the walls of the quarry somewhat like “monk cells at a monastery.” The quarters would have been stacked three stories high against the 100-foot-tall quarry walls with roofs covered with cactus gardens. The entrance was imagined to be a tunnel aligned with the rising sun. Again, the neighborhood was initially

willing to hear about the plans. Residents must have been willing to consider ideas for the rehabilitation of the hole in the ground.⁶¹ No newspaper articles were found to indicate why the project was never completed. Michael Joplin remains a Tucson artist specializing in glass creations.

The two Tucson Mountain peaks within Menlo Park boundaries were spared of extensive mining other than the rock quarry. Neither of these hills are formed from volcanic cores, rather they are the remains of eroded flanks of broad flat lava flows from a central caldera approximately 10 miles to the west. In addition to the quarry, rock mining probably took place in the pit on the south-facing slope of Powderhouse Hill (the hill between Sentinel Peak and Tumamoc Hill). The tailings on the east-facing slope of Powderhouse Hill are not well documented but are believed to be either an exploratory mine or a rock quarry. The robust concrete and stone bunker on Powderhouse Hill served in the past as a storage room for mining explosives and currently is a canvas for some impressive graffiti. A hillside cut along the ridge of “A” Mountain peak is seen just below the *ramada* west the parking lot and above the road. This light-colored cut is speculated to have been exposed as material excavated during the roadmaking process and provides a examination of the hill’s interior rock characteristics.

Valuable crystal deposits of wulfenite and vanadinite were mined west of Menlo Park in Tucson Mountain Park. These minerals metamorphized when ancient liquid magna flows encountered and chemically mixed with overlaying rock that contained lead. Vanadium is useful as a steel alloy. Scattered through the entire Tucson Mountain range are remnants of over 120 mines and quarries. The Old Yuma Mine in the Tucson Mountains yielded dozens of precious or valuable industrial mineral deposits that formed in dikes filled by liquid lava 20 to 30 million years ago. Fortunately for current Menlo Park residents, Sentinel Peak and Tumamoc Hill contained little of value in metals or crystals. The hills mostly remain in a state that provides a more favored long-term treasure, the spacious views of well-preserved desert hillsides.⁶²



Fig 44. Other theories of the Peak’s formation also exist
(Photo from the Googlesphere)

Tumamoc Research Station

Some early Menlo Park residents were interested in arid-land botany. In 1903, the retired industrial titan and philanthropist, Andrew Carnegie, shared some of his wealth by establishing the Carnegie Desert Laboratory on Tumamoc Hill. The founding scientists were Daniel T. MacDougal, the assistant director of the New York Botanical Garden, and Frederick V. Coville, a chief botanist for the U.S. Department of Agriculture. These gentlemen were fascinated by the desert plants found around the west that were able to thrive in environments of extreme seasonal heat and long periods of drought. Tucson was selected after the two scientists explored the Southwest for an appropriate research location. Their search ranged from El Paso to the east, Sonora to the south, west to the Mojave Desert and north to the Grand Canyon. Tucson appealed to them because the desert surrounding Tucson was "the richest and most diversified vegetation of any area in the arid part of the United States." An additional benefit was the presence of the University of Arizona which was established twelve years earlier.⁶³

Both men were hearty explorers. On a trip through Navajo land, MacDougal's Navajo guide abandoned him and took both of their horses. MacDougal managed to walk to a camp near Flagstaff. Coville had traversed Death Valley and other isolated regions of the world. Both visited the bottom of the Grand Canyon. From their earlier desert exploits, the names of many desert plants include the *macdougalii* or *covillea* species designation.⁶³

The city of Tucson donated the land for the Desert Laboratory project, 840 acres, and constructed a road to a semi-flat building site halfway up the peak. The city also supplied water to the base of the hill by providing a well and steam pump-driven water lines constructed in the Menlo Park area. Transporting water up to the hill for mixing mortar was one of the more expensive parts of the project, although rocks for the buildings were abundant. The slate for the roofs was imported from the East. The original Santa Fe style buildings had cooling features designed by the scientists themselves. Broad overhanging eaves provided a path for cross-ventilation through the attic. The design prevented the rooms from becoming too warm to work in, even in the summer. The staff grew, and lodging expanded from tents initially erected at the base of the mountain to homes built in Menlo Park that were more suitable for families.⁴⁴ The Institution purchased land and an adobe house in the McKee subdivision of Menlo Park east of Saint Mary's Hospital. The house served as the administrative office, and the land was used for studies of plant acclimation. The Spalding-Shreve permanent vegetation plots on Tumamoc Hill are among the oldest continually monitored vegetation plots in the world and provides a unique perspective on change and stability in desert vegetation.¹⁸





Fig 45. Founders of the Desert Laboratory. Robert S Woodward, president of the Carnegie Institution, seated in the center during a 1908 visit. MacDougal is to his left. Godfrey Sykes, who was instrumental to the expansion of the Laboratory, is the gentleman looking right, toward his wife. ⁶³
(Photo from the Arizona Historical Society)

The name Tumamoc comes from the O'Odham name for the horned lizard found on the hill. The richness of vegetation on Tumamoc today is a result of the combination of the land having been fenced since 1907 and the clay soil derived from the weathering of various mineral rich volcanic basalts.

The flat top of Tumamoc Hill was the home for entire villages of the Early Agricultural era and later, Huhugam cultures. Massive *trincheras* which are stacked-stone walls, and terraces encircling the hilltop represent one of the earliest communal-scale constructions in the Southwest of the United States. The *trincheras* are assumed to have been assembled for defensive purposes, however, it is impossible to confirm this for certain. One hundred fifty-two enclosures, mostly pit style houses, have been identified belonging to the Tortolita Phase of the Early Agricultural culture. Unlike the ancient dwellings buried under the floodplain near the riverbanks, the tops of circular surface-level stone walls are visible thousands of years after they were abandoned. Four hundred and sixty petroglyphs on the hill, representative of archaic to Early Agricultural cultures have been catalogued. The original hilltop mesa-town was abandoned as a residential site approximately 1500 years ago. It became a place for ceremony and pilgrimage. Then Pre-Columbian millennium modifications in village design begin to appear. These changes included larger *trincheras*, the addition of courtyards, terraces, and larger communal houses. These newer features are attributed to a sizable Huhugam occupation. Ceramic artifacts from all ancient cultures are represented. The O'Odham and their ancestors maintained a continuum of ritual observances on the hill dating from the pre-Spanish occupation. Over the last 100 years, scholars from the University of Arizona have been actively mapping and cataloging the unique characteristics of these two overlaying ancient hilltop towns. The existence of walls and villages endure but are not always evident from the paved road. They mostly go unnoticed by the thousands of daily walkers that value the hill for the same views and escape from the flatlands below that attracted the ancient ones.



Fig 46. Stone terrace wall or *trinchera* near the top of Tumamoc Hill
(Photo from the University of Arizona Tumamoc Hill Cultural Resources Policy report)

The Carnegie Institution ended its funding of the Laboratory in 1937 after the Great Depression diminished the value of their holdings. After three decades of exploring the burgeoning field of desert ecology, the property was sold to the United States Forest Service for one dollar in 1940. The University of Arizona had turned down the offer to purchase the property. However soon after, a building was made available by the Forest Service for the University's Geochronology Laboratories for "earth-time studies", along with other areas of research. Pollen and spores were the study subject, since they are durable, and can survive hundreds of millions of years as fossils. University research was slow to minimal during the decades of the 1940s and 1950s. The Forest Service permitted damaging construction to occur on the hill. A road was paved to the top, clay mines were leased, and the U.S. Marine Corps conducted training operations on the hill. Also, the Forest Service allowed the installation of trash pits, a fire outlook, four gas pipelines, and eight communication antennas plus their associated electrical power easements.⁶⁴

The University paid substantially more than a dollar for the property lease in 1960. Governor Rose Mofford officially designated 200 acres of the hill as State Trust Land in 1990 for the benefit of the University. Nineteen years later 320 additional acres in the western part of the hill were purchased from the State. Current study subjects include bees, owls, the effect of drought and invasive buffelgrass on the desert, soils, spiders, and the wealth of indigenous plants. The paved road up Tumamoc Hill, leading to Tucson's 'Acropolis' is one of the most popular recreational walks in the city.

Architectural Styles of Historic Homes

It was mentioned earlier that the adobe houses on the banks of the Santa Cruz were looked down upon by the early Anglo settlers. Adobe, as a material, was readily available. It was unfired which made it inexpensive, however it would deteriorate. The newcomers failed to realize adobe was the desert's finest building material for insulation. The newcomers had a different idea for construction based more on familiar styles and were willing to endure freezing in the winter and stewing in the summer to avoid living in one of those ugly mud houses.²¹

A variety of eastern architectural style homes began to appear in Menlo Park starting in 1905. The two popular styles up to the 1930s were either Spanish Colonial Revival or Bungalows. Approximately a hundred of each style were built and most are still occupied today. In the late 1940's the neighborhood filled out with historically recognized Ranch and Modern architectural styles.⁴⁷



Fig 47. Example of simple Spanish Colonial Revival style home. Variations exist commonly with shallow pitched 'shed' roofs.



Fig 48. Example of a simple Bungalow with local Sentinel Peak basalt columns. There are several variations on this style. This design has a cross gable.



Fig 49. Bungalow with typical front gable, offset triangular porch and roof knee braces.



Fig 50. James Dobson's exceptional Spanish Colonial Revival style home.



Fig 51. A late 1937 Spanish Colonial Revival style



Fig 52. One of the architectural jewels, the Chicago -style Bray Valenzuela House.
(All photos from Google.com/maps and author)

The Bray Valenzuela House on Grande offers an example of Prairie-style design. It was designed and built in 1917 by the prominent architect William Bray. This house is in the Frank Lloyd Wright style popular in the period. Although his work is not present in Menlo Park, Henry Trost was another graduate of the Chicago School and inspired other local builders. Trost was a prolific designer of iconic downtown buildings for a few years around 1900 before moving on to become the driving force behind El Paseo's 1910 downtown Chicago School art deco high-rise construction. (See www.casaroja.us/Henry-Trost for Trost's contribution to Tucson.)

Some original adobe structures still exist in the neighborhood. Three of Tucson's six remaining homes constructed entirely of lava boulders are in the Menlo Park area. The Boudreaux/Robison two-story house with arch windows designed by Henry O. Jaastadon on Westmoreland Avenue is an exceptional example. (Visit wikipedia.org/wiki/Henry_O._Jaastad.) A striking aspect of these

homes is the lack of any horizontal mortar lines. These ‘volcanic stone vernacular’ houses pre-date the 1930 closing of the nearby quarry.⁴⁷



Fig 53. Boudreaux house. At times it housed the Copper Bell Bed & Breakfast and the Las Piedras Rest Home. Builder Leon Boudreaux managed the rest home and lived in this house until his death in 1950. He had four children. This home includes an old copper bell brought from a German church.



Fig 54. The exceptionally well-preserved two-story adobe house that Henry Schwalen purchased sometime after his 1905 arrival in Menlo Park. Like many of the homes of this period, it occupied a 20-acre or more parcel of land. The interior of this home contains a ‘truth window’, an opening that reveals an earlier adobe wall, from the core 1797 farmhouse. It is possible that this older dwelling is one of the only farmhouses in Carlton Watkins’s photograph of the Menlo Park flood plain taken from Sentinel Peak in the 1880s, page 31.

(Photos from Google.com/maps and author)

Menlo Park was originally designated as a Multiple Property Resource area on the National Register of Historic Places in 1992 and expanded in 2010. Over 400 homes qualified for inclusion as ‘contributing’ historic value. The Menlo Park district is thought to have Tucson’s highest density of historic bungalow style homes.

The photos and descriptions of the second phase of residential architectural development shown on this page are taken from the 2010 National Register of Historic Places Registration Form ⁸⁸



Transitional Ranch, forty-four examples. This style pre-dates the fully developed Ranch that flourished after World War II. This residence is a simple, side-gabled, massed-plan building type. Steel casement windows appear on the style. The eave does not overhang deeply as does that of the Ranch style.



Ranch (1935-1970s): The neighborhood has 105 examples of this style. Menlo Park lots are relatively narrow but deep, so few homes have the characteristic wide spreading Ranch style. However, some are placed longitudinally on the lot. Most examples are modest, side or cross-gabled, brick residences.



Modern (ca. 1940-1980): Menlo Park has 156 such style residences. Making it the most popular in the historic district. Modest, Modern style residences are distinguished by flat or low-slope front gable roofs with wide fascia bands. Most have painted concrete block walls and steel casement windows.

Brick use in Ranch homes is common throughout the neighborhood, many built as late as the 1980s before this material became much more expensive than frame and stucco. Some original brick homes have since been painted or covered with stucco as the look of brick may have changed in favor.

In the late 1960's a style identified as Neo-Eclectic Spanish Colonial Revival was popular in the final historic neighborhood build out. ⁴⁷



Sentinel Peak (“A” Mountain)

Barrio sin Nombre

North Menlo Park

Map 11. 1936 Pima County map of Tucson Area. The white/black dashed roads are believed to be the only paved roads at the time. ⁸⁵⁾

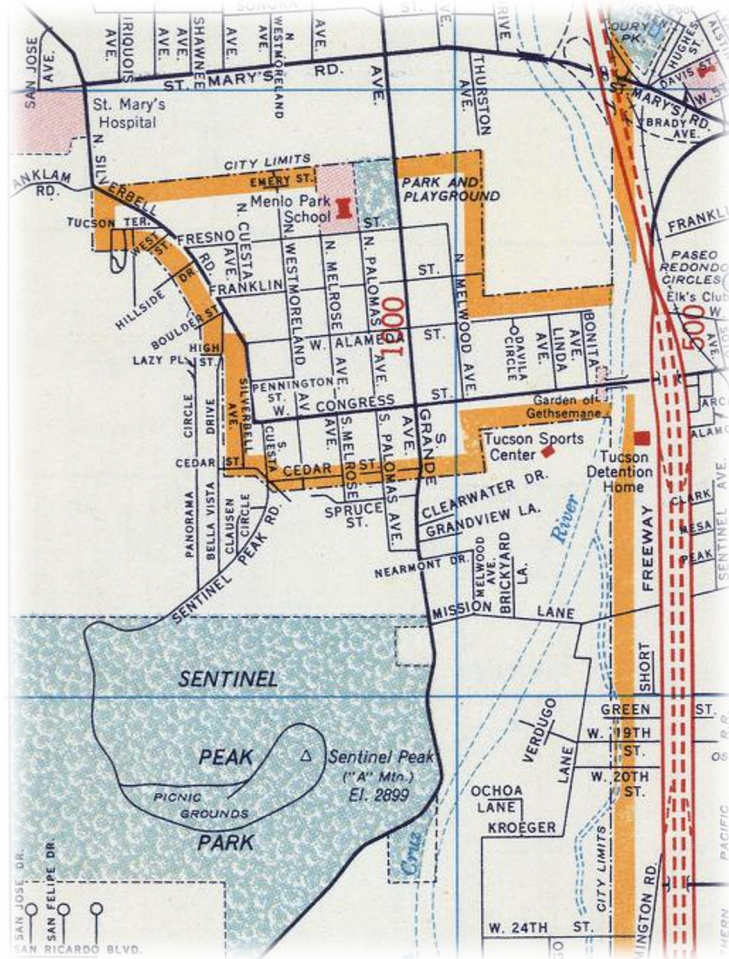
Post World War II Menlo Park Development



Map 12. 1947 Sanborn map of Menlo Park. The full map includes Menlo Park Elementary School and adjacent public park, north of Fresno Street, which is not shown on this map. Notice the number of vacant but platted residential lots. Even though developers had been promoting the construction of homes in Menlo Park for 40 years, there were still many lots available. In the original map, pink buildings were labeled as brick, the blue as 'tile' construction, and yellow was not labeled (possibly newest additions). Note the narrowness and depth of the plats. In time this has led to the addition of many backyard guest homes. The mapmaker chose not to show anything east of the Melwood houses, probably because it was mostly vacant land. Nor does the map show the populated streets south of Congress Street.

(Image from University of Arizona Special Collections Library)

After the war, Menlo Park experienced its resurgence. There was a demand for affordable housing with the amenities of yards, less city noise, yet ready access to downtown.



Map 13. 1956 Shell Oil street map illustrating city annexation boundaries of Menlo Park and the narrow connection to the east-side.

Note in Map 13 that Saint Mary's Road and Congress Street have bridges over the Santa Cruz River as expected, while West Mission Lane clearly crosses the river without a bridge. A bridge was planned for West Mission Lane however the neighborhood blocked its eventual construction, partly out of concern for damaging the Spanish heritage that it would have bisected. The narrow water channel between the Santa Cruz River and the freeway is the original path of the Julian Wash. The Tucson Sports Center which is shown to be just north of the current Mercado Annex was the site of advertised professional wrestling matches. Hubert Humphry gave a presidential primary campaign speech there in 1960.

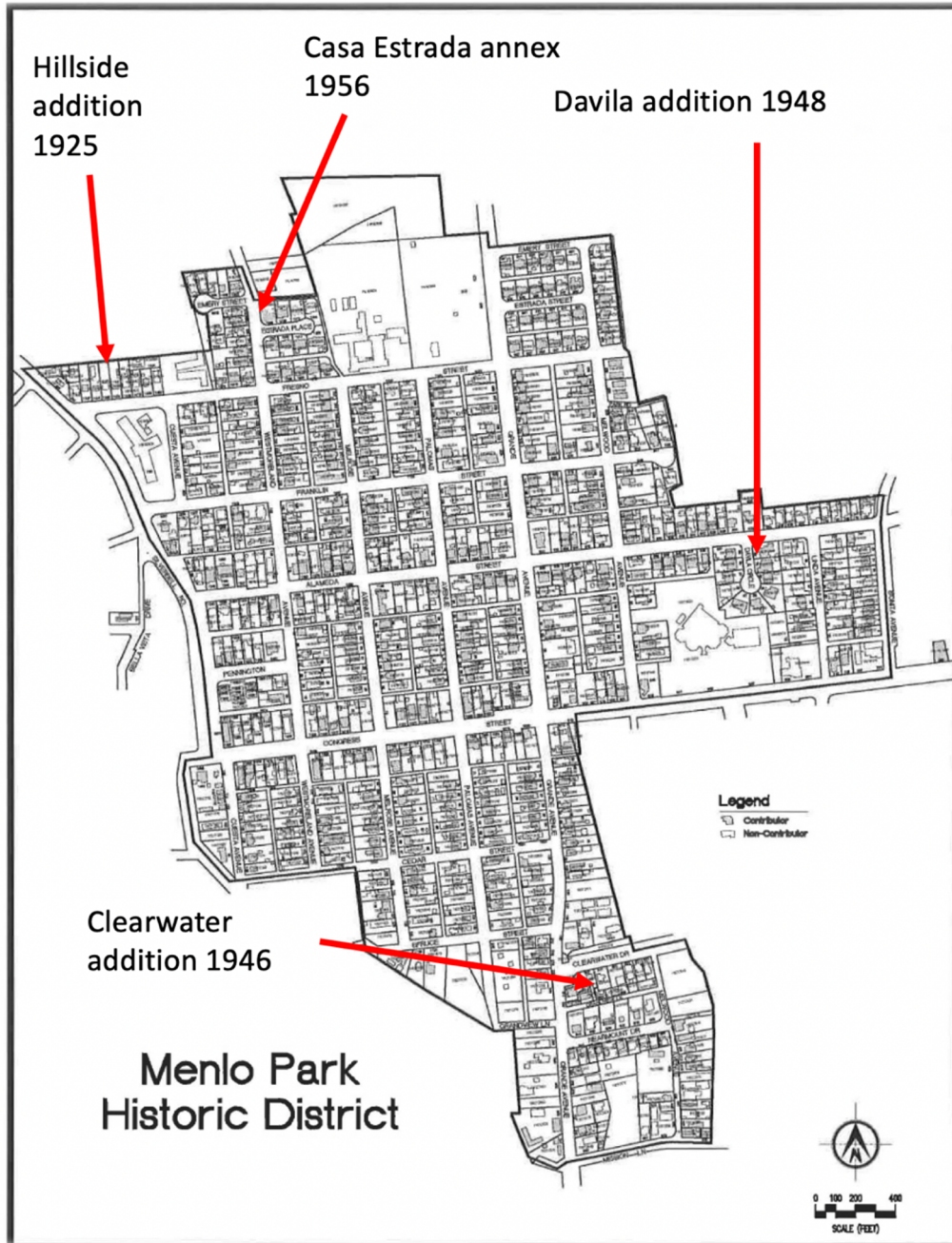
Interviews with locals Matt Perri and Oscar Morales provided a picture of how the neighborhoods looked around 1950 when they were youths. They describe the neighborhood as being well integrated with Spanish and non-Spanish speaking families, as well as some Irish and Filipinos and likely other immigrant families. They did recall that African American families were not treated fairly in those times and were forced to live in separate neighborhoods. There were haberdashers, fire chiefs, film projectionists, and teachers living in Menlo Park. The density of homes was low, about a third as dense as today, primarily with homes of the bungalow style and most build decades before the 1950s. The vacant lots were populated with mesquite trees and were

called bosques. A sandlot baseball field existed at Melwood Ave and Alameda St. There were few houses closer to the river where the old brick works were located. Abandoned barrow pits would fill with water and served as swimming pools. There was only one house on Linda Ave, now 17 N Linda Ave which is the pink bungalow that Pima County has renovated and now serves as a place for meetings and cultural events. Alameda St provided a footpath to downtown (there was no freeway then) and would run past the impressive homes on the east side like the Manning House. South of the neighborhood were some dairy farms, and hobos would camp out on the foothills of Sentinel Peak. The old gas station on Melwood Ave and West Congress was the MacDonald station. A Greek gentleman sold food out of the side window. Another gas station called Curl's Station was located on the SE corner of Grande Ave and West Congress St. which still displays an updated mural of the Virgin Mary. Across W Congress was Sloan's drug store. The SW corner was the location of the "A" Mountain Grocery Store. Farther south on South Grande Ave, a Wings Market was believed to have served the local community of South Menlo Park.

Located in the general area along the south side of West Congress St closer to the river were several businesses that are not shown on most maps. The Carl Monthan Nursery and the Rossi Flower Shop opened in the 1930s. The Callahan Hatchery was located here in the 1940s as well as the Horbacher Pumps and Equipment Company. The Austad Welding Shop later became the Austad Steel and Construction Co. located at 820 West Congress Street. They employed many of the local teenagers in the summer. Other sources refer to a small grocery store and a gas station and two residences filling out the area that is now occupied by the Sentinel Plaza and West End Station high rise apartments. The Tucson Detention Center occupied the current location of the Red Lion Inn. Panorama Estates and Barrio Kroeger Lane subdivisions embedded in today's Menlo Park official boundaries had been established. 22nd/Star Pass Boulevard doesn't yet appear on the map. One map from the 1960s shows a school bus yard near the current Caterpillar headquarters building.⁵³

Construction of the public park northwest of W Fresno St and N Grande Ave was started by the city in 1966. The vacant land was purchased from William and Pauline Mitchell who appeared to be land speculators. The purchase price was \$14,000. It was an expansive park for its time and the only one in town next to an elementary school.⁶⁶ One article claimed that Menlo Park's soccer field was the first in Tucson.⁶⁷ The swimming pool was added in 1968. Part of the old DeVry brickyard operations is located under the current north soccer field in the park. This may be the cause for the slow sinking of the field.⁶⁸

Monte Davila was born on May 4, 1896, in Durango Mexico. In 1937, he opened La Concha, an old-style drug store at 415 S Meyer Ave. The private residence still displays this business sign. In 1942, he opened the Midtown Liquor Store at South Stone and 14th St which is continued to be owned and operated by the family. The family lived at 32 N Linda Ave when Monte bought a two-acre parcel of land in the Menlo Park neighborhood and, in 1948, Davila Circle was officially recorded with Pima County as the Davila Addition. Monte died on Sept 10, 1962, in Tucson. Many of the homes on this eastern side of Menlo Park's residential neighborhood are described by historical architects as Neo-eclectic style, often inspired by a Spanish Colonial Revival influence.⁸⁷



Map 14. Later additions to Menlo Park
 (Image from 2010 National Register of Historic Places and authors notes)

Urban Renewal

The City of Tucson moved to annex Menlo Park in 1927. ⁶⁵ In a 1932 editorial in the Arizona Daily Star, a Menlo Park citizen explained that the neighborhood protested the 50% increase in water charges because of annexation. The protesters won a lawsuit against the city, yet refunds were never forthcoming.

A later editorial in October 1963 described the land between the freeway and the river as largely vacant and therefore 'wasted'. The Santa Cruz River is described as an eyesore, its banks filled with rubble. The author advised that this strip was ready for development, as far south as 36th Street. Indeed, the 6 motels and 3 fast-food shops that came into existence along the west frontage road between Congress Street and 22nd Street were able to take advantage of the available real estate and ready permits from the city's zoning department. ⁶⁹

The construction of the 14-mile Santa Cruz River Park began in 1977 as part of the effort to clean up the wildcat dumping on the banks of the river. The riverbed was dredged at this time to help contain floodwaters.

The Austad family's 6 lots immediately south of W Clearwater Dr were built out starting in 1946 as the Clearwater Addition. Uniquely, steel from their nearby business was a common structural component. Other city permitted homes on 45 lots total were the Casa Estrada and Casa Estrada Annex, located west and east of the public park. These were built by Estes Brothers Construction Company in 1955 and 1956. A common design of painted Modern style was used throughout.

The boundaries of Menlo Park Phase I as described in a 1966 newspaper article are stated as extending from Fresno Street on the north, and Spruce Street on the south. In a 1966 survey of the neighborhood, 184 of the 323 homes in Menlo Park I were determined to have violations of the city's new housing code. It was the first neighborhood to be inspected by the city. It seems this new code may have followed a period of non-permitted construction and improvements. The city felt that the neighborhood was sound but was beginning to deteriorate. Residents took advantage of federal aid programs that provided grants and low-interest loans to make the required proper safety repairs. By 1969, 90% of the owners had completed the requested repairs. 59 owners received federal grants based on financial and health status, and 125 owners used their own money to complete the work. ⁷⁰ Menlo Park II was designated the homes south of W Spruce St on either side of S Grande Ave. The Menlo Park II was next in line to be inspected by the city. Many of the older homes at this time were built of adobe. Termites favored the straw that was used as a binder in the mix of the older adobe blocks which led to the need for many of the repairs. Some bedrooms still had mesquite vigas and were considered too small by code, so additions had to be made.

A 1970 article in the Arizona Daily Star stated that 207 Menlo Park I and II violations had been issued and resolved. Homeowners were assessed 1/3 of the cost for street paving, installation of streetlights, storm drains, and sidewalks. Palms, olive, privet, ash, and mulberry trees were also planted. Menlo Park had a history of flooding from the Santa Cruz River, and the presence of dirt streets was a problem. Large storm drains along Congress Street, and Fremont Street were welcome improvements, as were levees along the west banks of the river near Sentinel peak.



Fig 55. 1956 view of the intersection of West Congress Street and the freeway, prior to the interstate overpass. The orientation is looking toward downtown. ⁷¹

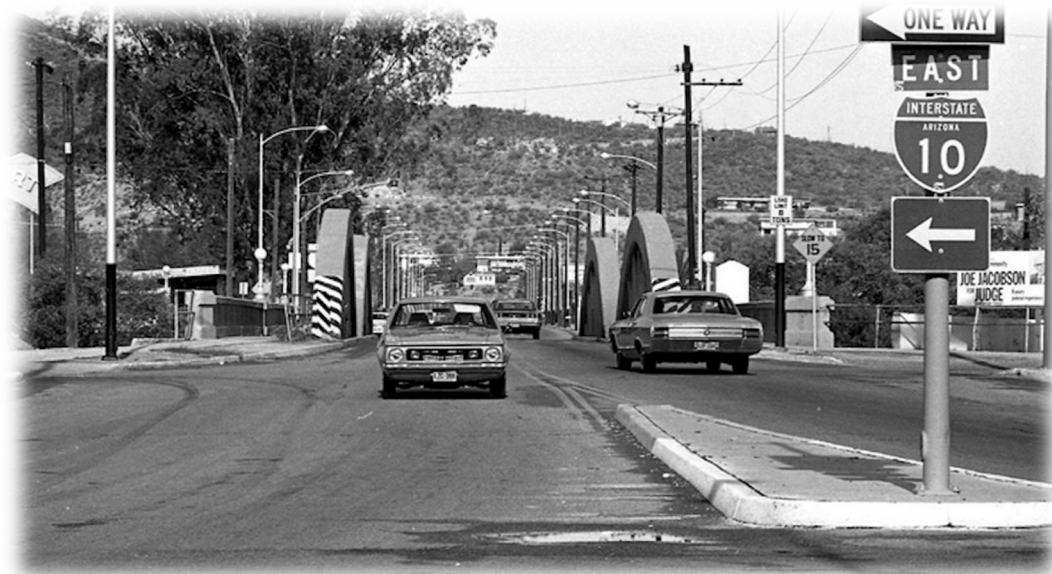
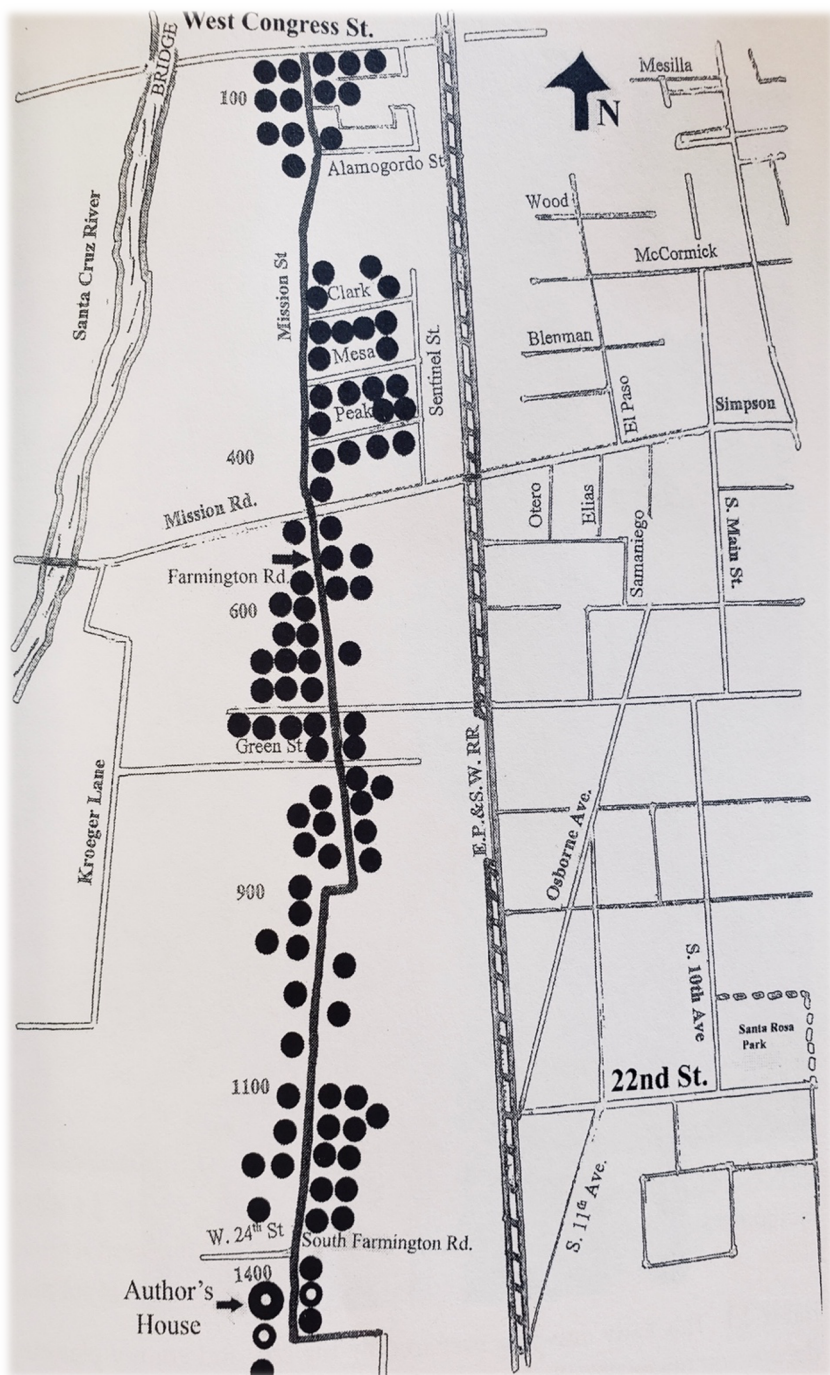


Fig 56. 1970, West Congress Street looking toward Menlo Park and the bridge over the Santa Cruz River. Plans were underway to replace the bridge. The current bridge spans one of the narrowest sections of Santa Cruz River channel in the downtown area. ⁷¹

(Photos from Tucson.com)

Impact of the I-10 Freeway Construction Project

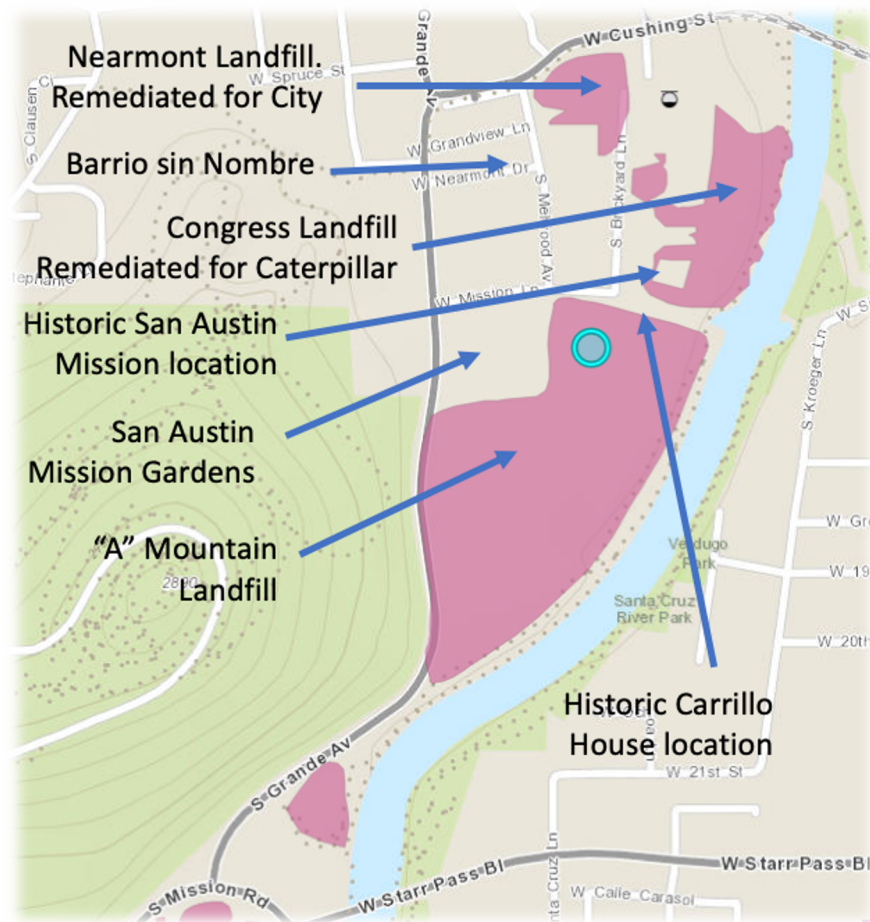


Map 15. Figure taken from page 57 of Lydia R Otero's 2019 insightful biography⁸⁶ showing the homes lost to the construction of the Interstate Freeway I-10, in the 1950s. The black dots are the author's identification of homes demolished; their original sites mostly lay underneath the current freeway.

From the goodreads.com review: "Otero takes readers to a world that existed on the physical and social margins and describes how a new freeway created a barrier that greatly influenced formative aspects of Otero's childhood. The author examines the multiple effects of environmental racism, while the lack of services and low expectations of the schools Otero attended are further examples of the discrimination directed at brown people."

A common injustice from the freeway completion was the low-income owners of these lost homes were not paid adequately to acquire new homes of equal value.

Landfills, and Their Legacy



Map 16. Map of the city's 'Area of Environmental Concern' for the "A" Mountain Landfill ⁷² Various landfills indicated by the red-colored areas. (Image from City of Tucson)

Starting in 1957, the city used the vacant land between the river and South Grande Avenue, south of what is now West Cushing Street for an series of landfills. The property was conveniently close to the city and undeveloped. Cushing Street, west of the river, was known as Clearwater Drive before the installation of the Cushing Street bridge which did not exist at the time the dumps were used. The 100-year-old neighborhood northwest of the 30-acre "A" Mountain Landfill is Barrio sin Nombre. It is unlikely that the residents welcomed or were asked about the addition of dumps adjacent to their homes. Later many homes on the former S Brickyard Lane west of the Congress Landfill were bought and torn down by the city adding additional angst by the local neighborhood.

The "A" Mountain Landfill served the city between 1953 and 1962. The Nearmont Landfill operated between 1960 and 1967 but was remediated in 2020 and 2021. The northeast section, called the Congress Landfill, was also remediated for the Caterpillar Headquarters project in 2018. Remediation required the complete removal of the old dump material, replacing it with clean fill and elevating the pad approximately 15 feet for increased protection from potential floods. During

both remediation projects, a steady stream of dump trucks traveled to the Los Reales Landfill to deposit excavated landfill material and returned with clean fill. Remediation for these two smaller dumps is estimated to have cost one million dollars per acre. The southern portion of the Congress Landfill has also been removed at this time and lies partially underneath the footprint of the long lost San Agustín Mission. The Misson Garden area was not affected by the landfills.⁷²

The “A” Mountain Landfill is monitored quarterly for methane and carbon dioxide accumulation. Low concentrations of volatile organic compounds (VOCs) are found in shallow wells near the landfill. The concern of city officials is that surface water can percolate through the landfill to the water table below. The monitors detect if the transitional water collected in the landfill develops sufficient head pressure to penetrate the underlying clay soil. This clay layer is the only barrier for this ‘perched’ water in the landfill. Clay provides a good, however not a perfect, barrier. There were no liner barriers installed in the creation of these landfills, which is a common practice today. In a 1986 survey of all the city’s landfills, Pima Association of Governments gave the “A” Mountain Landfill a “C” rating indicating that the potential existed for groundwater pollution. In fact this was the only city landfill with a rating below “A” status. After that report, the city installed the monitoring wells. With this “C” rating, ordinances prevent any future surface use of the landfill that would include plant irrigation or water features. A study was performed to determine whether the Santa Cruz River’s periodic flood water could ever contribute to elevating the local water table to the level of the deepest layer of the landfill. It was determined that this was not a risk because the water table was already easily too low for this to happen.⁷² The “A” Mountain refuse depth is typically 15 to 30 feet deep but the maximum depth is 40 feet at the northeast corner. At this time future periodic studies of surface water depth were canceled. However, in 2019, reclaimed waste water was reintroduced into the Santa Cruz just south of Menlo Park by the city water department. Tucson Water officials were surprised to learn that this low but continuous flow of effluent elevated the water table to near the “A” Mountain Landfill’s depth. This situation led to concerns that leaching of contaminants from the landfill might be possible. The flow of the recharge water was significantly reduced until the elevated water table would not reach into the landfill basin. In 2020, soil dredged from the Santa Cruz River bed was placed on top of the “A” Mountain landfill.

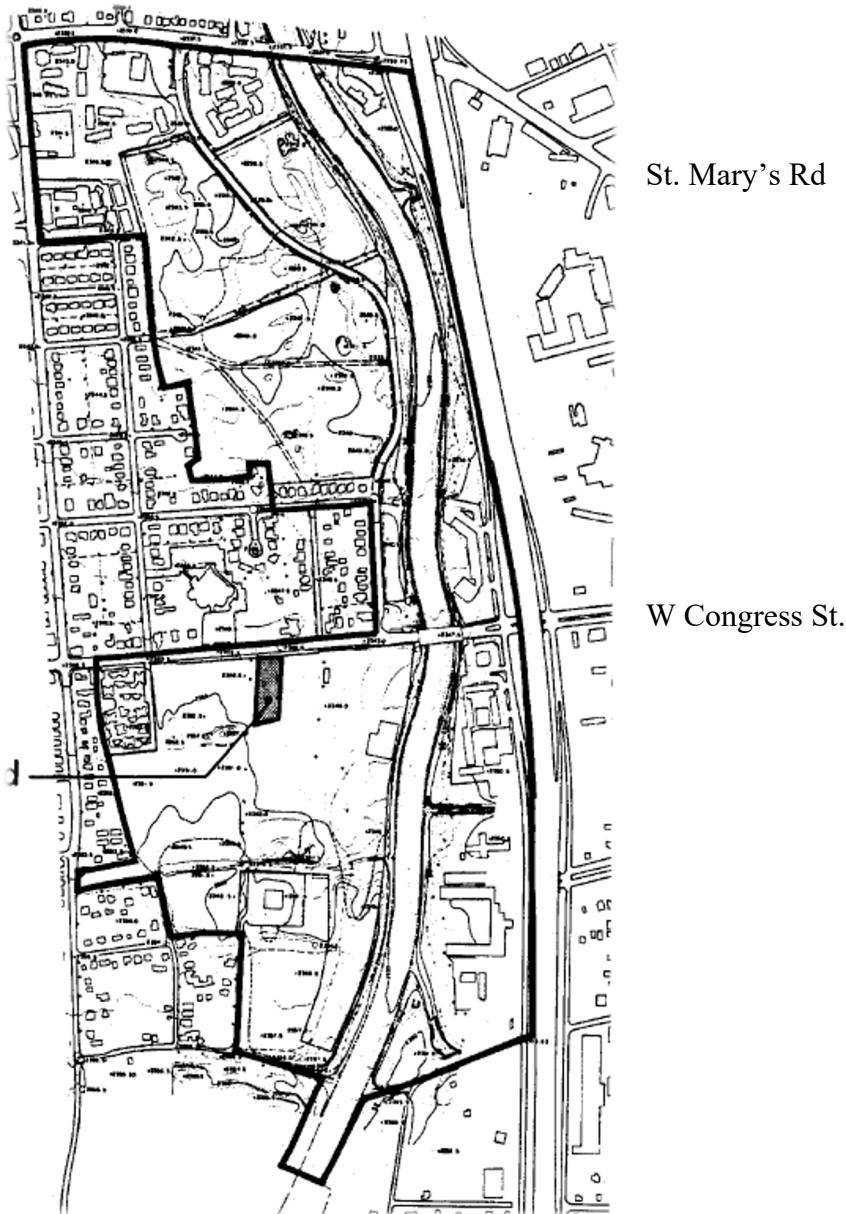


Fig 57. “A” Mountain Landfill, and its namesake hill

The surface emissions of methane and carbon dioxide from the buried decaying landfill material has limited the native vegetation that could grow on top of the landfill. Common native plants that seem to favor the unforgiving environment are four-wing saltbush, arrowweed, creosote, and velvet mesquite. The non-native invasive buffelgrass prefers the riverbed banks and continues to be a constant fire threat to the saguaros on the hillsides of the adjacent hills.

21st Century Development – A Timeline

Much of the development of Menlo Park in the 21st century was a result of a city master plan named PAD-4 or the Rio Nuevo Planned Area Development. This plan started around 1978. It predates the 2008 Rio Nuevo District that was created for identifying and funding new development.⁷⁶ Below is a map of the 1987 PAD map with the Menlo Park land acquisition shown inside the bold lines. This overall map is bound by Granada Ave, St Mary's, Road, the river, and South Mission Lane. Some properties were condemned for this acquisition. The \$4.75 million in acquisition funds came from development act grants, city improvement programs, Arizona flood control funds, and Tucson Electric Power underground fees. Per the plan, \$7.7 million was expected in return with the sale of the properties.



Map 17. 1978 Rio Nuevo Planned Area Development Area
(Image from the City of Tucson PAD-4 Plan)

City expenses for the project included \$4.8 million for flood control and \$6.4 million for the redevelopment project area's preparation. There was a landfill in the northern portion of the PAD, now located under the large central parking lot of North Commerce Park Loop. Twenty-five shallow gas probes are monitored, and the city utilizes a methane extraction system to capture emissions. Initially called the Linda Landfill it was renamed the Rio Nuevo North Landfill.⁷⁷ The original Rio Nuevo Tax District invested \$5.5 million in the Mercado commercial and housing project south of Congress Street before the Rio Nuevo District board reorganized.⁷⁸

For most of the 1900s, the eastern portion of Menlo Park had long been a semi-abandoned strip of the riverbank, prone to flooding and at times used for dumping. After World War II, the city started investigating possible uses for this land. Initially, they had planned for low-income housing projects.

The land was subdivided according to the Rio Nuevo Redevelopment Plan. Separate proposals divided North and South projects with West Congress Street as the dividing line. Flood control measures were made in 1983, which included the soil-cement bank protection seen today. The Santa Cruz River Park bike loop was added by Pima County as a part of that cleanup effort.

North Commercial Park Loop branches west from Bonita Avenue between Alameda Street and Saint Mary's Road. It is a distinctly different part of Menlo Park from its historic residential neighborhood, isolated by the lack of any connecting east-west through-streets north of W Alameda St. Buildings around North Commerce Park Loop were zoned for non-residential office, research/development, limited retail, commercial use as well as some government services. The Tucson Loop Park east of Bonita Avenue is designated as a CBA, Community Benefits Agreement property on Pima County maps. Some of the new businesses probably contributed to the cost of developing these parks via the CBA. The segment of the bike loop west of the river is designated "Diamond Street Loop."

Following is some history of the North Commerce Park Loop development:

In 1989 John Davis moved Arizona Lithographic to a lot he purchased from the city on the northwest corner of Commerce Park Loop.

In 1997 Pima Community College moved its teacher training program to the building on the north end of the loop.

The Community Resource Center Campus is in the center of the loop on Bonita Avenue. This includes offices leased by United Way of Southern Arizona and the City of Tucson. The city moved its Community Services Department there in 2000.

The Arizona State University School of Social Work opened its program in 2001.

The Western Archeological and Conservation Center building, completed in 2003, is an archival warehouse for the national parks.

The FBI consolidated three regional offices and moved them into a new building in 2011. The building is noticeable for its high-security perimeter and lack of any signage.

As for the Rio Nuevo South PAD, some development benchmarks are:

2003 – Rio Development Inc. won the bidding process for the 14-acre Mercado District of Menlo Park, a "new urbanist" residential and marketplace concept project situated across from the El Rio Community Health Center on W Congress Street. The first homes were built the next year.

2008 - A large basin was excavated south of Cushing St west of the river by the original Rio Nuevo District for a below ground parking lot for planned museums. Neither parking garage nor museums were ever completed. The state money was terminated for 3 proposed projects: a University of Arizona Science Center, an Arizona State Museum and an Arizona Historical Society building. The pit was later refilled for the 2018 Caterpillar Headquarters project.

2008 - 70,000 cubic yards of fill were placed on the vacant land where Sentinel Plaza is today. The city brought it in from the Cherry Field Detention Basin to raise the surrounding land elevation above the flood plain.

February 2009 - Mercado San Agustín shops and restaurants opened for business.

2010 – Mission Garden reconstruction project was started, with the first orchard planting in 2012. See the next chapter on the decade long history of realizing the Mission Garden project.

April 2011- An old water main under West Congress Street ruptured. Congress Street was closed to traffic for two weeks.

January 2012 – Rio Development Inc., which owned 40 of the remaining Mercado District lots, avoided bankruptcy, surviving the worst of the 2009 real estate downturn.

2012 – The city completed the construction of the \$13M Luis Gutiérrez Cushing Street Bridge that allowed the \$120M 4-mile Modern Streetcar route to extend to the Mercado District of Menlo Park. The bridge design was unique in that there is only a single pier for the 310-foot span of the bridge. As a result, the pier footing had to be embedded 155 feet below the stream bed.

July 2012 – The \$27M Sentinel Plaza section-8 housing opens for the relocation of Armory Park Apartments residents.

May 2013 – The El Rio Health Center completed a renovation of its 1978 single-story clinic nearly doubling the size of the original building. Members of the Menlo Park Neighborhood Association encouraged the designers to front the building on West Congress Street so that the parking lot would be mostly hidden behind the attractive new building. The thought was that this would best fit with the urban feel of the new construction projects near West Congress Street.

2014 – The Modern Streetcar started service.

2016 – The city sold the ownership of new planned development vacant lands south of West Congress Street to the Rio Nuevo District.

November 2018- The voters passed Proposition 407, which allowed for a two hundred and twenty-five million-dollar (\$225,000,000) bond. These funds were to be used for improvements in city parks. It is likely that full implementation will take many years to complete. Improvements proposed for the Menlo Park neighborhood include major projects at two sites: the public park at the intersection of Fresno Street and Grande Avenue and Sentinel Peak.

2018 - 2019- The West End Apartments (Section 8 housing) opened on the south side of Congress Street. The Mercado San Agustin Annex opened for business on the north side of Cushing Street. Soon after this, the Caterpillar Headquarters was completed on the south side of Cushing Street. Later in 2019, construction began on the Monier Apartments on Avenida del Convento just south of the original Mercado, requiring 2 years to complete.



Family outing under the shade of a cottonwood on the banks of the Santa Cruz, 1880
(Photo from the Arizona Historical Society)

The Origins of The Mission Garden

Mission Garden, at the base of “A” Mountain, is a popular destination for visitors to the west side of Tucson. The walled gardens recreate Spanish colonial era heritage fruit orchards. They also represent various other multicultural backgrounds of the people who have contributed to Tucson’s historical heritage. It is common for visitors ask how this impressive Garden came to fruition. The story of the creation of the Garden offers insight into how a dedicated group of volunteers patiently achieved this long-term objective. Their enterprise honors Tucson’s history and provides a serene public space. It is important to recognize the individuals that achieved this significant contribution to the community.

As early as 1987, archaeologist William Doelle' s staff discovered a significant prehistoric cultural legacy buried under the vacant lands west of the Santa Cruz River. These findings dated back 4,000 years and indicated that this location is the true birthplace of Tucson.

The year before, Gayle Castañeda had purchased a 4.7-acre parcel without prior knowledge that it was the site of the Spanish San Agustin Mission including a walled garden built by Franciscan priests in the 18th century. After learning more about the history associated with her land, she hired archaeologists to evaluate one corner of the plot which revealed 1,000-year-old Hohokam artifacts and part of the original Mission Garden wall foundations. She won a temporary injunction to halt the compaction on land adjacent to West Mission Lane. This was to be accomplished by dropping very heavy weights onto the ground. This testing could have damaged the probable archaeological treasure located under and near her property. Following this discovery, historians Diana Hadley and Steve Leal of the Historical Commission and the Cultural Preservation Alliance banded together to stop the expansion of West Mission Lane. The expansion would have bisected the Garden area and the larger Mission compound. Steve Leal was later elected to the city council.

1999 would prove to be a significant year for westside planning. The original Rio Nuevo tax district established a corridor for development on the west side using city owned land and government funds. Significantly, this same year Pima County had the foresight to purchase and thereby safeguard the Garden parcel. This action would later prove to protect the parcel during many years of debate on which government authority could claim ownership of the Garden land.

Leading up to 1999, three sets of plans were formulated for the Mission area. The newly founded 501(c)3 non-profit Friends of Tucson's Birthplace was the driving force to have the county approve the use of the land for reconstruction of the Garden. Early bids focused on turning the west-side vacant land into more of a theme park than honoring a representation of the genuine history and early architecture of the area. Plans were offered that included restaurants, hotels, a theater, shops as well as exhibits, recreated buildings such as the old Convento, and a bridge across the river. David Wald-Hopkins was an early supporter of the Garden and advocated an accurate recreation of the Spanish Garden with walls that would reflect the true nature of the original gardens. It would be years later that their design would be implemented.

In September 1999, Tucson voters were asked to approve proposition 400, the \$320 million Rio Nuevo South project which now was expanded to also revamp the downtown area. Besides the Mission area Convento, Granary, Garden along with the adjacent historic Carrillo House and Warner's Mill reconstructions, the bond included the creation of museums and theaters and a residential project and retail stores. The residential portion would eventually become the Mercado District neighborhood.

A significant and pivotal outcome of this initial investigative funding from Rio Nuevo was the contract with Desert Archaeology to conduct the three-year study of the multiple locations in the Rio Nuevo district. It was felt that it was important to establish a baseline knowledge of the history of multiple farming cultures dating as far back as 4,000 years. It would be important to protect the recognized evidence of Tohono O'Odham and colonial Spanish supervised agrarian societies. This provided vital information about Tucson's early history that may have never happened without the original Rio Nuevo board's action.

The Tucson Origins project was proposed in 2000 by Rio Nuevo and was slated to cost \$14 million to complete construction of the Garden, the Mission complex, Carrillo House, an interpretive

center, and a cultural park. O’Odham Nation representatives rightfully requested \$700,000 for the Rancho *Chuk-Son* site at the boundary of the Origins project, which was the home of their ancestral people. They were adamant that whatever was constructed here needed to be true to their significant historical legacy in the area.

For most of the decade, no actual work, other than grand plans, transpired for the vacant land on the ‘west side’.

There has been a keen interest by local botanists in prior decades to identify fruit-tree stocks dating back to the Spanish mission era. A team of researchers was formed in 2003, led by the Arizona-Sonora Desert Museum, University of Arizona, and the National Park Service to create the *Kino Heritage Fruit Trees Project*. Their study of records dating back to Kino’s time resulted in successfully identifying offspring of fruits-trees introduced to the New World. Varieties of citrus, quince, pear, fig, peach, apple, olive, and pomegranate have survived and even thrived in our arid climate and fertile clay soils. Most of the descendent tree stocks were found in residents’ yards. Also, hereditary lines for grapes, grains, herbs, and cattle are now known to have endured from their introduction by Jesuit missionaries. The priests’ motivation for these introductions was the need to feed the Native Americans with an expanded, more appealing, and healthy variety of crops from the Mediterranean and eastern Asian regions. They were wise enough to bring varieties adaptable to the desert riparian zone. These progeny trees were part of the missionary’s gifts and teachings that have left a significant living legacy by their presence in the New World. The Kino Heritage Fruit Tree Project was successful in locating descendant plants from the Spanish era. Jesus Garcia and Robert Emanuel were leaders of this successful and impressive research.²²

Jesus, an educational specialist with the Arizona-Sonora Desert Museum had started planting Spanish heritage trees in the orchard grounds of the Tumacacori National Historic Park. The goal was eventually to also plant heirloom trees at the Mission Gardens.

However, in 2008 problems were arising because of high expenditures by the original Rio Nuevo Board for the planning phases of larger projects. It became clear that funding was not available for much construction. The market for selling the required bonds began to appear to be tight. As a result, a restructured Rio Nuevo assumed control of the project with the prior funding depleted and an economic recession underway. The Rio Nuevo finances were said to be near meltdown.

Finally, in 2009 Cox Masonry was contracted to construct the new Garden walls. The project would cost \$3 million and was to be paid from the remaining Rio Nuevo funds. In this period longtime advocate Raul Ramirez was instrumental in promoting the garden wall construction. The Friends of Tucson’s Birthplace meetings started discussions on the greening of the Garden. Businesswoman Cele Peterson was honorary chairwoman for key public events. Bill Dupont coordinated presenters. Raul Ramirez, Bill DuPont, and Joseph Cates negotiated with Pima County to construct the interior of Mission Garden. Retired TUSD superintendent Roger Pfeuffer came on board that year as a member of the Friends of Tucson’s Birthplace.

The construction of the Garden stalled in May of 2009 due to a lack of funds to finish the project. Six-foot walls encircled a vacant area where gravel was spread. The sagging security fence was not adequate to protect the walls from graffiti. Lloyd Construction, the general contractor for the

walls, donated \$12,000 for mesquite-plank gates and exterior fencing to enclose the garden while it remained in limbo. The walls were tagged four times. The paint was removed each time adding to the upkeep expense.

By 2010 Rio Nuevo was fully reorganized. The state stripped control of Rio Nuevo projects from the city and assigned a new board. There was a dispute between the new Rio Nuevo board and the city on which land assets were to be transferred to Rio Nuevo.

By this time Jesus Garcia had been collecting trees for the gardens for seven years. He had moved them to Desert Survivors for further cultivation. Funding drives for the completion of the Garden continued. The support of ethnobotanist Gary Nabham and plant scientist Jim Verrier were mentioned in newspaper articles. In November 2010 a five-year contract between the Friends of Tucson's Birthplace and the county allowed the organization to occupy the Garden plot. By February the first trees were planted.

As an independent non-government non-profit, the Friends of Tucson's Birthplace, was best poised to take over operation and management of the stalled Garden project. They planned to start planting 130 trees in one quadrant of the garden.

The Friends of Tucson's Birthplace raised \$106,000 including \$60,000 in grants. However, these funds would expire if the plants did not go into the ground before the expiration of the five-year contract with the county board. Board members Diana Hadley, Bill O'Malley, Jesus Garcia, Roger Pfeuffer and Phil Hall described the progress of the planting in the Gardens to reporters in 2011. It was a significant undertaking.

The Garden opened to visitors in the summer of 2013. The 2011 plan between the county and the Friends of Tucson's Birthplace required the non-profit to raise \$350,000 within 5 years of operation. After two years, \$280,000 had been raised. Expansion into culturally specific gardens, such as a Tohono O'Odham plot was started with guidance from tribe members. Chinese gardens followed, along with acequia irrigation canals. The board members Clifford Pablo, Katya Peterson, Roger Pfeuffer, Bill O'Malley, Donna Tang and Councilwoman Regina Romero were significant contributors to the continued progress.



(Photo from 20161029 lastertrimman | Flickr)

In a December letter to supporters, the oral historian “Big Jim” Griffith shared; “The Garden’s creation is a fine example of the ‘damn-the-torpedoes’ spirit of our community. In the temporary absence of major monetary grants, the founders went full speed ahead, and just did it! Drawing on a mix of enthusiasm, solid scholarship, and hard work they made their vision a reality

Urban Rivers – Living Rivers Versus Flood Control

Historically, most cities and towns have often been founded on the banks of a river. One of the challenges that many municipalities have faced has been seasonal flooding. In the Menlo Park area, prior to the twentieth century, flooding from the Santa Cruz River was moderated by the presence of marshes and bosques. The river sustained earlier cultures that depended on its water for the irrigation of their crops. When rivers are given room to spread rich sediment deposits beyond their banks during periods of heavy rain, flooding of outlying communities is not the threat it is today. However, in recent years, many cities have failed to give rivers adequate breadth resulting in a greater likelihood of flooding adjacent neighborhoods.

From time to time, tropical storms that made landfall in Baja California and move northward led to significant flooding conditions in Southern Arizona. In recent events, due to warmer ocean water, storms tended to move more slowly over land depositing increasing amount of rain. This new weather pattern has resulted in flood conditions that surpassed those experienced in the past.

A group of Santa Cruz ecologists mourned the loss of Raymond M. Turner in 2019. He collaborated with three other scientists to write the book "*Requiem for the Santa Cruz*," a collection of research that explains the geological history of the river. As the title infers, the river has suffered an irreversible decline. The book provides readers with more information than it is possible to share in this brief overview. However, one thing that the authors emphasized is that at one time the river was surrounded by cienegas which helped to mediate flooding. Vegetation would be regenerated. This allowed for sediment to be trapped and erosion to be limited. Once these native plants disappeared from the riverbanks, flooding became much more likely.

Shallow wells, that were common locally in the early 1900s, lowered the water table such that the water then flowed underground. The deep wells that were utilized during the rest of the 20th century decimated the natural riparian environment of the river. Recently some isolated sections of the riverbank mesquite groves were reintroduced. The goal was to educate the public on how bosques can be an effective deterrent to flooding. In 1982, narrower sections of the river were soil-cement "channelized" to prevent it from changing course and flooding nearby areas. Record floods along the Santa Cruz River in the 1980s and floods along the Rillito River in the 1990s resulted in hundreds of millions of dollars of damage downstream. As a result, the goal was to design a deeper river channel that would allow maximum discharge in the event of unusually high amounts of rainfall upstream. Menlo Park and the downtown area were of particular concern because urbanization had encroached precariously close to the narrowest cemented riverbanks. Part of a maximum discharge strategy involved the ongoing need to dredge the silt that had been deposited in the channel beds from recent flooding events. In hindsight, a better approach would have been to maintain a natural broader channel as exists south of the Silverlake Road Bridge. The banks of the river are up to 200 feet wide in some areas. However, at the Congress Street Bridge the riverbed is only 120 feet wide. Since there are buildings close to the banks at Congress Street, there is no space for widening of the channel. Instead, recent development has instead required that the elevation of ground level grades adjacent to the banks be increased as much as 15 to 20 feet.

A designation for the Santa Cruz National Heritage Area was passed by Congress in late February of 2019 and was signed into law at the White House in the spring of 2019. The area encompasses 3,325 square miles. The designation does not infer any regulatory powers. However, it provides an alliance among citizens that support the idea of preserving the heritage of the Santa Cruz River Valley and its headwaters. One example of a related project is the Juan Bautista de Anza Trail which runs parallel to the river starting in Nogales and reaching beyond Marana.



Fig 59. Family seen in front of an acequia
(Photo from Arizona Historical Society)

Tucson Historic Timeline as History Affected Menlo Park

- 1539 The Spanish explorer, Marcos de Niza, encountered Sobaipuri groups when he traveled up the San Pedro River Valley.
- 1694 Father Kino, probably for the first time, passed through the village of *Shook-shon*, a Sobaipuri community at the base of “Black Mountain,” present day Sentinel Peak
- 1711 Father Kino died in Magdalena, Mexico.
- 1732 The Mission San Xavier del Bac was founded by Jesuits ten miles south of present-day Tucson.
- 1757 Mexican Army Captain, Francisco Elias Gonzales, persuaded several hundred Sobaipuris to relocate to Tucson. Jesuit Father Bernhard Middendorf failed to establish a church in Tucson.
- 1767 King Charles III of Spain expelled the Jesuits from the New World.
- 1770 Juan Bautista de Anza directed the citizens of Tucson to start the construction of the San Agustín Mission, including the Chapel, the Convento and Mission Gardens.
- 1776 The Presidio San Agustín de Tucson (military post) was established.
- 1779 December 6 - The First Battle of Tucson with raiding Apache tribes took place.
- 1782 May 1 - The Second Battle of Tucson took place. December 25 The Third Battle of Tucson took place.
- 1784 March 21 - The Fourth Battle of Tucson took place.

- 1793 The San Agustín Mission Chapel was completed.
- 1820 The San Agustín Mission was abandoned.
- 1821 Mexico gained its independence from Spain.
- 1828 The Franciscan Order was expelled.
- 1846 The Mexican American War began. General Cook and the Mormon Battalion captured Tucson.
- 1848 The Treaty of Guadalupe Hidalgo ended the Mexican American War. The region south of the Gila River remained as a part of Mexico. The population of Tucson was 760.
- 1854 The Gadsden Purchase was finalized. The region north of the present-day border between Mexico and the United States and the Gila River became part of the U.S. territories, including Tucson.
- 1856 August 29 - a conference was held to organize the Arizona Territory.
- 1857 The mail line between San Antonio and San Diego went into operation.
- 1862 March 1- Tucson was occupied by Confederate forces. On May 20, Union forces recaptured Tucson.
- 1867 Tucson became the capital of the Arizona Territory.
- 1870 The Tucson Citizen newspaper was published for the first time.
- 1872 The Public-School Department was established.
- 1873 The San Diego to Tucson telegraph began operating (approximate date). Tucson's population was estimated to be about 3,500.
- 1877 The city was incorporated. The territorial capital was moved from Tucson to Prescott.
- 1878 El Fronterizo, a Spanish language weekly newspaper began publication.
- 1879 The Arizona Daily Star began publication.
- 1880 The Southern Pacific Railroad began to serve Tucson.
- 1881 The Atchison, Topeka & Santa Fe Railroad began to serve Tucson.
- 1883 The City of Tucson was chartered. Its boundaries included: Speedway Boulevard on the north, 22nd Street on the south, 1st Avenue on the east and on the west by Main Avenue (north of 18th Street) and 10th Avenue (south of 18th Street).
- 1885 The first public park in Tucson, known as Carrillo's Gardens, across the river from Menlo Park was established by Leopoldo Carrillo.
- 1897 The Roman Catholic Diocese of Tucson was established. The St. Augustine Cathedral was built by Quintus Monier.
- 1898 Bishop Jean Baptiste Salpointe died at St. Mary's Hospital.
- 1900 The population of Tucson was 7,531.
- 1903 The Carnegie Desert Laboratory on Tumamoc Hill was founded.
- 1904 Henry Schwalen, considered the "Father of Menlo Park," settled on long abandoned farmland that previously belonged to Spanish speaking farmers.
- 1907 The Southern Pacific Railway station was built.
- 1910 The population of Tucson was 13,393.
- 1912 Arizona was admitted to the Union as the 48th state.

- 1920 Henry Schwalen and Manuel King sold their Menlo Park development company. They had donated the land for the neighborhood school and fire station.
- 1929 Henry Schwalen donated the land for the Menlo Park Fire Station, currently the Ward 1 Office, on the northeast corner of Alameda Street and Grande Avenue. Henry also pushed to close the “A” Mountain quarry.
- 1960 The University of Arizona purchased Tumamoc Hill from the Forest Service for desert ecology research.
- 1966 The public park at the corner of Fresno Street and Grande Avenue was completed.
- 1967 The Arizona Historical Society initiated a study on the San Agustín Mission area.
- 1978 The El Rio Health Center on Congress Street was built.
- 2000 A Rio Nuevo archaeological study was initiated. It was completed in 2003. The area studied was primarily within the Menlo Park neighborhood (south of West Congress Street). The Tucson Presidio was also a part of the study.
- 2013 In May, a renovation of the El Rio Health Center was completed. The size of the original one-story building, which was opened in 1978, was almost doubled. Mission Garden opens to the public.
- 2014 Service was initiated on the Modern Streetcar with its western terminus in Menlo Park



Fig 60. Italian Renaissance Revival style Menlo Park Elementary School, 1917
(Constructed by E.L. Wilcox. As the building expanded, the style eventually evolved as Modern)

Appendix – Local Archaeology Research Companies

Archaeology groups and a small sample of individuals that have researched Tucson' past:

Desert Archaeology, Inc., established as an independent entity in 1989, and transitioned in January 2017, when **Dr. Sarah Herr** became the owner and President. Desert Archaeology has expanded from its base in Tucson to include the Greater Southwest region. Desert Archaeology, Inc., states on their web page: “(DAI) is a woman-owned Arizona small business offering cultural resources compliance, research, and consulting services. We have been leaders in Southwestern cultural resources management (CRM) since 1982.”

The *Center for Desert Archaeology* changed its name to Archaeology Southwest in 2012. ASW is known to students of archaeology, citizen and professional, by their various outreaches such as their quarterly publication, Archaeology Southwest Magazine. **Dr. Bill Doelle** is Archaeology Southwest's founder, President, and CEO, and is the Vice President of Desert Archaeology, Inc.

The *Arizona Historical Society* was established in 1864. The Southern Arizona Board is based in Tucson. They publish the Journal of Arizona History, a useful source of research of local interest. Photographs from their collections provide invaluable insight on the early historical period of Tucson life.

J. Homer Thiel is a historical archaeologist and project director with *Desert Archaeology, Inc.*, and an editor of the Rio Nuevo 2000-2003 Clearwater investigation reports. Besides being the author and editor of many archaeological papers and articles, he works extensively with the Tohono O'odham Nation, the Mission Garden, the Spanish-era presidio in downtown Tucson, Arizona Historical Society, the Tucson Presidio Trust for Historic Preservation, and the newsletter El Presidio Real. Mr. Thiel has published a history of all individuals who lived in the Tucson Presidio before 1856, names numbering into the thousands.

Jonathan B. Mabry as also co-editor of the Rio Nuevo 2000-2003 Clearwater investigation reports, and the publication; *Canals and Communities: Small-Scale Irrigation Systems*. Dr. Mabry is Director of Community Engagement for the College of Social & Behavioral Sciences at the University of Arizona and was instrumental in obtaining the designation of Tucson as the first UNESCO Creative City of Gastronomy in the U.S.

Robert B. Ciaccio is an illustrator for Archaeology Southwest. Robert's drawings are quite beneficial for visualizing the lives of ancient cultures.

Bibliography

- 1 Archaeology Southwest Magazine. Volume 32 #4 cover. Fall 2018
- 2 Extracted from <https://www.tucson.gov/files/pdsd/Ward1new.pdf>

- 3 Rio Nuevo Archaeology, 2000-2003: Investigations at the San Agustín Mission and Mission Gardens, Tucson Presidio, Tucson Pressed Brick Company, and Clearwater Site. (March 2006). Edited by J. Homer Thiel and Jonathan B. Mabry. Technical Report No. 2004-11. Desert Archaeology, Inc. 3975 North Tucson Boulevard, Tucson, Arizona 85716. Only a soft copy published;
https://www.archaeologysouthwest.org/pdf/rio_nuevo_small.pdf. Also index format at
<https://www.archaeologysouthwest.org/final-report-rio-nuevo-archaeology-2000-2003/>

- 4 Deni J. Seymour. Santa Cruz River: The Origin of a Place Name. *The Journal of Arizona History*, Vol. 53, No. 1, pp. 81-88. Arizona Historical Society. Spring 2012

- 5 Thomas G. McGarvin. Field Guide to “A” Mountain and Description of Surrounding Region. Arizona Geological Survey Open File Report 01-07 October 2001 Pima County, Arizona

- 6 Suzanne K. Fish, Paula R. Fish, Gary Christopherson, Todd A. Pitezal, James T. Watson. Two Villages on Tumamoc Hill. (2011). *Journal of Arizona Archaeology* 2011 Vol 1, # 2: 185-196.

- 7 Craig Childs. *The Secret Knowledge of Water: Discovering the Essence of the American Desert*. (2000). Little, Brown, and Company. Boston

- 8 A. M. Gustafson. *John Spring’s Arizona*. (1966). The University of Arizona Press, Tucson.

- 9 C.J. Eastoe and Ailiang Gu. Groundwater Depletion Beneath Downtown Tucson, Arizona: A 240-Year Record. *Journal of Contemporary Water Research & Education*. 14 February 2017.
<https://doi.org/10.1111/j.1936-704X.2016.03230.x>

- 10 Michael F. Logan. Head-Cuts and Check-Dams: Changing Patterns of Environmental Manipulation by the Hohokam and Spanish in the Santa Cruz River Valley, 200-1820. *Environmental History*, Vol. 4, No. 3, pp. 405-430. Oxford University Press on behalf of Forest History Society and American Society for Environmental History. July 1999

- 11 Jane Sliva. Cienega Points and Late Archaic Period Chronology in the Southern Southwest. *Kiva* Vol. 64, No. 3 (Spring, 1999), pp. 339-367
- 12 <https://en.wikipedia.org/wiki/Spear-thrower>
- 13 Allen Denoyer. Burning Down the (Pit) House, part 1. Preservation Archaeology Blog. Archaeology Southwest. 2018.

- 14 Kate Sarther. Helping Us See. Archaeology Southwest Magazine. Volume 32 #4. Spotlight: Clearwater Site. Page 53. Fall 2018

- 15 Archaeological Investigations of the Early Agricultural Period Settlement at the Base of A-Mountain, Tucson, Arizona. Technical Report No. 96-21. Center for Desert Archaeology, Tucson
- 16 Christine H. Virden-Lange. Shell Bracelet Manufacturing, Preservation Archaeology Blog. Archaeology Southwest. 2018
- 17 William H. Doelle and J. Homer Thiel. Archaeology Southwest Magazine. Volume 32 #4. Spotlight: Clearwater Site. Page 20. Fall 2018
- 18 University of Arizona. Tumamoc Hill Cultural Resources Policy and Management Plan. September 2008. https://www.pdc.arizona.edu/file/TumamocManagementPlan_final.pdf
- 19 <https://en.wikipedia.org/wiki/Sobaipuri>
- 19 Anne M. Nequette and R. Brooks Jeffery. A Guide to Tucson Architecture. (2002). The University of Arizona Press, Tucson.
- 20 Henry F. Dobyns. Spanish Colonial Tucson, A Demographic History. (1976). The University of Arizona Press, Tucson. http://www.library.arizona.edu/exhibits/swetc/spct/body.1_div.2.html
- 21 C. L. Sonnichsen. Tucson, The Life And Times Of An American City. (1982). University of Oklahoma Press, Norman.
- 22 Christine Conte, Richard C. Brusca, Belén Navajas Josa, David Yetman, Diana Hadley. Seeds of Change: Legacy of Father Kino. Sonorensis Newsletter Volume 27, Number 1. Arizona Sonora Desert Museum. Winter 2007. <https://www.desertmuseum.org/members/sonorensis/sonorensis2007.pdf>
- 23 Cameron Greenleaf and Andrew Wallace. Tucson: Pueblo, Preciso, and American City: A Synopsis of Its History. Source: Arizoniana, Vol. 3, No. 2, pp. 18-27. Published by: Arizona Historical Society. Summer 1962. <https://www.jstor.org/stable/41700604>
- 24 Western Photographic Historic Society. Carl Watkins in Arizona. <https://www.wphsociety.org/forums/topic/carlton-watkins-in-arizona/>
- 25 Thomas E. Sheridan. Los Tucsonenses, The Mexican Community in Tucson, 1854-1941. (1986). The University of Arizona Press, Tucson.
- 26 Robert H. Webb, Julio L. Betancourt, R. Roy Johnson, and Raymond M. Turner. Requiem for the Santa Cruz, An Environmental History of an Arizona River. (2014). The University of Arizona Press, Tucson.
- 27 Johnathan B. Marby, J. Homer Thiel. A thousand Years of Irrigation in Tucson. Archaeology in Tucson, Newsletter of the Center for Desert Archaeology. Vol. 9 #4. Fall 1995
- 28 J. Homer Thiel. Soledad Jacome: Historical Archaeology and a Rediscovered Life. Desert Archaeology Inc. February 16, 2018. <https://desert.com/jacome/>

- 29 "Branding Cows was A Man's Job But Sometimes Women Did it". Arizona Daily Star. February 4, 1968.
- 30 "Tucson will Honor Leopaldo Carrillo, School is Named for Pioneer Here." Arizona Daily Star. June 29 1930.
- 31 Wikipedia on L Carrillo
- 32 https://www.insidetucsonbusiness.com/community_lifestyle/carrillo-keeps-one-of-tucson-s-first-family-owned-businesses/article_6c4a71f8-fadc-11e2-8d9e-0019bb2963f4.html
- 33 "Spanish Heritage". Arizona Daily Star. August 13 1994.
- 34 www.sourcecatalog.com/image_maps/map_obsidian_arizona.pdf
- 35 "The Chinese Quarter, A Respectable Locality Defamed By Their Presence". Arizona Daily Star. August 2, 1882
- 36 <https://www.archaeologysouthwest.org/pdf/rntg-5.pdf>
- 37 The Promise of Gold Mountain: Tucson's Chinese Heritage
<http://parentseyes.arizona.edu/promise/index.html>
- 38 Grace Pena Delgado. Of Kith and Kin: Land Leases, and Guanxi in Tucson's Chinese and Mexican Communities, 1880s-1920s. *Journal of Arizona History* Vol. 46, No 1 (Spring 2005), pp. 33-54. Arizona Historical Society. https://www.jstor.org/stable/41696875?read-now=1&refreqid=excelsior%3A0d5c16ea7e3e52f863cafe957ef0dd81&seq=2#page_scan_tab_contents
- 39 Margaret Regan. A River Ran Through It. Tucson Weekly. May 3, 2001
<https://www.tucsonweekly.com/tucson/a-river-ran-through-it/Content?oid=1068331>
- 40 <https://www.tucsonweekly.com/tucson/convento-or-invento/Content?oid=1070435>
- 41 Bruce Hooper. Willis Pearson Haynes: Arizona Photographer. Source: *Arizoniana*, Vol. 33, No. 1, pp. 85-98. Published by: Arizona Historical Society. Summer 1962. <https://www.jstor.org/stable/41695921>
- 42 The Evolutionary Development of the Sanitary Sewage System for the Greater Tucson Metropolitan Area. Tracing our "Roots" in Pima County Part 2: 1900 -- 1949
https://www.sewerhistory.org/chrono_pc/part2.htm
- 43 https://www.archaeologysouthwest.org/pdf/scvnha/chapter04_g.pdf
- 44 https://en.wikipedia.org/wiki/Solomon_Warner
- 44 William Ascarza. *Zenith on the Horizon, An Encyclopedic Look at the Tucson Mountains From A-Z.* (2010). Tucson Mountain Press, Tucson

- 45 https://tucson.com/news/blogs/streetsmarts/street-smarts-silverlake-s-namesake-made-a-splash-powered-flour/article_e2a9abb0-9ff7-5264-bb67-999d19d06b78.html
- 46 <https://www.carondelet.org/about-us/our-history>
- Janet H. Strittmatter. National Register of Historic Places, Historic and Architectural Properties in the Menlo Park Neighborhood Survey Area, Tucson, Arizona. United States Department of the Interior, National Park Service. Feb 2013
- 37 historic photos of the Santa Cruz River through Tucson, Arizona Daily Star. December 22, 2018.
- 48 https://tucson.com/news/local/historic-photos-of-the-santa-cruz-river-through-tucson/collection_b4a5a702-9b1d-11e7-b2b6-abd7f1554d1c.html
- 49 <http://parentseyes.arizona.edu/borderman/bmpt6.php> Mention of Tucson Iron Works
- 50 https://tucson.com/quintus-monier/image_9da9c915-2d17-5802-ab5b-a9103d017c73.html
- 51 https://tucson.com/news/local/mine-ales-brickmaking-in-tucson-dates-to-s/article_3ee92f5c-91ec-52b4-9ff5-c41b4ba7d9df.html
- 52 Michael W. Diehl and Allison C. Diehl. Economics, Ideology, and the Brick Industry in Tucson, Journal of the Southwest. Vol. 43, No. 3 (Autumn, 2001), pp. 423-446 (24 pages)
- Michael W. Diehl. Allison Cohen Diehl. Archaeological Investigations of the Tucson Pressed Brick Company, Tucson, Arizona. Technical Report No. 96-13. Center for Desert Archaeology. 3975 North Tucson Boulevard, Tucson, Arizona 85716. December 1996.
- 53
- 54 https://tucson.com/news/local/city-halts-work-after-earth-movers-grade-tucson-s-birthplace/article_5a40210a-c07a-5486-9d29-f287a7939127.html
- David Leighton. How Sentinel Peak almost became a private resort. Adultery and dirty deals. From the Street Smarts series, Arizona Daily Star. Oct 3, 2016. https://tucson.com/news/blogs/street-smarts-tale-of-road-up-a-mountain-includes-murder/article_6f0ff488-89ab-11e6-85d2-f36d39283de1.html
- 55
- 56 Arizona Daily Star. The Street. April 10, 2016
- 57 Arizona Daily Star. October 11, 1925
- 58 Shower of rocks from Quarry hits bathers in Pool. Arizona Daily Star. 30 July 1928
- 59 University of Arizona. Tumamoc Hill Cultural Resources Policy and Management Plan. September 2008. https://www.pdc.arizona.edu/file/TumamocManagementPlan_final.pdf
- 60 John Rawlinson. Some city leaders hear a hollow ring to eastside amphitheater proposal. Arizona Daily Star. May 2, 1987.
- 61 Joe Burchell. Old quarry may be site of artists' colony. Arizona Daily Star. 3 September 2004.
- 62 Tucson Mountain minerals. <https://www.desertmuseum.org/members/sonorensis/week4.php>

- 63 Judith C. Wilder. *The Years of a Desert Laboratory*. *The Journal of Arizona History*, Vol. 8, No. 3, pp. 179-199. Arizona Historical Society. Autumn 1967.
- 64 <https://tumamoc.arizona.edu/about-us>
- 65 Arizona Daily Star. November 1927
- 66 Arizona Daily Star. December 29, 1968
- 67 Arizona Daily Star. January 22, 1987
- 68 CAPLA. Draft Preservation Plan Menlo Park Neighborhood Tucson. May 8, 2019.
- 69 Arizona Daily Star. May 10, 1963
- 70 Arizona Daily Star. April 8, 1969
- 71 https://tucson.com/news/retrotucson/updated-aerial-photos-of-tucson-from-decades-ago/collection_b925e6ce-ff59-11e8-a1f7-27d9796fbc48.html#1
- 72 <https://www.tucsonaz.gov/es-projects/mountain-landfill#updates>
- 73 Lillian Lopez-Grant obituary". Arizona Daily Star. October 22, 2017.
- 74 "Lillian Lopez-Grant, an advocate for west-side, minority neighborhoods, dies". Arizona Daily Star. October 10, 2017.
- 75 https://tucson.com/opinion/local/gary-nabhan-the-santa-cruz-valley-national-heritage-area-can/article_d9a37741-ffd1-5f5f-b54c-ff647f2dbd4c.html
- 76 Rio Nuevo Redevelopment Plan / Planned Area Development. City of Tucson Planning Department. January 1987
- 77 City of Tucson ES Projects. October 29, 2018 <https://www.tucsonaz.gov/es-projects>
- 78 George Van Otten. *The Tohono O'Odham*. Penn State Department of Geography. 2018. <https://www.e-education.psu.edu/geog571/node/297>
- 79 Ray Brandes. *Guide to the Historic Landmarks of Tucson*. *Arizoniana*, Vol 3 No 2. Arizona Historical Society. Summer 1962. <https://www.jstor.org/stable/41700605>
- 80 Emily Livack. How desert cities such as Tucson and Phoenix make water sources sustainable? University of Arizona. April 23, 2108. <https://phys.org/news/2018-04-cities-tucson-phoenix-sources-sustainable.html>
- 81 Elena Acoba. Mission Garden will take you back centuries. Special to the Arizona Daily Star. May 7, 2016. https://tucson.com/lifestyles/mission-garden-will-take-you-back-centuries/article_e3b1c893-472b-57ce-b9ea-9e6f65c39369.html
- 82 <http://parentseyes.arizona.edu/westside/guesses.html>
- 83 Virginia & Lee McAlester. *A Field Guide To American Houses*. Alfred Knopf. 2005

- 84 Karl Jacoby. *Shadows at Dawn: An Apache Massacre and the Violence of History*. Penguin. 2009
- 85 John Warnock. *Tucson, A Drama in Time*. Wheatmark, Inc. 2019
- 86 Lydia R. Otero. In *The Shadows of The Freeway, Growing Up Brown & Queer*. Planet Earth Press. 2019
- 87 “Street Smarts: Monte helped his kids get started by opening shops for them to run” David Leighton. *Arizona Daily Star*, Updated Jul 2, 2014
- 88 <https://npgallery.nps.gov/NRHP/GetAsset/1ab6b9ca-4b8f-48ba-a0df-9910dc51876e>

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