TOWN OF JEROME

POST OFFICE BOX 335, JEROME, ARIZONA 86331
(928) 634-7943 www.jerome.az.gov

AGENDA

SPECIAL MEETING OF THE JEROME TOWN COUNCIL

VIA ZOOM

TUESDAY, JANUARY 19, 2021 AT 1:00 PM

DUE TO PUBLIC HEALTH CONCERNS, IN-PERSON ATTENDANCE AT PUBLIC MEETINGS HAS BEEN SUSPENDED UNTIL FURTHER NOTICE.

Notice is hereby given pursuant to A.R.S. 38-431.02 that members of the Town Council will attend this meeting.

PUBLIC PARTICIPATION IN THE MEETING

Members of the public are welcome to participate in the meeting via the following options:

1. *Zoom Conference*
   a. *Computer: https://us02web.zoom.us/j/9286347943*
   b. *Telephone: 1 669 900 6833 Meeting ID: 928 634 7943*
2. *Submitting questions and comments:*
   a. *If attending by Zoom video conference, click the chat button and enter your name and what you would like to address.*
   b. *Email c.gallagher@jerome.az.gov (Please submit comments at least one hour prior to the meeting.)*

*NOTE: FOR THOSE WITHOUT HOME INTERNET: A drive-up internet hotspot is now available in the parking lot in front of the Jerome Public Library. Bring your device and access the internet while sitting in your car. The network is **Sparklight Yavapai Free WIFI** and no password is required.*

ITEM #1:	**CALL TO ORDER/ROLL CALL** Mayor/Chairperson to call meeting to order. Town Clerk to call and record the roll.	
ITEM #2:	**MEXICAN POOL SITE** Council will hear from Bethany Halbreich and Cameron Sinclair, purchasers of the Mexican Pool site at 300 Queen Street, regarding their plans for its restoration.	*Sponsored by Mayor Jack Dillenberg* *Discussion; Possible Direction*
ITEM #3:	**CODE ENFORCEMENT** Council will continue their discussion of code enforcement procedures and penalties.	*Sponsored by Mayor Jack Dillenberg* *Discussion; Possible Direction*
ITEM #4:	**ADJOURNMENT**	

The Town Council may recess the public meeting and convene in Executive Session for the purpose of discussion or consultation for legal advice with the Town Attorney, who may participate telephonically, regarding any item listed on this agenda pursuant to A.R.S. § 38-431.03 (A)(3). The Chair reserves the right, with the consent of Council, to take items on the agenda out of order.

CERTIFICATION OF POSTING OF NOTICE

The undersigned hereby certifies that this notice and agenda was posted at the following locations on or before __________ on ____________________ in accordance with the statement filed by the Jerome Town Council with the Jerome Town Clerk.

970 Gulch Road, side of Gulch Fire Station, exterior posting case
600 Clark Street, Jerome Town Hall, exterior posting case
120 Main Street, Jerome Post Office, interior posting case

____

Rosa Cays, Deputy Town Clerk

Mexican Pool Restoration

300 Queen Street, Jerome, Arizona

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Renew and Restore

Over the next 18 months we are hoping rehabilitate the Mexican pool to its' original footprint and create a new public point of interest in the heart of Jerome. Collectively we bring decades of experience working on historic preservation and non profit reconstruction work from around the world.

With this project we are looking forward to calling Jerome home and creating a unique addition to its' rich history.

Cheers,
Bethany Halbreich and Cameron Sinclair

Only known photograph of pool opening in 1928.

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Renew and Restore

- 1. Plan for rehabilitation and restoration of Mexican Pool Complex
- 2. Opportunities for partnership with Town of Jerome
- 3. Synopsis and Next Steps
- Appendix A: About Us
  Appendix B: Satellite Images, 2006 to 2017
  Appendix C: Historic Surveys
  Appendix D: News Articles, 1928 & 2020
  Appendix E: Soil Report, 2018

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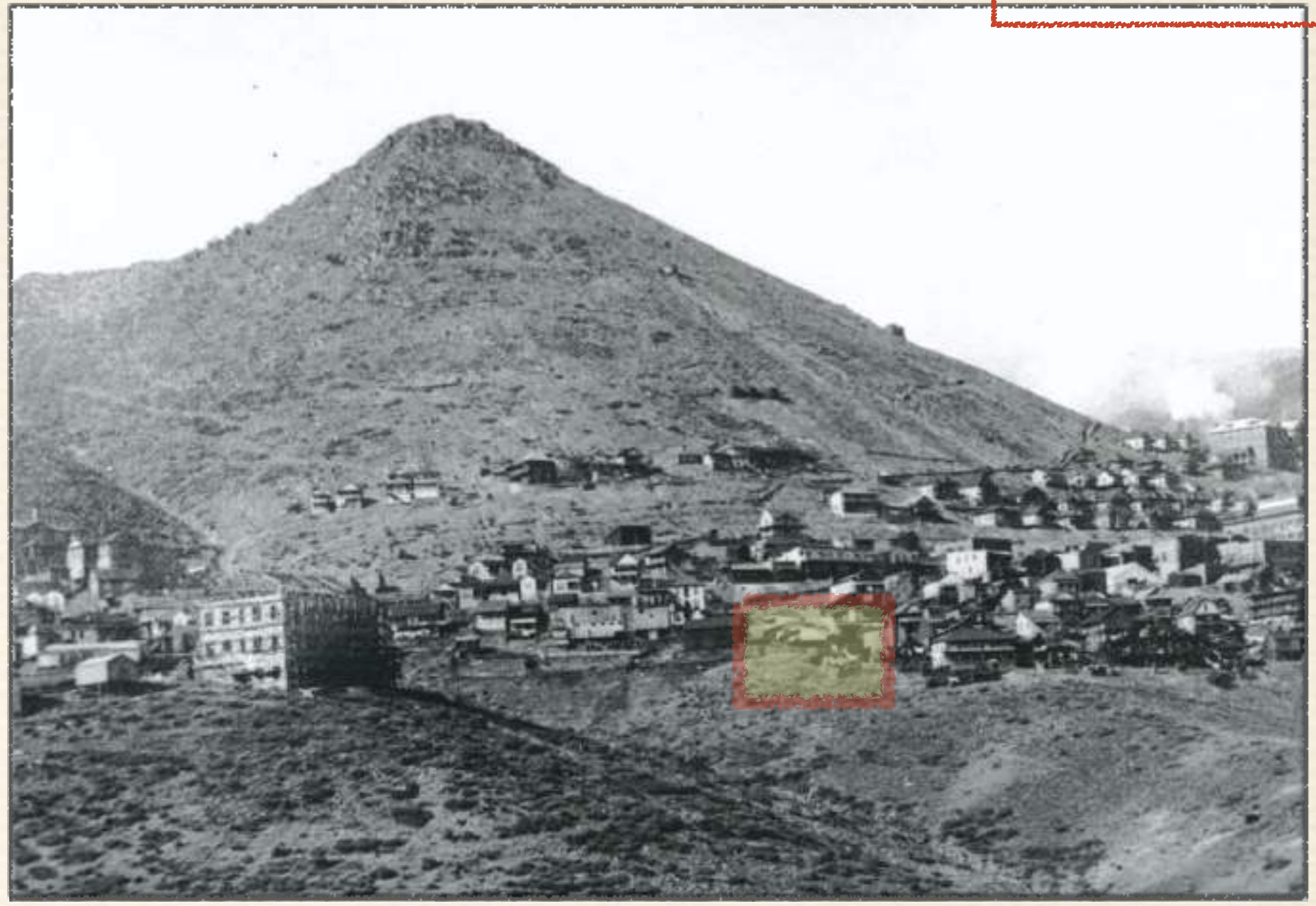
The creation of the Mexican pool

In June1928 the UVCC announced the construction of “a centrally located and well-furnished recreation center” for hispanic workers and families, to be built on Rich Street with land donated from UVX. The amenities included lighting to enable nighttime swimming, a diving board, and a shower and changing room.

After falling into disrepair the site has been neglected and forgotten. For the last 20 years it has been filled in with mud and used as a side yard. We hope to bring it back to life before its’ 100th Anniversary.



Our Current Goals.

1. **Restore** the pool complex to its' original 1928 footprint.
2. **Protect** it from further erosion.
3. **Use** auxiliary buildings for housing.
4. **Connect** it to a broader masterplan

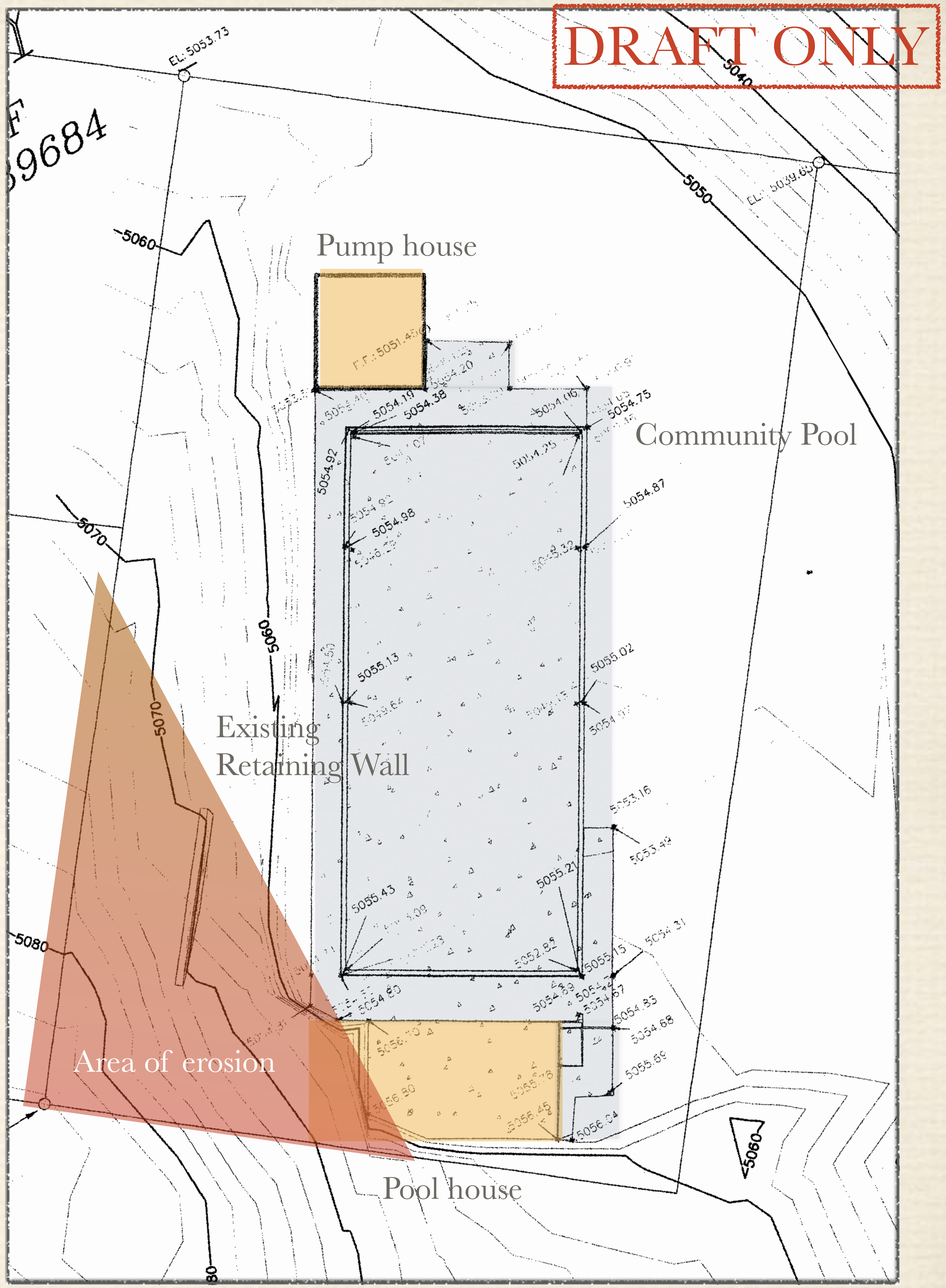




Our Phasing Plan.

- **Phase One:** Restore/complete Pump House
- **Phase Two:** Build retaining walls to prevent further erosion into historic property.
- **Phase Three:** Restore original pool house, including signage to tell the full story and history of complex.
- **Phase Four:** Restore pool to working condition
- **Phase Five:** Integration into larger masterplan*

*design approved earlier.



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Immediate action.

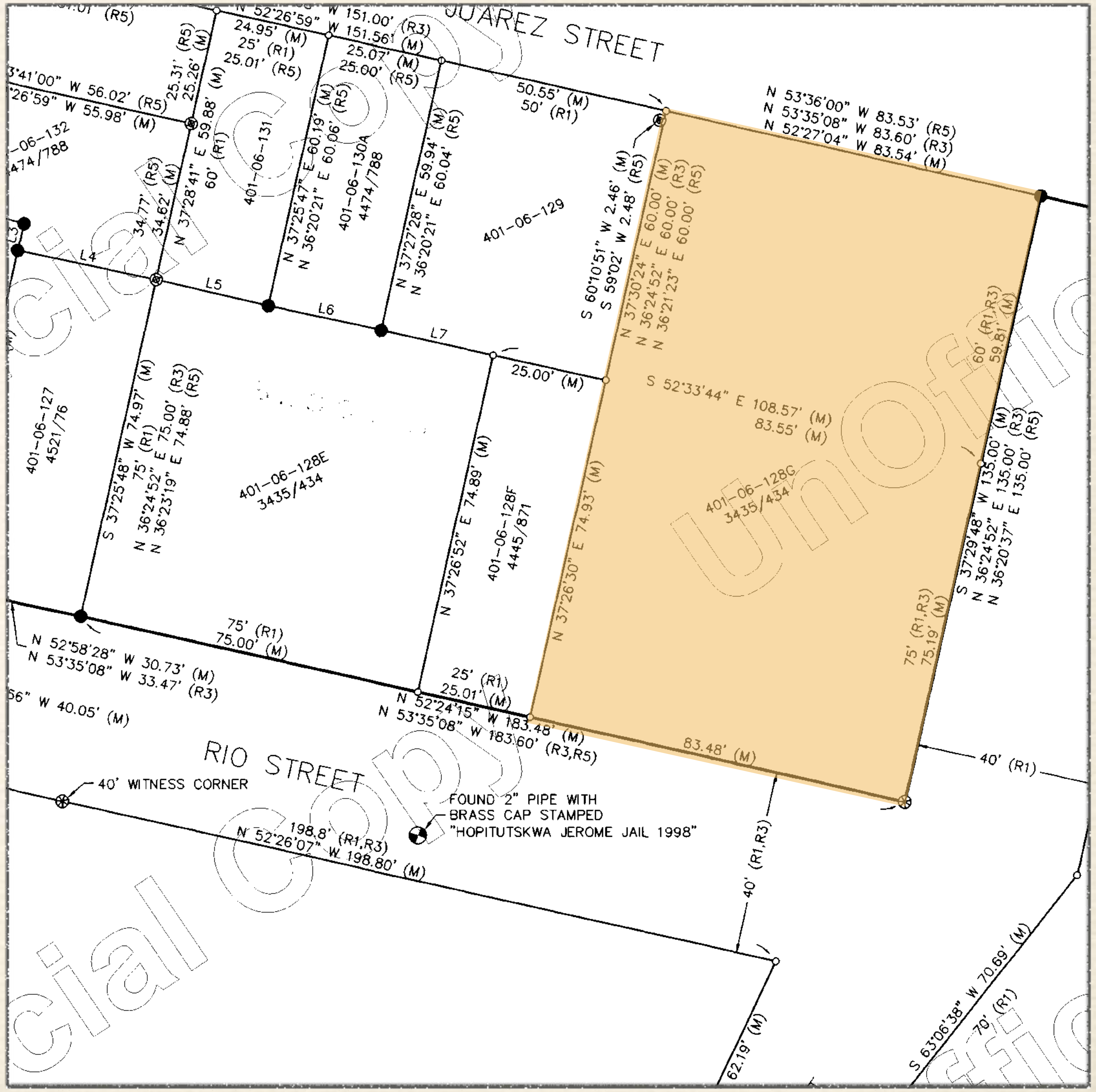
Erosion and Site Stabilization
The site has heavy erosion and based on the soil report we will need to build a retaining wall. While we understand the city cannot financially support, we are hoping that the city council will help facilitate expediting permitting.

Confirming adjacent lot boundaries.
Due to heavy erosion it is vitally important that we reconcile neighboring lots, esp as we are bordered on three sides by city owned lots. Shephard Wesnitzer Inc (SWI) was commissioned to survey the City of Jerome property and surrounding lots in anticipation of future work. We will work to ensure this matches sellers topo. survey. For now erosion looks to just be on lot.

Utility Infrastructure and Fire Suppression
Listing noted due to historic structure, water & sewer hookups will be waived for build. We will work with Jerome Fire Dept. and city to ensure site has appropriate fire suppression. Potentially sharing cost of upgrades.

Cultural Resource Study
We will commission a cultural resource study, then hire locally based engineering company to develop a retaining wall system that will support city owned lots from eroding into the pool.

**Please note that, with the rebuilding of the Cuban Queen Bordello, the city may need to expand and extend the 4" waterline and add a new fire hydrant.*



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Support we need.

- Endorsement of pool and auxiliary building restoration.
- Waiving of water and sewer hookups, support for implementing electrical.
- Conditional Use Permit for residency in C-1 as per Section 507 B.18 or C.1 and permit for building in AR as per Section 503 B.1, B.3 or C.10.
- Expediting permits for new retaining wall.
- Permits for restoring original pool house, historic pool and area lighting

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Opportunities

- **Restore:** Ensuring property is built to enhance the historic district.
- **Unify:** Co-develop a plan with P&Z, DRB and Town Council on enhanced parking area and landscaping
- **Expand:** Create a new unique district around Rio, Diaz, Juarez, Conglomerate and Rich streets. Through public/private partnership.
- **House:** Representatives for Verde Extension offered original 1928 housing plans, designed by Sen. Clark, intended to be built around an expanded community center. These can be used as a template to create worker housing on city owned lots that surround the pool.

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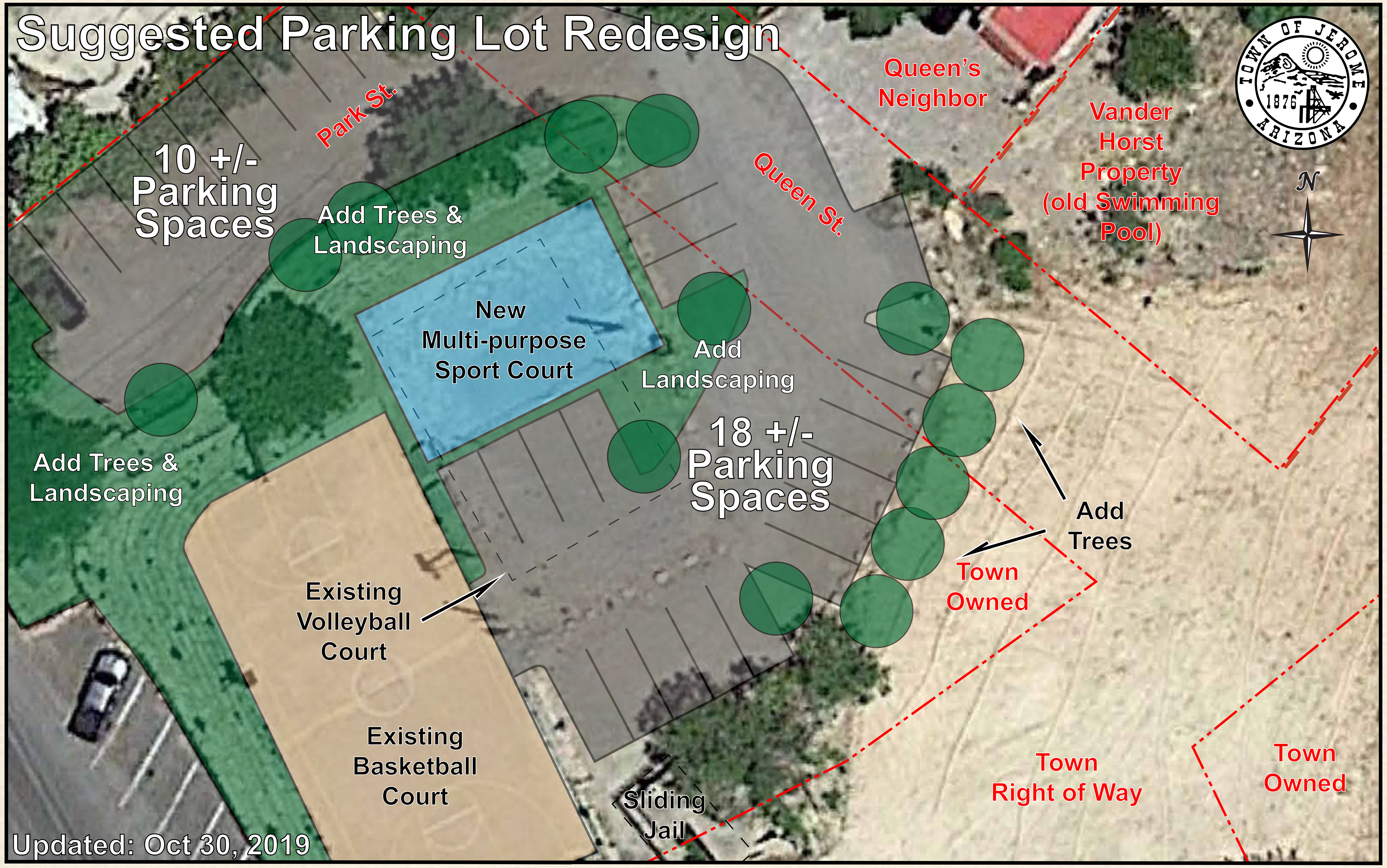
Long Term Partnerships: Unify



S:\Zoning Administrator\Code Amendments\Parking\2019-10-2 Cuban Queen (Volleyball) Parking Lot Redesign

Public/Private partnership is highly encouraged in Section B of 2018 General Plan. We would be delighted to engage in a community led process to ensure the parking lot redesign is developed so as protect historic properties that run along Queen Street / Rio Street.

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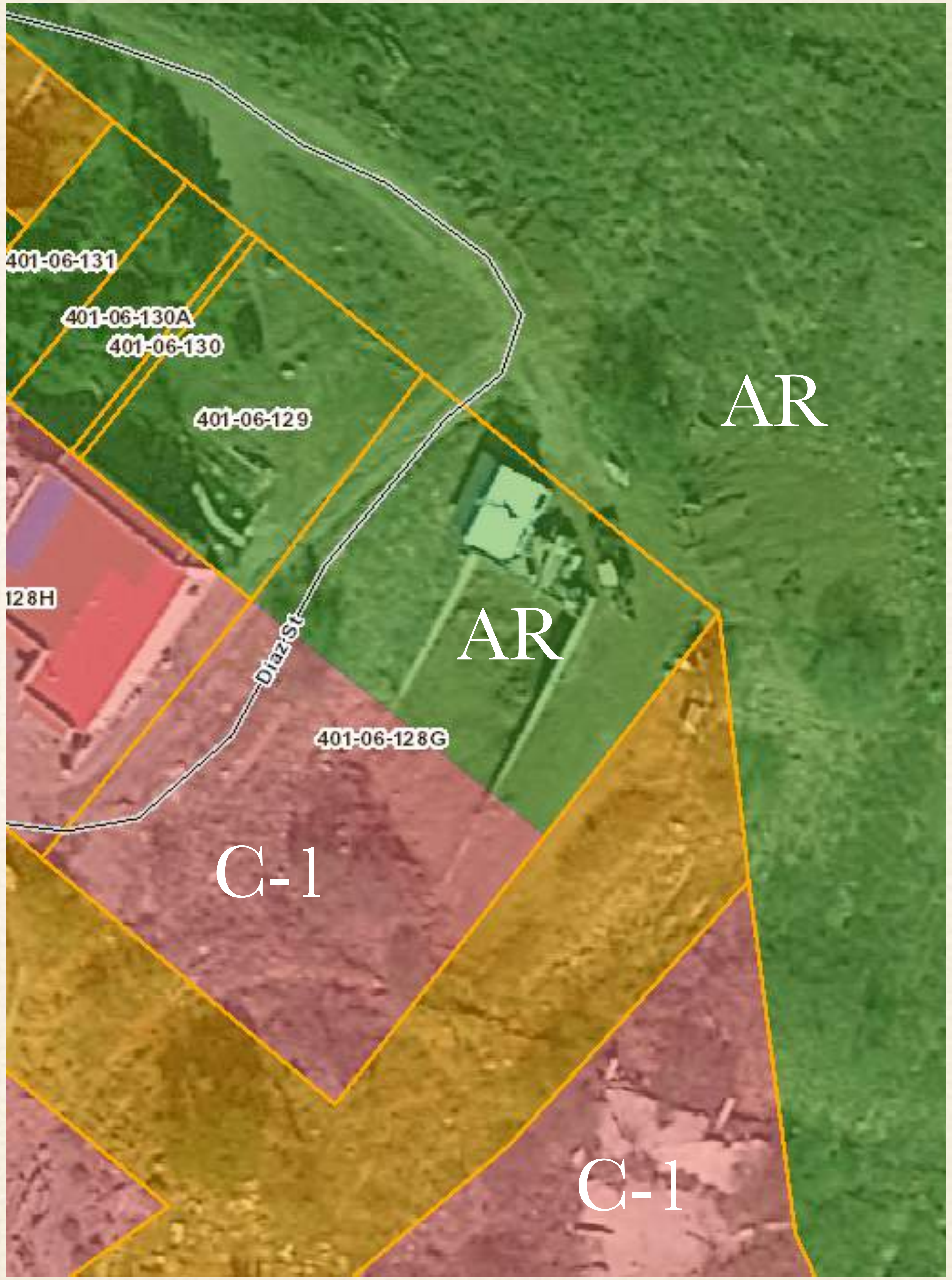
Enable a new commercial district

Currently the property* is unique in Jerome as its' zoning is both AR and C-1.

We would like a Conditional Use Permit for placing a residency in C-1 as current restrictions in A/R would mean covering up the Mexican pool.

One future opportunity is to clean up'the AR pockets along Rio/Queen and Diaz/Juarez and have a more uniform zoning masterplan for the commercial area of the town.

**Rusty Blair has confirmed the address of the Mexican Pool is 300 Queen Street (not 320 as previously listed.*



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Synopsis: Next Steps

1. Reconcile Topographical Survey (Frank) with Town Survey (SMI)
2. Gain approvals for utilities needed for historic preservation work.
3. Close on property
4. Implement Cultural Resource Study
5. Complete pump house rehabilitation
6. Set up design workshop process with P&Z, DRB and Town Council.

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Thank You

We are only just at the start of this journey but we would like to acknowledge the support of the Jerome City Council, the Jerome Fire Department and the Jerome Historical Society with special thanks to John Knight, Dr. Jack Dillenberg, Donna Chesler, Candace Gallagher, Alex Barber, Jay Kinsella, Barry Wolstencroft and Patrick Conley.

Additional thanks to Aron Wray (SWI) and Robert Pecharich (BPCWS/Verde Exploration)

Cheers
Cameron Sinclair and Bethany Halbreich

Thank You

"Respect for the past, looking toward the future"

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Appendix A: About Us

Bethany Halbreich is the founder of Paint the World, a non profit dedicated to inspiring and enabling creative expression through collaborative experiences. They have programs in eight countries, primarily activating communities by securing large blank canvas installations in areas that would otherwise have little or no access to these tools. In 2020, Paint the World worked with emergency wards and intensive care units across the United States, including Arizona, to utilize art therapy as a creative outlet for the stress in frontline workers responding to the Covid-19 crises.

She leads Incipe Insight, an innovation, design & strategy company with clients including IBM and PepsiCo. For the past three years she has also run Going Tiny, Living Large - a site to support those building and developing location specific tiny homes. This was borne out of her own experience designing and building a home in Topanga, California. Her tiny home video has has over 950K views this year.

Previously Bethany was director of onsite operations of THINK Global School, the world's first traveling high school, to empower the next generation of leaders through travel and cultural immersion. In her first stint as an Arizona resident, she worked at in addiction rehabilitation, directing various projects that harnessed the Native American communities' entrepreneurial potential.

Bethany received her B.A. from New York University's Gallatin School of Individualized Study, concentrating in Sustainable Development, Entrepreneurship and Global Initiative and her M.S.Ed. in Education Entrepreneurship at the University of Pennsylvania. She was an inaugural Resident at TED and has spoken at TED conference across the US.

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Appendix A: About Us

For the past two decades Cameron has worked at the forefront of social innovation, community development and historic preservation. As a trained architect he has built cultural centers, educational facilities and implemented community centric urban planning projects. He has managed multi-multidisciplinary teams to support communities in 58 countries, developing and building shelter solutions to over two million people.

Cameron has run a for-purpose design consultancy for over a decade which was recognized for designing and building schools for thousands of displaced children. Recent activities have included developing mobile health centers and cultural sustainability and preservation projects in Afghanistan, Japan, South Africa and the United States. He also serves pro bono as Executive Director of Armory of Harmony, which transforms decommissioned weapons into musical instruments, and co-founded Worldchanging Ventures, a sustainable housing company.

Previously he led social innovation at Airbnb, developing a range of projects from livelihoods for resettled refugees, economic revitalization of rural towns in Japan and Jordan, addressing systems for nomadic populations and developing marketplaces for traditional craftspeople in Japan. Sinclair was co-founder of Architecture for Humanity, which designed and built schools, health clinics, resilient housing and developed long term sustainable reconstruction programs.

He is a strong advocate in the power of design as a catalyst for social and economic change. Sinclair compiled a number of best selling books, is a visiting professor to a number of universities and holds an honorary doctorate of Architecture. Sinclair was a Senior Fellow of the Design Futures Council, an advisor at USAID, UNESCO and a Young Global Leader of the World Economic Forum.

Sinclair won the TED prize, the National Design Award and a runner-up for UK Designer of the Year.

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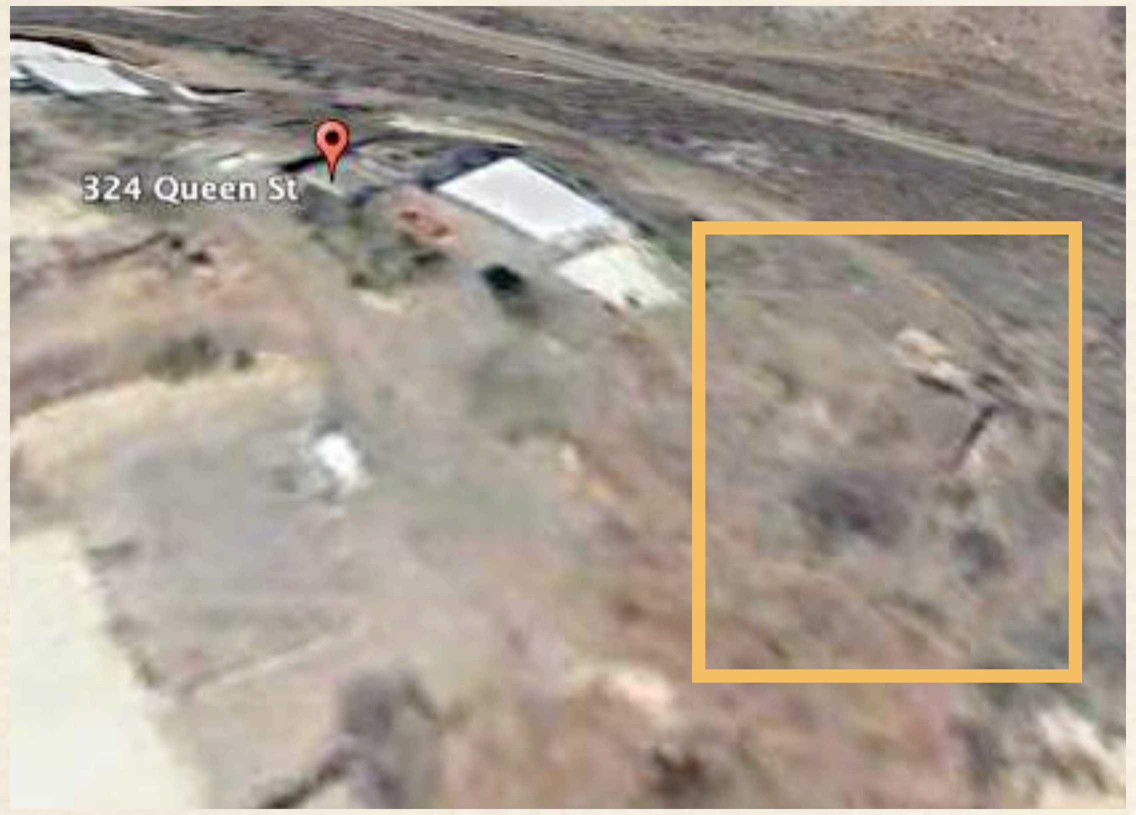
Appendix B: Satellite Images



2006

2009

2011

2012

2014

June 2015

Dec 2015

June 2017

Queen Street toward valley: 2006 to 2017

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Appendix B: Satellite Images


2006


2009


2011


2012


2014


June 2015


Dec 2015


June 2017

Queen Street toward town: 2006 to 2017

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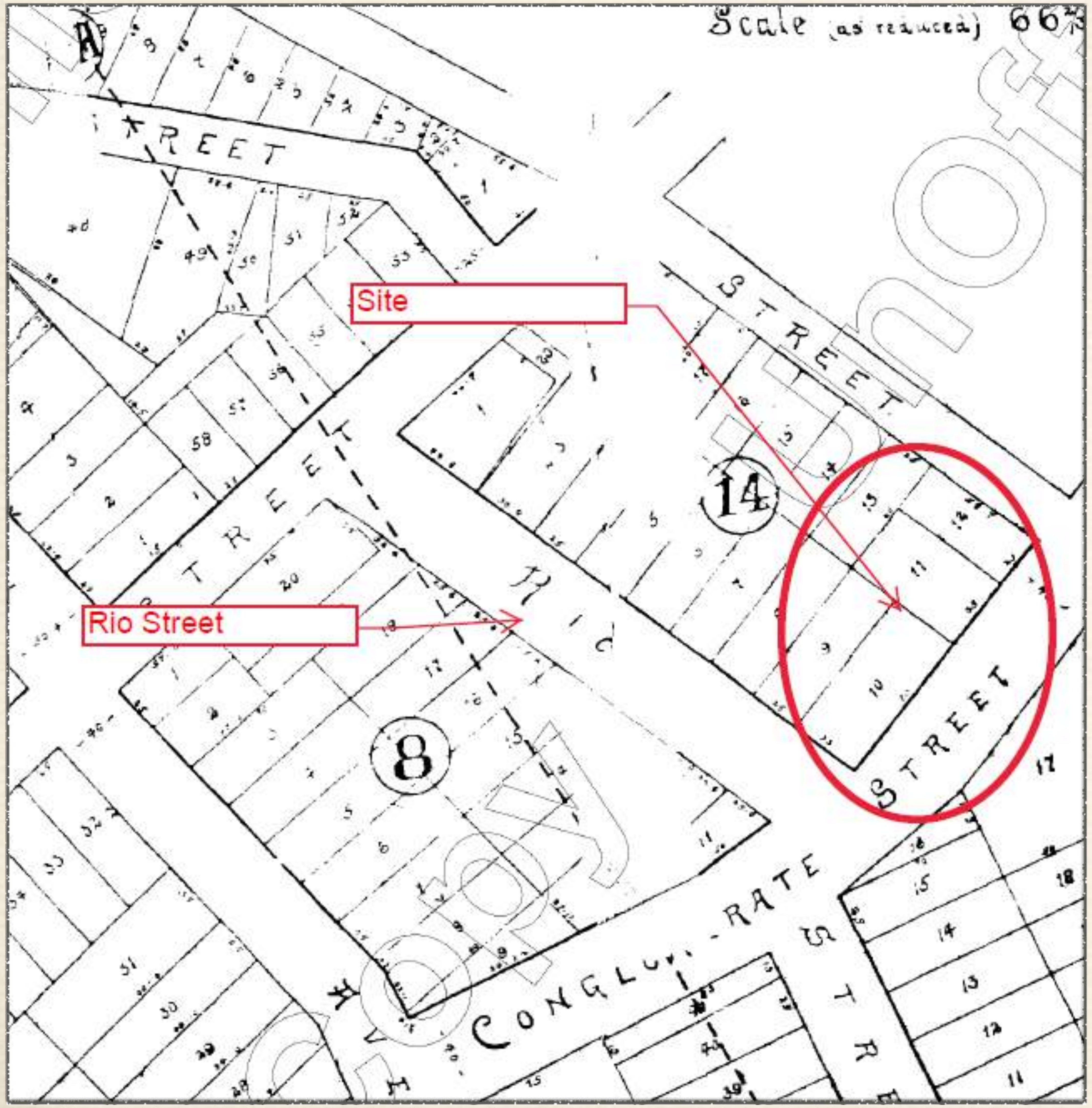
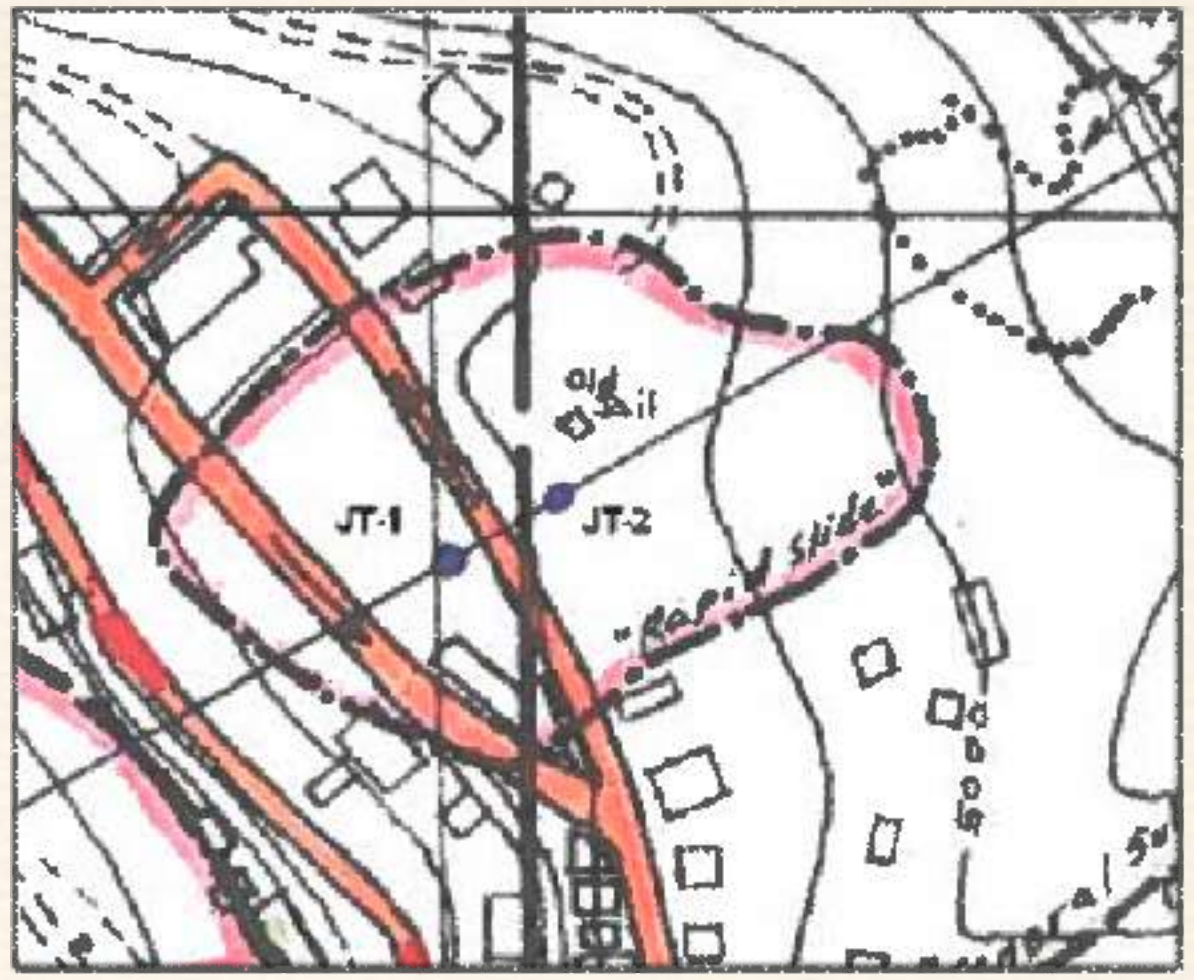
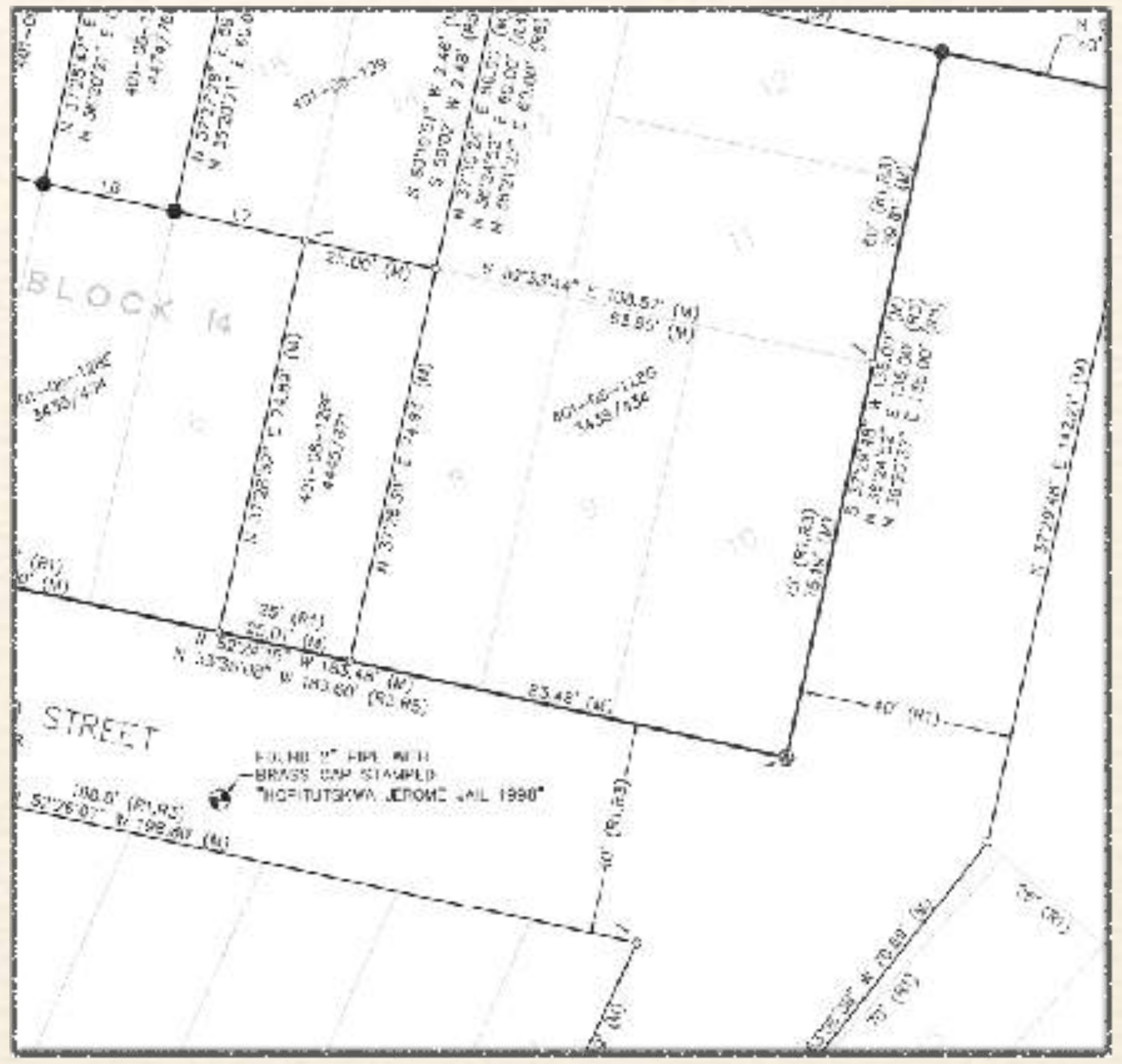
Appendix C: Historic Surveys







Surveys provided by John Knight, Zoning Administrator/Historic Preservation Officer.

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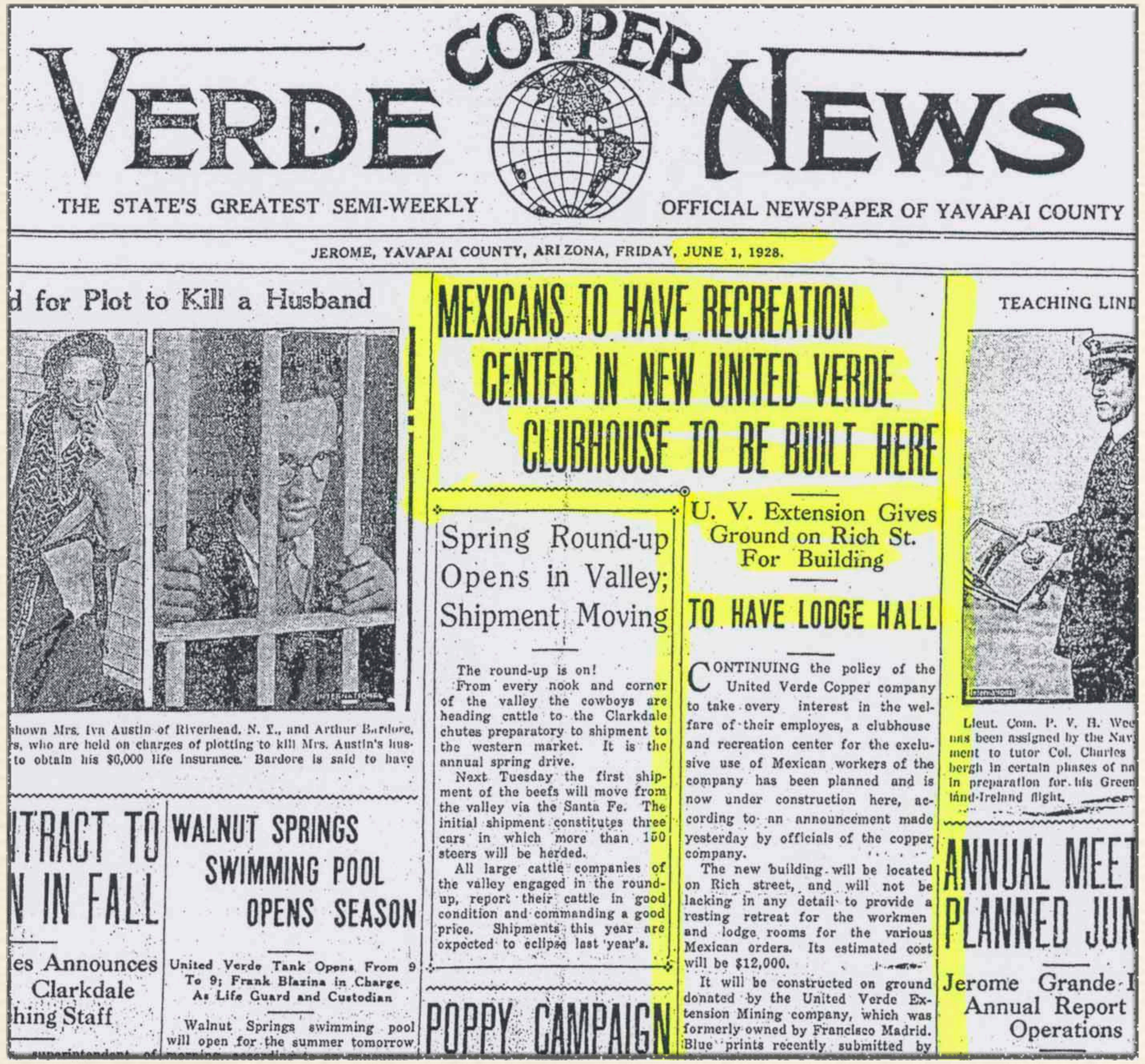
Appendix D: Historic News Articles



VERDE COPPER NEWS

THE STATE'S GREATEST SEMI-WEEKLY — OFFICIAL NEWSPAPER OF YAVAPAI COUNTY

JEROME, YAVAPAI COUNTY, ARIZONA, FRIDAY, JUNE 1, 1928.

d for Plot to Kill a Husband

shown Mrs. Iva Austin of Riverhead, N. Y., and Arthur Bardore, s, who are held on charges of plotting to kill Mrs. Austin's hus- to obtain his $6,000 life insurance. Bardore is said to have

MEXICANS TO HAVE RECREATION CENTER IN NEW UNITED VERDE CLUBHOUSE TO BE BUILT HERE

U. V. Extension Gives Ground on Rich St. For Building

TO HAVE LODGE HALL

CONTINUING the policy of the United Verde Copper company to take every interest in the welfare of their employes, a clubhouse and recreation center for the exclusive use of Mexican workers of the company has been planned and is now under construction here, according to an announcement made yesterday by officials of the copper company.

The new building will be located on Rich street, and will not be lacking in any detail to provide a resting retreat for the workmen and lodge rooms for the various Mexican orders. Its estimated cost will be $12,000.

It will be constructed on ground donated by the United Verde Extension Mining company, which was formerly owned by Francisco Madrid. Blue prints recently submitted by

Spring Round-up Opens in Valley; Shipment Moving

The round-up is on!

From every nook and corner of the valley the cowboys are heading cattle to the Clarkdale chutes preparatory to shipment to the western market. It is the annual spring drive.

Next Tuesday the first shipment of the beefs will move from the valley via the Santa Fe. The initial shipment constitutes three cars in which more than 150 steers will be herded.

All large cattle companies of the valley engaged in the round-up, report their cattle in good condition and commanding a good price. Shipments this year are expected to eclipse last year's.

POPPY CAMPAIGN

TEACHING LIN

Lieut. Com. P. V. H. Wee has been assigned by the Nav ment to tutor Col. Charles bergh in certain phases of na in preparation for his Green land-Ireland flight.

ANNUAL MEET PLANNED JUN

Jerome Grande Annual Report Operations

NTRACT TO N IN FALL

es Announces Clarkdale hing Staff

WALNUT SPRINGS SWIMMING POOL OPENS SEASON

United Verde Tank Opens From 9 To 9; Frank Blazina in Charge As Life Guard and Custodian

Walnut Springs swimming pool will open for the summer tomorrow

OPPER NEWS

OFFICIAL NEWSPAPER OF YAVAPAI COUNTY

The Newspaper That Is Read—*Always*

OUNTY, ARIZONA, FRIDAY, AUGUST 10, 1928. VOLUME 16, NUMBER 63.

Fostering Trade With Russia

ries Smith, left, and M. Malycheff as they appeared during their tions in Moscow in an effort to foster trade relations between the States and Russia. Mr. Smith is president of the American Chamber merce, and M. Malycheff is president of the Russian Commercial

mmittee Investigates te For Local Airport

anies Interested mmediate Move or Big Field

CONDITION OF

KAIBAB HUNTING RULES FOR NEXT FALL EXPLAINED

Sportsmen Are Urged to Decrease Big Deer Herds

PROBLEM ACUTE

ANSWERING many inquiries which have been directed to the offices of the Yavapai county chamber of commerce and the immigration commissioner, relative to hunting in the Kaibab forest, the following information from the United States department of agriculture, the forest service of the Kaibab national forest, is given for the benefit of the public.

The need of relief in the removal of the excessive number of deer on the Kaibab national forest is increasing. A friendly suit is now in the federal courts to determine the respective responsibilities for conditions. In order to secure as much relief as possible pending the final determination of this suit, the forest service and the Arizona state game department have agreed to the opening of restricted areas to hunting during October, 1928.

Two hunting areas are designated —one on the east side, and one on the west side—in heavily congested areas. Maps may be seen at the camps. Hunting will not be permitted elsewhere.

Camps will be in charge of forest rangers and deputy game wardens,

DEDICATION OF SWIMMING POOL ATTRACTS CROWD

Letter Read from Mr. Talley Gives Tank to Community

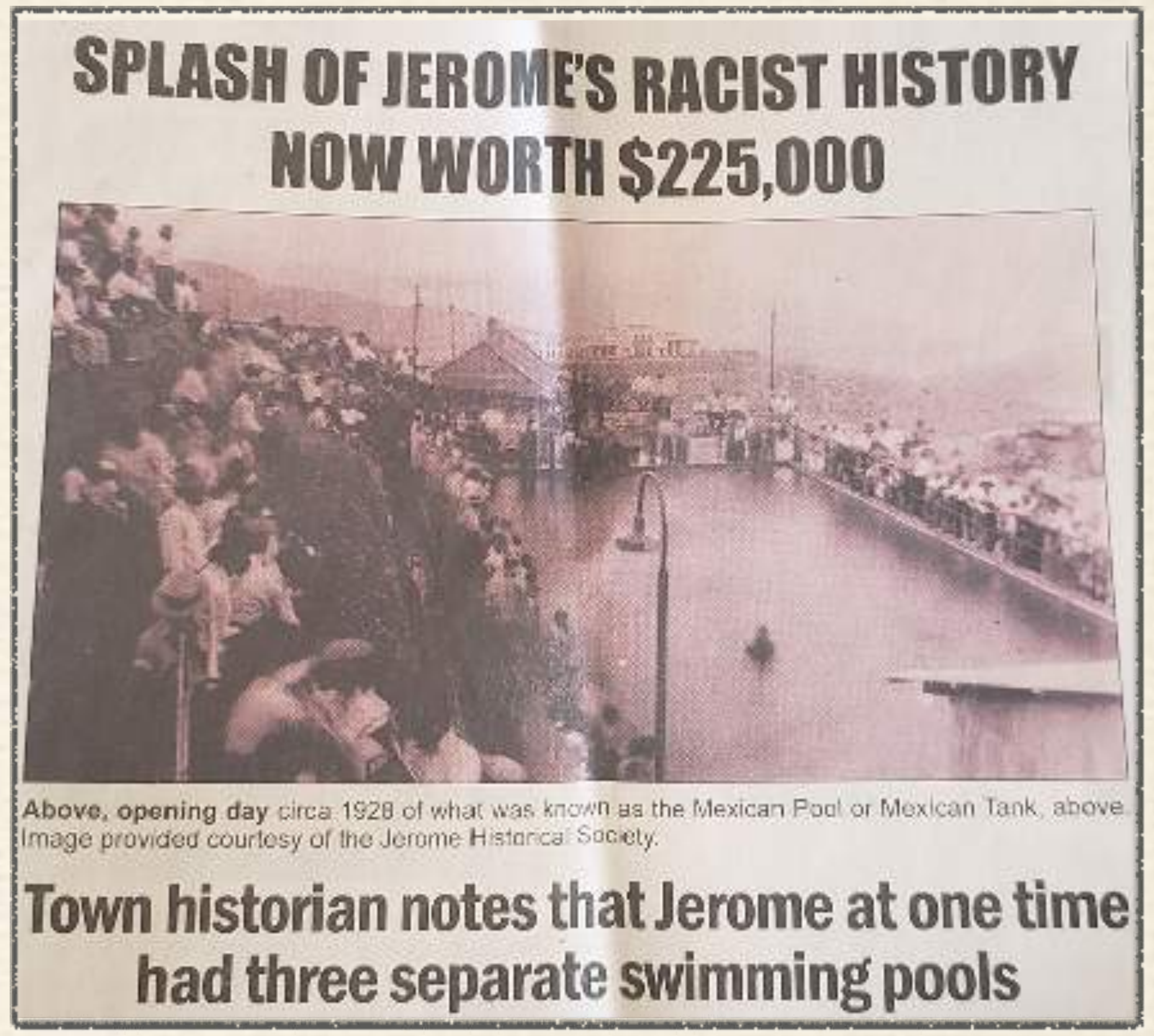
AQUATIC EVENTS

"BECAUSE of all these things and on behalf of the United Verde Copper company, its officials and directors, it gives me the deepest pleasure to dedicate this pool to the use of the people of this community," Robert E. Tally, general manager of the United Verde Copper company, told a gathering of more than 300 persons in a message which also lamented the fact that he was unable to be at the opening of the new Rich street swimming pool Wednesday evening.

Alfred Mayagoitia of the employment department read Mr. Tally's message which continues:

"I am happy to have the privilege of presenting to you, on behalf of the United Verde Copper company and its owners, another link in the chain of projects promoted by them and designed to make life in the Verde District more pleasant.

"The plan under which this swimming pool was built was close to the heart of Senator Clark, whom many of you knew and remember, and whom we all loved. This plan is now being carried to completion with the approval of his successors



SPLASH OF JEROME'S RACIST HISTORY NOW WORTH $225,000

Above, opening day circa 1928 of what was known as the Mexican Pool or Mexican Tank, above. Image provided courtesy of the Jerome Historical Society.

Town historian notes that Jerome at one time had three separate swimming pools

YAVAPAI COUNTY

VOLUME 16, NUMBER 62.

Registrations Over Next Saturday Eve.

A large number of Jerome residents have failed to register for the primary election on September 11. Registrations close at 6 o'clock next Saturday evening, August 11, according to Miss Grace Chapman, county recorder.

Those who desire to make themselves eligible for a vote in the fall elections should get in touch with either Judge Clyde B. Jones or Emmett Vickers, registration officers for the four Jerome precincts.

PREPARE ANNUAL

SWIMMING POOL ON RICH STREET OPEN TOMORROW

Aquatic Contests Will Mark Dedication of U. V. Tank

TO HAVE TALKS

A SPEAKING program and aquatic events will mark the dedication of the new United Verde Copper company's swimming pool on Rich street. The program will begin at

We are looking to tell the honest story of the pool, the context within Mexicantown / five points area of downtown Jerome in addition to engaging historians and current/former residents to explain the role the pool played in the history of Jerome.

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Appendix E: Soil Report

March 8, 2018
Project 1701665 – Vander Horst Residence
East of 310 Queen Street - APN 401-06-128G
Jerome, Arizona 86331

ACS

SCOPE

This report is submitted following a geotechnical investigation conducted by this firm for the proposed **VANDER HORST RESIDENCE**, to be located east of 310 Queen Street, APN 401-06-128G, in Jerome, Arizona 86331. The objectives of the investigation were to determine the physical characteristics of the soil underlying the site and to provide final recommendations for safe and economical foundation design and slab support. For purposes of foundation design, the maximum column and wall loads have been assumed to be as summarized below.

	Maximum Column Load (KIPS)	Maximum Wall Load (KLF)
Shallow Spread Foundations	74	4.5

- In March 2018, ACS recommended a retaining wall system to protect the site from further erosion.

ACS SERVICES LLC

BORING B-1

For: Frank Vander Horst
Project: Vander Horst Residence
Location: APN 401-06-128G
Jerome, AZ

Date: 11/1/2017 **Project No.** 1701665
Type of Boring: 6.625-inch HS Auger
Field Engineer: Karl Kalliokoski, EIT
Location: See Site Plan

Remarks: Ring sample obtained from 1.5 to 2.5 feet

Depth (Feet)	Blows per 6"	Moisture %	Dry Density (PCF)	USCS Soil Class	Description of Subsurface Conditions
	5	10.3		GC	**FILL** - Brown clayey sandy GRAVEL, medium dense, damp, PI of 24
1	8				
	8				
2	11			GC	**FILL** - Dark brown clayey sandy GRAVEL, medium dense, damp, high PI
	10				
3	5				
	6				
4	6				
	11			GC	**FILL** - Dark brown clayey sandy GRAVEL, medium dense, damp, high PI
5	11				
	11				
6	9				
	10	11.9		CL	**NATIVE** - Light brown sandy CLAY, very stiff, damp, PI of 22
7	13				
	19				Becomes hard
8	17				
9					
	6			CL	Dark brown gravelly sandy CLAY, hard, damp, very high PI
10	13				
	23				

March 8, 2018
Project 1701665 – Vander Horst Residence
East of 310 Queen Street - APN 401-06-128G
Jerome, Arizona 86331

ACS

Photo 5 – View looking north along an existing cut slope on the west side of the proposed residence where an exterior retaining wall will likely be required.

Geology and Landslide Activity
On Arizona SR 89A
In Jerome, Arizona

A Study Presented in May, 2005

Geology and Landslide Activity, on Arizona SR 89A, in Jerome, Arizona

Paul Lindberg, Consulting Geologist, Sedona, AZ
Nick M. Priznar, Engineering Geologist, Arizona Department of Transportation, Phoenix, AZ
Scott Neely, Geotechnical Engineer, Terracon Consulting Engineers and Scientists, Phoenix, AZ

Abstract

The outcrops, surrounding Jerome Arizona and underlying SR 89A, has been the subject of geological scrutiny ever since the late 1880s. Rich volcanogenic ore bodies, more than 1750 million years old, are found in the highly deformed Precambrian host rocks of the area. Crystalline basement rocks are unconformably overlain by flat-lying Paleozoic sediments and Tertiary basalt lava (550-250 and 15-10 million years old, respectively). Subsequent faulting has dropped the younger strata against Precambrian rocks along the Verde fault that passes through the upper part of Jerome, sub-parallel to portions of modern SR 89A. A former 1550 foot high fault scarp, generated about 8 million years ago along the western margin of the Verde graben, or rift valley, shed clay-rich fault gouge and weathered bedrock down slope onto the down-faulted Tertiary volcanic rocks on what was to become the site of Jerome. Millions of years of erosion of the fault scarp ultimately exposed the nearby Precambrian ore bodies and the debris from that erosional episode produced the layer of weathered colluvium that buried the unstable clay layer lying beneath the Jerome town site.

Portions of the town site and SR 89A, therefore, are constructed on a steep hillside on top of an unstable substrate that is subject to slope instability. Two other uninhabited sites along the trace of the Verde fault to the south of Jerome have also experienced similar scale landslides in geologically recent time. Other parts of the SR 89A alignment in the Jerome area were built across precarious bedrock outcrops and along the edge of deep canyons. These are prone to rock fall and retaining wall failures that could occur during high intensity rainfall events.

This paper will provide a brief review of the geologic conditions in the area and highlight some of the historic landslides still affecting on modern highway planning and construction. Additionally a recent project history will be summarized where these geologic conditions played a critical part in the analysis of a proposed rest area site.

Location

The project area is located in central Arizona, in Yavapai County on the northeastern slopes of the Black Hills Mountains. This is approximately 100 miles north of the state capital in Phoenix Figure 1.

Highway 89 A traverses the decent from Mingus Mountain via Deception Gulch through the community of Jerome and down the pediment slopes of the Verde Valley to the Town of Clarkdale. The elevation of the project is roughly at 5150 feet.

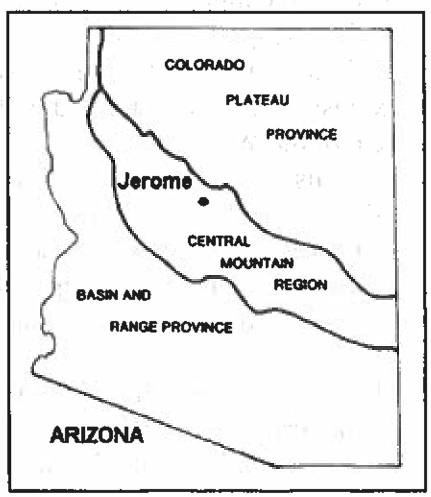


Figure 1. **Project Location Map**
(From Nations and Stump 1981)

The area is physiographically assigned to a central mountainous region known as the Transition Zone, which is south of the Colorado Plateau and north of the Basin and Range Province. The area receives approximately 20 inches of precipitation per year.

This paper will concentrate on the conditions that exist near milepost 344 in the town of Jerome. This area is locally known as Clark, Main and Hull streets

Highway History

SR 89A (formerly SR79) was one of the earliest highway construction projects to receive federal aid funding in Arizona. Its completion led to a drastic reduction in the time it took to travel from Prescott (the county seat) to Jerome. A trip that once took 5 hours now takes 1 hour.

In 1919, Federal Aid Project No. 12, facilitated construction of the new state highway route 79, (now 89A) with a 20' wide roadway and 6 to 10% grades. The work on the two-mile segment just outside of Jerome was considered the most difficult roadway construction ever attempted by the state of Arizona. Its total cost was reported as $123,785.15, a rate of approximately $62,000.00 per mile. (An exceptional amount of money at the time.)

The route surveyors utilized pioneer trails previously constructed by the local government and mining interests. It is probably no coincidence that the present highway travels past many of the old mining structures and workings. The highway provided a direct down hill route to the smelter located near present day Cottonwood Arizona, avoiding the steep uphill trail over Cleopatra Mountain.

Construction through the town of Jerome dominantly consisted of integrating the existing local streets of Clark and Main into a manageable route through the residential and business district. (Figure 23) The town upgraded the gravel roadway surface to match that of the state highway system in 1920. In 1928 a special bond election facilitated paving all the main streets in Jerome.

In 1937 the highway was widened to 30 feet. (Figure 2) At this time stone retaining walls and concrete culvert extensions were constructed with the help of the Works Progress Administration (WPA). Additionally sidewalks and new retaining structures were added to existing gravity rock rubble retaining walls in the vicinity of downtown Jerome.

Figure 2. 1937 stone retaining wall construction (Clements 2003)

The present alignment, with only minor surface improvements and local detours, is essentially the same today.

However nine of the town's retaining structures have had to be replaced or reinforced in the last 60 year. Others are being monitored because of deteriorating conditions.

Landslide activity in the Town Of Jerome

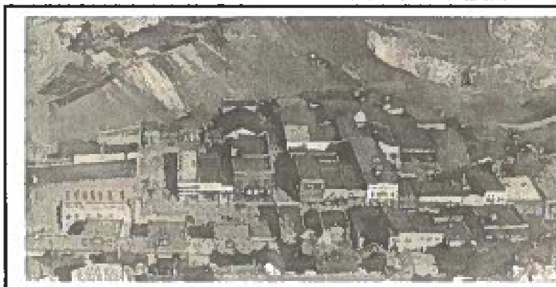
Initially slope stability issues were not a concern because the first rudimentary structures were few and lightly constructed. The local streets were constructed on a steeply inclined clayey gravelly soil and bedrock surface. The town's inhabitants utilized local soil and rock materials to construct terraced building lots, terrain contouring streets, rubble retaining walls and land fills on the steep slopes of Cleopatra Hill.

With the introduction of large scale mining activity the local population grew rapidly creating a great demand for buildings and transportation infrastructure. After three large fires destroyed significant portions of the community, the town incorporated itself in 1889 with a building code requiring brick and masonry construction. The town also initiated construction of a municipal water line and fire service.

This phenomenal growth is depicted in the two photographs displayed below contrasting the community in the 1880s and in the 1930s.

Figure 3. Jerome Main street circa 1880 (Young, 1964)

Figure 4. Jerome Main Street circa 1930 (Clements 2003)



The first signs of instability was reported in 1898 with subsequent events in 1903, 1912, 1913, 1914 and 1916 throughout the town site. Persistent damage to the town's water, sewer and fire fighting systems increased the saturation of the local soils. In 1913 instability in the area, which later became a major landslide, was reported in the vicinity of Clark, Hull and Main streets. In 1924 appreciable ground movement reoccurred in this area. Increasing horizontal and vertical movements continued until in 1937. At that time a 3-acre section of downtown Jerome had been deemed structurally unsound and many affected buildings had to be torn down. (See Figures 5, 6, & 8) Instability in the area continued well into the 1940s. (See Figure 9 & 10 for location of the landsides that occurred during this era.)

Figure 5. Main Street (from Young 1964)

Figure 6. Present day Main Street, exhibiting missing buildings in landslide affected area

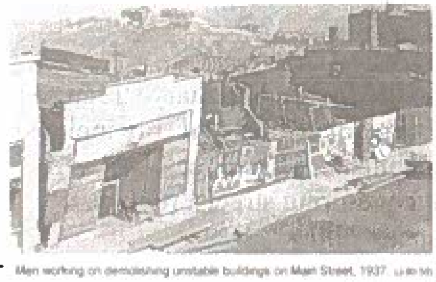


Figure 7. Exhibiting structural damage to building on Main Street circa 1937 (Now SR 89A) (Jerome Historical Society)

Landslide
Jerome AZ
date unknown

Figure 9. ***(From Lindberg 2002)*** This base map displays the outline of historic landslide areas of Jerome plus other pertinent information.

The location of the landslide cross section, (A – A'), passes through the exploratory borings JT1, JT2. See Figure 20.

The main strand of the Verde Fault, with a net drop of 1550 feet of the northeastern block, is shown with a long solid dashed line.

Outlines of the "Rapid Slide", "Upper Slide", and General Subsidence Area" are taken from, Kiersch, 1988.

The red outlined sections of SR 89 depict retaining walls that were replaced in recent years by ADOT

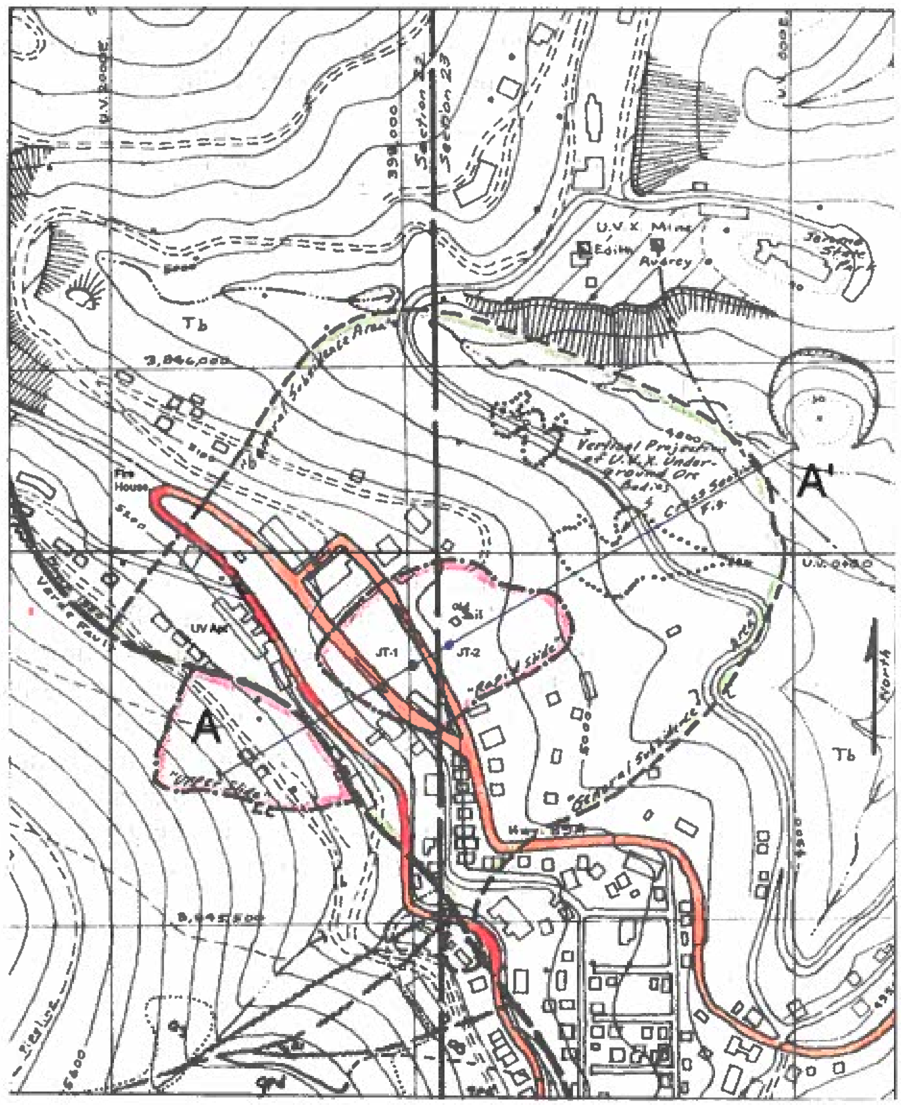


Figure 10. **This picture foreground displays the 3 acres of downtown Jerome affected by the landslide**

Figure 11. **Fill and regrading of Main street was a common occurrence during the 1930's and 1940's**

Considerable reconstruction of Main Street occurred throughout this era. In 1941 the state took over road maintenance that had grown beyond the towns capacity to repair. As late as 1948 the highway through the town of Jerome was regraded roughly every 6 months. Responsibility for the devastation of the business district focused on the local mining industry.

<u>Brief Geology of SR 89A in the vicinity of the Jerome Landslide</u>

There are four major groupings of lithologies that are present in the project area

Recent to Miocene Colluvium Deposits / with Landslide Debris

Investigations in the project area have identified a sequence of dense reddish brown sandy to clay-rich gravel beds deposited upon relatively solid bedrock outcrops of Tertiary and Precambrian lithologies. Fault gouge combined with chemical and mechanical weathering of bedrock materials in the vicinity of the Verde Fault Zone are presumed to have produced these high to moderately high plastic clay deposits that contain relic fragments of parent rock. Overlying this material is an assemblage of colluvium and a mixture of modern fill soils, local rocks, and mine waste and construction debris.

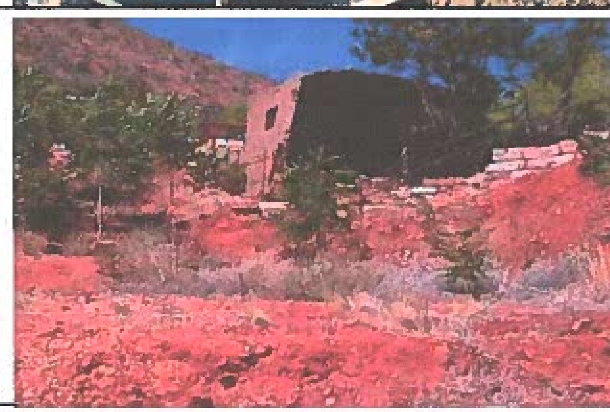


Figure 12. ***(right, above)*** **sandy clay and gravel overlain by highway fill exposed in retaining wall cut in the vicinity of the UV Apartments on Clark Street. (SR89A)**

Figure 13. ***(right, below)*** **Landslide disturbed soils and fill in the vicinity of sliding jail, down slope side of landslide mass**

Tertiary Volcanic and Sedimentary Deposits

Figure 14. **Hickey Basalt Outcrop**

Hickey Basalt of Miocene age has been displaced downward along the Verde fault zone and forms the dominant rock type that underlies the Jerome town site. In the upper part of town basalt bedrock lies below surface colluvium within the highway right of way, from the Jerome fire hall (at the switchback where Main and Clark Streets join) to a point 1300 feet to the south.

For the next 800 feet the centerline of SR89A intermittently intercepts the plane of the Verde fault. Hickey Basalt lies downhill to the east and Precambrian bedrock is exposed to the west. The Hickey formation is composed of fine to coarse-grained olivine basalt lava flows that contain a few intercalated conglomerate beds. Beneath the lava flows, well below the surficial colluvium deposits, is a pre-Hickey conglomerate of Miocene age that contains well-cemented Precambrian and Tertiary rock clasts. Except for several feet of surficial weathering, and thin layers of tuffaceous material, the Hickey Basalt lava flows are generally quite competent.

Paleozoic Sedimentary Deposits

Only two Paleozoic age rock formations are encountered in highway road cuts. To the west of the bold Precambrian rock exposures in Deception Gulch and Hull Canyon, SR 89A crosses down-faulted Devonian Martin Dolomite. The Martin is a relatively competent, tan colored, stratified sedimentary formation containing conspicuous blocky fractures. Further uphill on the flank of Mingus Mountain the route crosses into conformably overlying Mississippian Redwall Limestone, a relatively pure calcium carbonate formation, locally quarried for the manufacture of cement. The Redwall is typically very competent and grey in color but it locally displays karst solution cavities and cemented collapse breccias with an iron oxide pigmentation. Continuing uphill, (towards Prescott), the road crosses an unconformity and passes into Miocene Hickey Basalt. These same two Paleozoic formations are exposed in highway road cuts down slope from Jerome in down-faulted blocks below the Verde and Bessie faults. Neither of these Paleozoic sedimentary formations is exposed in the immediate Jerome town site area.

Precambrian Rock Types

There are two different Precambrian volcanic lithologies exposed on the hillside of the Verde fault immediately above Jerome. Relatively massive Lower Cleopatra Rhyolite crops out to the west of the fault plane and forms the massive outcrops of Cleopatra Hill above town. This extrusive lava flow has a granitoid texture with conspicuous quartz phenocrysts set in a groundmass of sericite (hydrothermally altered feldspar) and silica. About 1300 feet to the south of the Jerome fire hall (located at the sharp switchback where Main and Clark Streets come together) SR 89A enters Deception Rhyolite along the uphill side of the Verde fault. This rock has a similar composition to the Lower Cleopatra but it lacks the quartz phenocrysts. Both of the Precambrian rhyolites display a brownish weathering patina but actually are a pale green in color when exposed in fresh outcrops. High angle reverse faulting on the ancestral Verde fault during the Laramide Uplift (~75 million years ago) and more recent normal offsets along the reactivated Verde fault (~8 million years ago) generated clay-rich fault gouge formed from these rhyolite rocks. During the latter phase of faulting weathered rock and clay fault gouge from these rocks contributed to the surficial instability of the Jerome town site.

After leaving Jerome and passing westward through precipitous Deception Gulch and Deception Rhyolite outcrops, the road re-enters Lower Cleopatra Rhyolite where the more subdued landscape of Hull Canyon is exposed. Beyond the newly constructed vista point the road continues through Lower Cleopatra Rhyolite and traverses across unaltered Upper Cleopatra Rhyolite, Upper Sequence rhyolite flows and breccias, and finally into submarine-emplaced Grapevine Gulch turbidite debris flows before reaching the Warrior fault plane. Beyond that the road encounters Paleozoic strata

Geology of the Jerome Landslide Area

The area where the Jerome surficial landslide has occurred has undergone dramatic geologic changes over the past 75 million years. The general "head" of the historic slide area as shown in Figure 9, lies at the edge of the Verde Fault plane along the base of Cleopatra Hill. Precambrian age Cleopatra Rhyolite is exposed for more than 800 feet in elevation directly above the plane of the Verde Fault that passes through the upper part of the Jerome town site. Tertiary age Hickey Basalt, dated at 10-15 million years old, has been dropped approximately 1550 feet against Precambrian basement rocks along the Verde Fault. Most of the town of Jerome is situated on top of surface colluvium and Hickey Basalt bedrock.

The Verde fault plane has an attitude of about –60 degrees to the northeast and lies well below the landslide area. The most recent period of faulting took place approximately 8 million years ago. The ancestral phase of the Verde fault however, experienced a period of high angle reverse motion during the Laramide Uplift that occurred ~75 million years ago. During that time the northeast block of the fault plane was raised several hundred feet higher than the southwestern side. The ancestral Verde fault plane that was reactivated ~8 million years ago when it experienced a normal drop to the east-northeast. As a result, the rocks within the Verde fault zone have been severely crushed and subjected to deep weathering over the past 75 million years. Underground mine exposures and drill logs, show that flexures in the Verde fault zone can vary from a few inches to thirty or more feet wide locally. Figures 15 & 16 shows the present day result of this prolonged period of activity.

Figure 15. (right) Schematic cross-section through Jerome area graben fault.

Panel A shows an early phase of fault offset and subsequent erosion. The Verde fault forms the southwestern margin of the Verde graben. Much of the Upper left portion of the fault scarp has been eroded away during this early phase.
Panel B shows conditions following renewed graben development and rapid displacement of the Verde fault that displaces the various strata to their present day elevations. The wide slab of Crushed Cleopatra Rhyolite and fault gouge exposed along the fault scarp erodes quickly and the material is re-deposited at the base of the slope on the top of the Tertiary Hickey Basalt. This material, composed of Precambrian clasts of rhyolite and fault gouge, forms the unstable colluvium under the central part of Jerome.

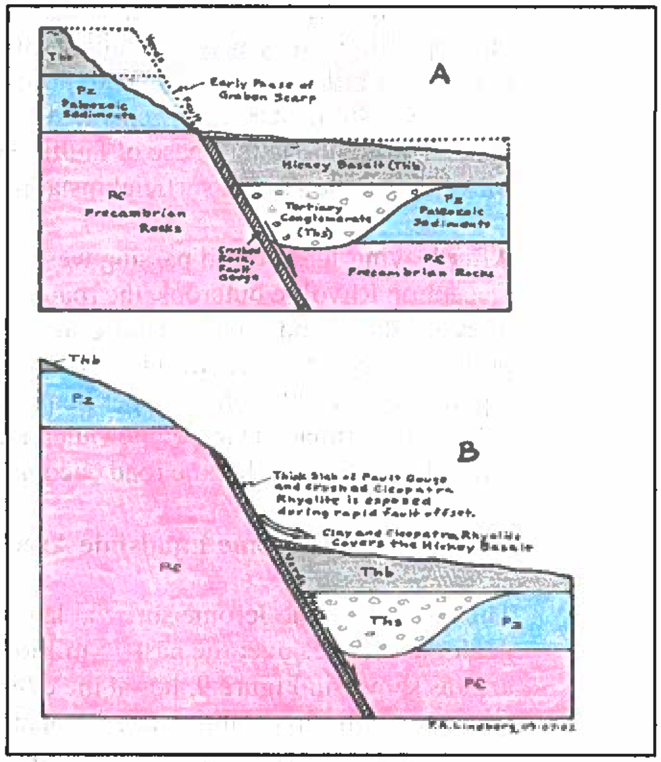
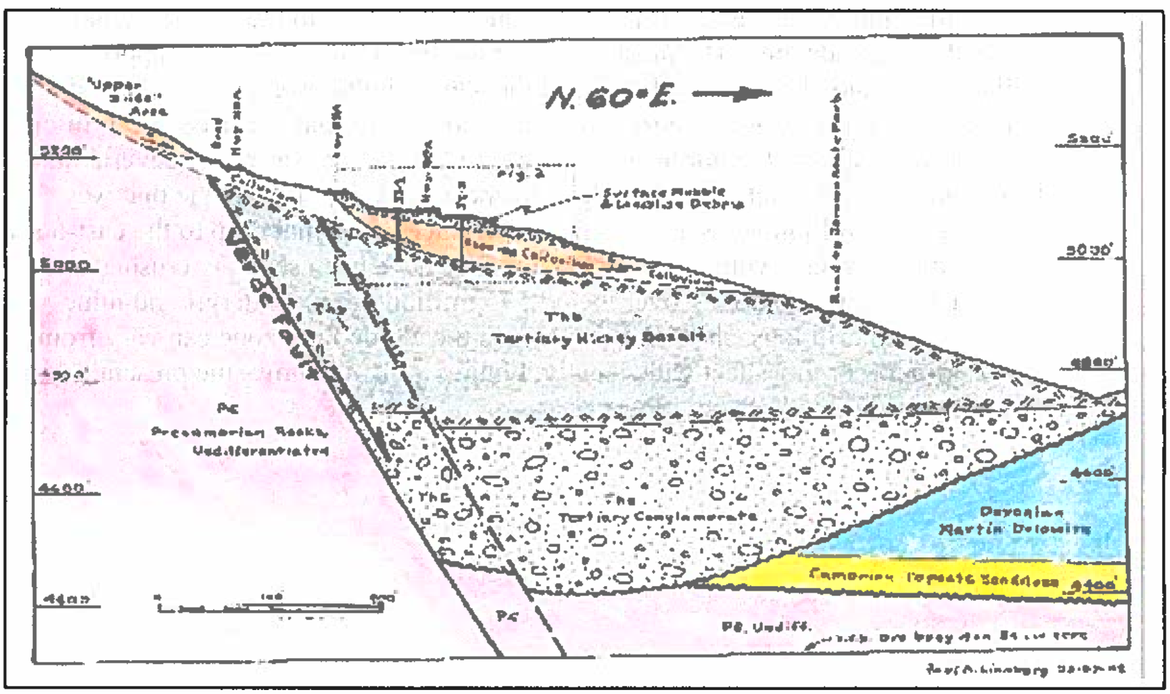


Figure 16. (below) Cross-section through the Jerome Landslide area looking northwesterly. Within this figure the dotted outline displays the position of project drill holes and the area of investigation. The current study strongly suggests that the entire landslide and subsidence area lies above the down dropped Hickey Basalt and is located within a thick colluvium that covers this part of the Jerome hillside.



The thin-skinned landslide deposits appear to have affected only surficial clay-rich and unconsolidated surficial colluvium deposits that lie above solid bedrock. Presently there is no observed field evidence for movement of underlying bedrock, or for recent displacement along the Verde fault, within the project limits. As such, the unconsolidated material upon which the central part of Jerome was constructed is underlain by unstable colluvium that is vulnerable to heavy precipitation events and down slope creep. The unconsolidated material in the immediate landslide area may have originally been up to 100 feet deep but to the north and south of the landslide area this thickness is much less. It is probable that the landslide occurred directly over the deepest part of a bedrock gully that has been filled with the thickest amount of clay-rich colluvium. This has exacerbated the potential for very local landslide movement. The source of clay is believed to have been derived from fault gouge and decomposed, hydrothermally-altered, sericite-rich Lower Cleopatra Rhyolite that was once exposed up slope on the scarp face of the Verde fault plane directly above Jerome. The Verde graben formed during the Basin and Range period of extension about 8 million years ago.

<u>Geotechnical Investigation of the Jerome Landslide Site</u>

In 2002 the town of Jerome partnered with ADOT's Roadside Development Section to re-develop the site as a rest area and parking facility for the tourists who visit the area. Since the area had had a long history of instability it was felt that a sub surface investigation was in order to try to understand the mechanisms that led to the 1930's era landslide. To accompany the study a detailed look into the records of the town was undertaken to find collaborating information, which described the landslide in the past.

ADOT through its on-call consultant, Terracon, conducted a field investigation at the site in which the subsurface soil, bedrock, and groundwater conditions were explored. An abstract of historical documents were compiled and a summary of potential causes of landslide activity was ascertained. Additionally a slope stability analysis of the present site conditions was conducted.

Surface Conditions

The site of the proposed rest area is an existing gravel parking lot for Lower Park in Jerome. There is an existing landscaped slope from Main Street down to the west side of the parking lot. Although the head scarp for the landslide was located further west near the middle of Main Street, the slope generally depicts the extent of the head scarp for the 1936 landslide.

The existing site conditions of the area in and around the 1936 landslide generally consisted of: the buildings west of Main Street, Main Street, the slope from Main Street down to Lower Park, Lower Park and associated parking lot, a portion of Hull Avenue, the newly constructed dry block retaining wall, the Sliding Jail Park and associated parking lot and basketball court, recently placed fill below the Sliding Jail Park and parking lot, and the existing ground surface down slope of the recently placed fill.

The majority of the buildings along the west side of Main Street show evidence of cracks that have been repaired at sometime in the past. Concrete retaining walls at various locations behind these buildings show cracking at the face of the wall. Otherwise, the buildings and retaining wall structures appear to be in relatively good condition considering their age.

The ground surface down slope of the recently placed fill is hummocky and irregular in appearance near what appears to be the central portion of the old landslide. The undulations are on the order of 1 to 5 feet in height. Vegetation in this area is thick with grasses, cattails, bushes, and trees. The ground surface was soft in places indicating groundwater apparently comes to the surface in these areas. Along the flanks of the landslide the ground surface appears to have been bermed.

Soil and Bedrock Conditions at the Site

The subsurface soils encountered in the test borings generally consisted of clayey gravel fill materials and colluvium soils overlying the Hickey Basalt. The upper clayey gravel fill soils varied in depth from 16 to 28 feet below the existing surface. The upper part of the fill material contained distinctive evidence of construction debris consisting of smelter slag, broken concrete and Cleopatra Rhyolite. The colluvium soils generally extend to depths of 65 to 85 feet in (or varied in thickness from 50 to 55 feet). The borings were terminated at depths of 16 to 25 feet into the Hickey basalt.

Field Test Results

Standard Penetration Tests for boring No. JT1 indicates the fill materials are generally poorly compacted. The underlying soils from 16 to 24.5 feet varied from loose to medium dense in relative density. Remolded in-situ soils were also observed in this zone. The fat clay soils below a depth of 24.5 feet are generally hard in consistency

Standard Penetration Tests for boring No. JT2 indicates the fill materials are generally well compacted, however, the penetration tests appear to represent the presence of gravel and cobbles, and not the surrounding matrix. The fat clay soils at a depth of 35 feet are generally soft to medium stiff in consistency. The clay and sandy soils generally increase in consistency and relative density below a depth of 40 feet.

Laboratory testing indicated the moisture content of the subsurface soils varied from 6 to 23 percent. The moisture of the upper 25 feet of materials in the test borings is generally low. The moisture content of the materials below a depth of 25 feet is relatively high, ranging between 15 and 25 percent. The clay fraction ranges from 10 to 50 percent. The clay soils generally have very high plasticity indices ranging up to 56.

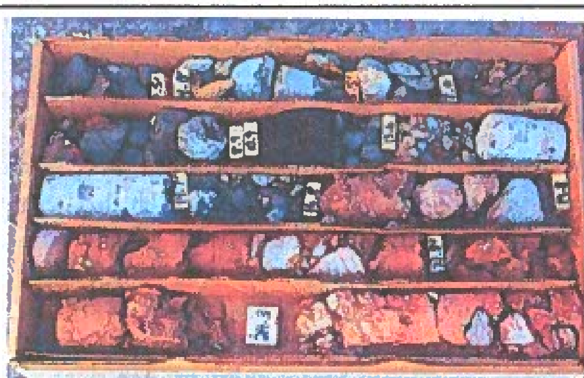


Figure 17. Boring JT1, 0 to 28 feet

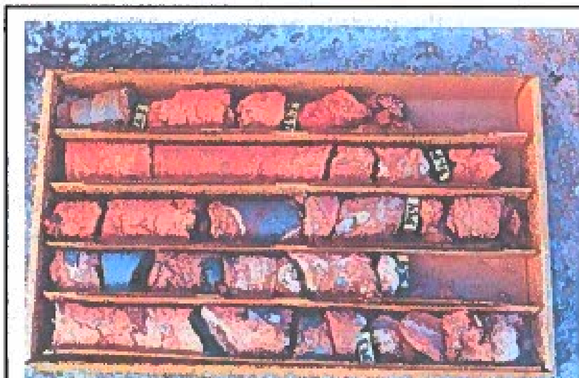


Figure 18. Boring JT1, 28 to 40 feet

Results of Investigation

Based on an analysis of the historical conditions, site geology and the geotechnical investigation, seven conditions could have contributed to the landslide of 1936.

1 Low shear strength soils in the near surface for the development of failure planes at shallow depths
2 Shallow groundwater concentration, caused by heavy rainfall events, leaking water utilities, and surface water accumulation near the head scarp.
3 Assimilated seismic events from large-scale blasting activity (over an extended number of years) may have contributed to keeping the landslide area in a state of creep.
4 The magnitude 4.5 seismic event of 1931 that also would contribute to creep.
5 Movement along the Verde Fault from blasting or the seismic event and a subsequent potential for change in the groundwater regime due to offset of the Verde Fault.
6 Over steepening of some slopes during building construction, leading to minor movement during the time when the ground relaxed into an active lateral pressure state. This may have led to broken water pipelines in these areas.
7 Reconstructing the local streets and backfilling the head scarp increasing surcharge to the already creeping mass.

Strength Parameters

All the strength parameters for geotechnical analyses could not be established by direct laboratory testing because of poor sample quality. For purposes of the engineering analyses, published correlations were used to estimate strength parameters based on available laboratory test results.

1 **Residual Cohesion:** The values used for the residual cohesion of the soils along the estimated failure plane of the landslide were approximated using a correlation based on moisture content and index properties (Fang, 1991). The anticipated variability of residual cohesion of the soil value was approximated using the variability of the liquid limit test data. For this analyses, an average residual cohesion value of 100 psf was used. The variability was approximated using a standard deviation of 25 psf.

2 **Effective Residual Friction Angle:** Six different correlations were used to estimate the effective residual friction angle of the colluvium soils. Data from all of the samples from Boring Nos. JT1 and JT2 were included in the data set.

The average values and values at two standard deviations away from the average were used with the correlation charts to estimate the range of effective residual friction angles expected based on the laboratory data from the two borings.

For this analysis, an effective residual friction angle of 16 degrees was used together with a standard deviation value of (4) degrees.

Slope Stability Analyses

Stability analyses were performed using the computer program SLOPE/W version 5.11 developed by GEO-SLOPE International, Ltd. SLOPE/W utilizes algorithms to solve the Morgenstern-Price limit equilibrium method of slices. This method satisfies force equilibrium in both the horizontal and vertical planes and also satisfies moment equilibrium. Direction of the resultant inter-slice forces is determined using an arbitrary function. The percentage of the function, λ, required to satisfy moment and force equilibrium is computed with a rapid solver.

For purposes of the stability evaluations, a cross-section (A - A') through the landslide area and the portions of the slope above and below the site of the rest area was developed. A specific failure plane was analyzed based on data obtained from the historical review and our field exploration. The failure plane slopes steeply to the east near the middle of Main Street, becomes planar for approximately 400 feet and slopes slightly up to the ground surface where it day-lights at the surface. The failure plane is parallel with the ground surface and is located at a depth of 25 to 35 feet. The location of the cross section is shown on Figure 20, with a few modifications to the ground surface to represent present day topography across the landslide area.

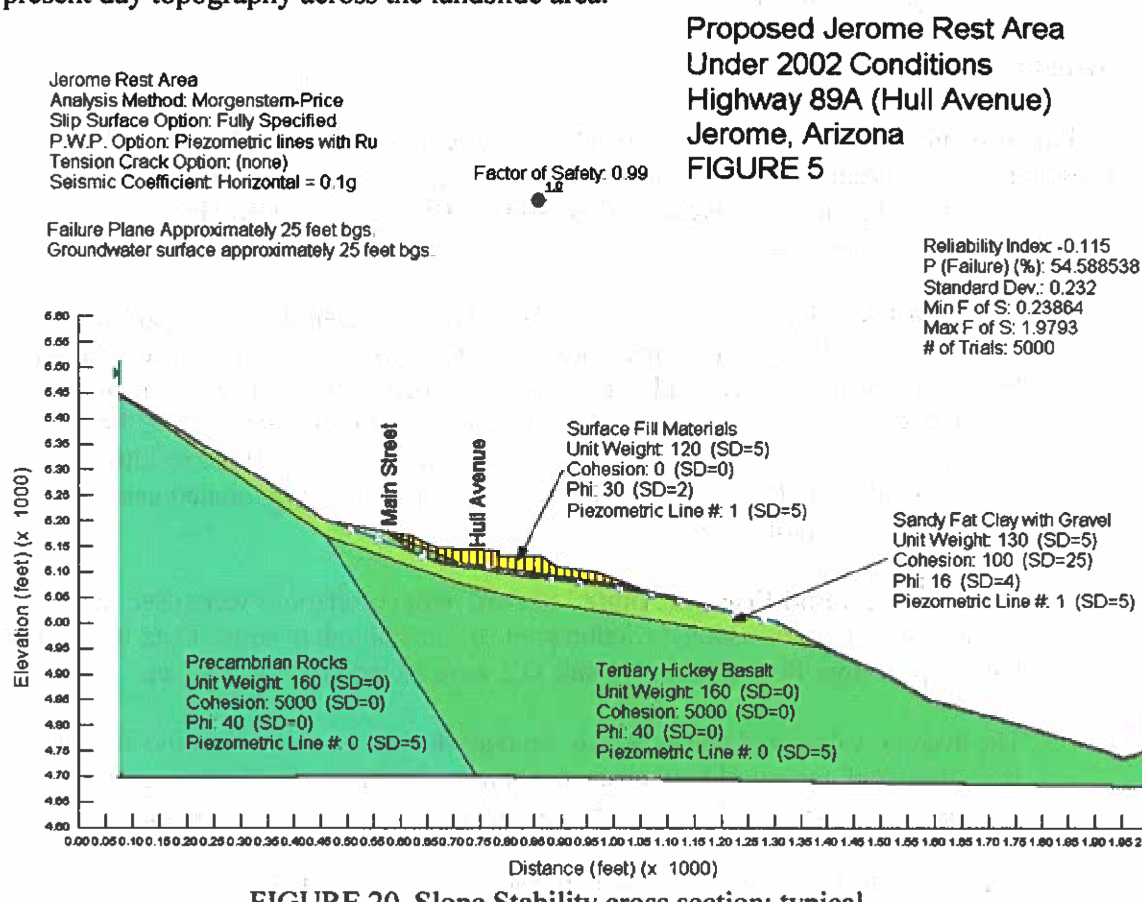


FIGURE 20, Slope Stability cross section; typical.

Slope stability models were analyzed for 1936 conditions and 2002 conditions. The conditions included in the analyses are outlined below:

Parameter	1936	2002
Geometry	as shown on cross section	same as 1936
Failure Surface	specified	same as 1936
Depth to Groundwater	10 feet	25 feet
Friction Angle	16°	16°
Cohesion	0 psf	100 psf
Seismic Coefficient	none	varied

The seismic coefficient was varied under the 2002 conditions to ascertain the sensitivity of the analyses to the seismic coefficient. The cohesion under the 1936 conditions was reduced to zero considering the slide was in motion and the failure surface slightly adjusted until a factor of safety of 1.0 was achieved. The proximity of the factor of safety to 1.0 indicates the correlated residual friction angle, groundwater surface and failure surface assumptions are relatively close to those conditions that continued landslide movement.

Results of the stability analyses for each case and the corresponding calculated factors of safety are summarized in the following table.

Summary of Stability Analyses		
Condition Analyzed	**Seismic Coefficient**	**Factor of Safety**
1936	0.00g	1.0
2002	0.10g	1.0
	0.02g	1.3
	0.00g	1.5

Based upon this analyses, the slope is stable under 2002 conditions provided there are no strong ground motion forces added to the slope and based on current groundwater conditions. In addition, the results of the stability analyses indicate the safety factor is sensitive to the magnitude of the seismic coefficient.

Risk Analysis

The notion of risk is an important aspect of any geotechnical exploration. The primary reason for this is that investigative and analytical methods used to develop geotechnical conclusions and recommendations do not comprise an exact science. The analytical tools are generally empirical and must be tempered by engineering judgment and experience. The solutions or recommendations presented in any geotechnical study should not be considered risk-free and more importantly, are not a guarantee that the proposed structure will perform satisfactorily. What the engineering recommendations do constitute is the geotechnical engineers' best estimate of those measures that are necessary to make the structure perform satisfactorily based on usually limited subsurface information. The purpose of the following paragraphs is to discuss the concept of risk so the owner, who must ultimately decide what is an acceptable risk, can better apply the finding of this study.

As previously outlined, the most critical geotechnical consequence of this study is considered to be slope stability of the landslide area. The stability of a portion of this slope is expressed as a factor of safety. It is important to note the concept of factor of safety is a derived value and not an intrinsic property of the slope. The accuracy with which the factor of safety for a given slope can be determined, is based on a number of factors the most significant of which are listed below:

- Variability of surface conditions
- Variability and type of subsurface conditions
- Validity of the analytical method
- Validity of simplifying assumptions
- Intensity of study
- Certainty of the design loading conditions occurring.

Depending on how well the above factors can be assessed determines what minimum factor of safety would be required to have a reasonable degree of confidence that a failure will not occur. It is the geotechnical engineers' responsibility to assess these conditions and advise the owner as to a minimum acceptable factor of safety.

Theoretically, a factor of safety of 1.0 indicates that a slope is on the verge of instability. Therefore, any lower factor of safety should result in failure and any higher factor of safety should theoretically represent a safe slope. However, due to the uncertainties associated with any geotechnical investigation and the factors discussed in the preceding paragraph, all slopes, even those with factors of safety greater than 1.0, have some potential for failure. The higher the computed factor of safety is for a given slope, the lower its probability of failure. Approaches have been developed to relate computed factor of safety to probability of failure. This approach is called a probabilistic analysis and a limited risk analysis was performed for this study.

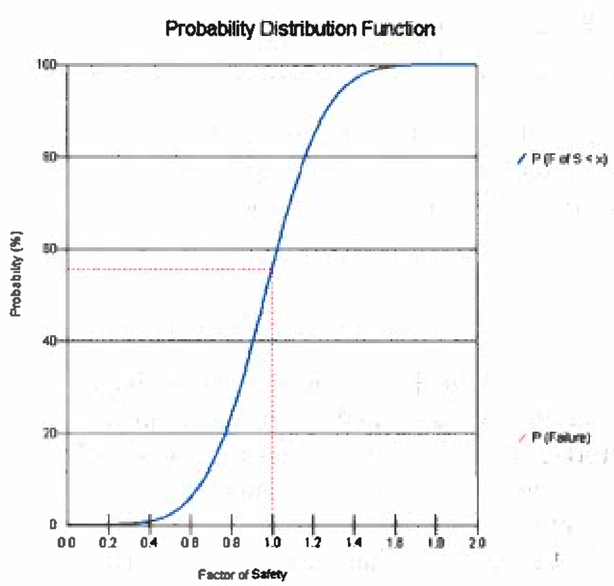


FIGURE 21: Probability Distribution graph graph for seismic coefficient of 0.1g.

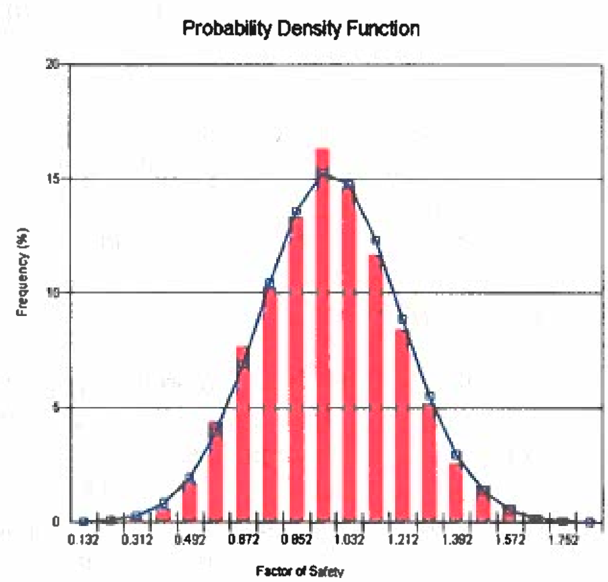


FIGURE 22: Probability Density for seismic coefficient of 0.1g.

The list of parameters that were varied included unit weight, cohesion, friction angle, groundwater elevation, and seismic coefficient.

Conclusions

The results show there is generally a one in seven (15%) chance of slope instability under 2002 conditions when the seismic coefficient is 0.02g. When the seismic coefficient is 0.10g the probability is generally one in two (55%).

The risk of future landslide movement at the site is particularly sensitive to the seismic coefficient used in the slope stability analysis. Though the other parameters when varied do effect the slope stability, their effect is relatively small. When considering future development on this historic landslide, the forecasting of seismic or assimilated seismic events will be the most crucial parameter to acquire accurately.

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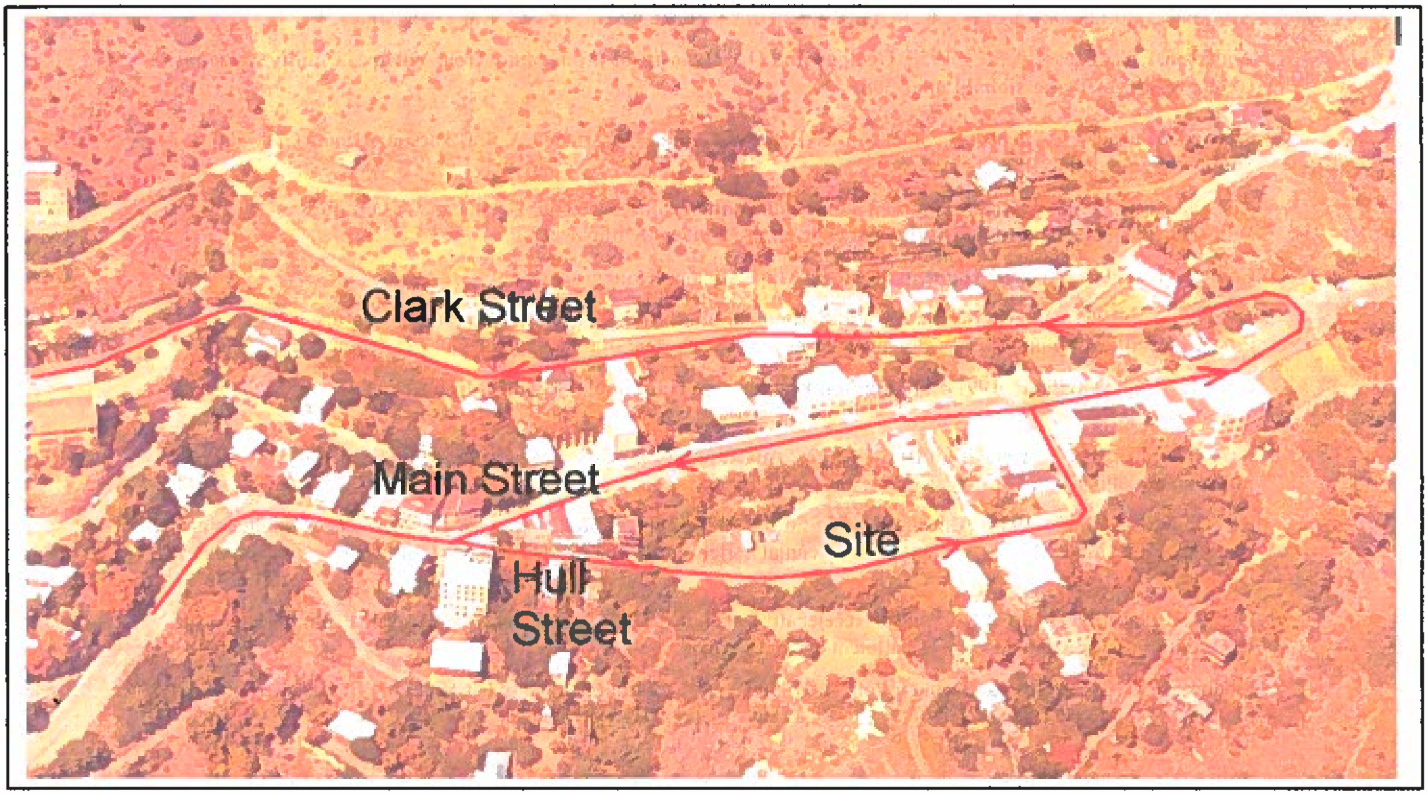
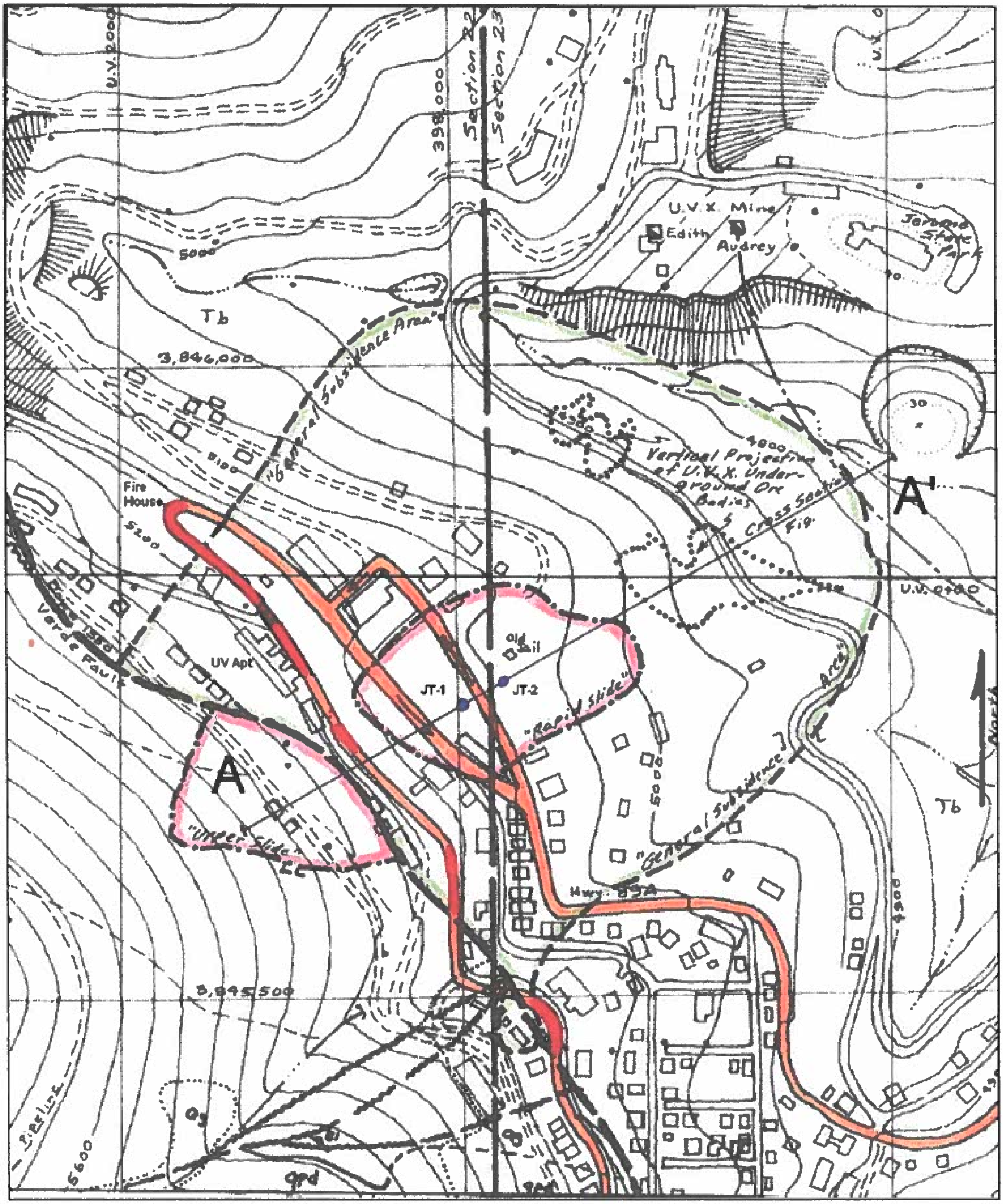
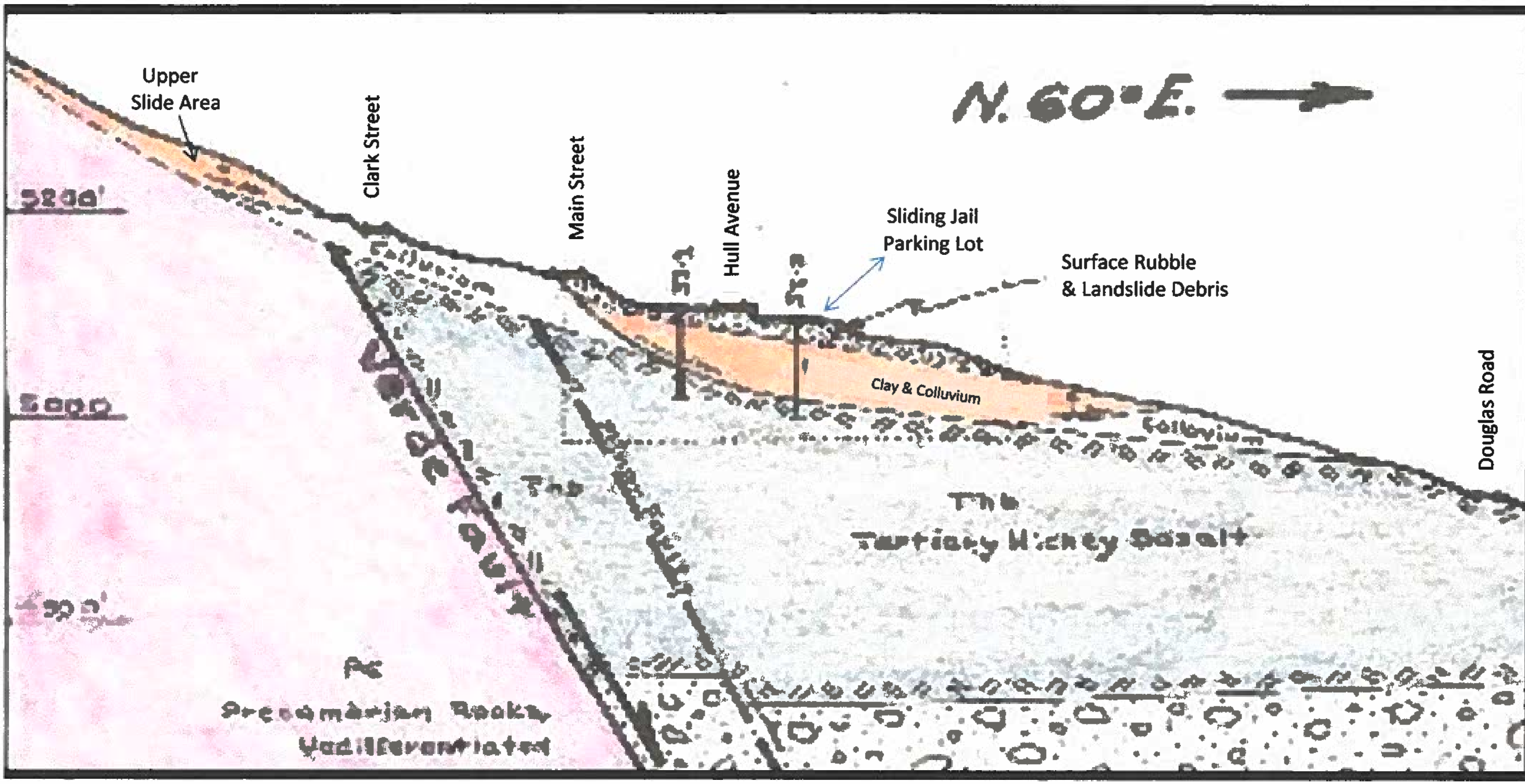


Figure 23. Aerial Photograph of the town of Jerome (1988) displaying the routing of SR 89A through down town. The site of the historic 1937 landslide and the proposed rest area is located between the one-way streets of Main and Hull.



Jerome Slide Area



Colluvium is a general name for loose, unconsolidated sediments that have been deposited at the base of hillslopes by either rainwash, sheetwash, slow continuous downslope creep, or a variable combination of these processes. Colluvium is typically composed of a mixed range of rock types and sediments ranging from silt to rock fragments of various sizes. This term is also used to specifically refer to sediment deposited at the base of a hillslope by unconcentrated surface runoff or sheet erosion.

TOWN OWNED PROPERTIES

TOWN OF JEROME

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ZONING ADMINISTRATOR ANALYSIS
COUNCIL STAFF REPORT
January 19, 2021

Item: **Update on Code Enforcement**
Recommendation: Discussion/Possible direction to staff
Prepared by: John Knight, Zoning Administrator

Background and Discussion: Recently, the council and town staff have been discussing updating the town code and zoning ordinance to address code enforcement. The Council met on December 29, 2020 to discuss updating the codes as well as the code enforcement procedures and fines.

Issues for discussion:

- **Process:** Staff is working on a more comprehensive approach to code enforcement. This includes a simple form that anyone can use to record a code enforcement complaint.
- **Record Management System (RMS):** Staff is working with the police chief to implement a record keeping system (data base) that can be used to tract code enforcement complaints and status.
- **Fees:** At the December Council meeting, staff discussed the possibility of doubling the fees for design review and site plan review if applicants begin work without permits. Note that building permit fees are currently doubled if someone starts work without a permit.

Action: Discussion and possible direction to staff.