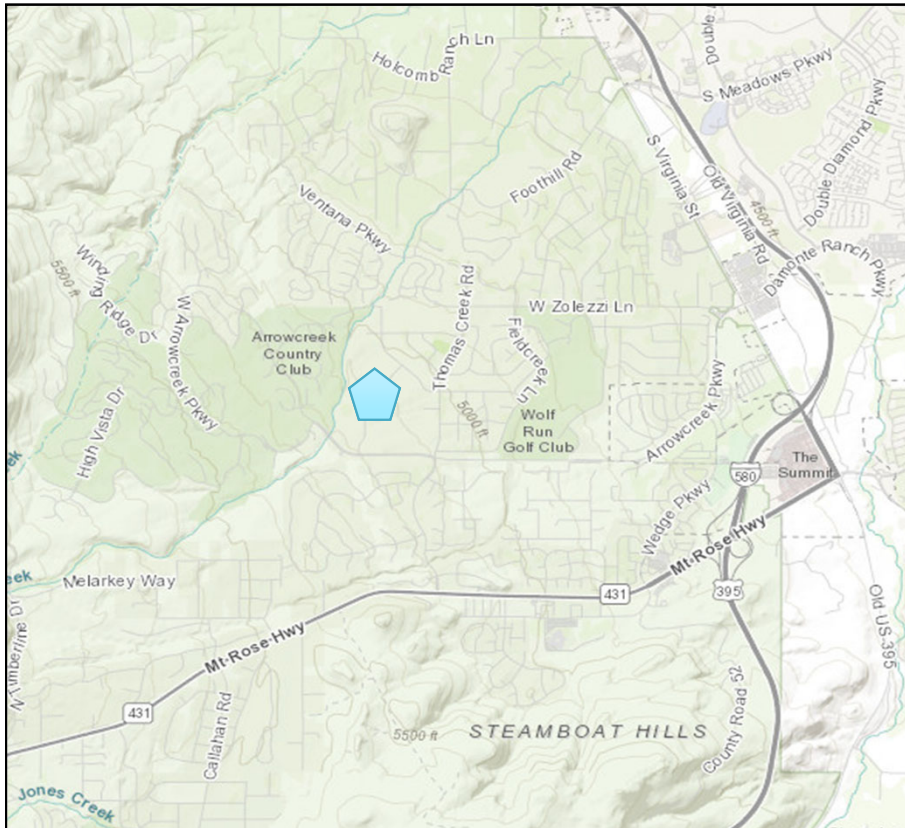


# Thomas Creek Wellhouse Replacement WSUP21-0030

*Washoe County Board of Adjustment  
March 3, 2022*



# Project Location



# Project Background

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- 2.5-acre parcel includes existing wellhouse, tank, pump station, and reg station
- Originally built 1979 as part of private water company
  - Existing well is small-diameter, agricultural-style well
  - 52' tall Tank
- Infrastructure inherited by Washoe County DWR
  - Additional modifications made in 1996
  - Tank shortened to 16'; underground pump station added
- Facilities became part of TMWA in 2015 as part of County-TMWA merger.
- A new production well was drilled on the parcel in 2019

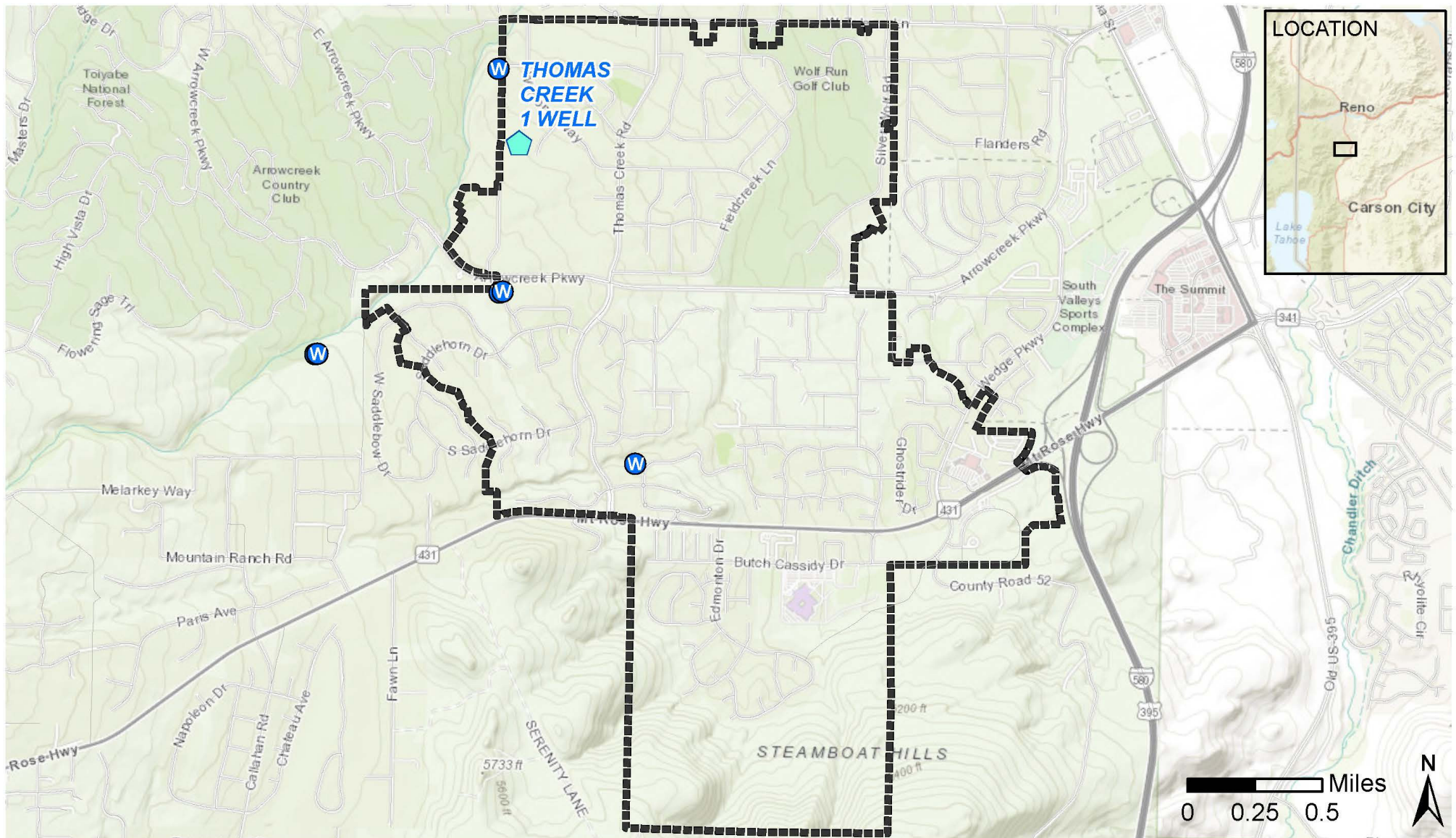
# Project Overview

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## This project will:

- Demolish the wellhouse, tank, and underground pump station
- Convert the existing production well to a monitoring well
- Construct a new 1,350 SF wellhouse to enclose the production well and appurtenances
- Construct an infiltration basin to receive and infiltrate pump-to-waste water from the well
- Install ±5,900 SF of new AC pavement around the wellhouse

# Project Benefit Area



# Community Benefit

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## System Supply

- Helps to ensure daily water supply and fire protection needs in a large distribution area.
- More than doubles the water supply from previous well (1000 vs 400 gpm) in the South Truckee Meadows that has limited and aging resources.

## Mechanical & Pumping Reliability

- Superior construction materials promotes well longevity and provides TMWA with a more robust groundwater asset.
- The larger diameter well with more plumb includes more efficient and reliable pump equipment.

## Resource Management

- New well includes a recharge line for off-season injection to benefit the regional aquifer health/sustainability.

# Existing Site Facilities

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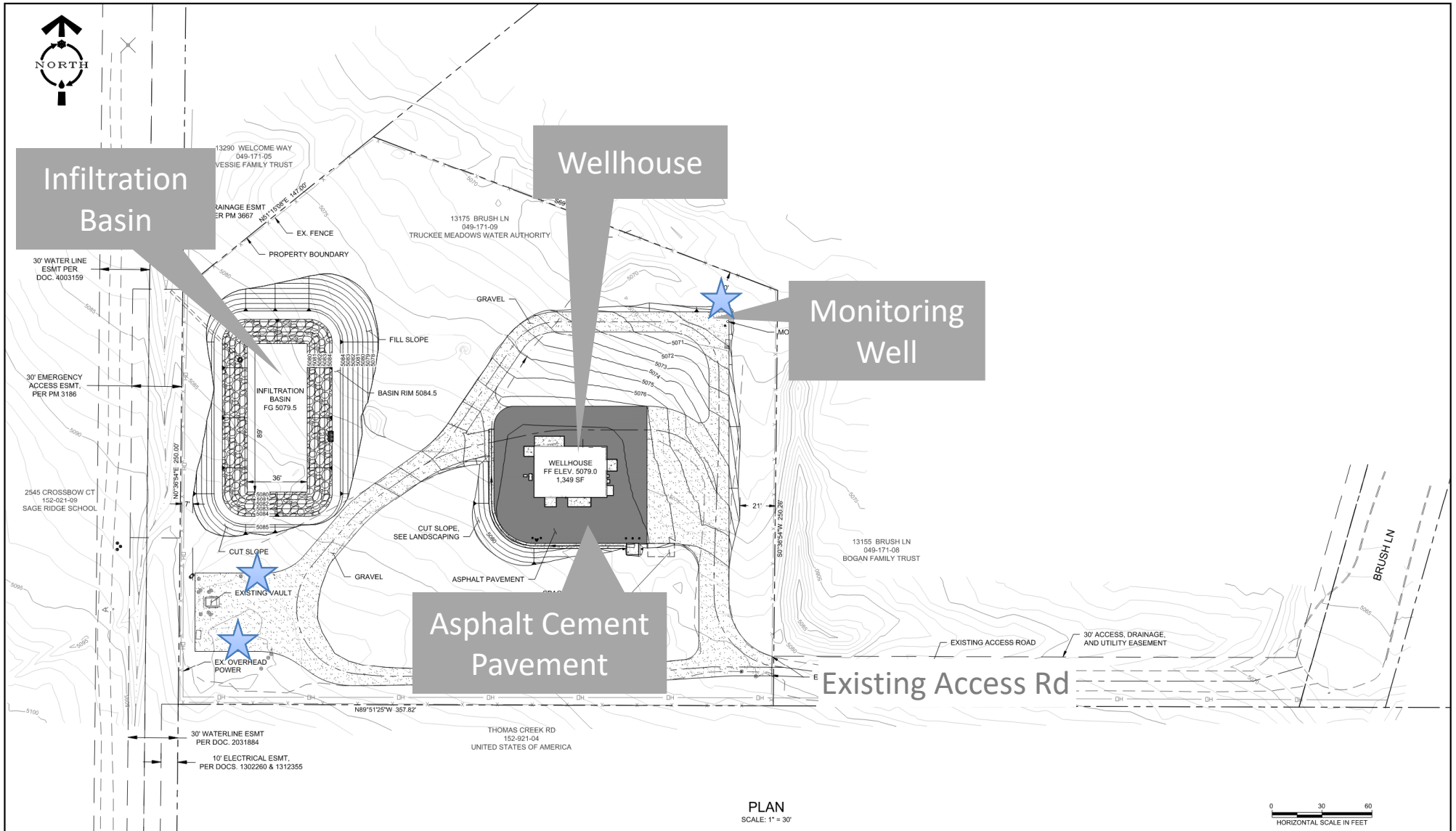
# Views from Surrounding Parcels

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# Proposed Site Plan



★ = Demolished Structures

# Proposed Wellhouse Architecture

Height: 22'

Footprint: 40'x30'-8"



PRELIMINARY  
NELSON & WILCOX  
STRUCTURAL ENGINEERS



# Supporting Infrastructure Operations

Infiltration Basin for well start up and shutdown pump-to-waste cycle

- Approximately 2.5" water depth for each cycle
- Approximately 5 hours for water to infiltrate
- Low ground water in surrounding area
- Overflow to drainage ditch to secondary basin at nearby TMWA site

# Landscaping and Screening



## PLANT LEGEND

PLANT SCHEDULE					
DECIDUOUS	BOTANICAL NAME	COMMON NAME	CONT	SIZE HXW	QTY
	KOELREUTERIA PANICULATA	GOLDEN RAIN TREE	2" CAL	30'HX30'W	2
	PRUNUS VIRGINIANA 'CANADA RED'	CANADA RED CHOKECHERRY	2" CAL	25'HX20'W	3
	SORBUS AUCUPARIA 'MICHRED' TM	CARDINAL ROYAL MOUNTAIN ASH	2" CAL	25'HX20'W	3
EVERGREEN	BOTANICAL NAME	COMMON NAME	CONT	SIZE HXW	QTY
	JUNIPERUS SCOPULORUM	ROCKY MOUNTAIN JUNIPER	7" HT	30'HX20'W	7
	PINUS PONDEROSA	PONDEROSA PINE	7" HT	60'HX30'W	7
SHRUBS	BOTANICAL NAME	COMMON NAME	CONT	SIZE HXW	QTY
	CERCOCARPUS LEDIFOLIUS	CURL-LEAF MOUNTAIN MAHOGANY	#5	18'HX10'W	12
	CHAMAEBATIARIA MILLEFOLIUM	FERNBUSH	#5	8'HX8'W	32
	FORESTIERA NEOMEXICANA	NEW MEXICO PRIVET	#5	10'HX10'W	17
	PEROVSKIA ATRIPLICIFOLIA	RUSSIAN SAGE	#5	5'HX4'W	38
	PRUNUS BESSEYI 'P011S' TM	PAWNEE BUTTES SAND CHERRY	#5	1.5'HX5'W	28
SHRUB AREAS	BOTANICAL NAME	COMMON NAME	CONT	SIZE HXW	QTY
	ROCK MULCH OX ROCK 2"- 6" SIZE PLACED AT 6" DEPTH		-		8,821 SF
GROUND COVERS	BOTANICAL NAME	COMMON NAME	CONT	SIZE HXW	QTY
	REVEGETATION SEEDING SEE NOTE #2 SHEET LP1	PREVIOUSLY DISTURBED AREA	-		15,388 SF
	REVEGETATION SEEDING SEE NOTE #2 SHEET LP1	NEW DISTURBED AREA	-		17,542 SF

EXISTING VEGETATION SCHEDULE		
SYMBOL	DESCRIPTION	QTY
	EXISTING NATIVE VEGETATION TO BE PRESERVED SEE NOTE #3 SHEET LP1	28,764 SF

# Landscaping and Screening Plant Reference Images

## Trees



Cardinal Royal Mountain Ash



Ponderosa Pine



Canada Red Chokecherry

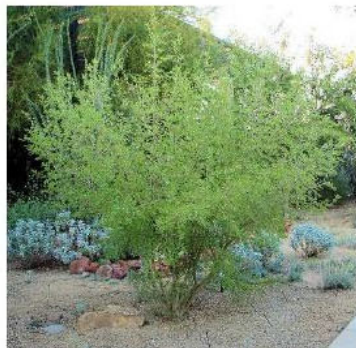


Rocky Mountain Juniper



Golden Rain Tree

## Shrubs



New Mexico Privet



Russian Sage



Pawnee Buttes Sand Cherry



Curl Leaf Mountain Mahogany



Fern Bush

# View from Welcome Way

## Existing Condition



Existing well house and tank within view

# View from Welcome Way Proposed Condition



New wellhouse and site area screened by landscaping and slopes restored to native, sagebrush landscape



## Landscaping and Screening modification 110.412.40c

22 trees, 127 shrubs + native revegetation

Screening modification is to keep the site loosely improved and consistent with the landscaping style in nearby residential and *focus screening those areas within view of adjacent homes*





## Paved Parking modification 110.410.25e

Site access is limited due to biweekly chemical delivery, and once weekly maintenance visit

Reducing pavement or impervious surface area enables greater groundwater recharge, reduced onsite detention, and aids in the urban heat island effect.



## Fencing modification 110.412.40d

The open chain link fence is undetectable from the surrounding neighbor's property.

Solid screen fence would be more visible in this sagebrush landscape context where residents enjoy view fencing.

# Thank you

*Washoe County Board of Adjustment  
March 3, 2022*

Ben Jesch, PE  
Truckee Meadows Water Authority  
[bjesch@tmwa.com](mailto:bjesch@tmwa.com)  
775.834.8047

