



# Town of Paradise Valley Update on Cell Coverage

Filling the Gaps in Coverage

# Overview of Activities

## Council Cellular Task Force in 2018

### Mapping of Cell Coverage: FirstNet, AT&T, T-Mobile, Verizon

- March 2018
- May 2021

### Changes Between Mappings

- AT&T deployed FirstNet Public Safety system
- T-Mobile purchased Sprint assets, reallocating PCS bandwidth for more capacity
- T-Mobile deployed N600 Low Band spectrum for coverage
- Crown Castle in process to add new wireless facilities
- Each carrier has completed site adds and system modifications

### Potential Cell Tower Sites

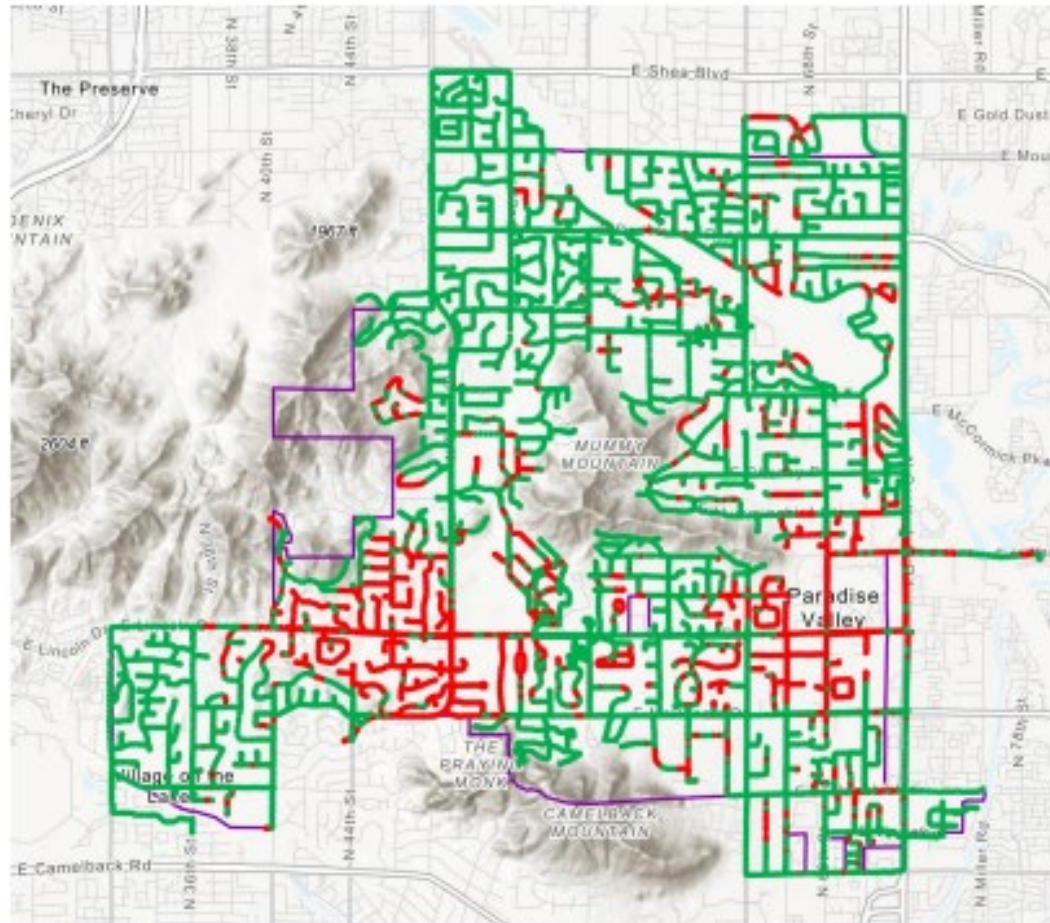
- Houses of Worship
- Resorts
- Other Quasi-Public Spaces



# Mapping of Cell Coverage 2021

## AT&T – LTE First Net Public Safety

### Scanner CH5330 Design Criteria Map



RSRP | 23312 points  
Green | >-100 | 15434 pts, 66.2%  
Red | <-100 | 7878 pts, 33.8%

No FirstNet  
system measured  
from 2018

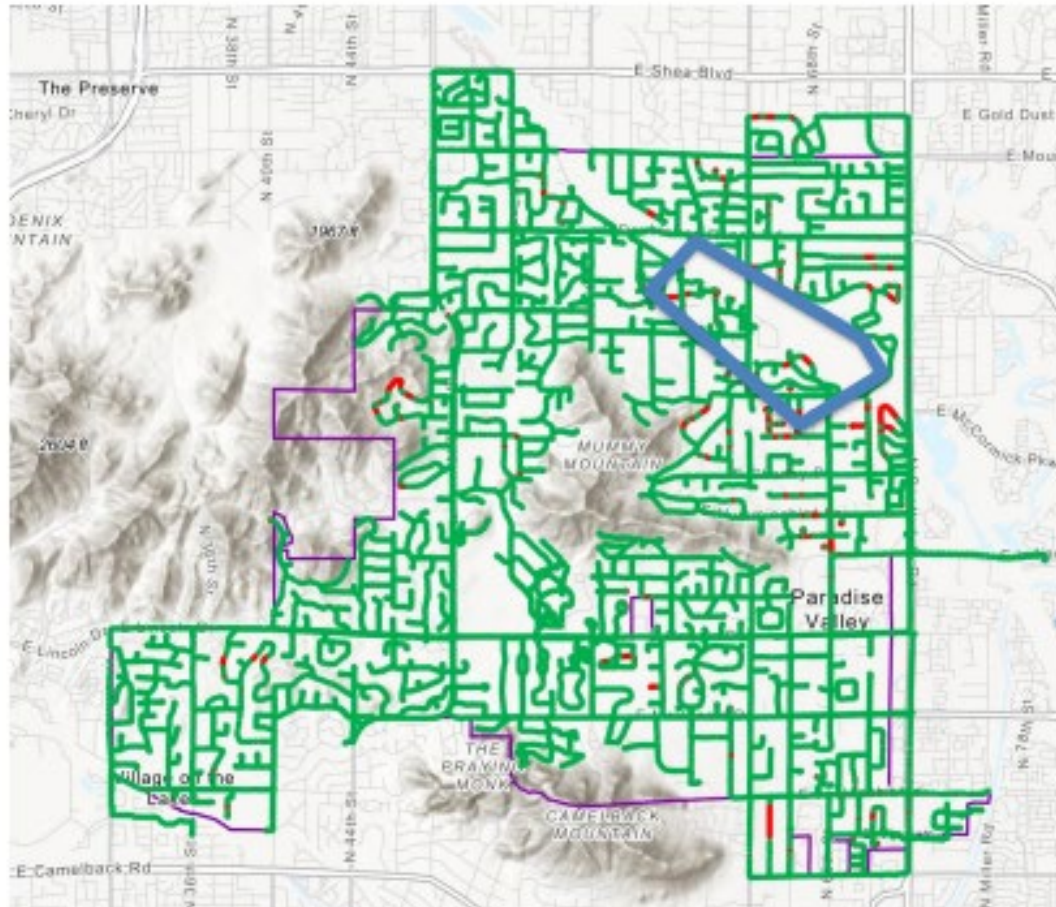




# Mapping of Cell Coverage 2021

## AT&T – LTE L700

### Scanner CH5780 Design Criteria Map



RSRP | 23338 points  
Green >=-100 | 21863 pts, 93.7%  
Red <-100 | 1475 pts, 6.3%

Area identified as  
impaired service  
from 2018

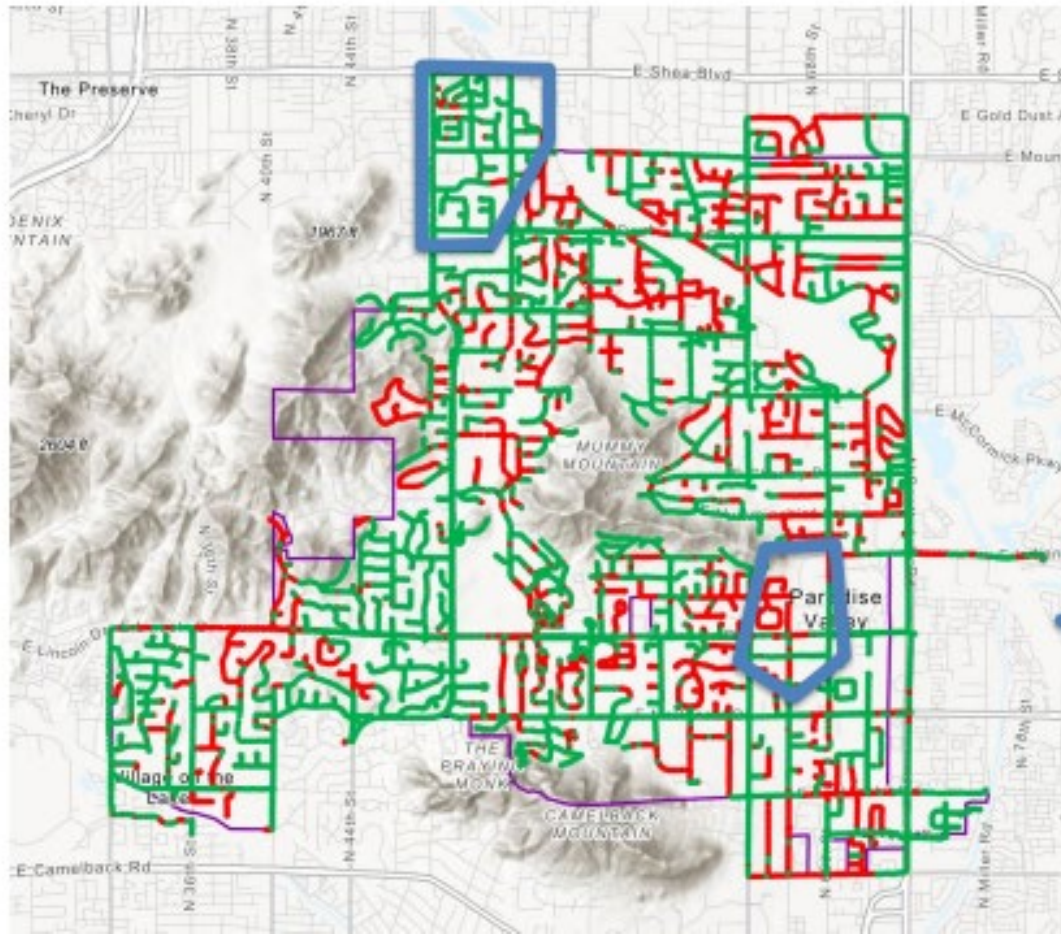




# Mapping of Cell Coverage 2021

## AT&T – LTE PCS

### Scanner CH1050 Design Criteria Map



RSRP | 23348 points  
Green |  $\geq -100$  | 13634 pts, 58.4%  
Red |  $< -100$  | 9714 pts, 41.6%

Area identified as  
impaired service  
from 2018

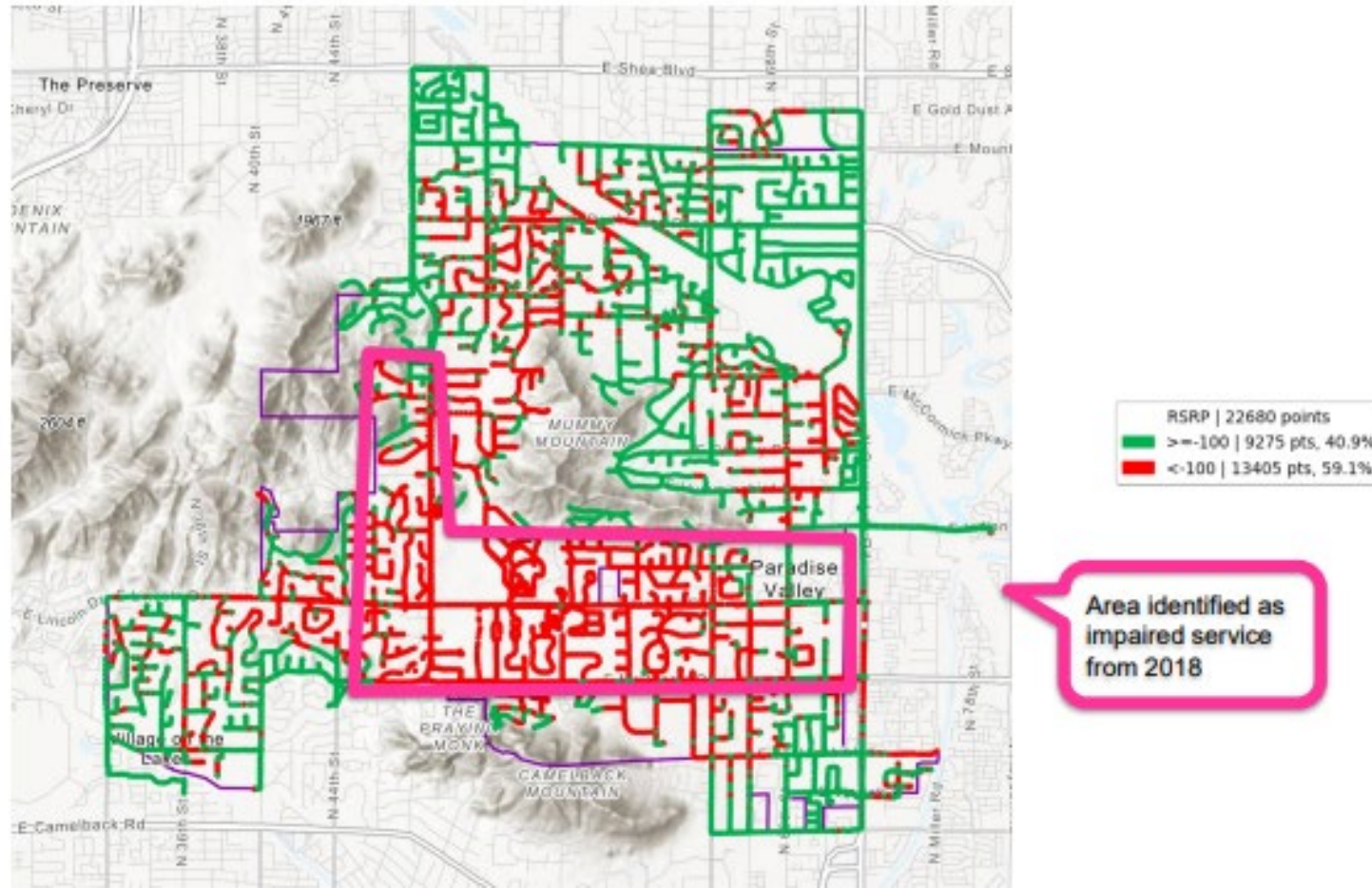




# Mapping of Cell Coverage 2021

## T-Mobile – LTE L700

Scanner CH5035 Design Criteria Map

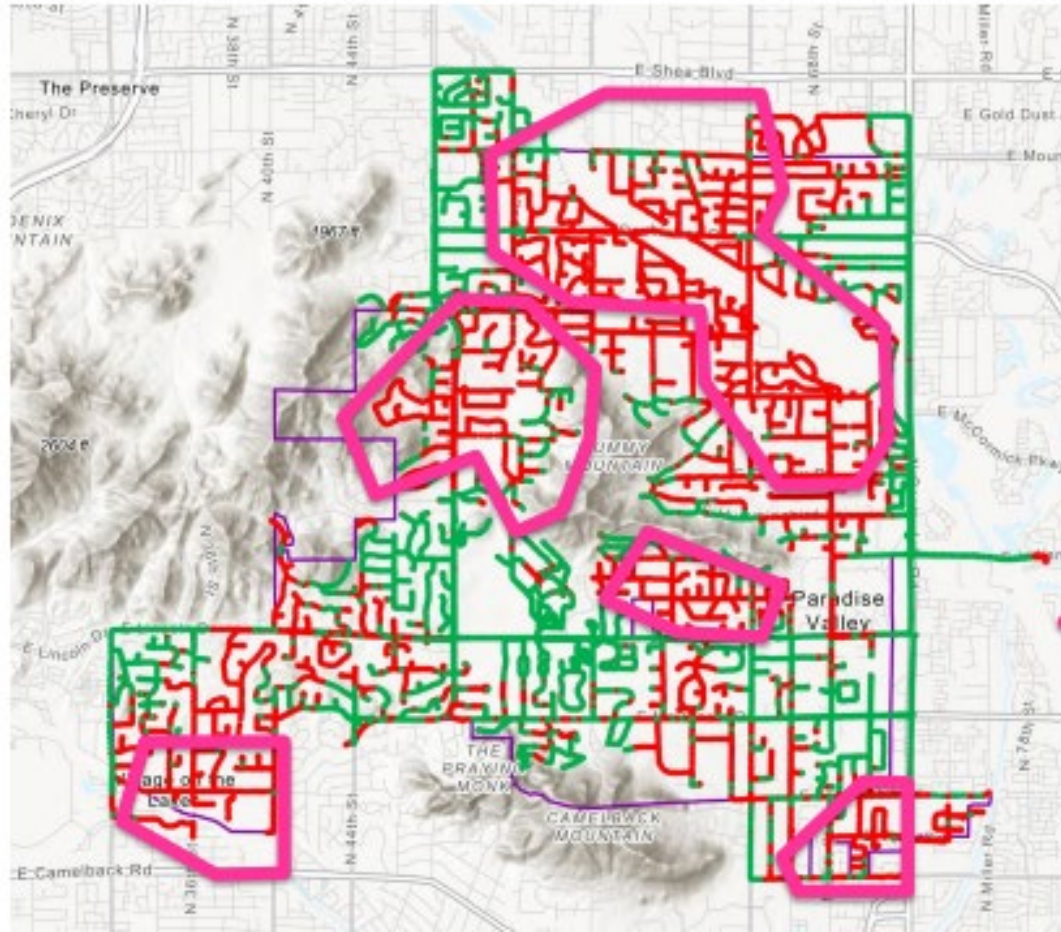




# Mapping of Cell Coverage 2021

## T-Mobile – LTE AWS

Scanner CH2300 Design Criteria Map



RSRP | 23367 points  
Green |  $\geq -100$  | 8542 pts, 36.6%  
Red |  $< -100$  | 14825 pts, 63.4%

Area identified as  
impaired service  
from 2018

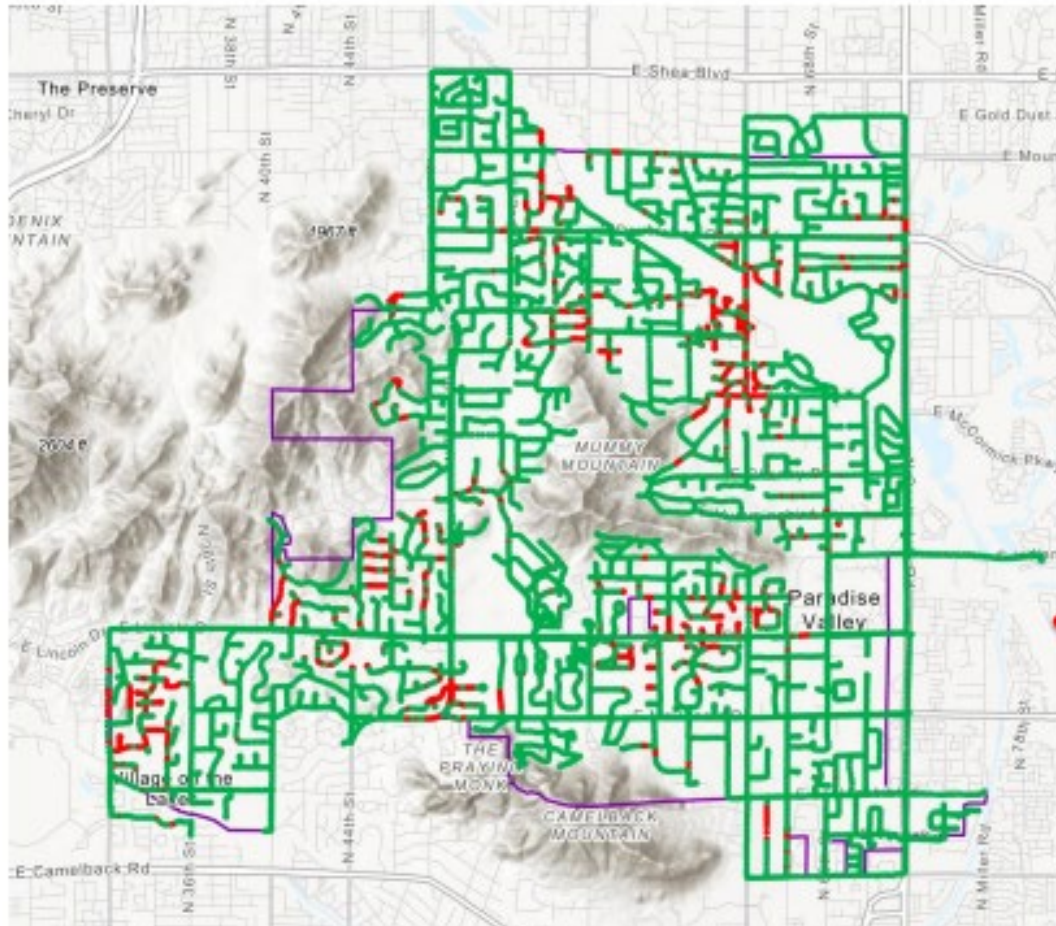




# Mapping of Cell Coverage 2021

## Verizon – LTE L700

### Scanner CH5230 Design Criteria Map



RSRP | 23340 points  
Green |  $\geq -100$  | 18767 pts, 80.4%  
Red |  $< -100$  | 4573 pts, 19.6%

No area identified  
as impaired  
service from 2018

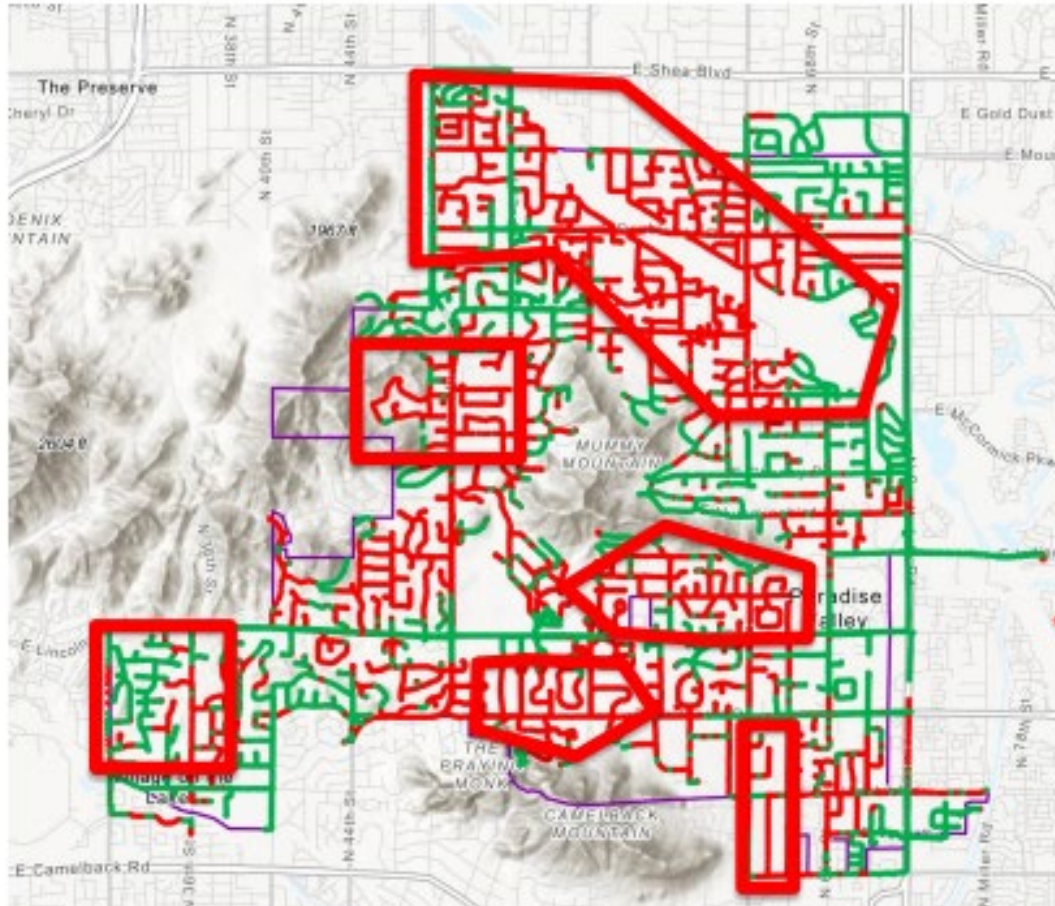




# Mapping of Cell Coverage 2021

## Verizon – LTE AWS

Scanner CH2125 Design Criteria Map



Area identified as  
impaired service  
from 2018





# Zoning Provisions

## Basics

- Resolution 932/932(A) approved by Town Council in 1998 and amended in 2001 identifies potential Personal Wireless Service Facility (PWSF) sites
- PWSF regulations in Article XII of the Zoning Ordinance
  - Not mount on or with a site having dwelling units unless in Resolution 932 (as may be amended)
  - 200' setback requirement from existing dwelling units
    - PWSF to the dwelling or PWSF to neighboring setback (if undeveloped)
  - Screen from public view, camouflage, architecturally compatible
  - Height limited to 4.5' above highest point of the roof provided within the maximum height (references residential zone table), existing structures height of that structure, and past practice on SUP zone is to use SUP Guideline height
  - Not project more than 42" from the side façade
  - Locate equipment cabinet below natural grade if feasible, otherwise screened (exception for cabinets larger than 144 ft<sup>3</sup>)
  - Encourage co-location



# Zoning Provisions

## Design Criteria

- **Appearance**

Degree PWSF "blends with" or "disturbs" the setting, the subject property and its character and use, or neighboring properties and their character and use

- **Form**

Degree to which the shape of the PWSF and any equipment cabinet relates to its surroundings

- **Color**

PWSF shall be in natural tones and a non-reflective color or color scheme appropriate to the background against which the PWSF would be viewed from a majority of points within its viewshed

- **Size**

Silhouette of the PWSF shall be reduced to minimize visual impact



# Zoning Provisions

## CUP Submittal Items

- Site Plan
- Landscape Plan
- Photographs, diagrams, photo simulations and sight line representations
- Siting elevations, or views at natural grade, from all directions (north, south, east, west)
- Equipment brochures
- Market and service maps
- Co-location submittals, including signed statements
- Lease agreement
- RF performance submittals
- Noise performance submittals
- Other items as necessary



# Zoning Provisions

## General Conditions

- After CUP approval, 1 year to construct/put in use
- Certain expiration provisions
- Hold harmless provisions to the Town
- Planning Commission can modify requirements if finds extraordinary hardship or to comply with Federal or state law that supports substantial justice and public interest
- Hardship, includes, not limited to, special circumstances applicable to the property, including its size, shape, topography, location or surroundings, will deprive such property of privileges enjoyed by other property in the same classification in the same zoning district through the strict application of the zoning ordinance
- CUP appealable to Town Council



# Potential Cell Locations in PV

After visiting all **Resorts**, most **Houses of Worship** and **other public locations**, sites were prioritized based on ability to close gaps.

## Sites Narrowed Down to:

1. Sanctuary Resort
2. Paradise Valley Country Club
3. Fire Station #91 (Tatum Boulevard)
4. Cosanti
5. Top of Invergordon



## Existing Approved SUP Elevation

- Annexed 1961
- SUP Resort Zoning District
- Listed in PWSF Resolution 932
- PWSF proposed is faux chimney on one or more casitas
- Casitas platted in 1969, 21'6" tall
- SUP amendment in 2017 added keys (interstitial plan)
- Interstitial plan to modify casitas approved, not built
- SUP Guideline principal building height 36'



# Sanctuary Camelback Resort

5600 E. McDonald





Coverage Area

Location provides great view to north and Lincoln commanding view to the North, East, West of Paradise Valley

Privately-owned

Antennas and radio heads to fit inside one or more stealth faux chimney(s)

Proposed antenna centerline at 28' and 15' in back due to sloping terrain (~30.5' tall to top of PWSF – 26' tall on a casita gets to 4.5' above roofline)

Expected to comply with PWSF provisions (not more than 4.5' above highest roofline, but may request hardship on height)



# Sanctuary Camelback Resort

5600 E. McDonald





## Existing View

- Annexed 1984
- SUP Resort Zoning District
- SUP allows most improvements via only building permit
- Listed in PWSF Resolution 932
- PWSF proposed is faux chimney on south roof
- Need to verify existing building height, no plans on file
- SUP Guideline principal building height 36'



# Paradise Valley Country Club

5600 E. McDonald





## Coverage Area

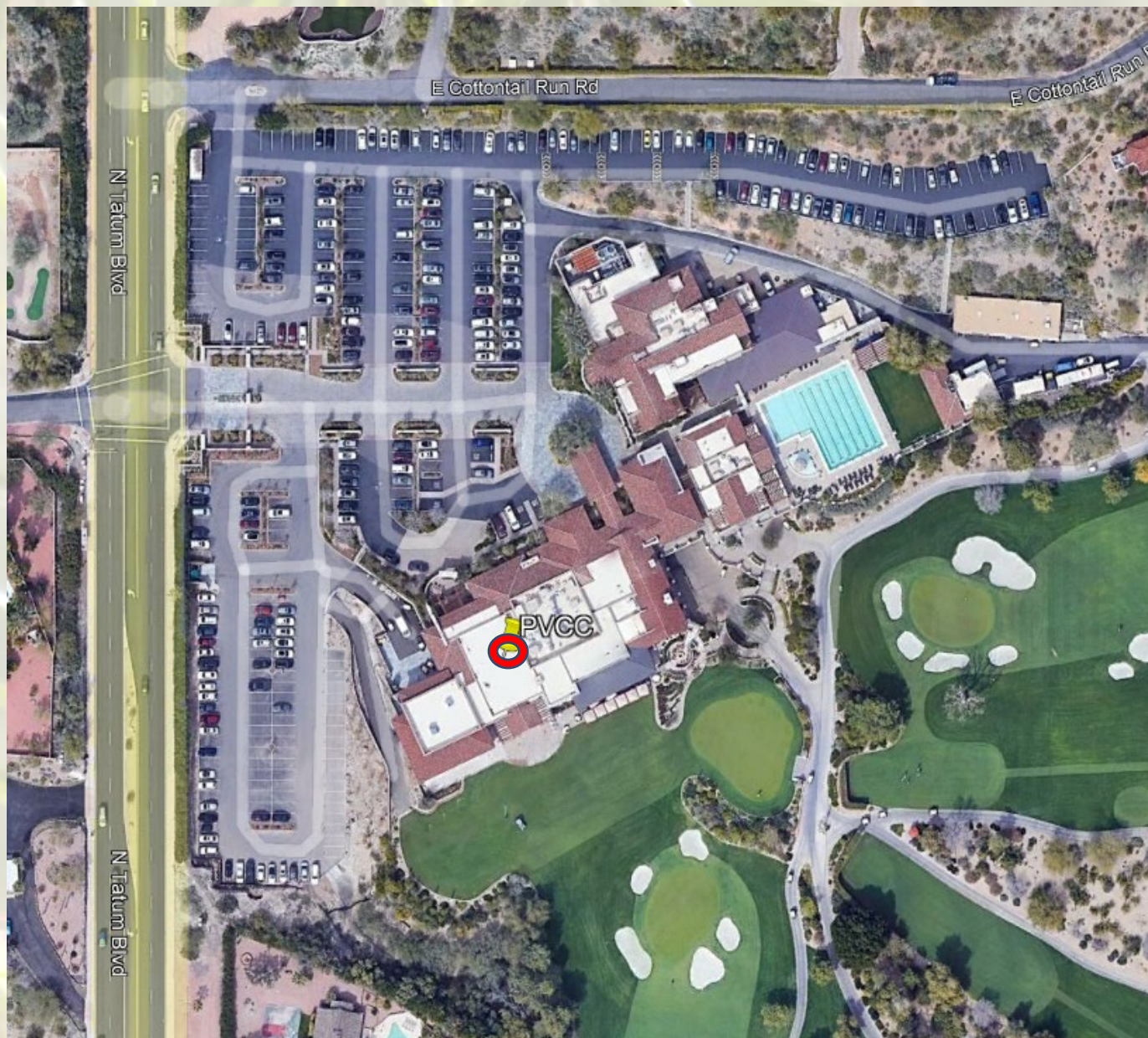
Location provides great view to north along Tatum east covering PVCC and East, South along Lincoln, and west towards Clearwater Hills of Paradise Valley

Privately-owned

Antennas and radio heads to fit inside one faux chimney

Proposed antenna centerline at 28' (~30.5' tall to top of PWSF)

Expected to comply with PWSF provisions (not more than 4.5' above highest roofline)



# Paradise Valley Country Club

5600 E. McDonald



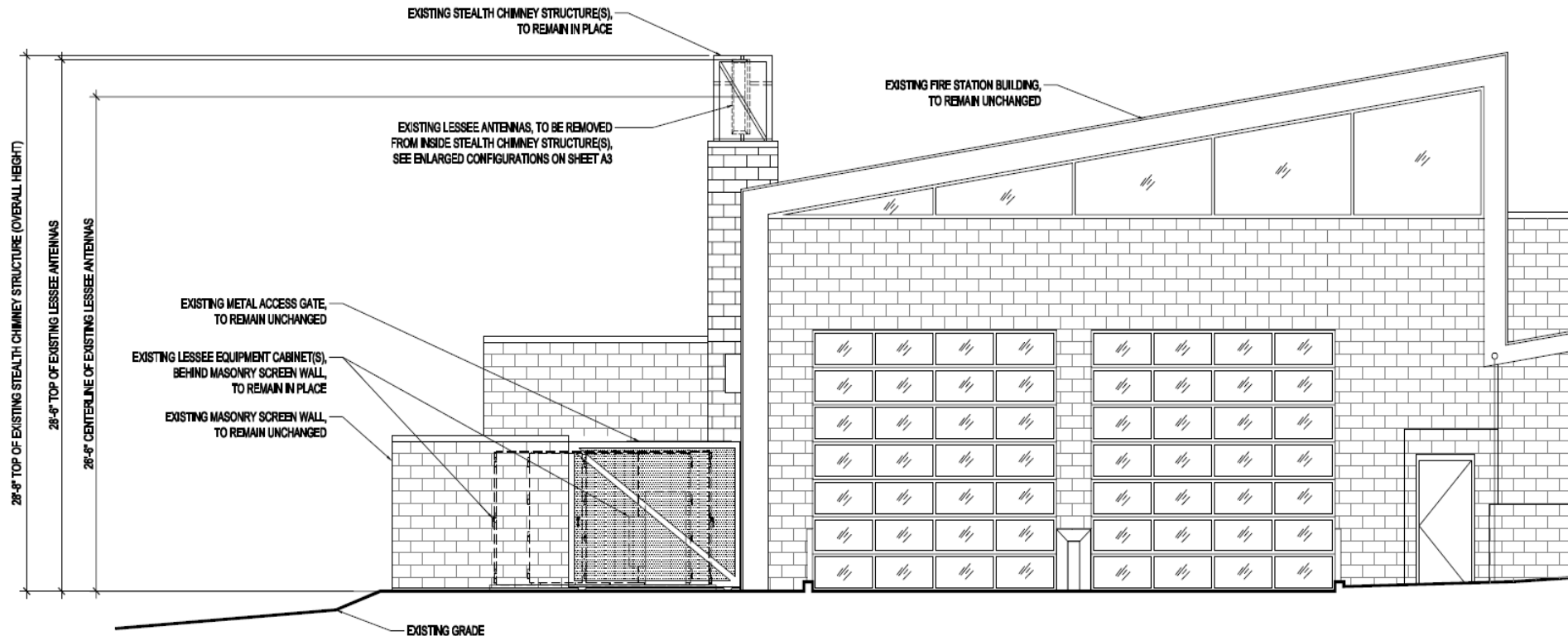
## Existing PWSF Elevation

- SUP Public/Quasi Zoning District
- Listed in PWSF Resolution 932
- Existing PWSF in faux chimney, approved in 2008
- CUP approved max height 28'8" (finished grade)
- Existing PWSF barely met 200' setback
- SUP Guideline principal building height 35'



# Fire Station #91

N. Tatum Blvd





## Coverage Area

Coverage along Tatum north and south. East to Mummy Mtn, West into Clearwater Hills

Town-owned

Antennas and radio heads to fit inside one faux chimney

Proposed antenna centerline at 30' (~32.5' tall to top of PWSF)

Hardship request on setback is likely due to new home being built to the west



# Fire Station #91

N. Tatum Blvd



## Existing View

- Annexed 1963
- SUP Public/Quasi Zoning District
- Not listed in PWSF Resolution 932, code requires add to resolution since dwelling units are on site
- Maximum existing structure 16' tall
- PWSF proposed - separate structure located south of pool
- SUP Guideline principal building height 35'



# Cosanti

5433 E. Doubletree  
Ranch Rd



Coverage Area

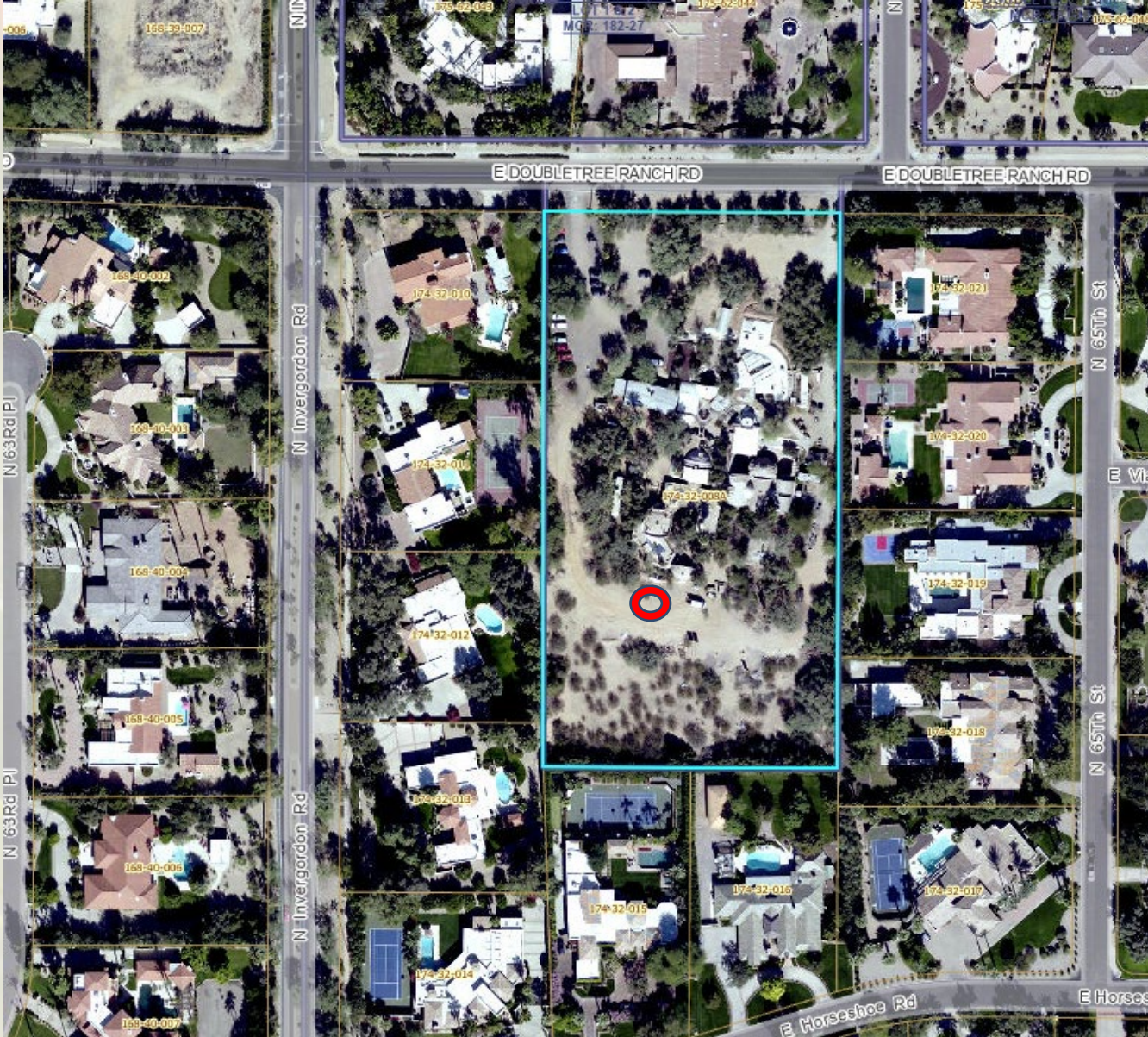
Coverage West and South, opportunity in all directions

Privately-owned

Antennas and radio heads to fit inside a separate structure

Proposed antenna centerline not determined (goal to keep not more than 30' to top of PWSF)

May require hardship request on setback, height proposed taller than existing structures



Cosanti

5433 E. Doubletree Ranch Rd



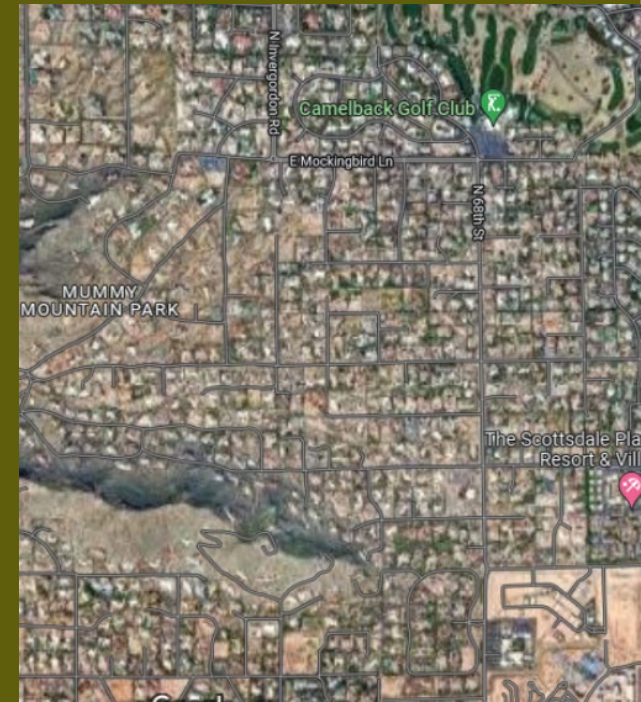


## Existing View

- Annexed 1961
- R-43, Hillside Zoning District
- Not listed in PWSF Resolution 932
- Settlement agreement applies



## Top of Invergordon





## Coverage Area

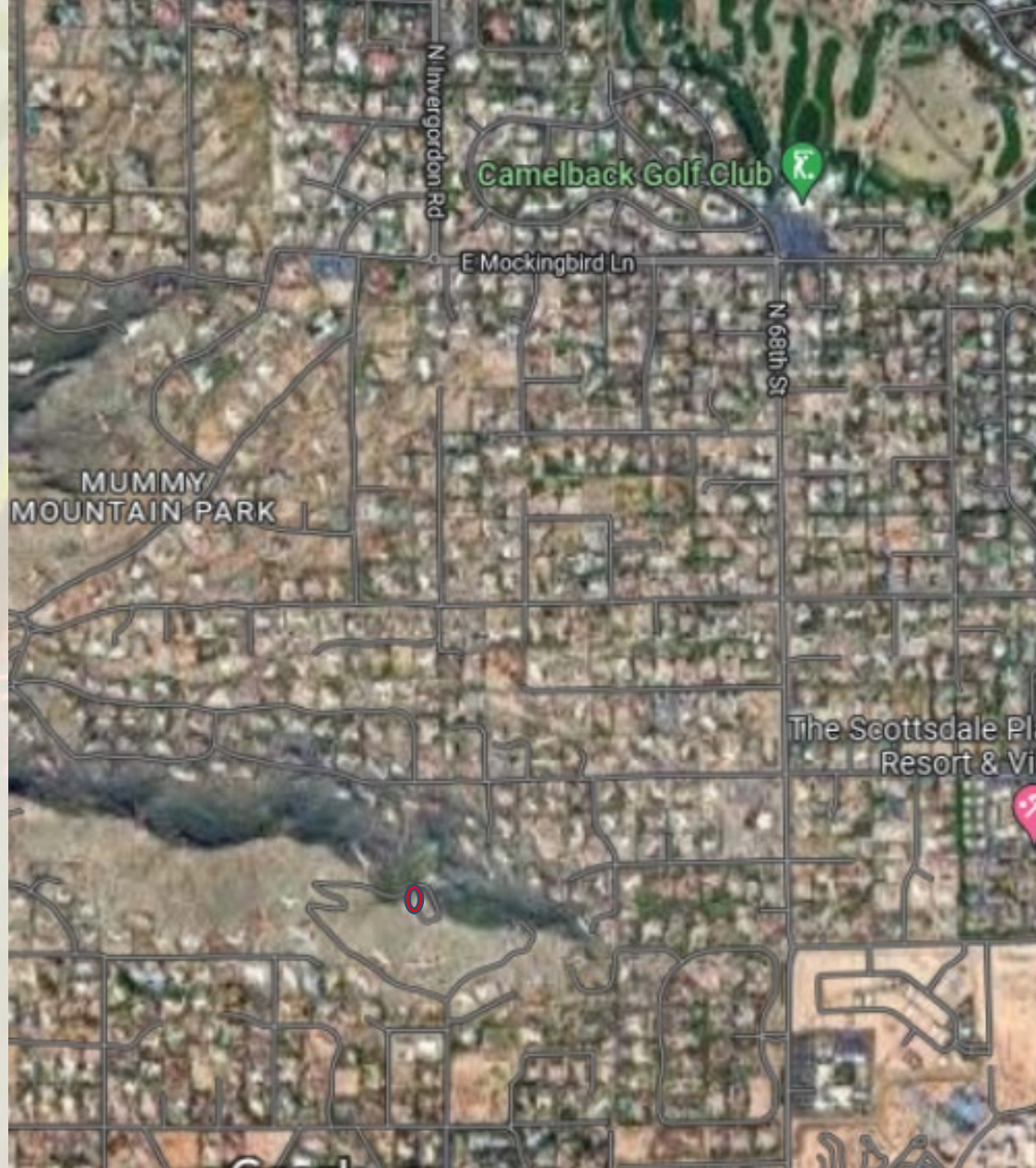
Location provides commanding view to the North, East, South, Southwest of Paradise Valley.

Town-owned property

Antennas and radio heads to on/within retaining wall

Proposed antenna ~8' above grade, not extend above hilltop, paint to match natural ground

Likely requires hardship request on setback



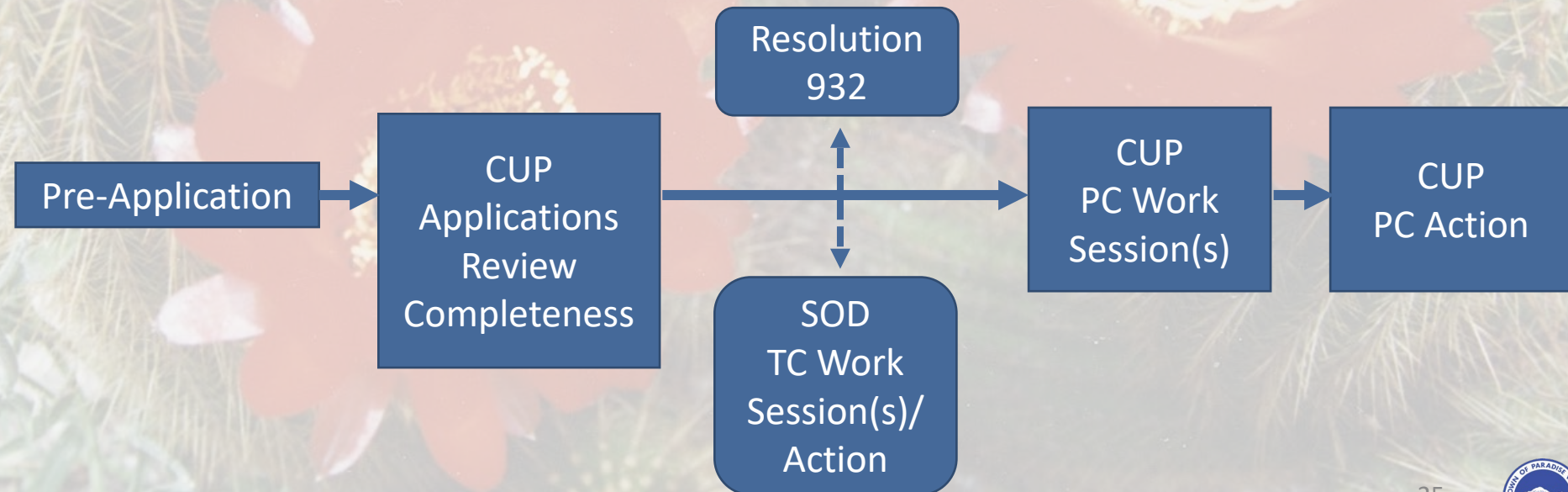
# Top of Invergordon





# Process

- Council Briefing (Sept 2022)
- Complete Pre-Application (Section 2-5-2.E, Town Code)
- Issue a Statement of Direction (SOD) to Planning Commission (Optional via Section 2-5-1.C, Town Code)
- Update (if needed) Resolution 932/932(A)
- Complete Conditional Use Permit (CUP) process via Planning Commission, appealable to Town Council
  - Separate CUP for each site, taken concurrently
- Complete Minor/Other SUP amendment (Cosanti if new structure in addition to PWSF)





## Other PWSF Pre-Applications and Upgrade Approvals

- Aug 2022 Verizon Pre-App more antennas ballroom roof (CUP)  
Camelback Inn, 5402 E Lincoln
- Aug 2022 AT&T Pre-App Substantially-Compliant Upgrades  
Town Hall Public Works, 6401 E Lincoln
- May 2022 T-Mobile Substantially-Compliant Upgrades  
Camelback Inn, 5402 E Lincoln
- May 2022 T-Mobile Pre-App Substantially-Compliant Upgrades  
Fire Station #91 Tatum, 8444 N Tatum
- Feb 2022 Dish Network Pre-App new antennas (CUP) Unitarian  
Church, 4027 E Lincoln
- Feb 2022 Verizon Substantially-Compliant Upgrades  
Fire Station #91 Tatum, 8444 N Tatum
- July 2021 AT&T/Sprint Pre-App antennas in bell tower (CUP)  
Unitarian Church, 4015 E Lincoln
- Dec 2020 T-Mobile Substantially-Compliant Upgrades  
Camelback Inn, 5402 E Lincoln

# Other PWSF Applications In Process





# Questions?