

Planning for Arizona's Energy Future

**Presented to City of Avondale
Mayor & Council Members**

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History/Background

To meet the power demands of current customers and future projects, APS will be building new substation and transmission facilities in the West Valley.

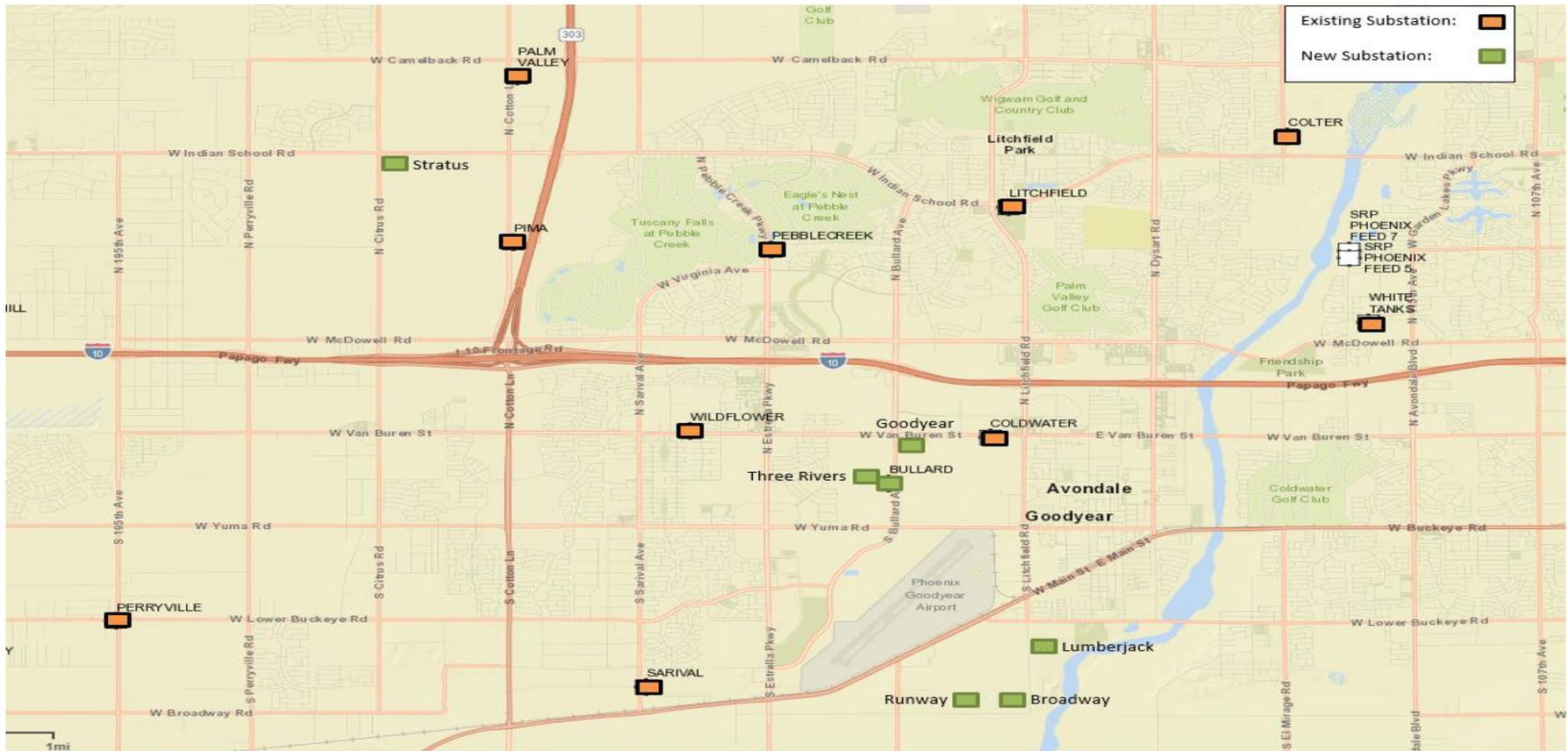
– What?

- 69kV substations & line construction
- 230kV substations & line construction will require public Siting process and approval by ACC
- Power line upgrade projects, as needed

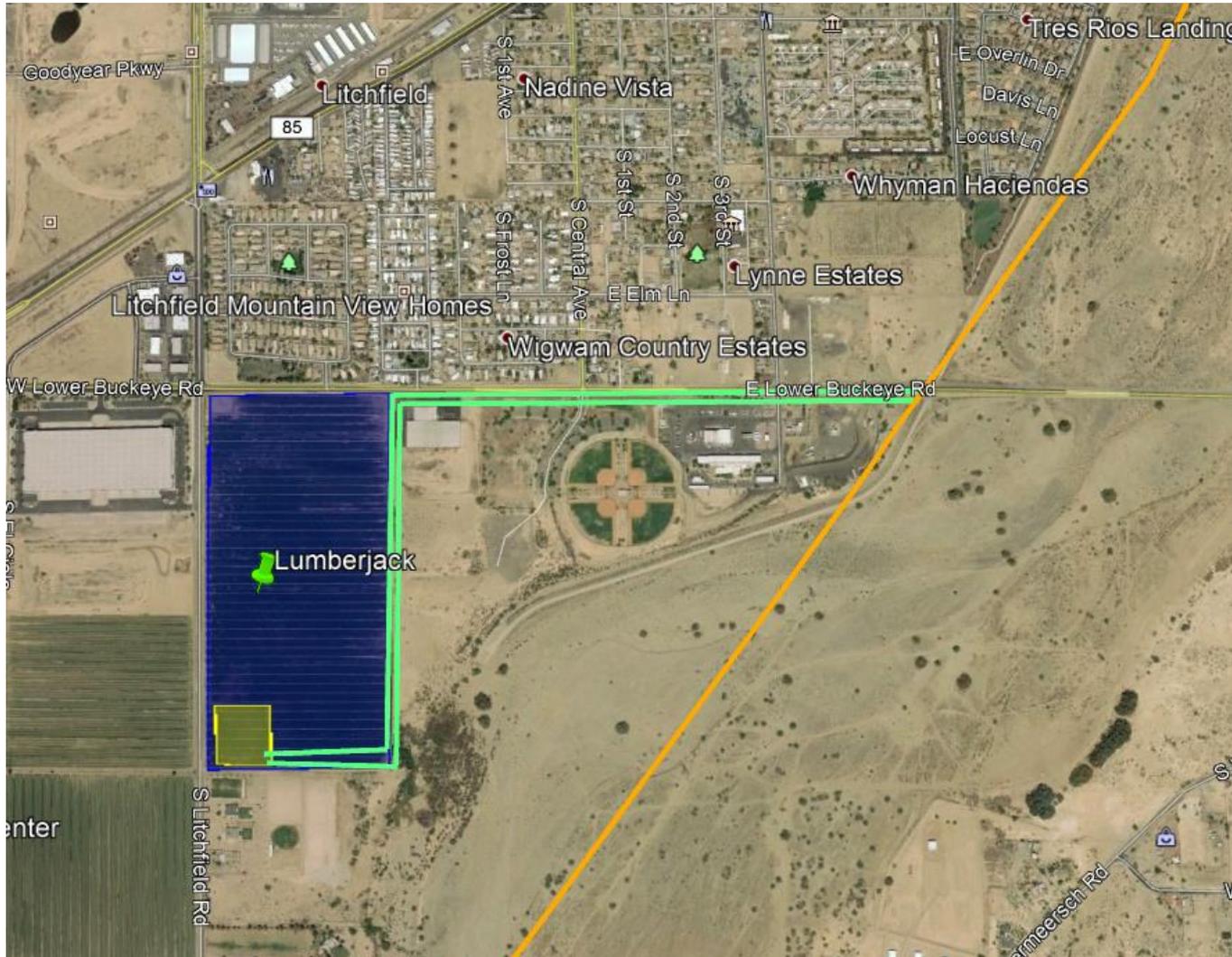
– When?

- Starting now and over the next 3-5 years

APS Substations in the Southwest Valley



69kV Project Lumberjack – Schedule TBD



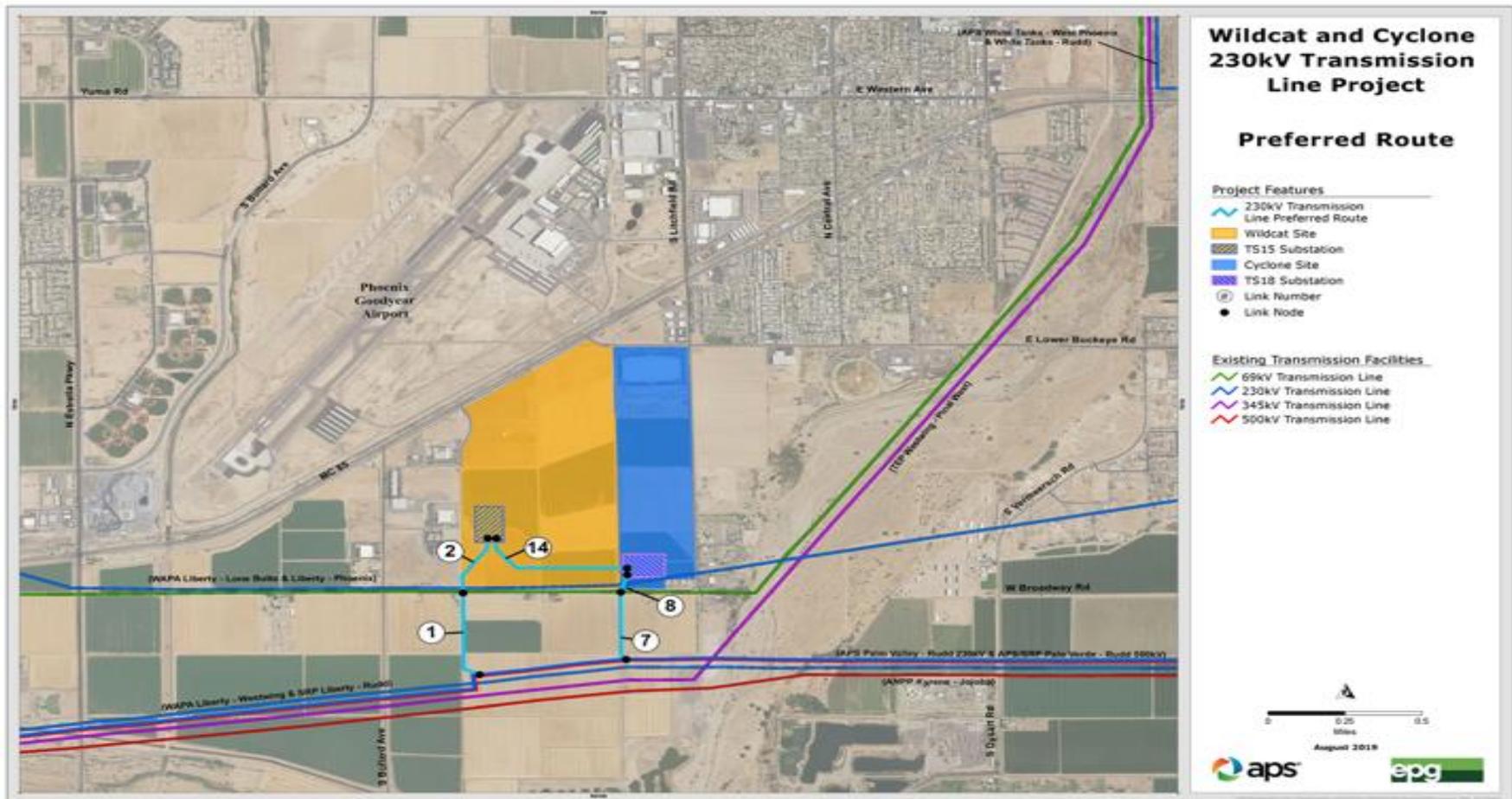
Goodyear - Active 69kV Projects

- **Runway 69kV Substation** – approximately one mile east of Bullard Ave., north of Broadway Road; in-service August 28, 2019
- **Broadway 69kV Substation** – approximately one mile east of Bullard Ave., north of Broadway Road; February 2020 through August/September 2020
- **Bullard 69kV Substation** – approximately one-half mile south of Van Buren Street on the west side of Bullard Avenue; June 2019 through March 2020
- **Three Rivers 69kV Substation** – approximately one-half mile south of Van Buren, immediately west of Bullard Substation; September 2019 through March 2020
- **Stratus 69kV Substation** – southeast corner of Indian School Rd and Citrus Rd; October 2019 through April 2020
- **Goodyear 69kV Substation** – approximately one-half mile south of Van Buren, west of 145th Avenue; schedule TBD

Runway & Broadway Substations

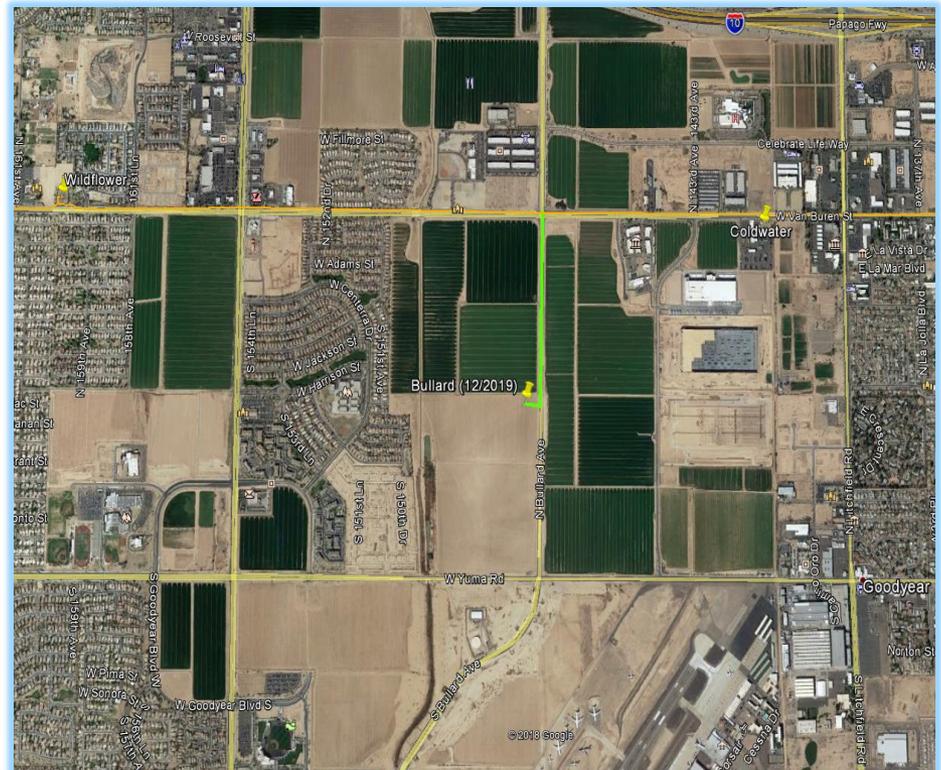
Runway (Wildcat) 69kV Substation, in-service August 28, 2019

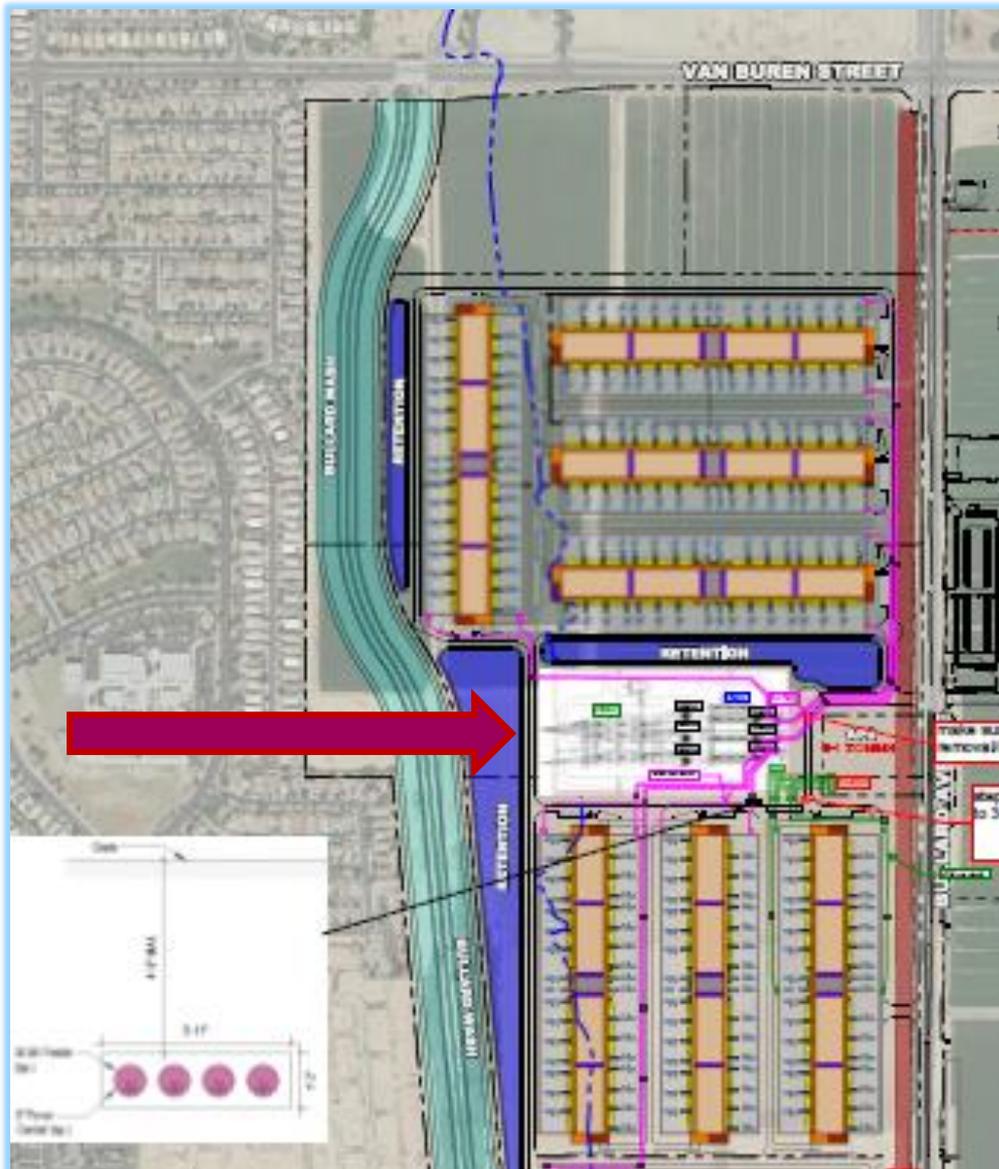
Broadway (Cyclone) 69kV Substation, February 2020 – September 2020



Bullard 69kV Substation

- Planned to serve Compass Data Center Phase 1 and Goodyear area customers
- Approx 3-acre substation on APS owned property
- Construction of 69kV Bullard facilities from June-March 2020





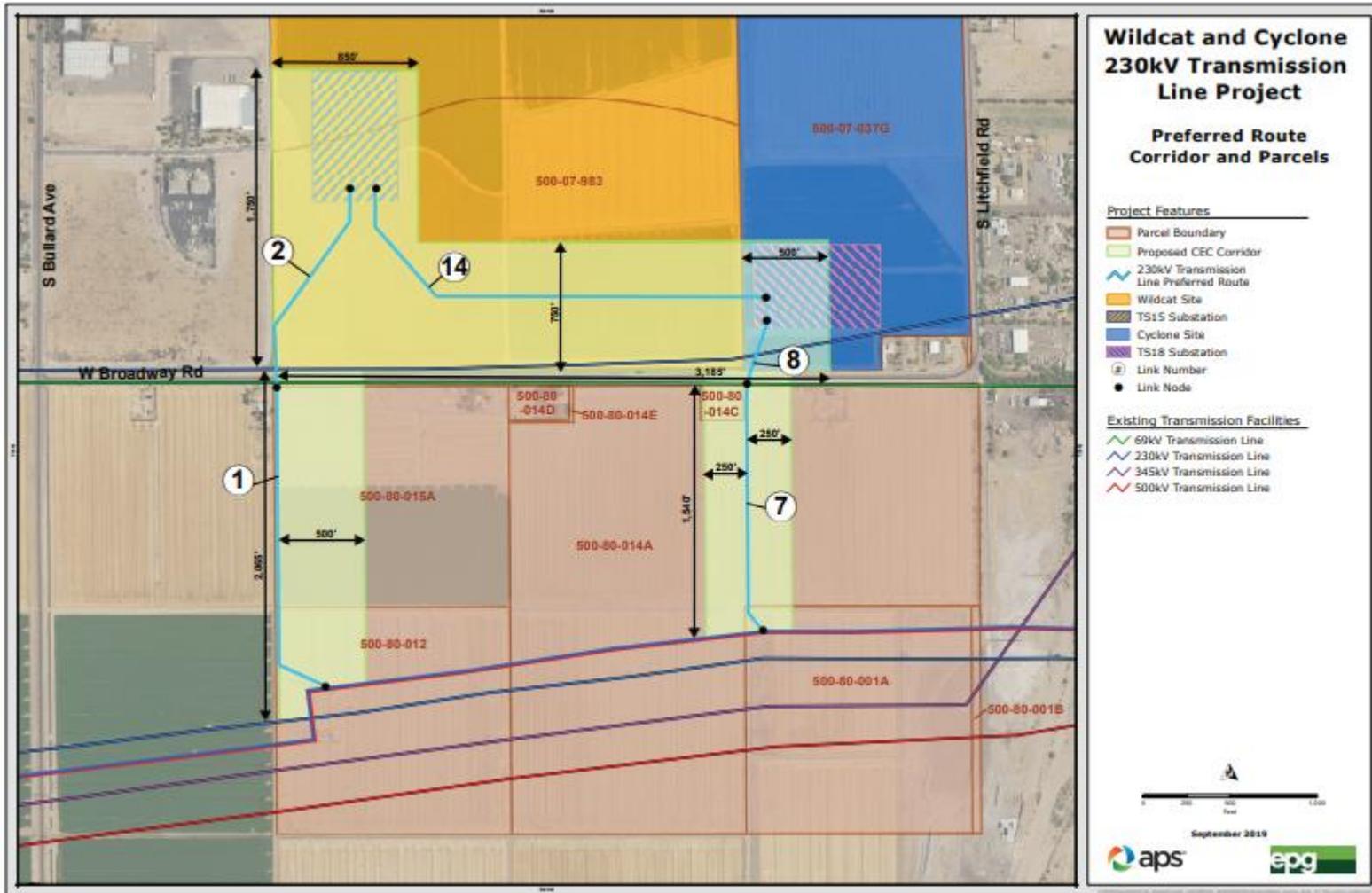
Three Rivers (Compass) Substation

- Located south of Van Buren Street, west of Bullard Road
- Approx 15-acre 69kV & 230kV substation within Compass owned property
- Construction of Three Rivers 69kV Substation from August 2019-March 2020
- Construction of 230kV facilities will likely take place following the 230kV Public Siting Process
- Siting launch in February 2020

230kV Siting Projects – Southwest Valley

- Wildcat and Cyclone 230kV Siting (for Runway and Broadway Substations)
 - Completed November 2019
- Three Rivers 230kV Power Line Siting
 - Open houses scheduled for February 19/20, 2020
 - Siting efforts will take place throughout 2020

Completed: Wildcat & Cyclone 230 kV Siting for Runway & Broadway Substations



Three Rivers 230kV Power Line Project Siting



THREE RIVERS 230kV POWER LINE PROJECT

Public Information Open House

Open House - Avondale
Wednesday, February 19, 2020
5:00-7:00 p.m.
Collier Elementary School
350 S. 118th Avenue
Avondale, AZ 85323

Open House - Goodyear
Thursday, February 20, 2020
5:00-7:00 p.m.
Centerra Mirage Stem Academy
15151 W. Centerra Drive
Goodyear, AZ 85338

Please visit our project website at aps.com/siting

Three Rivers Transmission Line Project (TS-16)

Project Features

- Notice Area
- Delta Center Site
- Point "M" - Building 230kV Power Line Required

Planned Transmission Facilities

- Point "M" Planned Three Rivers 230kV Substation
- Replacing Single-Circuit 69kV Line to be rebuilt as Double-Circuit 69kV Line

Existing Transmission Facilities

- 69kV Substation
- 230kV Substation
- 500kV Substation
- 69kV Transmission Line
- 230kV Transmission Line
- 345kV Transmission Line
- 500kV Transmission Line



Existing 230kV Substation at Cotton Lane & Camelback Rd - Street View



230kV Power Lines – examples



PROJECT FEATURES*

Monopole (single pole) structures are typically used for new 230kV transmission lines, but may include a variety of steel structure types, ranging in height from approximately 115 feet tall to a maximum height of 195 feet depending on routing, terrain and crossing of existing structures, including elevated roads and other power lines. The typical rights-of-way or easements will be approximately 120 feet wide (60 feet each side of the structure). Any opportunity to utilize existing 69kV power line routes for the new 230kV structures will be considered.**

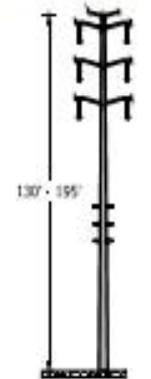
*Exact structure, height and right-of-way or easement width may vary.



Typical Existing
69kV Single Circuit
Monopole
Structure



Typical 230kV
Single Circuit with 69kV
Single Circuit Underbuilt
Monopole Structure



Typical 230kV
Double Circuit with 69kV
Double Circuit Underbuilt
Monopole Structure



**Existing 69kV line along the
north side of Van Buren Street,
east of Litchfield Road



230kV Single Circuit



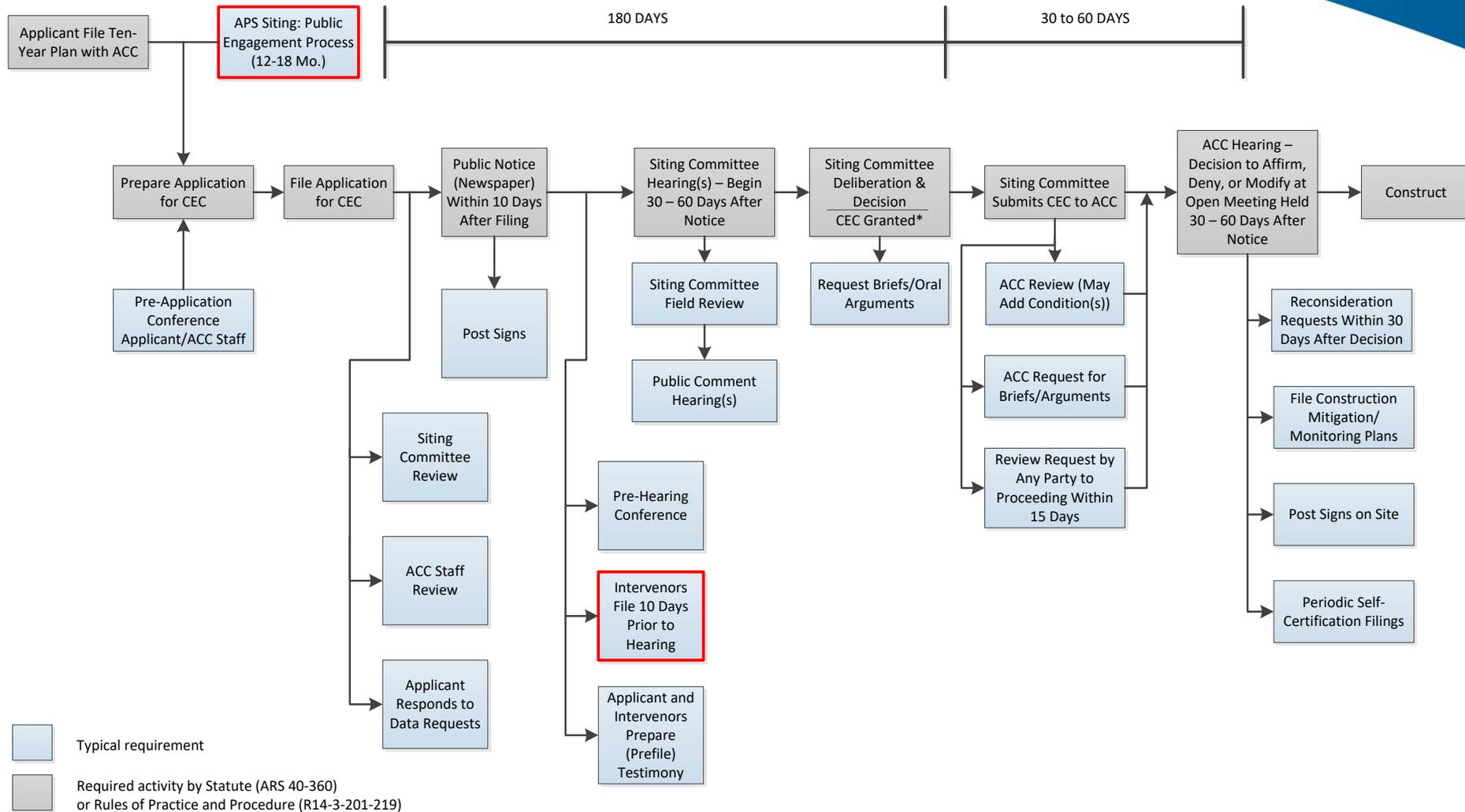
230kV Double Circuit with 69kV
Double Circuit Underbuilt

Siting Considerations in Granting a CEC

- How the project fits in with existing government plans
- Environmental and wildlife impacts
- Noise and communications impacts
- Availability of the area for public recreation
- Scenic and historical considerations
- Existing structures and people
- Archaeological sites
- Financial impacts



Siting: Lifecycle Timeline for a CEC



* Decision within 180 days after receipt of application (R14-3-213), subject to extension

Our APS Commitment

- We invest in transmission & distribution projects to upgrade, strengthen and expand our systems.
- Our investments provide the capacity required to meet future power demand needs associated with customer usage, economic development, and new customer technologies.
- We deliver safe, reliable and affordable electricity to our customers and communities.