

# FY 2019 – 2023 Utilities CIP Overview

City Council  
Study Session  
April 5, 2018



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# Major Capital Projects

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**Water Resources**



**Energy Resources**

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**Parks**



**Public Safety**



**Transportation**

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**Utilities  
(April 5)**

**General  
Government  
(April 26)**



# Agenda

- **Discuss Five Year Capital Improvement Program (CIP)**
- **Review CIP Funding**
- **Review Current Bond Authorization**
- **Review Significant Projects**

# Capital Improvement Program

- **Multi-year plan for capital infrastructure**
- **Projects identified through staff analysis, contractual obligation, or council direction**
- **City Council appropriates funding for first year as part of the annual budget adoption process**
- **Individual construction contracts are brought to Council for approval throughout the year**



# Project Types

## Funded

- Funding identified & allocated
- Programmed within five-year period

## Planned

- Funding not identified
- A need to complete within the five-year period

# CIP Utility Funding

## Local Revenues

- Revenue generated from City utility operations

## Utility Revenue Bonds

- Approved by voters, debt service repaid with revenues generated from City utility operations



# Operations & Maintenance

- Reviewed throughout the CIP project lifecycle
- Budgeted to ensure City can meet the operational requirements of capital improvements

## Examples:

- New positions to operate Signal Butte Water Treatment Plant
- Chemical cost to treat wastewater

# Status of 2014 Utility Bond Projects



**Water**



**Wastewater**



**Natural Gas**



**Electric**

**WATER  
RESOURCES**

**ENERGY  
RESOURCES**



# 2014 Utility Bond Programs

## Water, Wastewater, Natural Gas & Electric

	Water	Wastewater	Natural Gas	Electric
Lifecycle Replacement/Reliability	\$63.3M	\$24.4M	\$19.2M	\$7.2M
Contractual Obligations	\$46.5 M	\$20.4M	-----	-----
Customer Demand in Southeast Mesa	\$197.3M	\$131.0M	-----	-----
Customer Demand Citywide	\$8.6M	\$2.4M	\$27.5M	\$2.9M
System Reinforcement	-----	-----	\$12.4M	\$16.9M
<b>Total</b>	<b>\$315.7M</b>	<b>\$178.2M</b>	<b>\$59.1M</b>	<b>\$27.0M</b>

# Water

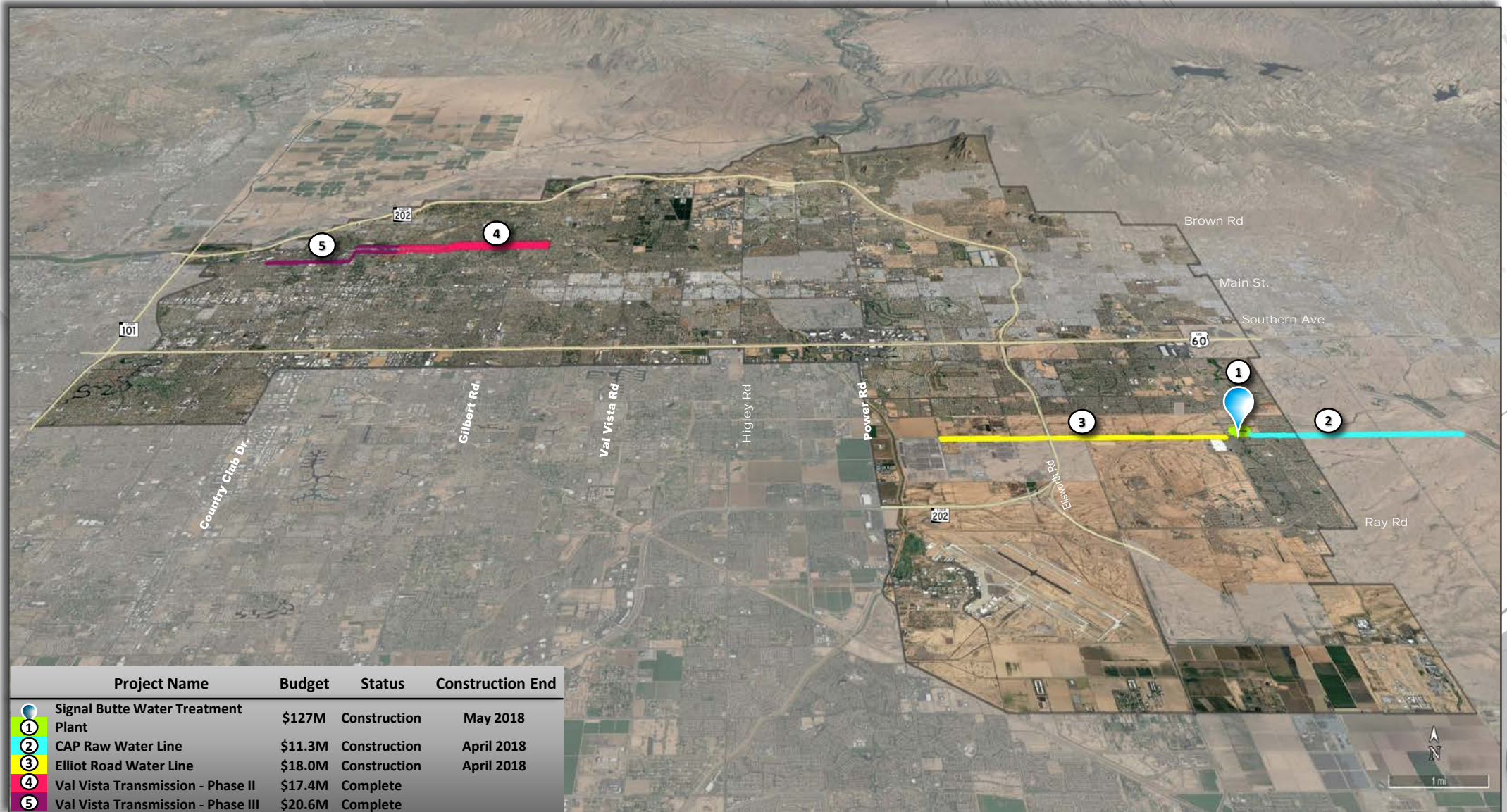
Lifecycle Replacement	\$63.3M	<ul style="list-style-type: none"><li>• 10 Quarter Section Waterline Replacement Projects</li><li>• 4 Well Projects</li><li>• Brown Road Water Plant Misc. Improvements</li></ul>
Contractual Obligations	\$46.5M	<ul style="list-style-type: none"><li>• Val Vista Pipeline Phases II &amp; III</li><li>• Val Vista Water Plant Contract w/Phoenix</li><li>• Water Settlement Contract</li></ul>
Customer Demand in Southeast Mesa	\$197.3M	<ul style="list-style-type: none"><li>• Signal Butte Water Plant</li><li>• CAP Raw Water Main</li><li>• 3 Transmission Main Projects</li><li>• 8 Well Projects</li><li>• 8 Pipeline Projects</li><li>• Gateway Infrastructure</li></ul>
Customer Demand-Citywide	\$8.6M	<ul style="list-style-type: none"><li>• Transfer Station 3 Upgrade</li><li>• Misc. Waterlines</li></ul>

**Total \$315.7M**





# 5 Major Water Projects = \$194.3 of Total Bonds



	Project Name	Budget	Status	Construction End
●	Signal Butte Water Treatment Plant	\$127M	Construction	May 2018
①	CAP Raw Water Line	\$11.3M	Construction	April 2018
②	Elliot Road Water Line	\$18.0M	Construction	April 2018
④	Val Vista Transmission - Phase II	\$17.4M	Complete	
⑤	Val Vista Transmission - Phase III	\$20.6M	Complete	





# Major Water Projects



Val Vista Pipeline (Phases II & III)



Elliot Road Water Line



CAP Raw Water Line

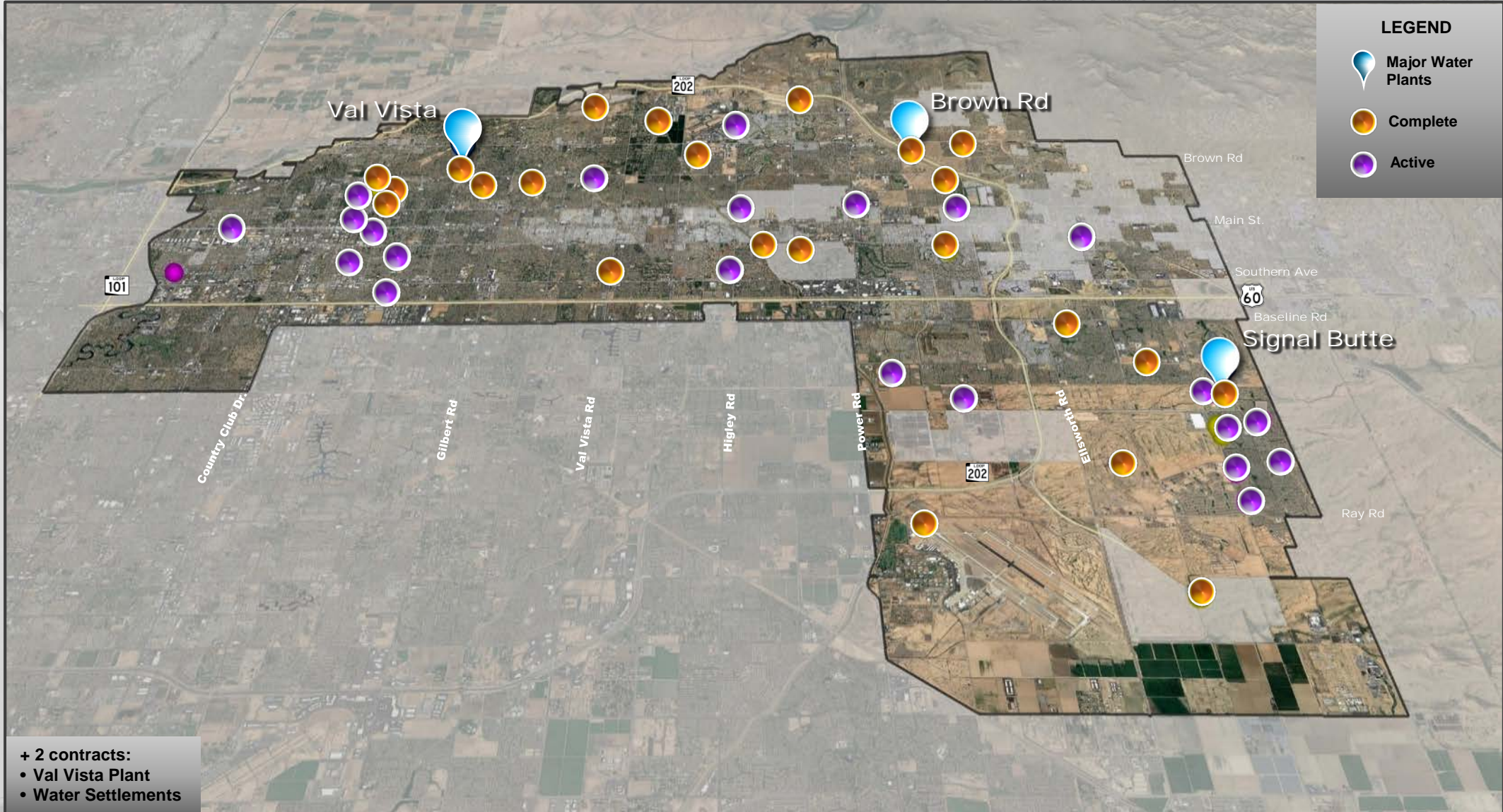


Signal Butte WRP





# All Water Projects





# Wastewater

Lifecycle Replacement

\$24.4M

- Miscellaneous Greenfield Water Reclamation Plant Improvements
- Lift Station, Pipeline & Manhole Projects
- Southeast Plant Rehabilitation Projects

Contractual Obligations

\$20.4M

- 91<sup>st</sup> Avenue WW Plant Mesa Share

Customer Demand in Southeast Mesa

\$131.0M

- 8 Sewer Projects
- Greenfield WRP Expansion

Customer Demand-Citywide

\$2.4M

- Septic to Sewer Program

**Total \$178.2M**





# One Major Wastewater Project = \$125M of Total Bonds

## Greenfield Water Reclamation Plant

### Status

**Partners:** Town of Gilbert  
Town of Queen Creek

**In Design Phase**

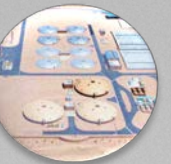
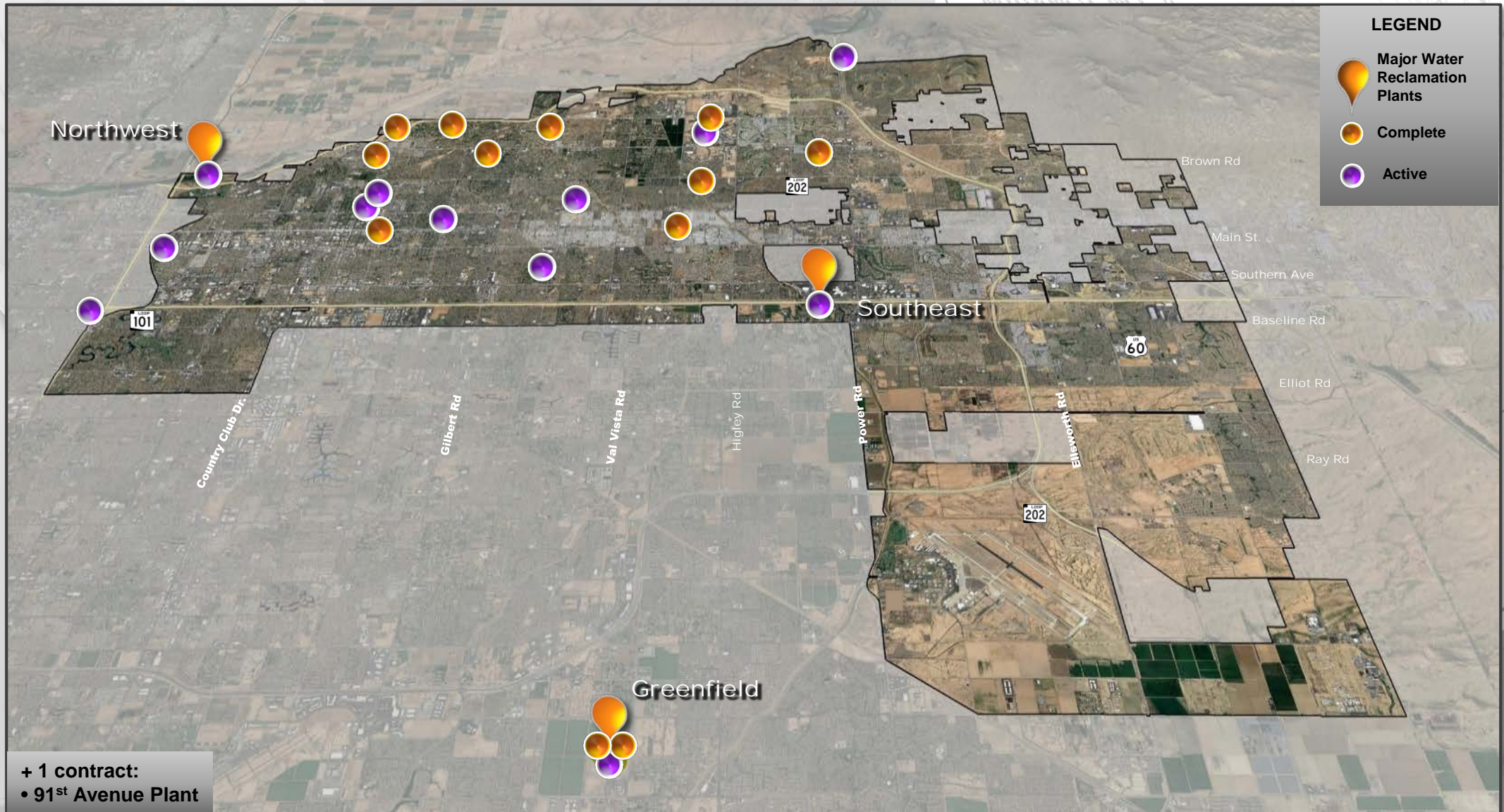
**Est. Construction Start:**  
**1<sup>st</sup> Quarter 2018**

**Est. Construction End:**  
**3<sup>rd</sup> Quarter 2020**





# All Wastewater Projects





# Electric

Lifecycle Replacement

\$7.2M

- Distribution – Overhead
- Transmission
- Substation Improvements
- Metering

System Reinforcement

\$16.9M

- Mesa Drive Phase II
- Distribution-Underground
- Generation
- Horne Utility Replacement
- Gilbert Road Light Rail Extension

Customer Demand

\$2.9M

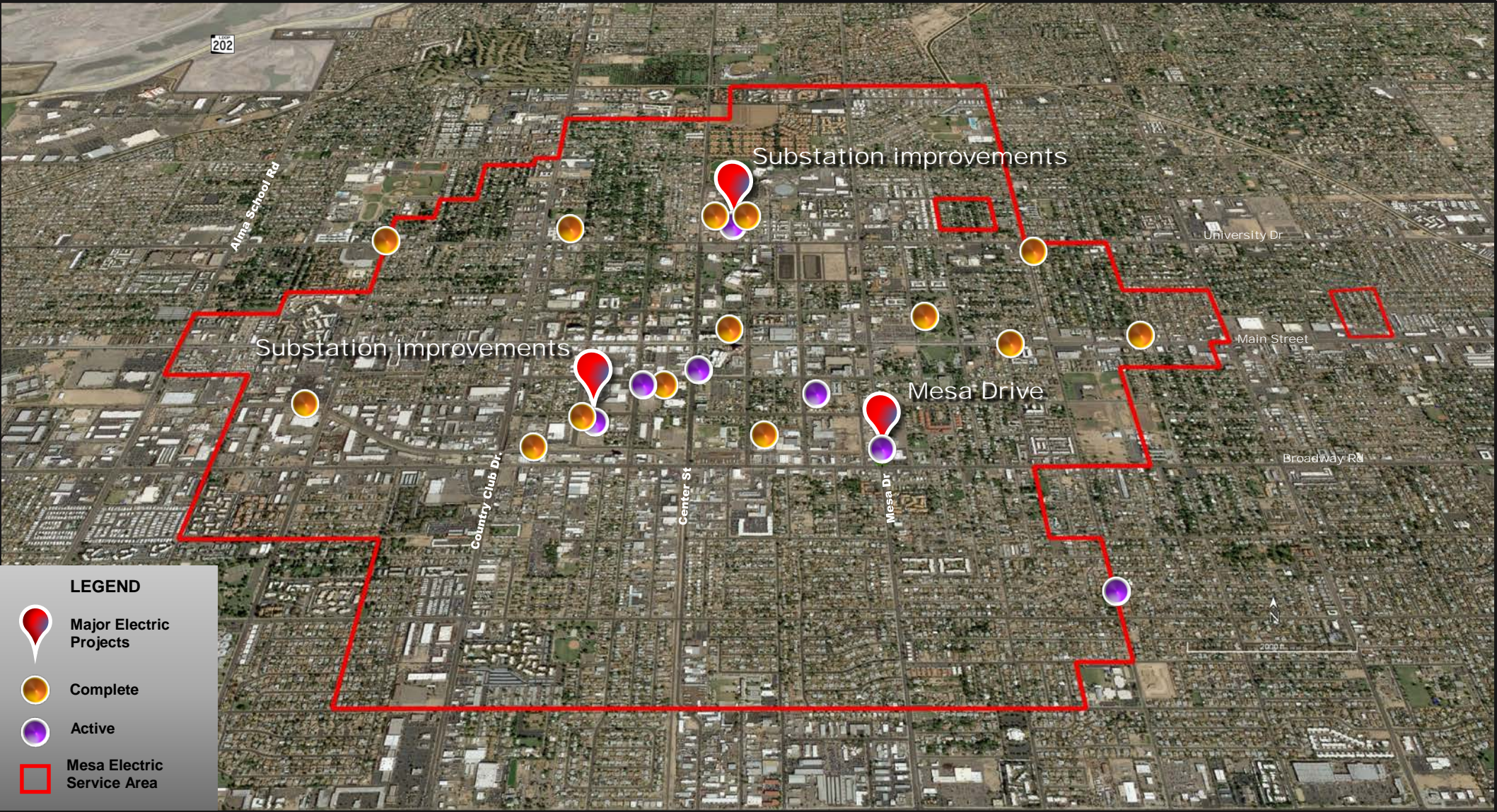
- New Services
- Substation to Park Conversion

**Totals \$27.0M**





# Electric Projects





# Natural Gas

Lifecycle  
Replacement

\$19.2M

- Coordinated Projects
- Main Replacements
- Service Replacements
- Meter Replacements

System  
Reinforcement

\$12.4M

- Mains
- HP Mains
- Pressure Regulation Stations
- SCADA
- Cross Ties

Customer  
Demand

\$27.5M

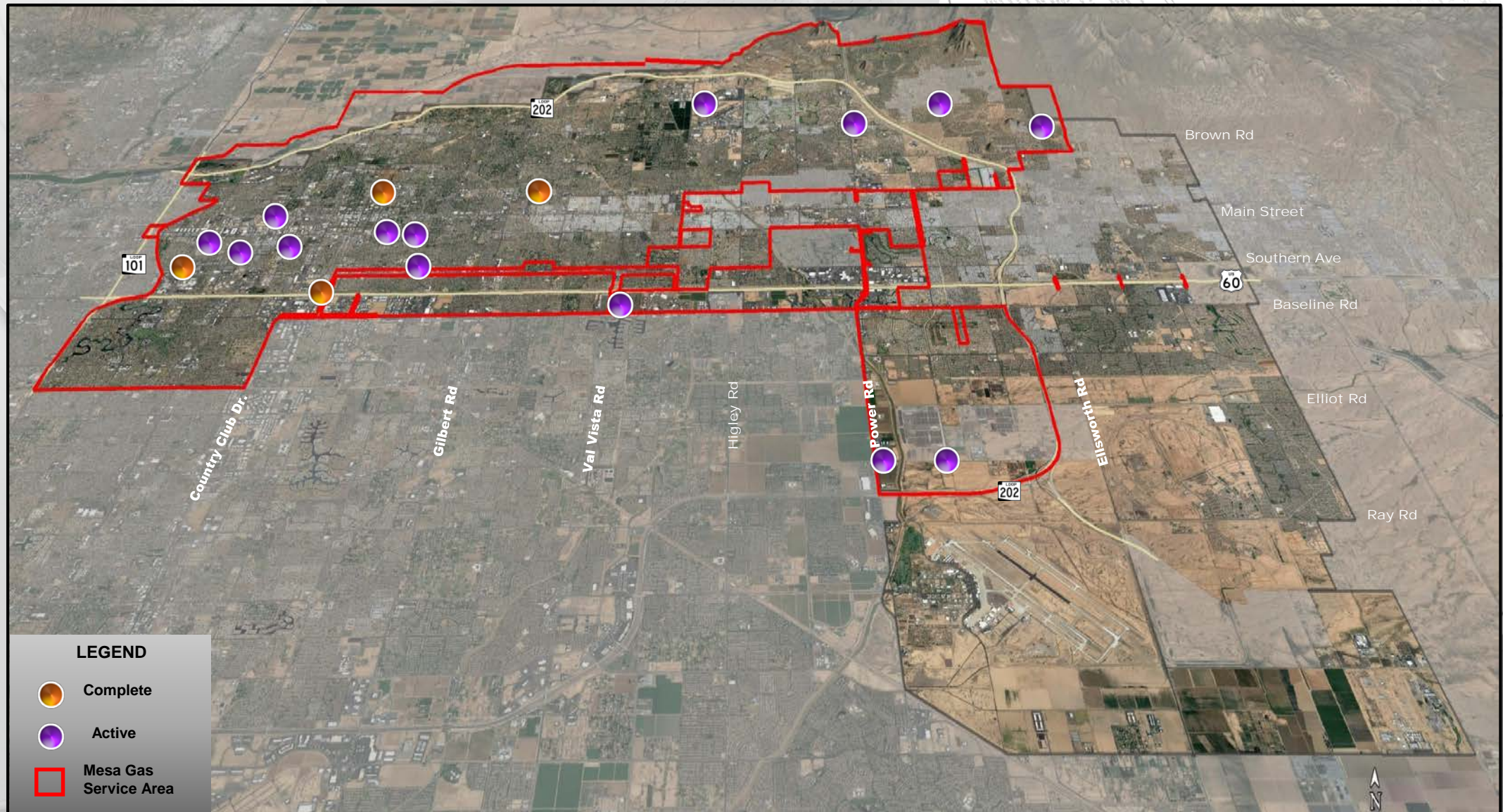
- New Mains
- New Meters
- New Service

**Totals \$59.1M**



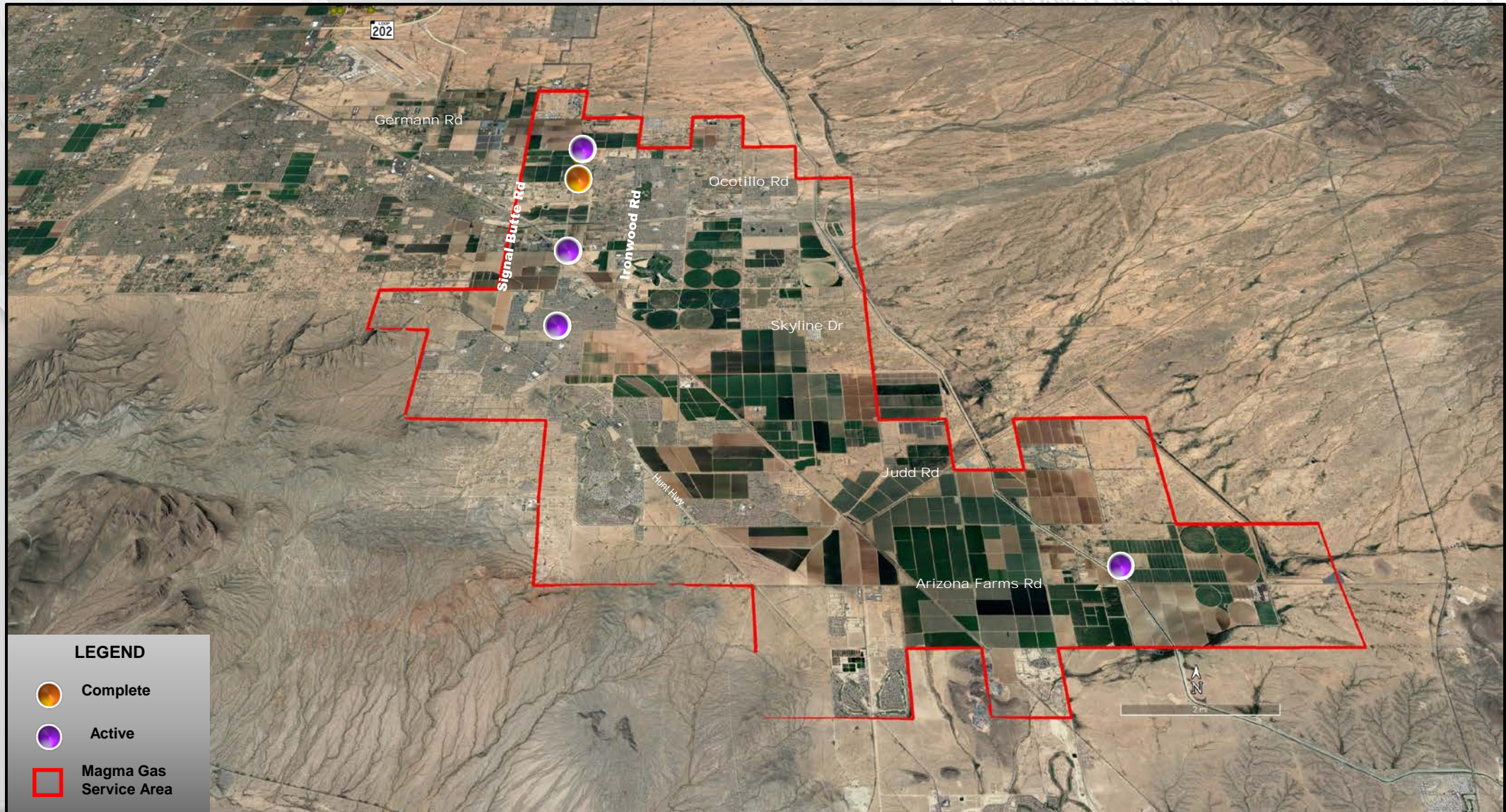


# Natural Gas Projects in Mesa Service Area





# Natural Gas Projects in Magma Service Area





# Nature of Electric and Natural Gas Projects

## PROJECT SCHEDULE DRIVERS:

- Many Natural Gas & Electric lines are under streets + Natural Gas joint-trenched with Water:

**\$20M or 23% of Program**

- Customer Demand + New Customers:

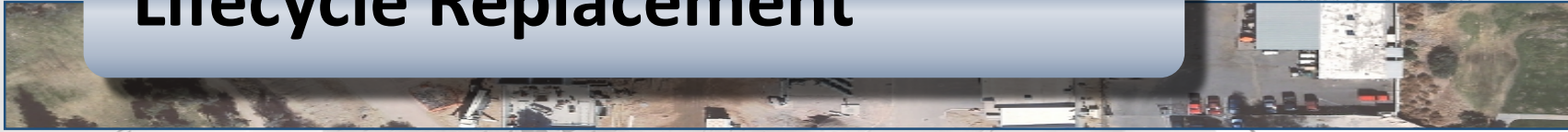
**\$30M or 35% of Program**





# Future CIP Bond Needs

**Lifecycle Replacement**



**Contractual Obligations**



**Customer Demand**



**System Reliability**





# Calendar

April	26	Non-Utility CIP discussion
May	21	Council considers CIP adoption
July	2	Deadline to call November 2018 bond election

## Questions?

