mesa·az
OFFICE OF THE CITY CLERK

COUNCIL MINUTES

November 7, 2019

The City Council of the City of Mesa met in a Study Session in the lower level meeting room of the Council Chambers, 57 East 1st Street, on November 7, 2019 at 7:31 a.m.

COUNCIL PRESENT	COUNCIL ABSENT	OFFICERS PRESENT
John Giles	Mark Freeman	Christopher Brady
Jennifer Duff		Holly Moseley
David Luna		Jim Smith
Francisco Heredia		
Kevin Thompson		
Jeremy Whittaker		

Mayor Giles excused Vice Mayor Freeman from the entire meeting.

(Mayor Giles excused Councilmember Thompson from the remainder of the meeting at 9:12 a.m.)

1-a. Hear a presentation, discuss, and provide direction on proposed Quality Development Design Guidelines to guide development in the City, as well as supporting text amendments to the Mesa City Code Title 11, Chapters 3, 4, 5, 6, 7, 8, 15, 22, 30, 31, 33, 69, 86, and 87, relating to the adoption of the Quality Development Design Guidelines Standards.

Planning Director Nana Appiah introduced Development Services Project Manager Veronica Gonzalez and Senior Planner Rachel Prelog who displayed a PowerPoint presentation. **(See Attachment 1)**

Ms. Gonzalez stated in November 2014 Mesa citizens voted to approve the Mesa 2040 General Plan establishing Mesa's vision of becoming a recognizable city with a strong sense of place and a standard for quality. (See Page 2 of Attachment 1)

Ms. Gonzalez advised the tools to implement the General Plan include zoning ordinances, sub-area plans, community plans and residential design guidelines. She announced the Central Main Plan, Falcon Field Sub-Plan, and Eastmark and Cadence Community Plans have set the desired quality for the City and the areas of the City without a sub-area or community plan are insufficient in producing that quality. (See Page 3 of Attachment 1)

Ms. Gonzalez remarked a City-initiated project has been developed to create quality development design guidelines. She explained the goals of the project are to establish clear expectations for quality development, encourage flexibility and innovation, establish consistency in applying design standards, and to adopt text amendments to support design standards. (See Page 4 of Attachment 1)

Ms. Gonzalez advised public outreach and feedback are important components to the project. She stated three community workshops, a developer workshop, two development advisory forums and two online surveys were conducted resulting in more than 500 participants in the project. (See Page 5 of Attachment 1)

Ms. Gonzalez pointed out the key elements obtained from public outreach which included architectural variety and diversity in building types, use of quality materials and paint colors, outdoor spaces that provide shade and landscaping, and pedestrian connectivity and walkability. (See Page 6 of Attachment 1)

Ms. Gonzalez detailed feedback from developers which included a variety of design options to allow for flexibility, consider site context, and consistency in review. She advised staff took the feedback and began drafting the quality development design guidelines into categories consisting of residential, commercial and industrial. (See Page 7 of Attachment 1)

Ms. Gonzalez stated the residential guidelines were developed to create resilient neighborhoods that stand the test of time. She added the guidelines include principles that encourage projects that create a sense of place and neighborhood identity, centrally located open spaces and amenity areas that include pedestrian connections, interesting architectural styles that focus on the main entrance to the home and using quality building materials. (See Page 8 of Attachment 1)

Ms. Gonzalez discussed the commercial design guidelines which include elements that engage the street with pedestrian scaled architecture, cohesive building design and group developments, designs that create a sense of arrival, gathering spaces designed for pedestrian use, and coordinating building materials and paint colors. (See Page 9 of Attachment 1)

Ms. Gonzalez explained the elements for industrial design guidelines which include using massing and scale to break up large buildings, encouraging smaller groupings of parking spaces, using a mixture of building materials and colors, and placing loading and service areas on the interior of the building. (See Page 10 of Attachment 1)

Ms. Prelog described the development of the design guidelines which were informed by research of national best practices, as well as the surrounding communities' standards. She displayed a comparison of the number of design standards that have been codified in various jurisdictions' zoning ordinances. She pointed out that Mesa has the fewest number of design standards which is possibly the reason for having lower quality development than other Valley cities. (See Page 11 of Attachment 1)

Ms. Prelog explained staff is proposing amendments to accompany the design guidelines to create a baseline of standards within the zoning ordinance. She stated Chapters 5, 6 and 7 would be affected by the amendments, but the majority of the changes would be to residential, commercial, mixed use and employment district chapters, and can be summarized as removal of repetitive language, reorganizing language, inclusion of new language, adding specificity to existing standards and new definitions, and an inclusion of an alternative compliance procedure. (See Page 12 of Attachment 1)

Ms. Prelog explained Planning & Zoning (P&Z) recommended approval on October 23rd and the next steps will be adoption of the design guidelines and introduction of the text amendments on December 2nd and adoption of the text amendments on December 9th. She informed Council that

staff is recommending a 60-day implementation with February 10th being the effective date. (See Page 13 of Attachment 1)

In response to a question from Councilmember Luna regarding the meaning of "interesting streetscapes," Ms. Gonzalez clarified staff is looking for a variety of home elevations.

Ms. Prelog added the term "interesting streetscapes" is not part of the design guidelines or in the zoning ordinance but is intended to avoid cookie-cutter home developments.

In response to a question posed from Mayor Giles, Ms. Prelog described the language "subordinate garage" is to convey an emphasis on the entrance of the home as the main feature rather than on the garage.

Councilmember Thompson indicated support for updating the guidelines to allow developers and builders the opportunity to try something different. He thanked staff for putting the presentation together and stated the changes will help set Mesa apart from other cities by expecting higher quality developments.

In response to a comment by Councilmember Duff regarding minimizing masterplan designs which forces traffic onto connector streets which discourages walking and biking, Mr. Appiah replied a thorough discussion will have to take place with engineering because that would require amending the standards beyond what is in the zoning ordinance. He stated staff will add the suggestion to the list of items to bring back to Council.

Councilmember Duff encouraged safe walking spaces in parking lots and heat mitigation in the City. She stated the hottest areas in the City are in the most impoverished areas and the City needs to focus on ways to mitigate heat.

Mr. Appiah replied P&Z feedback includes providing shade and landscape as part of the proposed text amendments in the design guidelines. He described one of the requirements in the text amendments is to require maximum lot coverage for setting zoning districts which has not been done in the past.

In response to a question by Councilmember Duff, Mr. Appiah stated the design guidelines may apply to a remodel, but it depends on the extent of the remodel. He reported the design guidelines will encourage citizens through negotiations to follow the design standards set by the City.

In response to a series of questions from Councilmember Heredia, Mr. Appiah reported when a remodel application comes in, the Substantial Conformance Improvement Plan is followed to help the applicant bring the project up to Mesa's standards. He described specific standards that developers need to meet, and staff provides collaboration and negotiation to ensure the desired quality. He explained in terms of the rollout, extensive discussion has already taken place with the development community to make them aware of the changes and there will be a 60-day implementation period.

In response to a question from Mayor Giles, Ms. Prelog confirmed the new text amendments propose drive-throughs will not be allowed to abut arterial streets. She added the change has not previously been part of the code.

City Manager Christopher Brady commented the pushback is often not from developers but from residents' concerns with connectors in neighborhoods and security issues that need to be addressed.

Further discussion ensued regarding the pros and cons of having connectors between neighborhoods and commercial areas surrounding neighborhoods.

In response to a series of questions from Councilmember Whittaker, Mr. Appiah explained the design guideline will be a resolution and the text amendments will be a zoning ordinance which will enforce or guide any proposed development to conform to the standards. He added that a developer can present an alternative and each situation is looked at on a case-by-case basis and would go through Planned Area Development (PAD) review for recommendation or denial by P&Z and approval by Council. He identified certain elements that help older neighborhoods maintain sustainability and staff takes those elements into consideration. He stated staff is in the process of reviewing standards for smaller developments to ensure there is a balance between increasing density and planning and engineering standards.

Ms. Prelog advised that small lot residential standards were previously separate because of higher quality requirements, but with the revision to higher standards, the baseline of those sections have been combined. She mentioned the change may discourage smaller lot development since the quality incentive is now the standard.

Mr. Brady provided examples of a higher quality plan that would have larger open spaces or community centers with shared amenities.

Councilmember Duff explained density needs to be looked at in light of affordability of housing and spaces for buildings, adding lower quality and lower price are not necessarily the same. She clarified density is not a bad thing and the City needs a variety of housing for all residents.

Mr. Appiah confirmed staff continues to look at the available infrastructure to support the type of density needed and have discussions with Community Development to provide a mix of housing to balance the needs in the City.

Mayor Giles thanked staff for the presentation.

1-b. Hear a presentation and discuss the City's Advanced Metering Infrastructure (AMI) project, also known as Smart Meters.

Management and Budget Director Candace Cannistraro introduced Water Resources Director Jake West and Energy Services Director Frank McRae and displayed a PowerPoint presentation. **(See Attachment 2)**

Ms. Cannistraro described a "smart city" as a city that leverages technology to improve services and overall quality of life. (See Page 2 of Attachment 2)

Ms. Cannistraro explained Advanced Metering Infrastructure (AMI), also known as smart meters, refers to the electric, gas and water meter on your home with the ability to transmit data to a central hub for use by the City or the resident. (See Page 3 of Attachment 2)

Ms. Cannistraro advised the smart meter offers two-way communication and there are different communication networks that are available to be used within the City. (See Page 4 of Attachment 2)

Ms. Cannistraro detailed the anticipated benefits to the City by installing smart meters with increased efficiency resulting in decreased costs and timely access to usage data. She added smart meters will assist with the accuracy of the meter replacement program. (See Page 5 of Attachment 2)

In response to a question from Councilmember Whittaker, Ms. Cannistraro verified the smart meters handle electric, gas and water.

In response to a question posed by Councilmember Luna, Ms. Cannistraro advised the AMI program is replacing the City's meters, but the City has been in discussions with Salt River Project (SRP) and Southwest Gas (SWG) regarding their programs.

Ms. Cannistraro commented in 2018 UtiliWorks Consulting, LLC conducted a feasibility study working with staff from Water Resources, Energy Resources, Business Resources and Information Technology, and reported the City is prepared to implement smart meters. She announced the return on the smart meter investment would be 12 to 13 years. (See Page 6 of Attachment 2)

Ms. Cannistraro displayed a map of the City's current fiber infrastructure, stating Mesa has an advantage because of its investment in fiber over the last few years. (See Page 7 of Attachment 2)

Ms. Cannistraro presented other physical assets the City currently has that will enhance the implementation of the smart meters. (See Page 8 of Attachment 2)

Ms. Cannistraro highlighted multiple facets of the project which are installation, implementing a communication network that can also be utilized for other smart city initiatives, and management of the data received. She explained the project will be done in two phases. (See Page 9 of Attachment 2)

Ms. Cannistraro stated Phase 1 will include approximately 2,000 meters located in the downtown and Superstition Springs areas and will consist of ensuring the technology and equipment are working, and to determine the frequency for data collection and transmission before moving into citywide rollout, which is Phase 2. (See Pages 10 and 11 of Attachment 2)

Ms. Cannistraro reported that a project management consultant who has experience in smart meter implementation has been hired to assist with the project and give technical advice on the design and layout of the communication network. (See Page 12 of Attachment 2)

In response to a question posed by Councilmember Whittaker, Ms. Cannistraro replied a Request for Proposal (RFP) process was conducted when hiring the consultant and one of the requirements was having completed at least five implementations.

Ms. Cannistraro explained five subject matter teams have been put together within the City which include: (See Page 13 of Attachment 2)

- Metering
- Technology and Security
- Integration and Reporting
- Organization Change/Management and Business Process
- Communications (Internal and External)

Ms. Cannistraro presented the anticipated project timeline which will begin October 31, 2019, ending with Citywide implementation in March 2022. She continued by saying that staff would provide Council updates on the progression of the project. (See Page 14 of Attachment 2)

In response to a series of questions from Councilmember Luna, Ms. Cannistraro confirmed the Smart City Initiative Team will be working together with the Smart Region Consortium and a road map will be created to show the direction of the City.

Mr. West informed Councilmember Luna that he would provide Council with a sample of the new technology for inspection.

Ms. Cannistraro stated that Mesa has networks already built for data sharing between other municipalities and now the data needs to be formatted to allow communication between cities.

In response to a series of questions from Councilmember Heredia, Ms. Cannistraro discussed that Business Services and Information Technology (IT) are evaluating the best option for the customer portal. She stated the communication team will be putting together a communication master plan that will be tested during Phase 1 so the City will have all the processes down before citywide implementation.

In response to a question from Councilmember Duff, Ms. Cannistraro indicated the beginning of the implementation will be the changeout of the meters in May 2021, taking approximately four months, and the rest of the time will be spent on testing, integration, and the communication network.

Further discussion ensued regarding homes having multiple meters and whether this is an opportunity to review the process and remove unwanted meters.

Mr. West explained that currently meters being replaced are switched to meters with smart meter compatibility, and after the implementation Water Resources will have the ability to pinpoint residents' water usage.

In response to a question from Councilmember Whittaker, Chief Information Officer Travis Cutright explained a comprehensive Internet of Things (IoT) plan is being put together looking at security for all devices connected to the network.

In response to a series of questions posed by Councilmember Whittaker, Ms. Cannistraro stated one of the areas that will be explored with the consultant is data management and data usage. She clarified the AMI project is a Capital Improvement Plan (CIP) project. She stated the estimate for Phase 1 is $5 million and is being funded through an existing bond authorization, and the total estimate for the project is $60 million. She remarked the battery life will depend on the number of times data is transmitted and that the consultant will assist in making those decisions.

Mr. West explained that the estimated battery life is 8 to 10 years.

In response to a question from Councilmember Whittaker, Ms. Cannistraro commented the AMI project goal is to switch out the meters and start collecting data; however, adding additional services to the utility account could be looked at in the future.

Mr. McRae added there are no restrictions at this time on a resident attaching a submetering device for data collection.

In response to a question from Councilmember Whittaker, Ms. Cannistraro explained she would have to research the annual operating cost for the new technology and stated the Return on Investment (ROI) would be recouped within 12 to 13 years and the savings thereafter will cover future costs.

In response to a question from Councilmember Whittaker, Mr. West stated the current meters have a 15- to 20-year lifespan.

Ms. Cannistraro confirmed she would forward Councilmember Whittaker the feasibility report prepared by UtiliWorks Consulting, LLC.

In response to a question posed by Councilmember Thompson, Ms. Cannistraro described the ROI takes into account the savings that will be gained from taking employees out of the field and also retraining employees for more technical positions.

In response to a question from Councilmember Thompson, Mr. McRae replied staff will rely on the surveillance program that is currently in place to handle the leak surveys and corrosion protection.

In response to a question from Mayor Giles regarding whether the fiber network in the City is sufficient, Ms. Cannistraro stated the fiber is an asset used for taking the collected data and transmitting it back to the City. She added the initial data will go to a collector and the collector will transmit the data through the fiber. She remarked as part of the Request for Proposal (RFP) process, vendors will present different communication networks based on their technology and the City's assets.

In response to a question posed by Councilmember Whittaker, Ms. Cannistraro explained the infrastructure slide shows the current assets throughout the City. She informed Council the vendors will receive a detailed dataset showing Mesa's assets that will be incorporated into their proposals. She stated in April of 2021 staff will be coming back to Council for award of the contract.

Mayor Giles thanked staff for the presentation.

1-c. Hear a presentation and discuss an update on the transition to the realignment of the paratransit service area.

Transit Services Director Jodi Sorrell introduced Transit Coordinator Edward Jones and displayed a PowerPoint presentation. **(See Attachment 3)**

Ms. Sorrell advised on July 1, 2019 Mesa realigned the Paratransit service area to follow the Federal mandate. She presented a map comparing the former and current Paratransit and RideChoice service areas. (See Pages 2 through 4 of Attachment 3)

Ms. Sorrell explained the extensive outreach that took place with paratransit customers and their families to assist them with understanding their options. (See Page 5 of Attachment 3)

Ms. Sorrell reported the numbers for Paratransit and RideChoice trips for Fiscal Year (FY) 19 and the budget and forecast for FY 20, stating the demand for accessible trips are increasing. She commented the cost to the City for a Paratransit trip is $45 and for RideChoice is $19. (See Page 6 of Attachment 3)

Ms. Sorrell stated, based on a customer request, staff is proposing that riders be allowed to choose between a mileage cap or a trip cap. She pointed out staff is listening to the needs of riders and implementing more options to help make the transition easier. (See Page 8 of Attachment 3)

In response to a series of questions from Councilmember Heredia, Ms. Sorrell advised there will not be a cost savings, but the transition of moving to RideChoice is offsetting the cost. She explained the education process is ongoing and some software issues need to be addressed. She stated roundtable discussions will be held in the spring to receive feedback for further improvement. She discussed the process of submitting a complaint for RideChoice is the same as Paratransit where a customer can contact Valley Metro customer service or go online to voice an issue.

In response to a series of questions posed by Councilmember Luna, Ms. Sorrell indicated since East Mesa is now outside the service area for Paratransit, the accessible service option is RideChoice. She advised future data will be analyzed to determine where the riders are coming from. She described a few complaints and stated staff has worked with Valley Metro and customers to handle the concerns.

In response to a question from Councilmember Luna, Mr. Jones stated he recently gave a presentation at the Senior Center and staff will continue public outreach to make the public aware of the available opportunities.

Mayor Giles thanked staff for the presentation.

2. Current events summary including meetings and conferences attended.

Mayor Giles –	United States Conference of Mayors – Get Global
Councilmember Duff –	Mesa Early Learning Network visit Video for Mesa United Way – Harvest of Hope Drive Rail Mesa – ASU Community Design Meeting
Councilmember Luna –	New Hope Community Center District 5 Ride Along with Sgt. Sean Kelly to Jefferson Elementary School

3. Scheduling of meetings.

City Manager Christopher Brady stated that the schedule of meetings is as follows:

Saturday, November 9, 2019, 4:00 p.m. – Eastmark Great Park Phase 3 Grand Opening

Monday, November 11, 2019, 11:00 a.m. – East Valley Veterans Parade in Downtown Mesa

Monday, November 18, 2019, 4:30 p.m. – Study Session

Monday, November 18, 2019, 5:45 p.m. – Regular Council Meeting

4. Adjournment.

Without objection, the Study Session adjourned at 9:34 a.m.

JOHN GILES, MAYOR

ATTEST:

DEE ANN MICKELSEN, CITY CLERK

I hereby certify that the foregoing minutes are a true and correct copy of the minutes of the Study Session of the City Council of Mesa, Arizona, held on the 7th day of November 2019. I further certify that the meeting was duly called and held and that a quorum was present.

DEE ANN MICKELSEN, CITY CLERK

la
(Attachments – 3)

mesa·az

Quality Development Design Guidelines and **Text Amendments**

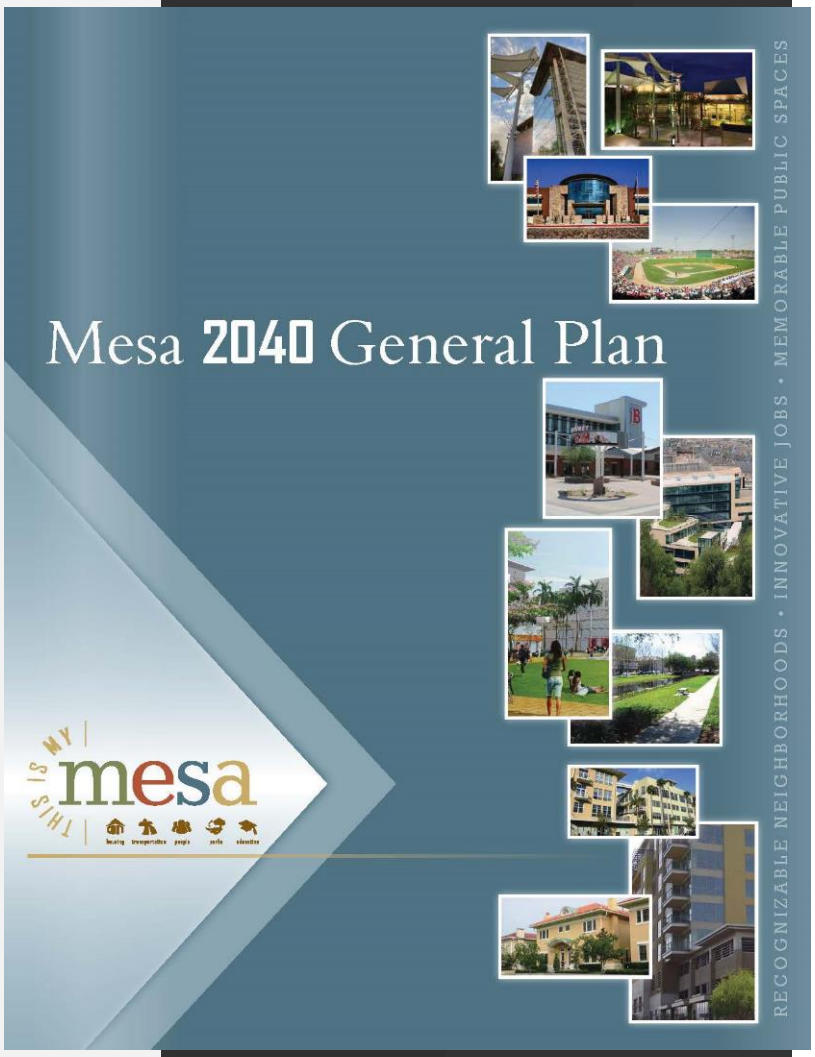
Nana Appiah, Planning Director
Veronica Gonzales, Project Manager
Rachel Prelog, Senior Planner

MESA 2040 GENERAL PLAN VISION

In 2040, Mesa is a recognizable City with a great sense of place where:

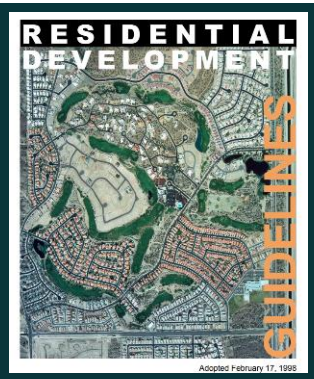
Mesa's built environment sets a standard of quality which is the envy of other communities.

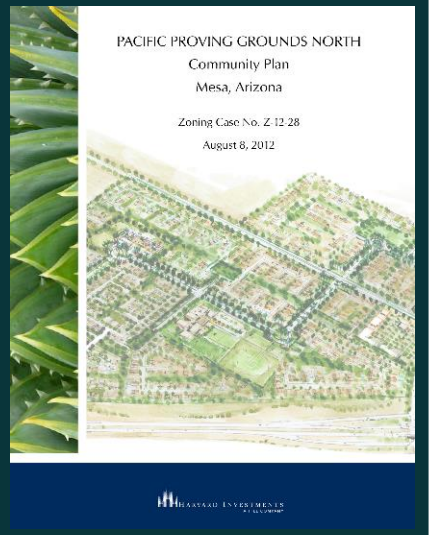
- Approved by Mesa Voters on November 4, 2014

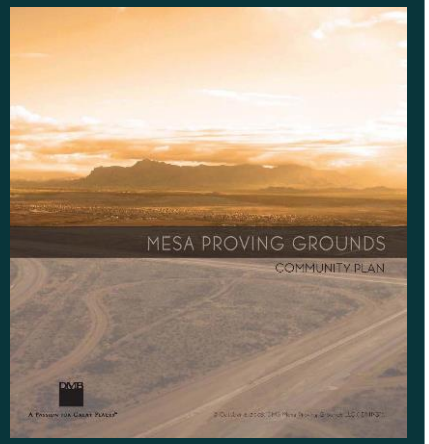


IMPLEMENTATION TOOLS

- Zoning Ordinance
- Sub-Area Plans
- Eastmark Community Plan
- Cadence Community Plan
- Desert Uplands Guidelines
- Residential Development Guidelines (1998)

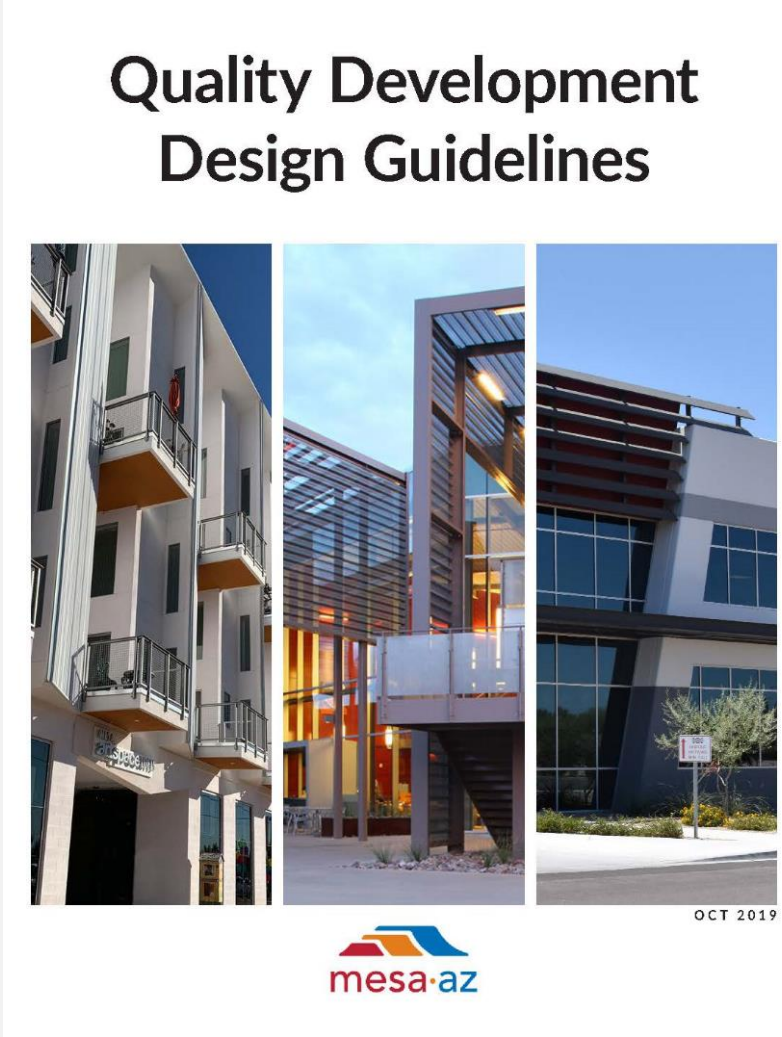




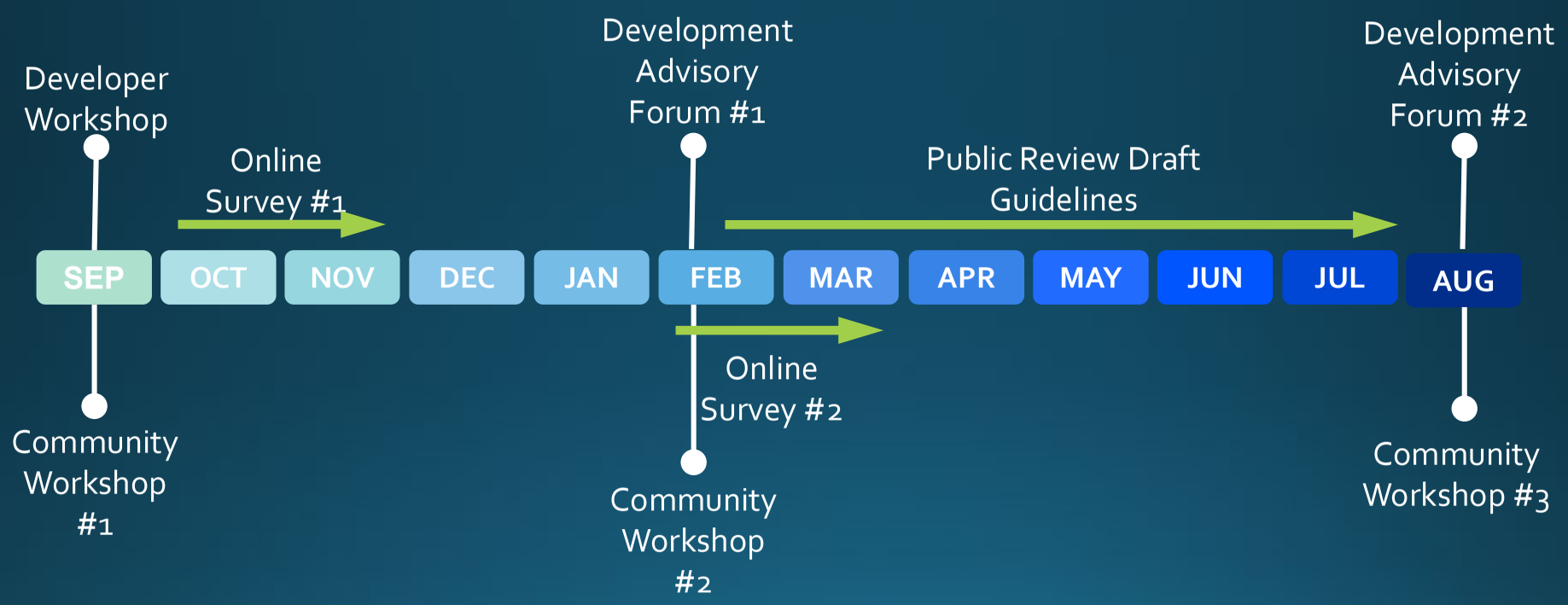


PROJECT GOALS

- Establish a policy emphasizing high-quality development
- Promote innovation and flexibility
- Uniformity of application of quality design standards
- Adopt text amendments that support high-quality development



OUTREACH & PUBLIC FEEDBACK 2018/2019



Total Number of Participants = 522

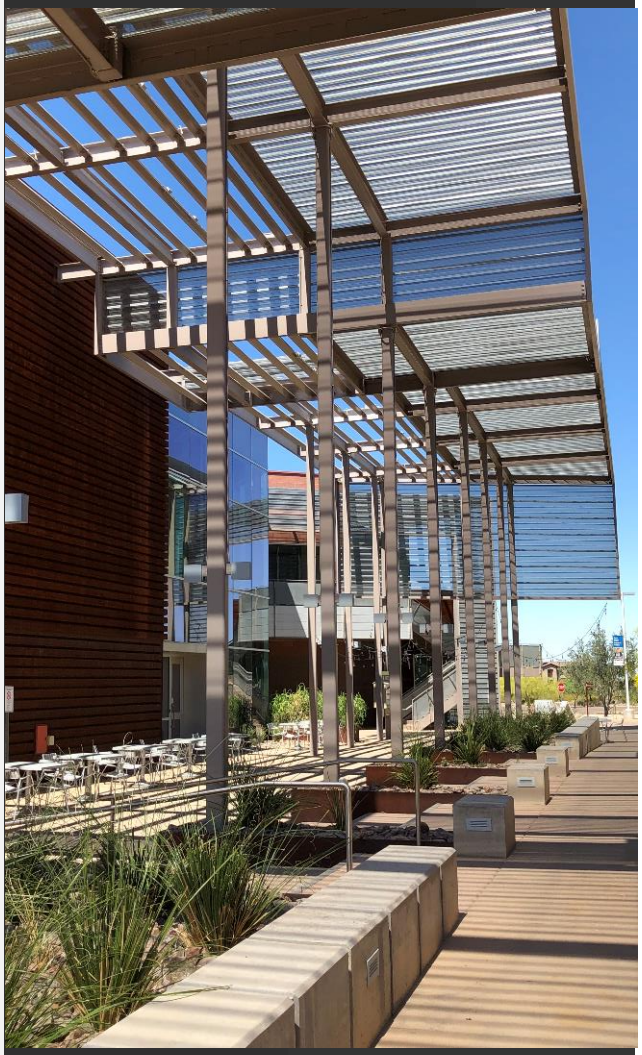
PUBLIC OUTREACH FEEDBACK

Architectural Variety

Quality Materials & Colors

Landscaped & Shaded Spaces

Walkability & Pedestrian Connectivity



DEVELOPER FEEDBACK

CONSIDER A VARIETY OF DESIGN OPTIONS

ALLOW FOR FLEXIBILITY

CONSIDER SITE CONTEXT

BE CONSISTENT IN REVIEW

RESIDENTIAL DESIGN GUIDELINES

- Identity and a sense of place
- Central open space and amenities
- Pedestrian connections
- Interesting streetscapes
- Subordinate garages
- Prominent entrances
- Quality building materials

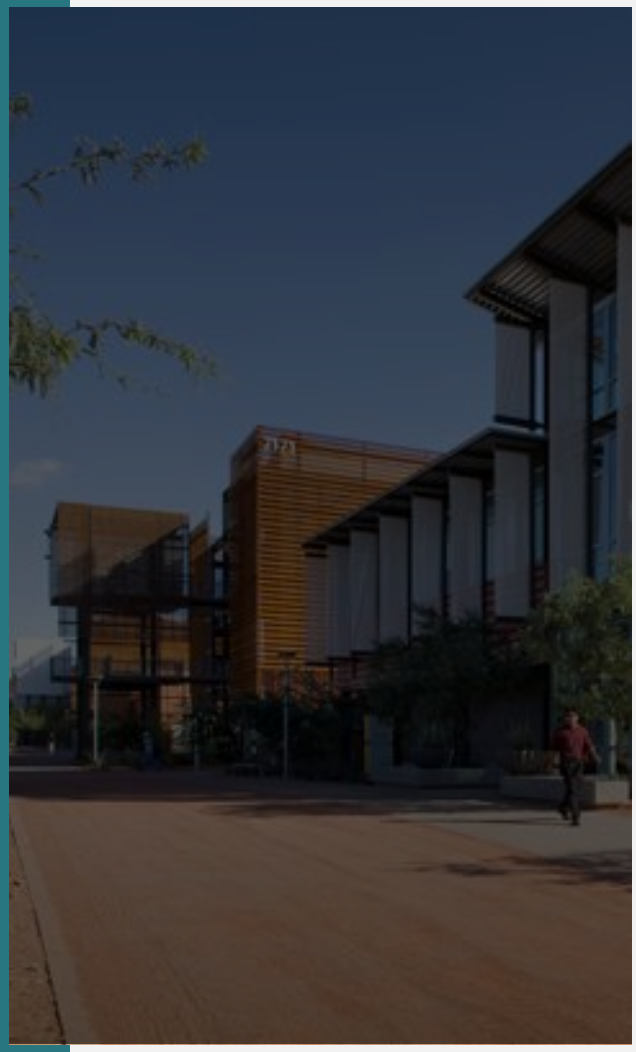
COMMERCIAL DESIGN GUIDELINES

- Buildings engaging the street
- Human scaled architecture
- Cohesive building design
- Sense of entry
- Pedestrian-friendly public spaces
- Variety of building materials

INDUSTRIAL DESIGN GUIDELINES

- Appropriate massing, scale, and articulation
- Avoid a "sea" of parking
- Variety of materials and colors
- Loading/service areas oriented away from public view

COMPARISON WITH OTHER CITIES



- Chapter 4: Agricultural District
- Chapter 5: Residential Districts
- Chapter 6: Commercial and Mixed-Use Districts
- Chapter 7: Employment Districts
- Chapter 22: Planned Area Development Overlay District
- Chapter 30: General Site Development Standards
- Chapter 31: Standards for Specific Uses and Activities
- Chapter 33: Landscaping
- Chapter 69: Site Plan Review
- Chapter 86: Use Types
- Chapter 87: Definitions

TEXT AMENDMENTS

- Re-organization & Added Specificity
- Removal of Duplicative Text
- Building Form

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Site Planning & Design Standards

- Maximum Lot Coverage
- New Definitions
- Alternative Compliance

NEXT STEPS

October 23rd	P&Z (*Recommended approval*)
December 2nd	City Council (*Design Guideline - Action*)
	(*Text Amendment - Introduction*)
December 9th	City Council (*Text Amendment - Action*)
February 10th	Effective Date

QUESTIONS?

Contoso
Pharmaceuticals

Character & Identity

- Diverse building elevations
- Connectivity
- Neighborhood identity & amenity features

Massing & Scale

- Single Residence (RS) & Small Lot Single Residence (RSL) - One change in wall plane
- Multiple Residence (RM) - No more than 25 feet

Entries

- Single Residence (RS) & Small Lot Single Residence (RSL) - Minimum dimensions

RESIDENTIAL

SUBSECTION TOPICS

1. Character & Image
2. Massing & Scale
3. Primary Entrances
4. Garages & Location
5. Driveways
6. Windows
7. Materials
8. Factory-Built Buildings
9. Alternative Compliance

Garages Multiple Residence (RM)

- Detached Garages - Articulation Required if Publicly Visible
- Smaller Segmented Parking Lots
- Distributed Guest Parking

Materials

- 2 Primary Materials
- Minimum Use
  - Single Residence (RS) & Small Lot Single Residence (RSL) - 15%
  - Multiple Residence (RM) - 25%

RESIDENTIAL

SUBSECTION TOPICS

1. Character & Image
2. Massing & Scale
3. Primary Entrances
4. Garages & Location
5. Driveways
6. Windows
7. Materials
8. Factory-Built Buildings
9. Alternative Compliance

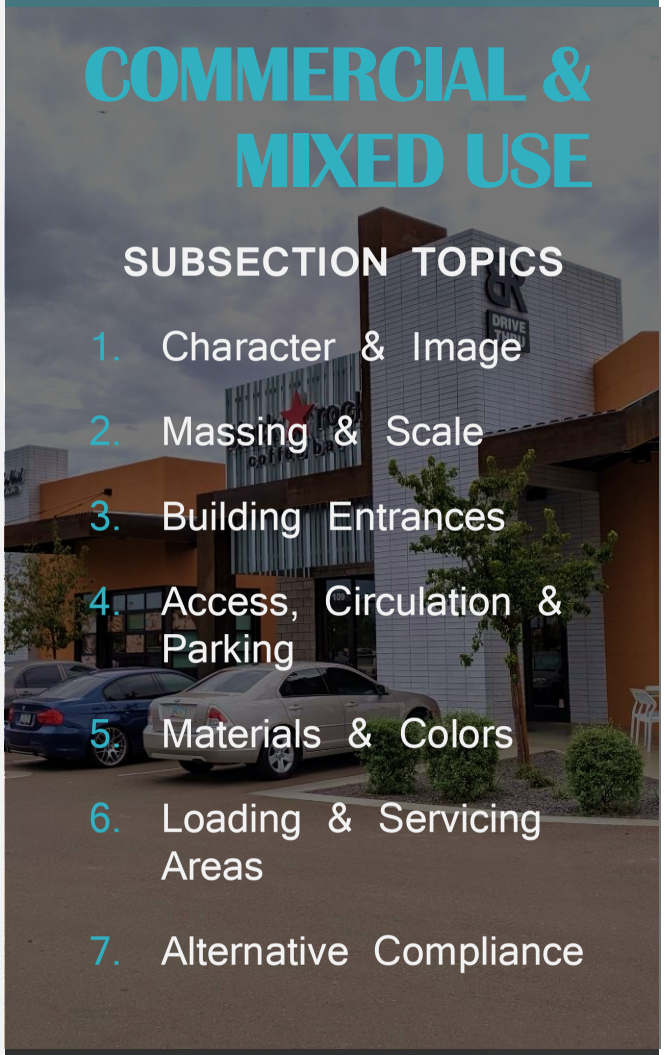
Character & Identity

- Compatibility
- Cohesive design without being monotonous
- Careful utilization of corporate architecture

Massing & Scale

- Commercial
  - Wall - no more than 50 feet
  - Roof - no more than 100 feet
- Employment
  - Wall - no more than 100 feet
  - Roof - no more than 100 feet

COMMERCIAL & MIXED USE



SUBSECTION TOPICS

1. Character & Image
2. Massing & Scale
3. Building Entrances
4. Access, Circulation & Parking
5. Materials & Colors
6. Loading & Servicing Areas
7. Alternative Compliance

Entrances

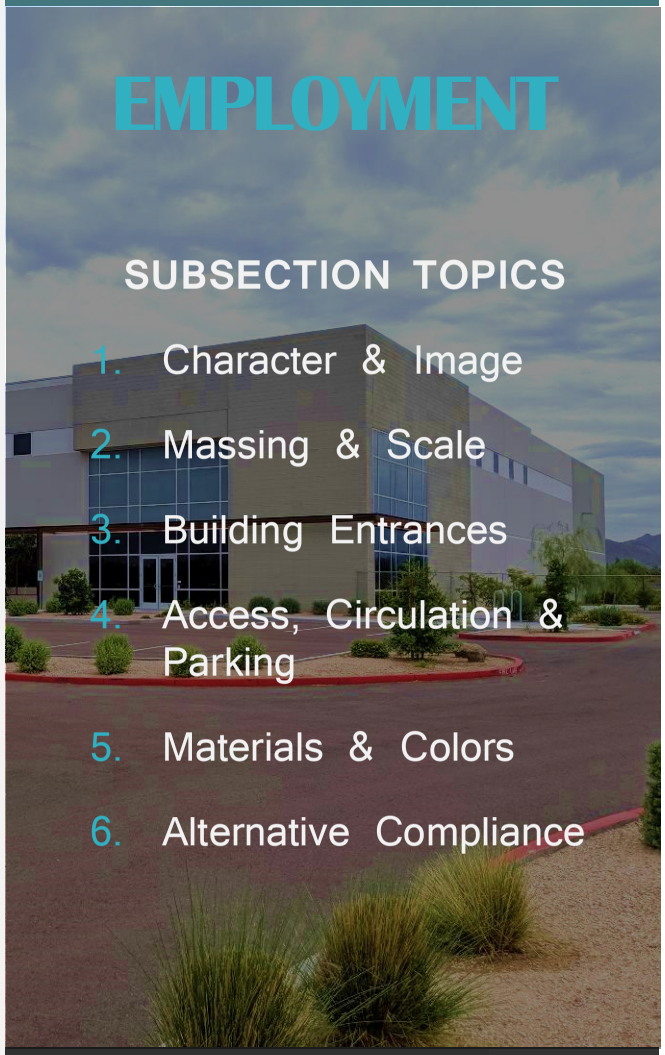
- Clearly defined - recessed, projected or framed

Access, Circulation & Parking

- Entryway feature
- Buildings engage the street - Parking behind

Materials

- 3 distinct materials
- Base & top treatment
- Maximum use of a material - 50%
  - Equivalent details on publicly visible facades



COMPARISON WITH OTHER CITIES

	Mesa (current)	Mesa (proposed)	Gilbert	Tempe	Scottsdale	Queen Creek	Phoenix	Chandler
Character & Context								
Design should be complimentary and compatable with the character of surrounding development		x	x	x	x	x	x	x
Precise replication of architecture within centers discouraged		x			x	x	x	
Corporate identity discouraged		x			x	x	x	
Building height stepped down to fit into adjacent smaller scaled development	x	x	x	x	x	x	x	x
Massing								
Horizontal breaks in material, texture and color		x	x		x	x	x	
Roof articulation		x	x		x	x	x	x
Wall articulation		x	x		x	x	x	x
Pedestrian scaled architecture in urban context/Pedestrian Realm		x	x	x	x	x	x	x
Environmental Considerations								
Encouragement of using native plant materials and landscaping	x	x			x	x	x	x
Sustainable design that minimizes/mitigates heat island effect/direct sun exposure/heat gain/solar orientation			x	x		x	x	x
Architerctural Details, Materials & Colors								
Defined entries through use of porticos, articulation, roof variations etc.		x	x		x	x		x
Mix of building materials	x (employment only)	x			x	x	x	
Four-sided architecture		x			x	x	x	x
Limit use of metal		x				x	x	
Site Design & Layout								
Buildings oriented towards the public right-of-way		x	x			x	x	
Entrances oriented towards the street		x		x		x	x	x
Parking not permitted within the build-to-lines/encouraged to be behind/adjacent to bldg.		x	x			x		
Utilities, Dispay & Service Areas								
RTU must be screened	x	x					x	
Screening treatments, enclosures, service areas compatible with primary architecture	x	x	x	x	x	x	x	
Electrical panels and cabinets enclosed or recessed			x	x		x		
Loading bays and service areas located away from public right-of-way	x	x		x		x	x	

Advanced Metering Infrastructure (AMI)

- A Smart City Initiative -

City Council Presentation
November 7, 2019

- Presented by:
- Candace Cannistraro - Management & Budget Director
- Jake West: - Water Resources Director
- Frank McRae – Energy Services Director

mesaaz
Smart City

What is a Smart City?

"Data is the fuel that powers our efficient and innovative services."

Mayor John Giles

From the "City of Mesa Smart City Master Plan"

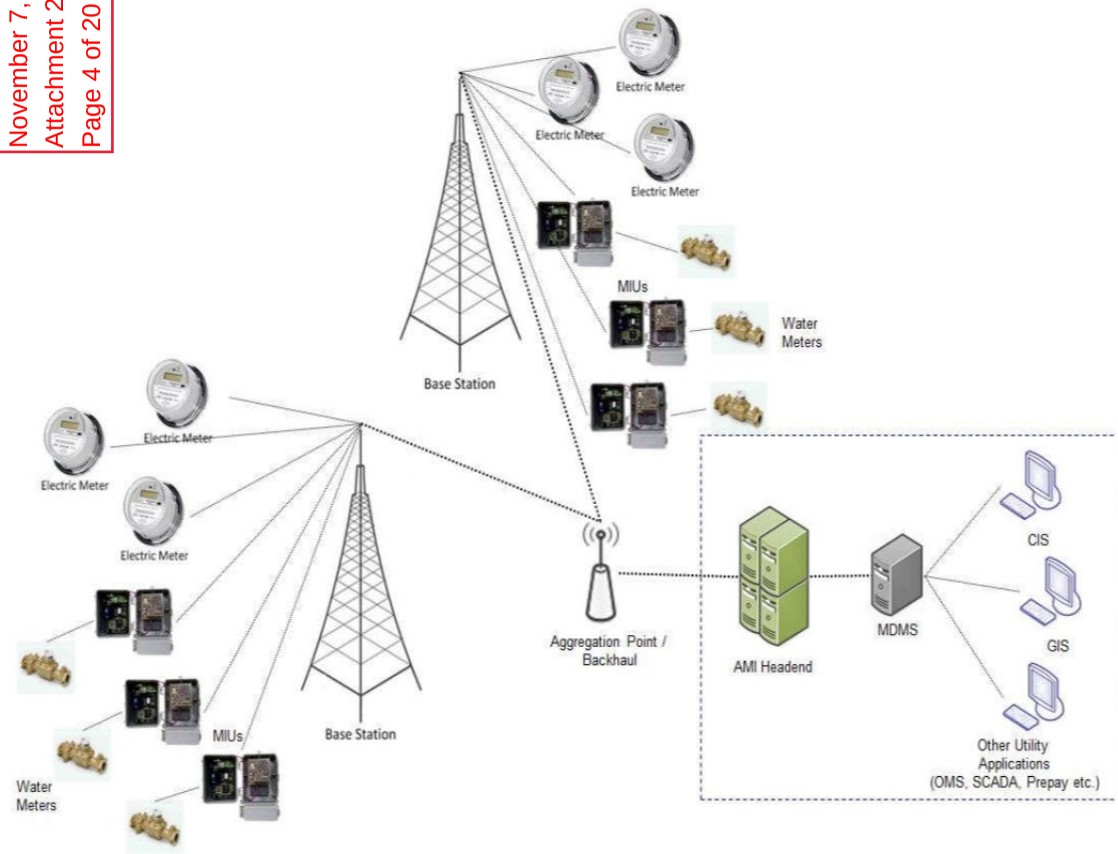
Leveraging Technologies and Data-driven Insights to Improve:

- Quality of Life
- Citizen Engagement
- Economic Development
- Service Delivery
- Community Vibrancy

Provide responsive solutions that enhance the live, work, and play experiences of people in the community

Advanced Metering Infrastructure (AMI) is also known as SMART METERS

- Existing meters are either replaced with a “smart” meter or retrofitted with a “smart” component depending on type of meter
- Commodity usage is measured at predetermined time intervals and communicated to a central location
- Commodity consumption data is available for both staff and customer review on a timely basis
- Remote service turn-on/turn-off available for some commodities



How Does a Smart Meter Work?

- Creation of the Information (Source/Endpoint)
- Collection of the Data
- Transmission of the Data
- Process/Storage of Raw Data (Headend)
- Conversion of Raw Data to Usable Data
- Usage of Data in Decision Making
  - By the City
  - By Customers
- Data Transmission back to Source where applicable (2-way communication)

Anticipated Benefits

Increased efficiency resulting in decreased system costs and additional revenue

- Minimal need for manual meter reading ($1.72M/yr. savings)
- 80% reduction in trips for customer service calls (about 7,900 work hours)
  - *From 82,426 trips/yr. to 16,425 trips/yr.*
  - *Remote review of usage patterns*
- Improved meter accuracy ($2.7M/yr. additional revenue)
  - *Timely removal of inaccurate meters*
- Increased water portfolio from conservation and efficient use

Timely access to usage data

- Customer/City notification of unusual usage
  - *Customer Portal*
- Increased customer engagement and control
  - *Setting of usage thresholds with notifications*
  - *Better conservation management*
- Reduced water leakage due to early detection (unbilled water)
- Improved outage management for Electric and Gas
- Two-way communication
- Faster response to theft/diversion

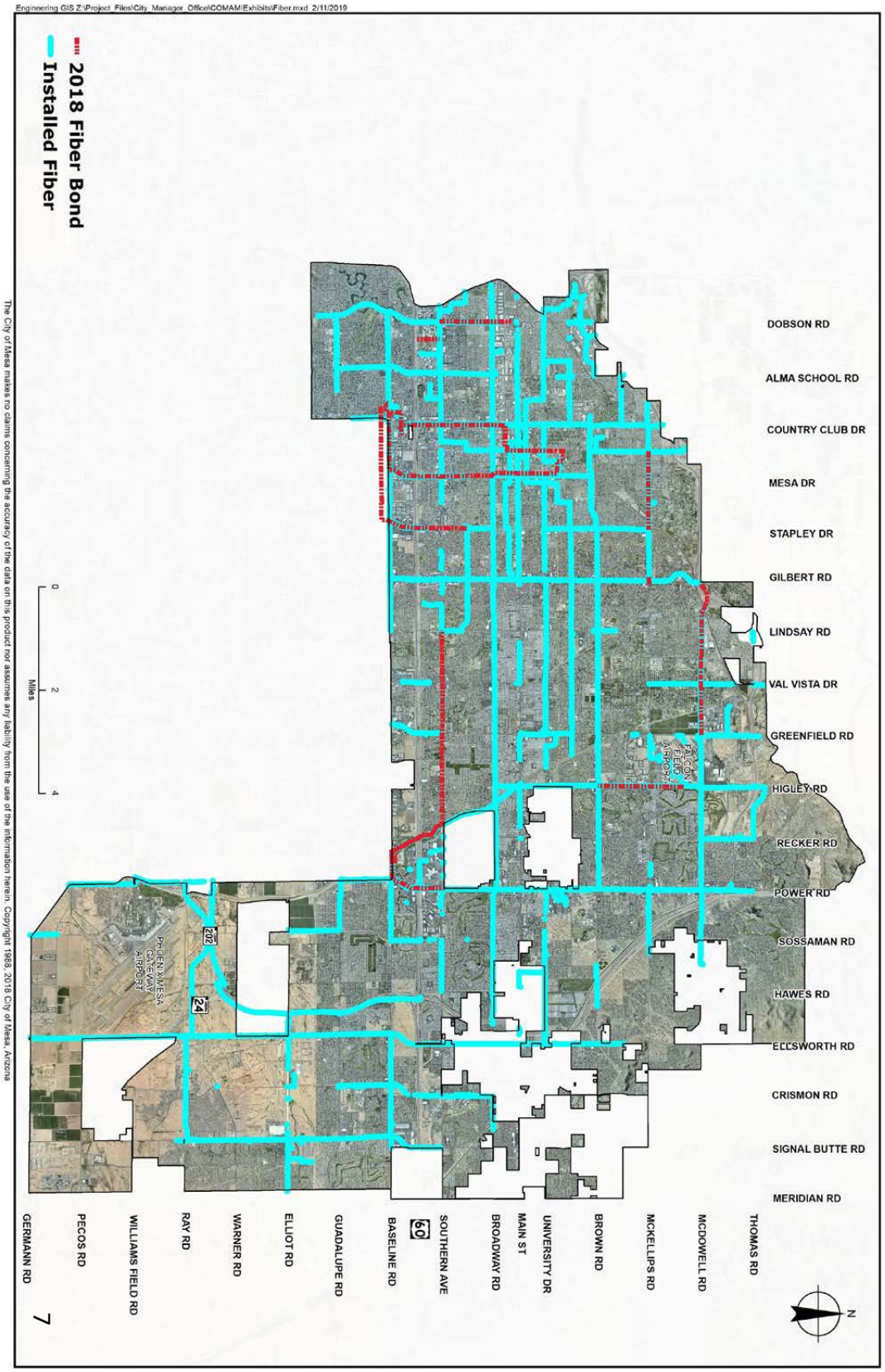
"In general, Mesa is well-informed and well-prepared for an AMI program implementation. Since Mesa has water, gas and electric utilities, the deployment logistics are more complicated, but there are also financial and operational advantages, especially in areas where there is service territory overlap and on the administration of the network and back office systems."

UtiliWorks Consulting, LLC. conducted an assessment study and presented their findings to the City in October, 2018

Cost scenarios for inclusion of all three utilities showed a return on investment of 12-13 years

Current State Analysis & Business Case

City Fiber Infrastructure



Other City Infrastructure

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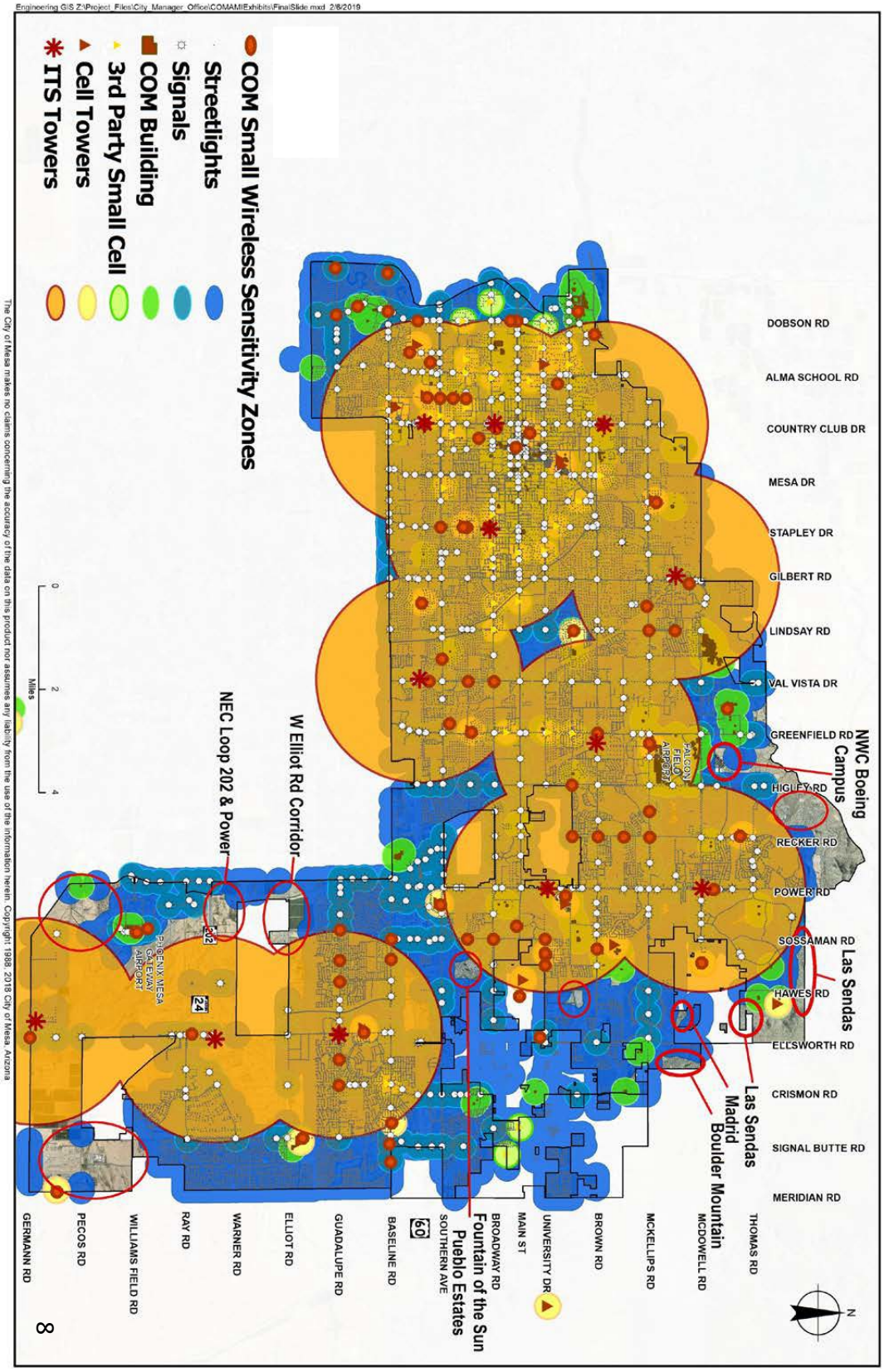

METER AND ENDPOINT

COMMUNICATION NETWORK

METER DATA MANAGEMENT SYSTEM

PROJECT MANAGEMENT

Meter population at time of consultant assessment: 229,210
Water 148,580, Gas 63,900, Electric 16,730
Meter replacement needs: Water 80%, Gas 92%, Electric 100%

Key Infrastructure Components

Mesa AMI
Phase 1
Overview/Goals

Two unique geographic locations

- Downtown (Electric/Water/Gas, ready access to fiber)
- Superstition Springs area (Water/Gas, far east location, mix of older and newer meters)

Mix of residential and commercial meters

Determine the default frequency for data collection and transmission

- Frequency may be different for each utility
- Frequency of data reads is different than frequency of transmission of the data
- Timeliness/usability of data versus effect on life of the equipment

Mesa AMI
Phase 1
Overview/Goals

Test of Transmission Infrastructure

- Assessment of City infrastructure and determination of need

Determine Desired Technology

- Multiple technologies considered with intent for one type for full City deployment

Management System Integration

- Use for system oversight/data analytics, integration with billing system (CIS), customer portal value/usability

Project Management Consultant Engaged

- The City has contracted with ***Arcadis***, a design and consulting firm with expertise and experience in the advanced metering infrastructure industry as well as smart city infrastructure
- Contract signed Oct. 31, 2019
- Consultant on-site this month (Nov. 2019)
- Consultant will have a prominent role in the City's needs assessment, system design, and vendor procurement

- Metering
- Technology and Security
- Integration and Reporting
- Organizational Change Management and Business Process
- Communications (Internal and External)

Five Teams of Subject Matter Experts

Anticipated Project Timeline

Consultant Contract Awarded	Needs Assessment/ Procurement Process	City Council Award of Vendor Contract	Phase I Implementation Begins	Software Integration and Testing	Citywide Implementation
Oct. 31, 2019	Nov. 2019 - Apr. 2021	Apr. 2021	May 2021	Jun. – Oct. 2021	Mar. 2022

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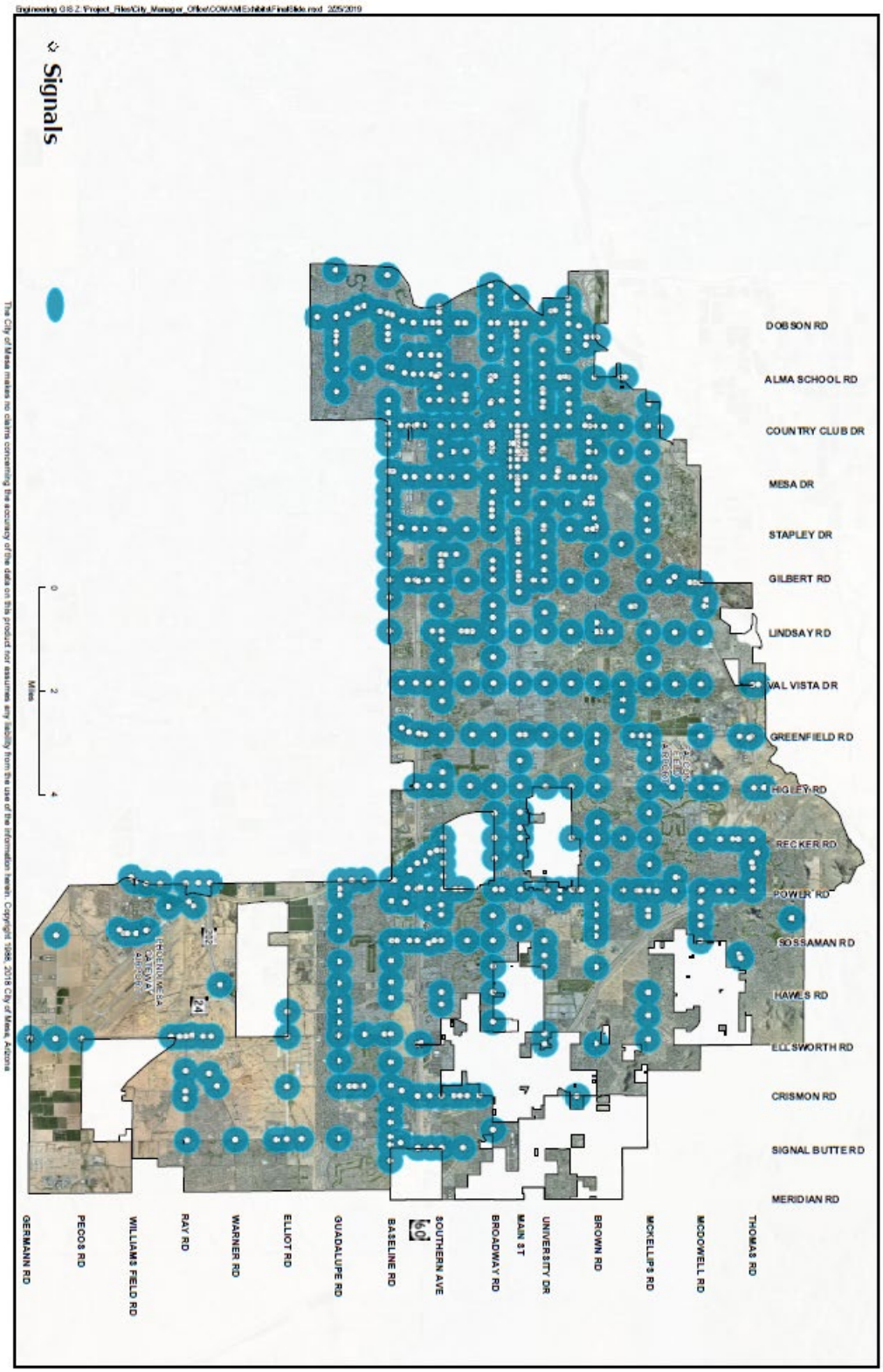
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Signals
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2
4
Miles
DOBSON RD
ALMA SCHOOL RD
COUNTRY CLUB DR
MESA DR
STAPLEY DR
GILBERT RD
LINDSAY RD
VAL VISTA DR
GREENFIELD RD
HIGLEY RD
RECKER RD
POWER RD
SOSSAMAN RD
HAWES RD
ELLSWORTH RD
CRISMON RD
SIGNAL BUTTE RD
MERIDIAN RD
THOMAS RD
MCDOWELL RD
MCKELLIPS RD
BROWN RD
UNIVERSITY DR
MAIN ST
BROADWAY RD
SOUTHERN AVE
BASELINE RD
GUADALUPE RD
ELLIOT RD
WARNER RD
RAY RD
WILLIAMS FIELD RD
PECOS RD
GERMANN RD
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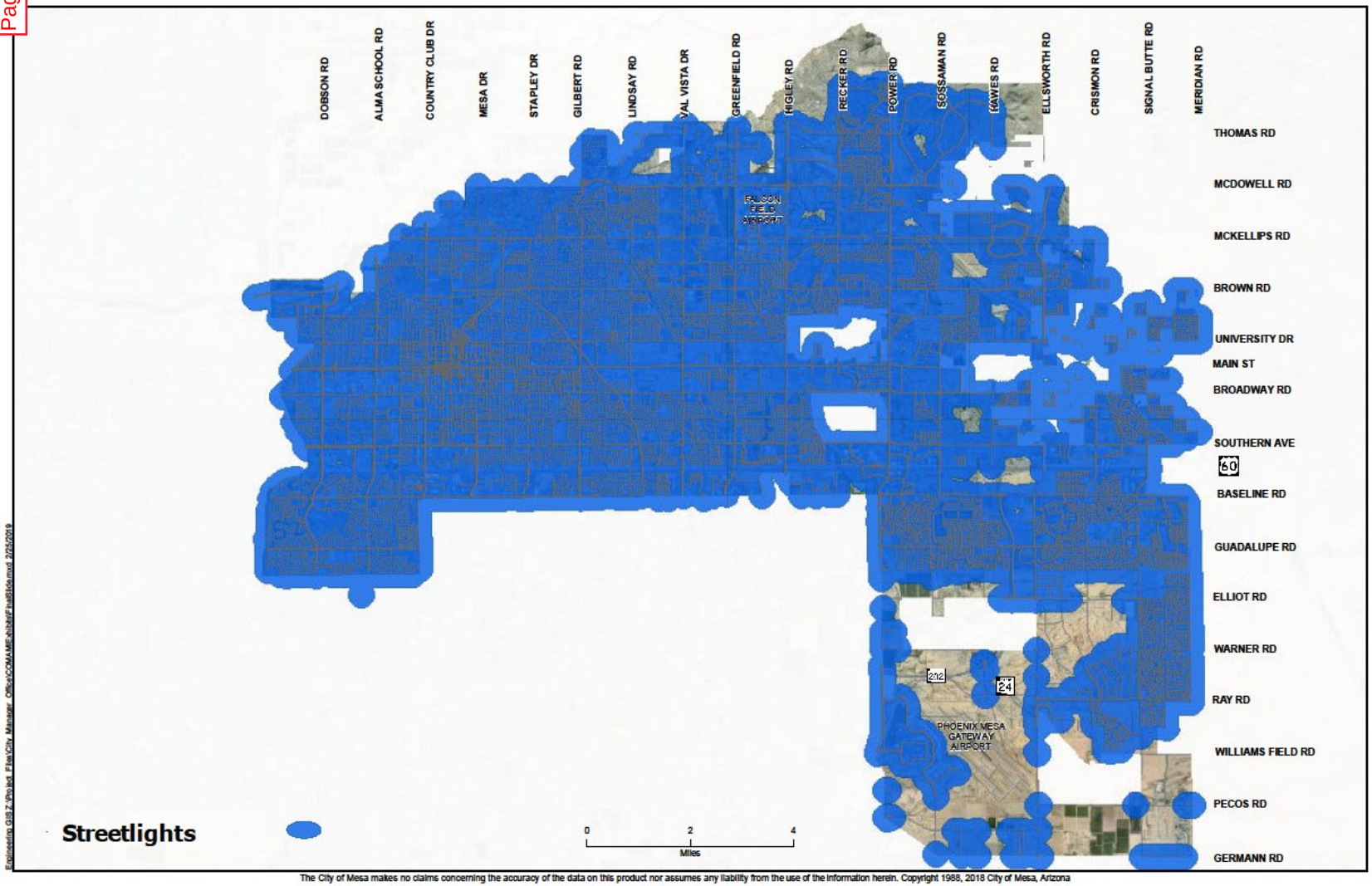

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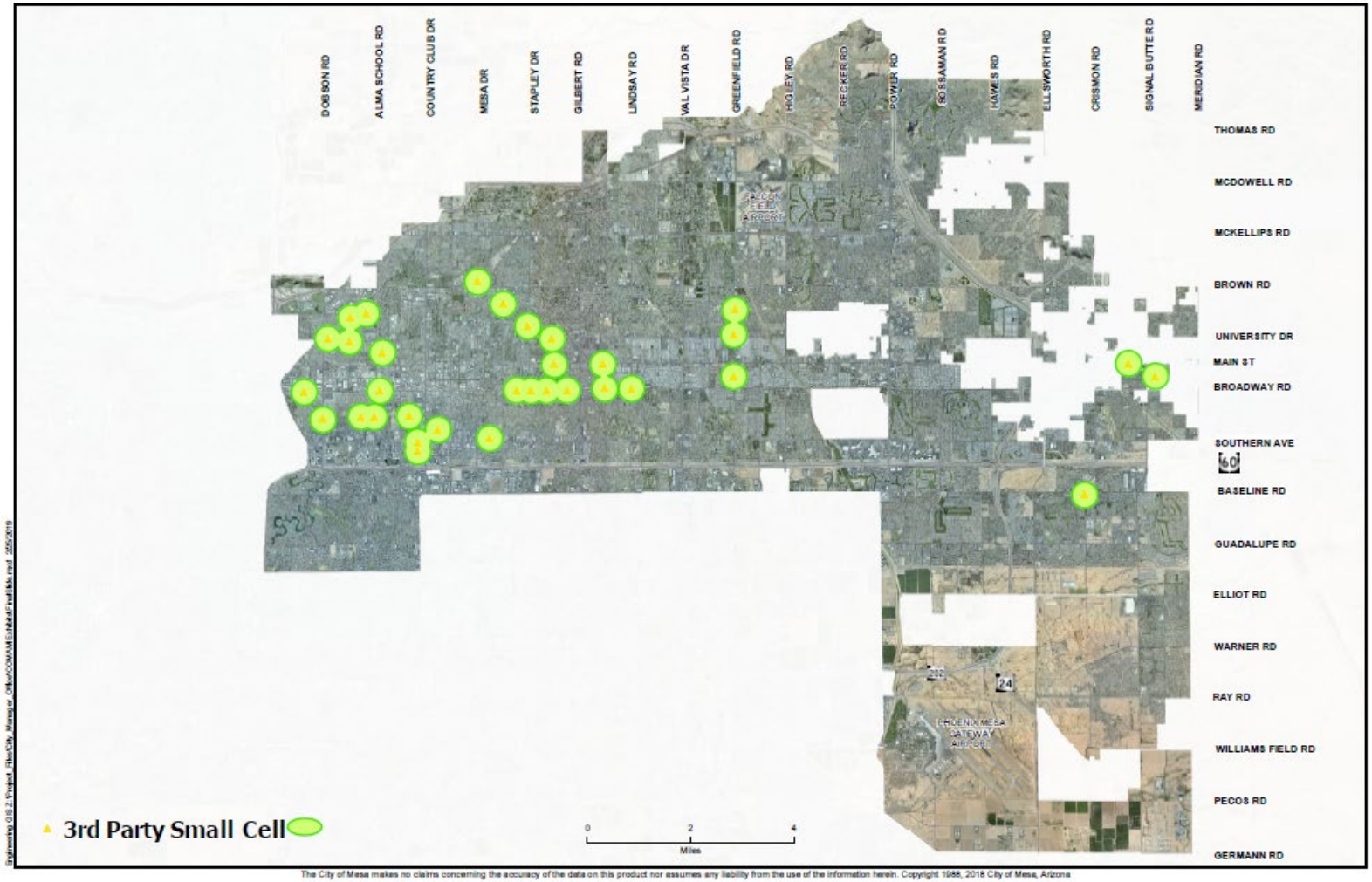

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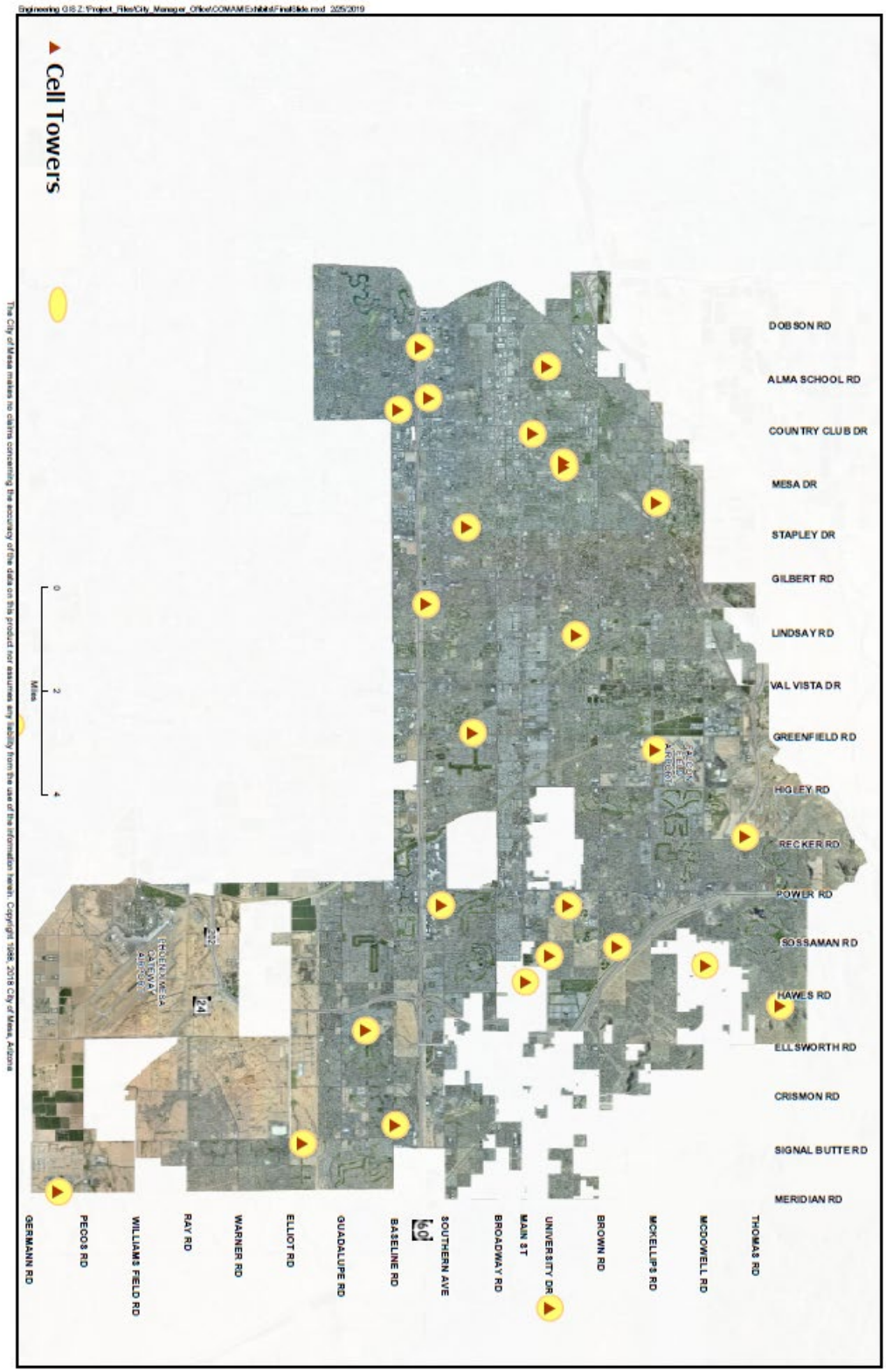
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Cell Towers
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COUNTRY CLUB DR
MESA DR
STAPLEY DR
GILBERT RD
LINDSAY RD
VAL VISTA DR
GREENFIELD RD
HIGLEY RD
RECKER RD
POWER RD
SOSSAMAN RD
HAWES RD
ELLSWORTH RD
CRISMON RD
SIGNAL BUTTE RD
MERIDIAN RD
THOMAS RD
MCDOWELL RD
MCKELLIPS RD
BROWN RD
UNIVERSITY DR
MAIN ST
BROADWAY RD
SOUTHERN AVE
BASELINE RD
GUADALUPE RD
ELLIOT RD
WARNER RD
RAY RD
WILLIAMS FIELD RD
PECOS RD
GERMANN RD
Falcon Field Airport
Phoenix-Mesa Gateway Airport
24
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Change to ADA Paratransit Service Area in Mesa

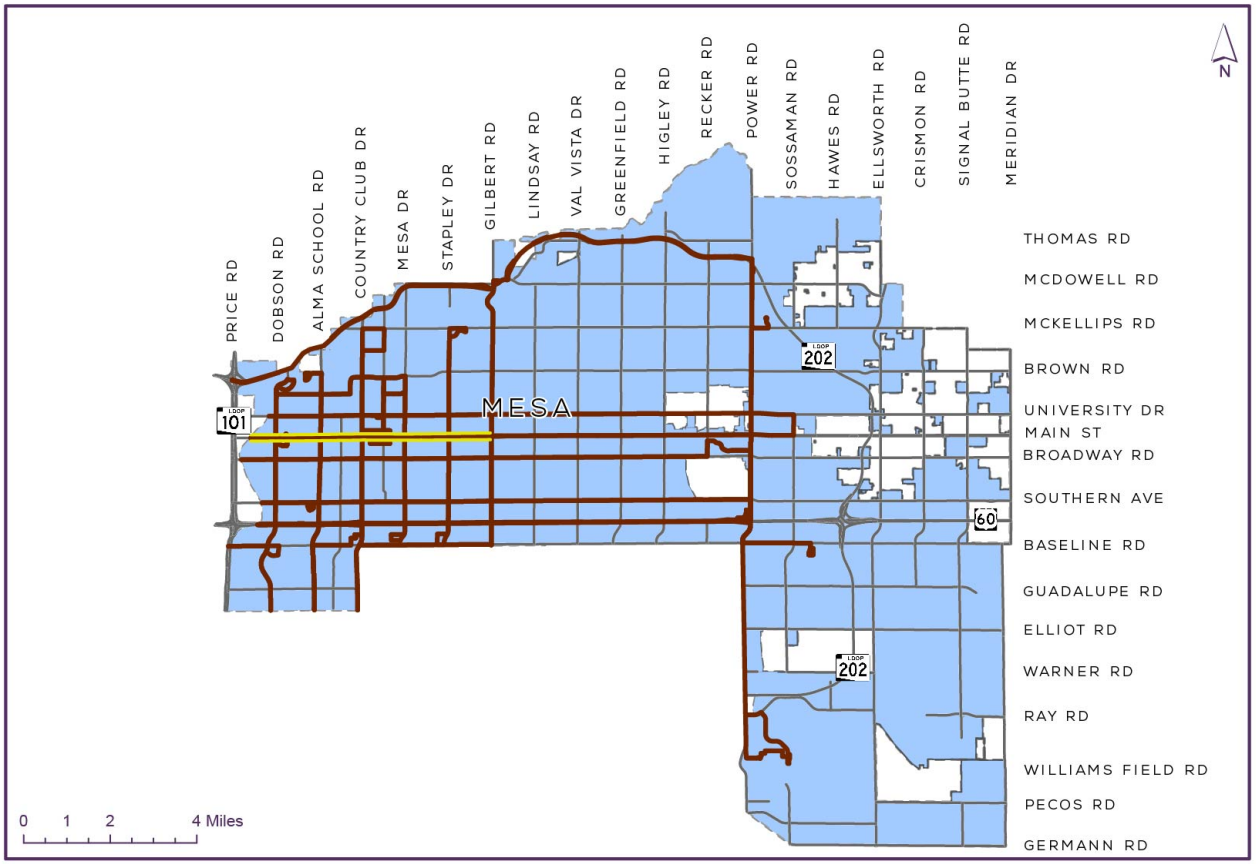
CITY COUNCIL STUDY SESSION

NOVEMBER 7, 2019

Purpose

Align Mesa's ADA paratransit service area to the Federal mandate – ¾ mile from local bus and light rail lines

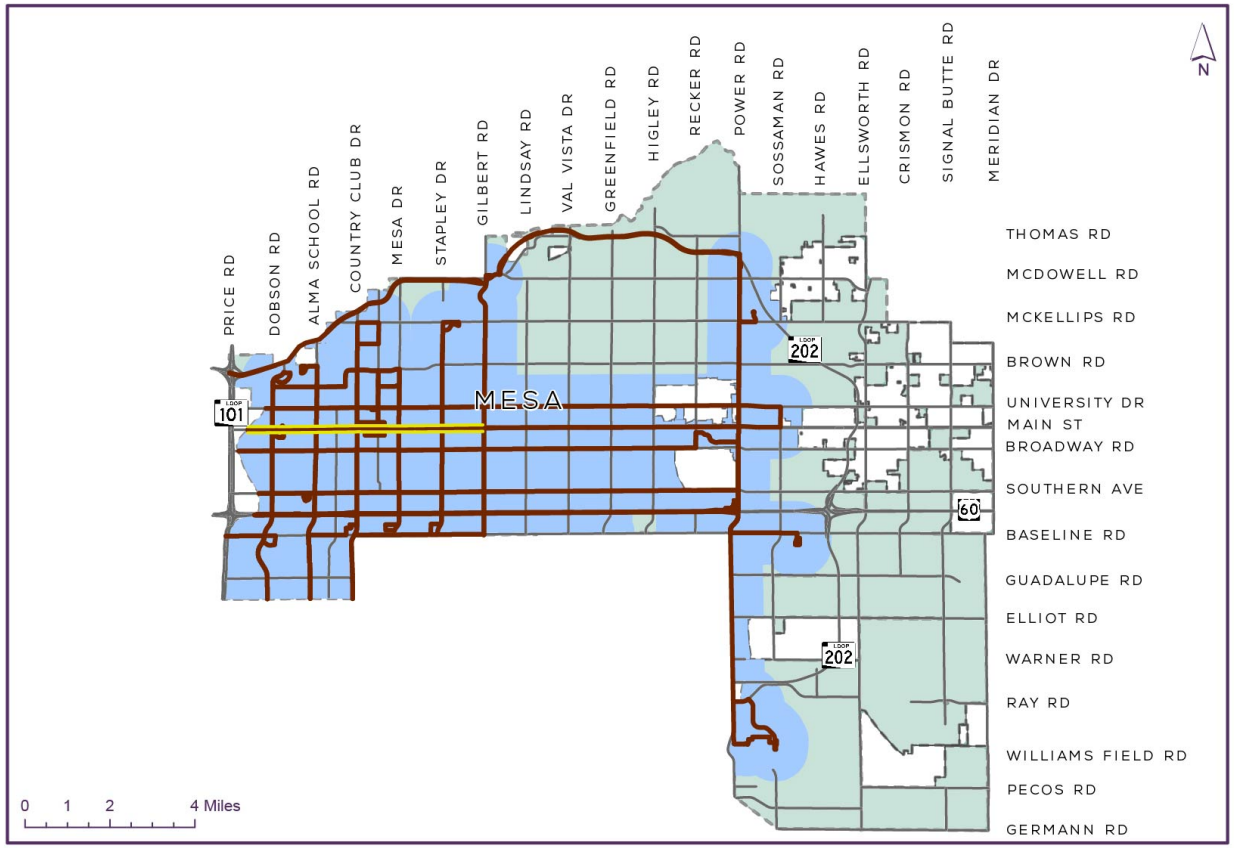
Effective July 1, 2019



Former Paratransit & RideChoice Services in Mesa

Bus Route
Light Rail
Paratransit & RideChoice Service Area in Mesa
Mesa County Islands
Major Arterials

VALLEY METRO



Current Paratransit & RideChoice Services in Mesa

Bus Route
Light Rail
Paratransit & RideChoice Service Area in Mesa
RideChoice Service Area for Mesa
Mesa County Islands
Major Arterials

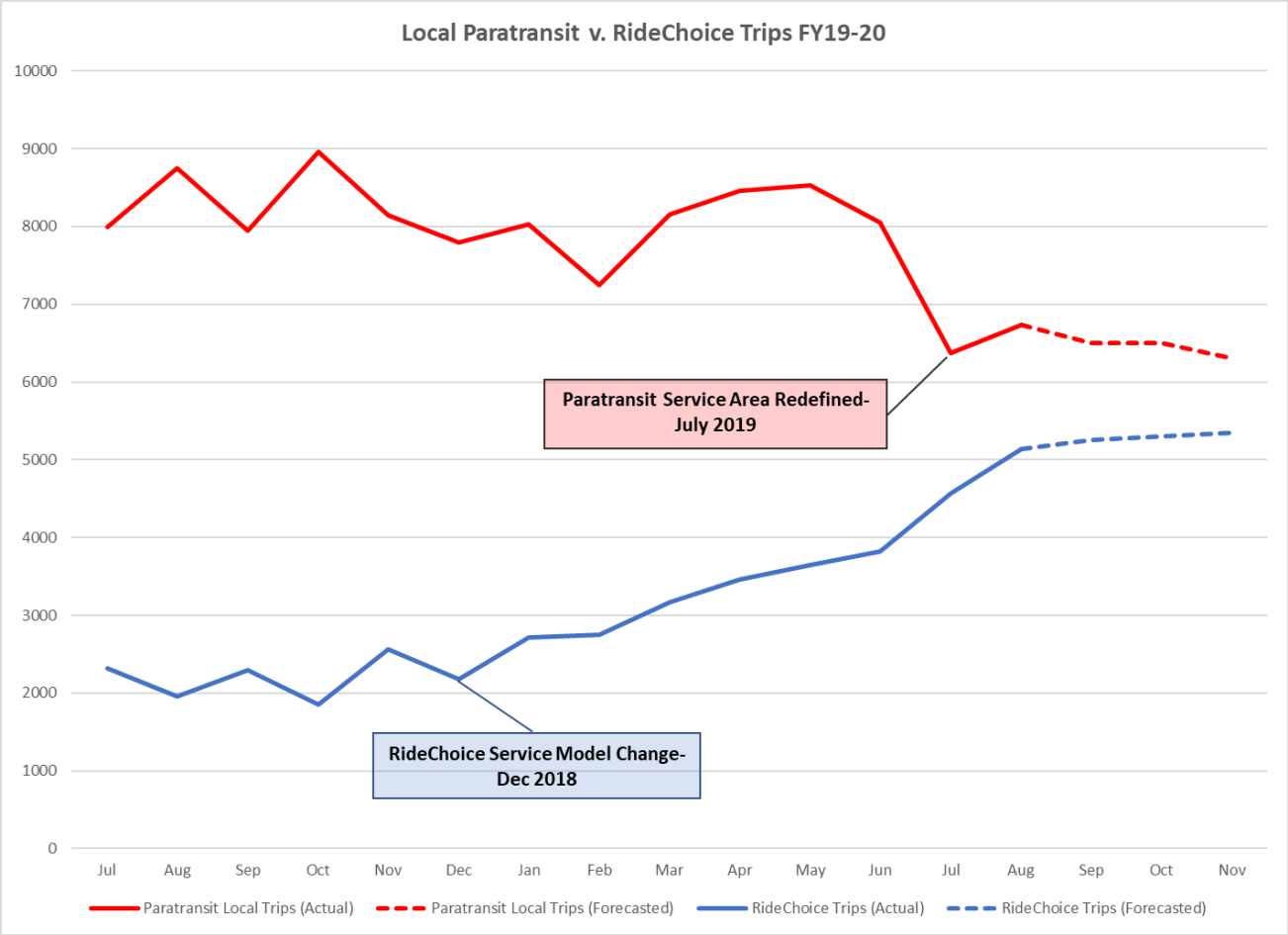
VALLEY METRO

Summary of Outreach Efforts

- Letters to customers
- Hired retired transit professional to call impacted customers.
  - 203 paratransit customers
  - 256 RideChoice customers
- Assisted with one-on-one trip planning
- Met with several impacted customers individually
- Visits to high frequency destinations
- Presentations at residential communities

Preliminary Accessible Transit Ridership

	FY19 Actual	FY20 Budget	FY20 Forecast
Paratransit Trips	112,269	93,791	89,694
RideChoiceTrips	32,738	41,000	61,848
Total Accessible Trips	**145,007**	**134,791**	**151,541**
% Trips on RideChoice	23%	30%	41%


Local Paratransit v. RideChoice Trips FY19-20
10000
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8000
7000
6000
5000
4000
3000
2000
1000
0
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Paratransit Service Area Redefined- July 2019
RideChoice Service Model Change- Dec 2018
Paratransit Local Trips (Actual)
Paratransit Local Trips (Forecasted)
RideChoice Trips (Actual)
RideChoice Trips (Forecasted)

Addressing Customer Concerns

Implement Mileage Option for RideChoice as a pilot.

- Request came from Mesa resident
- Approximately 40 people
- Customers have option of choosing 50 trips/month or 400 miles/month