

SECTION 12

WATER AND

WASTEWATER STANDARDS

12.1 INTRODUCTION

This Section permits modifications to the City's water and wastewater standards to create a flexible framework for development conducive to the vision. This Master Plan identifies the standards necessary for maintaining public health and safety related to design, construction, operation and maintenance (O & M) of the City's water and wastewater systems and all new components of the systems as may be required to serve the development. The goal is to create a vibrant living community with viable opportunities for water and wastewater delivery, disposal and collection management while maintaining necessary minimum requirements. The City's General Engineering Standards (GES) and details will form the basis for the water and wastewater infrastructure within the Property as modified herein. Privately owned, operated and maintained systems and components, none of which are currently shown in the Master Water and Wastewater Reports, may be considered at a later date only if the City's systems are adequately protected in accordance with the Code.

As further described in Section 4.1.C, these Water and Wastewater General Development Standards are the modifications to the General Engineering Standards and details within the Property. This Section does not address either the allocation of water resources to the Property or the off-site delivery of water or the collection of wastewater issues that are addressed exclusively in separate agreements between the City and the Owner. Conceptual water and wastewater main line/trunk systems are depicted on **Exhibit 12.2 – Conceptual Water Main Line / Transmission System** and **Exhibit 12.3 – Conceptual Wastewater Main Line / Trunk System** as may be amended per Section 4.2.

12.2 WATER AND WASTEWATER SYSTEM

- A. New public water and wastewater supply, distribution, storage and collection systems shall be designed and constructed in accordance with the City's General Engineering Standards and details, as amended by the Master Plan, and in general conformance to the Master Reports for the Property, and/or by City Council approved development agreement.
- B. The Owner is required to install improvements within the Property necessary to provide water service for domestic and firefighting purposes and wastewater service in accordance with the water and wastewater Master Reports, as may be amended, for the Property, except:

1. water facilities designed and constructed by or for the City through its capital improvement program,
 2. the portion of facilities up-sized at the request of the City, or to serve adjacent properties.
- C. The Owner is required to install improvements outside of the Property that are for the specific purpose of serving only the Property in accordance with City standards and the Water and Wastewater Master Reports, as may be amended, and as may be further specified in a development agreement for the Property. If the City is not able to deliver regional improvements in the timing desired by the Owner, then the Owner may install or cause to install regional improvements outside the Property necessary to serve the project.
- D. For the purposes of interpreting Article 5.5.2H and 5.8.1B of the City's General Engineering Standards, property line frontage shall mean SR 89 and Pioneer Parkway. Water and wastewater mains adjacent to SR 89 and Pioneer Parkway will be sized, located and installed when necessary to accommodate development on the Property. Within the Property development will occur in phases. Water and wastewater mains within the Property will be sized, located and installed when necessary to accommodate development on the Property.
- E. To the greatest extent possible the City shall work with the Master Plan Administrator to allow infrastructure to be phased as a result of limited water resources. The Master Plan Administrator shall insure easements or rights-of-way are reserved full build-out of the system. Phasing does not waive requirements to provide adequate water and wastewater services to each site / subdivision as they develop.

12.3 WATER

- A. Water mains are permitted through a tract or easement with maintenance access for repair operations. Existing City high pressure transmission mains shall be located in a tract or easement which protects the mains while allowing for vehicular/utility crossings, and pedestrian uses or as approved by the City Engineer.
- B. Horizontal location of water mains shall generally be aligned parallel to property lines or street centerlines. Water mains may cross and re-cross a street centerline especially when roadway alignments are curvilinear. Appropriate separation from sewer lines is required and adequate space for vehicular traffic around a repair is provided.
- C. Water mains are not specifically required beneath all arterial streets, District Streets or Neighborhood Streets, but shall accommodate system flexibility and required redundancy. Regionally serving water mains may be located beneath a Neighborhood Street and may be used to provide local water service. See **Exhibit 12.1 – Conceptual Water and Wastewater Main Horizontal Alignments** for acceptable horizontal alignment concepts.
- D. Meters, meter boxes, blow-offs, valves and similar devices may be located in private tracts when an access and maintenance easements or adjacent roadway is provided. The City may request indemnification of property, within reason, in order to provide maintenance and repair.

- E. Vaults and pressure reducing valves (“PRV”) shall be located outside of paved areas near back of curb or when not near back of curb an easement shall be provided for access and maintenance to ensure vehicular access. PRVs may be screened from view to enhance the streetscene experience.
- F. Curbs adjacent to a vault or PRV shall be rolled, ribbon or wedge when an alternate point of access is not provided.
- G. Water meter boxes shall be located in a public utility easement behind back of curb or edge of pavement when a curb does not exist.
- H. Water meter boxes may be located in a parkway, between back of curb and sidewalk, when a sidewalk is separated from the back of curb and shall be located in a City right-of-way or public utility easement.
- I. More than one (1) water service line is permitted within a single trench provided adequate horizontal and vertical spacing is provided as approved by the City Engineer for maintenance and/or replacement of the lines with minimal hand excavation.
- J. Water distribution main valve spacing shall dictated by the actual design requirements.

12.4 WASTEWATER

- A. Sewer mains are permitted through a tract or easement with maintenance access for repair operations.
- B. Public sewer mains in commercial, multifamily and industrial developments are not required to be located, but may be located under driveways or drive aisles. Public sewer mains are permitted under parking stalls to cross a parking lot.
- C. To the extent possible, a manhole should avoid being located in a vehicle wheel path, a valley gutter, or a curb and gutter.
- D. Horizontal location of sewer mains shall generally be aligned parallel to property lines or street centerlines. Sewer mains may cross and re-cross a street centerline especially when roadway alignments are curvilinear. Appropriate separation from water lines and other utilities is required.
- E. Regionally serving sewer mains may be located beneath a Neighborhood Street and may be used to provide local wastewater service. Sewer mains may be aligned through a tract or easement. Sewer mains are not required beneath an arterial street, District Street or Neighborhood Street when adequate sewer service is provided elsewhere in the system. See **Exhibit 12.1 – Conceptual Water and Wasterwater Main Horizontal Alignments** for acceptable horizontal alignment concepts.
- F. The system may be installed in phases as shown in the Master Report, as may be amended.

Exhibit 12.1 – Conceptual Water and Wastewater Main Horizontal Alignments

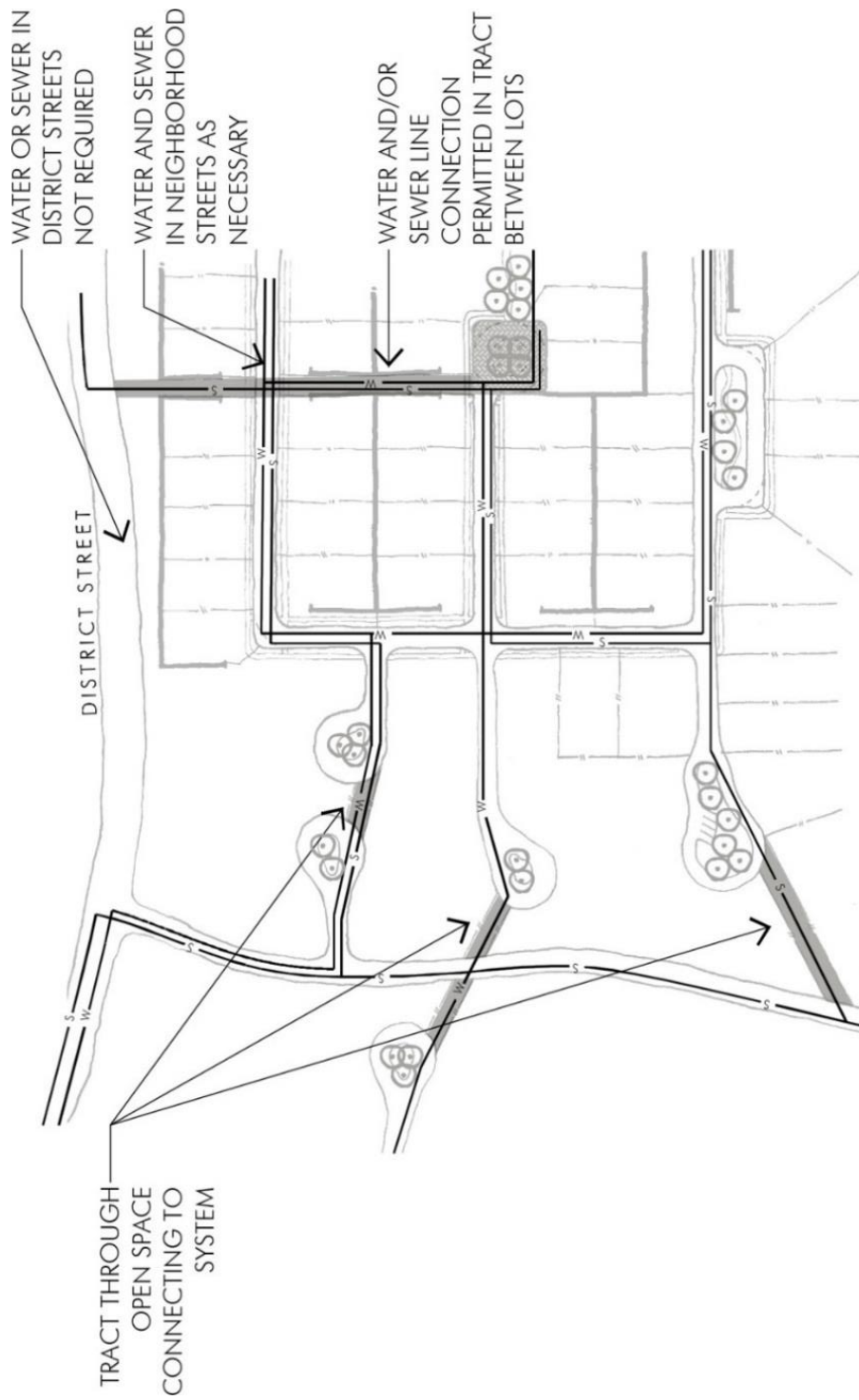
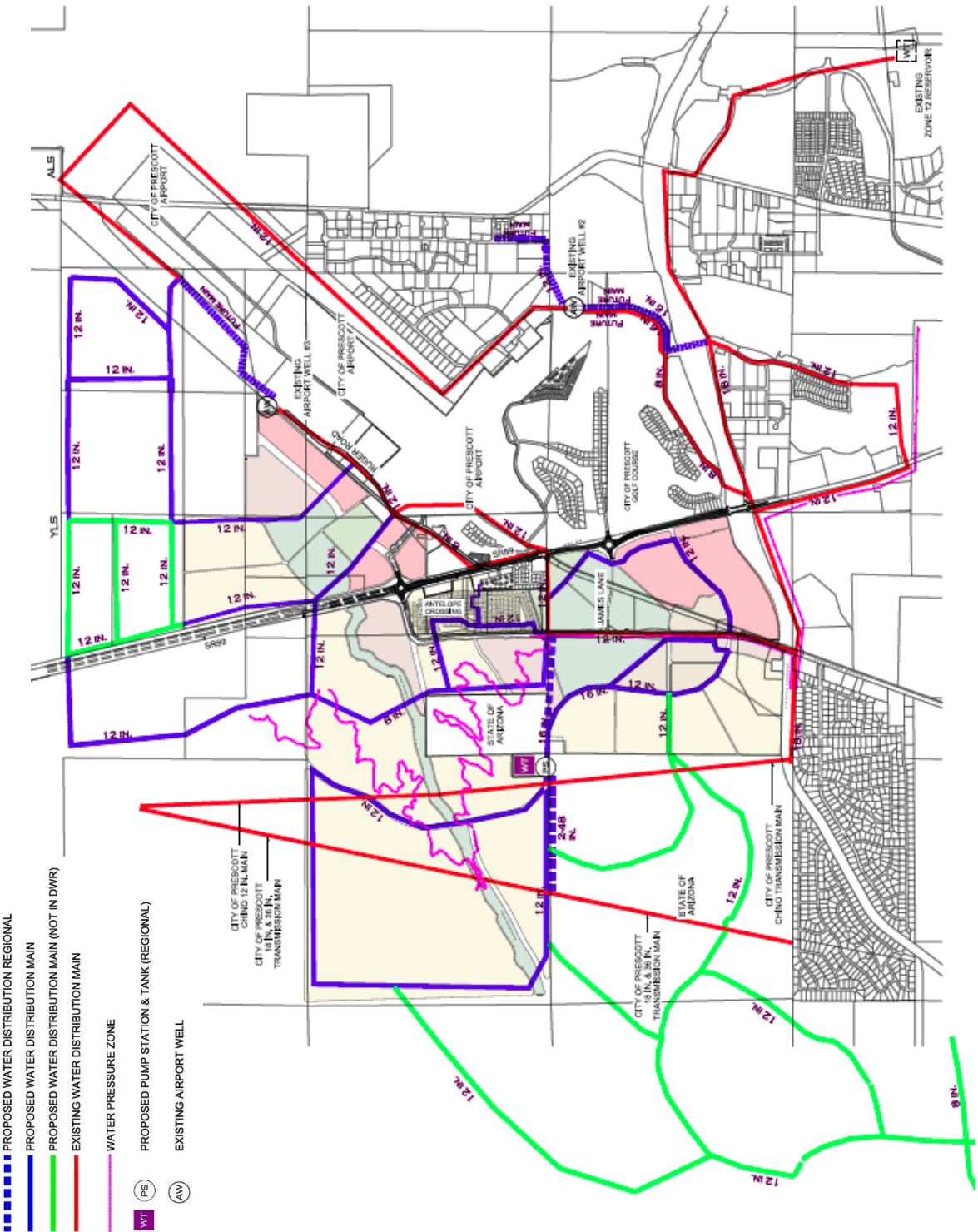
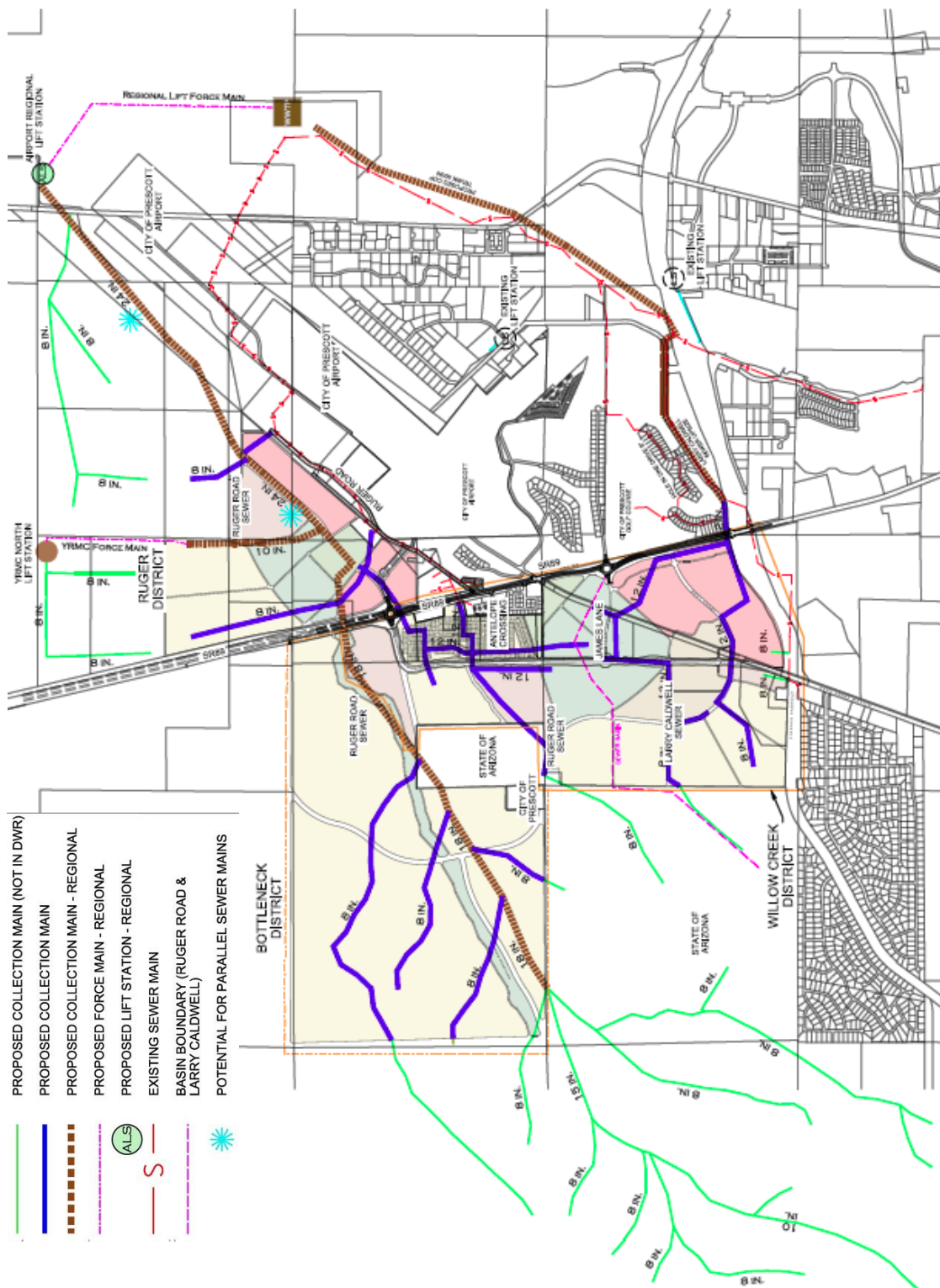


Exhibit 12.2 – Conceptual Water Main Line / Trunk System



Water main location and configuration shown is conceptual.
Actual location and configuration will be determined with improvement plans.

Exhibit 12.3 - Conceptual Wastewater Main Line / Trunk System



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