

# *Utilities & Drainage* 6

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## **6.1 Utility Upgrades in the Southwest Downtown Plan Area**

A portion of the City's bond project to build the Municipal Office Complex includes infrastructure improvements for the Southwest Downtown Plan Area (Plan Area). Infrastructure improvements funded by the first bond issuance are scheduled to be completed by the end of 2006, including improvements to water and wastewater utilities, underground dry utilities, and stormwater facilities.

Water and wastewater systems will be upgraded. The respective lines have been resized to reflect future demand. As work progresses in the Plan Area, all existing buildings will be reconnected to new lines. To avoid the need for streets to be torn up in the future, connections will also be "stubbed out" to the property lines of undeveloped lots.

The dry utilities, including gas, electric, phone, cable, and fiber optic cables, will all be operated through a single network of underground concrete channels that will also be able to accommodate future technologies. In most cases, providers will be able to add new cable by pulling it through the ducting system without having to excavate. The City of Round Rock Engineering and Development Services Department and a team of consultants from PageSoutherlandPage are working with utility providers to finalize a route for underground facilities that does not interfere with tree roots and other features.

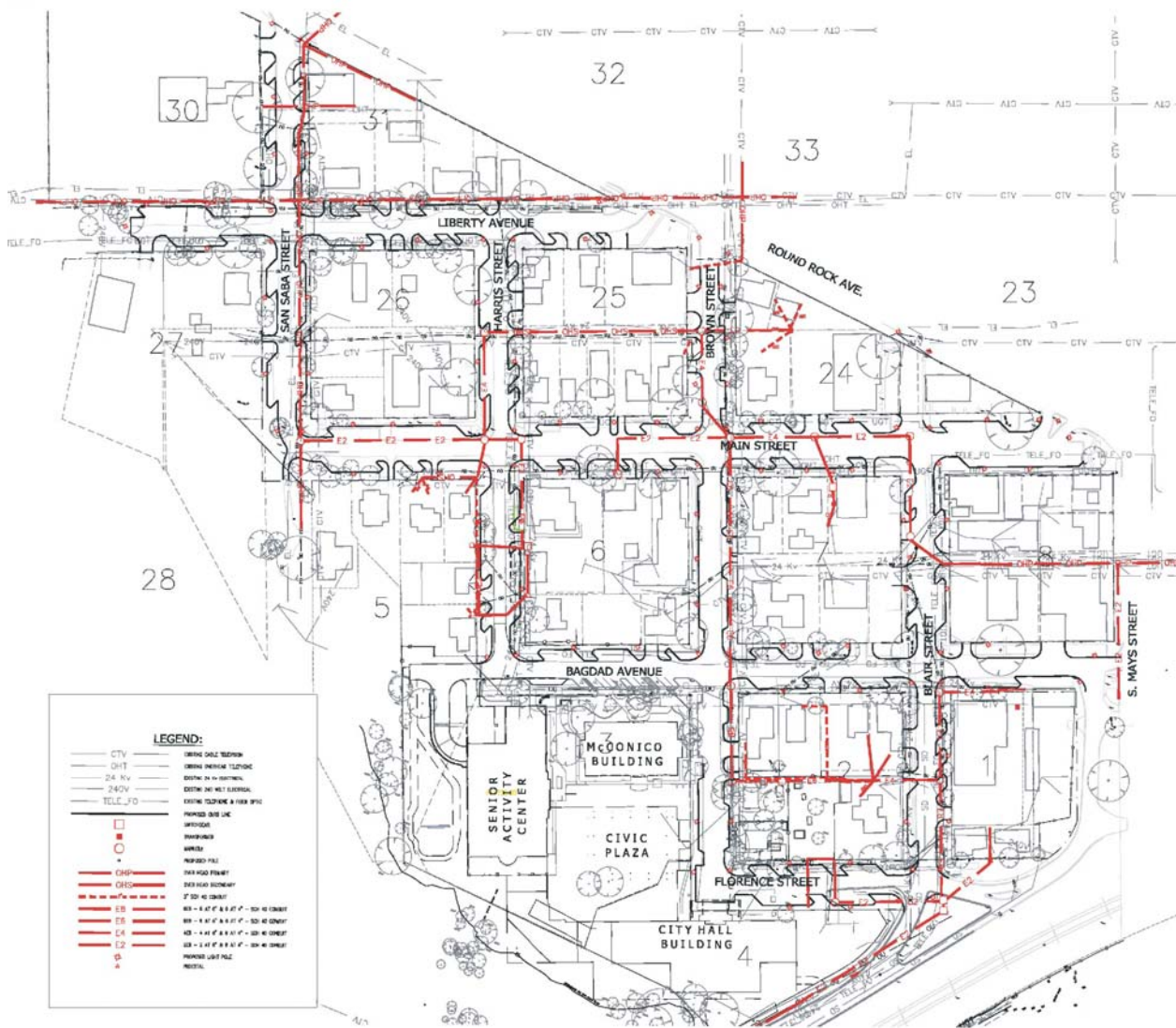
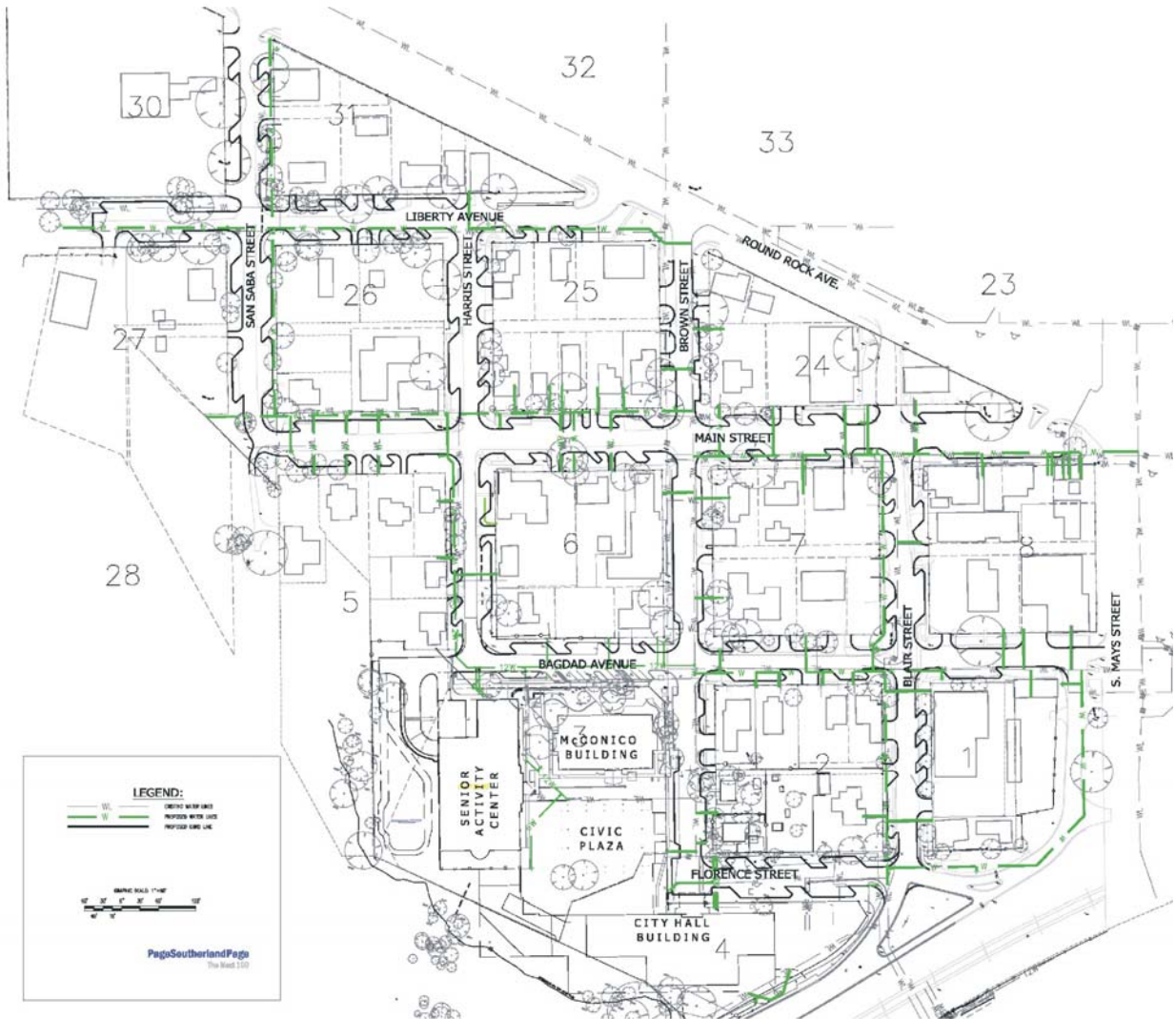


Figure 6.1: **Current and Proposed Southwest Downtown Dry Utility Plan.** Gray lines indicate existing dry utility (electric, phone, cable, communications) lines; proposed new and rerouted lines are in red. Dry utilities will be routed through underground channels so that new technologies can be threaded through them without excavating. Tree roots and other impediments may warrant minor modifications to the dry utility plan. *Illustration: PageSouthernlandPage.*



**Figure 6.2: Current and Proposed Southwest Downtown Water Plan.** Gray lines show existing water lines; green lines show proposed lines. Services will be “stubbed out” to vacant properties so that streets need not be torn up when future development occurs. Tree roots and other impediments may warrant minor modifications to the water plan. *Illustration: PageSouthernlandPage.*

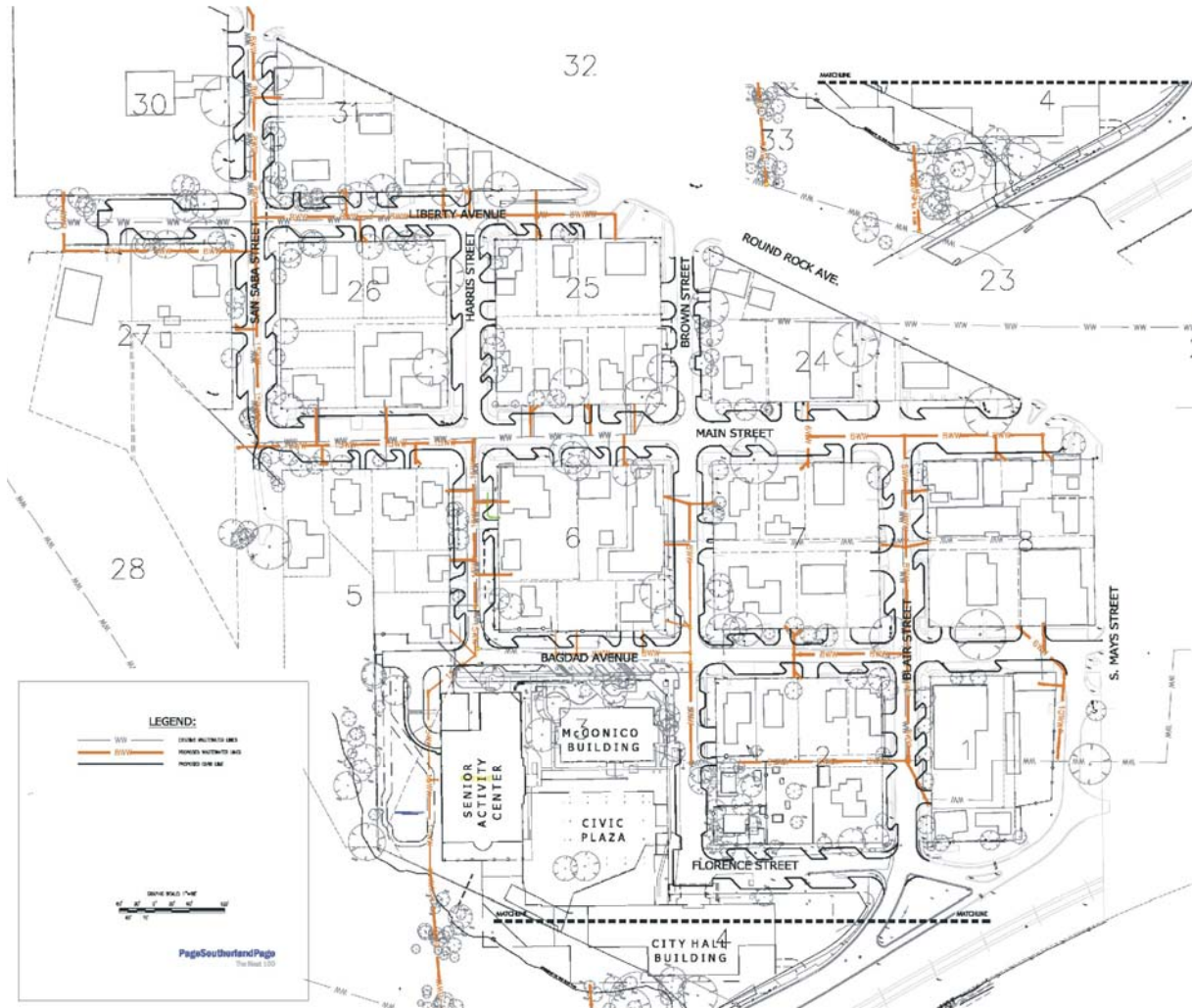


Figure 6.3: **Current and Proposed Southwest Downtown Wastewater Plan.** Gray lines indicate existing wastewater lines; orange lines are proposed lines. Overall capacity in the Plan Area will be increased. Tree roots and other impediments may warrant minor modifications to the wastewater plan. *Illustration: PageSoutherlandPage.*

## 6.2 Stormwater Management & Water Quality

Two important components of drainage are stormwater management and water quality. Stormwater is managed through the collection and conveyance of runoff in order to avoid downstream flooding. Typically, developers are required to provide stormwater management for their individual projects, triggering the need to build a detention pond on-site. For the Plan Area, the City is designing and installing infrastructure to allow participation in the Regional Stormwater Management Program.

As part of the improvements occurring in the Plan Area, the City will provide two water quality ponds. The first water quality pond to be constructed is adjacent to the Senior Center and will serve the northwest portion of the Plan Area. The second will be constructed downstream, south of the railroad tracks along McNeil Road to serve the Plan Area as a whole. These ponds will serve current water quality needs while accommodating future new construction. Figure 6.4 shows the location of the two new facilities.

Water quality ponds reduce the impact of pollutants discharged to surface and groundwater. Maintaining water quality is important since the Plan Area is over the Edward's Aquifer Recharge Zone. Typically, a developer is required to provide water pollution abatement measures that meet the standards mandated by the Texas Commission on Environmental Quality (TCEQ); however, the City intends to file a Water Pollution Abatement Plan (WPAP) with TCEQ for the Plan Area. While developers will still be required to file with the State, projects developed in compliance with the WPAP should not be required to provide individual water quality ponds.

## 6.3 Overall Plan for Utilities & Drainage

PageSoutherlandPage has provided an illustration showing the placement of utilities in the Southwest Downtown Plan Area. This is shown in Figure 6.5.



**Figure 6.4: Current and Proposed Stormwater Management & Water Quality Plan.** Gray lines indicate existing storm lines; blue lines are proposed lines. Rather than requiring each property owner to create pond facilities on-site, stormwater will be conveyed to centralized water quality ponds. Tree roots and other impediments may warrant minor modifications to the stormwater and water quality plan. *Illustration: PageSoutherlandPage.*

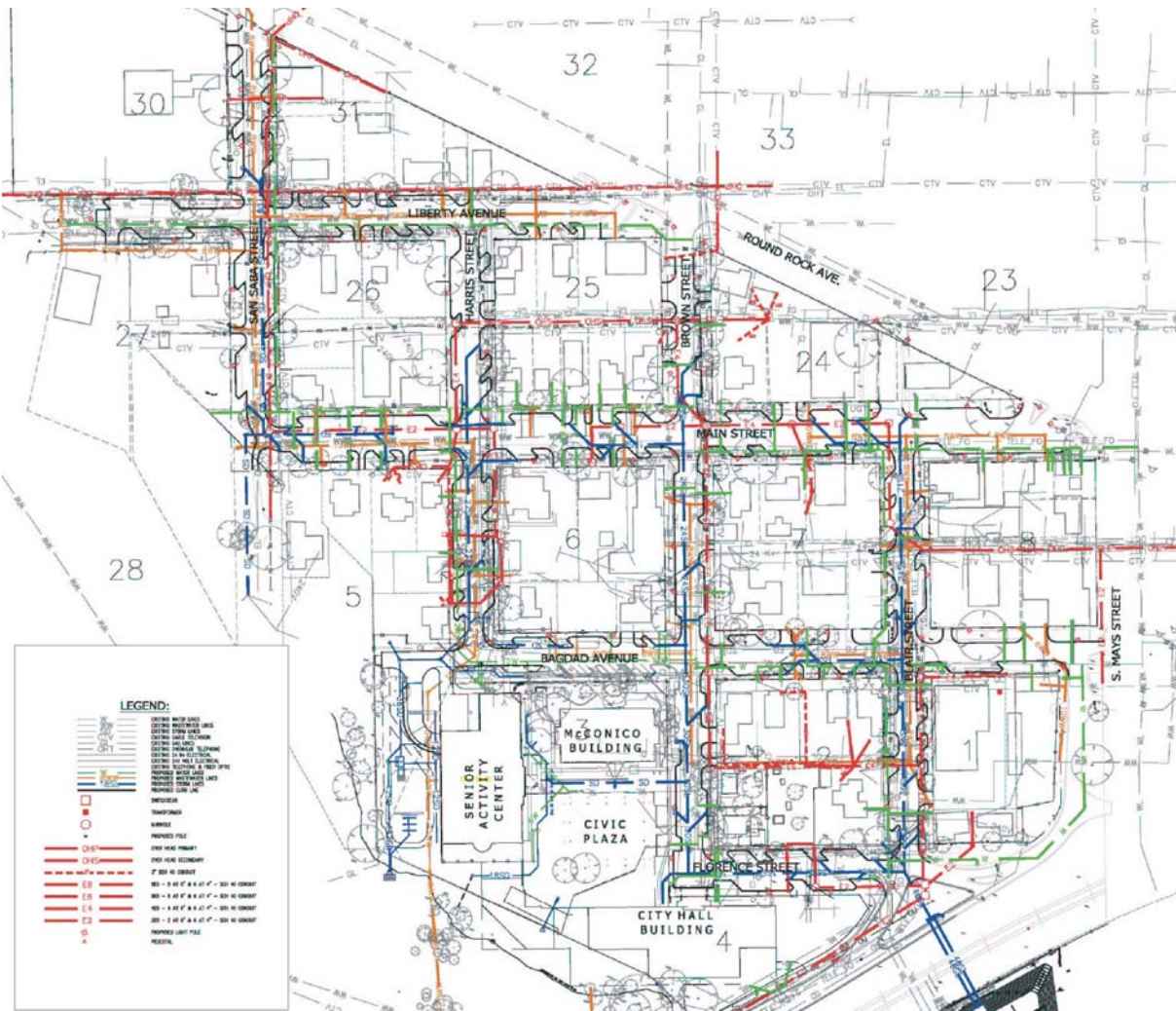


Figure 6.5: **Current and Proposed Combined Utility Plans.** Dry utilities (electrical, phone, cable – in red) will be moved to underground conduits, allowing lines to be added without requiring the excavation of existing lines. Water (green), wastewater (orange), and gas (black) service will be upgraded. Stormwater (blue) will be diverted to centralized water quality ponds. Tree roots and other impediments may warrant minor modifications of the proposed combined utility plan. *Illustration: PageSoutherlandPage.*

## **6.4 Utilities & Drainage Recommendations**

- Upgrade utilities and locate them underground where possible. For placement of utilities, utilize alleys where possible.
- Design utilities to simplify and accommodate future development in the Plan Area.
- Provide regional stormwater and water quality facilities to serve the entire Plan Area.