CITY OF ROLLINGWOOD
COMPREHENSIVE PLAN WORKSHOP NO. 1
AGENDA

Wednesday, February 16, 2022

Notice is hereby given that the City Council of the City of Rollingwood, Texas will hold a Comprehensive Plan Workshop, open to the public, in the Municipal Building at 403 Nixon Drive in Rollingwood, Texas on Wednesday, February 16, 2022 at 5:00 p.m. Members of the public and the City Council may participate in the meeting virtually, as long as a quorum of the City Council and the presiding officer are physically present at the Municipal Building, in accordance with the Texas Open Meetings Act. The public may watch this meeting live and have the opportunity to comment via audio devices at the link below. The public may also participate in this meeting by dialing one of the toll-free numbers below and entering the meeting ID and Passcode.

Link: https://us02web.zoom.us/j/5307372193?pwd=QmNUbmZBQ1IwUlNjNmk5RnJrelRFUT09

Toll-Free Numbers: (833) 548-0276 or (833) 548-0282

Meeting ID: 530 737 2193

Password: 9fryms

The public will be permitted to offer public comments via their audio devices when logged in to the meeting or telephonically by calling in as provided by the agenda and as permitted by the presiding officer during the meeting. If a member of the public is having difficulties accessing the public meeting, they can contact the city at awayman@rollingwoodtx.gov. Written questions or comments may be submitted up to two hours before the meeting. A video recording of the meeting will be made and will be posted to the City's website and available to the public in accordance with the Texas Public

CALL REGULAR CITY COUNCIL MEETING TO ORDER

1. Roll Call

PUBLIC COMMENTS

Citizens who have questions or wish to address the Town Hall with regard to the following matters will be received at the conclusion of each presentation.

PRESENTATIONS

2. Presentation and discussion with Thom Farrell, Chair of the Comprehensive Plan Strike Force, regarding the following portions of the Comprehensive Plan as recommended to the City Council by the Comprehensive Plan Strike Force:

   Facilities and Infrastructure (Comprehensive Plan, p. 31-34)

Economic Development and Fiscal Policy (Comprehensive Plan, p.39-41)

Plan Implementation (Comprehensive Plan, p. 42-43)

3. Presentation and discussion with Brook Brown, Strike Force member, regarding the Strike Force Bond and Tax Rate Analysis

4. Presentation and discussion with K. Friese and Associates, City Engineers, regarding the 2020 Drainage Infrastructure Improvement Plan

5. Update from Mayor Massingill and K. Friese and Associates, City Engineers, regarding the 2022 Water Capital Improvement Plan

6. Presentation and discussion by City staff regarding the 2019 Spatial Needs Assessment and discussion with Fire Chief David Wilson, Travis County ESD No. 9, regarding a proposal for a satellite emergency station to be collocated at City Hall

ADJOURNMENT OF MEETING

CERTIFICATION OF POSTING

I hereby certify that the above Notice of Meeting was posted on the bulletin board at the Rollingwood Municipal Building, in Rollingwood, Texas and to the City website at www.rollingwoodtx.gov on Friday, February 11, 2022 at 5:00 p.m.

AWayman

Ashley Wayman, City Secretary

NOTICE -

The City of Rollingwood is committed to compliance with the Americans with Disabilities Act. Reasonable modifications and equal access to communications will be provided upon request. Please contact the City Secretary, at (512) 327-1838 for information. Hearing-impaired or speech-disabled persons equipped with telecommunication devices for the deaf may call (512) 272-9116 or may utilize the stateside Relay Texas Program at 1-800-735-2988.

The City Council will announce that it will go into executive session, if necessary, to deliberate any matter listed on this agenda for which an exception to open meetings requirements permits such closed deliberation, including but not limited to consultation with the city's attorney(s) pursuant to Texas Local Government Code section 551.071, as announced at the time of the closed session.

Consultation with legal counsel pursuant to section 551.071 of the Texas Local Government Code;
discussion of personnel matters pursuant to section 551.074 of the Texas Local Government Code;
real estate acquisition pursuant to section 551.072 of the Texas Local Government Code;
prospective gifts pursuant to section 551.073 of the Texas Local Government Code;
security personnel and device pursuant to section 551.076 of the Texas Local Government Code;
and/or economic development pursuant to section 551.087 of the Texas Local Government Code.
Action, if any, will be taken in open session.

Comprehensive Plan

City of Rollingwood

Final Draft – October 12, 2021

Table of Contents

Introduction

Like many municipalities across Texas, the City of Rollingwood is experiencing significant change due to a variety of factors including population and demographic shifts and aging infrastructure. In 2020, Rollingwood City Council members made the decision to undertake the City's first comprehensive planning process to provide a long-range guide for how our community will develop moving forward.

The neighborly character and beautiful landscape of Rollingwood make our City unique, and it is important that as Rollingwood evolves, we preserve what we love about our community now and in the future. This initiative is designed to address issues that are known today while anticipating and preparing for the needs of tomorrow.

Our efforts are informed by community input and the best data and resources available to understand the challenges facing our City. The plan is rooted in four guiding principles:

- Quality of Life
- Good Governance
- Financial Sustainability
- Environmental Stewardship

This Comprehensive Plan details the vision and goals for this effort, the history and current makeup of Rollingwood, along with recommendations related to current and future land use, parks and recreation, facilities, mobility, economic development, and facilities & infrastructure.

A comprehensive plan outlines a long-term vision that provides a framework for decision-makers to guide development and future growth of Rollingwood. The process of comprehensive planning determines the aspirations and goals of a community in terms of development, as well as social, economic, and environmental ambitions. This process, informed by the community, forms the basis for the policies and recommendations within the Plan. This Comprehensive Plan represents the first of its kind for the City of Rollingwood. It was heavily guided by input from stakeholders and outlines a vision of Rollingwood for the next 10 years. Importantly, this Comprehensive Plan is not a "how-to-guide", nor is it a regulatory document itself. It is a declaration of community and stakeholder values, and should serve as a roadmap for future decisions.

The recommendations in this document should be used to guide City leaders in decisions regarding community identity, land use, parks & recreation, public facilities & infrastructure, economic development, and mobility.

Cities in Texas are not required to adopt a comprehensive plan. However, Chapter 213 of the Texas Local Government Code allows cities in Texas to develop and adopt comprehensive plans to promote sound development. The purpose of this Comprehensive Plan is to develop a plan of action for the future physical and economic development of the community. The awareness of

the significance of this plan and a well-crafted implementation strategy will catapult Rollingwood as a pioneer in sustainability and high quality of life within the Austin Metropolitan Region.

Appreciation of Key Individuals

As Rollingwood continues to grow, City leadership recognizes the need for assessment of current conditions and a thoughtful vision for the future. This Plan embodies the discussions with stakeholders, data analysis, and previous studies conducted. Major participants in the planning process included:

- Residents, stakeholders, and staff who participated in focus groups, interviews, open houses, and community-wide surveys;
- Staff and the support team from the City of Rollingwood;
- The volunteer Rollingwood Comprehensive Plan "Strike Force" Committee who provided input and direction on the overall Plan; and
  City leadership, including the Mayor, City Council, and the Planning and Zoning Commission who provided feedback throughout the process.

Existing Plans and Studies

Prior to the development of this Comprehensive Plan, the City of Rollingwood commissioned various plans and studies whose findings and implications have been incorporated into this Plan. While the full reports may be found on the City's website, summaries/key findings of these studies have been provided in the following chapters (these and other resources are found in the Appendix at the end up this Plan):

Report	Chapter
Rollingwood Needs Assessment (2019)	Public Facilities and Infrastructure
Commercial Corridor Study (1999)	Future Land Use
Retail Market Analysis (2019)	Community and Economic Development
Infrastructure Improvement Plan (2020)	Public Facilities and Infrastructure
Park Master Plan (2018)	Parks and Recreation
City Branding Initiative (2018)	Community Profile

How to Use this Plan

This Plan is intended to lay a strong foundation for the future of the City by building on the existing strengths of Rollingwood, and should therefore be used to guide its physical development in the years to come. However, comprehensive plans are just that - plans. They are just words on paper if the recommended actions are not pursued and implemented effectively.

Although this Comprehensive Plan has tremendous potential, it should not be considered a “cure all” or an “instant fix." The resulting Plan may not address every challenge that the community has. However, the Plan is meant to motivate the community in the desired direction for the years to come. Change takes time, which is why this Plan is meant to unfold over the next 5, 10, 15, and 20 years, and real transformation will not be experienced right away.

Further, looking forward affords the opportunity to realistically address the challenges associated with congestion, drainage, community & economic development, and funding for the desired community amenities. With such plans built on community consensus, Rollingwood can guide and manage growth rather than just react to it.

Every Plan should have a Vision and Mission. The following is what statements form the foundation for this Comprehensive Plan:

Vision

Our vision is our ambition and calling; it’s why the Comprehensive Plan was developed. It is our desired future position for the City of Rollingwood.

> ***Preserve Rollingwood’s friendly community, neighborly character, natural resources and high quality of life for current residents and future generations.***

Mission

The mission for the Comprehensive Plan is what we will offer (and how) to the City of Rollingwood. This is our objective and approach.

> ***Ensure the long-term sustainability of our community through careful financial planning, environmental stewardship, measured growth, excellent City services and governance reflective of public input.***

Community Profile

Key Takeaways

- As of 2019, Rollingwood had a population of approximately 1,532 residents, comprised of 525 households (US Census Bureau, 2019).
- Rollingwood has a significantly higher median home value as compared to Austin and United States averages. The median home value was $2,194,272 in August, 2021, a 168% increase from 2011 (Zillow, 2021).
- The two largest age cohorts in Rollingwood are: 45-59 years and 5-14 years, and represent 22% and 21%, respectively, of the total population (US Census Bureau, 2019).

Location and Geographic Context

The City of Rollingwood is located in Central Texas between the Hill Country and the Texas Coastal Plain. It is nestled within the City of Austin and is only approximately four miles southwest of its downtown. Regionally, it is part of the Austin Metropolitan Area, and it is a jurisdictional component of Travis County. Geographically, Rollingwood is at the edge of the Balcones Escarpment, cliffs that are a result of the Balcones Fault. The City is surrounded by two streams, Dry Creek, sometimes referred to as Eanes Creek, to the south and the Colorado River to the north. Rollingwood sits above the Edwards Aquifer, and is only about one mile away from Barton Springs, a natural water spring. The City is near various regional thoroughfares such as the Mopac Expressway (TX- 1 Loop) and the Bee Caves Road corridor. [1]

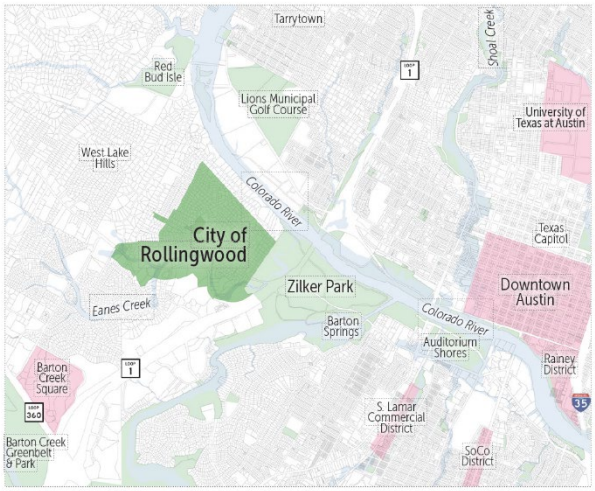
Location & Geographical Context

The Rollingwood community boasts closeness to both natural and cultural amenities. There are a number of recreational centers adjacent to the City, such as Zilker Park, Barton Springs Pool, the Nature & Science Center, Auditorium Shores, Zilker Botanical Garden, Lions Municipal Golf Course, and the Barton Creek Greenbelt.

[1] [5]Newlin, D. (n.d.). The Tonkawa People: A Tribal History from Earliest Times to 1893. Retrieved July 14, 2020, from http://www.texasindians.com/tonk.htm

Rollingwood's History

The City of Rollingwood is a thriving community in Central Texas, which is the product of tremendous volunteerism and community collaboration.



Municipal Context

"Rollingwood's history began when 1,800 acres of land were bought by Condido Dellana who had emigrated from Italy in the 1880s and worked as a stone mason on the State Capitol building until its completion in 1888. The Dellana ranch stretched from Barton Creek on the south to the Colorado River on the north and included the land on which Rollingwood, Treemont, Barton Creek Mall and MoPac freeway now sit. Dellana, an enterprising and hardworking man paid for his ranch by selling hundreds of pounds of bat guano, which he harvested out of caves located on his property. The little community of sparsely scattered cabins and houses remained sparsely populated and remote from Austin because there were no bridges across the Colorado River until the 1880s. Rollingwood's Dellana Lane and the Dellana tract reference this original Dellana family."[2]

In 1946, the George B. Hatley Company purchased approximately 300 acres of the Dellana Ranch, located just west of Austin, for $67,690. The property was known as The Rollingwood Addition, and George B. Hatley proceeded to build a residential community. Oral history indicates Hatley decided to build his own town after experiencing rising property taxes while living in Austin. While Hatley is generally recognized for developing Rollingwood, there are known lots that were purchased and developed before Hatley purchased the 300 acres in Rollingwood in 1946.

At an election on August 8, 1955, the Village of Rollingwood was officially incorporated, with 44 residents voting in favor of incorporation and only three in opposition. Residents voted again on October 1, 1955, to elect Frank L. Scofield as the first mayor of Rollingwood, along with five aldermen – all of whom served without pay, establishing a tradition of volunteerism that continues with today's volunteer-led City Council. In 1963 the Village of Rollingwood officially incorporated as the City of Rollingwood.

When Rollingwood was first created, the City of Austin turned down Hatley's request for water, so he proceeded to dig wells and later put in his own water distribution network using discarded pipes from Camp Swift. In 1964, Rollingwood City Council purchased the water system from Hatley for $40,500, and private water companies supplied water to homes until 1969, when the

[2] Collins, M. (2010, June 15). Levi Site. Retrieved July 14, 2020, from https://tshaonline.org/handbook/online/articles/ bbl03

City contracted to receive water from Austin. The water system was upgraded at that time and continually since then.

One of the most significant changes to the City followed the installation of the sewer system in 2002. Until then, all homes had on-site septic systems which, in practice, limited the size of each home. The City has since seen an accelerated growth of larger homes, some of which have contributed to drainage and flooding issues within the City.

Since 1955, Rollingwood has grown from 28 homes to more than 500 homes in what is now a one-square-mile city. The vision for the City of Rollingwood has changed significantly in the decades since it was established by the Hatley brothers, and while established primarily as a means to escape City of Austin taxes and regulations, it is important to accurately account for the City's history and the discrimination within early deed restrictions – on the basis of race, color, ethnicity, religion – that also occurred in many City of Austin subdivisions and other Central Texas communities at that time. Although such restrictions for the sale of property have been prohibited since The Fair Housing Act was signed in 1968, the City of Rollingwood recognizes the generational impact of these discriminatory practices.[3]

Additional conditions in that original conveyance deed also limited the use of property exclusively for a private dwelling, specifically restricting the development of a multi-family residence, such as an apartment, or use for any trade or business. These restrictions likewise have influenced the structure of Rollingwood, which consists primarily of single-family residences today with a limited commercial corridor.

The Bee Caves Road commercial corridor dates back to approximately 1966, when Roy Kovar first bought the Texaco station after selling the nearby Circle B Riding Stables. Kovar is remembered for claiming that when he bought the station, he had to wait an hour or two for the first car to come by, and he would only serve 10 to 12 cars in a day with one employee. The store also served as an unofficial civic center for Rollingwood for many years; it housed the city's only fire truck for 10 years and is also where the City's lone trash collector, Mr. Durbin, would take his calls.

A pivotal moment in Rollingwood's history was the opening of a brand new City Hall on November 23, 1975 – under the leadership of the first female mayor, Helen Shaw. Prior to this date, all meetings of the City Council were conducted in private homes, local offices or at the Optimist Club building. From 1958 to 1975, all City bookkeeping, water billings, traffic tickets and other business was conducted out of a private home on Gentry. Construction of City Hall was completed and the costs – $45,800 – were paid from City savings and donations from

[3] History of Rollingwood. (City of Rollingwood). Retrieved July 14, 2020, from https://www.rollingwoodtx.gov/administration/page/history-rollingwood

organizations like the Rollingwood Women's Club, the Volunteer Fire Department and private residents.[4]

Even before City Hall was built, the Rollingwood Women's Club was a partner in the City's growth. The club was established in 1958 to promote the welfare of residents, to encourage beautification of the City and to work with City government and staff on projects benefiting the community. Many club members have served on the City Council, and Roxanne McKee became the second female mayor in Rollingwood in 2016. Since its founding, the club has sponsored events including the annual 4th of July parade and celebrations like a 5K race every spring, which serve to unite the community while raising funds to beautify our shared spaces – both at City Hall and in the local parks.

Rollingwood's green spaces remain one of the most valuable assets in the community. Hatley Park was once a large quarry that was filled, leveled and dedicated by the Optimist Club in 1961 as a large ball field for young athletes. There was a large archway inscribed with George B. Hatley's name until 1994, when the City of Rollingwood purchased the ball fields, and, in 2009, an old concession stand building was replaced to create the Doyle Moore Field House with updated amenities. Rollingwood Park opened in 1985, after six years of volunteer efforts and donations from the community. The first 4th of July Parade was held in 1978 and continues to be a popular event in the City. The park continues to be used for many celebrations and public events today.

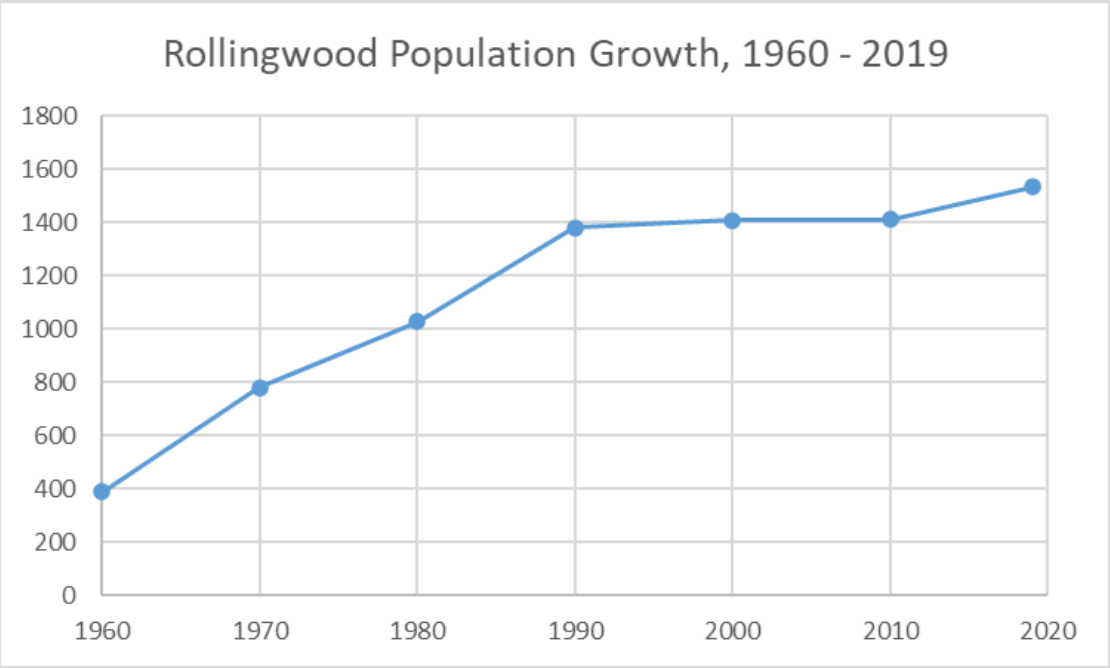
As a city, Rollingwood has grown and changed considerably in the past six decades. However, much of the infrastructure, utilities and amenities that were put in place over the years may require improvement, repair or updates. This Comprehensive Plan is designed to address our most immediate needs and carry the City into the next 65 years and beyond – building on the endearing and enduring spirit of volunteerism that will always be part of Rollingwood.

[4] Garver, L. (2010, June 15). Milam, Benjamin Rush. Retrieved July 14, 2020, from https://tshaonline.org/handbook/online/articles/fmi03

Demographics

Current Population and Population Projections

The Austin Metropolitan Area's exponential growth has shaped the recent population trends in the City of Rollingwood. Rollingwood's population grew by 11%, from an estimated 1,412 residents in 2010 to 1,532 residents in 2019.[9] While the population has grown, the total number of households has decreased from 565 in 2010 to approximately 525 households in 2019.[10]



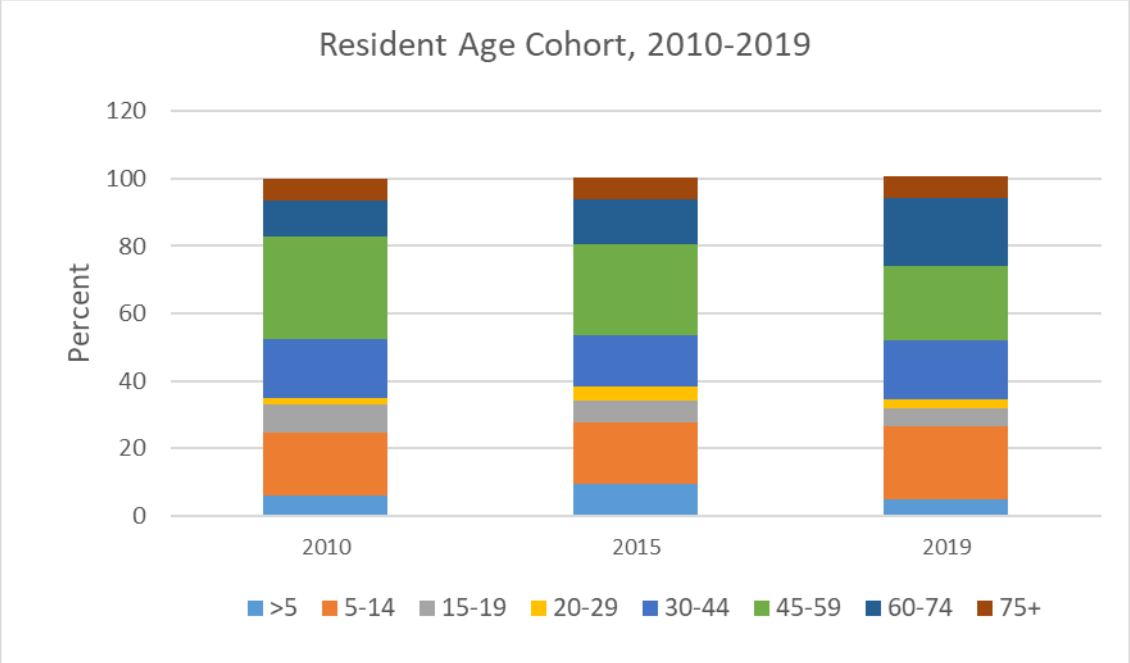
Sources:

(1) Population of Rollingwood, TX. (2016). From https://population.us/tx/rollingwood/

(2) United States Census Bureau. (2010-2019). ACS Demographic and Housing Estimates. From https://data.census.gov/

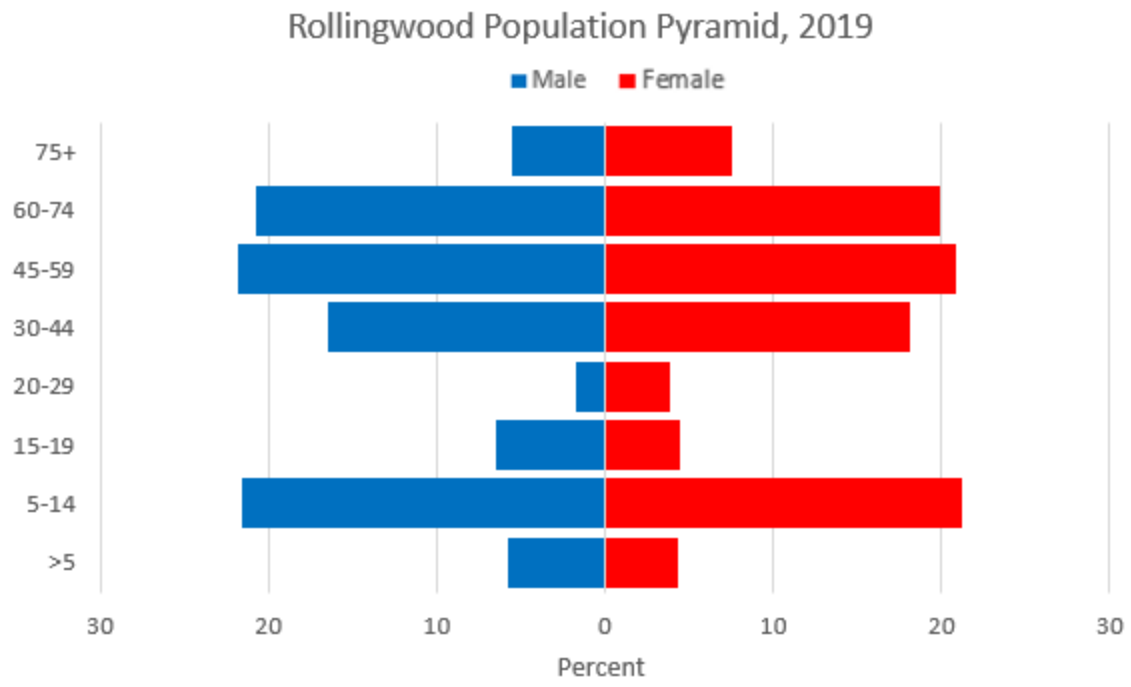
Age Cohorts and Median Age

Analyzing age group cohorts over time offers insights on the needs, preferences, and lifestyles of the community. While the share of Rollingwood's population that is 75 years and older has remained fairly constant, the share of residents between 45 to 59 has decreased within the last 20 years.[11] The largest population shift within the last decade has been the sharp increase of the 60 to 74 age cohort, from a 10% share of the population in 2010 to 20% in 2019. Furthermore, the children cohort of ages 5 to 14 years saw an increase of 15% from 2010 to 2019.[12] In comparison to Texas averages, the City of Rollingwood has a higher ratio of children under 15 years of age (26%, as compared to 21% for Texas), and an exceptionally low ratio of residents between the ages of 20 to 30 years (2%, as compared to 14% in Texas).



Sources:

(1) United States Census Bureau. (2010-2019). ACS Age and Sex. From https://data.census.gov/



Source: United States Census Bureau. (2019). ACS Age and Sex. From https://data.census.gov/

Peer Cities

A need was recognized to establish Rollingwood within a larger context of strategies and practices for future development. A set of peer cities were selected to use as comparisons or benchmarks for this Comprehensive Plan. The peer cities were designated using four rationales:

- Location within the Austin Metropolitan Area
- A population or population density comparable to Rollingwood
- Specified by community leaders
- Comparable home values

Due to the unique socio-economic elements in Rollingwood and the selected peer cities, it was necessary to define these unique factors using a data matrix and data visualization methods. This section shows the various socio-economic criteria that allow City leaders to compare Rollingwood with those of similar municipalities.

This table shows the population growth of Rollingwood, as compared to other peer cities.

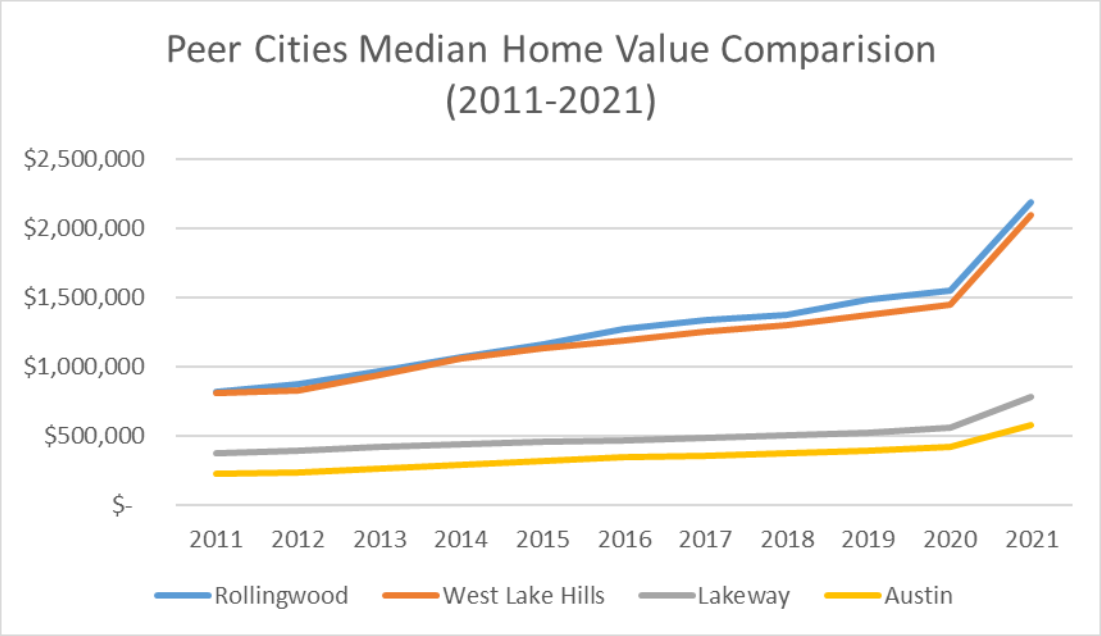
	Population (2010)	Population (2019)	Population Percent Increase (2010-2019)
Rollingwood	1412	1532	8.5%
West Lake Hills	3063	3311	8.1%
Lakeway	11391	15138	32.9%
Austin	790390	979263	23.90%

Sources:

(1) United States Census Bureau. (2019). ACS Demographic and Housing Estimates. From https://data.census.gov/

(2) United States Census Bureau. (2010). Decennial Total Population. From https://data.census.gov/

The following chart examines the median home values over time for Rollingwood and its peer cities.

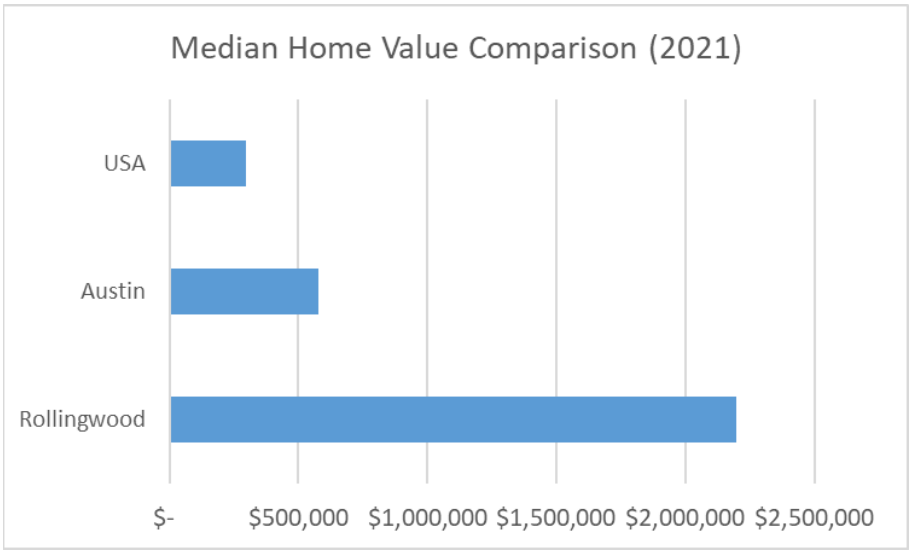


Source: Zillow. (2020, July). Home Prices; Home Values (various). From https://www. zillow.com/

More than a City

Known as a family-friendly community with excellent schools, the City of Rollingwood has been consistently ranked as the #1 place to raise a family in Texas. Additionally, Rollingwood has also been named "the best suburb to live in the Austin area" and is part of the Eanes School District, "one of the best school districts in America".[5]

Rollingwood has a significantly higher median home value and median household income, as compared to Austin and United States averages. According to Zillow, the median home value was $2,194,272 in August 2021, which represents a 168% increase from 2011.[2] Rollingwood's median home value is approximately 3.7x higher than Austin's median home value of $579,595 and approximately 7.3x higher than the US average of $298,933 within the same time period.[3]



Sources:

(1) Zillow. (2021, August). Rollingwood TX Home Prices; Home Values. From https://www. zillow.com/rollingwood-tx/home-values/

(2) Zillow. (2021, August). Austin TX Home Prices; Home Values. From https://www.zillow.com/ austin-tx/home-values/

(3) Zillow. (2021, August). United States Home Prices; Home Values. From https://www.zillow.com/home-values

[5] Source: Niche. (2020). Rollingwood. From https://www.niche.com/places-to-live/rollingwood-travis-tx/

Community Branding Initiative

In mid-2018, the Rollingwood City Council approved a comprehensive branding effort in partnership with the Rollingwood Community Development Corporation (RCDC). The City's primary goal with the branding initiative was to encourage all its residents and businesses to rally around being a part of the Rollingwood community. The branding initiative incorporated community input and resulted in an identity suite which includes a branding guide, imagery, and logos. Rollingwood's brand is a reflection of the community's vision for the City. For more information, please visit https://rollingwoodbrandguide.com.

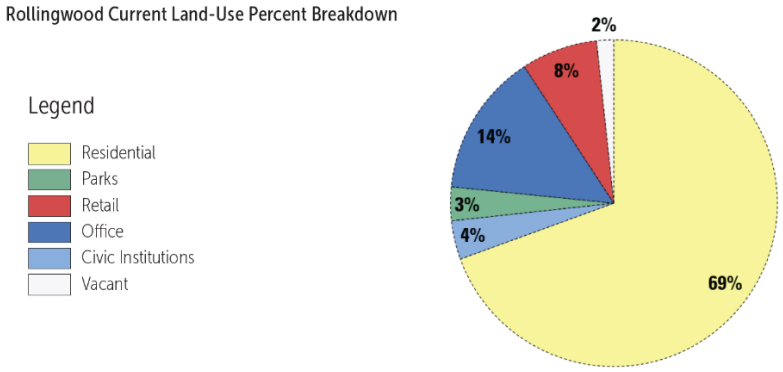
Current Land Use

Key Takeaways:

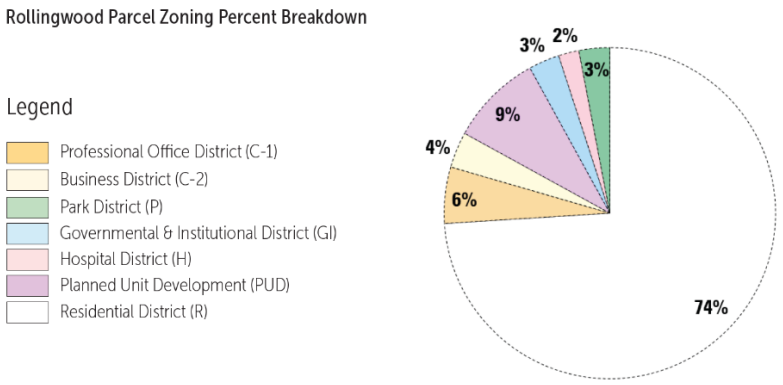
- Rollingwood's current land use, based on acreage, is composed of primarily residential uses (69%), followed by office (14.2%), and retail (7.5%) uses.
- A current land-use map shows how land is currently being used within an area, while zoning legally defines the types of uses permitted on a parcel of land and sets the development guidelines for those uses.
- Chapter 211 of the Texas Local Government Code states, "Zoning regulations must be adopted in accordance with a comprehensive plan."

Land Use and Zoning Designations[6]

Current land use is the characterization of land based on how parcels are currently used. Land use is composed of categories of uses such as residential, commercial, office, civic, industrial, and parks. A future land use plan (FLUP) indicates the community's desired or intended use of land for an area. The plan, through maps and other studies, help to set a broad direction on how City parcels should be used in the future. Currently, the City of Rollingwood does not have a future land-use plan.



Zoning, on the other hand, legally defines the types of uses permitted on a parcel of land and sets the design and development guidelines for those uses. For instance, zoning districts regulate allowable uses, development types, building height, impervious cover, setbacks, floor to area ratio, and the density of land use.



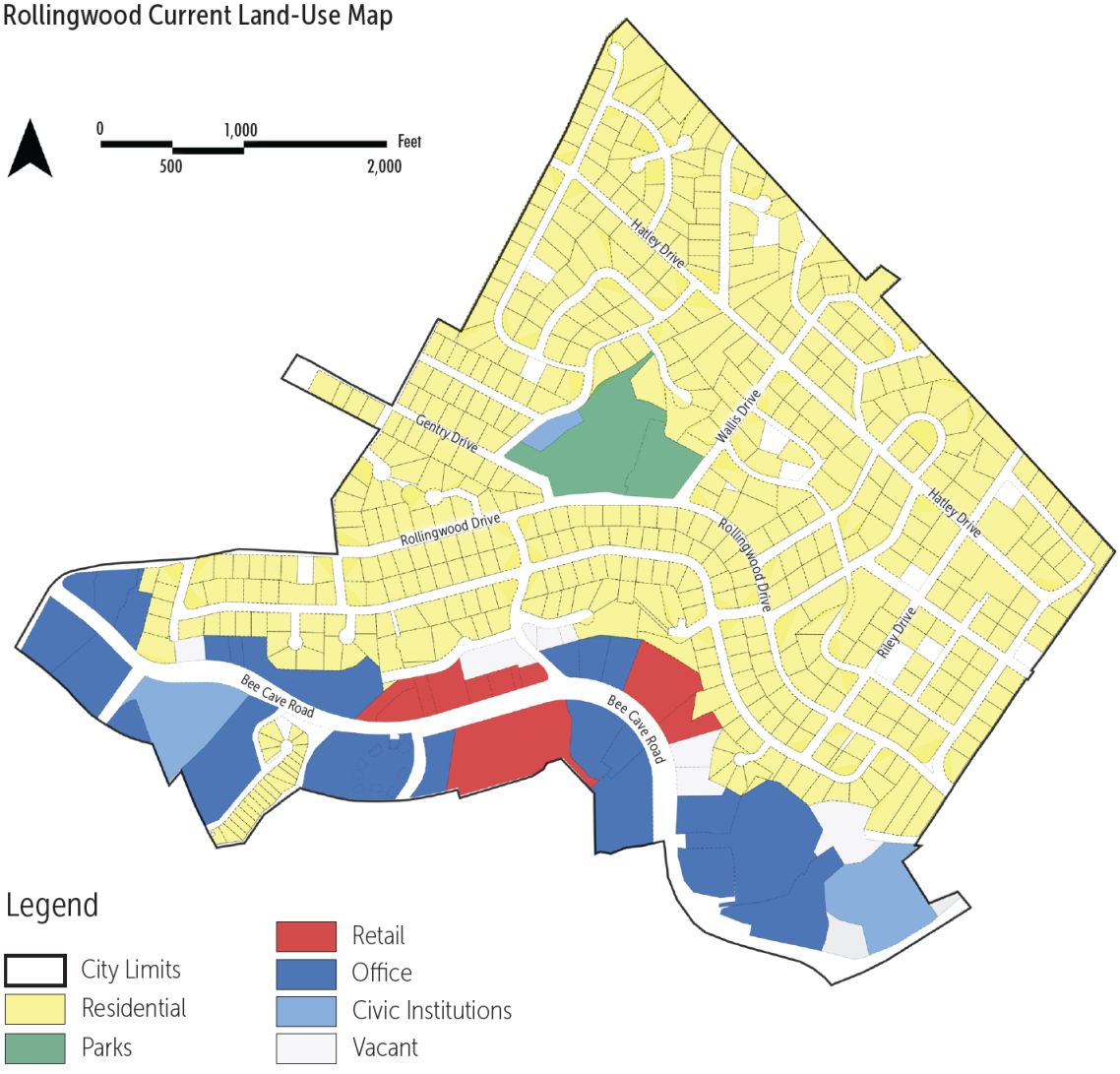
[6] Land use and Zoning charts below are based on percent of total acres.

Existing Conditions: Land Use

Current Land-Use Conditions

The existing land use in the City of Rollingwood is predominantly residential and commercial. Single-family residential comprises the largest percentage of land use, based on acreage, making up 69.4% of the total land use area. The second largest land use type is office with 14.2%, followed by retail with 7.5%. The commercial uses are located along Bee Caves Road, a key regional roadway. Civic Institutions such as City Hall and Parks/Green Space such as Rollingwood Park represent a modest amount of the City's current overall land use. Due to Rollingwood being fully built-out, vacant parcels make up only 1.7% of the total land-use and are scattered throughout the City.

Rollingwood Current Land-Use Map



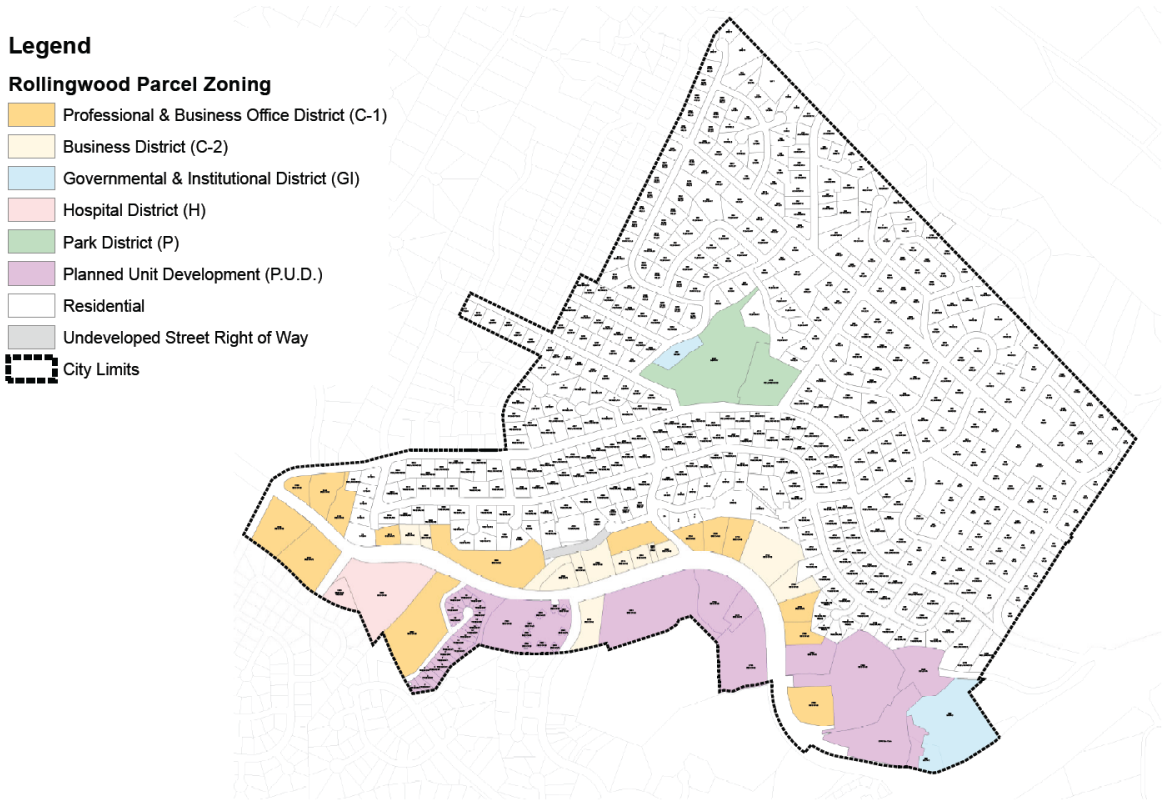
A comprehensive plan shall not constitute zoning regulations or establish zoning district boundaries.

Existing Conditions: Zoning

Current Zoning Districts

Zoning is governed by Chapter 107 of Rollingwood's Municipal Code. There are currently 7 different zoning districts in the city, including one residential district, two office & business districts, and four planned unit developments. The Residential zone in Rollingwood is by far the largest zoning district in the City.

The table below details the categories of zoning by percentage of land area, excluding major rights-of-way. This information was calculated based on the current zoning plan, last amended in 2018.



Zoning Districts, 2018	Area (sqft)	% Total Zoning
Residential Zoning District (R)	11,562,798	74.8%
Professional & Business Office Zoning District (C-1)	778,265	6.1%
Business Zoning District (C-2)	478,294	3.1%
Planned Unit Developments Zoning District (PUD)	1,865,119	12.1%
Governmental & Institutional Zoning District (GI)	400,272	2.6%
Hospital Zoning District (H)	254,343	1.6%
Park Zoning District (P)	411,256	2.7%

Zoning Regulatory Framework

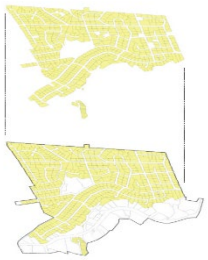
Future land-use and zoning are legally different. Although the Texas law does not explicitly mandate cities to have comprehensive plans, chapter 211 of the Texas Local Government Code authorizes a city to adopt a comprehensive plan that includes a future land use map. The Texas Government Code requires that "zoning regulations be adopted in accordance with a comprehensive plan". The code further clarifies that a land use map is different than a zoning map by requiring all land use maps included as part of a comprehensive plan to always contain the following statement: "A comprehensive plan shall not constitute zoning regulations or establish zoning district boundaries."

Future Land Use Plan

Prior to this Comprehensive Plan, the City of Rollingwood did not have a Future Land Use Plan to guide development and zoning decisions. The framework and process to create the Rollingwood Future Land Use Plan will be discussed in detail in next chapter, Future Land Use.

Existing Land Use Conditions: Residential

As evident in the land-use map, the City of Rollingwood is largely a residential community. The residential neighborhoods in the City are characterized by their wide streets, mature trees, and beautiful yards. In 2002 a sewer system was installed in the City, which allowed the building of larger homes. Previously, all homes had on-site septic systems which, in practice, limited the size of each home. While some of the older homes resemble their original character, one to two story homes comprised primarily of masonry, newer residences have incorporated contemporary architectural elements, such as the use of linear forms and glass as a building material.

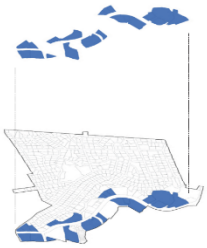


69.4%
OF THE TOTAL LAND-USES IN ROLLINGWOOD ARE RESIDENTIAL

Existing Land Use Conditions: Office

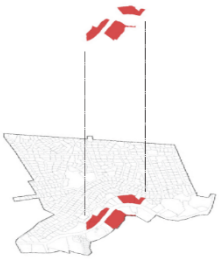
Office land-uses in Rollingwood are located along Bee Caves Road, the major commercial corridor in Rollingwood. This land-use makes-up 14.2% of the total land-use area and approximately 2/3 of the uses located on the Bee Caves Road commercial corridor. These types of uses include large business parks, banks, and low-rise office buildings.

14.2%
OF THE TOTAL LAND-USES IN ROLLINGWOOD ARE OFFICE



Existing Land Use Conditions: Retail

Retail land uses are also clustered along the Bee Caves Road commercial corridor. Retail comprises of 7.5% of the total land-uses in Rollingwood and about 1/3 of all commercial land-uses. Stores, strip plazas, and local family-owned businesses occupy the bulk of the retail land portion.

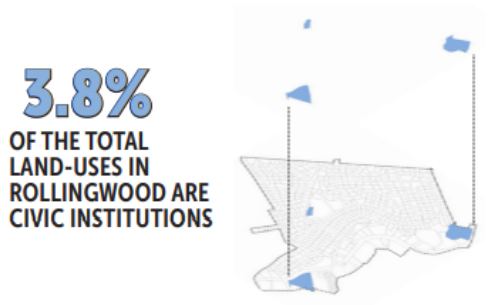


7.5%

OF THE TOTAL LAND-USES IN ROLLINGWOOD ARE RETAIL

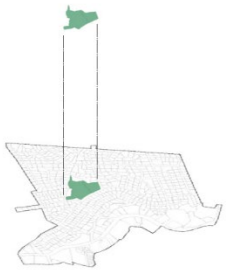
Existing Land Use Conditions: Civic Institutions

Civic institutions are public or quasi-public buildings. In Rollingwood, three parcels have civic uses: a religious institution, a medical center, and City Hall. These civic zones are located throughout the City, including the Bee Caves Road Corridor. Civic land-uses make-up only 3.8% of the total land use in the City.



Existing Land Use Conditions: Parks & Open Space

Parks in Rollingwood consist of recreation facilities, open areas, and sport fields. The only established park, Rollingwood Park, is located at the heart of the City. Rollingwood Park makes up a total of 3.3% of the total land-use area. Additionally, Rollingwood boasts acres of natural landscapes, especially near Dry Creek, also commonly known as Eanes Creek.



3.3%
OF THE TOTAL LAND-USES IN ROLLINGWOOD ARE PARKS & OPEN SPACE

Future Land Use

Citizen quote:
"A welcoming, walkable community amidst trees and nature."

Key Takeaways

- Rollingwood residents envision a walkable, tree-filled, connected neighborhood of single-family homes with easy access to local shops and restaurants.
- Residential: Rollingwood residents place great value on the low-density, single-family nature of the residential areas of our community and want to protect the "small town feel" of the community.
- Commercial: Rollingwood residents support a renewal of the Bee Caves Road commercial corridor that focuses on retail and restaurants while protecting Rollingwood residents' quality of life and the properties of adjacent and nearby Rollingwood homeowners.

Citizen Input on the Future of Rollingwood

The residents of Rollingwood have a great affection for the residential portions of the City and most hope that the residential areas of Rollingwood's future look a lot like Rollingwood today. Residents appreciate the low density of single-family homes on larger lots and greatly value—and wish to protect—the neighborhood's tree canopy. Although many residents are concerned about older and smaller homes being replaced by larger new ones, there is no widespread desire to alter current rules related to home sizes.

Residents resoundingly oppose allowing short-term rentals (*i.e.*, renting homes for less than 30 days) within Rollingwood, but support allowing residents to build accessory dwellings (sometimes called "granny flats") on residential lots. In addition, although there was no consensus reached for or against allowing "estate" lots (*i.e.*, single homes built across multiple existing lots), most residents want the City to regulate any estate-lot development as necessary to protect adjacent and surrounding homes from unwanted or unintended consequences. Residents also expressed support for making it more difficult to "upzone" residentially zoned lots in the future.

Rollingwood residents identified storm-drainage issues and increased traffic as among their greatest concerns in Rollingwood's residential areas. Residents support looking for creative ways to better connect Rollingwood's residential and commercial areas via walking paths, bicycles, or golf carts. There is also widespread support of residents to install a dedicated crosswalk across Rollingwood Drive near the park.

As for Rollingwood's commercial corridor (Bee Caves Road between MoPac and Rollingwood Drive), Rollingwood residents have a strong desire to permit, encourage, or improve restaurant

and retail offerings. Residents want greater connection between the residential and retail areas, showing a strong desire for additional trails or pathways to local shops and restaurants. Residents also support moving future development closer to Bee Caves Road by reducing setbacks between buildings and the roadway, while increasing or maintaining setbacks between commercial buildings and residential areas. Residents also would like to see Rollingwood join with TxDOT to fix stormwater runoff across Bee Caves Road and Edgegrove Drive.

Residents strongly oppose permitting hotels, apartment complexes, or large condominium developments in the Bee Caves Road commercial corridor. Residents also oppose increasing building heights in commercial areas. Residents' concerns about additional development on Bee Caves Road include the risk of increased traffic (within both the commercial district and residential areas) and losing the low-density, high quality of life currently maintained in Rollingwood.

Recommendations for Residential and Commercial Areas

- Review and, if necessary, create or strengthen City ordinances to protect Rollingwood tree canopy in residential and commercial areas.
- Create and encourage water-wise policies for landscaping in residential and commercial areas.
- Review and consider methods to ameliorate additional future drainage and storm water runoff, including additional drainage fees on new development.
- Review and revise City ordinances to ensure that new developments pay the costs they impose on drainage infrastructure.
- If allowable, enact rules making it more difficult to "upzone" properties from a residential use to a more intensive non-residential use.

Residential Recommendations

- Commission a traffic study to address residents' concerns over the amount and speed of traffic within residential areas; look for ways to reduce cut-through traffic; consider installation of crosswalks and pedestrian islands to permit the safe crossing of Rollingwood Drive near the park.
- Prohibit short-term rentals.
- Allow accessory dwelling units on residential lots.
- Connect residential and commercial areas with a dedicated, safe pathway for pedestrians and bicyclists alongside Edgegrove Drive between Rollingwood Drive and Bee Caves Road.
- Evaluate and consider connecting residential and commercial areas with a dedicated pathway along old Dellana Lane.

- Maintain standard and uniform setback and building rules on residential lots throughout Rollingwood regardless of whether a residential lot borders a lot that is either non-residential or outside Rollingwood.
- Regulate "estate lots" as necessary to protect nearby and adjacent residential properties.

Commercial Corridor Recommendations

- Allow retail and office uses on all commercially zoned properties and encourage restaurant development where a restaurant use would not create a nuisance for adjacent residential properties.
- On the north side of Bee Caves Road, limit development on commercially zoned lots to two stories and 30 feet in height. On the south side of Bee Caves Road, limit development on commercially zoned lots to 3 stories and 45 feet in height.
- Maintain current Rollingwood Drive frontage setbacks (*i.e.*, setbacks between commercial buildings and Rollingwood Drive).
- Prohibit the clearing of native vegetation within the FEMA floodplain on commercially zoned properties.
- Work with stakeholders to envision and create a safer pedestrian crossing of Bee Caves Road at Edgegrove Drive. (Long-term vision: build a pedestrian bridge across Bee Caves Road within Rollingwood.)
- Replace current setbacks between commercially zoned properties and residentially zoned properties with a 75-foot setback measured from the edge of any residentially zoned lot to the edge of any building on any commercially zoned lot. The clearing of native vegetation shall be prohibited in this 75-foot setback. In addition, the City should require replanting of previously cleared spaces within the 75-foot setback between the edge of any residentially zoned lot and the edge of any building on any commercially zoned lot.
- To reduce the number of ingress/egress points on Bee Caves Road, eliminate any existing code provisions that require a driveway on every commercially zoned lot.
- Encourage the building of walking and biking paths on commercially zoned lots along the south side of Dry Creek (sometimes called Eanes Creek) on the north side of Bee Caves Road.
- Enforcement: The City should require an as-built survey as part of its final permitting and Certificate of Occupancy for all new commercial development. In addition, the City should exercise its full discretion and employ all means to enforce all development rules regulating commercially zoned lots.
- Modify development standards as necessary based on following recommendations:
    - Front setback:
        - the front setback for commercial properties along the north side of Bee Caves Road be reduced from the current 25-foot setback to a 5-foot setback, where the developer has agreed to: 1) contribute any required

right of way to TX DOT, and 2) implement a landscape plan, including appropriate irrigation and maintenance, that provides native species shade trees along sidewalks and rear lot pedestrian paths.

- Impervious cover:
  - City should establish commercial impervious cover requirements such that impervious cover shall not exceed 55% provided that no new project development will create any increases to storm water runoff (either volume or rate of flow of runoff).
  - Incentives: the development code should incentivize permanent low impact development practices such as rainwater harvesting, bio-retention, rain gardens, green roofs, infiltration/filter strips, conservation landscaping using native plants and trees that promote the area's natural habitat including bird-, bee-, butterfly-friendly plants, and natural area preservation over and above required greenbelt setbacks, by development of a schedule of impervious cover limit increases up to an additional 10% for use of such practices: 1) there are no increases to storm water runoff (either volume or rate of flow of runoff), 2) the site plan meets all TCEQ best management practices for water quality, and meets the design elements described below.
  - Certification: all requirements associated with impervious cover incentives, storm water management and water quality be mandatory, not subject to variance, and enforced by requirements for engineering certification that the design meets all requirements as initially submitted in the permitting process and for engineering certification that the design as built meets all impervious cover, storm water management, and water quality requirements before the issuance of any occupancy permit.
- Design requirements to lessen impact of commercial development to adjacent residential properties:
  - Where roofs are visible from adjacent residential lots, the City should adopt appropriate design requirements that mask and/or eliminate the impact of (i) building mechanical elements (AC units, vents, wireless facilities, etc.) by requiring such elements be located at ground level and not on roofs, or if located on roofs, masked by the roof; (ii) require all solar panels be masked; and (iii) require the site plan to provide a vegetative buffer and safety features between a residential lot and a commercial lot where there is no greenbelt, topographical, or line of sight buffer between the commercial lot and any residential lot.
  - The City should adopt lighting design criteria to eliminate impact to adjacent residential properties, down-shield night-time lights, and adopt standards consistent with the "Dark Skies" lighting policies of similarly-

sized Central Texas Hill Country communities, the International Dark Skies communities or other state-certified "Dark Skies" organization.

- Review and revise necessary ordinances regarding interior and exterior lighting.

- Landscaping/Shade/setback incentives for commercial properties: the City should:
  - Require that landscaping within the setback along Bee Caves Road, where possible, and along any pedestrian walkways, include sufficient trees to shade sidewalks and pedestrian paths.
  - Employ a tree ordinance similar to that in residential areas that will preserve heritage trees, that requires replacement of heritage trees with a tree or trees of the same species and having the same total caliper inches, and require replacement of other protected trees so as to maintain current tree canopies.

- Safe harbor: the City should permit the renovation and, if necessary, rebuilding of existing structures on commercially zoned lots provided that such renovation or rebuilding 1) was in compliance with all City ordinances at the time it was built; and 2) is limited to the footprint of the existing structure.
- Update commercial signage regulations as needed to bring rules up to date with modern technology and building needs.
- Post-permit Enforcement and penalties: The zoning ordinance for commercial properties should include provisions sufficient to permit revocation of occupancy permits in the event the owner fails to maintain compliance with any permit requirement including impervious cover incentives, and landscaping, shade, setback requirements, and/or Dark Sky requirements, in addition to use of all fines and other enforcement provisions, including daily financial penalties for non-compliance.

Parks and Recreation

Citizen quote:
"Our park space is the heart and soul of our City."

Key Takeaways

- The Comprehensive Plan Strike Force did not engage in a new comprehensive plan for Rollingwood Park because the City had recently produced a Master Plan for the park (the 2018 Park Master Plan). The Strike Force elected to incorporate that Plan into this Comprehensive Plan and takes no position on the Plan's recommendations or conclusions. The 2018 Park Master Plan is attached and included with this chapter.
- The Strike Force did solicit resident input on parks and recreation generally and the results of its survey are summarized in this Chapter.
- The 2018 Park Master Plan recommendations include extending and improving the walking trail and making an accessible connection between the lower and upper park
- Strike Force parks & recreation recommendations include providing additional shade in Rollingwood Park and exploring the possibility of improving old Dellana Lane as a publicly accessible path.

Citizen Input on the Future of Rollingwood Park

If there is one thing that's certain about the residents of Rollingwood, it's that they love the Rollingwood Park. In surveys, residents described Rollingwood Park as "the heart and soul of our City," "a great asset to the community," and "the crown jewel of the neighborhood."

Residents were divided on whether to make significant changes to the park, with some reporting that it is "perfect as is," many others advocating for modest improvements, and some wanting a complete "overhaul" of the park similar to the recent renovations of many public parks in the City of Austin.

Many residents complained about the impact of league sports on park parking and accessibility, with some residents advocating for more open space while others asked for different sports fields to be added. Perhaps the issue that divided residents most was the use of the existing multipurpose field as a dog park when no youth sports are being played. Many residents feel that the existing off-leash dog use area is very important to the community, while others argued that dogs shouldn't play on the same fields as the youth sports league. No consensus emerged on the off-leash dog use issue in our surveys.

With respect to potential improvements, Rollingwood residents very much want additional shade to be provided in the park, including by tree planting. Residents also strongly support improving and expanding existing trails and sidewalks in the park. Residents were split on the idea of studying whether old Dellana Lane could be repurposed into a public trail, but more favored than disfavored the idea.

Recommendations for Parks and Recreation

- Add sources of shade to Rollingwood Park, including through tree planting
- Explore possibility of working with City of Austin and nearby neighbors to convert old Dellana Lane into a safe and publicly assessable hike and bike trail. (Long term: explore possibility of permitting golf cart use on pathway to connect residential areas with commercial corridor.)
- Improve and expand walking paths and sidewalks within Rollingwood Park
- The Strike Force took no position on the dog-park issues or concessions.

2018 Park Master Plan Recommendations

- Extend and improve walking trail and make an accessible connection between the lower and upper park
- Create multipurpose fields that allow for additional sports programming and unstructured play
- Assess and utilize on-street parking on all streets adjacent to the park
- Provide a separate off-leash dog area
- Expand programming opportunities for teenagers, adults, and seniors
- Create overall brand and identity for the park that reflects history of the park and community
- Focus on planting shade trees and maintaining existing canopy

Facilities and Infrastructure

Citizen quote:
"Storm drainage…, water main breaks…, [and] weak cell coverage."

Key Takeaways

- The Comprehensive Plan Strike Force did not engage in a new Comprehensive Plan for infrastructure or facilities because the City has recently produced several reports on these subjects, including: (1) the 2020 Infrastructure Improvements Plan; (2) the 2019 Facilities Master Plan; and (3) the 2013 Capital Improvement Plan. The Strike Force elected to incorporate those plans into this Comprehensive Plan and takes no position on the plans' recommendations or conclusions. Each plan is attached and included with this chapter.
- The Strike Force did solicit resident input on issues related to facilities and infrastructure generally and the results of its survey are summarized in this chapter. Residents expressed the greatest concern for stormwater drainage, but also identified repeated water-line breaks and weak cell-phone coverage as issues of concern. Residents also prioritized drainage and park improvements above building a new City Hall, but indicated support for each.
- The 2020 Infrastructure Improvement Plan identified 23 potential drainage projects with a total estimated cost of $17,901,000. The cost estimate did not include a cost for improving its highest-priority concern—the stormwater runoff across Bee Caves Road. The second and third highest priority items are included in the cost: the Edgegrove Drive low-water crossing (estimated $2,631,000) and the flooding at Nixon and Pleasant (estimated $5,283,000).
- The 2019 Facilities Master Plan envisions a future joint City Hall and Police Station with 8,436 square feet and space for 22 staff members (half of which would work for the Police Department). The plan estimates that it would cost $4,967,289 to renovate and build an addition to the existing City Hall building, and a cost of $4,916,217 to demolish the existing City Hall building and replace it with "all new construction."

Existing Infrastructure and Utility Services

- **Roads:** The City of Rollingwood owns and maintains all the roads within the City, except for Bee Caves Road, which is owned and maintained by the Texas Department of Transportation (TxDOT). The Mopac Expressway is also owned and maintained by TxDOT and is under study to expand HOV lanes south of the Colorado River.
- **Electric and Gas Services:** Electric Service for the City of Rollingwood is provided by Austin Energy. Gas Service for the City of Rollingwood is provided by Texas Gas Service.

- **Water and Wastewater**: Water and wastewater services are provided by the City of Rollingwood. The City provides surface water from the Colorado River, Lake Austin, and Lake Travis located in Travis County through a wholesale customer agreement with Austin Water Utilities. The City provides annual water quality reports, which can be found on the Rollingwood website. Before 2005, all homes in Rollingwood were on septic systems that required a drain field. Due to the drain field needed for septic tanks, many residential lots were not large enough to meet TCEQ standards. In 2005, the City of Rollingwood decided to transition from septic to a centralized water system.
- **Phone and Internet**: All telephone and internet services are provided by private service companies who contract directly with residents.
- **Trash & Recycling:** The City of Rollingwood contracts with third-party vendors to supply trash and recycling pickup to its residents.

Citizen Input on Facilities & Infrastructure

As part of the comprehensive planning process, Rollingwood residents were surveyed as to their thoughts on utilities, city services, and infrastructure. In general, residents were very positive about the services provided by the City of Rollingwood. The most favorably viewed City services were electricity (not provided by the City of Rollingwood), sewer, trash/recycling, and parks/recreation. The least favorably viewed areas were storm drainage, the City water system, road maintenance, and police. In addition, residents expressed an overall unfavorable view of the private internet and phone services available in Rollingwood. Notably, a significant majority of residents reported having no knowledge of the 2020 Infrastructure Improvement Plan or the 2019 Facilities Master Plan.

Addressing Rollingwood's stormwater drainage issues was the number one priority for the City as identified in the resident surveys. When specifically asked about the drainage projects identified in the 2020 Infrastructure Improvement Plan, a large majority of residents (nearly 72%) indicated that they support pursuing the identified stormwater runoff projects that address the most significant risks to public health and safety (such as the Edgegrove Drive low-water crossing and Nixon/Pleasant flooding). A smaller percentage, but still a majority (nearly 57%) indicated that they support pursuing all stormwater runoff projects identified in the 2020 Infrastructure Improvement Plan. Many residents pointed to the building of larger homes as contributing to the City's stormwater drainage problem.

Residents were more split on City Hall improvements. More than 35% indicated support for either completely rebuilding or completely renovating the existing building. A little less than 22% supported renovating portions of the existing building, and nearly 28% indicated that the City Hall should be left as it is.

When asked to choose between improvements to City Hall, drainage infrastructure, or parks & recreation, 51.67% of residents picked drainage as their number one priority. 36.81% chose parks & recreation projects, and 12.73% selected improving City Hall as their number one priority.

Although many residents complained about rising property taxes, nearly 63% of survey respondents indicated a willingness to pay at least a small increase in property taxes to pay for infrastructure improvements.

Strike Force Infrastructure Research Findings

- **Wastewater Capacity**
  - Wholesale service agreement with the City of Austin in 1999 with the maximum level of wholesale service (as defined in the agreement) not to exceed 300 gallons per minute
  - The 300 gallons consists of a peak of 255 from lift station No. 1 (Main lift station on Dellana Lane which is the main lift station for Rollingwood.) and 45 gallons per minute for other City of Rollingwood properties (on the south side of Bee Caves Road between Old Walsh Tarleton and Dry Creek)
  - Original system designed for app. 1100 LUE (Living Unit Equivalents or average flow from one single family home) of wastewater service with estimated current LUEs being 677
  - Additional tank on Dellana Lane of 100,000 to handle additional peak flows
  - Peak Wet Weather Flows can reduce systems capacity
  - Estimate of 100 to 200 additional LUEs available
  - Residential areas of Rollingwood near 100% connected with lines and lift stations designed for service load. The City is currently upgrading electrical service interruption for its lift stations
  - Existing lines capacity is adequate for residential areas and the commercial area currently serviced but will require extension of lines for additional commercial area service
  - Full engineering study would be need to determine fully any additional capacity
  - Additional service capacity should be allocated first to existing commercial properties in Rollingwood that do not have service
- **Water Capacity**
  - Agreement for water wholesale service with the City of Austin dated 1999 amended 2004
  - Maximum level of service 1,000,000 gallons per day with an instantaneous maximum flow rate of 694.4 with additional negotiations required when Rollingwood reaches 75% of the maximum monthly average flow
  - Rollingwood will be required to provide its own source of raw water to be treated and delivered by the City of Austin with 12 month notice. The City of Austin has indicated that they will give this notice in the future and Rollingwood should be in the process of determining its own raw water source be it LCRA, groundwater, or other sources
  - Current largest monthly demand 624,636 or approximately 62.5% of contractual limitations
  - Current commercial water line on Bee Caves Road is 12 inches

- Existing residential water line has been under replacement for many years and should be a priority for the City

Facility and Infrastructure Recommendations

- Drainage: The Strike Force strongly supports implementing stormwater drainage improvements that address the most significant risks to the health and safety of Rollingwood residents. The Strike Force also emphasizes that drainage improvements were identified as the highest community need by residents. Because the Strike Force was asked not to reassess the 2020 Infrastructure Improvement Plan, it takes no other positions on drainage issues.
- City Hall: The Strike Force received input from City administrators and the Chief of Police on the need for more space and other improvements to City administrative and Police facilities. City and police employees indicated that there is no more space to add additional employees, that there are no showers or private bathrooms for employees, and no private room to interview crime victims or suspects. However, the Strike Force did not take a position on which option should be selected for contemplated City Hall improvements.
- Water Infrastructure: The Strike Force notes that many Rollingwood residents expressed the need to address frequent water-line breaks and boil-water notices. The Strike Force did not receive testimony or engineering reports on water lines and therefore defers to the City Council as to the best way to manage the City's water infrastructure.

Mobility and Connectivity

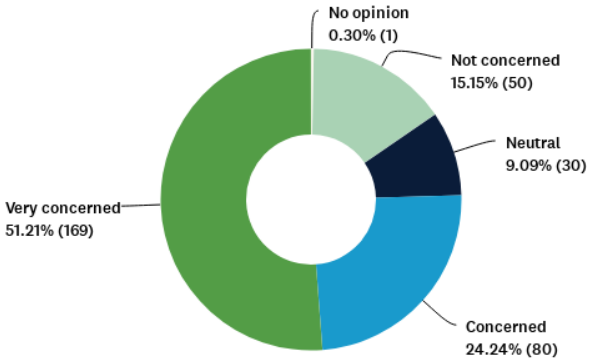
The Mobility chapter of the Comprehensive Plan provides guidance to the City of Rollingwood on issues related to sidewalks, bicycle lanes, and other mobility areas.

Public Engagement

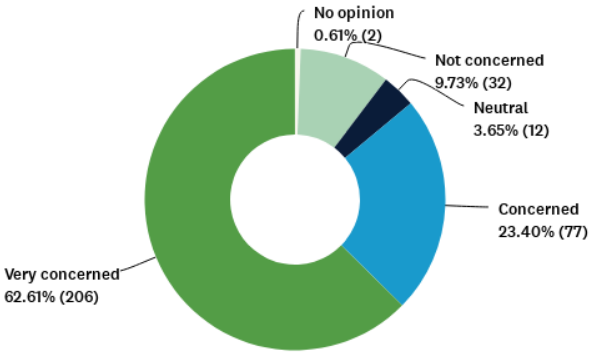
When asked about traffic, increased congestion on Bee Caves Road and within Rollingwood residential areas was a primary concern highlighted in responses for the Comprehensive Plan Strike Force Survey distributed in April 2021. However, the majority of residents were neutral on lowering the speed limit on Bee Caves Road, with the remainder of responses showing a split between support and opposition. Residents were also opposed to adding speed bumps or other traffic-calming measures.

Regarding potential mobility projects within Rollingwood, most residents supported a joint project with the Texas Department of Transportation to address Bee Caves Road low-water crossings and lane expansion with shoulders and sidewalks. The majority of residents opposed implementing reversible lanes on Bee Caves Road, proposed by CAMPO's regional study.

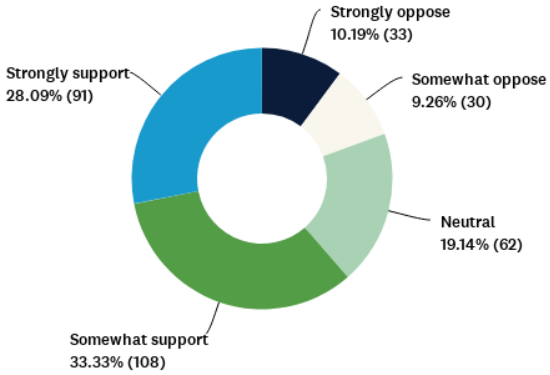
Q51 Increased traffic congestion on Bee Caves Road



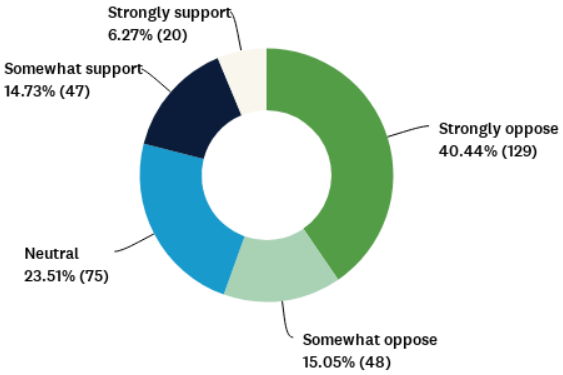
Q52 Increased traffic congestion within Rollingwood residential areas



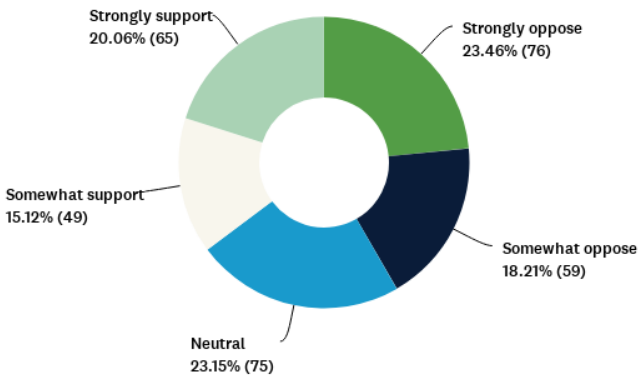
Q56 Joint project with TxDOT and Rollingwood to address Bee Caves low-water crossing and lane expansion with shoulders and sidewalks. [Note: Rollingwood would share 10% of the total project costs, which may be met through donation of land along the right of way.]



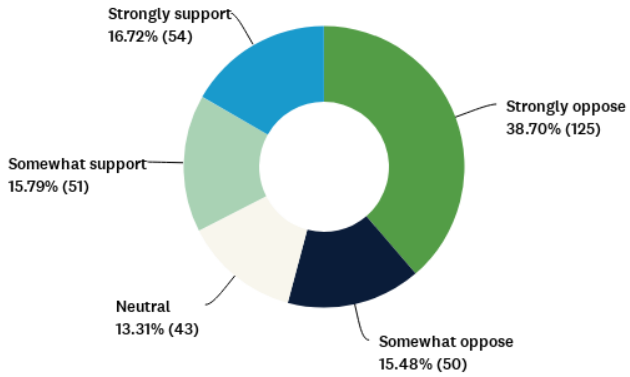
Q57 Reversible lanes on Bee Caves Road (Note: CAMPO's regional study proposes to implement reversible lanes on Bee Caves Road during peak morning and evening hours. Reversible lanes would use the center lane of Bee Caves Road for incoming traffic during morning peak traffic times and for outgoing traffic during evening peak traffic times.)



Q70 Lower the current speed limit

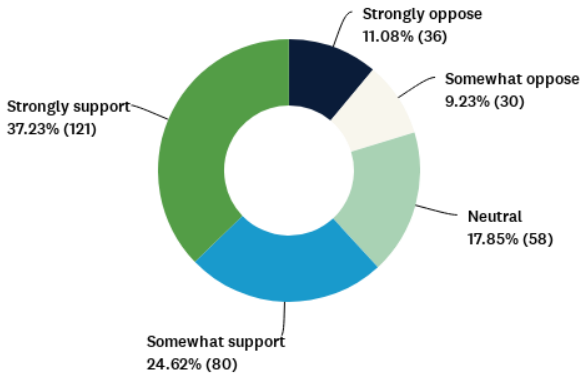


Q71 Add speed bumps or other traffic-calming measures



Beyond vehicular traffic, Rollingwood residents emphasized a desire for the City to prioritize improved walkability with shared use paths – sidewalks, bike paths, and trails – and street lights to promote safe use of such amenities. A majority of residents also supported adding a dedicated crosswalk across Rollingwood Drive near the park.

Q72 Add a dedicated crosswalk across Rollingwood Drive near park



Recommendations related to Mobility

1. Conduct a traffic study with an eye towards creating safe accessibility from the residential areas of Rollingwood to commercial areas along Bee Caves Road; specifically, along Dellana Lane, Rollingwood Drive, and Edgegrove Drive and at the crossings of these two roadways over Bee Caves Road.
2. Consider creating Pedestrian Refuge Islands and crosswalks at or near Bee Caves Road at the intersections of Rollingwood Drive and Edgegrove Drive (this requires additional study).
3. Consider adopting a policy allowing usage of golf cart type vehicles on residential roads and up to commercial areas at Bee Caves Road.
4. Encourage sidewalks on rear of commercial development for additional bike and pedestrian usage.
5. Add a crosswalk over Rollingwood Drive next to the Rollingwood Park.
6. Add an improved hike and bike path along Edgegrove Drive from Rollingwood Drive to Bee Caves Road.

Economic Development and Fiscal Policy

"Rollingwood projects should be funded primarily by use of revenue from property, sales and commercial taxes. All long term bond borrowing for infrastructure to be citizen approved. No short-term notes issued without tax payer approval." Citizen quote

Key Takeaways

- The City of Rollingwood's main sources of income are property tax revenues and sales tax revenues, allowing the City to provide the quality City services that residents and businesses have come to expect.
- The projected 2020-2021 total property tax revenues (from both residential real property and commercial real and personal properties) is $2.62 million, with $1.27 million committed to payment of debt service and $1.35 million available for maintenance and operations. Sales tax revenues from sales of retail goods within Rollingwood's commercial area is $852,887.
- With increases in property values in the Rollingwood area, revenues from property taxes are expected to increase.
- While Bee Caves Road is and will continue to be the only physical commercial area for Rollingwood, changes in the law with respect to the allocation of sales tax on internet sales are expected to increase the sales tax revenues received by the City.
- Maintaining the residential and family character of Rollingwood is much more of value to residents than increasing sales tax revenues.
- Implementing a City financial policy that reflects these values and factors is in the long term best interest of the City and will provide sound financial planning.

As part of the Comprehensive Plan Strike Force Survey distributed in April 2021, Rollingwood residents weighed in on a variety of potential priorities and shared their preferences for the Bee Caves Road Commercial Corridor. Responses revealed a desire for more restaurants and retail (small boutiques), with strong opposition to uses such as a hotel or additional multifamily housing options. Maintaining the low-density, single-family character of Rollingwood was identified as the number one priority for residents. Increased traffic and crime were primary sources of concern for respondents. *The list below indicates residents' preferred priority of potential goals for the Bee Caves Road Commercial Corridor*:

#1 - Maintain low-density, single-family character of Rollingwood (56.25%)
#2 - Protect property values and/or views of existing Rollingwood residences (18.87%)
#3 - Increase sales tax revenue (13.38%)
#4 - Increase retail and restaurant options (8.63%)
#5 - Maintain current traffic levels (6.27%)

Although residents showed a desire for increased retail and restaurants, the majority opposed the use of a limited tax incentive to encourage additional retail business to locate in Rollingwood's commercial corridor.

Discussion with respect to fiscal policy:

City services necessarily include both recurring annual costs (such as salaries, supplies, and on-going maintenance) and one-time long-term costs (such as capital improvements for water system upgrades and drainage improvements). In funding both types of costs, the City is benefitted by development of a fiscal policy that identifies and manages the costs to be paid annually from current revenues and costs that are appropriately funded through municipal bonds (debt). Bonds, most of which require voter approval, allow the City to finance the cost of large, long-term projects over the useful life of the project so that current and future users benefitted by the project share in the cost over its useful life. Each year, the City pays the principal and interest on bonds (the annual debt service - much like a home mortgage) using a portion of annual property taxes. Having an appropriate allocation of the use of property tax revenues between annual costs and long-term repayment of bonds, through a stated fiscal policy, not only benefits the City in setting its annual budget but also assists the City in showing financial markets that the City has properly planned its budgeting so that it can pay its obligations, enabling the City to maintain a strong bond rating, which in turn reduces interest rates on those bonds.

The Comprehensive Plan Strike Force, together with the City's bond advisors, U.S. Capital Advisors, has analyzed Rollingwood's current and future debt service, current and future interest rates on municipal bonds, and projected growth in property tax revenues. This analysis has been conducted to project the amount of capital that the City might be able to raise, at various impacts to annual property taxes. The results of this analysis are provided in the Bond and Tax Rate Analysis (2021), and, in summary, show the impact of new bonds on the Rollingwood portion of a residential property tax bill, and on the total property tax bill (which includes taxes assessed by other Travis County taxing jurisdictions), using the assumptions stated in the attachment. For example, to raise an additional $10 million in bonds, the annual cost to a residential property would be in the range of $400 per year per million dollars of property tax valuation. As property values increase, the annual cost per resident for a $10 million bond will reduce proportionally. Other changes will also impact this result, but these estimates provide a ballpark number for considering how larger long-term projects might be funded.

Economic Development Policy recommendations:

The Strike Force recommends the City develop a City financial policy, based on the values and circumstances identified above. The Strike Force recommends the following policies based on the community input identified in the April 2021 survey regarding development of the commercial corridor, and analysis of the City's ability to pay for bonds to afford quality public services:

1. Build and maintain a positive and competitive business-friendly climate that will retain, grow, and attract high-quality restaurants and retail businesses in the City's commercial corridor along Bee Caves Road.
2. Rather than build multi-story, multi-family housing, continue to invest in the single-family character and quality of life attributes that provide the City with a competitive advantage in terms of economic development and growth in property values.
3. Look first to new revenue made available by increases in the market value of new and existing Rollingwood properties to fund projects rather than raising property taxes.
4. Explore to the greatest extent possible third party sources of funds, including state and federal funds, to assist in financing of infrastructure projects.
5. Require voter approval for any new debt.
6. Develop a fiscal policy that balances use of tax funds between annual expenses and long-term project funding.

Implementation

The Implementation chapter of the Comprehensive Plan addresses how the policies and direction described in the previous chapters will be accomplished in Rollingwood. The Planning & Zoning Commission and City Council recognize these recommendations cannot be implemented all at once. Limitations of resources must be weighed against the desire to accomplish all recommendations at once. Therefore, this chapter of the Plan sets priorities for the objectives that should be undertaken.

This chapter also addresses future amendments of this Plan. Circumstances change as opportunities arise; therefore, to keep this plan vital and useful, it must be reviewed regularly, and the community must be involved in those reviews.

Revisions to the Comprehensive Plan and Priorities

The City Council reserves the right to change the priority list as objectives and strategies are completed, as circumstances change, and as new opportunities arise. As the City and community pursues an objective, they may find that upon detailed study, the objective or an associated strategy recommendation is not advisable. An alternative objective or strategy to meet the goal may be substituted. In addition, an objective that was identified as significant may be reduced in importance because of a change in circumstance. Another objective may be moved up on the priority list because a new funding source becomes available, another community organization has addressed or initiated efforts to address an objective, or a strong need arises. The list of priority objectives provided above is flexible and may be changed during the timeframe of this Comprehensive Plan.

It should also be noted that the inclusion of an objective or strategy in the Comprehensive Plan or priorities list does not guarantee implementation. The City Council also reserves the right to evaluate the need and cost of implementing an objective or strategy in light of current conditions and priorities as implementation proposals arise.

Amendments to the Comprehensive Plan

This Plan should be reviewed regularly so that is does not become out of date. Amendments to the Plan can also be made between the adoption of this Plan and the next update. The following are general guidelines to City Council, Planning & Zoning Commission, and City Staff:

- Public hearings should be held to allow citizens the opportunity to comment on proposed amendments.
- Regularly review the Comprehensive Plan's recommendations and the progress towards meeting them.

- Use the Comprehensive Plan as a guide for City of Rollingwood and community actions.
- Use the Comprehensive Plan as a guide for land use and zoning decisions, capital improvement planning, budgeting and other City actions.
- Seek and encourage partnerships to implement strategies and plan objectives. Partners might include the City, other local, state, and federal agencies, local businesses, the development community, and citizenry.

Implementation

The table on the following page lists all of the policy recommendations from each chapter of this Plan that should be prioritized for implementation by the City and the community. This list was developed in consideration of public comments, discussions at public workshops, and discussions among the Planning & Zoning Commission, City Council, and City staff. Available resources and financial realities shall be recognized during the implementation. The following sixty-two (62) policies have been identified as priorities for Rollingwood:

Future Policy/Objectives

FUTURE LAND USE CHAPTER	
General Policies	Review and, if necessary, create or strengthen City ordinances to protect Rollingwood tree canopy in residential and commercial areas.
	Create and encourage water-wise policies for landscaping in residential and commercial areas.
	Review and consider methods to ameliorate additional future drainage and storm water runoff, including additional drainage fees on new development.
	Review and revise City ordinances to ensure that new developments pay the costs they impose on drainage infrastructure.
	If allowable, enact rules making it more difficult to "upzone" properties from a residential use to a more intensive non-residential use.
Residential Policies	Commission a traffic study to address residents' concerns over the amount and speed of traffic within residential areas; look for ways to reduce cut-through traffic; consider installation of crosswalks and pedestrian islands to permit the safe crossing of Rollingwood Drive near the park.
	Prohibit short-term rentals.
	Allow accessory dwelling units on residential lots.
	Connect residential and commercial areas with a dedicated, safe pathway for pedestrians and bicyclists alongside Edgegrove Drive between Rollingwood Drive and Bee Caves Rd.
	Evaluate and consider connecting residential and commercial areas with a dedicated pathway along old Dellana Lane.
	Maintain standard and uniform setback and building rules on residential lots throughout Rollingwood regardless of whether a residential lot borders a lot that is either non-residential or outside Rollingwood.
	Regulate "estate lots" as necessary to protect nearby and adjacent residential properties.
Commercial Policies	Allow retail and office uses on all commercially zoned properties and encourage restaurant development where a restaurant use would not create a nuisance for adjacent residential properties.
	On the north side of Bee Caves Road, limit development on commercially zoned lots to two stories and 30 feet in height. On the south side of Bee Caves Road, limit development on commercially zoned lots to 3 stories and 45 feet in height.
	Maintain current Rollingwood Drive frontage setbacks (*i.e.*, setbacks between commercial buildings and Rollingwood Drive).
	Prohibit the clearing of native vegetation within the FEMA floodplain on commercially zoned properties.
	Work with stakeholders to envision and create a safer pedestrian crossing of Bee Caves Road at Edgegrove Drive. (Long-term vision: build a pedestrian bridge across Bee Caves Road within Rollingwood.)

Commercial Policies Continued (FUTURE LAND USE CHAPTER)	Replace current setbacks between commercially zoned properties and residentially zoned properties with a setback of 75 feet measured from the edge of any residentially zoned lot to the edge of any building on any commercially zoned lot. The clearing of native vegetation shall be prohibited in this 75-foot setback. In addition, the City should require replanting of previously cleared spaces within the 75-foot setback between the edge of any residentially zoned lot and the edge of any building on any commercially zoned lot.
	To reduce the number of ingress/egress points on Bee Caves Road, eliminate any existing code provisions that require a driveway on every commercially zoned lot.
	Encourage the building of walking and biking paths on commercially zoned lots along the south side of Dry Creek (sometimes called Eanes Creek) on the north side of Bee Caves Road.
	Enforcement: The City should require an as-built survey as part of its final permitting and Certificate of Occupancy for all new commercial development. In addition, the City should exercise its full discretion and employ all means to enforce all development rules regulating commercially zoned lots.
	Modify development standards as necessary based on following recommendations:
	Front set back:
	the front setback for commercial properties along the north side of Bee Caves Road be reduced from the current 25' setback to a 5' setback, where the developer has agreed to: 1) contribute any required right of way to TX DOT, and 2) implement a landscape plan, including appropriate irrigation and maintenance, that provides native species shade trees along sidewalks and rear lot pedestrian paths.
	Impervious cover:
	City should establish commercial impervious cover requirements such that impervious cover shall not exceed 55% provided that no new project development will create any increases to storm water runoff (either volume or rate of flow of runoff).
	Incentives: the development code should incentivize permanent low impact development practices such as rainwater harvesting, bio-retention, rain gardens, green roofs, infiltration/filter strips, conservation landscaping using native plants and trees that promote the area's natural habitat including bird-, bee-, butterfly-friendly plants, and natural area preservation over and above required greenbelt setbacks, by development of a schedule of impervious cover limit increases up to an additional 10% for use of such practices: 1) there are no increases to storm water runoff (either volume or rate of flow of runoff), 2) the site plan meets all TCEQ best management practices for water quality, and meets the design elements described below.
	Certification: all requirements associated with impervious cover incentives, storm water management and water quality be mandatory, not subject to variance, and enforced by requirements for engineering certification that the design meets all requirements as initially submitted in the permitting process and for engineering certification that the design as built meets all impervious cover, storm water management and water quality requirements before the issuance of any occupancy permit.
	Design requirements to lessen impact of commercial development to adjacent residential properties:

Commercial Policies Continued (FUTURE LAND USE CHAPTER)	Where roofs are visible from adjacent residential lots, the City should adopt appropriate design requirements that mask and/or eliminate the impact of (i) building mechanical elements (AC units, vents, wireless facilities, etc.) by requiring such elements be located at ground level and not on roofs, or if located on roofs, masked by the roof; (ii) require all solar panels be masked; and (iii) require the site plan to provide a vegetative buffer and safety features between a residential lot and a commercial lot where there is no greenbelt, topographical, or line of sight buffer between the commercial lot and any residential lot.
	The City should adopt lighting design criteria to eliminate impact to adjacent residential properties, down-shield night-time lights, and adopt standards consistent with the "Dark Skies" lighting policies of similarly-sized Central Texas Hill Country communities, the International Dark Skies communities or other state-certified "Dark Skies" organization.
	Review and revise necessary ordinances regarding interior and exterior lighting.
	Landscaping/Shade/setback incentives for commercial properties: the City should:
	Require that landscaping within the setback along Bee Caves Road, where possible, and along any pedestrian walkways, include sufficient trees to shade sidewalks and pedestrian paths.
	Employ a tree ordinance similar to that in residential areas that will preserve heritage trees, that requires replacement of heritage trees with a tree or trees of the same species and having the same total caliper inches, and require replacement of other protected trees so as to maintain current tree canopies.
	Safe harbor: the City should permit the renovation and, if necessary, rebuilding of existing structures on commercially zoned lots provided that such renovation or rebuilding (1) was in compliance with all City ordinances at the time it was built; and (2) is limited to the footprint of the existing structure.
	Update commercial signage regulations as needed to bring rules up to date with modern technology and building needs.
	Post-permit Enforcement and penalties: The zoning ordinance for commercial properties should include provisions sufficient to permit revocation of occupancy permits in the event the owner fails to maintain compliance with any permit requirement including impervious cover incentives, and landscaping, shade, setback requirements, and/or Dark Sky requirements, in addition to use of all fines and other enforcement provisions, including daily financial penalties for non-compliance.

PARKS AND RECREATION CHAPTER	
Additional Strike Force Recommendations	Add sources of shade to Rollingwood Park, including through tree planting
	Explore possibility of working with City of Austin and nearby neighbors to convert old Dellana Lane into a safe and publicly assessable hike and bike trail. (Long term: explore possibility of permitting golfcart use on pathway to connect residential areas with commercial corridor.)
	Improve and expand walking paths and sidewalks within Rollingwood Park
	The Strike Force took no position on the dog-park issues or concessions.

FACILITIES AND INFRASTRUCTURE CHAPTER	
Drainage	The Strike Force strongly supports implementing stormwater drainage improvements that address the most significant risks to the health and safety of Rollingwood residents. The Strike Force also emphasizes that drainage improvements were identified as the highest community need by residents. Because the Strike Force was asked not to reassess the 2020 Infrastructure Improvement Plan, it takes no other positions on drainage issues
City Hall	The Strike Force received input from City administrators and the Chief of Police on the need for more space and other improvements to City administrative and Police facilities. City and police employees indicated that there is no more space to add additional employees, that there is no shower for employees or private bathroom, and no private room to interview crime victims or suspects. However, the Strike Force did not take a position on which option should be selected for contemplated City Hall improvements.
Water	The Strike Force notes that many Rollingwood residents expressed the need to address frequent water-line breaks and boil-water notices. The Strike Force did not receive testimony or engineering reports on water lines and therefore defers to the City Council as to the best way to manage the City's water infrastructure.

MOBILITY CHAPTER	
	Conduct a traffic study with an eye towards creating safe accessibility from the residential areas of Rollingwood to commercial areas along Bee Cave Road; specifically, along Dellana Lane, Rollingwood Drive and Edgegrove Drive and at the crossings of these two roadways over Bee Caves Road.
	Consider creating Pedestrian Refuge Islands and crosswalks at or near Bee Cave Road at the intersections of Rollingwood Drive and Edgegrove Drive (this requires additional study).
	Consider adopting a policy allowing usage of golf cart type vehicles on residential roads and up to commercial areas at Bee Cave Road.
	Encourage sidewalks on rear of commercial development for additional bike and pedestrian usage.
	Add a crosswalk over Rollingwood Drive next to the Rollingwood Park
	Add an improved hike and bike path along Edgegrove Drive from Rollingwood Drive to Bee Cave Road.

ECONOMIC DEVELOPMENT CHAPTER	
	Build and maintain a positive and competitive business-friendly climate that will retain, grow and attract high-quality restaurants and retail businesses in the City's commercial corridor along Bee Cave Road.
	Rather than build multi-story multi-tenant housing, continue to invest in the single-family character and quality of life attributes that provide the City with a competitive advantage in terms of economic development and growth in property values.
	Look first to new revenue made available by increases in the market value of new and existing Rollingwood properties to fund projects rather than raising property taxes.
	Explore to the greatest extent possible third party sources of funds, including state and federal funds, to assist in financing of infrastructure projects.
	Require voter approval for any new debt.
	Develop a fiscal policy that balances use of tax funds between annual expenses and long-term project funding.

List of Appendices

- Pages 98-101 of *Eanes: Portrait of a Community* written by Linda Vance and Researched by Dorothy M. Depwe (1986)
- Page 257 of *Power, Money and the People: The Making of Modern Austin* by Anthony M. Orum (1987, 2002)
- Future Land Use Plan (1998)
- Bee Caves Road Corridor Study (1999)
- Capital Improvement Plan (CIP) for water and streets (2013)
- Park Master Plan (2018)
- City Branding Initiative (2018)
- Spatial Needs Assessment (2019)
- Retail Coach – Retail Market Analysis (2019)
- Retail Coach – Parcel-By-Parcel Analysis (2019)
- Retail Coach Recommendations (2019)
- Infrastructure Improvements Plan (IIP) (2020)
- Pegasus Survey Results (2020)
- Proposal for Rollingwood Reimagined (2021)
- Fiscal Forecast of Ad Valorem Tax Revenues (2021)
- Bond and Tax Rate Analysis (2021)
- Resident Generated – Residential Survey Results (2021)
- Resident Generated – Commercial Survey Results (2021)
- Engineer's Report on Wastewater Capacity (2021)
- Engineer's Report on Water Capacity (2021)

CITY OF ROLLINGWOOD, TEXAS
ZONING DISTRICTS MAP

THIS IS TO CERTIFY THAT THIS IS THE OFFICIAL ZONING DISTRICT MAP REFERRED TO IN THE ORDINANCES OF THE CITY OF ROLLINGWOOD

MAYOR
CITY OF ROLLINGWOOD

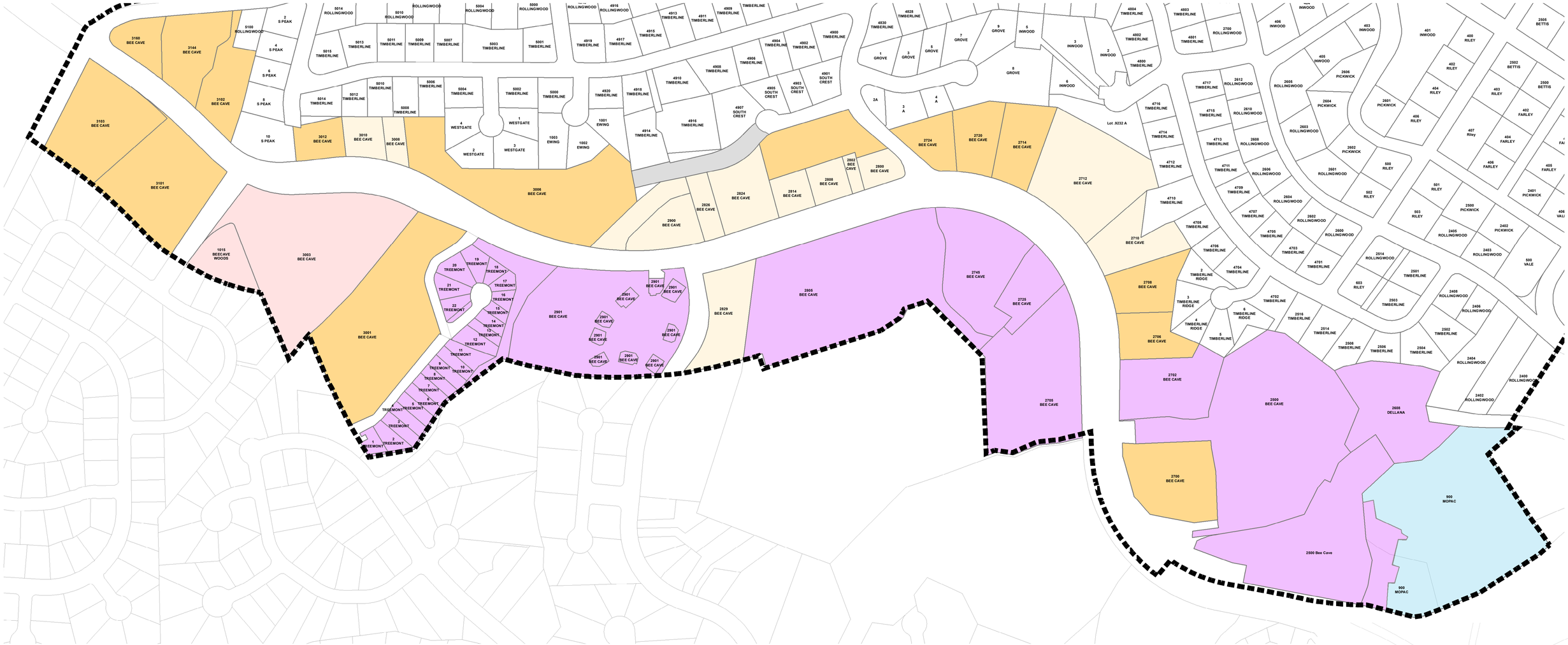
DATE

CITY SECRETARY
CITY OF ROLLINGWOOD

DATE

0 400 800 Feet

1 inch = 200 feet



Legend

Rollingwood Parcel Zoning

- Professional & Business Office District (C-1)
- Business District (C-2)
- Governmental & Institutional District (GI)
- Hospital District (H)
- Park District (P)
- Planned Unit Development (P.U.D.)
- Residential
- Undeveloped Street Right of Way
- City Limits

LNV
engineers | architects | contractors

Tax Impact at various borrowing levels - Rollingwood

The Comprehensive Plan Strike Force, with the assistance of the city's bond advisors, has developed the following data to advise residents of the to the Rollingwood property tax if the City were to use 20-year bonds to pay for city improvements. This paper is not intended to suggest this method of funding, but instead to identify the impact, at various levels of additional bond funds, so that residents can evaluate this funding option, among other funding options.

The following table shows the impact of new bonds on the Rollingwood portion of your property tax bill, and on your total property tax bill (which includes taxes assessed by other Travis County taxing jurisdictions).The following table shows the increase in Rollingwood portion of the tax bill (by percentage and tax rate) and the increase in the total tax bill (by percentage and tax rate), for a property having a valuation of $1M valuation, based on Travis County Tax Appraisal District (TCAD) 2020 property valuations, and assuming new bonds have a 20-year term.

Add'l Bonds	$/yr. to tax bill	% increase/ tax rate-RW	% increase/ tax rate -TCAD	Add'l debt service
$815,000	**$47 yr.**	**2%/.2416**	**.26%/1.9226**	**$51,238**
$1,620,000	**$95 Yr.**	**4%/.2464**	**.52%/1.9274**	**$102,476**
$2,445,000	**$142 Yr.**	**6%/.2511**	**.76%/1.9321**	**$153,714**
$10,000,000	**$405 yr.**	**17%/.2774**	**2.11%/1.9584**	***(@$670,000)**
$15,000,000	**$620 yr.**	**26%/.2989**	**3.23%/1.9799**	***(@$1M)**
$30,000,000	**$1266 yr.**	**53.4%/.3635**	**6.45%/2.0445**	***(@2M)**

Source: The US Capital Advisors Nov. 30 Tax Rate Analysis.

For comparison: The current RW tax rate is .2369%.
The current RW Tax per $1M in property valuation is $2369/yr. (RW tax rate of .2369 x $1M)
The current RW tax is 12.4% of the total TCAD tax bill.
The total TCAD property tax rate for RW properties is 1.9179%.
The total tax bill per $1M in property valuation is @$19,179. (TCAD tax rate x $1M)
The City of Rollingwood has a AA bond rating.

Notes: The rates, percentages and tax increases shown assume current interest rates and assessed property values and will change as these rates and values change. Costs of issuance are not included and may slightly increase the amounts shown. The percentages shown for the total tax column may be slightly higher for a resident whose school district tax is capped by the 0ver-65 exemption or for property owners with other exemptions that limit the tax values. Some Rollingwood residents that live within the boundaries of the Travis County Water Control & Improvement District #10 may pay an additional $0.0840 property tax.

The rates and amounts shown for the $10M, $15M, and $30M columns assume that assessed value of Rollingwood properties increases by 2% per year in years 2021-2026, and is level thereafter. The 2% is likely to be low, and that increases in property values will likely exceed 2% a year, but as the amount of this increase is not certain, we have used the 2% as a conservative measure. There may be other methods to lower the impact to the tax bill, such as refinancing existing bond and/or tax notes, but again, we have assumed a "conservative" measure, so as to not understate the impact that might result.

*The debt service in this column assumes "structured debt service" meaning some principal is deferred until a portion of the existing debt service is retired, resulting in somewhat higher interest costs than if debt service were level over the life of the bond. Example: For a $10M bond/20 yr. term, the increase interest would be @$360,150 with structured debt service than with level debt service.

PROPERTY TAX IMPACT OF NEW BONDS

The table below provides an estimate of the additional property tax on a property having a value of $1M if Rollingwood were to issue 20-year bonds in the amounts shown in Column 1 to pay for improvements.

(1)	(2)	(3)	(4)	(5)
Add'l Bonds	$/yr. to tax bill	% increase RW tax	% increase total tax	Annual debt service cost
$815,000	$47 yr.	2%	.26%	$51,238
$1,620,000	$95 Yr.	4%	.52%	$102,476
$2,445,000	$142 Yr.	6%	.76%	$153,714
$10,000,000	$405 yr.	17%	2.11%	@$670,000
$15,000,000	$620 yr.	26%	3.23%	@$1M
$30,000,000	$1266 yr.	53.4%	6.45%	@$2M

This table is based on 2020 Travis County Tax Appraisal District (TCAD) property valuations for the City of Rollingwood.

The RW portion of your tax bill is @12.4% of the total property tax bill.

OTHER CONSIDERATIONS IN FUNDING OF LONG TERM PROJECTS

Sources of revenues:

The property tax is Rollingwood's single largest source of funds. Rollingwood's current property tax revenues are @ $2,527,000/yr. for 2022. $1.23M of property tax revenues is used to pay debt service on long term debt, and $1.3M of property tax revenues is used to fund ongoing city operations.

Sales tax revenues are currently $550,000/yr.

Rollingwood also receives revenues from permits, water sales, drainage fees, court fees, and other fees. However, these fees primarily fund related city operations.

Debt funding:

Rollingwood has $14.4M in long term debt currently, consisting of:

- **$9.2M used for purchase of the wastewater system from LCRA,**
- **$2M from the commercial notes sold in 2019**
- **$3.2M from bonds issued in 2012 and 2014.**

$1.23M is the annual principal and interest payment ("debt service") on this outstanding long term debt, and is paid from, and secured by, property tax revenues.

Funding of City operations: The remainder of property tax revenue (@$1.3M) is used, along with sales tax revenues, fees, and other revenues, to fund city operations, at @$2.8M annually.

ADDITIONAL SOURCES OF FUNDS FOR CAPITAL PROJECTS

Increase in property valuations: The Travis County Tax Appraisal District valuation of Rollingwood property has increased by @25% from 2018 to 2021. Rollingwood has seen a parallel 25% increase in property tax revenues over this period, from $2M in 2018, to @$2.5M as of 9-1-2021. As RW property values increase, if tax rates are not reduced, the additional property tax revenues can be used to pay debt service.

Commercial property valuations: The Comprehensive Plan recommends revisions to the zoning for commercial properties (mainly reducing setbacks and modifying parking requirements) that may induce new development in the commercial corridor, increasing the values and property taxes on commercial properties and may generate additional sales tax revenues, which can be used to pay debt service.

Sales tax revenue increases: Sales tax revenues are expected to increase with changes in state law by which the location of the purchaser (instead of the location of the seller's warehouse) determines who receives the sales tax on internet sales.

Reduction/refinance of existing debt: In 2026, the $1.24M in annual debt service reduces by $330,000 - as a portion of existing debt is paid off. Using the prior chart, this $330,000 could fund @$5M in additional debt, assuming a 20-yr. bond. Alternatively, $2M of Rollingwood's current debt, now being paid over an 8-year term, could be refinanced to a 20-year bond, and the debt service reduction used to fund additional bonds.

Third party funds: Third party grants may be available for certain projects, either through state grants or federal infrastructure funds. State-backed zero or low interest funds may be available for certain projects, reducing debt service payments.

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN

FINAL REPORT

PREPARED FOR:
CITY OF ROLLINGWOOD
403 NIXON DRIVE
ROLLINGWOOD, TEXAS 78746

PREPARED BY

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

JUNE 2020

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
FINAL REPORT

Prepared For:

City of Rollingwood
403 Nixon Drive
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Prepared by:

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1120 S Capital of Texas Highway
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Firm No: F-6535

June 2020

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1 GLOSSARY AND ACRONYMS

AOI – Area of Interest: defined as areas within the City that are prone to property flooding and street flooding.

CAPCOG – Capital Area Council of Governments

CIP – Capital Improvement Plan

City – City of Rollingwood

FEMA – Federal Emergency Management Program

FIS – Flood Insurance Study

GIS – Geographic Information System

HMGP – Hazard Mitigation Grant Program

KFA – K Friese + Associates, Inc.

NFIP – National Flood Insurance Program

NOAA – National Oceanic and Atmospheric Administration

TCAD – Travis County Appraisal District

TCEQ – Texas Commission on Environmental Quality

TNRIS – Texas Natural Resource Information System

2 INTRODUCTION

The City of Rollingwood (City) contracted K Friese & Associates, Inc. (KFA) to perform a city-wide Infrastructure Improvements Plan (IIP) to identify and mitigate local infrastructure concerns, with a focus on stormwater drainage and flooding issues. This plan provides potential mitigations for these issues and a summary of potential funding sources to guide the City's development of a Capital Improvement Program (CIP).

To identify drainage issues in the City, the project team spent the first half of 2019 gathering data by distributing a public survey, holding an open house, and reviewing drainage concerns and solutions that were documented prior to this plan. The team also conducted fieldwork, created a web-based geodatabase of existing infrastructure, and developed an inundation model to assess flooding depths and velocities within the City.

Following the data collection and modeling efforts, the project team identified areas of interest (AOIs) and developed project concepts to address the highest priority issues. This final report includes summary sheets and cost estimates for these project concepts, as well as an analysis of potential external funding sources.

This report documents the methodology and results of the plan in the following sections:

- *Data Collection:* This section describes the combination of public outreach, hydraulic and hydrologic modeling, data synthesis, field investigation, and coordination with City staff that provided the information needed to develop this plan.
- *Findings:* This section details the methodology and results of the process by which the project team used the collected data to identify and rank the top 23 AOIs.
- *Recommendations:* This section contains information regarding the CIP projects and associated cost estimates that are recommended for further analysis and design to mitigate drainage issues at the AOIs.
- *Next Steps:* This section provides a roadmap for further analysis and coordination for the City of Rollingwood to undertake to successfully implement the projects recommended by this plan.

Figure 1: Edgegrove Drive Low Water Crossing (September 11, 2019)

3 DATA COLLECTION

This section of the report describes the data gathered by the project team from a variety of methods and sources that form the foundation for the plan.

3.1 GEOGRAPHIC DATA INVENTORY

Drainage-related data, including as-built documentation of infrastructure, and Geographic Information System (GIS) mapping data, was gathered and reviewed. Sources included the City of Rollingwood, the Federal Emergency Management Agency (FEMA), the Capital Area Council of Governments (CAPCOG), the City of Austin, the Texas Commission on Environmental Quality (TCEQ), the Texas Natural Resource Information System (TNRIS), and the Travis County Appraisal District (TCAD). Most GIS data was collected to provide background mapping data for jurisdictional boundaries, parcel boundaries, street names, creek centerlines, and FEMA flood hazard zones.

3.2 CITY COORDINATION

Site visits were conducted with City staff to incorporate their knowledge into the inventory. The experience and familiarity of City staff provided insight to better understand and document drainage issues including the severity and frequency of recurring issues, as well as maintenance impacts.

The City Engineer, LNV, provided documentation of past drainage complaints received by the City, including photo and video files for approximately a dozen properties. Other notable data obtained from the City included a previous survey prepared in CAD for the purpose of mapping city stormwater infrastructure for the TCEQ Municipal Separate Storm Sewer System (MS4) program.

3.3 FIELD INVESTIGATION

The KFA project team drove each City street in Rollingwood to build a database of geolocated existing infrastructure. The resulting inventory, which also builds upon as-built data provided by LNV, the City Engineer, is shown in a series of maps provided in **Appendix A**. The inventory includes the following infrastructure components (as observable from the right-of-way):

- Drainage infrastructure, including culverts, ditches, and inlets
- Water & wastewater infrastructure, including distribution lines, hydrants, manholes, and valves
- Electric infrastructure, including overhead utility lines and electric poles
- Observations of pavement issues based on a visual inspection during fieldwork

KFA conducted dry and wet weather field visits to investigate potential drainage concerns around the City to determine contributing factors and to assess the severity of each identified issue. Additional drainage concerns were documented and recorded during field visits with City staff and public outreach efforts. Through this process, KFA created an inventory in the form of a GIS database to track drainage issues for the IIP and develop a comprehensive view of the issues facing the City.

Figure 2: South Crest Drive, Looking West (June 6, 2019)

3.4 PUBLIC INVOLVEMENT

The largest collective data source within a community are those who live there and experience it every day. A public survey was sent out to the residents and businesses within the City to utilize this data source. The purpose of the public survey was to gather data regarding drainage concerns in and around the home or business of the participants as well as any city-wide concerns. The questions were designed to retrieve objective data and to solicit comments from the participants. A flyer accompanied the survey explaining the purpose of the Infrastructure Improvements Plan and detailing the response process. Participants had the option to fill out the survey online, via email, or by U.S. mail. The flyer and public survey sent out to the community are provided in **Appendix B.**

3.4.1 Public Meeting

The City and KFA hosted a public meeting for the Infrastructure Improvements Plan on Tuesday, March 26, 2019. The public meeting was held at City Hall from 4 p.m. to 8 p.m. Nineteen attendees recorded their names on the sign-in sheet, and an estimated five to ten others were in attendance.

Figure 3: City Hall Public Meeting (March 26, 2019)

3.4.2 Public Survey

According to the American Community Survey, there are 533 housing units within the City of Rollingwood. A total of 106 public survey responses were received online, by mail, and at the public meeting, which equals approximately 20 percent participation.

Each public survey response was reviewed and incorporated into a GIS database and map. The database provided a method to analyze both the content and the spatial locations of the responses and issues. Maps of survey responses are included in **Appendix C.** The responses provide firsthand accounts of those affected by known issues, such as the intersection of Nixon and Pleasant, the Hatley culvert, and the Edgegrove Drive low water crossing. However, respondents also identified previously undocumented drainage issues, including ponding at the east Timberline bend and overtopping of the culvert on east Rollingwood Drive.

3.4.3 Citizen Input

In addition to the public meeting and survey, the project team received input directly from a number of citizens via email, including photos and videos of historic flooding at various locations throughout the City. These flooding complaints have been organized and incorporated into the GIS database for this plan.

3.5 HYDRAULIC MODELING

The project team developed a preliminary existing conditions hydrologic and hydraulic model for the entire City limits utilizing Infoworks ICM v8.0.4. The model was used to identify areas at risk of flooding and estimate potential flood depths and velocities. A rapid assessment "rain-on-mesh" model was created for the 100-year storm. A "rain-on-mesh" model simulates rainfall directly on a surface and utilizes two-dimensional (2D) hydraulic computations to compute overland and channel flow. Because the model is conceptual, it conservatively assumes no infiltration of rainfall. More detailed modeling would be required to assess the impacts of increases in impervious cover on the City's drainage system.

The primary inputs into the model were the terrain surface, rainfall hyetographs and existing drainage infrastructure. The surface data used was the 2017 LiDAR downloaded from TNRIS and processed in ArcGIS. The 100-year rainfall depth of 10.2-inches used was from the COA DCM (December 2018) and was applied using a 24-hour SCS Type 3 storm distribution. A Manning's n-value of 0.055 (for grass cover) was selected to model overland flow ease, or resistance. This value was chosen to represent an average of the various surfaces throughout City. The model also included approximately a dozen of the largest culverts and pipes, including the Bee Cave Road, Edgegrove Drive, Pleasant Cove, and Rollingwood Drive culverts. Pipes whose total diameter at one location was less than 36 inches were not incorporated into the high-level model.

The projected depths and velocities produced by the model were a helpful tool to identify, confirm, and prioritize flooding issues throughout the development of this plan. A map of model depths can be seen in **Appendix D.**

4 FINDINGS

This section of the report describes how the project team used the data they collected to develop a list of AOIs for CIP project candidacy. An area of interest map is provided in **Appendix F** for reference.

4.1 AREA OF INTEREST IDENTIFICATION

A list of preliminary AOIs was developed using 2D modeling results, public input, field observations, and input from City staff. In total, 23 AOIs were identified. These areas of interest were categorized into their corresponding watersheds, drainage areas, and sub-basins.

- *Watersheds:* The watershed boundary divides the City into the portion that drains to Town Lake (or Lady Bird Lake), and the portion that drains to Eanes Creek.
- *Drainage Areas:* LNV delineated drainage basins for the 2012 City of Rollingwood Drainage Area Map. KFA reviewed these drainage areas delineations for consistency with available contour data and known drainage patterns within the City and used them for this plan.
- *Sub-basins:* Sub-basins were delineated for Drainage Area 5. Drainage Area 5 contains multiple tributaries with three or more areas of interest each. Because of the number of tributaries and potential interdependency of the AOIs, it was necessary to subdivide Drainage Area 5 into Sub-basins. The Drainage Areas and Sub-basins are shown on the map in **Appendix F**.

4.2 AREA OF INTEREST PRIORITIZATION

Due to the scale of improvements and a review of the 100-year storm inundation model, a 200-foot buffer around each area of interest was assumed to be its area of influence. This buffer was analyzed for each area of interest to determine the percentage of parcels in this buffer that experience:

- Depth of flooding at structures greater than or equal to 6 inches (based on the most recently available building footprint GIS data from the City of Austin GIS database, 2013). 6-inch depths were selected based on a review of model results as an effective threshold to distinguish between AOIs for the purpose of prioritization for the IIP.
- Flooding velocities greater than or equal to 6 feet per second (based on the maximum permissible velocity in the 100-year storm, from the City of Rollingwood Drainage Criteria Manual)

These factors were used to assess the need for a project at that area of interest. The percentage of parcels within the buffer that meet the depth criteria and the percentage of parcels within the buffer that meet the velocity criteria were added together to obtain a need-based rating for each area of interest, as shown in **Table 1**.

Figure 4: Nixon Drive Culvert, Looking Southeast/Downstream (June 6, 2019)

Five projects received equivalent ratings using this process: projects C, I, A, P, and U. For these projects, public comments received in the spring of 2019 as part of the development of this Infrastructure Improvements Plan were referenced to prioritize the AOIs with the most apparent impact to private property.

Upon further analysis of area of interest C, no project was proposed. For this reason, C was moved to the bottom of the priority list.

4.2.1 Project Dependencies

In addition to the prioritization based on flooding depth and velocities, another factor considered was project interdependency. It is recommended that where projects are interdependent – that is, they are directly upstream or downstream from one another – the downstream projects be completed first. It is possible that improving hydraulic efficiency will result in higher peak flows downstream, and it would be prudent for the City to construct downstream improvements prior to upstream improvements to mitigate potential impacts. Due to this risk of downstream impacts, it is further recommended that the City model potential improvements for interdependent AOIs together. Modeling the system together will ensure the City reaches the desired outcome for the system as a whole.

One example is AOI M. AOI M is considered to be a higher priority than project K, even though project K's initial ranking is higher. This is because AOI M is located downstream of AOI K and in order for improvements at AOI K to begin, the improvements at AOI M would need to be complete. The same principle is true for projects L and H. These recommendations have been incorporated into the rankings provided in **Table 1**.

Figure 5: Bee Caves Road Culvert, Downstream (September 11, 2019)

Projects involving drainage infrastructure large enough to be included in the citywide model were included in a proposed conditions inundation model to determine preliminary culvert and storm drain sizing. This model was compared to the existing conditions inundation model to assess project impact.

Table 1: Area of Interest Prioritization

Watershed	Drainage Basin	Drainage Subbasin	ID	Description	200-ft Area of Influence		Score	Ranking
					% of Parcels with Velocity > 6 fps	% of Parcels with Depth > 6" at Structures		
Eanes	10	-	B	Bee Caves Road low water crossing	75%	25%	1.00	1
Eanes	10	-	G	Edgegrove low water crossing	63%	13%	0.75	2
Town Lake	5	5-2	M*	Nixon/Pleasant property/roadway flooding	20%	40%	0.60	3
Town Lake	5	5-2	K	303 Pleasant Drive property flooding	0%	71%	0.71	4
Eanes	10	-	D	Timberline-South Crest roadway and property flooding	50%	17%	0.67	5
Town Lake	6	-	W	Hatley Drive and Riley Road flooding	33%	33%	0.66	6
Town Lake	5	5-1	L*	Pleasant Cove flooding	18%	36%	0.55	7
Town Lake	5	5-1	H	City Hall property flooding	29%	29%	0.57	8
Eanes	10	-	J	Rollingwood Drive ponding across from underground pond	0%	43%	0.43	9
Eanes	14	-	T	Rollingwood Drive property flooding	0%	30%	0.30	10
Eanes	10	-	N	Timberline ravine property flooding	0%	25%	0.25	11
Town Lake	5	5-4	Q	Rock Way Cove flooding and ponding	0%	20%	0.20	12
Eanes	14	-	S	Timberline bend water ponding	0%	18%	0.18	13
Town Lake	6	-	R	Hatley flooding and ponding	0%	18%	0.18	14
Town Lake	5	5-1	F	Nixon/Gentry property and road flooding	0%	17%	0.17	15
Town Lake	5	5-2	V	Pleasant Drive property flooding	0%	15%	0.15	16
Town Lake	5	5-4	O	Kristy Drive flooding	0%	10%	0.10	17
Town Lake	5	5-1	E	Randolph property flooding	0%	8%	0.08	18
Town Lake	5	5-2	I	Park Hills flooding and ponding	0%	0%	0.00	19
Eanes	9	-	A	Rollingwood Drive ponding in yards	0%	0%	0.00	20
Town Lake	5	5-3	P	Wallis/Hatley yard flooding	0%	0%	0.00	21
Town Lake	6	-	U	Vance/Riley ponding in road	0%	0%	0.00	22
Eanes	10	-	C**	Rollingwood Drive south side property flooding	0%	0%	0.00	23

*AOI is downstream of an AOI with a higher rating. It is given higher priority than the upstream AOI because downstream AOI's should be addressed first to mitigate adverse impacts.
**No project is recommended at this AOI due to further analysis, so this AOI is listed as the lowest priority level.

5 RECOMMENDATIONS

This section of the plan contains a summary of CIP project concepts that were developed by the project team to address the drainage issues at the AOIs described in the previous section. Specific project summaries and cost estimates can be found in **Appendix H** and **Appendix I**, respectively.

5.1 CIP DEVELOPMENT

The proposed improvements included in each CIP project are based on preliminary level engineering, field visits, and high-level topographic information; these are not detailed engineering analysis or design. The following sections discuss the CIP development process and prioritization.

Guiding principles from the City of Rollingwood Drainage Criteria Manual were used to determine planning-level preliminary sizing for recommended CIP projects: runoff from the 100-year storm event should be generally contained within City right-of-way. While modeling more frequent storm events was not included within the scope of this plan, the CIP project concepts that were developed provide planning-level approximations of pipe sizes and other parameters that could achieve other Drainage Criteria Manual objectives, like mitigation of adverse downstream impacts and runoff from the 25-year storm event contained within drainage infrastructure. Further analysis through modeling and design is required to determine exact design parameters.

5.2 PROJECT COST ESTIMATES

Planning-level cost estimates were developed for the proposed projects. <u>These cost estimates are based on the preliminary project concepts developed to mitigate the issue at each area of interest, and are likely to vary when detailed design is completed for each project.</u>

The cost estimates include:

- *Engineering & Surveying:* Engineering, surveying, and environmental costs were estimated as a uniform percentage of construction costs for each project.
- *Permitting Fees:* Estimated fees required by TCEQ or FEMA have been included in project cost estimates.
- *Construction:* Unit costs and quantities are provided in the project cost estimate sheets. Traffic control and roadway reconstruction are included where necessary.

The estimates do not include costs for:

- *Right-of-Way & Easement Acquisition:* It was determined in the course of the project through close coordination with the City that additional research is required to determine right-of-way and easement acquisition needs. It is recommended that the City perform this research prior to implementation of recommended CIP projects.

Due to these limitations in available information and the associated impacts on the design of proposed projects, it is recommended that construction costs continue to be refined as this information is made available and projects are further developed.

Cost summary sheets for each project can be found in **Appendix I**. A summary of costs is provided in **Table 2**. As shown in the table, costs for projects that comprise a combined system are bundled together. These project combinations are projects E and F; projects M, K, and V; projects Q and P; and projects S and T.

Also note that a cost estimate was not generated for the Bee Cave Road crossing of Eanes Creek at AOI B. The flooding along Bee Cave Road has added complexity with the adjacent tributary, roadway design implications and would require significant TxDOT involvement. It is the opinion of KFA that this AOI would

require its own feasibility study to understand flooding sources, roadway implications and involvement with TxDOT prior to developing a cost estimate.

Table 2: Project Ranking and Cost Summary

ID	Project Name	Cost	Ranking*
B	Bee Caves Road Drainage Improvements	*Not Estimated*	1
G	Edgegrove Drainage Improvements	$ 2,631,000	2
M	Nixon/Pleasant Roadway Drainage Improvements	$ 5,283,000	3
K	Pleasant Drive Drainage Improvements	*included in M*	4
D	Timberline-South Crest Drainage Improvements	$ 558,000	5
W	Hatley Drive Drainage Improvements	$ 654,000	6
L	Pleasant Cove Drainage Improvements	$ 490,000	7
H	City Hall Property Drainage Improvements	$ 475,000	8
J	Underground Infiltration Basin Drainage Improvements	$ 883,000	9
T	East Rollingwood Drive Drainage Improvements	$ 2,122,000	10
N	Timberline Drive Drainage Improvements	$ 380,000	11
Q	Rock Way Cove Drainage Improvements	$ 816,000	12
S	East Timberline Drive Drainage Improvements	*included in T*	13
R	Hatley Drive Drainage Improvements	$ 400,000	14
F	Nixon/Gentry Drainage Improvements	$ 2,024,000	15
V	Pleasant Drive Drainage Improvements	*included in M*	16
O	Kristy Drive Drainage Improvements	$ 217,000	17
E	Randolph Place Drainage Improvements	*included in F*	18
I	Park Hills Drainage Improvements	$ 238,000	19
A	Rollingwood Drive West Drainage Improvements	$ 589,000	20
P	Wallis and Hatley Drainage Improvements	*included in Q*	21
U	Riley Rd and Vance Ln Drainage Improvements	$ 141,000	22
C	Rollingwood Drive South Drainage Improvements	*Not Estimated*	23
	SUM	**$ 17,901,000**	

* Ranking is based on velocities and flooding depths at structures from the inundation model.

5.3 ADDITIONAL INFRASTRUCTURE IMPROVEMENTS

While this Infrastructure Improvements Plan is focused primarily on drainage, additional infrastructure improvements have been incorporated into the plan in several ways:

- Projects identified and recommended for inclusion by City staff
- Projects identified by the project team during development of the IIP
- Recommended next steps listed in this section of the report

5.3.1 Projects Identified by City Staff

City staff reviewed the recommended CIP projects identified by this plan for alignment with other infrastructure needs that were identified at the time of this plan, to see if projects could be completed concurrently for time and cost efficiency. The City provided construction plans and a cost estimate for a waterline improvement project on South Crest Drive that could be completed in conjunction with project D. A cost estimate for this waterline is included on the project summary and cost estimate sheets for project D in **Appendix H** and **Appendix I**.

5.3.2 Projects Identified by IIP

Roadway reconstruction has been incorporated into project concepts and cost estimates where necessitated by the drainage improvements. For example, raising and repaving the road on Pleasant Cove is recommended for project L in conjunction with regrading the adjacent channel to seek to maintain access to homes during flooding events. Similarly, roadway improvements are included with project G along Edgegrove Drive and South Crest Drive to accommodate the bridge that is recommended to replace the existing low water crossing on Edgegrove Drive.

5.3.3 Recommended Next Steps

For a detailed assessment of other infrastructure improvements, it is recommended that the City allocate resources to the creation of the following citywide plans to assess infrastructure needs comprehensively:

- Sidewalk Master Plan
- Utility Master Plan
- Traffic Calming Master Plan *(The City completed a Traffic Calming Study in 2001 that can be used as a reference, but an updated plan should be completed to assess current needs.)*

As discussed in **Section 6.2** of this report, verification of right-of-way and easement data across the City should be performed prior to the design of the drainage projects recommended by this plan. Similarly, this data should be obtained prior to developing the other infrastructure plans listed above. Knowledge of where the City currently holds right-of-way and easements will be crucial information to inform what options are available to the City when it comes to the installation of sidewalks, underground utilities, and other potential projects.

When the drainage projects proposed by this plan go out for design and construction, all current City plans (including the above list) should be reviewed for two reasons:

1. If any additional projects are proposed in the vicinity of the drainage projects, the City should consider whether it makes sense to combine the projects for the sake of time and cost efficiency.
2. Infrastructure projects like sidewalks and traffic speed humps are likely to impact drainage patterns. As detailed design parameters are developed for each drainage project, it is important to consider whether the addition of other infrastructure should be considered in the drainage analysis for the project.

6 NEXT STEPS

While this Plan provides a preliminary assessment of top drainage issues and potential solutions across the City of Rollingwood, additional study, coordination, analysis, and design are required for implementation.

6.1 ONGOING DATA NEEDS

During the course of this project, a significant data needs issue came to KFA's attention that must be addressed prior to design and implementation of CIP projects. There is currently no comprehensive and up-to-date database of right-of-way and easements belonging to the City. The lines between public right-of-way and private property with respect to drainage, utility, roadway and other public infrastructure have been blurred over time through verbal agreements and changes in property ownership.

Without this data, the definition and design parameters for each of the recommended CIP projects will be unclear. For example, if the City has or is able to obtain a drainage easement for a swale that can sufficiently contain runoff from the 25-year storm, it may not be necessary to build underground storm drain infrastructure to convey runoff in this location. On the other hand, if no easement exists and one cannot be obtained, the City may choose to construct storm drain in order to reroute the flow to where drainage conditions can be monitored and maintained by the City.

Due to the relative lack of existing documentation, defining existing easements and right-of-way will be a greater than average effort. For the purposes of this plan, it has been assumed that the City will pursue easements on private property where necessary in order to implement recommended drainage projects.

Figure 6: Rockway Cove Culvert, Looking Southwest/Upstream (September 11, 2019)

6.2 MODELING

The 2D 100-year inundation model prepared for this project is a preliminary model that is appropriate for planning purposes. In order to more fully understand project dependencies and mitigate adverse impacts, each proposed project must be modeled with a greater level of detail. It is assumed that a more thorough assessment of adverse impacts will be completed at the time of design for each project, when detailed design parameters are determined.

6.3 INTERAGENCY COORDINATION

It is also strongly recommended that prior to moving forward with the design of any of these projects, the City of Rollingwood coordinate with the City of Austin Watershed Protection Department to discuss what

permitting, coordination, and mitigation measures may be required based on the potential impacts of the proposed projects on City of Austin waterways downstream of the City of Rollingwood.

6.4 ATLAS 14 CONSIDERATIONS

The National Oceanic and Atmospheric Administration's (NOAA) National Weather Service (NWS) published Atlas 14 Volume 11 (Texas) in September of 2018. Atlas 14 is a historical rainfall study that provides updated precipitation frequency estimates based on new statistical methods and a greater range of historical precipitation data extending through 2017. Rainfall precipitation frequency estimates are used for the purposes of flood risk management and infrastructure design, including the sizing of pipes and ponds, and determination of floodplain limits. During the development of this plan, discussions have arisen regarding the incorporation of Atlas 14 rainfall data into the modeling and recommendations.

6.4.1 Approach to Rainfall Data for This Plan

The hydraulic modeling and preliminary pipe sizing for this Infrastructure Improvements Plan is based on current City of Rollingwood policies, including the following sections of the City code and drainage ordinance:

- "Storm drainage facilities shall be designed and constructed in compliance with this Article 3.09, the City of Austin, Texas (COA) Drainage Criteria Manual Section 2-8 in effect on September 9, 2014 (the "COA DCM Regulations") and the City of Rollingwood Drainage Criteria Manual (Rollingwood DCM) attached to this Article as Appendix 3.09 A, and incorporated herein by reference. No amendments made to the COA-DCM Regulations by the COA shall become effective unless adopted by the Rollingwood City Council" (Drainage Ordinance Sec. 3.09.002).
- "Drainage calculation methods shall be based on the COA DCM (Supplement 9 – 2014) Sections 2-8" (Drainage Ordinance Sec. 3.09.005(c)).
- "The areas of special flood hazard identified by the Federal Emergency Management Agency in the current scientific and engineering report entitled, "The Flood Insurance Study (FIS) for Travis County, Texas and Incorporated Areas," dated January 6, 2016, with accompanying flood insurance rate maps or flood boundary-floodway maps (FIRM or FBFM), index panel 48453C0445H, dated January 6, 2016, and any revisions thereto are hereby adopted by reference and declared to be a part of this article" (City Code Sec. 103-116).

Atlas 14 rainfall data is not incorporated into this plan because of the complex policy questions that must first be answered that will determine *how* Atlas 14 rainfall data is incorporated into the City of Rollingwood's code, ordinance and criteria manuals. These questions are numerous and far-reaching, including the following:

- **Which storm frequencies will the City choose to regulate?** The Atlas 14 study includes rainfall data for the one-, two-, five-, ten-, 25-, 50-, 100-, 200-, 500-, and 1000-year storm events. The degree to which the City decides to regulate stormwater runoff based on the new rainfall data will determine which of these storm events are incorporated into design criteria for new drainage infrastructure.
- **What level of service will the City seek to provide for stormwater management?** For example, channels are currently designed to contain runoff from the 25-year storm event within the channel and runoff from the 100-year storm event within the public right-of-way (City code Sec. 103-231). Instead of maintaining the analogous level of service with their drainage infrastructure for the updated rainfall data, some cities are choosing to modify design parameters. An example of this approach could be the City of Rollingwood changing its drainage criteria to require the 10-

year storm event to be contained within the channel and the 25-year event within the right-of-way.

- **How will the City of Rollingwood respond to modifications to FEMA floodplain limits?** The floodplain boundaries within the City of Rollingwood are directly tied to the floodplain boundaries within the City of Austin. Therefore, revisions that the City of Austin decides to submit to FEMA to modify the FEMA Flood Insurance Rate Map (FIRM) panels in the Austin area directly impact the City of Rollingwood. It is known that the City of Austin will re-study the watersheds within the City utilizing the Atlas 14 rainfall data, and therefore the FEMA FIRM panels (which delineate floodplains) for the City of Rollingwood will change. The City should consider whether it wants to participate in the re-study with the City of Austin and what benefits that may serve.
- **How will flood insurance requirements change for properties where the floodplain has changed?** The City of Rollingwood currently refers to FEMA's Flood Insurance Study (FIS) for Travis County from 2016 for the determination of areas of special flood hazard (City code Sec. 103-116). As a member of the National Flood Insurance Program (NFIP), the City must adopt updates to the FIS and FIRM panel in order to avoid suspension from the NFIP. Note that the City may adopt an ordinance that automatically adopts the most recently available flood elevation data provided by FEMA. The revision of the floodplain limits and elevations within the City of Rollingwood will change the number of properties that require flood insurance.
- **How will changes to floodplains affect development regulations?** This is up to the City of Rollingwood. At a minimum, the City must have a floodplain management ordinance that meets or exceeds the minimum NFIP requirements. It is suggested that City staff review the floodplain regulation changes proposed by the City of Austin to start a discussion on regulations that could benefit the City of Rollingwood. (http://austintexas.gov/floodplainrules)
- **When will the City of Rollingwood take action regarding Atlas 14?** With respect to floodplain regulations, it is recommended that the City of Rollingwood begin taking action now. As stated above, the City of Austin will revise the FEMA floodplain boundaries and this will directly impact the City of Rollingwood whether the City is prepared or not. If the City begins to educate residents on the potential changes due to Atlas 14 and begins to regulate development and stormwater management to higher standards now, the City will be better prepared for the coming changes. Like the City of Austin and Travis County, it may benefit the City to use the 500-year floodplain as a proxy for the new Atlas 14 100-year floodplain until final results of the new rainfall data have been incorporated into the FEMA FIRMs. This approach in combination with public education will help ease the impact of the revised FEMA maps when they are adopted. With respect to City stormwater management, such as City stormwater infrastructure, or requirements for development permit applications outside of the floodplain, the City should begin discussing how it would like to regulate stormwater (see the first two bullets above).

Ultimately, the Atlas 14 rainfall data illustrates that Central Texas is more likely to experience larger rain events than previously thought. The City regulates stormwater through the Drainage Criteria Manual and Code of Ordinances in order to protect the public from flood risk and reduce expense after flood events. Updates to rainfall data deserve particularly careful consideration in Rollingwood, given the City's proximity to Lady Bird Lake, lack of residential impervious cover limitations, and shared boundaries with the City of Austin and the City of West Lake Hills. Because of the complexities and implications of Atlas 14 incorporation, 100-year rainfall data from the City of Austin Type III SCS 24-hour storm duration was used for this plan's preliminary hydraulic modeling in accordance with the City of Rollingwood's current drainage ordinance.

While the City determines its desired direction regarding Atlas 14, it should continue to assess appropriate rainfall data to use on a project-by-project basis. In order to account for likely increases in project costs due to future incorporation of Atlas 14 data, a contingency of 10% has been incorporated into the preliminary project cost estimates included in this plan. This figure is based on cost increases experienced by other agencies as a result of incorporating Atlas 14 data into hydraulic analysis for previous projects.

6.4.2 Recommended Approach for Future Consideration of Policy Implications

It remains for the City to determine its response to Atlas 14 data. The following steps are recommended for the City to investigate Atlas 14 further and begin to make important policy decisions:

- Conduct a peer review of similarly sized municipalities in Central Texas to learn what approach to design criteria and development regulations other communities are adopting in response to the Atlas 14 data.
- Develop a set of Atlas 14 adoption scenarios outlining potential paths the City could take to incorporate the data into City policies.
- Conduct public meetings. Educate the public on the potential impacts and receive input on an appropriate path forward for the City.
- Perform an economic study to analyze the costs and benefits of different Atlas 14 adoption scenarios to the residents and businesses of Rollingwood.
- Develop and adopt new policies in accordance with the City's goals and priorities.

Finally, it is recommended that the City update the improvements proposed by this plan once decisions have been made regarding implementation of Atlas 14 rainfall data, as it may have a significant impact on drainage facility sizing, target level of service, and other design parameters within the City's Drainage Criteria Manual.

6.5 PLANNING & DESIGN

The project concepts provided in **Appendix H** provide a possible way to improve drainage at each of area of interest identified by this plan. These project summaries provide order-of-magnitude cost estimates and give a head-start to future planning and design efforts, but are not fully vetted and modeled improvements. Similarly, the cost estimates are intended for planning and programming purposes only and should not be used for construction.

Further coordination with the City and drainage analysis is required to develop specific design parameters and detailed design for each project. A major unknown element for project development is where the City currently has right-of-way and drainage easements. Additional research to determine where easements exist and where they can be acquired will help inform the final design for each project recommended by this plan.

6.6 REGIONAL DETENTION CONSIDERATIONS

Another topic for further study is whether regional detention can play a larger role in improving the drainage conditions within Rollingwood. Runoff generally flows faster through storm drain systems than it does overland, so installing storm sewer systems can increase downstream flow rates. Detention is one way to counteract this effect.

For this plan, the preliminary pipe sizing was based on the City of Rollingwood Drainage Criteria Manual and preliminary review of downstream impacts. When runoff that currently flows overland is captured and conveyed in a storm drain system, the runoff travels faster which can potentially increase peak flows

at the outfall. While detailed impact analysis was not performed, an effort was made to review the preliminary pipe sizing with respect to potential downstream impacts. In order to not cause any downstream impacts, the pipes in some systems may perform at a level of service lower than the current Criteria Manual guidance. An alternative solution to allow larger pipes and a higher level of service while preventing downstream impacts is to provide detention at key locations.

One location for potential detention discussed with City staff is the creek bed just upstream of the Pleasant Cove culvert. By observation of the inundation mapping, this area is already storing runoff upstream of the culvert. It is possible that culvert crossing (AOI L) could be optimized to maximize the natural storage area upstream of the crossing. In addition, there may be opportunity to grade out the channel banks to increase the size of the storage area or combine the area with AOI H. Note that grading within this area will require careful consideration for slope stability and environmental review to ensure USACE permitting is not required.

6.7 ADDITIONAL CONSIDERATIONS

As previously noted, the primary challenge within the City in terms of improving the drainage infrastructure is the lack of right-of-way and easements. However, there are also other challenges the City faces with regulating new development. Moving forward, the City should consider the following to maximize benefit to the residents, utilize funding efficiently, and effectively regulate new development:

1. Ensure new development is considering offsite contributing drainage area as well as site impacts. Establish a policy for drainage easement dedication for new development when offsite runoff will be conveyed through the property. In order improve the drainage within the City, the City must have the ability to maintain drainage infrastructure.
2. For the City to plan for and design City stormwater infrastructure to accommodate an ultimate, fully-developed future condition, it would be prudent to establish a maximum allowable impervious cover percentage for residential land use. If impervious cover is not regulated, additional drainage infrastructure, higher development fees, and/or acquisition of more drainage easements will be necessary to allow the City to continue to mitigate flooding issues.
3. Additional policy-related measures for floodplain management can be found in *A Guide for Higher Standards in Floodplain Management,* prepared by the Association of State Floodplain Managers in 2013 and made available at https://www.floods.org/ace-files/documentlibrary/committees/3-13_Higher_Standards_in_Floodplain_Management2.pdf. This guide contains language that can help communities such as Rollingwood establish new policies or strengthen existing ones to protect their communities from flood risk. Examples include requirements for finished floor elevations, foundation design, setbacks for land adjacent to streams, and use restrictions.
4. Establish drainage criteria that requires the comparative review of the flow rate, velocity, depth, and flow type of runoff leaving development and redevelopment projects between pre- and post-project conditions. While the City does currently require new development to detain runoff, it is equally as important to ascertain that runoff leaving a site as sheet flow pre-project does not then leave as concentrated flow post-project. It is also vital that development maintains existing drainage patterns so runoff does not leave the site in a different location post-project.

6.8 SUMMARY OF OUTSIDE FUNDING MECHANISMS

As part of the KFA Project Team, The Goodman Corporation researched external funding sources that could be leveraged by the City to assist with implementation of the recommended CIP projects. Examples include Texas Water Development Board grants, TxDOT Transportation Alternatives funding, and FEMA Flood Mitigation Assistance (FMA). These and other funding sources are described in **Appendix J** as they relate to the specific CIP projects recommended by this plan.

The majority of the recommended projects are, at a minimum, eligible for one or more discretionary funding sources. However, the competitiveness of the projects varies and is difficult to estimate without the completion of further evaluation via a benefit-cost analysis.

Based on the analysis completed thus far, the best projects for discretionary funding support appear to be the Bee Caves Road Drainage Improvement project and the projects related to City Hall Drainage.

Figure 7: Pleasant Cove Culvert, Looking Northeast/Downstream (September 11, 2019)

Recommended next steps for the City to pursue external funding are as follows:

- Conduct detailed outreach with individual property owners to obtain and assemble census tract-level information related to individual flood-related losses, National Flood Insurance Program (NFIP) insurance status, and claim amounts. This information will help to validate whether or not FMA grants will be applicable to individual projects.
- Perform a benefit-cost analysis for all of the projects. Due to the nature of these projects, it is recommended that FEMA methodology be used. This data could also be used to adjust the project ranking information provided as well as determine which projects are or are not eligible for Hazard Mitigation Grant Program (HMGP) funds through FEMA.
- Develop and process for ongoing coordination with Travis County, the City of Austin Watershed Protection Department, and the Lower Colorado River Authority and any other applicable entities to identify opportunities for partnership projects.

6.9 SUMMARY OF INTERNAL FUNDING MECHANISMS

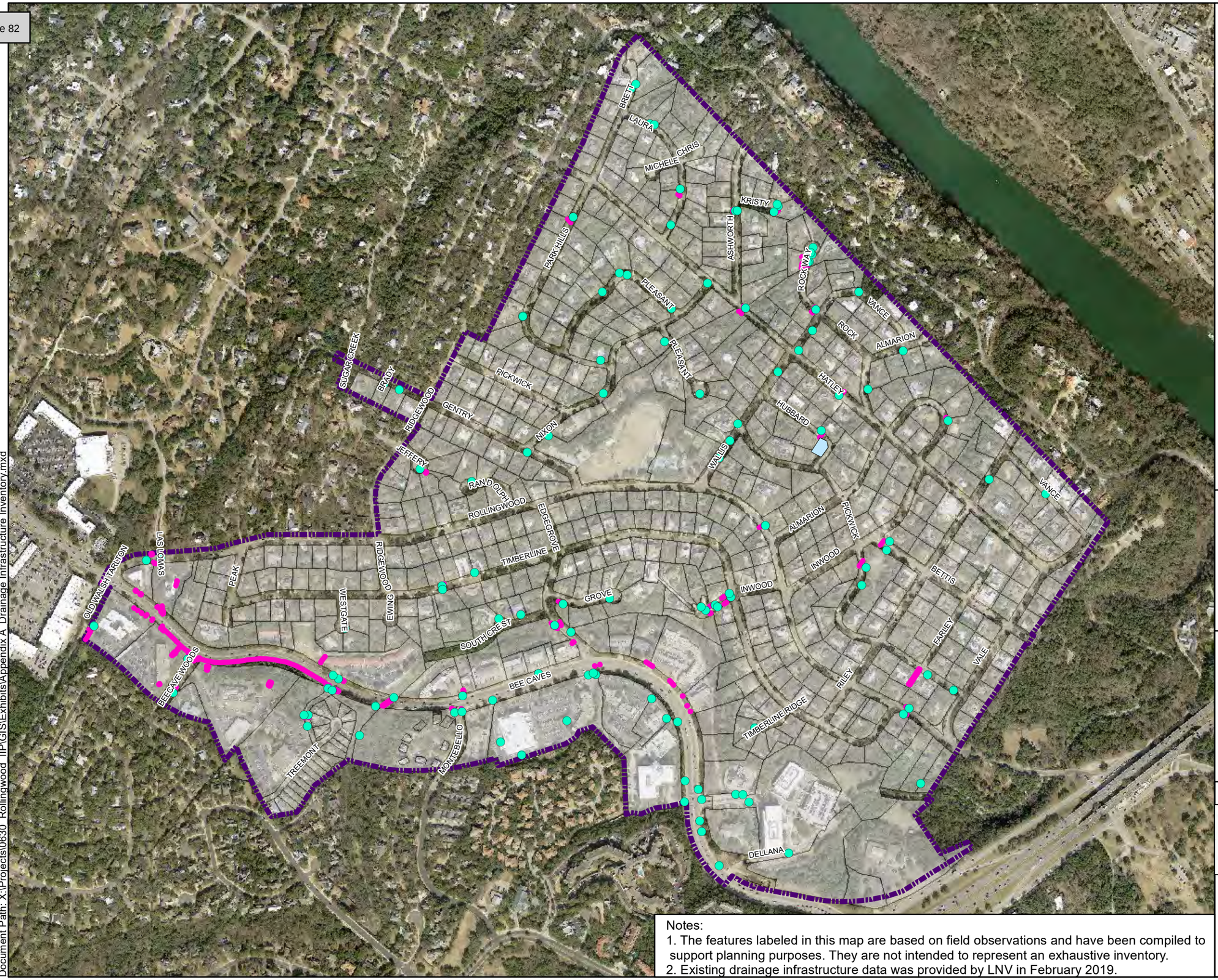
In addition to the external funding mechanisms mentioned above, there are internal funding mechanisms that the City could leverage to support the installation and maintenance of drainage infrastructure. Two such funding mechanisms are outlined below:

1. Drainage Utility Fee: Several municipalities in the area, including Austin, Fredericksburg, and Killeen, have implemented a drainage utility fee for this purpose. The amount and structure of drainage utility fees can vary; in some cities the amount of the fee is based on property size, zoning classification, or amount of impervious cover, while others use a flat monthly rate.
2. Rollingwood Stormwater Discharge Permit (RSDP): Another option for the City to consider is to modify the current RSDP structure to require redevelopment efforts to contribute to a fund for citywide drainage improvements.

Appendices

Appendix A: Infrastructure Inventory Maps

- Drainage Infrastructure Inventory
- Electric Infrastructure Within Right-of-Way
- Water & Wastewater Infrastructure Within Right-of-Way
- Results of Visual Pavement Observations



Legend

- Rollingwood City Limits
- Parcels
- Existing Detention Pond
- Existing Inlets
- Existing Drainage Infrastructure (2010)

City of Rollingwood Infrastructure Improvements Plan

Drainage Infrastructure Inventory

N

0 600 1,200 Feet

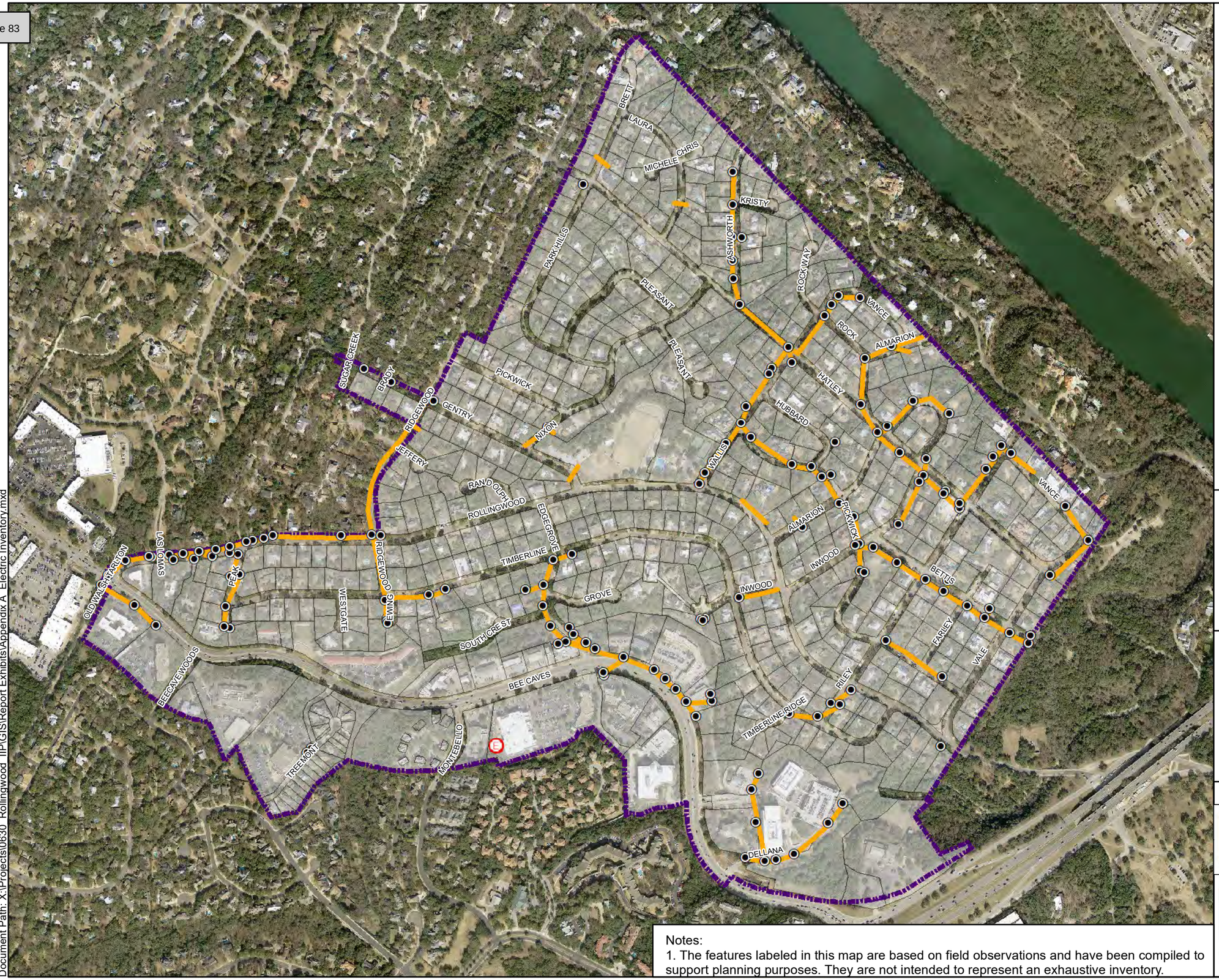
Date: 10/25/2019

ROLLINGWOOD TEXAS

K FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

Notes:
1. The features labeled in this map are based on field observations and have been compiled to support planning purposes. They are not intended to represent an exhaustive inventory.
2. Existing drainage infrastructure data was provided by LNV in February 2019.

Document Path: X:\Projects\0630 Rollingwood II\PGIS\Exhibits\Appendix A Drainage Infrastructure Inventory.mxd



Legend

- Rollingwood City Limits
- Parcels
- Overhead Electric in Right-of-Way
- Electric Manhole
- Electric Pole

City of Rollingwood Infrastructure Improvements Plan

Electric Infrastructure Within Right-of-Way

N

0 600 1,200 Feet

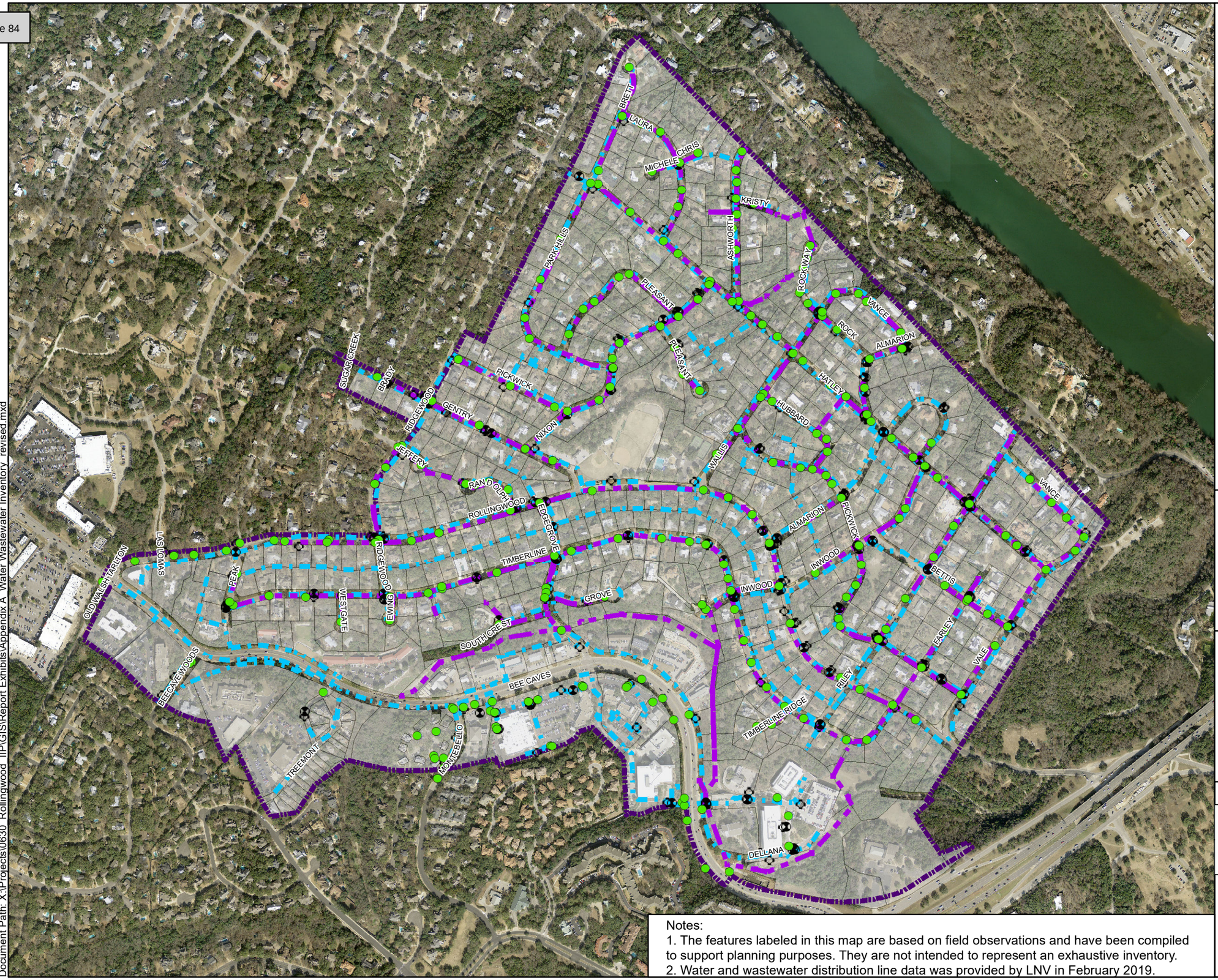
Date: 11/26/2019

ROLLINGWOOD TEXAS

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

Notes:
1. The features labeled in this map are based on field observations and have been compiled to support planning purposes. They are not intended to represent an exhaustive inventory.

Document Path: X:\Projects\0630 Rollingwood IIP\GIS\Report Exhibits\Appendix A Electric Inventory.mxd



Legend

- Rollingwood City Limits
- Parcels
- Utility Manhole
- Fire Hydrant
- Valve
- Wastewater Collection Line
- Water Distribution Line

City of Rollingwood Infrastructure Improvements Plan

Water & Wastewater Infrastructure Within Right-of-Way

N

0 600 1,200 Feet

Date: 6/10/2020

ROLLINGWOOD TEXAS

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

Notes:
1. The features labeled in this map are based on field observations and have been compiled to support planning purposes. They are not intended to represent an exhaustive inventory.
2. Water and wastewater distribution line data was provided by LNV in February 2019.

Document Path: X:\Projects\0630 Rollingwood IIP\GIS\Report Exhibits\Appendix A Water Wastewater Inventory_revised.mxd

Legend

- Rollingwood City Limits
- Parcels
- Pavement Issues from Visual Inspection

Raveling & loss of surface aggregate

Rippling and shoving

Raveling & loss of surface aggregate

Broken curb

BRETT
LAURA
CHRIS
MICHELE
PARKHILLS
ASHWORTH
KRISTY
ROCKWAY
PLEASANT
VANCE
ROCK
ALMARION
SUGAR CREEK
BRADY
RIDGEWOOD
PICKWICK
GENTRY
NIXON
JEFFERY
HATLEY
HUBBARD
WALLIS
RANDOLPH
ROLLINGWOOD
EDGEGROVE
TIMBERLINE
PICKWICK
INWOOD
OLDWASHINGTON
LASTOLOMAS
PEAK
WESTGATE
RIDGEWOOD
EWING
GROVE
SOUTH CREST
BEE CAVES
BEECAVE WOODS
TREEMONT
MONTEBELLO
BETTIS
FARLEY
VALE
RILEY
TIMBERLINE RIDGE
DELLANA

Notes:
1. The features labeled in this map are based on field observations conducted in February 2019 and have been compiled to support planning purposes. They are not intended to represent an exhaustive inventory.

City of Rollingwood Infrastructure Improvements Plan

Results of Visual Pavement Observations

N

0 600 1,200 Feet

Date: 10/25/2019

ROLLINGWOOD TEXAS

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

Document Path: X:\Projects\0630 Rollingwood IIP\GIS\Exhibits\Appendix A Pavement Inventory.mxd

Appendix B: Public Outreach Materials

- Public Flyer
- Public Survey

ROLLINGWOOD TEXAS

PUBLIC SURVEY

Date: _____

First Name: _____ **Last Name:** _____

Address: _____

House# *Street Name*

We have heard your concerns about flooding and drainage in our City, and to address these concerns we are developing an Infrastructure Improvements Plan.

The City of Rollingwood Infrastructure Improvements Plan will identify areas of interest related to drainage and pavement conditions, prioritize those areas, and create project concepts to address the issues that are present.

If you are aware of a drainage problem near your property, please take a few minutes to complete and return the brief survey (on the back of this letter) or go to https://arcg.is/15rXqD online to complete and submit the survey electronically. We will use the information you provide as one source of data, along with other information that we collect to help identify and prioritize public infrastructure concerns within the City. If you have relevant photos of flooding, please upload them to the website mentioned above.

CITY OF ROLLINGWOOD

Infrastructure Improvements Plan

Please share your concerns by returning the survey:

By Mail

Attn: Amber Lewis
403 Nixon Drive
Rollingwood, TX 78746

By Email

clafollette@kfriese.com

Online

https://arcg.is/15rXqD

If you would like assistance completing your survey or would like more information about the Infrastructure Improvements Plan, join City staff and engineers from K Friese + Associates for a public meeting:

Where: **403 Nixon Drive (City Hall)**

When: **Tuesday, March 26th, 2019 from 4-8 PM**

CITY OF ROLLINGWOOD TEXAS

ROLLINGWOOD TEXAS

PUBLIC SURVEY

LOCAL Flooding Issues

1. How long have you lived at this address?
   _____ Months _____ Years

2. Do you have any drainage concerns on your property?
   (Check all that apply)
   - ☐ Ponding in front yard
   - ☐ Ponding in backyard
   - ☐ Water in garage
   - ☐ Water in house
   - ☐ Septic (on-site wastewater) related problems
   - ☐ Other _____

3. How often do these issues occur?
   - ☐ Once every couple of years
   - ☐ Once or twice a year
   - ☐ 3-6 times a year
   - ☐ Every time it rains
   - ☐ Other _____

4. Approximately how deep is the water?
   - ☐ 1-2 inches
   - ☐ 3-4 inches
   - ☐ 5-6 inches
   - ☐ >6 inches

5. How long does the water remain after the rain has stopped?
   - ☐ A few minutes
   - ☐ 30 minutes
   - ☐ 1 hour
   - ☐ Several hours
   - ☐ 1 day or longer

6. Where is the water coming from?

   _____

   _____

CITY-WIDE Flooding Issues

1. Are there any roadway or public flooding issues in your area? If so, please describe the issue and state the location.

   _____

   _____

   _____

2. When did the issue(s) begin?

   _____

   _____

   _____

3. How often does the issue(s) occur?
   - ☐ Once every couple of years
   - ☐ Once or twice a year
   - ☐ 3-6 times a year
   - ☐ Every time it rains
   - ☐ Other _____

4. Comments

   _____

   _____

   _____

CITY OF ROLLINGWOOD TEXAS

Appendix C: Public Survey Response Maps

- Public Surveys Received
- Type of Flooding Reported by Survey
- Frequency of Flooding Reported by Survey
- Ponding Duration Reported by Survey
- Flooding Issues Reported Within Right-of-Way by Survey

Legend

- Rollingwood City Limits
- Parcels
- Public Survey Received

BRETT
LAURA
MICHELE
CHRIS
KRISTY
ASHWORTH
PARK HILLS
PLEASANT
ROCKWAY
VANCE
ROCK
ALMARION
HATLEY
HUBBARD
SUGAR CREEK
BRADY
RIDGEWOOD
CENTRY
PICKWICK
NIXON
JEFFERY
WALLIS
RAN'D OLPH
ROLLINGWOOD
EDGEGROVE
TIMBERLINE
PICKWICK
INWOOD
BETTIS
FARLEY
VALE
RILEY
TIMBERLINE RIDGE
LAS LOMAS
PEAK
WESTGATE
EWING
GROVE
SOUTHCREST
OLD WASHINGTON
BEE CAVES WOODS
BEE CAVES
TREEMONT
MONTEBELLO
DELLANA

City of Rollingwood Infrastructure Improvements Plan

Public Surveys Received

N

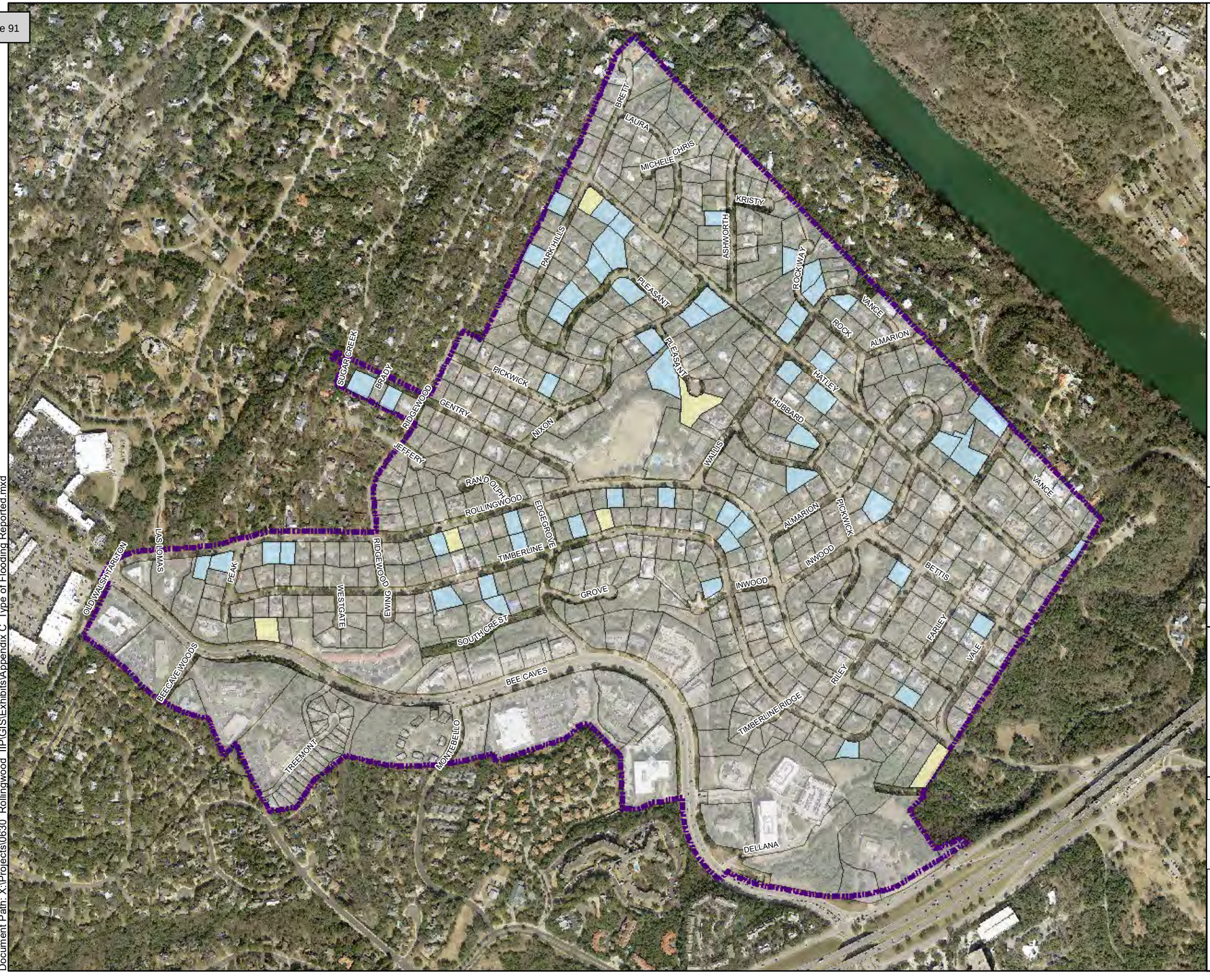
0 600 1,200 Feet

Date: 10/25/2019

ROLLINGWOOD TEXAS

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

Document Path: X:\Projects\0630 Rollingwood IIP\GIS\Exhibits\Appendix C Public Survey Received.mxd



Legend

- Rollingwood City Limits
- Parcels
- Yard/Driveway Flooding Reported
- Home/Garage Flooding Reported

City of Rollingwood Infrastructure Improvements Plan

Type of Flooding Reported by Survey

N

0 600 1,200 Feet

Date: 10/25/2019

ROLLINGWOOD TEXAS

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

Document Path: X:\Projects\0630 Rollingwood II\GIS\Exhibits\Appendix C Type of Flooding Reported.mxd

Legend

- Rollingwood City Limits
- Parcels

Frequency of Reported Issue

- Once every couple of years
- Once or twice a year
- 3-6 times a year
- Every time it rains

City of Rollingwood Infrastructure Improvements Plan

Frequency of Flooding Reported by Survey

N

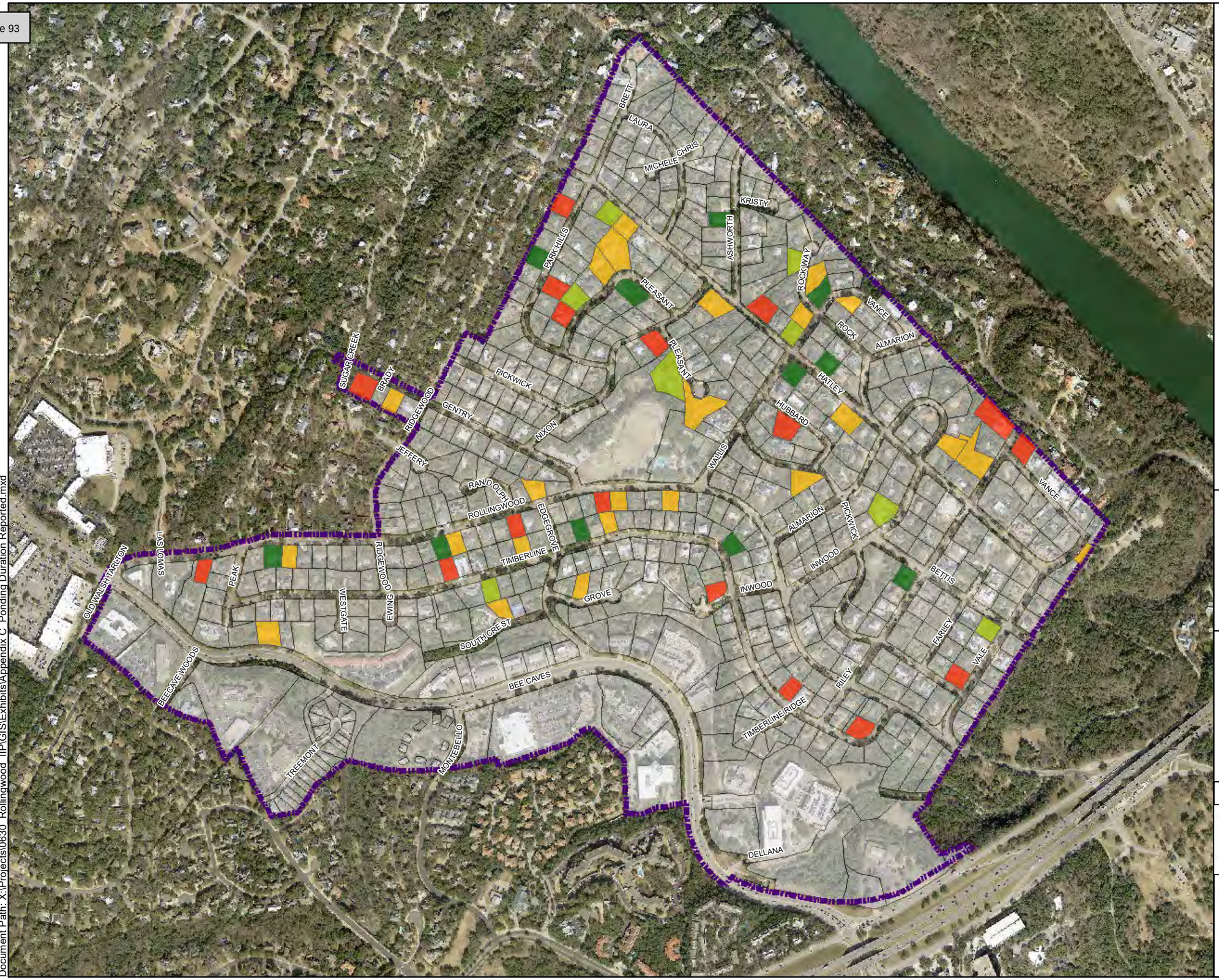
0 600 1,200 Feet

Date: 10/25/2019

ROLLINGWOOD TEXAS

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

Document Path: X:\Projects\0630 Rollingwood II\PGIS\Exhibits\Appendix C Frequency of Flooding Reported.mxd



Document Path: X:\Projects\0630 Rollingwood IIP\GIS\Exhibits\Appendix C Ponding Duration Reported.mxd

Legend

- Rollingwood City Limits
- Parcels

Ponding Duration Reported

- 30 minutes
- 1 hour
- Several hours
- 1 day or longer

City of Rollingwood Infrastructure Improvements Plan

Ponding Duration Reported by Survey

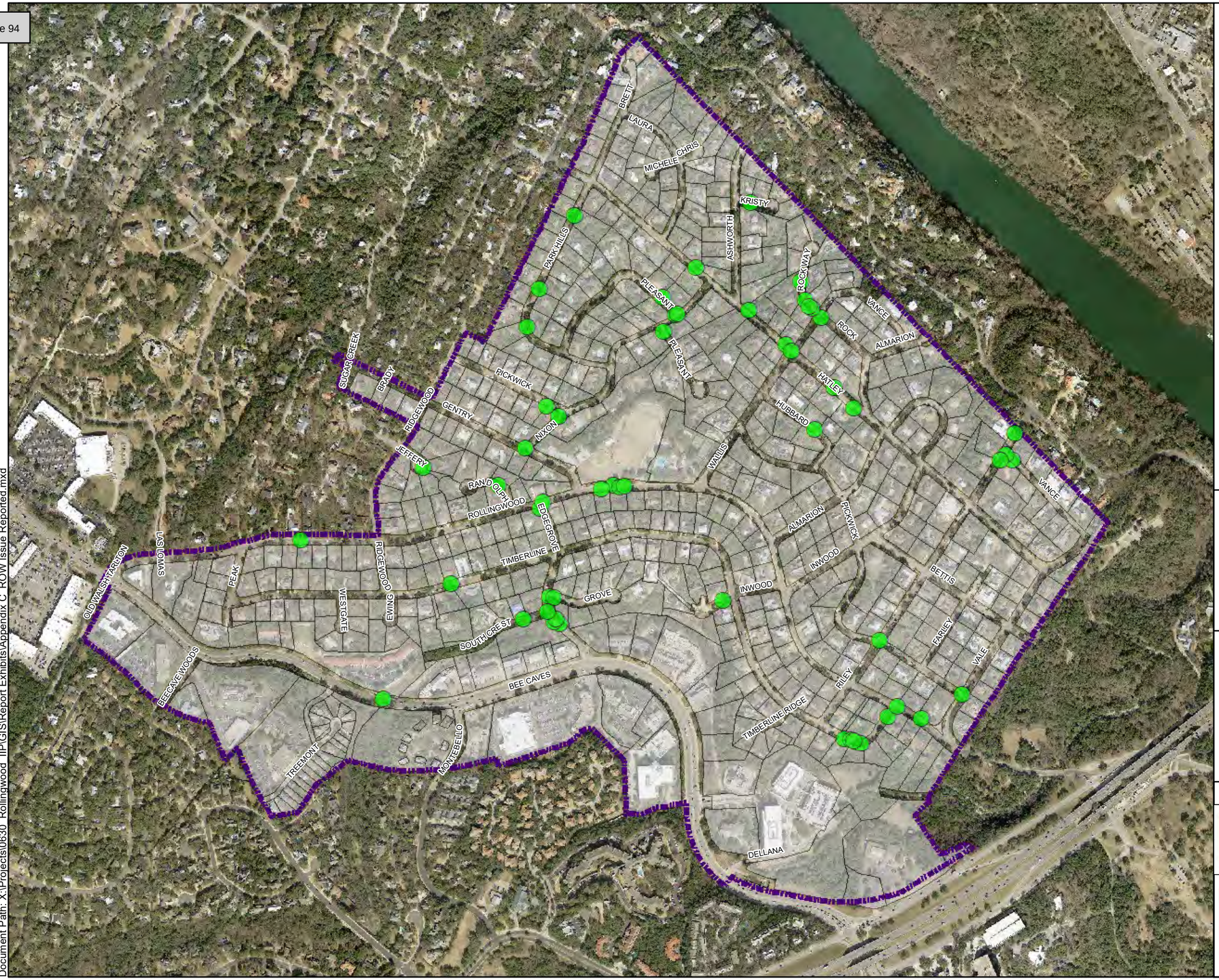
N

0 600 1,200 Feet

Date: 10/25/2019

ROLLINGWOOD TEXAS

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535



Legend

- Rollingwood City Limits
- Parcels
- Flooding Issues Reported in Right-of-Way

City of Rollingwood Infrastructure Improvements Plan

Flooding Issues Reported Within Right-of-Way by Survey

N

0 600 1,200 Feet

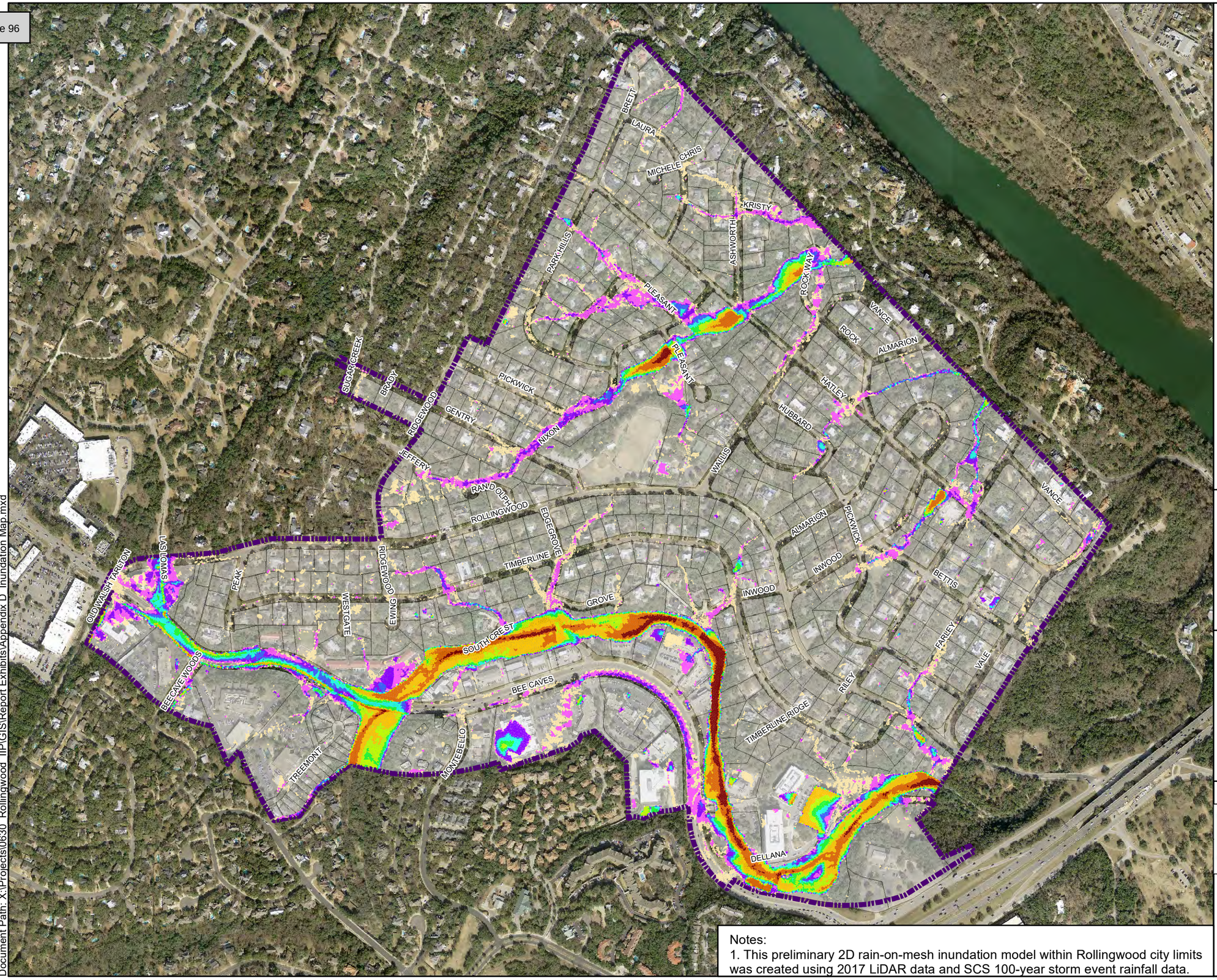
Date: 10/25/2019

ROLLINGWOOD TEXAS

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

Document Path: X:\Projects\0630 Rollingwood IIP\GIS\Report Exhibits\Appendix C ROW Issue Reported.mxd

Appendix D: Existing 100-year Storm Inundation Map



Legend

- Rollingwood City Limits
- Parcels

Model Depths

100-yr Storm Inundation

- 3-6 in
- 6-12 in
- 12-18 in
- 18-24 in
- 2-3 ft
- 3-4 ft
- 4-5 ft
- 5-7 ft
- 7-10 ft
- 10-20 ft

City of Rollingwood Infrastructure Improvements Plan

100-year Storm Event Inundation Map

N

0 600 1,200 Feet

Date: 11/26/2019

ROLLINGWOOD TEXAS

K FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

Notes:
1. This preliminary 2D rain-on-mesh inundation model within Rollingwood city limits was created using 2017 LiDAR data and SCS 100-year storm event rainfall data.

Document Path: X:\Projects\0630 Rollingwood IIP\GIS\Report Exhibits\Appendix D Inundation Map.mxd

Appendix E: FEMA Flood Insurance Rate Map (January 6, 2016)

USERS

This m… National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Texas State Plane Central Zone (FIPS zone 4203). The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713- 3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was provided in digital format by the City of Austin and CAPCOG. The projection used in the preparation of the FIRMs was Texas State Plane Central Zone (FIPSZONE 4203) and the horizontal datum was NAD83, GRS1980 spheroid.

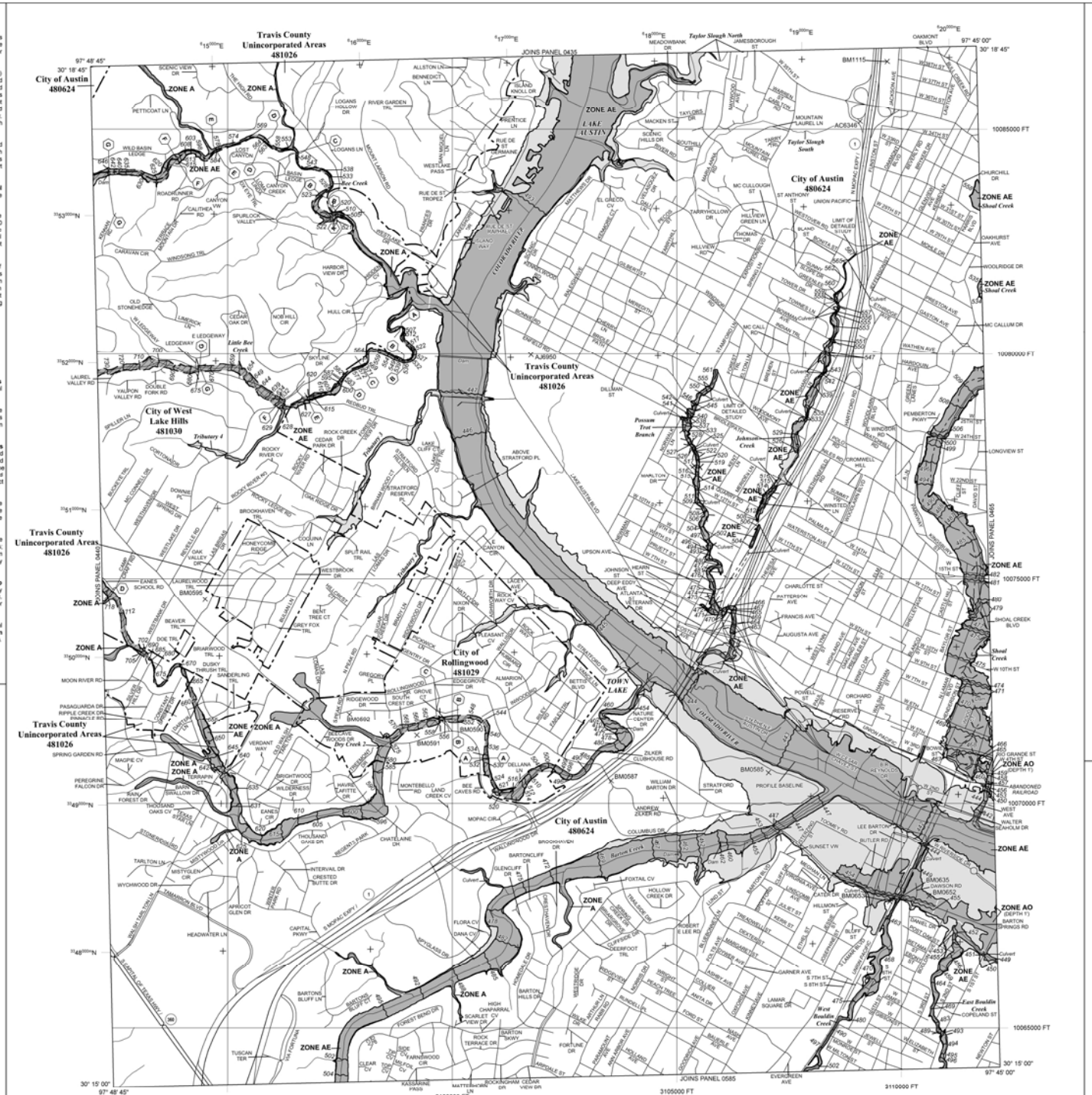
This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables for multiple streams in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map,** how to order products, or the National Flood Insurance Program in general, please call the **FEMA Map Information eXchange (FMIX)** at **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) S… INUNDATION BY THE 1% ANNUAL CHA…

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- **ZONE A** No Base Flood Elevations determined.
- **ZONE AE** Base Flood Elevations determined.
- **ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- **ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- **ZONE AR** Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- **ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- **ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- **ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- **ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- **ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- **ZONE D** Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
- 513 (EL 987) Base Flood Elevation line and value; elevation in feet*
- Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- A–A Cross section line
- 23–23 Transect line
- Culvert
- Bridge
- 45° 02' 08", 93° 02' 12" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- 3100000 FT 5000-foot ticks: Texas State Plane Central Zone (FIPS Zone 4203); Lambert Conformal Conic projection
- *9855000 N 1000-meter Universal Transverse Mercator grid values, zone 14
- DX5510 Bench mark (see explanation in Notes to Users section of this FIRM panel)
- *5000 FT1,000 River Station

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
June 16, 1993

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
June 5, 1997, January 19, 2000, April 15, 2002, September 26, 2008
January 6, 2016 - to update corporate limits, to change Special Flood Hazard Areas, to reflect updated topographic information, to incorporate previously issued Letters of Map Revision

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'
500 0 1000 2000 FEET
300 0 300 600 METERS

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0445J

FIRM

FLOOD INSURANCE RATE MAP

TRAVIS COUNTY, TEXAS AND INCORPORATED AREAS

PANEL 445 OF 730
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
AUSTIN, CITY OF	480624	0445	J
ROLLINGWOOD, CITY OF	481029	0445	J
TRAVIS COUNTY	481026	0445	J
WEST LAKE HILLS, CITY OF	481030	0445	J

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48453C0445J
MAP REVISED
JANUARY 6, 2016

Federal Emergency Management Agency

Appendix F: Identified Areas of Interest Map

Legend

- Rollingwood City Limits
- Parcels
- Area of Interest
- Drainage Areas

100-yr Inundation

- 3-6 in
- 6-12 in
- 12-18 in
- 18-24 in
- 2-3 ft
- 3-4 ft
- 4-5 ft
- 5-7 ft
- 7-10 ft
- 10-20 ft

City of Rollingwood Infrastructure Improvements Plan

Identified Areas of Interest Map

N

0 600 1,200 Feet

Date: 10/25/2019

ROLLINGWOOD TEXAS

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

Notes:
1. Drainage area boundaries 5, 6, 9, 10, and 14 developed by LNV.
2. Sub-basin boundaries, 5-1, 5-2, 5-3, and 5-4 developed by KFA.

Document Path: X:\Projects\0630 Rollingwood IIP\GIS\Exhibits\Appendix F Areas of Interest.mxd

Appendix G: Proposed Projects Map

Legend

- Rollingwood City Limits
- Parcels
- Area of Interest
- Proposed Channel Improvements
- Proposed Roadway Improvements
- Proposed Storm Sewer
- Proposed Detention Pond
- Proposed Culvert Improvements
- Proposed Bridge

100-yr Inundation

- 3-6 in
- 6-12 in
- 12-18 in
- 18-24 in
- 2-3 ft
- 3-4 ft
- 4-5 ft
- 5-7 ft
- 7-10 ft
- 10-20 ft

City of Rollingwood Infrastructure Improvements Plan

Proposed Improvements Map

N

0 600 1,200 Feet

Date: 10/30/2019

ROLLINGWOOD TEXAS

K FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

Notes:
1. Location of proposed improvements is approximate and is subject to change based on further analysis and design.

Document Path: \\KFSERVER2\Projects\Projects\0630 Rollingwood IIP\GIS\Report Exhibits\Appendix G Proposed Improvements Map.mxd

Appendix H: Project Summary Sheets

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Table 1: Project Ranking and Cost Summary

Project ID	Project Name	Cost	Rank*
B	Bee Caves Road Drainage Improvements	UNK	1
G	Edgegrove Drainage Improvements	$ 2,631,000	2
M	Nixon/Pleasant Roadway Drainage Improvements	$ 5,283,000	3
K	Pleasant Drive Drainage Improvements	included in M	4
D	Timberline-South Crest Drainage Improvements	$ 558,000	5
W	Hatley Drive Drainage Improvements	$ 654,000	6
L	Pleasant Cove Drainage Improvements	$ 490,000	7
H	City Hall Property Drainage Improvements	$ 475,000	8
J	Underground Infiltration Basin Drainage Improvements	$ 883,000	9
T	East Rollingwood Drive Drainage Improvements	$ 2,122,000	10
N	Timberline Drive Drainage Improvements	$ 380,000	11
Q	Rock Way Cove Drainage Improvements	$ 816,000	12
S	East Timberline Drive Drainage Improvements	included in T	13
R	Hatley Drive Drainage Improvements	$ 400,000	14
F	Nixon/Gentry Drainage Improvements	$ 2,024,000	15
V	Pleasant Drive Drainage Improvements	included in M	16
O	Kristy Drive Drainage Improvments	$ 217,000	17
E	Randolph Place Drainage Improvements	included in F	18
I	Park Hills Drainage Improvements	$ 238,000	19
A	Rollingwood Drive West Drainage Improvements	$ 589,000	20
P	Wallis and Hatley Drainage Improvements	included in Q	21
U	Riley Rd and Vance Ln Drainage Improvements	$ 141,000	22
C	Rollingwood Drive South Drainage Improvements	UNK	23
	SUM	**$ 17,901,000**	

* Rank is based on velocities and flooding depths at structures from the inundation model.

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: A
Project Name: Rollingwood Drive West Drainage Improvements
Drainage Basin: 9

Problem Description

Property flooding between Las Lomas Dr and S. Peak Rd on Rollingwood Dr.

Proposed Improvements

Install 24" RCP underground storm sewer system of approximately 500 feet in length with approximately 5 inlets, 5 driveway reconstructions, and curb construction along entire length. Connect to Eanes Creek tributary crossing at Las Lomas Drive.

CIP Ranking

20 out of **23**

Project Costs

Engineering & Survey:	$ 86,000
Construction:	$ 472,000
Other:	$ 31,000
ROW/Easements:	UNK
Total:	**$ 589,000**
Conceptual Cost Range:	$500k - $750k
Estimated Construction Duration:	6 Months

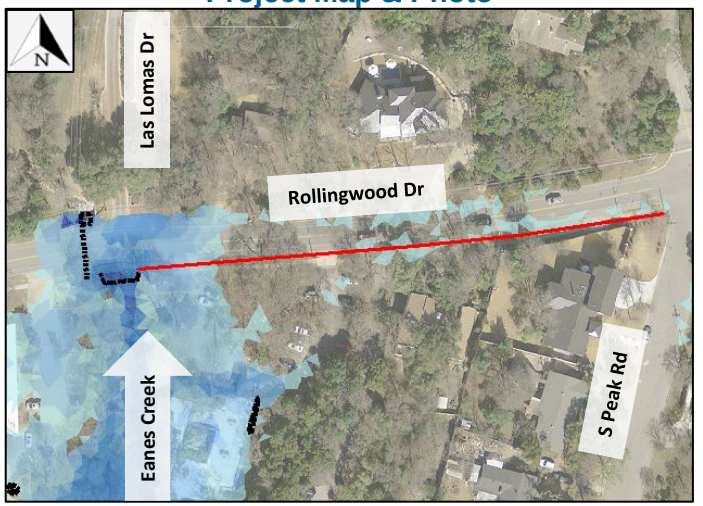
Possible Impacts

It is possible that the velocities and peak flow in Eanes Creek will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream system will need to be surveyed and analyzed for potential impacts.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed culverts will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red. Existing culverts in black.
Existing 100-yr inundation shown.

Rollingwood Drive looking northwest.

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: B
Project Name: Bee Caves Road Drainage Improvements
Drainage Basin: 10

Problem Description

Roadway flooding at Bee Caves Road. Existing 2-42" CMPs.

Proposed Improvements

Further discussion is needed to determine the desired outcome of a project along Bee Caves Road. Potential project complications include but are not limited to: TxDOT coordination, raising the roadway profile, multiple sources of flooding (Eanes Creek and the Tributary that runs along Bee Caves), the length of flooding along Bee Caves and potential utility conflicts. Due to the number of unknowns, a cost estimate was not generated but it is expected to be within the tens of millions of dollars. The cost incurred by the City would be subject to negotiations with TxDOT and is unknown.

CIP Ranking

1 out of **23**

Project Costs

Engineering & Survey:	$	-
Construction:	$	-
Other:	$	-
ROW/Easements:		UNK
Total:		**UNK**
Conceptual Cost Range:		N/A
Estimated Construction Duration:		N/A

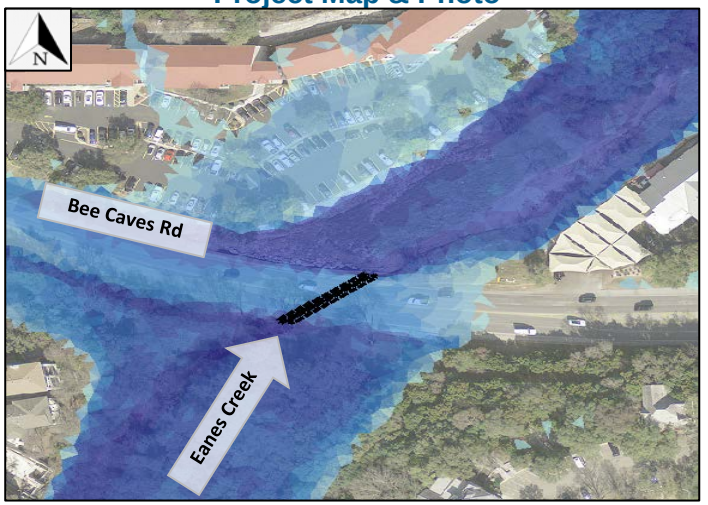
Possible Impacts

N/A

Assumptions

N/A

Project Map & Photo



Bee Caves Road, existing culverts in black.
Existing 100-yr inundation shown.

Bee Caves Road, downstream. 9/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: C
Project Name: Rollingwood Drive South Drainage Improvements
Drainage Basin: 10

Problem Description

Property flooding along Rollingwood Drive.

Proposed Improvements

This AOI was studied using modeling and field observations, and existing infrastructure appears sufficient for this location. A CIP project is not recommended at this AOI at this time.

CIP Ranking

23 out of **23**

Project Costs

Engineering & Survey:	$	-
Construction:	$	-
Other:	$	-
ROW/Easements:		UNK
Total:		**UNK**
Conceptual Cost Range:		N/A
Estimated Construction Duration:		N/A

Possible Impacts

N/A

Assumptions

N/A

Project Map & Photo

Rollingwood Drive.
Existing 100-yr inundation shown.

Rollingwood Drive, looking east. 09/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: D
Project Name: Timberline-South Crest Drainage Improvements
Drainage Basin: 10

Problem Description

Property flooding between Timberline Drive and South Crest Drive. Roadway flooding on Timberline Drive.

Proposed Improvements

Regrade and improve the channel between 4907 and 4905 South Crest Drive to 4908 Timberline Drive, approximately 475 feet. At the end of the channel, build a drop inlet leading to approximately 140 feet of 48" underground storm sewer.

CIP Ranking

5 out of **23**

Project Costs

Engineering & Survey:	$	80,000
Construction:	$	438,000
Other:	$	40,000
ROW/Easements:		UNK
Total:	**$**	**558,000**

Conceptual Cost Range:	$500k - $750k
Estimated Construction Duration:	6 Months

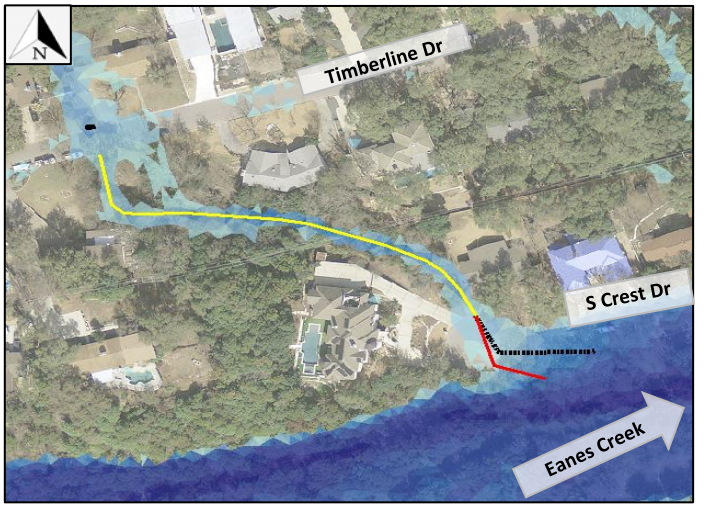
Possible Impacts

It is possible that the velocities and peak flow in Eanes Creek will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- Cost included estimate completed by Peabody General Contractors and provided to KFA by the City for waterline improvements along South Crest Drive.
- It is assumed the proposed culverts will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Channel improvements in yellow, proposed storm sewer in red. Existing channel in black. Existing 100-yr inundation shown.

South Crest Drive during rain event, looking north. 06/06/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: E
Project Name: Randolph Place Drainage Improvements
Drainage Basin: 5

Problem Description

Roadway flooding and property flooding along Randolph Place.

Proposed Improvements

Install approximately 272 feet of 24" RCP, 846 feet of 36" RCP, 125 feet of 5' x 3' RCB, and 626 feet of 6' x 3' RCB. Begin at Gentry Drive and discharge to channel near City Hall. It will include an estimated 20 curb inlets, 1 area inlet, and approximately 12 driveway reconstructions. This includes the improvements at AOI F. In accordance with downstream impacts the imporvements along AOI M should be completed first.

CIP Ranking

18 out of **23**

Project Costs

See Cost on AOI F

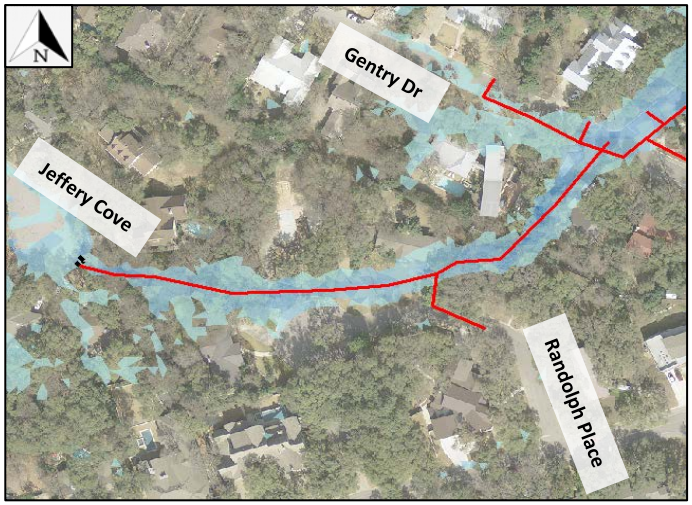
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red.
Existing 100-yr inundation shown.

3 Randolph Place looking west.

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: F
Project Name: Nixon/Gentry Drainage Improvements
Drainage Basin: 5

Problem Description

Roadway flooding and property flooding along Gentry Drive and Nixon Drive.

Proposed Improvements

Install approximately 272 feet of 24" RCP, 846 feet of 36" RCP, 125 feet of 5' x 3' RCB, and 626 feet of 6' x 3' RCB. Begin at Gentry Drive and discharge to channel near City Hall. It will include an estimated 20 curb inlets, 1 area inlet, and approximately 12 driveway reconstructions. This includes the improvements at AOI E. To mitigate downstream impacts, the improvements along AOI M should be completed first.

CIP Ranking

15 out of **23**

Project Costs**

**AOI E included

Engineering & Survey:	$ 300,000
Construction:	$ 1,648,000
Other:	$ 76,000
ROW/Easements:	UNK
Total:	**$ 2,024,000**
Conceptual Cost Range:	> $2M
Estimated Construction Duration:	15 Months

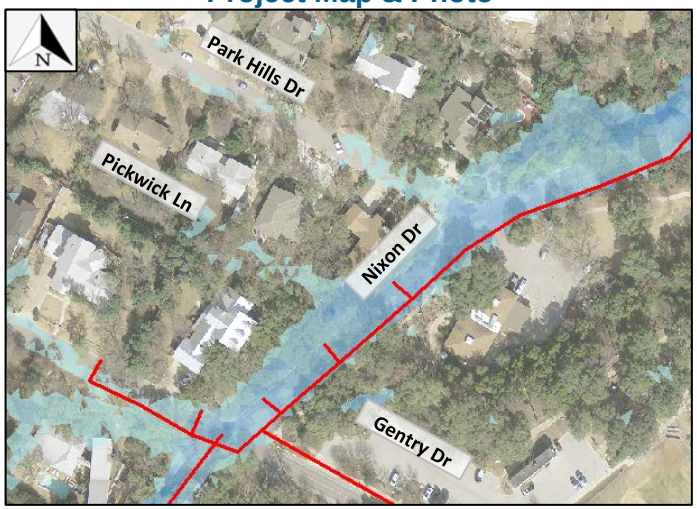
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed strom drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red.
Existing 100-yr inundation shown.

Nixon and Gentry intersection looking north. 09/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: G
Project Name: Edgegrove Drive Drainage Improvements
Drainage Basin: 10

Problem Description

Roadway flooding at Edgegrove Drive. Existing 2 - 32" RCP and 1 - 24" RCP.

Proposed Improvements

Bridge crossing approximately 300 feet in length and an estimated 46 feet in width (2 lanes, 2 shoulders/bike lanes, and sidewalk). Improve and regrade the channel 50 feet downstream and upstream of the crossing. Raise and rebuild the road about 350 feet in total length. The roadway improvements are along Edgegrove Drive and South Crest Drive. It is recommended this AOI should be coordinated with the proposed retail study along Eanes Creek.

CIP Ranking

2 out of **23**

Project Costs

Engineering & Survey:	$ 394,000
Construction:	$ 2,167,000
Other:	$ 70,000
ROW/Easements:	UNK
Total:	**$ 2,631,000**
Conceptual Cost Range:	> $2M
Estimated Construction Duration:	12 Months

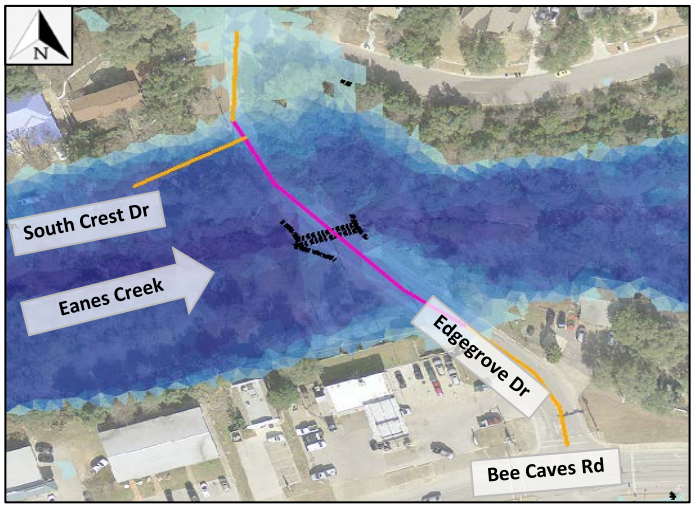
Possible Impacts

It is possible that the velocities and peak flow in Eanes Creek will increase downstream of the project due to these improvements. The bridge should be designed to ensure no upstream impacts. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- Flooding on Edgegrove Dr is controlled by Eanes Creek.
- It is assumed the proposed bridge will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and detailed hydraulic will need additional consideration and analysis.

Project Map & Photo



Proposed bridge in pink. Road improvements in orange. Existing culvert in black. Existing 100-yr inundation shown.

Edgegrove Drive, looking northeast. 09/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: H
Project Name: City Hall Drainage Improvements
Drainage Basin: 5

Problem Description

Property flooding at City Hall and roadway flooding along Nixon Drive.

Proposed Improvements

Regrade Rollingwood City Hall property. Design and create a detention pond of approximately 0.20 acres at the existing community playground. This would include connecting to the improvements at AOI E and F. The detention pond may provide benefit for smaller storm events, however preliminary modeling shows that the area is too small to provide detention in the 100-year event. Further analysis is necessary to determine the potential benefits from a detention pond at this location.

CIP Ranking

8 out of **23**

Project Costs

Engineering & Survey:	$ 64,000
Construction:	$ 350,000
Other:	$ 61,000
ROW/Easements:	UNK
Total:	**$ 475,000**
Conceptual Cost Range:	$250k - $500k
Estimated Construction Duration:	12 Months

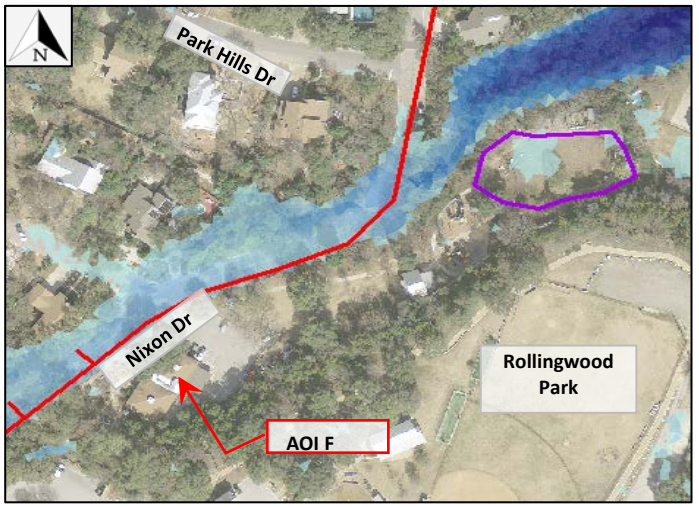
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed strom drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer (AOI F) and pond area in purple.
Existing 100-yr inundation shown.

Proposed area for detention. 09/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: I
Project Name: Park Hills Drainage Improvements
Drainage Basin: 5

Problem Description

Property and roadway flooding along Park Hills Drive. Existing 24" RCP cross culvert.

Proposed Improvements

Double the size of the existing culvert, approximately 35 feet 24" RCP, to 2-24" RCPs with two new headwalls. Remove the existing culvert. Regrade the channel about 20 feet downstream and upstream. Another alternative improvement is to purchase an inundation easement and not upsize the existing culvert. Note downstream headwall could not be field located.

CIP Ranking

19 out of **23**

Project Costs

Engineering & Survey:	$	32,000
Construction:	$	175,000
Other:	$	31,000
ROW/Easements:		UNK
Total:	**$**	**238,000**

Conceptual Cost Range:	$200k - $250k
Estimated Construction Duration:	6 Months

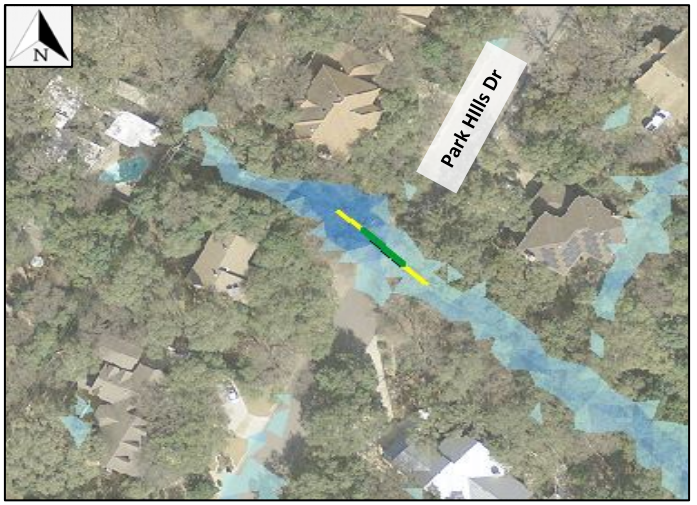
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed culverts will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed culvert in green. Channel improvements in yellow. Existing 100-yr inundation shown.

Park Hills Drive, upstream. 09/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: J
Project Name: Underground Infiltration Basin Drainage Improvements
Drainage Basin: 10

Problem Description

Rollingwood Drive ponding across from the underground infiltration basin pond. The existing inlet and pipe are clogged with debris, and sediment, creating maintenance and ponding challenges.

Proposed Improvements

Abandon the underground vault and tie the existing lateral pipe, assuming a 24" RCP, into the proposed drainage system on Gentry Drive. Approximately 675 feet of proposed 24" RCP will be needed for the connection, approximately 10 inlets, and an estimated 2 driveway reconstructions.

CIP Ranking

9 out of **23**

Project Costs

Engineering & Survey:	$ 127,000
Construction:	$ 695,000
Other:	$ 61,000
ROW/Easements:	UNK
Total:	**$ 883,000**

Conceptual Cost Range:	$750k - $1M
Estimated Construction Duration:	12 Months

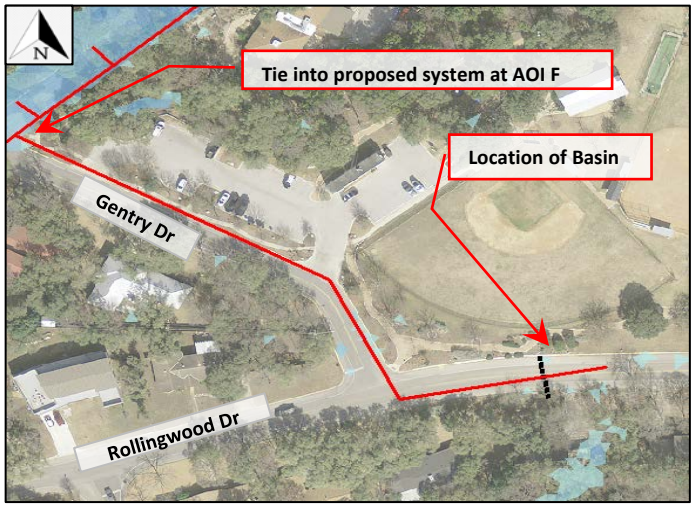
Possible Impacts

It is possible that the velocities and peak flow in Eanes Creek will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and pond area will need additional consideration.
- The recommendation to abandon the underground basin was generated in coordination with City staff & City engineer.

Project Map & Photo



Rollingwood Drive, proposed storm sewer in red.
Existing 100-yr inundation shown.

Pond inlet during rain event. 06/06/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: K
Project Name: Pleasant Drive Drainage Improvments
Drainage Basin: 5

Problem Description

Roadway and property flooding along Pleasant Drive.

Proposed Improvements

Install approximately 248 feet of 36" RCP, 358 feet of 5' x 3' RCB, 303 feet of 6' x 3' RCB and 1382 feet of 8' x 4' RCB. Begin at Pleasant Drive and proposed detention pond (AOI H) and outfall at Town Lake tributary downstream of Hatley Drive. It will include an estimated 27 curb inlets, 1 area inlet, 675 feet of 12" tall curb, and approximately 16 driveway reconstructions. This includes the improvements at AOI V and AOI M.

CIP Ranking

4 out of **23**

Project Costs

See Cost on AOI M

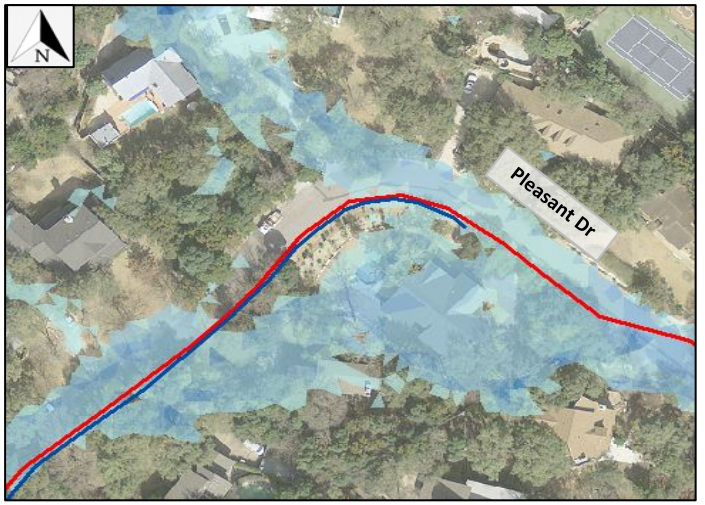
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red. Proposed 12" curb in blue. Existing 100-yr inundation shown.

Pleasant Drive, looking northeast/upstream.06/06/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: L
Project Name: Pleasant Cove Drainage Improvements
Drainage Basin: 5

Problem Description

Roadway flooding. Existing 60" RCP cross culvert at Pleasant Cove.

Proposed Improvements

Install new roadside channel upstream, approximately 400 feet in length. The channel grading will be to an approximate channel of 20 feet wide, 2 feet deep with a 4 ft bottom width, and 4:1 side slopes. Approximately 1 driveway reconstruction with a crossing culvert of 24" RCP of an estimated 24 feet. Raise the roadway profile, an estimated 175 feet.

CIP Ranking

7 out of **23**

Project Costs

Engineering & Survey:	$ 67,000
Construction:	$ 368,000
Other:	$ 55,000
ROW/Easements:	UNK
Total:	**$ 490,000**

Conceptual Cost Range:	$250k - $500k
Estimated Construction Duration:	9 Months

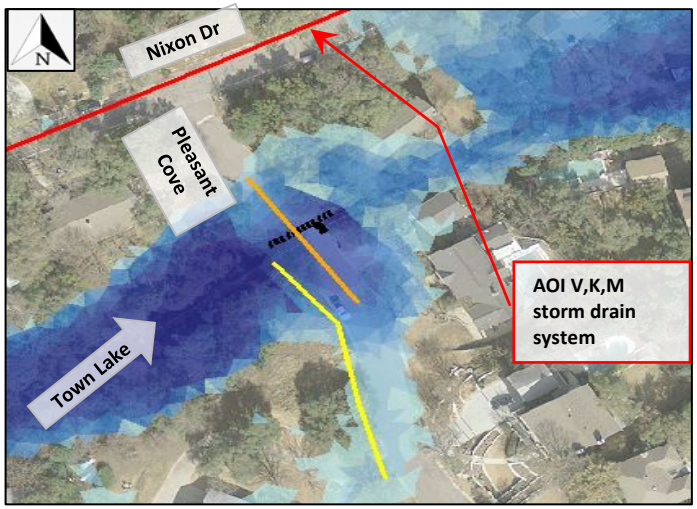
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed culverts will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed road improvements in orange, channel improvements in yellow. Existing culverts in black. Existing 100-yr inundation shown.

Pleasant Cove culvert crossing, upstream. 09/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: M
Project Name: Nixon/Pleasant Drainage Improvements
Drainage Basin: 5

Problem Description

Roadway flooding on Nixon Drive. Property flooding between Pleasant Drive and Hatley Drive.

Proposed Improvements

Install approximately 248 feet of 36" RCP, 358 feet of 5' x 3' RCB, 303 feet of 6' x 3' RCB and 1382 feet of 8' x 4' RCB. Begin at Pleasant Drive and proposed detention pond (AOI H) and outfall at Town Lake tributary downstream of Hatley Drive. It will include an estimated 27 curb inlets, 1 area inlet, 675 feet of 12" tall curb, and approximately 16 driveway reconstructions. This includes the improvements to AOI V and AOI K.

CIP Ranking

3 out of **23**

Project Costs**

**AOI V and AOI K included

Engineering & Survey:	$ 804,000
Construction:	$ 4,419,000
Other:	$ 60,000
ROW/Easements:	UNK
Total:	**$ 5,283,000**
Conceptual Cost Range:	> $2M
Estimated Construction Duration:	12 Months

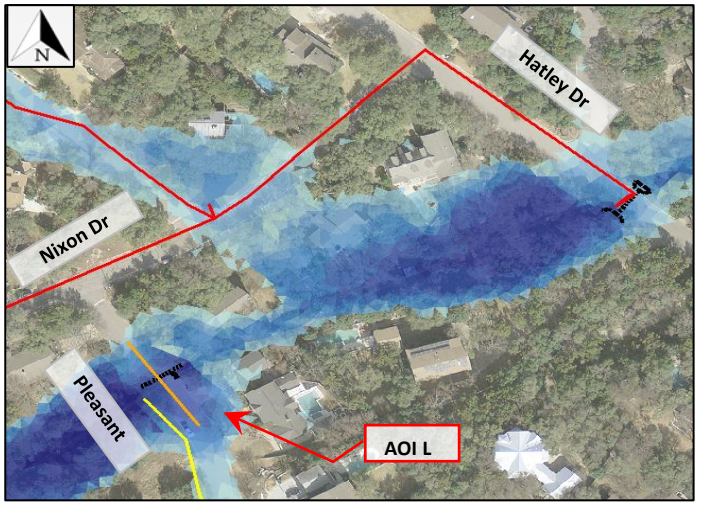
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red. Proposed 12" curb in blue. Existing culvert in black. Existing 100-yr inundation shown.

Nixon Drive during rain event, looking west. 06/06/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: N
Project Name: Timberline Drive Drainage Improvements
Drainage Basin: 10

Problem Description

Roadway and property flooding along Timberline Drive and Inwood Drive.

Proposed Improvements

Install approximately 250 feet of 36" RCP underground storm sewer. Begin at a drop inlet in the ravine on 4803 Timberline Drive property and connect to existing storm sewer network on Inwood Drive. It will include clearing and regrading the ravine for approximately 10 feet, addition of approximately 2 inlets, and approximately 3 driveway reconstructions. The existing network outfalls into Eanes Creek south of Inwood Drive.

CIP Ranking

11 out of **23**

Project Costs

Engineering & Survey:	$ 54,000
Construction:	$ 295,000
Other:	$ 31,000
ROW/Easements:	UNK
Total:	**$ 380,000**
Conceptual Cost Range:	$250k - $500k
Estimated Construction Duration:	6 Months

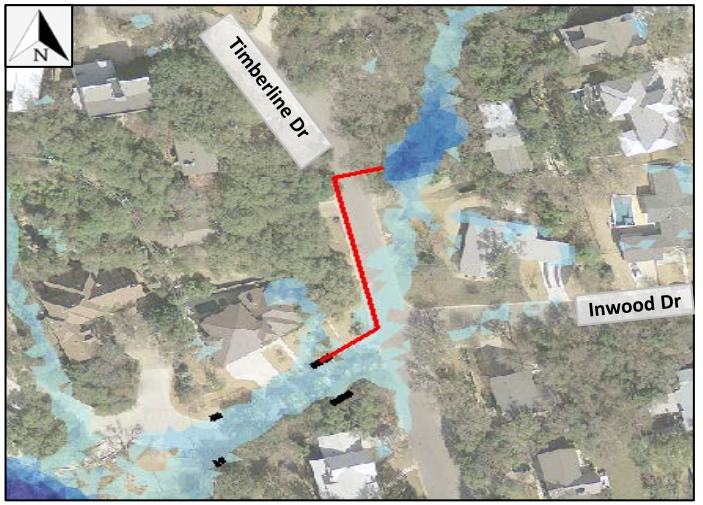
Possible Impacts

It is possible that the velocities and peak flow in Eanes Creek will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream system will need to be surveyed and analyzed for potential impacts.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red to existing inlets in black.
Existing 100-yr inundation shown.

Ravine at 4803 Timberline Drive. 09/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: O
Project Name: Kristy Drive Drainage Improvments
Drainage Basin: 5

Problem Description

Roadway and property flooding along Kristy Drive.

Proposed Improvements

Approximately 475 feet of channel improvements along Kristy Drive.

CIP Ranking

17 out of **23**

Project Costs

Engineering & Survey:	$	29,000
Construction:	$	157,000
Other:	$	31,000
ROW/Easements:		UNK
Total:	**$**	**217,000**
Conceptual Cost Range:		$200k - $250k
Estimated Construction Duration:		6 Months

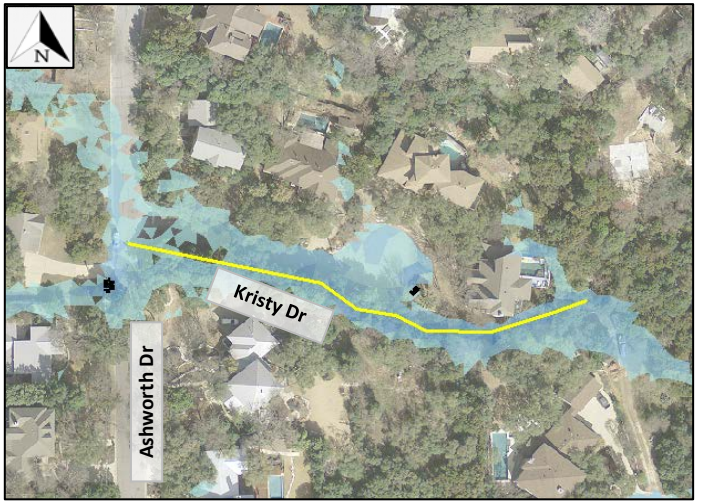
Possible Impacts

It is possible that the velocities and peak flow in the Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream impacts to adjacent properties will need to be reviewed in addition to the tributary impacts. Channel grading will impact multiple roadside trees.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the channel will have sufficient capacity for the design storm event.

Project Map & Photo



Channel improvements in yellow.
Existing 100-yr inundation shown.

Kristy Drive, looking northwest.

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: P
Project Name: Wallis and Hatley Drainage Improvements
Drainage Basin: 5

Problem Description

Property flooding along Wallis Drive and roadway flooding at intersection of Wallis Drive and Hatley Drive.

Proposed Improvements

Install approximately 630 feet of 36" RCP underground storm sewer. Begin at the intersection of Hatley Drive and Wallis Drive and connect to the Town Lake tributary crossing on Rock Way Cove . It will include approximately 10 inlets and approximately 8 driveway reconstructions. This system includes the improvements at AOI Q.

CIP Ranking

21 out of **23**

Project Costs

See Cost on AOI Q

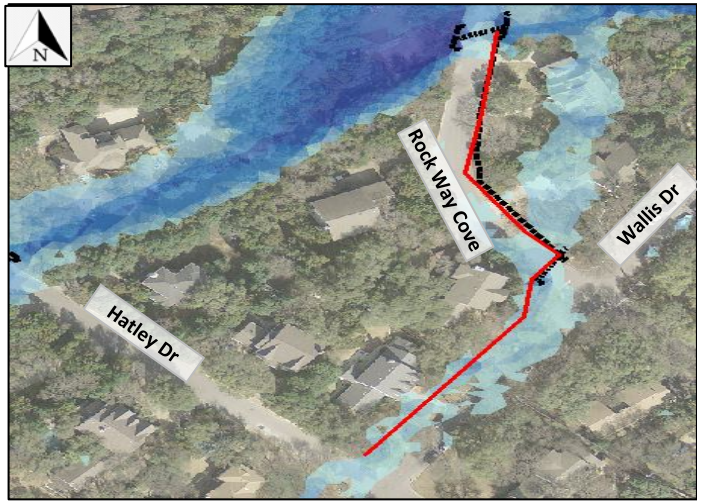
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream system will need to be surveyed and analyzed for potential impacts.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed culverts will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red, existing in black.
Existing culverts in black. Existing 100-yr inundation shown.

200 Wallis Drive, during rain event. 06/06/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: Q
Project Name: Rock Way Cove Drainage Improvements
Drainage Basin: 5

Problem Description

Property flooding along Rock Way Cove and roadway flooding at intersection of Rock Way Cove and Wallis Drive.

Proposed Improvements

Install approximately 630 feet of 36" RCP underground storm sewer. Begin at the intersection of Hatley Drive and Wallis Drive and connect to the Town Lake tributary crossing on Rock Way Cove . It will include approximately 10 inlets and approximately 2 driveway reconstructions. This system includes the improvements at AOI P.

CIP Ranking

12 out of **23**

Project Costs

**AOI P included

Engineering & Survey:	$	115,000
Construction:	$	631,000
Other:	$	70,000
ROW/Easements:		UNK
Total:	**$**	**816,000**

Conceptual Cost Range:	$750k - $1M
Estimated Construction Duration:	12 Months

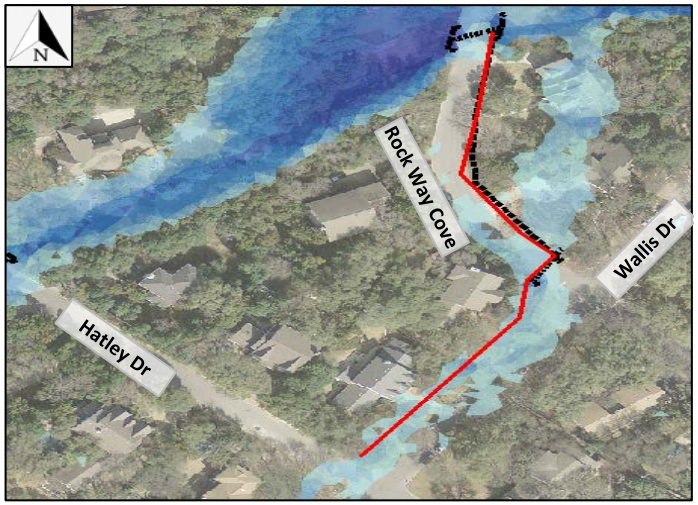
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream system will need to be surveyed and analyzed for potential impacts.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed culverts will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red, existing in black.
Existing culverts in black. Existing 100-yr inundation shown.

Outfall at Town Lake tributary. 09/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: R
Project Name: Hatley Drive Drainage Improvements
Drainage Basin: 6

Problem Description

Roadway flooding at Hatley Drive and Almarion Way. Property flooding along Hubbard Circle and Hatley Drive.

Proposed Improvements

Install underground storm sewer of approximately 415 feet of 36" RCP. Start at Hately Drive property and outfall at the beginning of the Town Lake tributary channel on Almarion Way. It will include clearing and regrading downstream channel about 150 feet in length, 4 curb inlets, 1 area inlet, and 1 driveway reconstruction.

CIP Ranking

14 out of **23**

Project Costs

Engineering & Survey:	$	57,000
Construction:	$	312,000
Other:	$	31,000
ROW/Easements:		UNK
Total:	**$**	**400,000**

Conceptual Cost Range:	$250k - $500k
Estimated Construction Duration:	6 Months

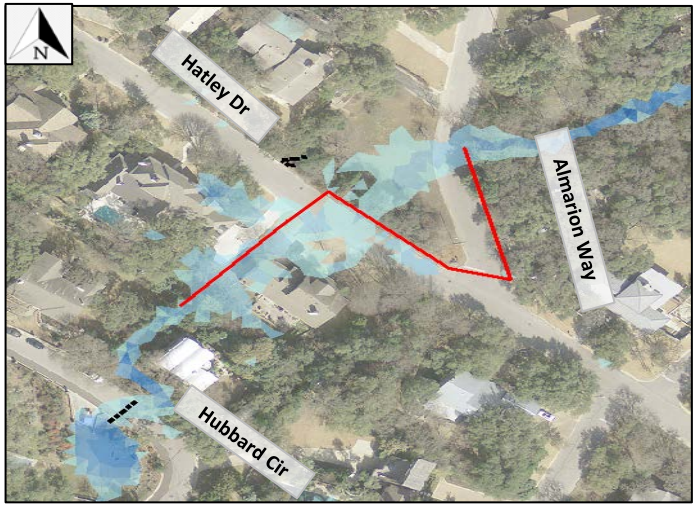
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red.
Existing 100-yr inundation shown.

Almarion Way, looking northwest. 09/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: S
Project Name: East Timberline Drive Drainage Improvements
Drainage Basin: 14

Problem Description

Roadway flooding on Rollingwood Drive and Timberline Drive. Property flooding along Rollingwood Drive and Riley Drive.

Proposed Improvements

Install approximately 700 feet of 36" RCP underground storm sewer, 520 feet of 5' x 3' RCB, and 350 feet of 7' x 4' RCB. Begin at Farley Trial and outfall at Eanes Creek tributary downstream of Timberline Drive. It will include an estimated 22 inlets and approximately 15 driveway reconstructions. This includes the improvements at AOI T.

CIP Ranking

14 out of **23**

Project Costs

See Cost on AOI T

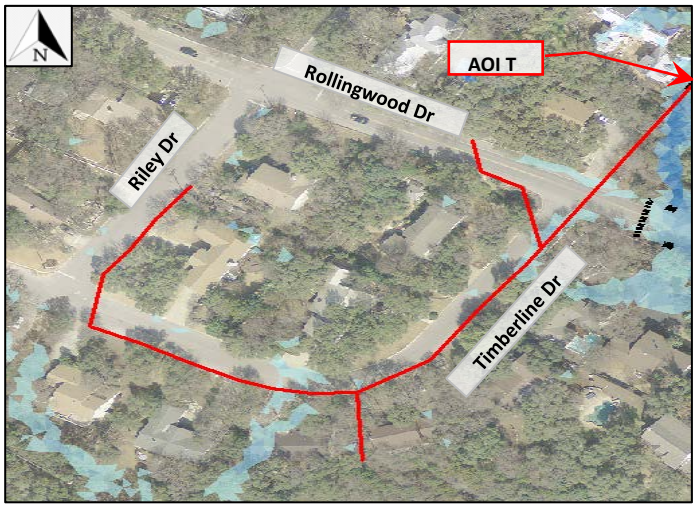
Possible Impacts

It is possible that the velocities and peak flow in Eanes Creek will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream channel will need to be surveyed and analyzed for potential impacts.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red.
Existing 100-yr inundation shown.

Timberline Drive looking northeast. 09/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: T
Project Name: East Rollingwood Drive Drainage Improvements
Drainage Basin: 14

Problem Description

Roadway flooding on Rollingwood Drive and Pickwick Lane. Property flooding along Farley Trail and Rollingwood Drive.

Proposed Improvements

Install approximately 700 feet of 36" RCP underground storm sewer, 520 feet of 5' x 3' RCB, and 350 feet of 7' x 4' RCB. Begin at Farley Trail and outfall at Eanes Creek tributary downstream of Timberline Drive. It will include an estimated 22 inlets and approximately 15 driveway reconstructions. This includes the improvements at AOI S.

CIP Ranking

14 out of **23**

Project Costs**

**AOI S included

Engineering & Survey:	$ 313,000
Construction:	$ 1,718,000
Other:	$ 91,000
ROW/Easements:	UNK
Total:	**$ 2,122,000**
Conceptual Cost Range:	> $2M
Estimated Construction Duration:	18 Months

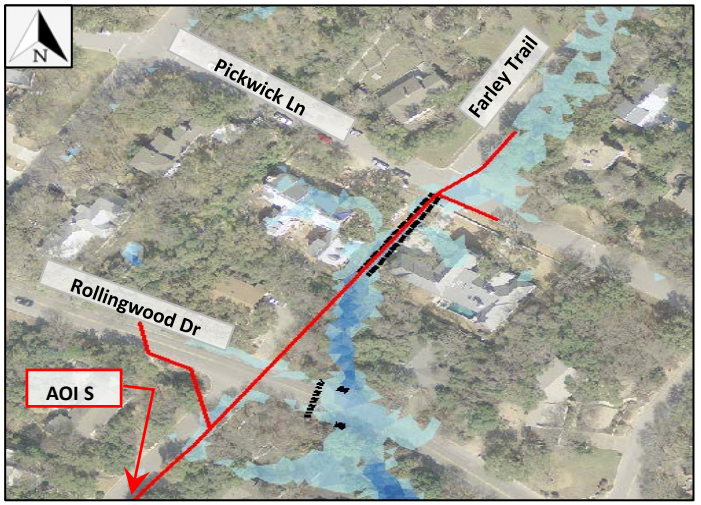
Possible Impacts

It is possible that the velocities and peak flow in Eanes Creek will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream system will need to be surveyed and analyzed for potential impacts.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red, existing in black.
Existing culverts in black. Existing 100-yr inundation shown.

Half buried culvert at Rollingwood Drive. 09/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: U
Project Name: Riley Rd and Vance Ln Drainage Improvements
Drainage Basin: 6

Problem Description

Property flooding at intersection of Riley Rd and Vance Ln.

Proposed Improvements

An approximate 3 foot curb cut at intersection of Vance Ln and Riley Rd and approximately 230 feet of channel improvements.

CIP Ranking

22 out of **23**

Project Costs

Engineering & Survey:	$	17,000
Construction:	$	94,000
Other:	$	30,000
ROW/Easements:		UNK
Total:	**$**	**141,000**

Conceptual Cost Range:	$100k - $150k
Estimated Construction Duration:	4 Months

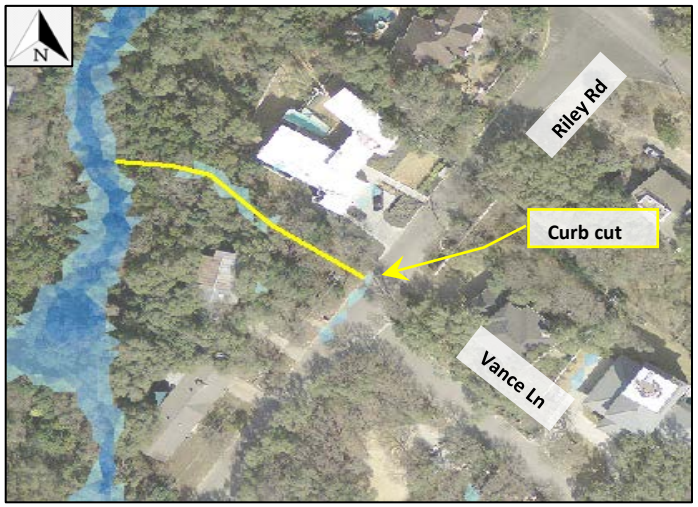
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream system will need to be surveyed and analyzed for potential impacts.

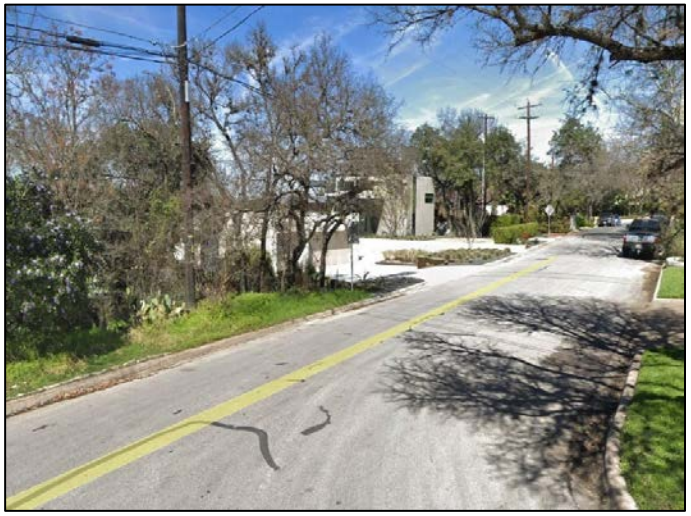
Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the channel will have sufficient capacity for the design storm event.

Project Map & Photo



Channel improvments shown in yellow.
Existing 100-yr inundation shown.



Riley Road off of Vance Lane, looking north.

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: V
Project Name: Pleasant Drive Drainage Improvements
Drainage Basin: 5

Problem Description

Roadway flooding and property flooding on Pleasant Drive.

Proposed Improvements

Install approximately 248 feet of 36" RCP, 358 feet of 5' x 3' RCB, 303 feet of 6' x 3' RCB and 1382 feet of 8' x 4' RCB. Begin at Pleasant Drive and proposed detention pond (AOI H) and outfall at Town Lake tributary downstream of Hatley Drive. It will include an estimated 27 curb inlets, 1 area inlet, 675 feet of 12" tall curb, and approximately 16 driveway reconstructions. This includes the improvements at AOI K and AOI M.

CIP Ranking

16 out of **23**

Project Costs

See Cost on AOI M

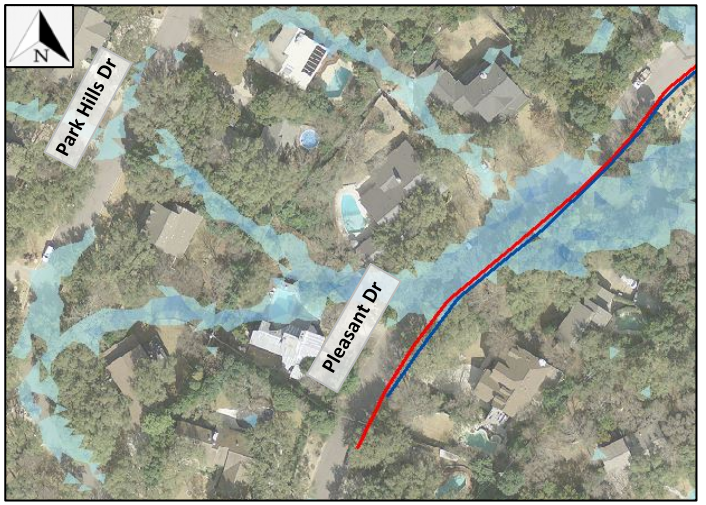
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red. Proposed 12" curb in blue. Existing 100-yr inundation shown.

Pleasant Drive, looking northeast. 09/11/2019.

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: W
Project Name: Hatley Drive Drainage Improvements
Drainage Basin: 6

Problem Description

Roadway flooding across Hatley Drive and at intersection with Riley Road. Property flooding and along Hatley Dr.

Proposed Improvements

Install approximately 390 feet of 36" RCP underground storm sewer. Begin at intersection of Hatley Drive and Riley Road and outfall at channel on Riley Road to Town Lake. It will include approximately 8 inlets, and approximately 2 driveway reconstructions. Keep existing 36" RCP crossing at Hatley Drive.

CIP Ranking

6 out of **23**

Project Costs

Engineering & Survey:	$ 90,000
Construction:	$ 494,000
Other:	$ 70,000
ROW/Easements:	UNK
Total:	**$ 654,000**
Conceptual Cost Range:	$500k - $750k
Estimated Construction Duration:	12 Months

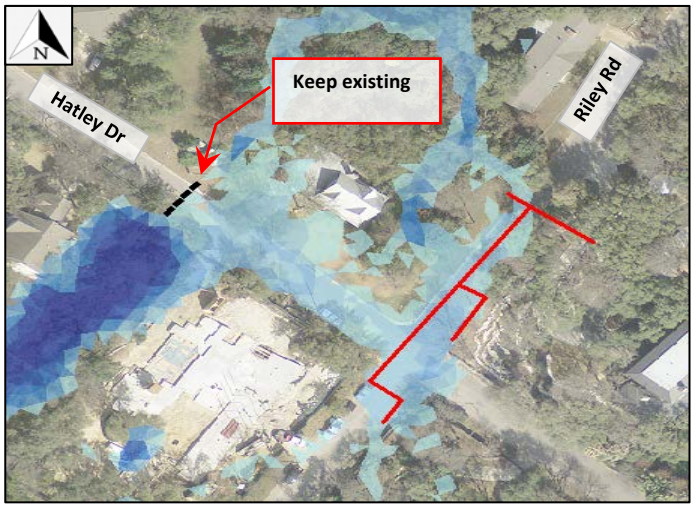
Possible Impacts

It is possible that the velocities and peak flow in Town Lake Tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red. Existing culvert in black. Existing 100-yr inundation shown.

Crossing of Town Lake tributary at Hatley Drive. 09/09/2019

Appendix I: Opinions of Probable Cost

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: A **Total Cost Estimate: $ 589,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 42,900	$ 42,900
SURVEY (5%)	1	LS	$ 21,450	$ 21,450
ENVIRONMENTAL (5%)	1	LS	$ 21,450	$ 21,450
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 86,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(24 IN)	500	LF	$ 208	$ 104,000
RECONSTRUCTION OF DRIVEWAYS	5	EA	$ 4,000	$ 20,000
CUT AND RESTORE PAVEMENT	500	LF	$ 160	$ 80,000
BARRICADES, SIGNS AND TRAFFIC HANDLING	6	MO	$ 10,000	$ 60,000
PERMANENT EROSION CONTROL AND REVEGETATION	500	LF	$ 10	$ 5,000
CURB INLET	5	EA	$ 5,500	$ 27,500
SAFETY END TREATMENT (24 IN)	1	EA	$ 1,250	$ 1,250
SUBTOTAL				$ 297,750
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 2,978
MOBILIZATION (8%)				$ 23,820
CONTINGENCY (35%)				$ 104,213
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 429,000
ATLAS 14 CONTINGENCY (10%)				$ 42,900
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 472,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	6	MO	$ 5,000	$ 30,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 500	$ 500
TOTAL OTHER COSTS:				$ 31,000

[1] NOT INCLUDED IN OPINION OF PROBABLE TOTAL PROJECT COST

THIS DOCUMENT IS AN OPINION OF PROBABLE COST AND NOT TO BE USED FOR BID PURPOSES.

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: B **Total Cost Estimate: $ -**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ -	$ -
SURVEY (5%)	1	LS	$ -	$ -
ENVIRONMENTAL (5%)	1	LS	$ -	$ -
TOTAL ENGINEERING AND SURVEYING COSTS:				$ -

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
SUBTOTAL				$ -
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ -
MOBILIZATION (8%)				$ -
CONTINGENCY (35%)				$ -
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ -
ATLAS 14 CONTINGENCY (10%)				$ -
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ -

NO PROJECT IS PROPOSED AT THIS AREA OF INTEREST AT THIS TIME, SO NO COST ESTIMATE IS PROPOSED.

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES		MO		$ -
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)		LS		$ -
TOTAL OTHER COSTS:				$ -

[1] NOT INCLUDED IN OPINION OF PROBABLE TOTAL PROJECT COST

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CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: C **Total Cost Estimate: $ -**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ -	$ -
SURVEY (5%)	1	LS	$ -	$ -
ENVIRONMENTAL (5%)	1	LS	$ -	$ -
TOTAL ENGINEERING AND SURVEYING COSTS:				$ -

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
SUBTOTAL				$ -
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ -
MOBILIZATION (8%)				$ -
CONTINGENCY (35%)				$ -
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ -
ATLAS 14 CONTINGENCY (10%)				$ -
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ -

NO PROJECT IS PROPOSED AT THIS AREA OF INTEREST AT THIS TIME, SO NO COST ESTIMATE IS PROPOSED.

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES		MO	$ 5,000	$ -
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)		LS		$ -
TOTAL OTHER COSTS:				$ -

[1] NOT INCLUDED IN OPINION OF PROBABLE TOTAL PROJECT COST

THIS DOCUMENT IS AN OPINION OF PROBABLE COST AND NOT TO BE USED FOR BID PURPOSES.

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: D **Total Cost Estimate: $ 558,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 39,800	$ 39,800
SURVEY (5%)	1	LS	$ 19,900	$ 19,900
ENVIRONMENTAL (5%)	1	LS	$ 19,900	$ 19,900
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 80,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(48 IN)	140	LF	$ 208	$ 29,120
HEADWALL	1	EA	$ 17,500	$ 17,500
DROP INLET	1	EA	$ 6,000	$ 6,000
CHANNEL IMPROVEMENTS	475	LF	$ 70	$ 33,250
RECONSTRUCTION OF DRIVEWAYS	1	EA	$ 4,000	$ 4,000
CUT AND RESTORE PAVEMENT	140	LF	$ 160	$ 22,400
BARRICADES, SIGNS AND TRAFFIC HANDLING	6	MO	$ 10,000	$ 60,000
PERMANENT EROSION CONTROL AND REVEGETATION	475	LF	$ 10	$ 4,750
PROPOSED CUL-DE-SAC WATERMAIN IMPROVEMENTS LNV PROJECT [2]	1	LS	$ 98,929	$ 98,929
SUBTOTAL				$ 275,949
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 2,759
MOBILIZATION (8%)				$ 22,076
CONTINGENCY (35%)				$ 96,582
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 398,000
ATLAS 14 CONTINGENCY (10%)				$ 39,800
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 438,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	6	MO	$ 5,000	$ 30,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 9,200	$ 9,200
TOTAL OTHER COSTS:				$ 40,000

[1] NOT INCLUDED IN OPINION OF PROBABLE TOTAL PROJECT COST

[2] PROJECT DATED JULY 07, 2018 WAS INFLATED TO NOVEMBER 2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: F, E **Total Cost Estimate: $ 2,024,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 149,800	$ 149,800
SURVEY (5%)	1	LS	$ 74,900	$ 74,900
ENVIRONMENTAL (5%)	1	LS	$ 74,900	$ 74,900
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 300,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(36 IN)	846	LF	$ 143	$ 120,978
RC PIPE (CL III)(24 IN)	272	LF	$ 95	$ 25,840
CONC BOX CULV (6 FT x 3 FT)	626	LF	$ 465	$ 291,090
CONC BOX CULV (5 FT x 3 FT)	125	LF	$ 642	$ 80,250
HEADWALL	1	EA	$ 17,500	$ 17,500
CURB INLET	20	EA	$ 5,500	$ 110,000
CURB INLET	1	EA	$ 6,000	$ 6,000
CUT AND RESTORE PAVEMENT	1118	LF	$ 160	$ 178,880
BARRICADES, SIGNS AND TRAFFIC HANDLING	15	MO	$ 10,000	$ 150,000
PERMANENT EROSION CONTROL AND REVEGETATION	1118	LF	$ 10	$ 11,180
DRIVEWAY RECONSTRUCTION	12	EA	$ 4,000	$ 48,000
SUBTOTAL				$ 1,039,718
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 10,397
MOBILIZATION (8%)				$ 83,177
CONTINGENCY (35%)				$ 363,901
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 1,498,000
ATLAS 14 CONTINGENCY (10%)				$ 149,800
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 1,648,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	15	MO	$ 5,000	$ 75,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 500	$ 500
TOTAL OTHER COSTS:				$ 76,000

[1] NOT INCLUDED IN OPINION OF PROBABLE TOTAL PROJECT COST

THIS DOCUMENT IS AN OPINION OF PROBABLE COST AND NOT TO BE USED FOR BID PURPOSES.

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: G **Total Cost Estimate: $ 2,631,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 197,000	$ 197,000
SURVEY (5%)	1	LS	$ 98,500	$ 98,500
ENVIRONMENTAL (5%)	1	LS	$ 98,500	$ 98,500
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 394,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
BRIDGE	13800	SF	$ 75	$ 1,035,000
RAISE ROAD/ROAD IMPROVEMENTS	350	LF	$ 570	$ 199,500
BARRICADES, SIGNS AND TRAFFIC HANDLING	12	MO	$ 10,000	$ 120,000
PERMANENT EROSION CONTROL AND REVEGETATION	650	LF	$ 10	$ 6,500
CHANNEL IMPROVEMENTS	100	LF	$ 70	$ 7,000
SUBTOTAL				$ 1,368,000
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 13,680
MOBILIZATION (8%)				$ 109,440
CONTINGENCY (35%)				$ 478,800
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 1,970,000
ATLAS 14 CONTINGENCY (10%)				$ 197,000
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 2,167,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	12	MO	$ 5,000	$ 60,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 9,200	$ 9,200
TOTAL OTHER COSTS:				$ 70,000

[1] NOT INCLUDED IN OPINION OF PROBABLE TOTAL PROJECT COST

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CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: H **Total Cost Estimate: $ 475,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 31,800	$ 31,800
SURVEY (5%)	1	LS	$ 15,900	$ 15,900
ENVIRONMENTAL (5%)	1	LS	$ 15,900	$ 15,900
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 64,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
BARRICADES, SIGNS AND TRAFFIC HANDLING	12	MO	$ 10,000	$ 120,000
PERMANENT EROSION CONTROL AND REVEGETATION	55	LF	$ 10	$ 550
DETENTION POND	1	EA	$ 100,000	$ 100,000
SUBTOTAL				$ 220,550
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 2,206
MOBILIZATION (8%)				$ 17,644
CONTINGENCY (35%)				$ 77,193
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 318,000
ATLAS 14 CONTINGENCY (10%)				$ 31,800
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 350,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	12	MO	$ 5,000	$ 60,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 500	$ 500
TOTAL OTHER COSTS:				$ 61,000

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CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: I **Total Cost Estimate: $ 238,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 15,900	$ 15,900
SURVEY (5%)	1	LS	$ 7,950	$ 7,950
ENVIRONMENTAL (5%)	1	LS	$ 7,950	$ 7,950
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 32,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(24 IN)	70	LF	$ 95	$ 6,650
HEADWALL	2	EA	$ 17,500	$ 35,000
CHANNEL IMPROVEMENTS	40	LF	$ 70	$ 2,800
BARRICADES, SIGNS AND TRAFFIC HANDLING	6	MO	$ 10,000	$ 60,000
PERMANENT EROSION CONTROL AND REVEGETATION	475	LF	$ 10	$ 4,750
REMOVE HEADWALL	2	EA	$ 401	$ 802
SUBTOTAL				$ 110,002
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 1,100
MOBILIZATION (8%)				$ 8,800
CONTINGENCY (35%)				$ 38,501
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 159,000
ATLAS 14 CONTINGENCY (10%)				$ 15,900
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 175,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	6	MO	$ 5,000	$ 30,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 500	$ 500
TOTAL OTHER COSTS:				$ 31,000

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CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: J **Total Cost Estimate: $ 883,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 63,100	$ 63,100
SURVEY (5%)	1	LS	$ 31,550	$ 31,550
ENVIRONMENTAL (5%)	1	LS	$ 31,550	$ 31,550
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 127,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(24 IN)	675	LF	$ 208	$ 140,400
RECONSTRUCTION OF DRIVEWAYS	2	EA	$ 4,000	$ 8,000
CUT AND RESTORE PAVEMENT	675	LF	$ 160	$ 108,000
BARRICADES, SIGNS AND TRAFFIC HANDLING	12	MO	$ 10,000	$ 120,000
PERMANENT EROSION CONTROL AND REVEGETATION	675	LF	$ 10	$ 6,750
CURB INLET	10	EA	$ 5,500	$ 55,000
SUBTOTAL				$ 438,150
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 4,382
MOBILIZATION (8%)				$ 35,052
CONTINGENCY (35%)				$ 153,353
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 631,000
ATLAS 14 CONTINGENCY (10%)				$ 63,100
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 695,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	12	MO	$ 5,000	$ 60,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 500	$ 500
TOTAL OTHER COSTS:				$ 61,000

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CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: L **Total Cost Estimate: $ 490,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 33,400	$ 33,400
SURVEY (5%)	1	LS	$ 16,700	$ 16,700
ENVIRONMENTAL (5%)	1	LS	$ 16,700	$ 16,700
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 67,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(24 IN)	24	LF	$ 95	$ 2,280
SET (TY II) (24 IN) (RCP)	2	EA	$ 1,300	$ 2,600
CHANNEL IMPROVEMENTS	175	LF	$ 70	$ 12,250
RECONSTRUCTION OF DRIVEWAYS	1	EA	$ 4,000	$ 4,000
BARRICADES, SIGNS AND TRAFFIC HANDLING	9	MO	$ 10,000	$ 90,000
RAISE ROAD/ROAD IMPROVEMENTS	315	LF	$ 380	$ 119,700
PERMANENT EROSION CONTROL AND REVEGETATION	55	LF	$ 10	$ 550
SUBTOTAL				$ 231,380
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 2,314
MOBILIZATION (8%)				$ 18,510
CONTINGENCY (35%)				$ 80,983
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 334,000
ATLAS 14 CONTINGENCY (10%)				$ 33,400
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 368,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	9	MO	$ 5,000	$ 45,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 9,200	$ 9,200
TOTAL OTHER COSTS:				$ 55,000

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CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: M, K, V **Total Cost Estimate: $ 5,283,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 401,700	$ 401,700
SURVEY (5%)	1	LS	$ 200,850	$ 200,850
ENVIRONMENTAL (5%)	1	LS	$ 200,850	$ 200,850
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 804,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(36 IN)	248	LF	$ 143	$ 35,464
CONC BOX CULV (6 FT x 3 FT)	303	LF	$ 465	$ 140,895
CONC BOX CULV (8 FT x 4 FT)	1382	LF	$ 573	$ 791,886
CONC BOX CULV (5 FT x 3 FT)	358	LF	$ 642	$ 229,836
HEADWALL	1	EA	$ 17,500	$ 17,500
CURB INLET	27	EA	$ 5,500	$ 148,500
AREA INLET	1	EA	$ 6,000	$ 6,000
12" TALL CURB (TY II)	675	LF	$ 30	$ 20,250
CUT AND RESTORE PAVEMENT	2043	LF	$ 160	$ 326,880
BARRICADES, SIGNS AND TRAFFIC HANDLING	12	MO	$ 10,000	$ 120,000
PERMANENT EROSION CONTROL AND REVEGETATION	2043	LF	$ 10	$ 20,430
DRIVEWAY RECONSTRUCTION	16	EA	$ 4,000	$ 64,000
SUBTOTAL				$ 1,921,641
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 19,216
MOBILIZATION (8%)				$ 153,731
CONTINGENCY (35%)				$ 1,922,000
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 4,017,000
ATLAS 14 CONTINGENCY (10%)				$ 401,700
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 4,419,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	12	MO	$ 5,000	$ 60,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 9,200	$ -
TOTAL OTHER COSTS:				$ 60,000

[1] NOT INCLUDED IN OPINION OF PROBABLE TOTAL PROJECT COST

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: N **Total Cost Estimate: $ 380,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 26,800	$ 26,800
SURVEY (5%)	1	LS	$ 13,400	$ 13,400
ENVIRONMENTAL (5%)	1	LS	$ 13,400	$ 13,400
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 54,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(36 IN)	250	LF	$ 143	$ 35,750
HEADWALL	1	EA	$ 17,500	$ 17,500
DROP INLET	1	EA	$ 6,000	$ 6,000
CHANNEL IMPROVEMENTS	10	LF	$ 70	$ 700
RECONSTRUCTION OF DRIVEWAYS	3	EA	$ 4,000	$ 12,000
CUT AND RESTORE PAVEMENT	250	LF	$ 160	$ 40,000
BARRICADES, SIGNS AND TRAFFIC HANDLING	6	MO	$ 10,000	$ 60,000
PERMANENT EROSION CONTROL AND REVEGETATION	250	LF	$ 10	$ 2,500
CURB INLET	2	EA	$ 5,500	$ 11,000
SUBTOTAL				$ 185,450
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 1,855
MOBILIZATION (8%)				$ 14,836
CONTINGENCY (35%)				$ 64,908
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 268,000
ATLAS 14 CONTINGENCY (10%)				$ 26,800
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 295,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	6	MO	$ 5,000	$ 30,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 500	$ 500
TOTAL OTHER COSTS:				$ 31,000

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CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: O **Total Cost Estimate: $ 217,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 14,200	$ 14,200
SURVEY (5%)	1	LS	$ 7,100	$ 7,100
ENVIRONMENTAL (5%)	1	LS	$ 7,100	$ 7,100
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 29,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CHANNEL IMPROVEMENTS	475	LF	$ 70	$ 33,250
BARRICADES, SIGNS AND TRAFFIC HANDLING	6	MO	$ 10,000	$ 60,000
PERMANENT EROSION CONTROL AND REVEGETATION	475	LF	$ 10	$ 4,750
SUBTOTAL				$ 98,000
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 980
MOBILIZATION (8%)				$ 7,840
CONTINGENCY (35%)				$ 34,300
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 142,000
ATLAS 14 CONTINGENCY (10%)				$ 14,200
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 157,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	6	MO	$ 5,000	$ 30,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 500	$ 500
TOTAL OTHER COSTS:				$ 31,000

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: Q, P **Total Cost Estimate: $ 816,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 57,300	$ 57,300
SURVEY (5%)	1	LS	$ 28,650	$ 28,650
ENVIRONMENTAL (5%)	1	LS	$ 28,650	$ 28,650
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 115,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(36 IN)	630	LF	$ 143	$ 90,090
HEADWALL	1	EA	$ 17,500	$ 17,500
CURB INLET	10	EA	$ 5,500	$ 55,000
RECONSTRUCTION OF DRIVEWAYS	2	EA	$ 4,000	$ 8,000
CUT AND RESTORE PAVEMENT	630	LF	$ 160	$ 100,800
BARRICADES, SIGNS AND TRAFFIC HANDLING	12	MO	$ 10,000	$ 120,000
PERMANENT EROSION CONTROL AND REVEGETATION	630	LF	$ 10	$ 6,300
SUBTOTAL				$ 397,690
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 3,977
MOBILIZATION (8%)				$ 31,815
CONTINGENCY (35%)				$ 139,192
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 573,000
ATLAS 14 CONTINGENCY (10%)				$ 57,300
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 631,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	12	MO	$ 5,000	$ 60,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 9,200	$ 9,200
TOTAL OTHER COSTS:				$ 70,000

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CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: R **Total Cost Estimate: $ 400,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 28,300	$ 28,300
SURVEY (5%)	1	LS	$ 14,150	$ 14,150
ENVIRONMENTAL (5%)	1	LS	$ 14,150	$ 14,150
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 57,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(36 IN)	415	LF	$ 143	$ 59,345
HEADWALL	1	EA	$ 17,500	$ 17,500
CURB INLET	4	EA	$ 5,500	$ 22,000
CURB INLET	1	EA	$ 6,000	$ 6,000
CUT AND RESTORE PAVEMENT	80	LF	$ 160	$ 12,800
BARRICADES, SIGNS AND TRAFFIC HANDLING	6	MO	$ 10,000	$ 60,000
PERMANENT EROSION CONTROL AND REVEGETATION	415	LF	$ 10	$ 4,150
CHANNEL IMPROVEMENTS	150	LF	$ 70	$ 10,500
DRIVEWAY RECONSTRUCTION	1	EA	$ 4,000	$ 4,000
SUBTOTAL				$ 196,295
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 1,963
MOBILIZATION (8%)				$ 15,704
CONTINGENCY (35%)				$ 68,703
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 283,000
ATLAS 14 CONTINGENCY (10%)				$ 28,300
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 312,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	6	MO	$ 5,000	$ 30,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 500	$ 500
TOTAL OTHER COSTS:				$ 31,000

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: T, S **Total Cost Estimate: $ 2,122,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 156,100	$ 156,100
SURVEY (5%)	1	LS	$ 78,050	$ 78,050
ENVIRONMENTAL (5%)	1	LS	$ 78,050	$ 78,050
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 313,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(36 IN)	700	LF	$ 130	$ 91,000
CONC BOX CULV (7 FT x 4 FT)	350	LF	$ 294	$ 102,900
CONC BOX CULV (5 FT x 3 FT)	520	LF	$ 470	$ 244,400
HEADWALL	1	EA	$ 17,500	$ 17,500
CURB INLET	22	EA	$ 5,500	$ 121,000
CUT AND RESTORE PAVEMENT	1570	LF	$ 160	$ 251,200
BARRICADES, SIGNS AND TRAFFIC HANDLING	18	MO	$ 10,000	$ 180,000
PERMANENT EROSION CONTROL AND REVEGETATION	1570	LF	$ 10	$ 15,700
DRIVEWAY RECONSTRUCTION	15	EA	$ 4,000	$ 60,000
SUBTOTAL				$ 1,083,700
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 10,837
MOBILIZATION (8%)				$ 86,696
CONTINGENCY (35%)				$ 379,295
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 1,561,000
ATLAS 14 CONTINGENCY (10%)				$ 156,100
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 1,718,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	18	MO	$ 5,000	$ 90,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 500	$ 500
TOTAL OTHER COSTS:				$ 91,000

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CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: U **Total Cost Estimate: $ 141,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 8,500	$ 8,500
SURVEY (5%)	1	LS	$ 4,250	$ 4,250
ENVIRONMENTAL (5%)	1	LS	$ 4,250	$ 4,250
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 17,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CHANNEL IMPROVEMENTS	230	LF	$ 70	$ 16,100
BARRICADES, SIGNS AND TRAFFIC HANDLING	4	MO	$ 10,000	$ 40,000
PERMANENT EROSION CONTROL AND REVEGETATION	230	LF	$ 10	$ 2,300
SUBTOTAL				$ 58,400
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 584
MOBILIZATION (8%)				$ 4,672
CONTINGENCY (35%)				$ 20,440
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 85,000
ATLAS 14 CONTINGENCY (10%)				$ 8,500
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 94,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	4	MO	$ 5,000	$ 20,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 9,200	$ 9,200
TOTAL OTHER COSTS:				$ 30,000

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CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: W **Total Cost Estimate: $ 654,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 44,900	$ 44,900
SURVEY (5%)	1	LS	$ 22,450	$ 22,450
ENVIRONMENTAL (5%)	1	LS	$ 22,450	$ 22,450
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 90,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(36 IN)	390	LF	$ 143	$ 55,770
HEADWALL	1	EA	$ 17,500	$ 17,500
RECONSTRUCTION OF DRIVEWAYS	2	EA	$ 4,000	$ 8,000
CUT AND RESTORE PAVEMENT	390	LF	$ 160	$ 62,400
BARRICADES, SIGNS AND TRAFFIC HANDLING	12	MO	$ 10,000	$ 120,000
PERMANENT EROSION CONTROL AND REVEGETATION	390	LF	$ 10	$ 3,900
CURB INLET	8	EA	$ 5,500	$ 44,000
SUBTOTAL				$ 311,570
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 3,116
MOBILIZATION (8%)				$ 24,926
CONTINGENCY (35%)				$ 109,050
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 449,000
ATLAS 14 CONTINGENCY (10%)				$ 44,900
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 494,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	12	MO	$ 5,000	$ 60,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 9,200	$ 9,200
TOTAL OTHER COSTS:				$ 70,000

[1] NOT INCLUDED IN OPINION OF PROBABLE TOTAL PROJECT COST

THIS DOCUMENT IS AN OPINION OF PROBABLE COST AND NOT TO BE USED FOR BID PURPOSES.

Appendix J: External Funding Sources Memorandum

THE GOODMAN CORPORATION

HOUSTON:
3200 Travis Street
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Houston, TX 77006

AUSTIN:
911 W. Anderson Lane
Suite 200
Austin, TX 78757

PHONE: (713) 951-7951

THEGOODMANCORP.COM

MEMO

Date: **October 31, 2019**
To: **K. Friese + Associates (KFA)**
From: **The Goodman Corporation (TGC)**
Subject: **City of Rollingwood Infrastructure Improvements Plan: Potential Capital Improvement Program (CIP) Project Funding Sources**

Background

TGC is assisting KFA in the review of recommended City of Rollingwood (City) Capital Improvement Program (CIP) projects. TGC's review is specific to recommendations related to discretionary funding opportunities and other project specific recommendations related to funding and implementation. This memo summarizes these recommendations. The order of projects listed within this memo is based on the ranked CIP order as established by KFA.

THE GOODMAN CORPORATION

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MEMO

Funding Types

This memorandum refers to various funding opportunities. For ease of reference, commonly referenced funding opportunities are summarized and described below. Other funding opportunities are identified as they apply to individual projects.

Economic Development Administration Disaster Recovery (EDA-DR)	Refers to EDA funding made available after a Presidential Disaster Declaration and administered directly through the EDA. The EDA typically requires for there to be a rational nexus between the proposed project, the disaster suffered, and job growth, attraction, and/or retention.
Flood Mitigation Assistance (FMA)	Refers to Federal Emergency Management Agency (FEMA) funds which are made available annually and allocated through the Texas Water Development Board. This particular program requires a connection between the project and its potential to benefit National Flood Insurance Program (NFIP) policy holders who have suffered significant or repetitive losses.
Hazard Mitigation Grant Program (HMGP)	Refers to FEMA funds made available after a Presidential Disaster Declaration and channeled through the Texas General Land Office (GLO). HMGP funding can be used for a variety of project types to include acquisition and a variety stormwater management type to include drainage improvements and floodwater diversion and storage. Nearly every project in this analysis is technically eligible for HMGP funds. However, it is very difficult to determine the potential for funding without the completion of a Benefit Cost Analysis (BCA) per FEMA criteria.

Surface Transportation Block Grant (STBG)	Refers to federal discretionary dollars made available through the Capital Area Metropolitan Planning Organization (CAMPO). STBG funds can be spent on most mobility-related capital projects so long as the facility is federally functionally classified as a collector or above. The only two roadways within the City which meet this criteria are Rollingwood Drive and FM 2244/Bee Caves Road.
Texas Water Development Board (TWDB)	Refers to funding potentially made available via Proposition 8, Flood Infrastructure Fund Amendment. The proposition will create a fund for projects related to flood drainage, mitigation and control. The majority of funding will be in the form of low interest loans and grants to provide the match for federal funds. So, these funds could theoretically be applied to the EDA-DR, FMA, and HMGP resources previously referenced.
Transportation Alternatives Set-Aside Program (TAP)	Refers to federal discretionary dollars for sidewalks, bike facilities, and other multi-modal investments. Funds are made available through CAMPO as well as through Texas Department of Transportation (TxDOT) itself for small urban and rural areas of the state.
TxDOT On-System	Refers to TxDOT funding reserved for on-system facilities (meaning, TxDOT owned and operated facilities) or otherwise used at the discretion of a District office or at the Texas Transportation Commission. This could mean funds derived from Propositions 1 & 7 or from TxDOT Category 2 funding.

Project ID:	B
Project Name:	Bee Cave Road Drainage Improvements

Comments and Recommendations: The issues and resultant recommendations relative to this project should be further evaluated through engineering studies and meetings with TxDOT, as the issue is completely specific to the flooding of their facility. TxDOT is currently performing an overlay project on the road so it is logical to schedule a meeting with the TxDOT Austin District Office to understand how the overlay project could impact any future programming decisions for future roadway specific projects, especially in light of TxDOT's reconstruction and widening of the section of FM 2244 west of Walsh Tarlton. Depending on the recommended solution, there could be a variety of TxDOT resources available.

Further project scope development is needed prior to the recommendation of any specific funding opportunities. A project involving a significant roadway reconstruction and/or bridge replacement would result in a recommendation for the pursuit of roadway/highway centric funding. Close coordination with TxDOT is recommended as the frequency and severity of roadway flooding could be interpreted as an impediment to safe travel, especially for emergency services. A potential funding partnership with TxDOT could be explored towards a solution. A project on this facility would be eligible for TxDOT On-System funds and could potentially be ranked high as FM 2244 is designated as a portion of the National Highway System (NHS) and as a Principal Arterial.

Project eligible for HMGP funding but will likely yield a low BCA based on travel time delay alone. However, if the elevation of the bridge will have other positive downstream impacts, then a higher BCA is possible. TxDOT may or may not be supportive of using FEMA funding as part of a broader project involving their facility.

Project could be a very strong candidate for EDA-DR funding based upon strength of economic development argument (movement of goods, freight, etc.) along Bee Caves Road during rain events. However, the same caveat related to mixing funding sources applies.

Project ID:	G
Project Name:	Edgegrove Drive Drainage Improvements
Comments and Recommendations: The recommended project is not eligible for most types of federal funding as Edgegrove Drive is considered to be a local road and it does not appear that this flooding impacts any adjacent property. However, there are elements of the project which could theoretically be funded through TAP resources, such as the proposed bicycle facilities and pedestrian improvements. The road also provides a key connection between an adjacent Major Collector (Rollingwood Drive) and Principal Arterial (FM 2244/Bee Caves Road), which may make it more attractive for funding partnerships. Project eligible for HMGP funding but will likely yield a low BCA based on travel time delay alone. However, if the elevation of the bridge will have other positive downstream impacts, then a higher BCA is possible. Potential for EDA-DR funds based on project benefits.	

Project ID:	M, K, V, L
Project Name:	Nixon / Pleasant Drainage Improvements
Comments and Recommendations: The recommended project appears to have some potential to reduce localized flooding for residential structures along Nixon and Pleasant Drives. Additional analysis and modeling may need to be completed to confirm this, but if so, and the structures and the individual property owners themselves have NFIP severe or repetitive losses, then FMA funding made available through the Texas Water Development Board (TWDB) and FEMA may be an option. Project eligible for HMGP funding but will require a closer analysis of structural damage reduction and vehicular delay through modeling to determine BCA. However, due to the relatively high cost of the combined project, it may be difficult to quantify a BCA over 1.0.	

Project ID:	D
Project Name:	Timberline-South Crest Drainage Improvements
Comments and Recommendations: Area inundation does not appear sufficient to justify competitive discretionary funding resources.	

Project ID:	W
Project Name:	Hatley Drive Drainage Improvements
Comments and Recommendations: The project appears to have some potential to reduce localized flooding for residential structures along Hatley Drive. Additional analysis and modeling may need to be completed to confirm this, but if so, and the structures have NFIP severe or repetitive losses, then FMA funding made available through the TWDB and FEMA may be an option. Potential for HMGP application based on calculated structural damage.	

Project ID:	H
Project Name:	City Hall Drainage Improvements
Comments and Recommendations: Project appears to be dependent upon AOI E and F improvements. However, the project and its benefits may lead to opportunities within the HMGP and EDA-DR Programs due to the benefits created at City Hall and the Rollingwood Police Department. FMA funding may also be applicable for this project dependent upon flood damage historically experienced at public facilities.	

Project ID:	J
Project Name:	Underground Sand Filtration Pond Drainage Improvements
Comments and Recommendations: Project appears to be dependent upon AOI E and F improvements. Regardless, the minor ponding experienced at the pond inlet is not significant enough to warrant competitive discretionary funding resources.	

Project ID:	T, S
Project Name:	East Rollingwood Drive and East Timberline Drive Drainage Improvements
Comments and Recommendations: The recommended project appears to have the potential to reduce localized flooding for residential structures. Additional analysis and modeling may need to be completed to confirm this, but if so, and the structures have NFIP severe or repetitive losses, then FMA funding made available through the TWDB and FEMA may be an option.	

Project ID:	N
Project Name:	Timberline Drive Drainage Improvements
Comments and Recommendations: Incorporating these improvements into a larger CIP project which involved sidewalk/roadway reconstruction could facilitate a grant request for sidewalks, curb, gutter, new stormwater systems, and ADA compliant ramps through CAMPO's TAP/STBG programs. HMGP and FMA funding may also be an option dependent upon historical flooding claims and damage but it appears to be unlikely based on the existing ponding maps.	

Project ID:	Q, P
Project Name:	Rock Way Cove Drainage Improvements + Wallis and Hatley Drainage Improvements
Comments and Recommendations: : The project appears to have some potential to reduce localized flooding for residential structures along Hatley Drive. Additional analysis and modeling may need to be completed to confirm this, but if so, and the structures have NFIP severe or repetitive losses, then FMA funding made available through the TWDB and FEMA may be an option. Potential for HMGP application based on calculated structural damage. Additionally, the addition of sidewalks to the project scope, as well as expansion of the scope to connect activity centers such as Rollingwood Park and/or Pool could potentially create grant opportunities for a project that included sidewalks, curb, gutter, new stormwater systems, and ADA compliant ramps.	

Project ID:	R
Project Name:	Hatley Drive Drainage Improvements
Comments and Recommendations: The project appears to have some potential to reduce localized flooding for residential structures along Hatley Drive. Additional analysis and modeling may need to be completed to confirm this, but if so, and the structures have NFIP severe or repetitive losses, then FMA funding made available through the TWDB and FEMA may be an option. Potential for HMGP application based on calculated structural damage.	

Project ID:	O
Project Name:	Kristy Drive Drainage Improvements
Comments and Recommendations: The project appears to have some potential to reduce localized flooding for residential structures along Kristy Drive. Additional analysis and modeling may need to be completed to confirm this, but if so, and the structures have NFIP severe or repetitive losses, then FMA funding made available through the TWDB and FEMA may be an option. Potential for HMGP application based on calculated structural damage.	

Project ID:	E, F
Project Name:	Nixon/Gentry, Randolph Place Drainage Improvements
Comments and Recommendations: The recommended project appears to have the potential to reduce localized flooding for residential structures along Town Lake tributary. Additional analysis and modeling may need to be completed to confirm this, but if so, and the structures have NFIP severe or repetitive losses, then FMA funding made available through the TWDB and FEMA may be an option. HMGP, and EDA-DR resources may be applicable due to a reduction along Nixon adjacent to Rollingwood City Hall. However, the direct nexus between this project and AOI project H is unclear.	

Project ID:	I
Project Name:	Park Hills Drainage Improvements
Comments and Recommendations: The recommended project appears to have the potential to reduce localized flooding for residential structures along Town Lake tributary. Additional analysis and modeling may need to be completed to confirm this, but if so, and the structures have NFIP severe or repetitive losses, then FMA funding made available through the TWDB and FEMA may be an option. Potential for HMGP funding based on historic structural losses.	

Project ID:	A
Project Name:	Rollingwood Drive West Drainage Improvements
Comments and Recommendations: Area inundation does not appear sufficient to justify competitive discretionary funding resources for drainage component alone. Scope expansion to include access management, roadway, and/or sidewalk and bicycle improvements could potentially allow for the creation of discretionary funding opportunities through CAMPO's STBG program which would also support the overall area drainage objectives. The facility does meet the federal functional classification requirements for STBG funding application through CAMPO.	

Project ID:	U
Project Name:	Riley Road and Vance Lane Drainage Improvements
Comments and Recommendations: Per engineering report, inundation does not appear sufficient to justify competitive discretionary funding resources.	

Project ID:	C
Project Name:	Rollingwood Drive South Drainage Improvements
Comments and Recommendations: Per engineering report, inundation does not appear sufficient to justify development of a project.	

Next Steps

Prior to determining how these projects could best be funded, it is recommended that the following is completed, or at least considered:

- The calculated BCA of each of these projects. Due to the nature of these projects, it is recommended that FEMA methodology be used. This data could also be used to adjust the project ranking information provided as well as determine which projects are or are not HMGP eligible.
- Outreach with the community to determine the real world "true up" of the flooding demonstrated in the ponding maps. As many of these projects are based on individual locations of "spot" flooding, it will be helpful to understand the experienced severity and the associated frequency. Rather than a public meeting or survey tool, discussion with individual property owners could likely provide the additional information. These discussions could also include information relative to individual flood-related losses, NFIP insurance status, and claim amounts. This information will help to validate whether or not FMA grants will be applicable to individual projects. It is important to note that census tract level information.
- Coordination should occur with Travis County, the City of Austin Watershed Protection Department, and the Lower Colorado River Authority and/or any other applicable entities to understand if there are any opportunities for partnership projects or project specific restrictions related to downstream impacts.
- *Possible Next Step:* The City could develop funding applications which includes all or some of the projects identified. The local match participation amount could be adjusted (20%, 25%, 50%, etc.) to elevate the competitiveness of the project. It is important to remember that HMGP funds are only made available after a disaster declaration.

Conclusion

The majority of the recommended projects are, at a minimum, eligible for one or more discretionary funding sources. However, the competitiveness of the projects vary and are difficult to estimate without the completion of further evaluation via a benefit-cost analysis. Based on the information provided to date by KFA, the best projects for discretionary funding support appear to be the Bee Caves Road Drainage Improvement project and the projects related to City Hall Drainage.

It is our recommendation that the City use the framework provided here to monitor and identify funding opportunities. Grant funds can be pursued when identified and if awarded, will allow for the City to reallocate funding to other projects at that time.

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CITY OF ROLLINGWOOD

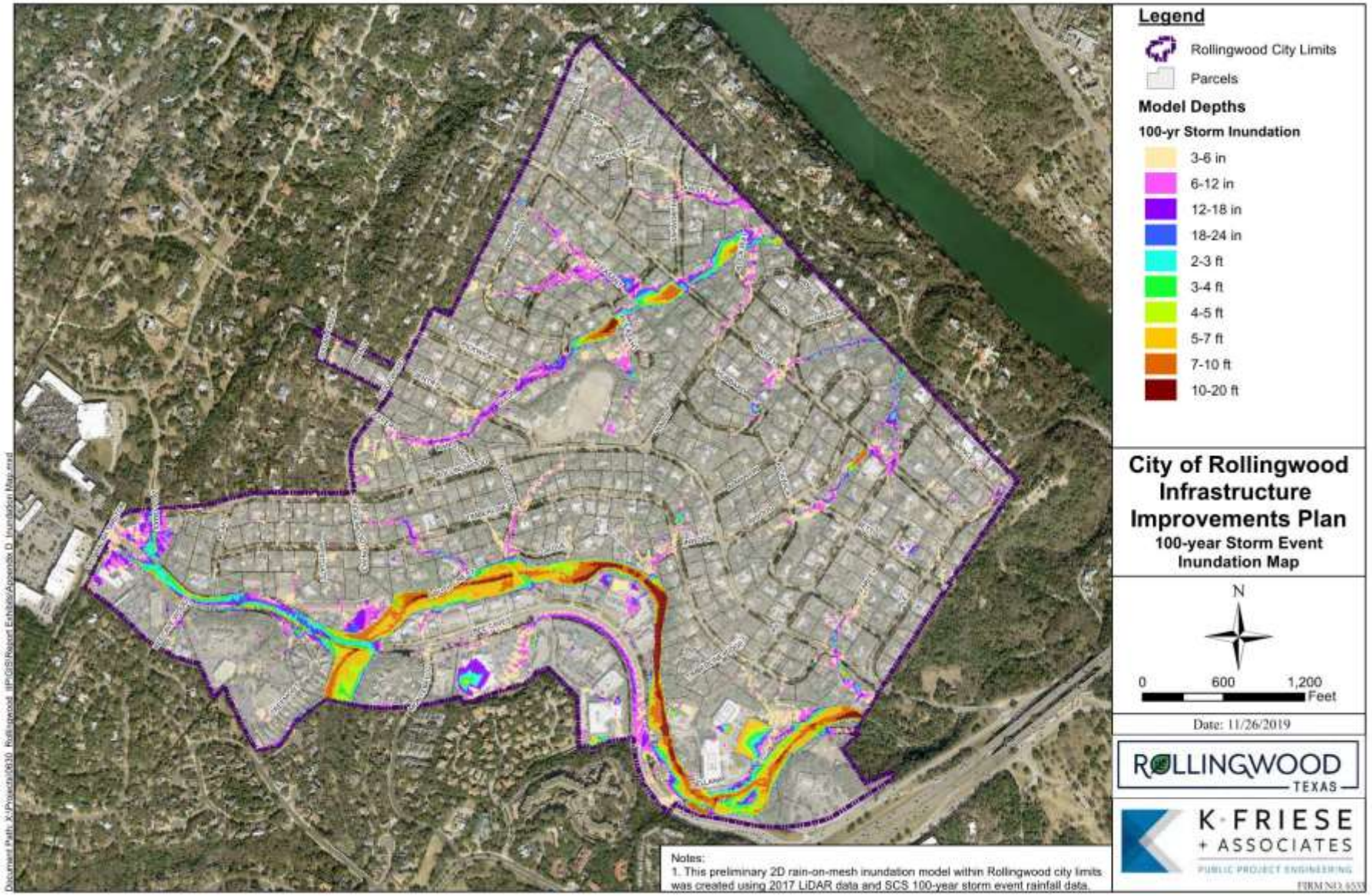
Infrastructure Improvements Plan

Comprehensive Plan Workshop No. 1| February 16, 2022

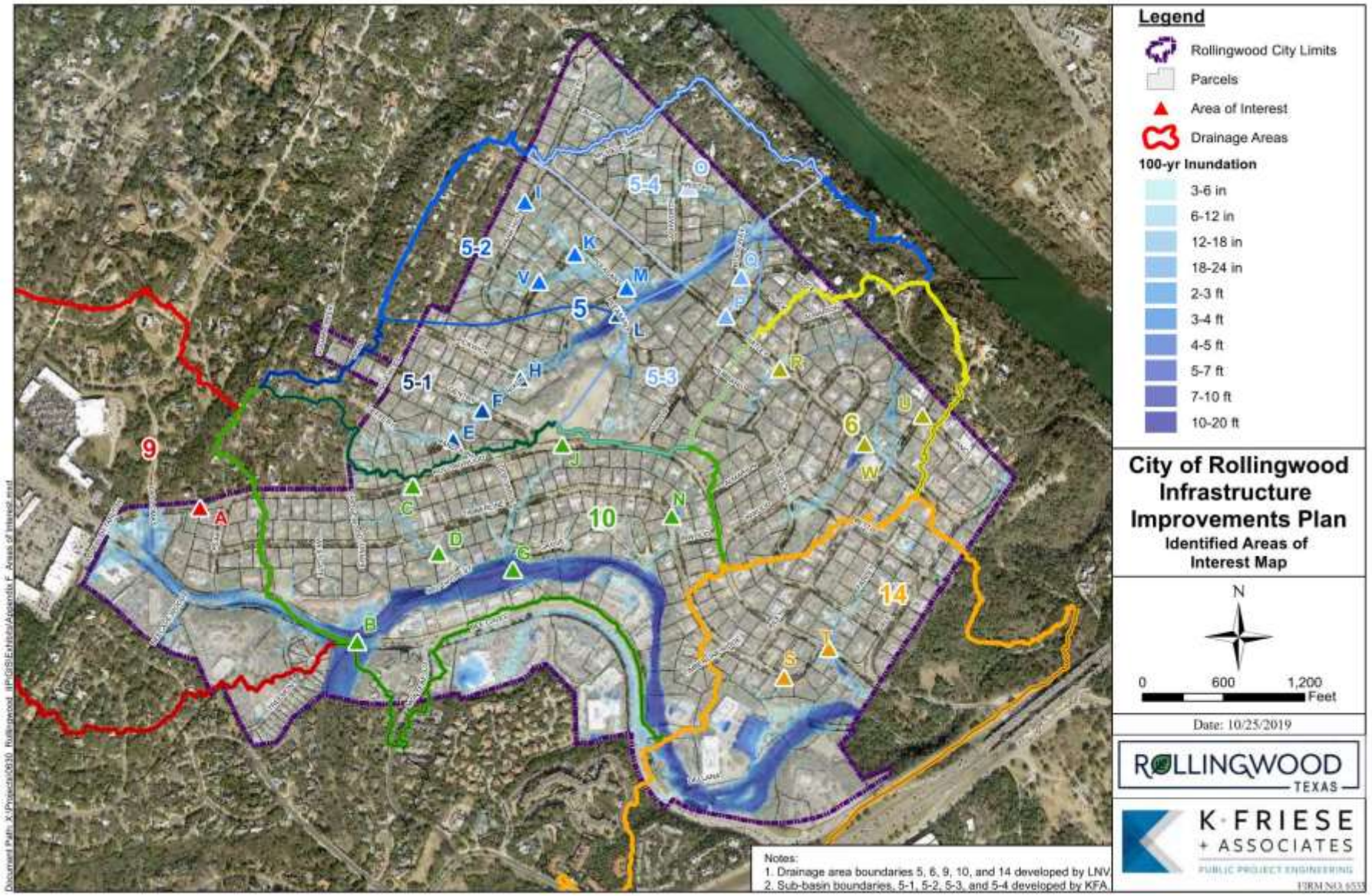
ROLLINGWOOD TEXAS

CITY OF ROLLINGWOOD
Infrastructure Improvements Plan

Background


Legend
Rollingwood City Limits
Parcels
Model Depths
100-yr Storm Inundation
3-6 in
6-12 in
12-18 in
18-24 in
2-3 ft
3-4 ft
4-5 ft
5-7 ft
7-10 ft
10-20 ft
City of Rollingwood
Infrastructure
Improvements Plan
100-year Storm Event
Inundation Map
N
0
600
1,200
Feet
Date: 11/26/2019
ROLLINGWOOD
TEXAS
K·FRIESE
+ ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535
Notes:
1. This preliminary 2D rain-on-mesh inundation model within Rollingwood city limits was created using 2017 LiDAR data and SCS 100-year storm event rainfall data.
Document Path: K:\Projects\0630_Rollingwood_IIP\GIS\Report Exhibits\Appendix D_Inundation Map.mxd

Areas of Interest



CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project Summary Sheet

Project ID: L
Project Name: Pleasant Cove Drainage Improvements
Drainage Basin: 5

Problem Description

Roadway flooding. Existing 60" RCP cross culvert at Pleasant Cove.

Proposed Improvements

Install new roadside channel upstream, approximately 400 feet in length. The channel grading will be to an approximate channel of 20 feet wide, 2 feet deep with a 4 ft bottom width, and 4:1 side slopes. Approximately 1 driveway reconstruction with a crossing culvert of 24" RCP of an estimated 24 feet. Raise the roadway profile, an estimated 175 feet.

CIP Ranking

7 out of 23

Project Costs

Engineering & Survey:	$ 67,000
Construction:	$ 368,000
Other:	$ 55,000
ROW/Easements:	UNK
Total:	**$ 490,000**
Conceptual Cost Range:	$250k - $500k
Estimated Construction Duration:	9 Months

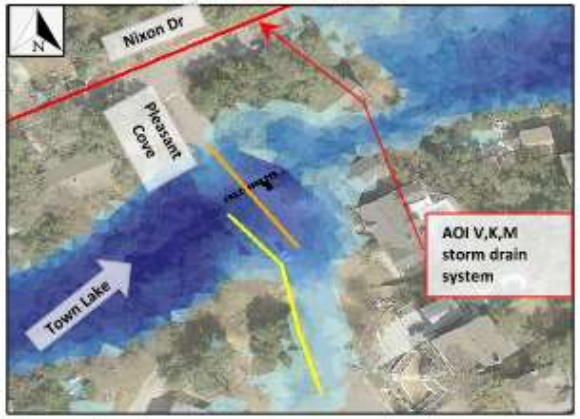
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed culverts will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed road improvements in orange, channel improvements in yellow. Existing culverts in black. Existing 100-yr inundation shown.

Pleasant Cove culvert crossing, upstream. 09/11/2019

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PUBLIC PROJECT ENGINEERING

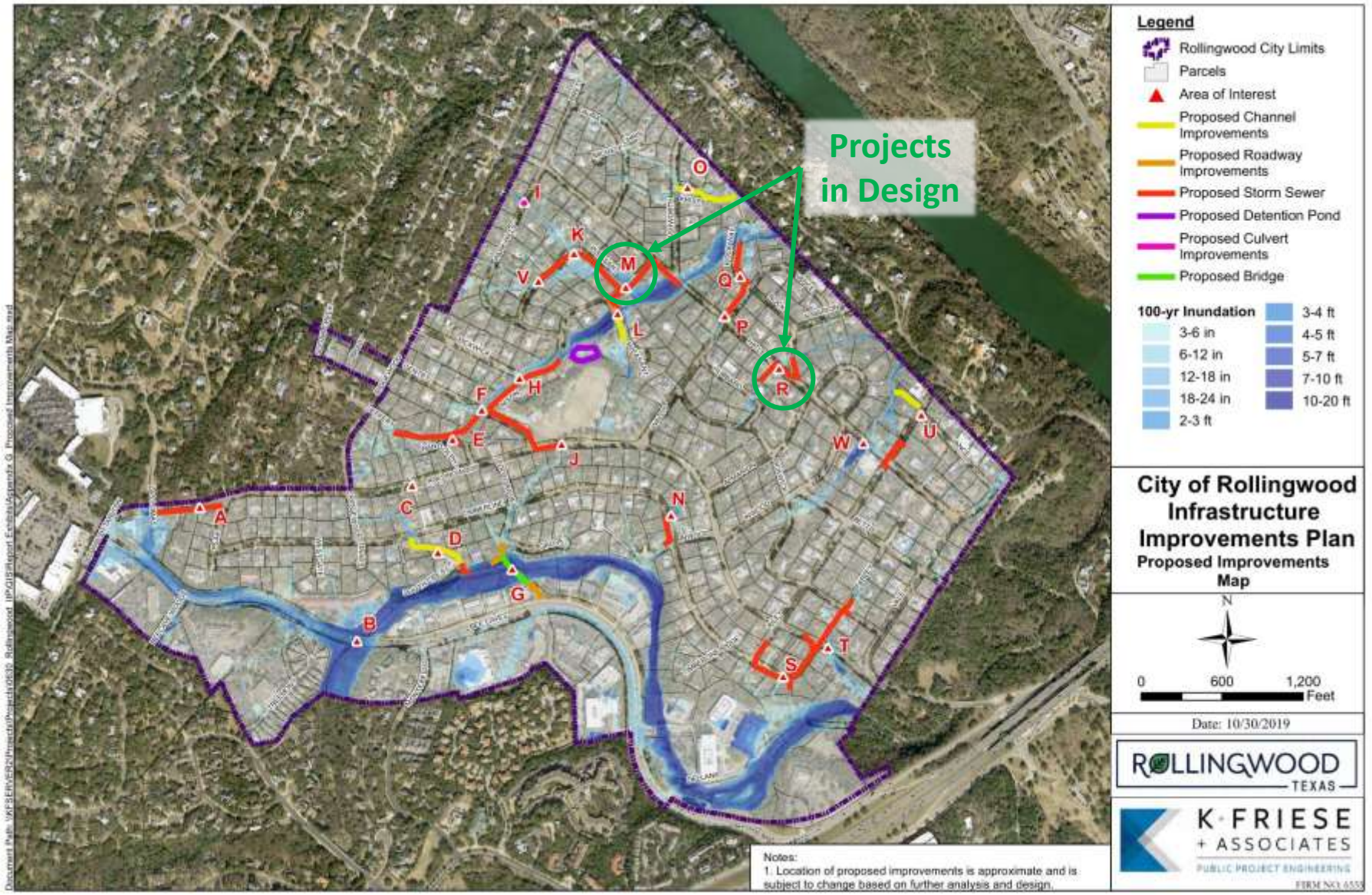
Project Ranking

Table 1: Project Ranking and Cost Summary

Project ID	Project Name	Cost	Rank*
B	Bee Caves Road Drainage Improvements	UNK	1
G	Edgegrove Drainage Improvements	$ 2,631,000	2
M	Nixon/Pleasant Roadway Drainage Improvements	$ 5,283,000	3
K	Pleasant Drive Drainage Improvements	included in M	4
D	Timberline-South Crest Drainage Improvements	$ 558,000	5
W	Hatley Drive Drainage Improvements	$ 654,000	6
L	Pleasant Cove Drainage Improvements	$ 490,000	7
H	City Hall Property Drainage Improvements	$ 475,000	8
J	Underground Infiltration Basin Drainage Improvements	$ 883,000	9
T	East Rollingwood Drive Drainage Improvements	$ 2,122,000	10
N	Timberline Drive Drainage Improvements	$ 380,000	11
Q	Rock Way Cove Drainage Improvements	$ 816,000	12
S	East Timberline Drive Drainage Improvements	included in T	13
R	Hatley Drive Drainage Improvements	$ 400,000	14
F	Nixon/Gentry Drainage Improvements	$ 2,024,000	15
V	Pleasant Drive Drainage Improvements	included in M	16
O	Kristy Drive Drainage Improvments	$ 217,000	17
E	Randolph Place Drainage Improvements	included in F	18
I	Park Hills Drainage Improvements	$ 238,000	19
A	Rollingwood Drive West Drainage Improvements	$ 589,000	20
P	Wallis and Hatley Drainage Improvements	included in Q	21
U	Riley Rd and Vance Ln Drainage Improvements	$ 141,000	22
C	Rollingwood Drive South Drainage Improvements	UNK	23
	SUM	**$ 17,901,000**	

* Rank is based on velocities and flooding depths at structures from the inundation model.

Progress to Date



Next Steps

- City to Identify Projects
- KFA to Review Project Readiness
  - Review Design Solution Concept
  - Project Assumptions
  - Project Costs

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CITY OF ROLLINGWOOD

Infrastructure Improvements Plan

Comprehensive Plan Workshop No. 1| February 16, 2022

ROLLINGWOOD TEXAS

Project ID A.

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project ID: A
Project Name: Rollingwood Drive West Drainage Improvements
Drainage Basin: 9

Problem Description

Property flooding between Las Lomas Dr and S. Peak Rd on Rollingwood Dr.

Proposed Improvements

Install 24" RCP underground storm sewer system of approximately 500 feet in length with approximately 5 inlets, 5 driveway reconstructions, and curb construction along entire length. Connect to Eanes Creek tributary crossing at Las Lomas Drive.

CIP Ranking

20 out of 23

Project Costs

Engineering & Survey:	$ 86,000
Construction:	$ 472,000
Other:	$ 31,000
ROW/Easements:	UNK
Total:	**$ 589,000**
Conceptual Cost Range:	$500k - $750k
Estimated Construction Duration:	6 Months

Possible Impacts

It is possible that the velocities and peak flow in Eanes Creek will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream system will need to be surveyed and analyzed for potential impacts.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed culverts will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo

Proposed storm sewer in red. Existing culverts in black. Existing 100-yr inundation shown.

Rollingwood Drive looking northwest.

Project ID B

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project ID: B
Project Name: Bee Caves Road Drainage Improvements
Drainage Basin: 10

Problem Description

Roadway flooding at Bee Caves Road. Existing 2-42" CMPs.

Proposed Improvements

Further discussion is needed to determine the desired outcome of a project along Bee Caves Road. Potential project complications include but are not limited to: TxDOT coordination, raising the roadway profile, multiple sources of flooding (Eanes Creek and the Tributary that runs along Bee Caves), the length of flooding along Bee Caves and potential utility conflicts. Due to the number of unknowns, a cost estimate was not generated but it is expected to be within the tens of millions of dollars. The cost incurred by the City would be subject to negotiations with TxDOT and is unknown.

CIP Ranking

1 out of 23

Project Costs

Engineering & Survey:	$	-
Construction:	$	-
Other:	$	-
ROW/Easements:		UNK
Total:		**UNK**
Conceptual Cost Range:		N/A
Estimated Construction Duration:		N/A

Possible Impacts

N/A

Assumptions

N/A

Project Map & Photo

Bee Caves Road, existing culverts in black.
Existing 100-yr inundation shown.

Bee Caves Road, downstream. 9/11/2019

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Project ID C

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project ID: C
Project Name: Rollingwood Drive South Drainage Improvements
Drainage Basin: 10

Problem Description

Property flooding along Rollingwood Drive.

Proposed Improvements

This AOI was studied using modeling and field observations, and existing infrastructure appears sufficient for this location. A CIP project is not recommended at this AOI at this time.

CIP Ranking

23 out of **23**

Project Costs

Engineering & Survey:	$	-
Construction:	$	-
Other:	$	-
ROW/Easements:		UNK
Total:		**UNK**
Conceptual Cost Range:		N/A
Estimated Construction Duration:		N/A

Possible Impacts

N/A

Assumptions

N/A

Project Map & Photo

Rollingwood Drive.
Existing 100-yr inundation shown.

Rollingwood Drive, looking east. 09/11/2019

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

Project ID D

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project ID: D
Project Name: Timberline-South Crest Drainage Improvements
Drainage Basin: 10

Problem Description

Property flooding between Timberline Drive and South Crest Drive. Roadway flooding on Timberline Drive.

Proposed Improvements

Regrade and improve the channel between 4907 and 4905 South Crest Drive to 4908 Timberline Drive, approximately 475 feet. At the end of the channel, build a drop inlet leading to approximately 140 feet of 48" underground storm sewer.

CIP Ranking

5 out of **23**

Project Costs

Engineering & Survey:	$ 80,000
Construction:	$ 438,000
Other:	$ 40,000
ROW/Easements:	UNK
Total:	**$ 558,000**
Conceptual Cost Range:	$500k - $750k
Estimated Construction Duration:	6 Months

Possible Impacts

It is possible that the velocities and peak flow in Eanes Creek will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- Cost included estimate completed by Peabody General Contractors and provided to KFA by the City for waterline improvements along South Crest Drive.
- It is assumed the proposed culverts will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo

Channel improvements in yellow, proposed storm sewer in red. Existing channel in black. Existing 100-yr inundation shown.

South Crest Drive during rain event, looking north. 06/06/2019

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

Project ID E

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project ID: E
Project Name: Randolph Place Drainage Improvements
Drainage Basin: 5

Problem Description

Roadway flooding and property flooding along Randolph Place.

Proposed Improvements

Install approximately 272 feet of 24" RCP, 846 feet of 36" RCP, 125 feet of 5' x 3' RCB, and 626 feet of 6' x 3' RCB. Begin at Gentry Drive and discharge to channel near City Hall. It will include an estimated 20 curb inlets, 1 area inlet, and approximately 12 driveway reconstructions. This includes the improvements at AOI F. In accordance with downstream impacts the imporvements along AOI M should be completed first.

CIP Ranking

18 out of 23

Project Costs

See Cost on AOI F

Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo

Proposed storm sewer in red.
Existing 100-yr inundation shown.

3 Randolph Place looking west.

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

Project ID F

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project ID: F
Project Name: Nixon/Gentry Drainage Improvements
Drainage Basin: 5

Problem Description

Roadway flooding and property flooding along Gentry Drive and Nixon Drive.

Proposed Improvements

Install approximately 272 feet of 24" RCP, 846 feet of 36" RCP, 125 feet of 5' x 3' RCB, and 626 feet of 6' x 3' RCB. Begin at Gentry Drive and discharge to channel near City Hall. It will include an estimated 20 curb inlets, 1 area inlet, and approximately 12 driveway reconstructions. This includes the improvements at AOI E. To mitigate downstream impacts, the improvements along AOI M should be completed first.

CIP Ranking

15 out of **23**

Project Costs**

**AOI E included

Engineering & Survey:	$ 300,000
Construction:	$ 1,648,000
Other:	$ 76,000
ROW/Easements:	UNK
Total:	**$ 2,024,000**
Conceptual Cost Range:	> $2M
Estimated Construction Duration:	15 Months

Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed strom drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo

Proposed storm sewer in red.
Existing 100-yr inundation shown.

Nixon and Gentry intersection looking north, 09/11/2019

Project ID G

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project ID: G
Project Name: Edgegrove Drive Drainage Improvements
Drainage Basin: 10

Problem Description

Roadway flooding at Edgegrove Drive. Existing 2 - 32" RCP and 1 - 24" RCP.

Proposed Improvements

Bridge crossing approximately 300 feet in length and an estimated 46 feet in width (2 lanes, 2 shoulders/bike lanes, and sidewalk). Improve and regrade the channel 50 feet downstream and upstream of the crossing. Raise and rebuild the road about 350 feet in total length. The roadway improvements are along Edgegrove Drive and South Crest Drive. It is recommended this AOI should be coordinated with the proposed retail study along Eanes Creek.

CIP Ranking

2 out of **23**

Project Costs

Engineering & Survey:	$ 394,000
Construction:	$ 2,167,000
Other:	$ 70,000
ROW/Easements:	UNK
Total:	**$ 2,631,000**
Conceptual Cost Range:	> $2M
Estimated Construction Duration:	12 Months

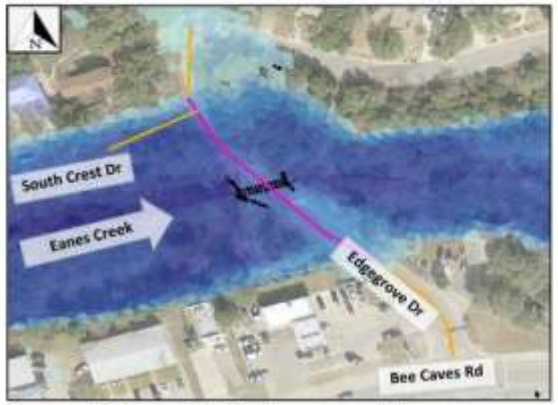
Possible Impacts

It is possible that the velocities and peak flow in Eanes Creek will increase downstream of the project due to these improvements. The bridge should be designed to ensure no upstream impacts. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- Flooding on Edgegrove Dr is controlled by Eanes Creek.
- It is assumed the proposed bridge will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and detailed hydraulic will need additional consideration and analysis.

Project Map & Photo



Proposed bridge in pink. Road improvements in orange.
Existing culvert in black. Existing 100-yr inundation shown.

Edgegrove Drive, looking northeast. 09/11/2019

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

Project ID H.

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project ID: H
Project Name: City Hall Drainage Improvements
Drainage Basin: 5

Problem Description

Property flooding at City Hall and roadway flooding along Nixon Drive.

Proposed Improvements

Regrade Rollingwood City Hall property. Design and create a detention pond of approximately 0.20 acres at the existing community playground. This would include connecting to the improvements at AOI E and F. The detention pond may provide benefit for smaller storm events, however preliminary modeling shows that the area is too small to provide detention in the 100-year event. Further analysis is necessary to determine the potential benefits from a detention pond at this location.

CIP Ranking

8 out of **23**

Project Costs

Engineering & Survey:	$ 64,000
Construction:	$ 350,000
Other:	$ 61,000
ROW/Easements:	UNK
Total:	**$ 475,000**
Conceptual Cost Range:	$250k - $500k
Estimated Construction Duration:	12 Months

Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed strom drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo

Proposed storm sewer (AOI F) and pond area in purple.
Existing 100-yr inundation shown.

Proposed area for detention. 09/11/2019

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

Project ID I

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project ID: K
Project Name: Pleasant Drive Drainage Improvments
Drainage Basin: 5

Problem Description

Roadway and property flooding along Pleasant Drive.

Proposed Improvements

Install approximately 248 feet of 36" RCP, 358 feet of 5' x 3' RCB, 303 feet of 6' x 3' RCB and 1382 feet of 8' x 4' RCB. Begin at Pleasant Drive and proposed detention pond (AOI H) and outfall at Town Lake tributary downstream of Hatley Drive. It will include an estimated 27 curb inlets, 1 area inlet, 675 feet of 12" tall curb, and approximately 16 driveway reconstructions. This includes the improvements at AOI V and AOI M.

CIP Ranking

4 out of 23

Project Costs

See Cost on AOI M

Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo

Proposed storm sewer in red. Proposed 12" curb in blue. Existing 100-yr inundation shown.

Pleasant Drive, looking northeast/upstream.06/06/2019

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

Project ID J

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project ID: J
Project Name: Underground Infiltration Basin Drainage Improvements
Drainage Basin: 10

Problem Description

Rollingwood Drive ponding across from the underground infiltration basin pond. The existing inlet and pipe are clogged with debris, and sediment, creating maintenance and ponding challenges.

Proposed Improvements

Abandon the underground vault and tie the existing lateral pipe, assuming a 24" RCP, into the proposed drainage system on Gentry Drive. Approximately 675 feet of proposed 24" RCP will be needed for the connection, approximately 10 inlets, and an estimated 2 driveway reconstructions.

CIP Ranking

9 out of **23**

Project Costs

Engineering & Survey:	$ 127,000
Construction:	$ 695,000
Other:	$ 61,000
ROW/Easements:	UNK
Total:	**$ 883,000**
Conceptual Cost Range:	$750k - $1M
Estimated Construction Duration:	12 Months

Possible Impacts

It is possible that the velocities and peak flow in Eanes Creek will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and pond area will need additional consideration.
- The recommendation to abandon the underground basin was generated in coordination with City staff & City engineer.

Project Map & Photo

Rollingwood Drive, proposed storm sewer in red.
Existing 100-yr inundation shown.

Pond inlet during rain event. 06/06/2019

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

Project ID K

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project ID: K
Project Name: Pleasant Drive Drainage Improvments
Drainage Basin: 5

Problem Description

Roadway and property flooding along Pleasant Drive.

Proposed Improvements

Install approximately 248 feet of 36" RCP, 358 feet of 5' x 3' RCB, 303 feet of 6' x 3' RCB and 1382 feet of 8' x 4' RCB. Begin at Pleasant Drive and proposed detention pond (AOI H) and outfall at Town Lake tributary downstream of Hatley Drive. It will include an estimated 27 curb inlets, 1 area inlet, 675 feet of 12" tall curb, and approximately 16 driveway reconstructions. This includes the improvements at AOI V and AOI M.

CIP Ranking

4 out of 23

Project Costs

See Cost on AOI M

Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo

Proposed storm sewer in red. Proposed 12" curb in blue. Existing 100-yr inundation shown.

Pleasant Drive, looking northeast/upstream.06/06/2019

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

Project ID L

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project ID: L
Project Name: Pleasant Cove Drainage Improvements
Drainage Basin: 5

Problem Description

Roadway flooding. Existing 60" RCP cross culvert at Pleasant Cove.

Proposed Improvements

Install new roadside channel upstream, approximately 400 feet in length. The channel grading will be to an approximate channel of 20 feet wide, 2 feet deep with a 4 ft bottom width, and 4:1 side slopes. Approximately 1 driveway reconstruction with a crossing culvert of 24" RCP of an estimated 24 feet. Raise the roadway profile, an estimated 175 feet.

CIP Ranking

7 out of **23**

Project Costs

Engineering & Survey:	$ 67,000
Construction:	$ 368,000
Other:	$ 55,000
ROW/Easements:	UNK
Total:	**$ 490,000**
Conceptual Cost Range:	$250k - $500k
Estimated Construction Duration:	9 Months

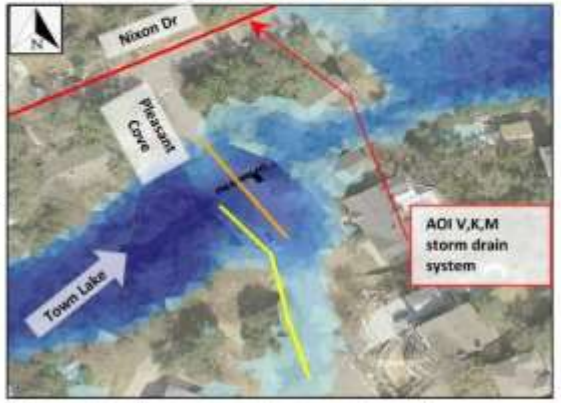
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed culverts will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed road improvements in orange, channel improvements in yellow. Existing culverts in black. Existing 100-yr inundation shown.

Pleasant Cove culvert crossing, upstream. 09/11/2019

Project ID M

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project ID: M
Project Name: Nixon/Pleasant Drainage Improvements
Drainage Basin: 5

Problem Description

Roadway flooding on Nixon Drive. Property flooding between Pleasant Drive and Hatley Drive.

Proposed Improvements

Install approximately 248 feet of 36" RCP, 358 feet of 5' x 3' RCB, 303 feet of 6' x 3' RCB and 1382 feet of 8' x 4' RCB. Begin at Pleasant Drive and proposed detention pond (AOI H) and outfall at Town Lake tributary downstream of Hatley Drive. It will include an estimated 27 curb inlets, 1 area inlet, 675 feet of 12" tall curb, and approximately 16 driveway reconstructions. This includes the improvements to AOI V and AOI K.

CIP Ranking

3 out of 23

Project Costs**

**AOI V and AOI K included

Engineering & Survey:	$ 804,000
Construction:	$ 4,419,000
Other:	$ 60,000
ROW/Easements:	UNK
Total:	**$ 5,283,000**
Conceptual Cost Range:	> $2M
Estimated Construction Duration:	12 Months

Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo

Proposed storm sewer in red. Proposed 12" curb in blue. Existing culvert in black. Existing 100-yr inundation shown.

Nixon Drive during rain event, looking west. 06/06/2019

K·FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING

Project ID N

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project ID: N
Project Name: Timberline Drive Drainage Improvements
Drainage Basin: 10

Problem Description

Roadway and property flooding along Timberline Drive and Inwood Drive.

Proposed Improvements

Install approximately 250 feet of 36" RCP underground storm sewer. Begin at a drop inlet in the ravine on 4803 Timberline Drive property and connect to existing storm sewer network on Inwood Drive. It will include clearing and regrading the ravine for approximately 10 feet, addition of approximately 2 inlets, and approximately 3 driveway reconstructions. The existing network outfalls into Eanes Creek south of Inwood Drive.

CIP Ranking

11 out of **23**

Project Costs

Engineering & Survey:	$ 54,000
Construction:	$ 295,000
Other:	$ 31,000
ROW/Easements:	UNK
Total:	**$ 380,000**
Conceptual Cost Range:	$250k - $500k
Estimated Construction Duration:	6 Months

Possible Impacts

It is possible that the velocities and peak flow in Eanes Creek will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream system will need to be surveyed and analyzed for potential impacts.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo

Proposed storm sewer in red to existing inlets in black.
Existing 100-yr inundation shown.

Ravine at 4803 Timberline Drive. 09/11/2019

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

Project ID O

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project ID: O
Project Name: Kristy Drive Drainage Improvments
Drainage Basin: 5

Problem Description

Roadway and property flooding along Kristy Drive.

Proposed Improvements

Approximately 475 feet of channel improvements along Kristy Drive.

CIP Ranking

17 out of **23**

Project Costs

Engineering & Survey:	$ 29,000
Construction:	$ 157,000
Other:	$ 31,000
ROW/Easements:	UNK
Total:	**$ 217,000**
Conceptual Cost Range:	$200k - $250k
Estimated Construction Duration:	6 Months

Possible Impacts

It is possible that the velocities and peak flow in the Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream impacts to adjacent properties will need to be reviewed in addition to the tributary impacts. Channel grading will impact multiple roadside trees.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the channel will have sufficient capacity for the design storm event.

Project Map & Photo

Channel improvements in yellow.
Existing 100-yr inundation shown.

Kristy Drive, looking northwest.

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

Project ID P

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project ID: P
Project Name: Wallis and Hatley Drainage Improvements
Drainage Basin: 5

Problem Description

Property flooding along Wallis Drive and roadway flooding at intersection of Wallis Drive and Hatley Drive.

Proposed Improvements

Install approximately 630 feet of 36" RCP underground storm sewer. Begin at the intersection of Hatley Drive and Wallis Drive and connect to the Town Lake tributary crossing on Rock Way Cove . It will include approximately 10 inlets and approximately 8 driveway reconstructions. This system includes the improvements at AOI Q.

CIP Ranking

21 out of **23**

Project Costs

See Cost on AOI Q

Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream system will need to be surveyed and analyzed for potential impacts.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed culverts will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo

Proposed storm sewer in red, existing in black.
Existing culverts in black. Existing 100-yr inundation shown.

200 Wallis Drive, during rain event. 06/06/2019

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

Project ID Q

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project ID: Q
Project Name: Rock Way Cove Drainage Improvements
Drainage Basin: 5

Problem Description

Property flooding along Rock Way Cove and roadway flooding at intersection of Rock Way Cove and Wallis Drive.

Proposed Improvements

Install approximately 630 feet of 36" RCP underground storm sewer. Begin at the intersection of Hatley Drive and Wallis Drive and connect to the Town Lake tributary crossing on Rock Way Cove . It will include approximately 10 inlets and approximately 2 driveway reconstructions. This system includes the improvements at AOI P.

CIP Ranking

12 out of **23**

Project Costs

**AOI P included

Engineering & Survey:	$ 115,000
Construction:	$ 631,000
Other:	$ 70,000
ROW/Easements:	UNK
Total:	**$ 816,000**
Conceptual Cost Range:	$750k - $1M
Estimated Construction Duration:	12 Months

Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream system will need to be surveyed and analyzed for potential impacts.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed culverts will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo

Proposed storm sewer in red, existing in black.
Existing culverts in black. Existing 100-yr inundation shown.

Outfall at Town Lake tributary. 09/11/2019

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

Project ID R

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project ID: R
Project Name: Hatley Drive Drainage Improvements
Drainage Basin: 6

Problem Description

Roadway flooding at Hatley Drive and Almarion Way. Property flooding along Hubbard Circle and Hatley Drive.

Proposed Improvements

Install underground storm sewer of approximately 415 feet of 36" RCP. Start at Hately Drive property and outfall at the beginning of the Town Lake tributary channel on Almarion Way. It will include clearing and regrading downstream channel about 150 feet in length, 4 curb inlets, 1 area inlet, and 1 driveway reconstruction.

CIP Ranking

14 out of **23**

Project Costs

Engineering & Survey:	$ 57,000
Construction:	$ 312,000
Other:	$ 31,000
ROW/Easements:	UNK
Total:	**$ 400,000**
Conceptual Cost Range:	$250k - $500k
Estimated Construction Duration:	6 Months

Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo

Proposed storm sewer in red.
Existing 100-yr inundation shown.

Almarion Way, looking northwest. 09/11/2019

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

Project ID S

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project ID: S
Project Name: East Timberline Drive Drainage Improvements
Drainage Basin: 14

Problem Description

Roadway flooding on Rollingwood Drive and Timberline Drive. Property flooding along Rollingwood Drive and Riley Drive.

Proposed Improvements

Install approximately 700 feet of 36" RCP underground storm sewer, 520 feet of 5' x 3' RCB, and 350 feet of 7' x 4' RCB. Begin at Farley Trial and outfall at Eanes Creek tributary downstream of Timberline Drive. It will include an estimated 22 inlets and approximately 15 driveway reconstructions. This includes the improvements at AOI T.

CIP Ranking

14 out of **23**

Project Costs

See Cost on AOI T

Possible Impacts

It is possible that the velocities and peak flow in Eanes Creek will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream channel will need to be surveyed and analyzed for potential impacts.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo

Proposed storm sewer in red.
Existing 100-yr inundation shown.

Timberline Drive looking northeast. 09/11/2019

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

Project ID T

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project ID: T
Project Name: East Rollingwood Drive Drainage Improvements
Drainage Basin: 14

Problem Description

Roadway flooding on Rollingwood Drive and Pickwick Lane. Property flooding along Farley Trail and Rollingwood Drive.

Proposed Improvements

Install approximately 700 feet of 36" RCP underground storm sewer, 520 feet of 5' x 3' RCB, and 350 feet of 7' x 4' RCB. Begin at Farley Trail and outfall at Eanes Creek tributary downstream of Timberline Drive. It will include an estimated 22 inlets and approximately 15 driveway reconstructions. This includes the improvements at AOI S.

CIP Ranking

14 out of **23**

Project Costs**

**AOI S included

Engineering & Survey:	$ 313,000
Construction:	$ 1,718,000
Other:	$ 91,000
ROW/Easements:	UNK
Total:	**$ 2,122,000**
Conceptual Cost Range:	> $2M
Estimated Construction Duration:	18 Months

Possible Impacts

It is possible that the velocities and peak flow in Eanes Creek will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream system will need to be surveyed and analyzed for potential impacts.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo

Proposed storm sewer in red, existing in black.
Existing culverts in black. Existing 100-yr inundation shown.

Half buried culvert at Rollingwood Drive. 09/11/2019

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

Project ID U

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project ID: U
Project Name: Riley Rd and Vance Ln Drainage Improvements
Drainage Basin: 6

Problem Description

Property flooding at intersection of Riley Rd and Vance Ln.

Proposed Improvements

An approximate 3 foot curb cut at intersection of Vance Ln and Riley Rd and approximately 230 feet of channel improvements.

CIP Ranking

22 out of **23**

Project Costs

Engineering & Survey:	$ 17,000
Construction:	$ 94,000
Other:	$ 30,000
ROW/Easements:	UNK
Total:	**$ 141,000**
Conceptual Cost Range:	$100k - $150k
Estimated Construction Duration:	4 Months

Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream system will need to be surveyed and analyzed for potential impacts.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the channel will have sufficient capacity for the design storm event.

Project Map & Photo

Channel improvments shown in yellow.
Existing 100-yr inundation shown.

Riley Road off of Vance Lane, looking north.

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

Project ID V

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project ID: V
Project Name: Pleasant Drive Drainage Improvements
Drainage Basin: 5

Problem Description

Roadway flooding and property flooding on Pleasant Drive.

Proposed Improvements

Install approximately 248 feet of 36" RCP, 358 feet of 5' x 3' RCB, 303 feet of 6' x 3' RCB and 1382 feet of 8' x 4' RCB. Begin at Pleasant Drive and proposed detention pond (AOI H) and outfall at Town Lake tributary downstream of Hatley Drive. It will include an estimated 27 curb inlets, 1 area inlet, 675 feet of 12" tall curb, and approximately 16 driveway reconstructions. This includes the improvements at AOI K and AOI M.

CIP Ranking

16 out of **23**

Project Costs

See Cost on AOI M

Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo

Proposed storm sewer in red. Proposed 12" curb in blue.
Existing 100-yr inundation shown.

Pleasant Drive, looking northeast. 09/11/2019.

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

Project ID W

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

ROLLINGWOOD TEXAS

Project ID: W
Project Name: Hatley Drive Drainage Improvements
Drainage Basin: 6

Problem Description

Roadway flooding across Hatley Drive and at intersection with Riley Road. Property flooding and along Hatley Dr.

Proposed Improvements

Install approximately 390 feet of 36" RCP underground storm sewer. Begin at intersection of Hatley Drive and Riley Road and outfall at channel on Riley Road to Town Lake. It will include approximately 8 inlets, and approximately 2 driveway reconstructions. Keep existing 36" RCP crossing at Hatley Drive.

CIP Ranking

6 out of **23**

Project Costs

Engineering & Survey:	$ 90,000
Construction:	$ 494,000
Other:	$ 70,000
ROW/Easements:	UNK
Total:	**$ 654,000**
Conceptual Cost Range:	$500k - $750k
Estimated Construction Duration:	12 Months

Possible Impacts

It is possible that the velocities and peak flow in Town Lake Tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo

Proposed storm sewer in red. Existing culvert in black.
Existing 100-yr inundation shown.

Crossing of Town Lake tributary at Hatley Drive. 09/09/2019

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

City of Rollingwood
Needs Assessment & Facilities Master Plan

ROLLINGWOOD TEXAS

FINAL REPORT

April 5,2019

BRINKLEY SARGENT WIGINTON ARCHITECTS

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ACKNOWLEDGEMENTS

Special thanks for their cooperation and time is extended to all City Staff members who participated in the process of this report. Those particularly engaged in the study are listed below:

City of Rollingwood

Amber Lewis	City Administrator
Robyn Ryan	City Secretary
Michael Alexander, P.E.	Planning & Development
Kimberley Wood	Court Clerk
Robby Chapman	Presiding Judge
Kristal Pompa	Interim Chief
Abel Campos	Finance Manager
Jackie Bob Wright	Director of Public Works

Rollingwood City Council

Michael Dyson	Mayor
Gavin Massingill	Alderman and Mayor Pro Tem
Sara Hutson	Alderwoman
Buck Shapiro	Alderman
Amy Pattillo	Alderwoman
Wendi Hundley	Alderwoman
Roxanne McKee	Former Mayor

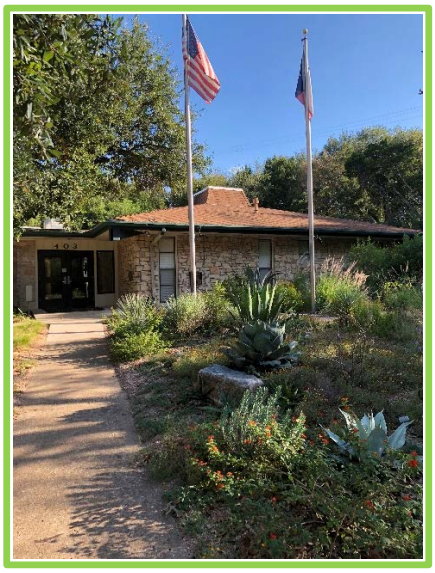
Brinkley Sargent Wiginton Architects

Don Greer, AIA	Principal / Project Manager
Denny Boles, AIA	Principal

TABLE OF CONTENTS

1 – EXECUTIVE SUMMARY

The key role of municipal governments is to provide essential and quality-of-life services to the citizens they serve. Examples of essential services include public safety (police and courts) and public works (road repair, drainage and utilities). Quality-of-life services may include the provision for open spaces, playgrounds, and cultural and recreational opportunities for residents of all ages. A city must continually monitor how well they are providing those services to offer a better place to live, work and play for its citizens. The purpose of this Needs Assessment and Facilities Master Plan is to assist in the planning of facilities that allow for this high level of service to continue and to improve in the City of Rollingwood.



Brinkley Sargent Wiginton Architects, in cooperation with the City of Rollingwood, performed a thorough evaluation of the short- and long-range facility needs for both City Hall and the police department. This report presents an analysis of existing facility and surrounding site conditions and integrates projected space needs. The result is a master plan that allows Rollingwood officials to make informed, creative and cost-effective decisions when addressing their current and future municipal building needs.

The City of Rollingwood and its departments are presently operating in a shared-use building constructed in 1974, when fewer than 800 residents lived within the city limits. Over the past 45 years, the population has nearly doubled — to 1,562 — and the need to provide continued services and support staff for residents is evident. Despite multiple renovations and additions to City Hall, the space shortage has evolved into an acute problem. About 18 months ago, the police department was relocated to a trailer near City Hall, precipitated by space constraints combined with drainage and mold issues in a specific section of the building. Additionally, the City Hall is showing its age and is nearing the end of its ability to efficiently house the various city departments, prompting the need to weigh continued investment in a 45-year-old structure against other options.

This Needs Assessment & Facilities Master Plan identifies and reviews future staffing and spatial needs within city departments, with the purpose of developing a strategy for meeting those needs in a combined facility that houses both city management and police department operations. As part of the process, participating staff members were encouraged to share their visions of an ideal workplace environment without being influenced by existing constraints of current space.

Among the City of Rollingwood's early objectives was maintaining the building on its original site, Lot 'A,' and strengthening its connection with City Park. This is an indication of the City's commitment to enhancing the quality-of-life for its residents and allows for the opportunity of the council chambers/courtroom to function as an after-hours community room available to residents. The design team's scope of work included analysis of the existing City Hall to determine how the original building could be utilized moving forward and the evaluation of advantages and disadvantages of adding on to

the existing building or constructing a new one. Several test scenarios were developed involving the two planning options, and they were vetted with key staff. The appendices of this report include two separate estimates of probable cost and two proposed site planning diagrams for the City Council's consideration.

Although the City of Rollingwood's population has doubled in the past half-century, it has experienced minimal population growth in recent years. This is a trend that is expected to continue for the foreseeable future. As a result, minimal staff growth for city departments is anticipated. Relatively few positions were added in this report's section on staffing projections. Some staff positions, such as planning and development and utilities billing, are currently being outsourced and it is represented this way in the space program documents. However, the final decision regarding future staffing expectations and space needs can be determined when the actual design phase begins. It is standard procedure in a carefully planned project to include a program-verification phase before initiating architectural design. This allows for consideration of any items or philosophies on governance that may have changed since the study was completed. In the case of any additions, the increased square footage for these functions and the costs associated with them will need to be determined.

The development of this Needs Assessment and Facilities Master Plan for the City of Rollingwood is the result of its civic leaders' recognition of the need for a long-range facility needs assessment to ensure the City not only will maintain but also improve its high level of service to residents. Furthermore, this document is intended to establish a process for the coordinated development of a new city/police facility based on budgets, projected spatial needs, conceptual site plans, and construction cost estimates. The included documentation with appendices provide all the supporting documentation used in the study's findings.

SPACE NEEDS

Required spatial needs and site issues were developed over a series of meetings with city staff members, as well as three City Council presentations. The final square footage needs for a new combined city/police facility are as follows:

City Hall	Net	5,893 SF
Police	Net	1,783 SF
Gross Total Bldg.		8,436 SF (includes building circulation, exterior walls, mech. systems, etc.)

PARKING NEEDS

The police department requires 14 parking spaces, six of which are to be secure spaces. Secure spaces are typically fenced off and protected by a gate to protect the vehicles and their contents. The higher-than-current count takes into consideration anticipated changes in shift schedules for officers. City Hall parking will be shared onsite, utilizing existing spaces and additional markings for parallel parking on the adjacent street. Expanding parking options near City Hall was not a popular option among staff, because it would encroach on available parking at City Park. Additionally, the consensus is that the public works department's storage yard be relocated away from the existing city/police building, as greater materials access and better screening processes can be found at locations outside of Lot 'A.'

SITE ISSUES

Keeping the building footprint and any new site work to a minimum is critical to this project. The building is located in the Edwards Aquifer recharge zone, and regulatory requirements for treatment of water runoff is required. These regulations were not in place when the original building was constructed, and it therefore retains grandfathered allowances for existing conditions. However, any new impervious cover for the building or site will require water quality treatment. Maximum impervious coverage for a site zoned GI (Governmental and Institutional District) is limited to 50 percent, which is approximately 21,800 square feet of the site in question. Currently, the impervious cover is about 14,800 square feet, leaving roughly 7,000 square feet available for new impervious cover.

A second site issue that must be managed is the storm drainage coming off the adjacent hillside and moving across the property. The proposed budget includes a line item for a combined stone wall and internal/external drainage path that can divert this water to a proper outfall. Early discussions regarding the project suggested the possibility of utilizing this wall to facilitate a stair and ramp system to travel from the upper lot to the lower lot; that structural component is not included in the current budget.

BUDGET & SCHEDULE

Braun & Butler, an Austin, Texas-based general contractor, worked with Brinkley Sargent Wiginton Architects to develop construction cost estimates based on similar past projects. Two potential bond election dates are under consideration, with November 2019 being the preferred one and the basis for project estimates. That date also would provide enough time to consider other city-related needs for possible inclusion on the ballot.

Here is the proposed schedule, based on projected passage of the November 2019 bond:

Design Phase Start	January 2020
Construction Start	January 2021
Occupancy	March 2022 (1A), October 2021 (2A)

Total Development Budget – *Option 1A*	**$ 4,967,289**
Total Development Budget – *Option 2A*	**$ 4,916,217**

2 – PLANNING CONTEXT

PLANNING HORIZON

This study is a review of the long-term requirements for the City Hall and Police facility needs for the City of Rollingwood, Texas. At the time of this study, the City's population census estimated the population to be 1,562 residents and annual growth 1.1% the last four years. It was determined that this study would consider the staff and space needs at milestone years of 2018, 2023, 2038 and 2038 and use a steady 1,562 as the population.

2018	2023	2028	2038
1,562	**1,562**	**1,562**	**1,562**

STAFFING PROJECTIONS

Developing staff projections is a crucial component of a successful Needs Assessment. Projections of staff requirements were made using past history, present staffing and anticipated growth of staff (based on the departments' desired level of service to the community).

The organizational charts shown below list not only the current staffing for 2018, but it also outlines the planned additional staff as the milestone years are reached.

TOTAL STAFF PROJECTIONS

Facilities Master Plan and Municipal Campus Plan

City of Rollingwood

Total Staff Comparison				
Year	**2018**	**2023**	**2028**	**2038**
Population	1562	1562	1562	1562

Staff	Current	5 Yr. staff	10 Yr. staff	20 Yr. staff
Appointed Commissions & Boards				
Judge				
Prosecutors				
Mayor	1	1	1	1
City Administrator	1	1	1	1
City Secretary	1	1	1	1
City Attorney				
Court Clerk	1	1	1	1
Financial Department	1	1	1	1
Utility Billing	0	0	0	0
Accounting				
Payroll				
Treasury				
Police Department	10	11	11	11
Police Operations				
Code Enforcement				
Support Services				
Public Works Department	3	4	4	4
Planning & Operations	0	1	1	1
General Services				
Maintenance				
Total	18	21	21	21
Staff Per Capita	11.5	13.4	13.4	13.4

STAFF PROJECTIONS CONT.

Mayor

Year	2018	2023	2028	2038
Population	1562	1562	1562	1562

Staff	Current	5 Yr. staff	10 Yr. staff	20 Yr. staff
Mayor	1	1	1	1
Total	1	1	1	1
Staff Per Capita	0.6	0.6	0.6	0.6

City Secretary

Year	2018	2023	2028	2038
Population	1562	1562	1562	1562

Staff	Current	5 Yr. staff	10 Yr. staff	20 Yr. staff
City Secretary	1	1	1	1
Total	1	1	1	1
Staff Per Capita	0.6	0.6	0.6	0.6

City Administration

Year	2018	2023	2028	2038
Population	1562	1562	1562	1562

Staff	Current	5 Yr. staff	10 Yr. staff	20 Yr. staff
City Administrator	1	1	1	1
Total	1	1	1	1
Staff Per Capita	0.6	0.6	0.6	0.6

Municipal Court

Year	2018	2023	2028	2038
Population	1562	1562	1562	**1562**

Staff	Current	5 Yr. staff	10 Yr. staff	20 Yr. staff
Clerk of Court	1	1	1	1
Total	1	1	1	1
Staff Per Capita	0.6	0.6	0.6	0.6

STAFF PROJECTIONS CONT.

Finance Department

Year	2018	2023	2028	2038
Population	1562	1562	1562	1562

Staff	Current	5 Yr. staff	10 Yr. staff	20 Yr. staff
Finance Manager	1	1	1	1
Total	1	1	1	1
Staff Per Capita	0.6	0.6	0.6	0.6

Police Department

Year	2018	2023	2028	2038
Population	1562	1562	1562	1562

Staff	Current	5 Yr. staff	10 Yr. staff	20 Yr. staff
Chief of Police	1	1	1	1
Lieutenant	1	1	1	1
Sergeant	1	1	1	1
Corporal	2	2	2	2
Officer	2	2	2	2
Reserve	2	2	2	2
Detective	1	2	2	2
Total	10	11	11	11
Staff Per Capita	6.4	7.0	7.0	7.0

Public Works Department

Year	2018	2023	2028	2038
Population	1562	1562	1562	1562

Staff	Current	5 Yr. staff	10 Yr. staff	20 Yr. staff
Public Works Director	1	1	1	1
Operator	2	3	3	3
Total	3	4	4	4
Staff Per Capita	1.9	2.6	2.6	2.6

STAFF PROJECTIONS CONT.

Planning & Development

Year	2018	2023	2028	2038
Population	1562	1562	1562	1562

Staff	Current	5 Yr. staff	10 Yr. staff	20 Yr. staff
Planner	0	1	1	1
Admin./ Planner	0	0	0	0
Inspector/ Bldg. Office	0	0	0	0
Total	0	1	1	1
Staff Per Capita	0.0	0.6	0.6	0.6

Utility Billing

Year	2018	2023	2028	2038
Population	1562	1562	1562	1562

Staff	Current	5 Yr. staff	10 Yr. staff	20 Yr. staff
Utility Billing Clerk	0	0	0	0
Total	0	0	0	0
Staff Per Capita	0.0	0.0	0.0	0.0

3 – SITE PLANNING

PARKING

A significant impact on site planning is staff parking, City owned vehicles (secure), and visitor's vehicles. The chart below is a summary of the maximum number of parking spaces needed for police only which was the requirements of the study. The existing public parking for court visitors also serving the City Council meeting visitor's alternate evening.

Police Parking 2038	
Public	0
Staff	8
Town/Secure	6
Total	**14**

To determine the necessary parking spaces for the Police department, a typical 24-hour work day and parking needs for a new facility was estimated. The chart on the following page illustrates the expected arrival and departure times for each staff member. The important aspect to this chart is to account for the overlap of staffs at shift change.

POLICE PARKING

Rollingwood Police Parking 2038

Non-Take Home Policy

Shift Times

DEPARTMENT	Staff	12 am		2 am		4 am		6 am		8 am		10 am		12 pm		2 pm		4 pm		6 pm		8 pm		10 pm		Note
PUBLIC PARKING																										A
Police Visitors																										
covered by Town Hall parking																										
Total Public Cars										0	0	0	0	0	0	**0**	0	0	0	0	0	0				
STAFF/PERSONAL CARS																										B
Administration																										
Chief of Police	1									1	1	1	1	1	1	1	1	1								
Lieutenant	1									1	1	1	1	1	1	1	1	1								
Sergeant	1									1	1	1	1	1	1	1	1	1								
Patrol																										
Corporal	2																									
Day Shift							1	1	1	1	1	1	1	1	1	1	1	1	1	1						C
Evening Shift		1	1	1											1	1	1	1	1	1	1	1	1	1	1	C
Officer	2																									
Day Shift								1	1	1	1	1	1	1	1	1	1	1								
Night Shift		1	1	1	1	1	1	1										1	1	1	1	1	1	1	1	C
Reserve	2																									
Evening Shift		1	1												1	1	1	1	1	1	1	1	1	1	1	
Future Officer	1																									
Night Shift (assumed)		1	1	1	1	1	1												1	1	1	1	1	1	D	
Investigation																										
Detective	1									1	1	1	1	1	1	1	1	1								E
Total Staff Cars		4	4	3	2	2	3	3	2	6	6	6	6	6	7	**8**	8	8	5	5	4	4	4	4	4	
CITY CARS/SECURE																										
Chief of Police	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	F
Patrol																										
Current Vehicles for All Shifts	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Future Vehicles	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Miscellaneous Police																										
Marked/Patrol Pool Car																										
Flex vehicle/vacation																										
Trailers																										
Other Equipment	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	G
Crime Scene Vehicle																										
Seized Vehicle																										
Trailer (small/single axle)																										
Trailer (large/double axle)																										
Total City Cars	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	**6**	6	6	6	6	6	

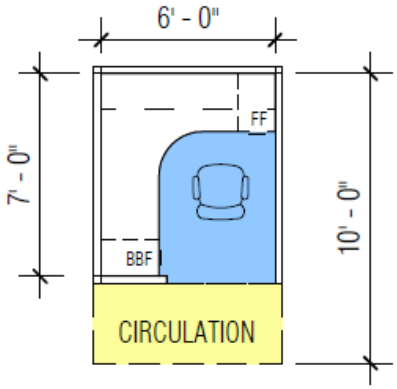
Notes:

A	covered by City Hall
B	One hour accounted before AND after every shift
C	1 vehicle added 1 hour before + after shift for staff fluctuation
D	Discuss Future Officer shift coverage
E	Detective shift assumed 8am-5pm
F	Requested 4 Covered Spaces (5 for future?)
G	Full space not needed, Kawasaki Mule

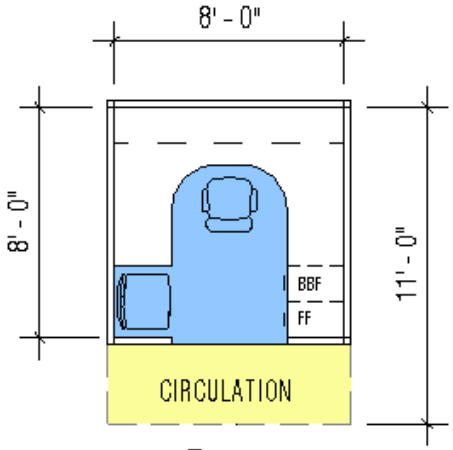
4 – SPATIAL DIAGRAMS

The following pages illustrate the spatial requirements determined through meetings with staff. The sketches reflect needed space to provide efficient, functional spaces and correspond with notations in the facility program, shown in Section 5. These diagrams or sketches will be referred to under the column labeled 'Space Code' on each department sheet of that section.

Workstations

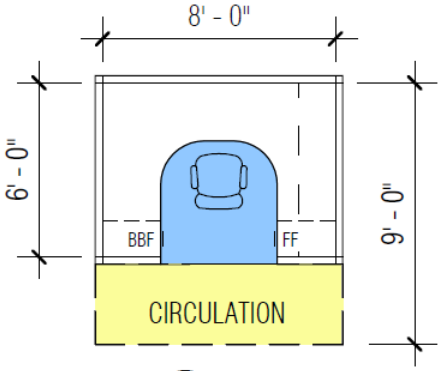


WS2
WORK STATION
42 SF ACTUAL
60 SF WITH CIRCULATION



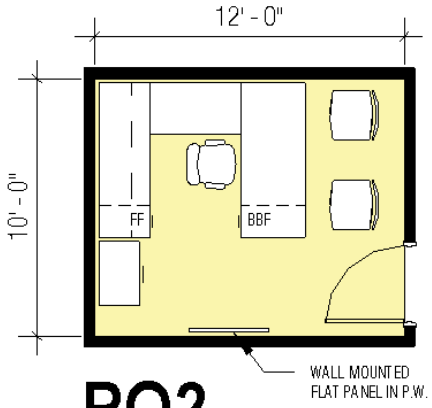
WS5
WORK STATION
64 SF ACTUAL
88 SF WITH CIRCULATION

NOTE GUEST CHAIR IS OPTIONAL.
TRANSACTION TOP IS OPTIONAL.



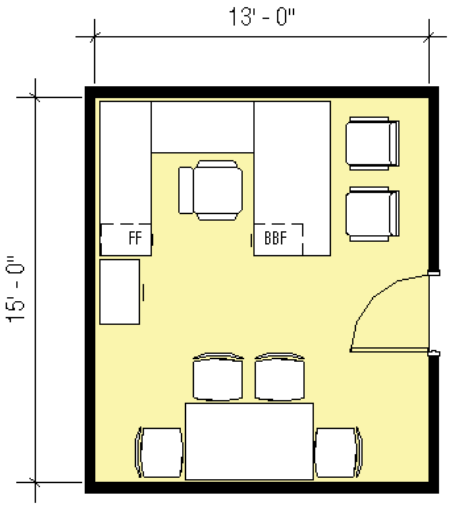
WS3
WORK STATION
48 SF ACTUAL
72 SF WITH CIRCULATION

Private Offices



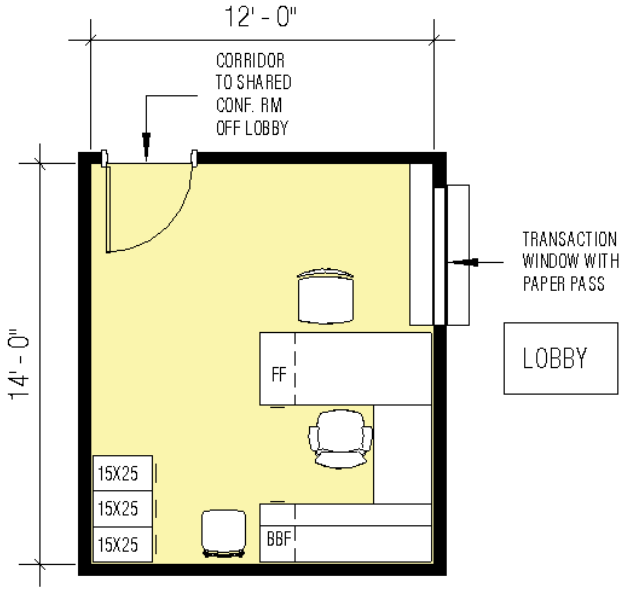
PO2

PRIVATE OFFICE
120 SF



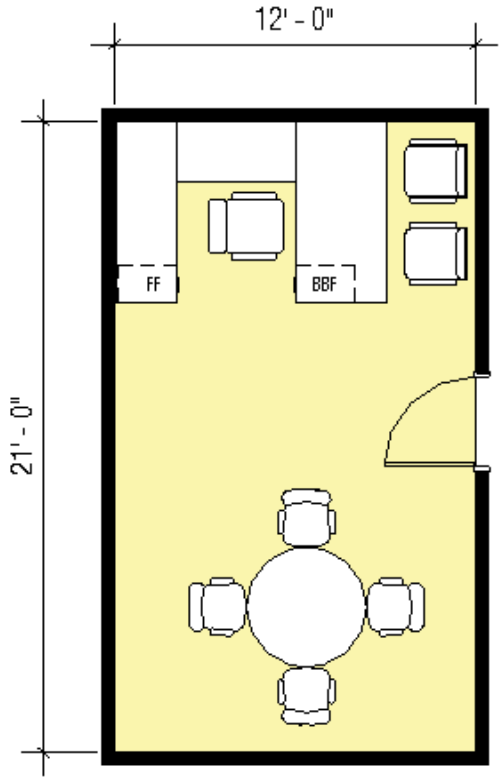
PO4

PRIVATE OFFICE
195 SF



PO4.3

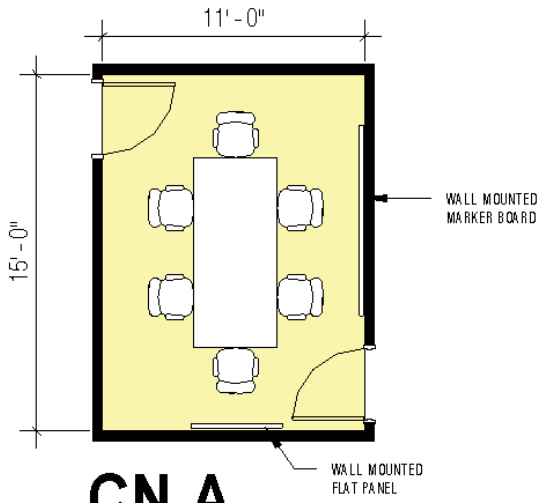
PRIVATE OFFICE
252 SF



PO4.5

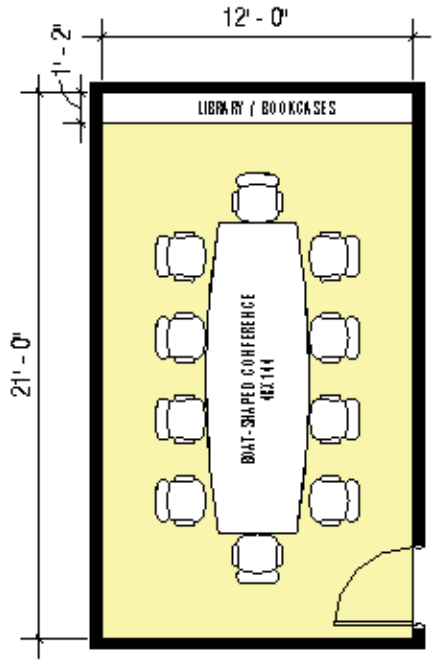
PRIVATE OFFICE
252 SF

City Hall / Shared Spaces



CN A

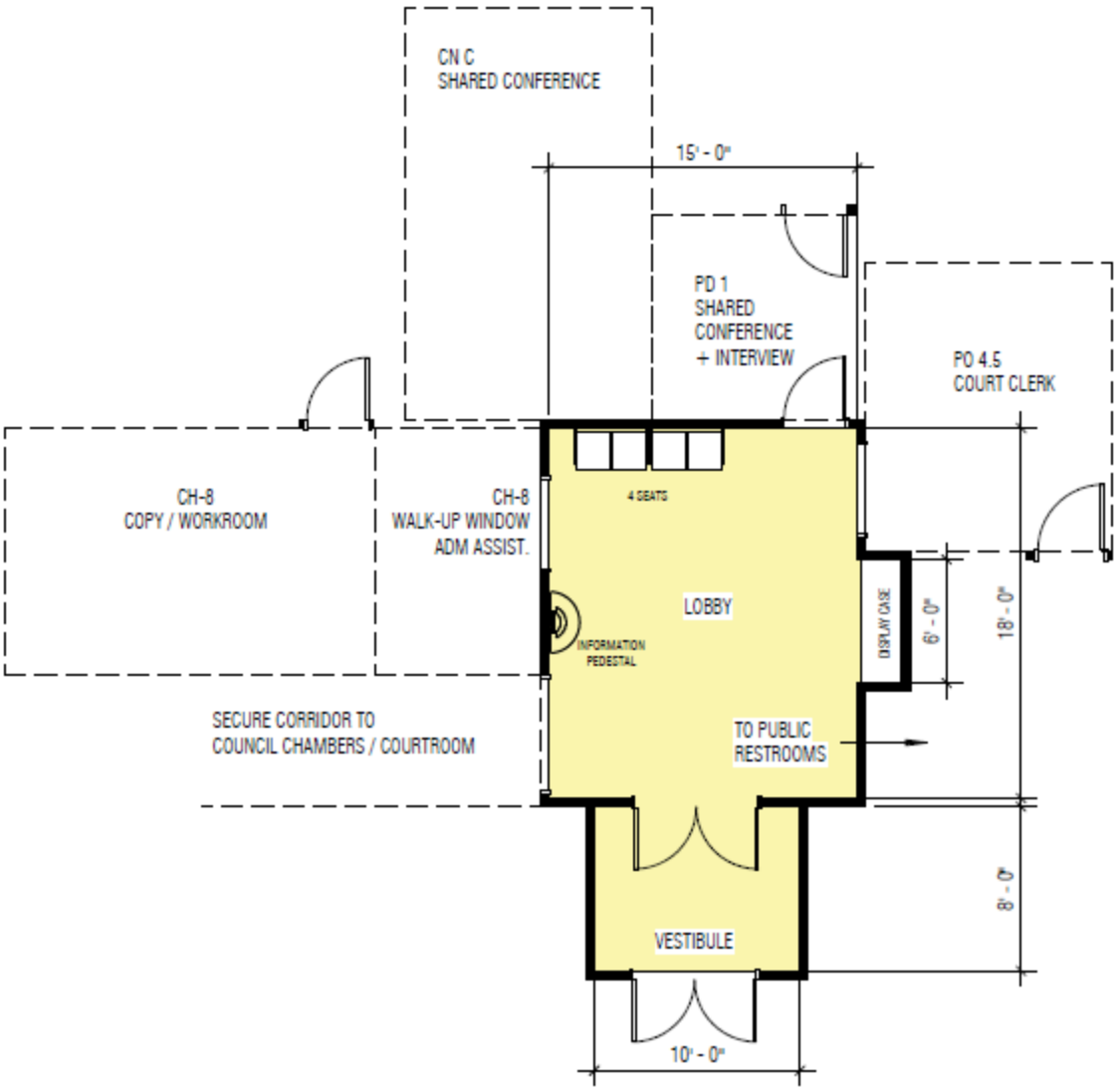
CONFERENCE (6)
165 SF



CN C

CONFERENCE (10)
LIBRARY BOOKCASE AREA (18 SF)
252 SF

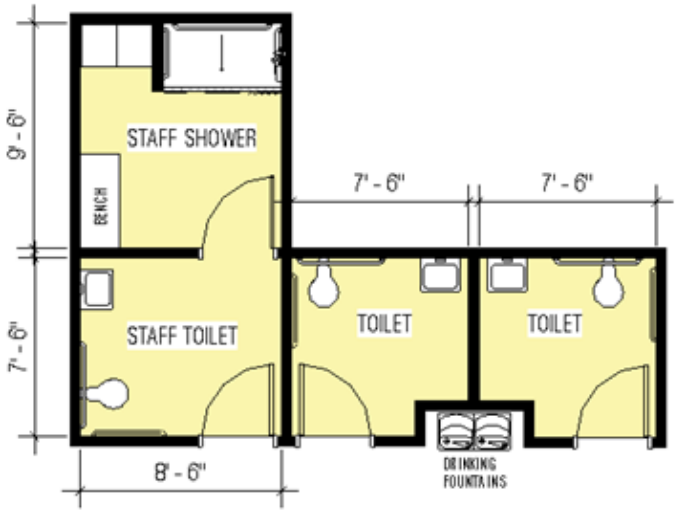
City Hall / Shared Spaces



CH-1

LOBBY
(SEATING FOR 4)
DISPLAY CASE (12 SF)
270 SF

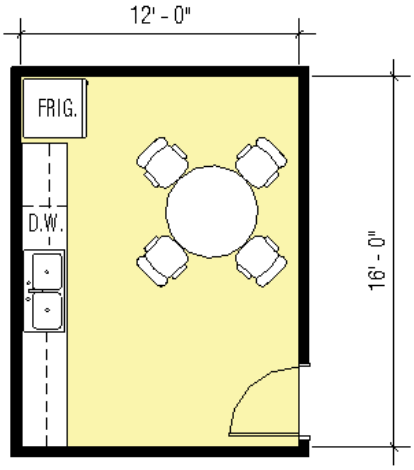
City Hall / Shared Spaces



CH-5

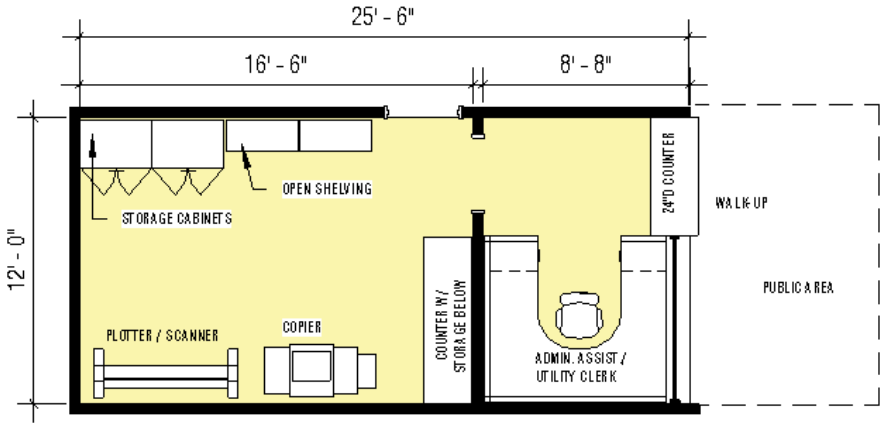
PUBLIC RESTROOMS
112 SF

STAFF SHWR/ TOILET
145 SF



CH-12

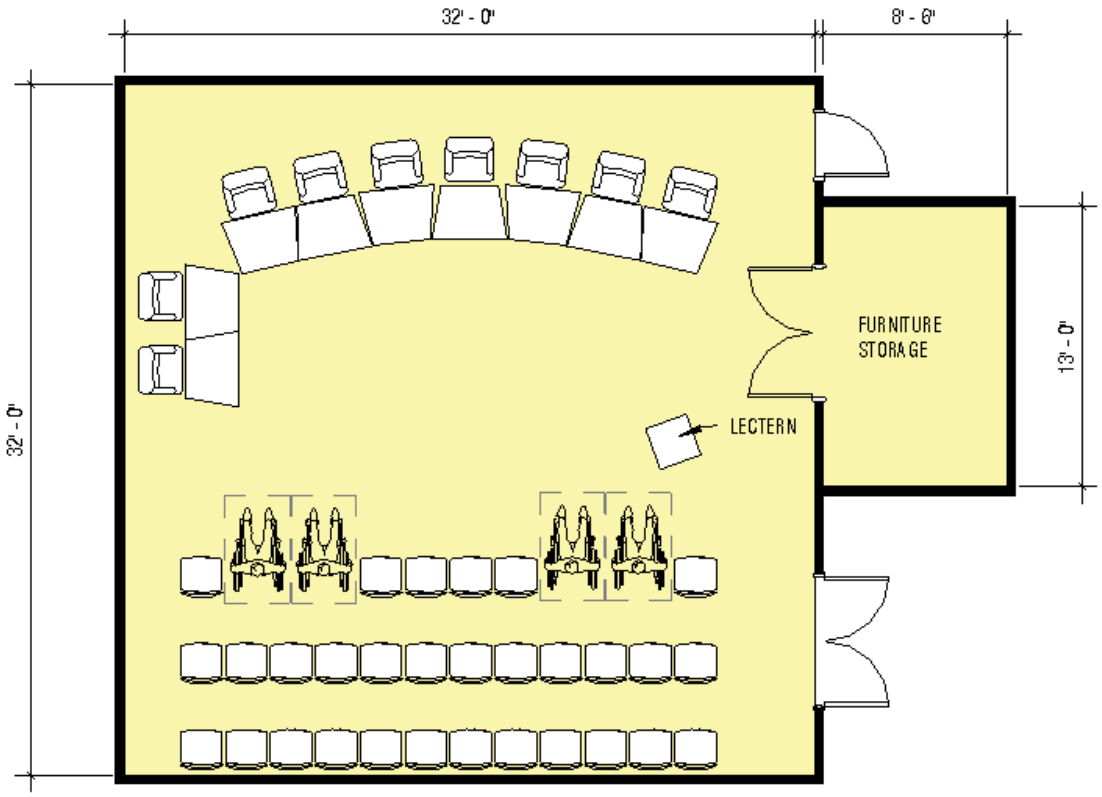
BREAKROOM
192 SF
(SEATING CAPACITY - 4)



CH-8

DOCUMENT/WORKROOM
216 SF
ADMIN ASSIST.
103 SF
SUITE TOTAL 319 SF

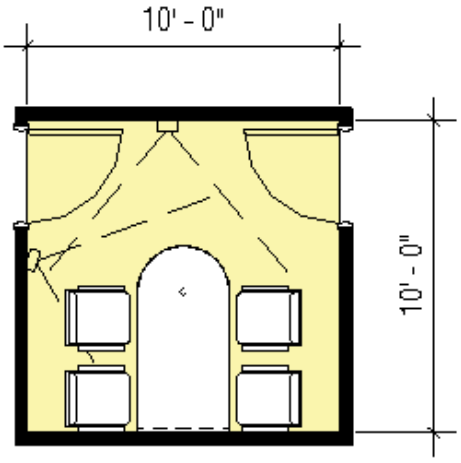
Council Chambers/ Courtroom



CH-16

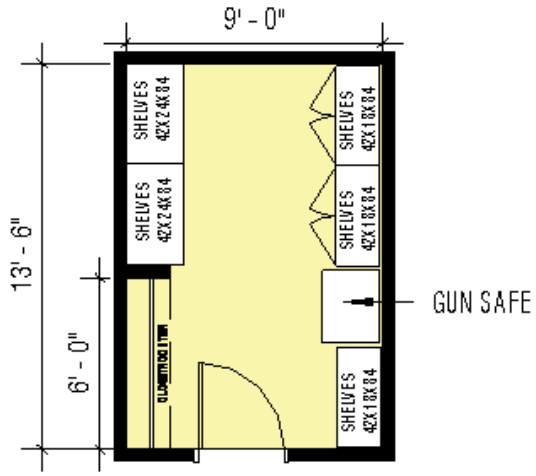
COUNCIL CHAMBERS /COURT SETUP
(30) +(4) WHEELCHAIR ACCESSIBLE
1,024 SF
TOTAL WITH STORAGE (104 SF)
1,128 SF

Police Department Spaces



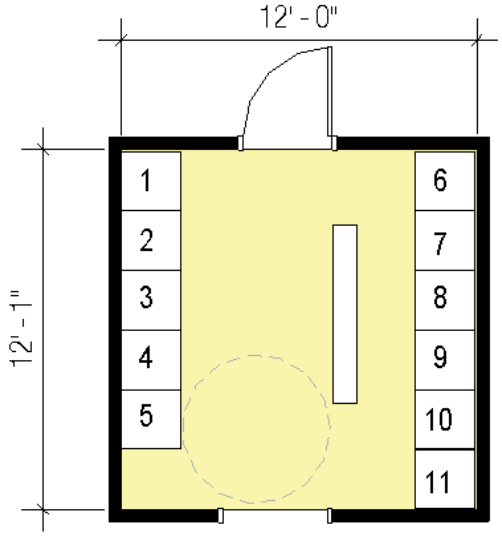
PD-1

INTERVIEW ROOM
100 SF



PD-2

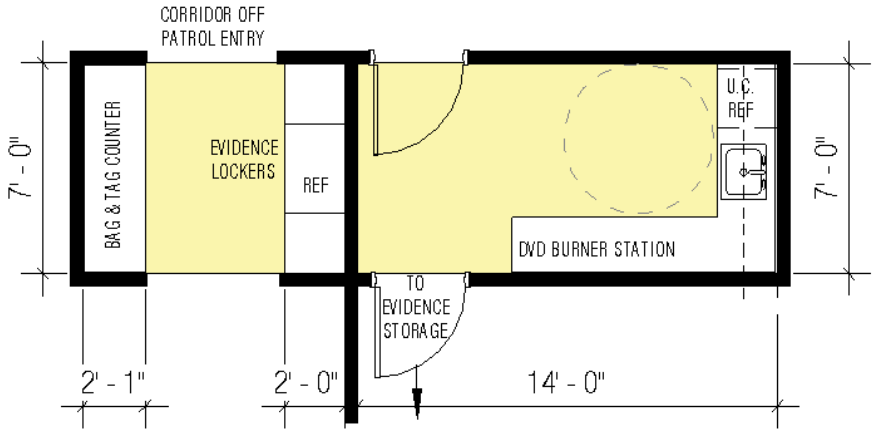
STORAGE
122 SF



PD-3

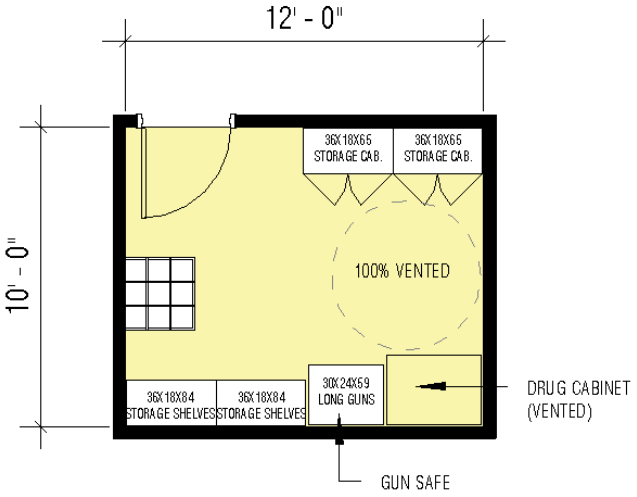
PATROL LOCKERS
144 SF

Police Department Spaces



PD-5

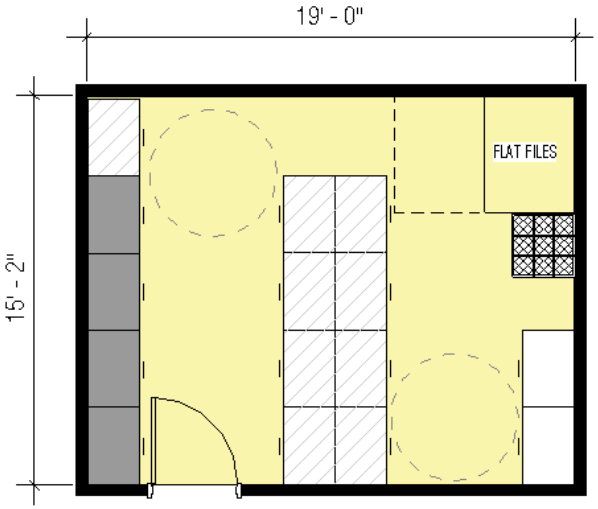
EVIDENCE BAG & TAG / LOCKERS
112 SF



PD-6

EVIDENCE STORAGE
120 SF

Department Shared Records Storage



RS11

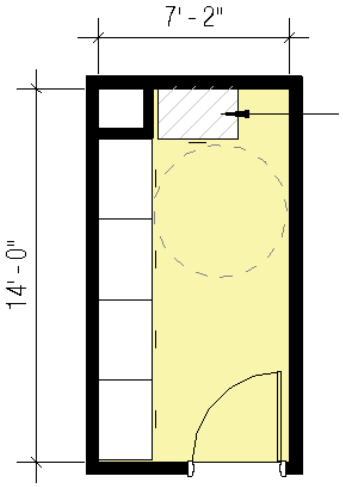
RECORDS
288 SF

FINANCE RECORDS

CITY SECRETARY RECORDS

PUBLIC WORKS RECORDS

4-DRAWER LATERAL FILES SHOWN (36WX24DX55H)



RS12

POLICE RECORDS
100 SF

5 – CITY HALL AND POLICE SPACE NEEDS

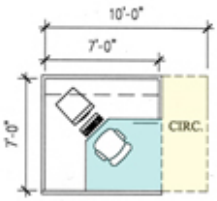
This section will focus on the City Hall and Police Department's facility space needs. As part of the meetings with City Staff, consideration for adjacencies, function and proper size of each element/space were discussed, with the agreed upon sizes and quantities shown on the final program charts.

Explanation of Circulation Factors

The ***Circulation Area*** is the portion of the Gross (Total) Area, whether or not enclosed by partitions, which are required for physical access to some subdivisions of space.

Systems Office Furniture (Work Stations) Circulation:

Contrary to popular perception, systems office furniture does not take up significantly less space. What they do allow is flexibility of that space. A certain amount of area is added to these systems before the department circulation to allow for adequate access to each of the workstations. The drawing at right shows an example of this added area, shaded yellow.



Gross Circulation:

This is a calculation of the space needed to travel to and within the department and the thickness of walls. It is a percentage of the Gross square footage (i.e. the subtotal and the circulation together). This number is calculated (using 25% as an example) by taking the subtotal and dividing it by (100-25) then multiplying by 25. This gives you a number that is 25% of the Gross square footage. [(Subtotal/75) x 25= gross circulation] This circulation number varies depending on the makeup of the department.

Gross Circulation Sample
(Subtotal/75) x 25 = gross circulation

Exterior Wall/ Mechanical/Circulation Factor:

After each department is added together to form a component (i.e. Patrol, Court, and Finance) then each component has a building envelope and mechanical factor added to it. This number covers the area needed for exterior walls and mechanical systems and circulation between components.

Explanation of Department Tables

The table shown below serves as a legend to understanding the tables shown for each department in the pages to follow. Note: This legend may not directly apply to the Summary Table.

City Hall Needs Assessment

City Department

Requirements Data Sheet	Current	Future Space Needs				Projected 2030 Requirements		
Item Description	Staff	Space Code	Note Code	Unit Size	Unit Area	Staff	No.of Spcs	Total Area
Department Name								
Waiting (5)					120		1	120
Public Carrel (2)				9x9	81		1	81
Admin Assistant		WS4		7x8	80	1	1	80
Director	1	PO3		12x12	144	1	1	144
Assistant Director	1	PO2		10x12	120	1	1	120
Clerk		WS4		7x8	80	2	2	160
Conference (6)				11x15	165		1	165
Files				9x10	90		1	90
(4+2) 4-drawer lateral files								
Work/Copy/Coffee				10x12	120		1	120
Supply Room				9x10	90		1	90
Net Subtotal	2					5		1,170
26% Gross Circulation								411
Total Gross Sq. Footage								1,581
Total Area	2					5		1,581

( ) Peak Users to be Accommodated

1. Description of space or personnel space.
2. Current staffing numbers.
3. Space code identifies spaces listed in space standards section.
4. Unit size describes physical size of space.
5. Unit area per space or personnel housed within space.
6. Hallmark year (2030) for staff projections.
7. Number of spaces required (i.e. One conference room is provided).
8. Total area equals unit area times the number of spaces to develop total area.
9. Reflects walls/circulation as described on previous page.

The study process began with planning for the long range department needs, for at least 20 years in the future. After an initial calculation was made on April 4, 2018, typical review and revisions were made to trim some square footage. On subsequent days, May 2nd and 8th, additional modifications were made to reduce the square footage further. We continued to reduce square footage June 7th and July 13th resulting in the totals shown in this report.

The following pages contain department tables for each distinct area / department for the planned facility. A summary of all areas concludes this section.

Facilities Master Plan and Municipal Campus Plan

City of Rollingwood	TOTAL BUILDING
Revised from 8-22-2018 meeting	*Total building SF - 8,436 SF*
Revised from 7-13-2018 meeting	*Total building SF - 8,490 SF*
Revised from 6-07-2018 email	*Total building SF - 8,378 SF*
Revised from 5-09-2018 meeting	*Total building SF - 7,921 SF*
Revised from 5-2-18 meeting	*Total building SF - 8,947 SF*
Initial meeting 4-04-2018	*Total building SF - 12,697 SF*

	2018	2028		2038		
Space Description	Staff	Staff	Total Space	Staff	Total Space	Notes:
Administration	4	4	969	4	969	
Court Clerk	1	1	224	1	224	
Financial Department	1	1	544	1	544	
Utility Billing						Remain out sourced
Police Department	10	11	1,783	11	1,783	
Public Works Department	3	4	240	4	240	
Planning & Operations	-	1	160	1	160	Future position
Public Lobby		-	649	-	649	
Council Chambers			1,327		1,327	*circulation factor adjust*
Building Support			1,780		1,780	*circulation factor adjust*
Net Subtotal	19		7,676		7,676	
9% Mech/Bldg. Circ. Factor			759		759	
Total Facilities Master Plan		**22**	**8,436**	**22**	**8,436**	*circulation factor adjust*

Current usable City Hall (3,015 SF) + old police department (665 SF) + new police trailer (765 SF) = 4,445 SF

Facilities Master Plan and Municipal Campus Plan

City of Rollingwood — **Public Lobby & Council Chambers**

Revised from 8-22-2018 meeting
Revised from 7-13-2018 meeting
Revised from 6-07-2018 email
Revised from 5-09-2018 meeting
Revised from 5-2-18 meeting

Required Spaces			**Future Space Needs**					**2028**			**2038**		
						{a}		{b}	{c}		{b}	{c}	
Space Description	2018 Staff	Current Room size	Space Code	Note Code	Unit Size	Unit Area NSF	Qty. of Staff	Qty. of Space	Total Space	Qty. of Staff	Qty. of Space	Total Space	
Public Lobby and Adjacent Spaces													*Voting Booths in Council Chamber*
Vestibule		0			8X10	80		1	80		1	80	
Util.B. secure drop box													*Confirm w/ Owner*
Conference / Interview Room		0	PD 1		9x10	90		1	90		1	90	*Shared conference room*
Lobby Waiting (4)		114	CH 1		15X18	270		1	270		1	270	*Sound attenuation walls*
Court Waiting				A									*part of Lobby*
Admin. Asst. / Recept.			CH8	B	12X8.6	103							*Refer to Admin*
Court Clerk window access				A									*part of Lobby*
Public Access / Kiosk				A									*part of Lobby*
Display case					2X8								*part of Lobby*
Drinking Fountains					5x3	15		1			1		*Refer CH5*
Public Toilets		122	CH 5	Z	15x7.5	112		1	112		1	112	*(1-male, 1-female)*
Work / Copy counter			CH8		12X16.5	198							*Refer Shared Bldg. Support*
Net Subtotal									552			552	
15% Gross Circ. Factor									97			97	*circulation factor adjusted*
Subtotal Gross Area [square footage]								**5**	**649**		**5**	**649**	
Council Chambers/Courtroom		1026	CH16		32X32	1,024		1	1024		1	1024	
~~*Sound/Security Vestibule*~~					8X10	80			0			0	
Council Chambers/Court :													
Council Dais (8)				S									*Dais not raised*
~~Court Well~~													
Audience Seating (34 + 4 disabled)													
Furniture Storage + A/V		0			8X13	104		1	104		1	104	
Voting Booths Area (4 x per yr.)													
Public Conf/Prosecutor		0	PD 1	F									*Shared conference*
Pre-Council/Conf-10/Jury		0	CN C		12X21	252							*Shared conference*
Coffee bar													*Confirmed*
Council/Staff/Jury Toilets					8x7	56							*Shared Bldg. Support*
Net Subtotal							0		1128	0		1128	
15% Gross Circ. Factor									199			199	*circulation factor adjusted*
Subtotal Gross Area [square footage]							0	2	**1,327**	0	2	**1,327**	
Total Gross Area [square footage]							0	7	**1,976**	0	7	**1,976**	

Typical Formula is a x b = c

Notes:

A. Subset space is part of Lobby square footage

B. Walk-up counters for Administrative Assistant; 24"D counter w/glass partition between public and staff

F. Small Conference Room 4-5 seating capacity. City Attorney and Prosecutor to share - off Lobby with 2nd door to staff
Shared with City Prosecutor evenings / once a month. City is discussing an every other month option.

S. ~~Option for raised dais 18"- 21" layout.~~ The current size of existing Council / Court Room is 1012 SF
Confirmed seating count at dais City Adm., Mayor, 5 Alderman, City Attny (4/27/2018)

Z. Building Code requirements for Assembly Area /Council Chambers (1-male, 1-female) at 15 net load factor [best case] and Business Occupancy at 100 gross per Table 1004.1.2 max. floor area per occupant. (1-male & 1-female) one each on 1st floor

City of Rollingwood — Administration

Revised from 8-22-2018 meeting
Revised from 7-13-2018 meeting
Revised from 6-07-2018 email
Revised from 5-09-2018 meeting
Revised from 5-2-18 meeting

Required Spaces			Future Space Needs				2028			2038			
						{a}		{b}	{c}		{b}	{c}	
Space Description	2018 Staff	Current Room size	Space Code	Note Code	Unit Size	Unit Area NSF	Qty. of Staff	Qty. of Space	Total Space	Qty. of Staff	Qty. of Space	Total Space	
Staff Offices & Workstations													
Mayor	1	0	PO4.5	H	21x12	252	1	1	252	1	1	252	
City Administrator	1	160	PO4.5	E	21x12	252	1	1	252	1	1	252	
f City Secretary	1	130	PO2	D, I	12x10	120	1	1	120	1	1	120	*reduced*
Admin. Assistant / Utility Clerk	1	0	CH8	C, F, B	12x8.6	103	1	1	103	1	1	103	*Public Lobby*
Shared / Support Space													
Large Conference Space	-	0	CN C	A	21X12	252							*Shared Bldg. Support*
Walk up counter@ workstations	-	0	CH8	G	12x8.6	103							*Public Lobby*
File Room	-	80		M	15.2x19	288							*Shared files: Records & Finance*
Net Subtotal	4						4		727	4		727	
25% Gross Circ. Factor									242			242	
Total Gross Area [square footage]							**4**		**969**	**4**		**969**	

Typical Formula is a x b = c

Notes:

A. Large shared Conference Room - 10 seating capacity. Shared conference room available to all dept./ Admin. to schedule.
Library / Archive permanent records available for public access on 18" deep bookcase along one wall.
B. Receptionist and Court Clerk to be cross- trained functions. Existing Receptionist answers citizen questions, functions as utility clerk, handles water billing, cash.
C. Receptionist and Court Clerk to be sit down height, printer access, paper pass, bullet resistant surround speaker glass at Court Clerk, and bullet resistant wall on Lobby side.
D. Boxes brought from Iron Mtn. need 12 ft. of counter for research with laterals underneath - *needs layout space location to sort files.*
E. Office layout with L-desk against wall with door so visitors can't see monitor.
F. Acts as Receptionist for Bldg.
G. Receptionist provides support to Utility Clerk position (currently outsourced) and will occupy the walk up counter when resident comes in to pay bill.
H. Mayor near City Administrator
I. Keep current desk & bookcase
M. Files accessed by City Secretary and PW Director. Lockable files in lockable room (fire rated) adjacent to Finance Manager
Wyndburg painting - locate

Lateral file cabinet = (36"w x 24" d); Upright file cabinet = (18"w x 22"d)
J. Active files

Meeting Minutes
Existing Files: (1) existing upright unit at (4) drawers (18"w x 22"d)
File growth: (1) existing upright unit at (4) drawers + (4) drawers for growth (100%) = (8) drawers upright [convert to (1) 4-drawer lateral]
(fire rated file cabinets w permenant records. Fire rated room is an option.)

City Council Meeting Files & Packets
Existing Files: (1) existing 4-drawer lateral
File growth: (1) existing 4-drawer lateral with no growth = (4) drawers
(keep up to 4-years on site due to citizen requests)
(agenda management computer system 3-yrs of records on line)

Admin. Publications/ misc.
Existing Files: (1) existing drawer in lateral file
File growth: (1) existing drawer in lateral file + (1) drawer for growth (100%) = (2) drawers

Contract Files
Existing Files: (1) existing drawer in lateral file
File growth: (1) existing drawer in lateral file + (1) drawer for growth (100%) = (2) drawers
(required to keep 5 years)

Budget & Audit Files
(20 years of files: FEMA, CAMPO, governance - 2nd drawer Freedom of Information Act, keep 1-yr)
Existing Files: (2) existing drawer in lateral file
File growth: (2) existing drawer in lateral file + (2) drawer for growth (100%) = (2) drawers

ADMIN CONT.

Historical Documents
(20 years of files: pavillion plans, park commission)
Existing Files: (1.5) existing drawer in lateral file
File growth: (1.5) existing drawer in lateral file + (1) drawer for growth (33%) = (2.5) drawers
(Utility commission)
Existing Files: (0.5) existing drawer in lateral file
File growth: (0.5) existing drawer in lateral file + (1) drawer for growth (150%) = (1.5) drawers
(Planning & Zoning)
Existing Files: (1.5) existing drawer in lateral file
File growth: (1.5) existing drawer in lateral file + (.5) drawer for growth (33%) = (2) drawers
(Board of Adjustment)
Existing Files: (1) existing drawer in lateral file
File growth: (1) existing drawer in lateral file + (1) drawer for growth (100%) = (2) drawers

2-Drawer Lateral - Exgt. 36"w x 24" d
(20 years of files: water/ seewer, resident's complaints, AWR - water company, water reports)
Existing Files: (2) existing drawer in lateral file
File growth: (2) existing drawer in lateral file + (2) drawer for growth (100%) = (4) drawers

Address Files - Bldg. & Development 1955
(Perm. Files, ordinances, proclaimations 1-Hr. Fire Rated Room + Elevated prevent water damage)
Existing Files: (1) existing drawer in lateral file
File growth: (1) existing drawer in lateral file + (1) drawer for growth (100%) = (2) drawers

Record Retention
One binder for each department of what is sent to Iron Mountain
Existing Files: (1) existing drawer in lateral file
File growth: (1) existing drawer in lateral file + (0) drawer for growth (0%) = (1) drawers

Address - residential & Commercial *(will go digital)*
Existing Files: (6) existing drawer in lateral file
File growth: (6) existing drawer in lateral file + (0) drawer for growth (0%) = (6) drawers

Building and Development PUDS
(PUD (3),street, striping (1)- staff records accessed daily)
Existing Files: (4) existing drawer in lateral file
File growth: (4) existing drawer in lateral file + (2) drawer for growth (50%) = (6) drawers

Permits
[Permits (1), personal, oaths of office, training (1)]
Existing Files: (2) existing upright unit at (2) drawers
File growth: (2) existing upright unit + (0) drawer for growth (0%) = (1) 22" d upright convert to lateral = .5 lateral

2-Drawer Lateral - Exgt. 36"w x 24" d
(in storage clo.)

30 -Tubes 31" ht. x 4" dia

5-drawer Flat File - 54" w x 42" deep *(need scanning)*
(20-25 items in each drawer)

need to find a location in building

Water conservation pamplets in Lobby

3-Drawer Lateral - Exgt. 38"w x 24" d *Fire-rated*
[Historical records (1)-drawer]
(electrical extension cords (1)- drawer)
19x19 printer & shredder
Recept. - 6 shelf binders 4' w x 6'-6" ht.
(Library - 2nd shelf, 5 shelves archive)

Bookcase in office (keep)
Iron Mountain Notes
Pull 5-7 boxes per month- City Sec.
Archive files stored at Iron Mountain. Deliver and Pick up next day.
Approx. 300 boxes at Iron Mount.

City of Rollingwood — Municipal Court

Revised from 8-22-2018 meeting
Revised from 7-13-2018 meeting
Revised from 6-07-2018 email
Revised from 5-09-2018 meeting
Revised from 5-2-18 meeting

Required Spaces			Future Space Needs				2028			2038			
						{a}	{b}		{c}	{b}		{c}	
Space Description	2018 Staff	Current Room size	Space Code	Note Code	Unit Size	Unit Area NSF	Qty. of Staff	Qty. of Space	Total Space	Qty. of Staff	Qty. of Space	Total Space	
Staff Offices & Workstations													
Court Clerk	1	81	PO4.3	L	12x14	168	1	1	168	1	1	168	*critical files kept in office*
City Attorney	-	0		F			-						
Prosecutor	-	0											*Share conference room*
Support Space													
Municipal Court				R									*Courtroom*
Net Subtotal	1								168			168	
25% Gross Circ. Factor									56			56	
Total Gross Area [square footage]							**1**		**224**	**1**		**224**	

Typical Formula is a x b = c

Notes:

F. Small Conference Room 4-5 seating capacity. City Attorney and Prosecutor to share - off Lobby with 2nd exit door
City Prosecutor evenings / once a month. City is discussing an every other month option. Not a court of record.
Can also be used during day for Clerk side conversations and Police soft Interview.

L. Counter built-in at transaction window. (high enough that visitor can't jump over)
speak around glass and bullet resistant glass. All 4 walls to be bullet resistant and impact resistant.
Office to have table where judge can meet with clerk (work area, not conference) Ablility to spread out & secure information.
Ability to pull down shades (at transaction window) when Judge visiting, or as needed

R. Reference Administration Department for Municipal Court (share with Council Chamber)

J. Active files (No laterals -Preferred 4-drawer upright files) (18"w x 22"d)
9" x 12" folder - case files; in fire proof file cabinet
Existing Files: (1) existing upright unit at (4) drawers
File growth: (1) existing upright unit at (4) drawers + (2) drawers for growth (50%) = (6) drawers upright
(Growth to include Financials, State reports, Juror records + stored boxes in Storage room*)
Existing Files: (1) existing upright unit at (4) drawers
File growth: (1) existing upright unit at (4) drawers + (2) drawers for growth (50%) = (6) drawers upright
(dockets & warrants - need separting)
Total (3) 4-drawer upright cabinets
May keep bookcase in current office
New Court clerk hasn't gone through all files - final count pending
currently closed cases in banker boxes
warrants 2012-2013 in office
tickets up to 8 yrs
overnight deposits - exterior secure drop box?
State reports keep for 2 years
dockets what Judge sees kept for 2 yrs.
Financials kept for 2 yrs.
Juvenile records
Jurors records
Other banker boxes in storage closet to go through with Judge 10 ft. linear full ht.*

City of Rollingwood — Finance Department

Revised from 8-22-2018 meeting
Revised from 7-13-2018 meeting
Revised from 6-07-2018 email
Revised from 5-09-2018 meeting
Revised from 5-2-18 meeting

Required Spaces			Future Space Needs				2028			2038			
						{a}	{b}		{c}	{b}		{c}	
Space Description	2018 Staff	Current Room size	Space Code	Note Code	Unit Size	Unit Area NSF	Qty. of Staff	Qty. of Space	Total Space	Qty. of Staff	Qty. of Space	Total Space	
Staff Offices & Workstations													
Finance Manager	1		PO2		12x10	120	1	1	120	1	1	120	
											-		
Support Space													
Conference Room		0	CN C	A	12X21	252			-			-	*Shared Bldg. Support*
File Room			RS 11	M	15.2x19	288		1	288		1	288	
Lateral files - (4) 4-dwr x 36" wide													
Net Subtotal	1								408			408	
25% Gross Circ. Factor									136			136	
Total Gross Area [square footage]							**1**		**544**	**1**		**544**	

Typical Formula is a x b = c

Notes:

A. Large shared Conference Room- 12 seating capacity. Shared conference room available to all dept./ Admin. to schedule.
Library / Archive permanent records available for public access on 18" deep bookcase along one wall.

M. Files accessed by City Secretary and PW Director. Lockable files in lockable room (fire rated) adjacent to Finance Manager

J. Active files (convert to 36" wide lateral 4- Drawer)
(1) year of current years records and (1) year of previous years records in office
15"w x 22"d Existing upright files

Vendor Files
Existing Files: (2) existing drawer
File growth: (2) extg. dwrs + (2) dwrs. for growth (100%)= (4) drawers

Receivables / Misc.
Existing Files: (1) extg. drawer
File growth: (1) extg. dwrs + (1) dwrs for growth (50%) = (2) drawers

Bond Issue
Existing Files: (1) extg. drawer
File growth: (1) extg. dwrs + (1) dwrs for growth (100%) = (2) drawers

Cash Deposits
Existing Files: (2) extg. drawer
File growth: (2) extg. dwrs + (2) dwrs for growth (100%) = (4) drawers
(keep previoius year on site)

Payroll & General Vouchers
Existing Files: (1) 4- dwrs upright
File growth: (4) extg. dwrs + (2) dwrs for growth (50%) = (6) drawers
(State Taxes, unclaimed property, invest., workers comp, utilities)

Voucher & Bank Reconcilliations
Existing Files: (1) existing drawer
File growth: (1) extg. dwrs + (1) dwrs for growth (100%) = (2) drawers

Payroll Records
Existing Files: (1) existing drawer
File growth: (1) extg. dwr + (1) dwr for growth (100%) = (2) drawers

Health Insur. & Prop. Insur.
Existing Files: (2) existing desk drawers
File growth: (2) extg. dwrs + (2) dwrs for growth (100%) = (4) dwrs
(4 year period)

Finance Bookcase convert to Lateral file
Existing Files: 1099 = (1) drawer, physical audits = 1 drawer (2-3 yrs kept), current year budget= (1) drawer
File growth: (3) drawers
(6 shelf bookcase - binders remain)

Total Active Files = 29 drawers at 22" = (638" linear)
Growth = (4) lateral 4-drawer

City of Rollingwood — Police Department

Revised from 8-22-2018 meeting
Revised from 7-13-2018 meeting
Revised from 6-07-2018 email
Revised from 5-09-2018 meeting
Revised from 5-2-18 meeting

Required Spaces			Future Space Needs				2028			2038			
						{a}	{b}		{c}	{b}		{c}	
Space Description	2018 Staff	Current Room size	Space Code	Note Code	Unit Size	Unit Area NSF	Qty. of Staff	Qty. of Space	Total Space	Qty. of Staff	Qty. of Space	Total Space	
Staff Offices & Workstations													
Chief of Police	1		PO 4		15X13	195	1	1	195	1	1	195	
Lieutenant	1		PO2		10x12	120	1	1	120	1	1	120	
Sergeant	1		WS5		8x8	88	1	1	88	1	1	88	*download video for Court, IT extra server*
Corporal	2		WS5		8x8	88	2	1	88	2	1	88	
Officer	2		WS5		8x8	88	2	1	88	2	1	88	
Reserve	2		WS3		8x6	72	2	1	72	2	1	72	
Detective	1		WS5		8x8	88	2	1	88	2	1	88	
Support Space													
Conference Room (sm)*		0	CN A	F	11x15	165							*deleted Case Conf. /lockable*
Records Room		0	RS 12	J, V	7.2X14	100		1	100		1	100	*lockable*
(4) 4-drawer 36 w lateral files													
Interview Room		0	PD 1		10X10	100							*Shared conf. rm. at Lobby*
Break room													*move to Shared Bldg. Support*
Storage - supplies w gun locker		0	PD 2		9x13.5	122		1	122		1	122	*Confirm content, uniforms*
IT Room (3 racks)		0	CH-11		9x10	90							*move to Shared Bldg. Support*
Patrol Lockers		0	PD 3	U	12X12	144		1	144		1	144	*Patrol Lockers*
Evidence Processing/ Evid. Lockers		0	PD 5		7X16	112		1	112		1	112	*Evidence Lockers in Suite.*
Evidence Storage w/ gun locker		0	PD 6		10X12	120		1	120		1	120	*DVD burner station in Evidence Processing*
Net Subtotal	10								1,337			1,337	
25% Gross Circ. Factor									446			446	
Total Gross Area [square footage]							**11**		**1,783**	**11**		**1,783**	

Typical Formula is a x b = c

Notes:

F. Small Conference Room 4-5 seating capacity. Confirm shared or dedicated
One off of Lobby for Court Clerk side conversations is shared with City Staff.

Fa. Option 2. Not ideal to use table in Chief's Office since meetings, debrief need space.
At times needs to leave confidencial paperwork out and ability to lock and leave.
PD 1 - Confirm need to record in Interview room -dedicated or shared

Conference Room

*Neighborhood comes in to discuss the 5k route and blocking intersections
*Plus once a week debriefing meetings

Currently file cabinets for case files are in Chief's office (3 extg.)

J. Active files (convert to 36" wide lateral rawers)
15"w x 22"d Existing uprights

Training Files (permenant)
Existing Files: (2) existing drawer
File growth: (2) extg. dwrs + (2) dwrs. for growth (100%)= (4) drawers

Employee Records / Internal Affairs
Existing Files: (2) extg. desk drawer
File growth: (2) extg. dwrs + (1) dwrs for growth (50%) = (3) drawers

(Qty. 3) 4-drawer upright in Chief's Office
Existing Files: (12) extg. drawer
File growth: (12) extg. dwrs + (6) dwrs for growth (50%) = (18) drawers

The plan is to go digital as much as possible
Total Active Files = 25 drawers at 22" = (550" linear) at 36"= (4) 4-drawer laterals

POLICE CONT.

U. Patrol needs spare uniform at work for change of clothes. Patrol Lockers located as you walk into Police Area. 2x2 with charging station inside
Qty. 9 + reserve = 10 lockers
Kevlar vest drying / hanging station (air); Lockers hold weapons, long guns, boot shelf, gym bag/ hanging 'go bag', spare uniform,
Kevlar vests wash at home periodically, but air out station would be used.

V. Record Room - Records Room for additional case files combined with Chief's records

No support staff
No finger prints, all done downtown
No temporary holding
No registering of sex offenders
No Armory - provide storage closet for supplies to clean & repair guns
No internal fitness currently on site
Juvenile - No Holding. get back to parents.

Changing of shift A & B-
Use pass through book - debrief in morning, write in log book. Can use a conference room or in WS area

Evidence Processing
No pass-thru locker for evidence. Use one-sided lockers in secure room
Evidence Processing - needs bag & tag (one-sided lockable lockers) Keep drugs separated and ventilated.
Need secure locker with valuables in secure room w safe.
DVD burner in or adjacent to Evidence Processing area. Should be accessible to everyone, not in locked room
Processing evidence once every 3 days- Greg. Provide work surface with ability to process evidence. Then write report back at desk.
photograph evidence
seized evidence like recovered stolen lawn mower is stored in Jackie Bobs fenced area
238 pieces of evidence in locker.
Need camera on door

Cubicals (WS)
Officers & Detectives individual case management files in lockable assigned file drawers at WS.
'You catch'm you take'm" - case files at each WS cubical
Each officer has 3 drawers; with shift A & B overlapping, each WS has 2 box, box file and 2 file file = 8 drawers
Sergeant performs evaluations - needs guest chair. There are privacy issues.

*May share copier **but** some sensitive material should not be sent to shared copier. Better to have desk top in patrol area.*
Patrol officers are not sitting at their desks. Approximately 1- hour working case file at desk
Large detail map of Rollingwood on wall either in conference or Workstation area

Lockers
Patrol lockers are different. Refer to note 'U' above
In storm event, Police stay overnight. During ACL - 1 officer worked 20 hours straight.
Use card reader for locker access in patrol

Facilities Master Plan and Municipal Campus Plan

City of Rollingwood — **Public Works Department**

Revised from 8-22-2018 meeting
Revised from 7-13-2018 meeting
Revised from 6-07-2018 email
Revised from 5-09-2018 meeting
Revised from 5-2-18 meeting

Required Spaces			Future Space Needs				2028			2038			
						{a}	{b}		{c}	{b}		{c}	
Space Description	2018 Staff	Current Room size	Space Code	Note Code	Unit Size	Unit Area NSF	Qty. of Staff	Qty. of Space	Total Space	Qty. of Staff	Qty. of Space	Total Space	
Staff Offices & Workstations													
Public Works Director	1	81	PO2	O, M	10X12	120	1	1	120	1	1	120	
Operators	2	0	WS2	W, S	6x7	60	3	1	60	3	1	60	
Support Space													
Small Conference Space		0	CN A	N	11X15	165							*Shared Bldg. Support*
(2) 3-drawer lateral file cabinets													
Net Subtotal	3								180			180	
25% Gross Circ. Factor									60			60	
Total Gross Area [square footage]							**4**		**240**	**4**		**240**	

Typical Formula is a x b = c

Notes:
M. Files accessed by City Secretary and PW Director. Lockable files in Lockable room adjacent to Finance Manager
O. Large monitor on wall for viewing water lines on map.
J. Active files (36" wide units. drawers)

TCEQ / AWR Files
Existing Files: (1) existing 4-drawer lateral
File growth: (1) existing 4-drawer lateral + (2) drawer for growth (50%) = (6) drawers
(5-years of records; paid to keep water & waste water files)
Upright - Workshop
Existing Files: (1) existing upright unit at (4) drawers
File growth: (1) existing upright unit at (4) drawers - used for brass fittings, tools, drills

Lockable Storage tool space
10'-8" L x 5' w existing size - expand to 10'x10'

Storage Yard with barn - Approximate size 80 x 30
selling chipper and trailer
Location for dirt, base and haul off needed
Will be acquiring new dump bed trailer to keep dirt on
partial enclosure protects generator
Skaggs riding lawn mower in barn
If provide pole barn, could remove barn
Monday & Thursday recycle days - pick up at curb
Austin City Limits trailer - no parking sign
TDS contracts for rocks
Location for backhoe / front end loader in yard
Rigid evidence locker located in garage currently
Freezer - ICE for Public Works crew located in garage
Storage for large bottled waters for cooler currently located in garage
Woman's Club plastic storage bins currently located in garage

Facilities Master Plan and Municipal Campus Plan

City of Rollingwood — **Planning and Development**

Revised from 8-22-2018 meeting
Revised from 7-13-2018 meeting
Revised from 6-07-2018 email
Revised from 5-09-2018 meeting
Revised from 5-2-18 meeting

Required Spaces			Future Space Needs				2028			2038			
						{a}	{b}		{c}	{b}		{c}	
Space Description	2018 Staff	Current Room size	Space Code	Note Code	Unit Size	Unit Area NSF	Qty. of Staff	Qty. of Space	Total Space	Qty. of Staff	Qty. of Space	Total Space	
Staff Offices & Workstations													
Planner Inspector	-	0	PO2		10X12	120	1	1	120	1	1	120	Future FTE added back
Admin. Support	-	0											Future FTE deleted
Support Space													
Medium Conference Space		0											
Copy / Workroom		0											
Net Subtotal	-								120			120	
25% Gross Circ. Factor									40			40	
Total Gross Area [square footage]									**160**			**160**	

Typical Formula is a x b = c

FTE = full-time equivalent (employee)

Facilities Master Plan and Municipal Campus Plan

City of Rollingwood — **Utility Billing**

Revised from 8-22-2018 meeting
Revised from 7-13-2018 meeting
Revised from 6-07-2018 email
Revised from 5-09-2018 meeting
Revised from 5-2-18 meeting

Required Spaces			Future Space Needs				2028			2038		
						{a}	{b}		{c}	{b}		{c}
Space Description	2018 Staff	Current Room size	Space Code	Note Code	Unit Size	Unit Area NSF	Qty. of Staff	Qty. of Space	Total Space	Qty. of Staff	Qty. of Space	Total Space
Staff Offices & Workstations												
Clerk		0										
Support Space												
Medium Conference Space		0										
Walk up counter@ workstations	-	0										
Net Subtotal	-											
25% Gross Circ. Factor												
Total Gross Area [square footage]									-			

Typical Formula is a x b = c

Notes:
currently will remain out sourced

City of Rollingwood — **Shared Building Support**

Revised from 8-22-2018 meeting
Revised from 7-13-2018 meeting
Revised from 6-07-2018 email
Revised from 5-09-2018 meeting
Revised from 5-2-18 meeting

Required Spaces			Future Space Needs				2028			2038			
						{a}	{b}	{c}		{b}	{c}		
Space Description	2018 Staff	Current Room size	Space Code	Note Code	Unit Size	Unit Area NSF	Qty. of Staff	Qty. of Space	Total Space	Qty. of Staff	Qty. of Space	Total Space	
Shared Building Support													
Central Custodial / Storage		0		Y	9x10	90		1	90		1	90	
Electrical					9X9	81		1	81		1	81	
Mechanical Room					8x10	80		1	80		1	80	*split with Equipment platform*
waterheater													
Sprinkler/ riser													
I.T. (3 racks ea) City & Police separate		18	CH 11		9x10	90		2	180		2	180	*split room with chain link fence*
Building Material Storage		0			10x10	100		1	100		1	100	
Janitor Closet		9			5x7	35		1	35		1	35	
Shared Staff Support													
Breakroom (1-table, 4 -chairs)		75	CH 12		12X16	192		1	192		1	192	*Adjacent to Community Room*
Copy / Workroom		0	CH 8	Ca, P, X	12x16.5	198		1	198		1	198	*Centrally located*
Toilets		122	CH 5		15x7.5	112		2	224		2	224	*(1-male + 1-female) 112 SF ea.; 1st & 2nd floors*
Staff Shower (1)		0	CH5.3	T	9.5x8.5	81		1	81		1	81	*1-Unisex shower off restroom*
Shared Conference (seating for 10)			CN C	N	21X12	252		1	252		1	252	*Projector*
Net Subtotal									1,513			1,513	
15% Gross Circ. Factor									267			267	*circulation factor adjusted*
Total Gross Area [square footage]	-						-		**1,780**	-		**1,780**	

Typical Formula is a x b = c

Notes:

A. Large shared Conference Room- 10 seating capacity.(Rev. 5/3/2018) Shared conference room available to all dept./ Admin. to schedule.
Library / Archive permanent records available for public access on 18" deep bookcase along one wall.
Library to be part of main conference room with community functions

Ca. Confirm Copy/ Workroom is for all City staff. Some individual desktop copiers for Court Clerk & Police
Provide shelving & cabinets for paper goods storage / office supplies. Currently in storage closet.

~~N. Small shared Conference Room- 6 seating capacity. Public Works, Planning and Utility Billing to share~~ (Rev. 5-2-2018)

P. Provide space for large format plotter / scanner (Used by Planning Dept.)

T. Showers - currently officers dress in restroom before shift and change again after shift using gym bag (Rev. 5-9-2018) delete shower, 7-18-2018 Add shower back
~~Showers to be accessible to everyone. PW, Police + City Staff. Adjacent lockers for changing - bring clothes into shower. No assigned lockers~~.
(1-male, 1-female, 1- unisex)

W. Police required to have separate server from City

X. Mail Distribution center

Y. Jackie Bob request cabinet doors for supplies

6 – PROJECT BUDGET OPTIONS & CONCEPTUAL SITE PLAN

OPTION 1A – Addition and Renovation of Existing City Hall

Schedule Milestone Dates

The following budget is based on hallmark dates for the design and construction process as indicated:

Bond Election	November 2019
Start of Design Phase	January 2020
Construction Start	January 2021
Occupancy	March 2022

Total Development Budget = $4,967,289

The following page shows the total development budget including Notes reflecting cost assumptions for this option, which is based upon a detailed analysis. Project budgeting was performed by utilizing a local, Austin General Contractor, Braun & Butler Construction, to develop construction costs and Brinkley Sargent Wiginton Architects providing the additional Project Costs estimates based on past and similar projects. The detailed construction estimate by Braun & Butler in included in Appendix 3.

Rollingwood City Hall and Police Facility

Option #1A - Addition and Renovation to Existing City Hall - November 2019 Bond Election

Project Budget - Brinkley Sargent Wiginton Architects

November 28, 2018

	11/20/2018	11/28/2018		
Land Acquisition	0	0		Note A
Total	**0**	**0**		
Testing Services				
Site Environmental Assessment	0	0		Note B
Geotechnical Report	8,000	8,000		
Materials Testing	12,700	12,700		Note C
Total	**20,700**	**20,700**		
Construction				
New City Hall and Police Facility	3,171,889	3,171,889		Note D
Demolish Existing Structure	0	0		Note E
Public Works Yard	0	0		Note E
Site Development/Parking	0	0		Note E
Site Landscape	0	0		Note E
Site Fence/Gates	0	0		Note E
On-Site Water Retention	0	0		Note E
Security Systems	0	0		Note E
I.T. Infrastructure	33,200	33,200		Note F
Covered Parking	0	0		Note A
Police Equipment/Lockers	12,000	12,000		
Emergency Generator	25,000	25,000		Note G
LEED Enhancements	0	0		Note A
Construction Contingency	0	0		Note E
Design Contingency	200,000	200,000		Note H
Sub-Total	3,442,089	3,442,089		
Inflation	522,400	522,400		Note J
Total	**3,964,489**	**3,964,489**		Note K
FF&E				
Furniture	184,700	184,700		Note L
Exercise Equipment	0	0		Note A
Telephones	13,900	13,900		Note M
A/V Equipment	30,000	30,000		Note N
Total	**228,600**	**228,600**		
City Budgets				
Art Budget	0	0		Note A
Site Survey/Platting	0	0		Note O
Construction Manager at Risk Pre-Const.	7,500	7,500		
Building Environmental Assessment	0	0		Note P
Off-Site Utility Development	0	0		Note P
Moving Costs	0	24,000		Note T
IT Equipment Relocation	15,000	5,000		Note T
Temporary Office Space	92,000	92,000		Note R
Communication Tower	0	0		Note A
Computers	0	0		Note B
Off-Site Fiber to Site	0	0		Note B
Owner Contingency	39,600	39,600		Note S
Total	**154,100**	**168,100**		
Professional Services				
Site Submittal Process	8,000	8,000		
TCEQ Submittal Process	2,000	2,000		
Architectural, Structural and MEP Eng. Basic Services	396,400	396,400		
Extended CA Services (Phased Project)	33,500	33,500		
Civil Engineering (On-Site)	54,000	54,000		
Water Quality Pond Design	7,000	7,000		
Public Works Area	1,000	1,000		
Civil Engineering (Off-Site)	0	0		Note B
Civil Engineering Site Survey	0	0		Note B
Civil Off-Site Drainage Survey	0	0		Note B
Landscape Design	15,000	15,000		
Audio/Visual/Acoustical Consulting	15,000	15,000		
Commissioning	13,000	13,000		
TAAS Consultant	2,500	2,500		
Technology/Security Consultants	18,000	18,000		
Interior Design/Furniture Selection	32,800	0		Note Q
Exercise Equipment Procurement	0	0		Note A
LEED Consultation	0	0		Note A
Record Drawings	8,000	8,000		
Cost Estimating	8,000	0		Note U
Reimbursable Costs	12,000	12,000		
Total	**626,200**	**585,400**		
Total Project Cost	**4,994,089**	**4,967,289**		

Notes:

Note A: Not required
Note B: To be determined
Note C: 8,436 s.f. @ approximately $1.50/s.f.
Note D: Refer to Exhibit A
November 2018 construction budget
Note E: Incorporated into construction budget
Refer to Exhibit A
Note F: 6,647 s.f. @ approximately $5/s.f.
Note G: Use of existing emergency to be verified
Note H: Contingency for design scope modifications
and/or discovered items due to existing cond
Note J: Inflation assumptions (15.2%):
2018 - .6% (December)
2019 - 7%
2020 - 5.8% (through October)
Note K: Assumed schedule:

November 2019	Bond Election
January 2020	Begin Design
October 2020	Project Bids
January 2021	Construction Begins
March 2022	Owner Move-In

Note L: Furniture assumptions:
- Furniture install January 2022
- Assumes all new furniture
- Assumes re-use of existing files and shelvin

Note M: 8,436 s.f. @ $1.65/s.f.
Note N: Assumed AV scope of work:
- Lobby
- Multi-Purpose Room
- Large Conference Room
- Small Conference Room

Note O: Survey previously provided by City.
Platting not required.
Note P: Unknown at this time
Note Q: Provided by City
Note R: - 48' x 64' mobile home (double wide)
- $20,000 setup cost
- $4,000/month over 16 months
- $500/month for utilities over 16 months
Note S: 1% of construction budget
Note T: Cost estimated by City
Note U: CMAR project delivery anticipated

OPTION 2A – Demolish Existing Facility and Provide All New Construction

Schedule Milestone Dates

The following budget is based on hallmark dates for the design and construction process as indicated:

Bond Election	November 2019
Start of Design Phase	January 2020
Construction Start	January 2021
Occupancy	October 2021

Total Development Budget = $4,916,217

The following page shows the total development budget including Notes reflecting cost assumptions for this option, which is based upon a detailed analysis. Project budgeting was performed by utilizing a local, Austin General Contractor, Braun & Butler Construction, to develop construction costs and Brinkley Sargent Wiginton Architects providing the additional Project Costs estimates based on past and similar projects. The detailed construction estimate by Braun & Butler in included in Appendix 3.

Rollingwood City Hall and Police Facility

Option #2A - Demolish Existing Facility and Provide All New Construction - November 2019 Bond Election

Project Budget - Brinkley Sargent Wiginton Architects

November 28, 2018

	11/20/2018	11/28/2018		
Land Acquisition	0	0		Note A
Total	**0**	**0**		
Testing Services				
Site Environmental Assessment	0	0		Note B
Geotechnical Report	8,000	8,000		
Materials Testing	12,700	12,700		Note C
Total	**20,700**	**20,700**		
Construction				
New City Hall and Police Facility	3,170,317	3,170,317		Note D
Demolish Existing Structure	0	0		Note E
Public Works Yard	0	0		Note E
Site Development/Parking	0	0		Note E
Site Landscape	0	0		Note E
Site Fence/Gates	0	0		Note E
On-Site Water Retention	0	0		Note E
Security Systems	0	0		Note E
I.T. Infrastructure	42,200	42,200		Note F
Covered Parking	0	0		Note A
Police Equipment/Lockers	12,000	12,000		
Emergency Generator	25,000	25,000		Note G
LEED Enhancements	0	0		Note A
Construction Contingency	0	0		Note E
Design Contingency	200,000	200,000		Note H
Sub-Total	3,449,517	3,449,517		
Inflation	523,500	523,500		Note J
Total	**3,973,017**	**3,973,017**		Note K
FF&E				
Furniture	177,600	177,600		Note L
Exercise Equipment	0	0		Note A
Telephones	13,900	13,900		Note M
A/V Equipment	30,000	30,000		Note N
Total	**221,500**	**221,500**		
City Budgets				
Art Budget	0	0		Note A
Site Survey/Platting	0	0		Note O
Construction Manager at Risk Pre-Const.	7,500	7,500		
Building Environmental Assessment	0	0		Note P
Off-Site Utility Development	0	0		Note P
Moving Costs	0	24,000		Note T
IT Equipment Relocation	15,000	5,000		Note T
Temporary Office Space	74,000	74,000		Note R
Communication Tower	0	0		Note A
Computers	0	0		Note B
Off-Site Fiber to Site	0	0		Note B
Owner Contingency	39,700	39,700		Note S
Total	**136,200**	**150,200**		
Professional Services				
Site Submittal Process	8,000	8,000		
TCEQ Submittal Process	2,000	2,000		
Architectural, Structural and MEP Eng. Basic Services	397,300	397,300		
Civil Engineering (On-Site)	54,000	54,000		
Water Quality Pond Design	7,000	7,000		
Public Works Area	1,000	1,000		
Civil Engineering (Off-Site)	0	0		Note B
Civil Engineering Site Survey	0	0		Note B
Civil Off-Site Drainage Survey	0	0		Note B
Landscape Design	15,000	15,000		
Audio/Visual/Acoustical Consulting	15,000	15,000		
Commissioning	13,000	13,000		
TAAS Consultant	2,500	2,500		
Technology/Security Consultants	18,000	18,000		
Interior Design/Furniture Selection	32,100	0		Note Q
Exercise Equipment Procurement	0	0		Note A
LEED Consultation	0	0		Note A
Record Drawings	8,000	8,000		
Cost Estimating	8,000	0		Note U
Reimbursable Costs	10,000	10,000		
Total	**590,900**	**550,800**		
Total Project Cost	**4,942,317**	**4,916,217**		

Notes:

Note A: Not required
Note B: To be determined
Note C: 8,436 s.f. @ approximately $1.50/s.f.
Note D: Refer to Exhibit A
October 2018 construction budget
Note E: Incorporated into construction budget
Refer to Exhibit A
Note F: 8,436 s.f. @ approximately $5/s.f.
Note G: Use of existing emergency to be verified
Note H: Contingency for design scope modifications
and/or discovered items due to existing conditions
Note J: Inflation assumptions (15.2%):
2018 - .6% (and December)
2019 - 7%
2020 - 5.8% (through October)
Note K: Assumed schedule:

November 2019	Bond Election
January 2020	Begin Design
October 2020	Project Bids
January 2021	Construction Begins
October 2021	Owner Move-In

Note L: Furniture assumptions:
- Furniture install July 2021
- Assumes all new furniture
- Assumes re-use of existing files and shelving

Note M: 8,436 s.f. @ $1.65/s.f.
Note N: Assumed AV scope of work:
- Lobby
- Multi-Purpose Room
- Large Conference Room
- Small Conference Room

Note O: Survey previously provided by City.
Platting not required.
Note P: Unknown at this time
Note Q: Provided by City
Note R: - 48' x 64' mobile home (double wide)
- $20,000 setup cost
- $4,000/month over 12 months
- $500/month for utilities over 12 months

Note S: 1% of construction budget
Note T: Cost estimated by City
Note U: CMAR project deliver anticipated

EXECUTIVE SUMMARY

A. The following Mechanical, Electrical and Plumbing Assessment Report is for Rollingwood City Hall located at 403 Nixon Drive, Rollingwood, Texas. The original building was built in 1975 to house City Hall, a small shop and a two-bay garage for fire trucks. A new two-bay garage was added in 1977 for Police vehicles. The Police garage was later converted into the Police Station in the 2005 renovation. ADA remodel of restrooms with additional air conditioning was done in 2012 along with replacing the air conditioning unit for the Council Chambers. Although the Council Chamber's HVAC system was replaced in 2012 it does not have enough capacity during peak load conditions and will need to be investigated further. The HVAC system in the ADA Restroom and Office area has exterior exposed ductwork located on the roof from a 2005 renovation. This is going to be a future maintenance issue and is not efficient. An alternate solution should be investigated in the new project. The converted Police area is served by three (3) window units which should not be reused. Because of it's original use, this area does not have adequate space above the ceiling to provide appropriate long-term, accessible and modifiable services for a Police Facility. All existing MEP items in this area are not reusable. New HVAC systems will need to replace existing to meet current code requirements and accommodate new building layout and space requirements.

B. The plumbing systems were upgraded in 2012, however, the service distribution piping is original. Tempered water requirements at hand wash sinks may need to be modified to meet current code requirements and will require further investigation. Condition of 1975 piping is unknown.

C. The main electric service is currently fed overhead from a pole mounted transformer and will need to be redone to provide adequate electric service for new project requirements. New service may be overhead or underground as dictated by new layout and utility company requirements. All space lighting, emergency lighting, exit lighting and controls will need to be replaced to meet current 2015 IECC Energy Code requirements. We would also suggest installation of a new fire sprinkler system and fire alarm system in the new facility. Reference Assessment Report for more detailed information.

ASSESSMENT REPORT

A. The existing HVAC system consists of the following:

1. Council Chambers: The HVAC system consists of a 5-ton D-X split system unit which is ducted over the ceiling of offices to sidewall grilles in sidewall of main meeting room. The exterior condensing unit is located near the main service panel. Reference Photo 'A1'. The system was replaced in 2012 and the ductwork was changed to sheet metal ductwork in 2017 due to poor condition of original ductwork. The space is reported to be too hot in the summer and too cold in the winter. This implies system is not adequately sized for current use and conditions. Also outside ventilation air does not meet current code requirements. Systems will need to be upgraded to meet new project and code requirements if building is renovated. Some of the newer existing equipment may be able to be reused depending upon new project requirements and equipment condition.

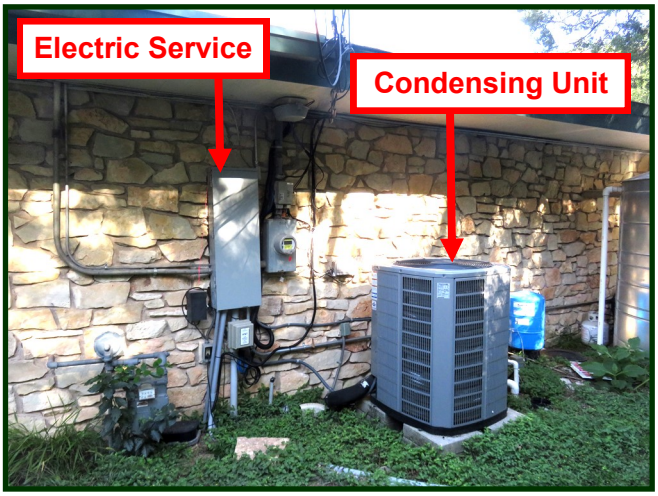


Photo A1

2. Restroom / Offices: The HVAC system was added in 2012 and consists of a rooftop unit with exposed exterior ductwork run on the roof. Reference Photo 'A2'. This was done due to limited space above the ceiling. Exposed ductwork will become a maintenance issue and is not energy efficient for the system. Recommend investigating another solution for the mechanical system in this area.

Photo A2

3. Police/Office Areas: This area is conditioned by three (3) window units. The space was converted from a parking garage for police vehicles to the Police Department in 2005-2006. Reference Photos 'A3' and 'A4'. Mold was found in this area in 2017 and the Police Department was relocated to a portable building nearby. The space is currently empty. Area surrounding the structure also has drainage issues. There has been water intrusion issues in this portion of the building. Currently a temporary berm has been installed to divert water from getting into area. Reference Photos 'A5' and 'A6'.

Photo A3

Photo A4

A3 - Continued

Photo A5

Photo A6

B. The existing electrical system condition and recommendation are indicated below:

1. Building electric service is fed from the local utility company from an overhead transformer to an exterior main panel (120/240V / 1 Phase / 200 Amp / Residential Style). Reference Photos 'B1' and 'B2'. The panel has a 200 amp main breaker. The electric service will need to be upgraded to handle new project electrical requirements.

Photo B1

Photo B2

2. There is a 7500 watt generator located on the exterior near the rain water collection tank to handle minimal emergency requirements during an outage (couple of receptacles for computers and some lights). Reference Photos 'B3' and 'B4'. Suggest evaluating emergency requirements for new project to see if generator is large enough. Also suggest circuiting all emergency circuits from a new emergency panel. These requirements will need to be carefully evaluated with the City to insure all critical items are considered.

Photo B3

Photo B4

3. Lighting in entire facility, including Council Chambers, will need to be upgraded to meet energy code requirements for control and efficiency. All emergency and exit light will also need to be upgraded to meet code requirements. New LED exterior lighting should be installed for safety. New lighting controls will be used for scheduling of exterior fixtures to minimize light trespass onto adjoining property.

4. Recommend a new code compliant fire alarm system be installed.

LEGEND

- Existing Council Chamber / Court Room 1,789 SF
- One-Story Lobby and Programmed Block support spaces 1,111 SF
- Two-Story City Hall Addition
  2,768 SF stacked floors / 5,536 SF Total
- Public Works Yard - Approx. 1670 SF

Areas include circulation factors

NIXON DRIVE (60' R.O.W.)

GENTRY DRIVE (60' R.O.W.)

HATLEY PARK SUBDIVISION

LOT A
COMMUNITY PLAZA
BK. 68, PG. 17
P.R.T.C.TX.

PARKING LOT

Parking (9)

Parallel Parking (9)

Parking (12)

Parking (18)

Parking (20)

Public Entry

Staff Entry

Water Quality Pond (potentially relocated within NE section of Rollingwood Park)

P.W. Shed to move

Retaining Wall

Retaining Wall

Patio

Public Works Yard

5' P.U.E.

WOOD, ROCK AND METAL PAVILION

CONC. DRAINAGE STRUCTURE

ROCK STAIRS

WOOD STAIRS

METAL CISTERN

DRAINAGE

ROCK WALL

SWK

C&G

CONC.

Option 1A

Renovate existing Council / Court Room and add balance of program functions in new additions

Site layout based on waiver from detention approval

BRINKLEY SARGENT WIGINTON ARCHITECTS

LEGEND

- Level 1 Council Chambers/ Court/ Community Rm. 1,458 SF
- Two-Story Lobby w/ Programmed Block Support spaces 1,111 SF
- Two-Story City Hall Addition 2,933 SF stacked floors / 5,866 SF Total
- Public Works Yard - Approx. 1670 SF

Areas include circulation factors

NIXON DRIVE (60' R.O.W.)

GENTRY DRIVE (60' R.O.W.)

HATLEY PARK SUBDIVISION

Parallel Parking (9)

Parking (18)

Public Entry

Staff Entry

Retaining Wall

Patio

Retaining Wall

Public Works Yard

Water Quality Pond (potentially relocated within NE section of Rollingwood Park)

P.W. Shed to move

Parking (12)

Parking (18)

Parking (20)

LOT A

5' P.U.E.

CONC. DRAINAGE STRUCTURE

ROCK STAIRS

METAL CISTERN

WOOD, ROCK AND METAL PAVILION

DRAINAGE

Option 2A

All program functions in new additions

Site layout based on waiver from detention approval

BRINKLEY SARGENT WIGINTON ARCHITECTS

Job Name: Rollingwood City Hall

Date: 11/21/2018

Braun & Butler Construction

Option 1

		Mhrs	Qty	Unit	Miscellaneous UP	Miscellaneous Amount	Labor UP	Labor Amount	Material UP	Material Amount	Total
0	**Project Information**										0
	Building (SF)		**8436**	sf							0
	Paving (SY)			sy							0
	Project Duration		424	days							0
											0
1	**General Conditions**										0
	Project Manager		63	wk			1,000	63000			63,000
	Truck Expense		63	wk			150	9450			9,450
	Superintendent		63	wk			2,100	132300			132,300
	Truck Expense		63	wk			350	22050			22,050
	Preconstruction		1	wk			1,700	1700			1,700
	Interim Cleanup Labor		756	mhrs			28	21168			21,168
	Project Office Clerical Support		63	wk			350	22050			22,050
											0
	Mobilization / Demobilization		1	ls	3,500	3,500					3,500
	Job Office / Furniture / Supplies		14	mo	600	8,400					8,400
	Chemical Toilet		14	mo	150	2,100					2,100
	Drinking Water		14	mo	100	1,400					1,400
	Dumpster Service		18	ea	600	10,800					10,800
	Storage Trailer			mo	300	0					0
	Job Office Temporary Utilities		14	mo	100	1,400					1,400
	Telephone / Fax / Radio		14	mo	275	3,850					3,850
	Computer Service		14	mo	150	2,100					2,100
											0
	Rentals		1	ls	1,500	1,500					1,500
	Plan Reproduction		1	ls	500	500					500
	Close Out Documents		1	ls	1,500	1,500					1,500
											0
	Allowances										0
	contractor's contingency		1	ls		200,000					200,000
	monument sign allowance		1	ls		18,000					18,000
	public works yard allowance		1	ls		100,000					100,000
											0
2	Site Work					97,000					97,000
	temp meter & usage		1	ls		2,500					2,500
2.05	Asphalt Paving - included above		711	sy		0					0
											0
2.10	Striping / Traffic Signage		1	ls		2,800					2,800
											0
2.15	Permanent Fence- dumpster gates					2,500					2,500
											0
2.20	Termite Treatment		8,436	sf	0	2,953					2,953
											0
2.25	Landscape					44,000					44,000
											0
2.30	Irrigation					13,300					13,300
											0
2.35	Demolition- existing building / misc. site		2,000	sf	8	16,000					16,000
											0
2.90	Erosion Controls		1	ls		5,500					5,500
											0
2.91	Site Utilities					65,000					65,000
											0
2.92	Water Quality Structures- small		1	ls		75,000					75,000
											0
2.93	retaining wall - large cut stone wall		3,240	sf	26	84,240					84,240

											0
3.0	Building Concrete Turnkey		6,647	sf	22	146,234					146,234
											0
4	Masonry		4,564	sf	24	109,536					109,536
											0
5.15	Miscellaneous Steel					7,500					7,500
											0
6	Rough Carpentry					0		2200		2450	4,650
											0
6.01	Wood Framing		6,647	sf	19	125,628					125,628
											0
6.20	Millwork		allowance			165,000					165,000
											0
7	Dampproofing		7,824	sf	2.65	20,734					20,734
											0
7.10	Flashing		1	ls		6,800					6,800
											0
7.20	Joint Sealers		1	ls		3,800					3,800
											0
7.25	Fire Stopping		1	ls		2,340					2,340
											0
7.30	Roofing		8,436	sf	12	101,232					101,232
											0
7.50	Insulation		8,436	sf	4	35,431					35,431
											0
8	Hollow Metal Doors / Frames										0
	3070 frame	60	55	ea			35	2100	350	19,250	21,350
	3070 doors	15	5	ea			35	525	275	1,375	1,900
											0
8.10	Wood Doors										0
	wood doors	120	50	ea			35	4200	275	13,750	17,950
											0
8.20	Hardware - by allowance	120	55	sets			35	4200	650	35,750	39,950
	knox box	1	1	ea			35	35		350	385
											0
8.30	Glass / Glazing		8,436	sf	12.65	106,736					106,736
											0
9.00	Metal Framing / Drywall		8,436	sf	7	83,500					83,500
											0
9.05	Acoustical Ceiling		8,436	sf	3	29,104					29,104
											0
9.10	Ceramic Tile		1	ls		24,500					24,500
	wall tile restrooms										0
	floor tile restrooms										0
											0
9.15	Lath / Plaster		3,260	sf	10	32,600					32,600
											0
9.20	Carpet / VCT / Base		8,436	sf	3.4	28,682					28,682
											0
9.25	Tape / Float / Texture / Paint		8,436	ssf	5	42,180					42,180
											0
10.15	Toilet Accessories		20	ea	175	3,500					3,500
											0
10.35	Building Signage room signage only	8	50	ea		0	35	280	115	5750	6,030
											0
10.90	FEC	8	4	ea		0	35	280	200	800	1,080
											0
12.90	Window Treatments		allowance			4,500					4,500
											0
14.90	Elevator		1	ea		55,000					55,000
											0
15	Fire Suppression		12,654	sf	2.35	29,737					29,737
											0

15.10	Plumbing		60	fixtures	1380	82,800				82,800
										0
15.20	HVAC		8,436	sf	34.65	292,307				292,307
										0
16	Electrical		8,436	sf	26.25	221,445				221,445
										0
16.10	Communications- by owner					0				0
										0
16.20	Electronic Safety / Security		8,436	sf	5	42,180				42,180
										0
16.30	Fire Alarm		8,436	sf	2.75	23,199				23,199
										0
	Regulatory Requirements									0
	plan review fee- by owner if required			ls						0
	building permit fee- by owner if required			ls						0
	capital recovery fee- by owner if required			ls						0
	other permit fees - by owner if required			ls						0
	TCEQ appilcation / plan		1	ls	1500	1,500				1,500
	TCEQ Edward's WPAP Fee		1	ls	3000	3,000				3,000
	TCEQ inspections		10	mo	400	4,000				4,000
										0
	Project Specific Requirements									0
	registered surveyor		40	hr	125	5,000				5,000
	site safety inspections		1	ls		3,750		4500		8,250
	temporary fence		500	lf	2	2,500				2,500
	temporary gates		3	ea	350	1,050				1,050
	project final clean		8,436	sf	0.45	3,796				3,796
										0
	Project Insurance		1	ls		25,934				25,934
										0
	SUBTOTAL					2,642,579		290,038	79,475	3,012,092
	CM Fee		4.20%							126,508
	Sales tax on Material		0.00%							0
	Sales tax on Total		0.00%							0
	Total Before Bond									3,138,600
	Bond Cost (yes=1)		1							33,289
	SUMMARY TOTAL									**3,171,889**

Braun & Butler Construction

Job Name: Rollingwood City Hall

Date: 11/21/2018

Option 2

		Mhrs	Qty	Unit	Miscellaneous UP	Miscellaneous Amount	Labor UP	Labor Amount	Material UP	Material Amount	Total
0	**Project Information**										0
	Building (SF)		**8436**	sf							0
	Paving (SY)			sy							0
	Project Duration		273	days							0
											0
1	**General Conditions**										0
	Project Manager		41	wk			1,000	41000			41,000
	Truck Expense		41	wk			150	6150			6,150
	Superintendent		41	wk			2,100	86100			86,100
	Truck Expense		41	wk			350	14350			14,350
	Preconstruction		1	wk			1,700	1700			1,700
	Interim Cleanup Labor		492	mhrs			28	13776			13,776
	Project Office Clerical Support		41	wk			350	14350			14,350
											0
	Mobilization / Demobilization		1	ls	3,500	3,500					3,500
	Job Office / Furniture / Supplies		9	mo	600	5,400					5,400
	Chemical Toilet		9	mo	150	1,350					1,350
	Drinking Water		9	mo	100	900					900
	Dumpster Service		18	ea	600	10,800					10,800
	Job Office Temporary Utilities		9	mo	100	900					900
	Telephone / Fax / Radio		9	mo	275	2,475					2,475
	Computer Service		9	mo	150	1,350					1,350
	Rentals		1	ls	1,500	1,500					1,500
	Plan Reproduction		1	ls	500	500					500
	Close Out Documents		1	ls	1,500	1,500					1,500
											0
	Allowances										0
	contractor's contingency		1	ls		200,000					200,000
	monument sign allowance		1	ls		18,000					18,000
	public works yard allowance		1	ls		100,000					100,000
											0
2	Site Work					108,000					108,000
	temp meter & usage		1	ls		2,500					2,500
2.05	Asphalt Paving - included above		711	sy		0					0
											0
2.10	Striping / Traffic Signage		1	ls		2,800					2,800
											0
2.15	Permanent Fence- dumpster gates					2,500					2,500
											0
2.20	Termite Treatment		8,436	sf	0	2,953					2,953
											0
2.25	Landscape					44,000					44,000
											0
2.30	Irrigation					13,300					13,300
											0
2.35	Demolition- existing building / misc. site		2,000	sf	16	32,000					32,000
											0
2.90	Erosion Controls		1	ls		5,500					5,500
											0
2.91	Site Utilities					65,000					65,000
											0
2.92	Water Quality Structures- small		1	ls		75,000					75,000
											0
2.93	retaining wall - large cut stone wall		3,240	sf	26	84,240					84,240

											0
3.0	Building Concrete Turnkey		8,436	sf	22	185,592					185,592
											0
4	Masonry		4,564	sf	24	109,536					109,536
											0
5.15	Miscellaneous Steel					7,500					7,500
											0
6	Rough Carpentry					0		2200		2450	4,650
											0
6.01	Wood Framing		8,436	sf	19	159,440					159,440
											0
6.20	Millwork		allowance			165,000					165,000
											0
7	Dampproofing		7,824	sf	2.65	20,734					20,734
											0
7.10	Flashing		1	ls		6,800					6,800
											0
7.20	Joint Sealers		1	ls		3,800					3,800
											0
7.25	Fire Stopping		1	ls		2,340					2,340
											0
7.30	Roofing		8,436	sf	12	101,232					101,232
											0
7.50	Insulation		8,436	sf	4	35,431					35,431
											0
8	Hollow Metal Doors / Frames										0
	3070 frame	60	55	ea			35	2100	350	19,250	21,350
	3070 doors	15	5	ea			35	525	275	1,375	1,900
											0
8.10	Wood Doors										0
	wood doors	120	50	ea			35	4200	275	13,750	17,950
											0
8.20	Hardware - by allowance	120	55	sets			35	4200	650	35,750	39,950
	knox box	1	1	ea			35	35		350	385
											0
8.30	Glass / Glazing		8,436	sf	12.65	106,736					106,736
											0
9.00	Metal Framing / Drywall		8,436	sf	7	83,500					83,500
											0
9.05	Acoustical Ceiling		8,436	sf	3	29,104					29,104
											0
9.10	Ceramic Tile		1	ls		24,500					24,500
	wall tile restrooms										0
	floor tile restrooms										0
											0
9.15	Lath / Plaster		3,260	sf	10	32,600					32,600
											0
9.20	Carpet / VCT / Base		8,436	sf	3.4	28,682					28,682
											0
9.25	Tape / Float / Texture / Paint		8,436	ssf	5	42,180					42,180
											0
10.15	Toilet Accessories		20	ea	175	3,500					3,500
											0
10.35	Building Signage room signage only	8	50	ea		0	35	280	115	5750	6,030
											0
10.90	FEC	8	4	ea		0	35	280	200	800	1,080
											0
12.90	Window Treatments		allowance			4,500					4,500
											0
14.90	Elevator		1	ea		55,000					55,000
											0

15	Fire Suppression		12,654	sf	2.35	29,737					29,737
											0
15.10	Plumbing		60	fixtures	1380	82,800					82,800
											0
15.20	HVAC		8,436	sf	34.65	292,307					292,307
											0
16	Electrical		8,436	sf	26.25	221,445					221,445
											0
16.10	Communications- by owner					0					0
											0
16.20	Electronic Safety / Security		8,436	sf	5	42,180					42,180
											0
											0
16.30	Fire Alarm		8,436	sf	2.75	23,199					23,199
											0
	Regulatory Requirements										0
	plan review fee- by owner			ls							0
	building permit fee- by owner if required			ls							0
	capital recovery fee- by owner if req'd			ls							0
	other permit fees- by owner if req'd			ls							0
	TCEQ appilcation / plan		1	ls	1500	1,500					1,500
	TCEQ Edward's WPAP Fee		1	ls	3000	3,000					3,000
	TCEQ inspections		10	mo	400	4,000					4,000
											0
	Project Specific Requirements										0
	registered surveyor		40	hr	125	5,000					5,000
	site safety inspections		1	ls		3,750		4500			8,250
	temporary fence		500	lf	2	2,500					2,500
	temporary gates		3	ea	350	1,050					1,050
	project final clean		8,436	sf	0.45	3,796					3,796
											0
	Project Insurance		1	ls		25,500					25,500
											0
	SUBTOTAL					2,735,440		195,746		79,475	3,010,661
	CM Fee		4.20%								126,448
	Sales tax on Material		0.00%								0
	Sales tax on Total		0.00%								0
	Total Before Bond										3,137,109
	Bond Cost (yes=1)		1								33,278
	SUMMARY TOTAL										**3,170,387**

Needs Assessment and Site Master Plan

Update 11.28.2018

City of ROLLINGWOOD Texas

BRINKLEY SARGENT WIGINTON ARCHITECTS

Steps of the Process

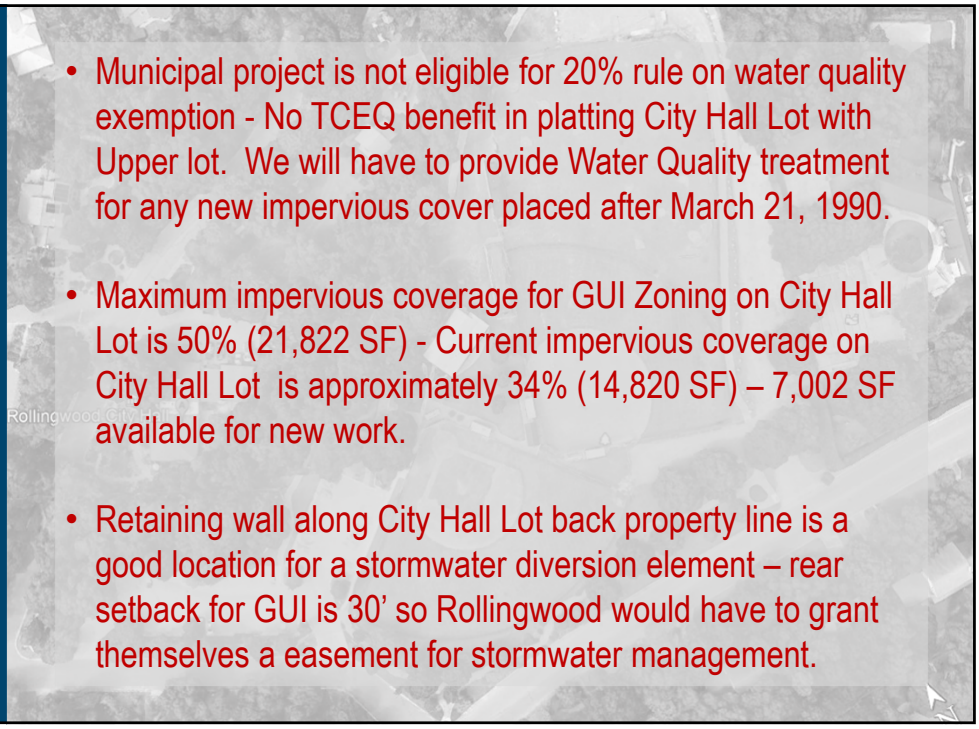
1. Inventory of Facilities
   - Architectural condition
   - Mechanical Electrical and Plumbing review of existing conditions
   - Site constraints / opportunities
   - Regulatory agencies and development requirements
   - Maintenance issues
2. Needs Assessment (20 year / Build out)
3. Development Strategy Options for Building / Site
4. Facility Master Plan / Project Budget
5. Final Report

Building Program Status – Decisions from 7/18/2018 Council Mtg.

- Confirm size of building program approx. 8,500 SF
- Confirm direction for use of Council / Court Chamber
  - Current size or larger? Current size +
  - Opportunity for community use? Yes
  - Fixed alderman tables or mobile? Open to flexible / No dais
- Preference for Option 1, 2 or 3 for continuation of Study Process (Pick 2)
  - Option 2 / Retain original Council structure and connect to a new two story addition
  - Option 3 / New two story building
- Incorporate stormwater solutions into overall design

Site Issues

- Site drainage from hillside
- On Edwards Aquifer Recharge Zone
- Limited building pad / parking



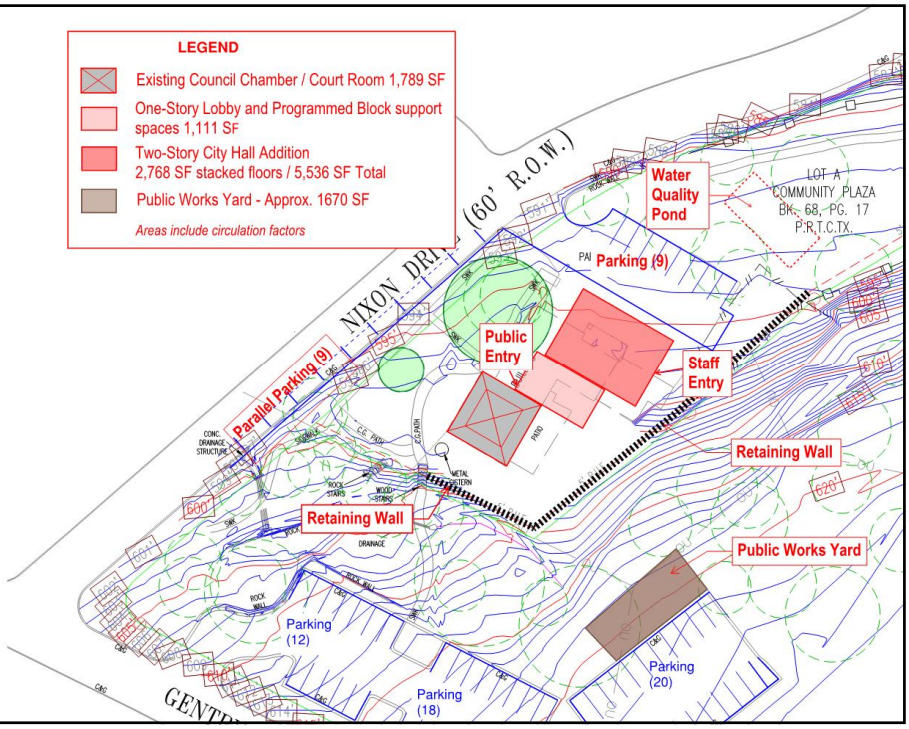
- Municipal project is not eligible for 20% rule on water quality exemption - No TCEQ benefit in platting City Hall Lot with Upper lot. We will have to provide Water Quality treatment for any new impervious cover placed after March 21, 1990.
- Maximum impervious coverage for GUI Zoning on City Hall Lot is 50% (21,822 SF) - Current impervious coverage on City Hall Lot is approximately 34% (14,820 SF) – 7,002 SF available for new work.
- Retaining wall along City Hall Lot back property line is a good location for a stormwater diversion element – rear setback for GUI is 30' so Rollingwood would have to grant themselves a easement for stormwater management.

Building Program Status – 9.6.2018 Decisions

- Rollingwood's position on granting an easement for stormwater diversion treatment within rear 30' setback / granting an easement for building within rear 30' setback
  (agreeable to both easement grants)
- In Option 2 (all new building) preference for the Council / Court / Community room location:
  - Front of the City Hall - visible from street / adjacent to water-wise garden
  - Back of the City Hall – more private / open to rear courtyard
    (Selected 1A and 2A – Price with outside General Contractor)
- Preference for location of Public Works yard:
  - Improved at current location
  - Adjacent to parking at upper level *(preferred)*
  - At end of drive at upper level (North)

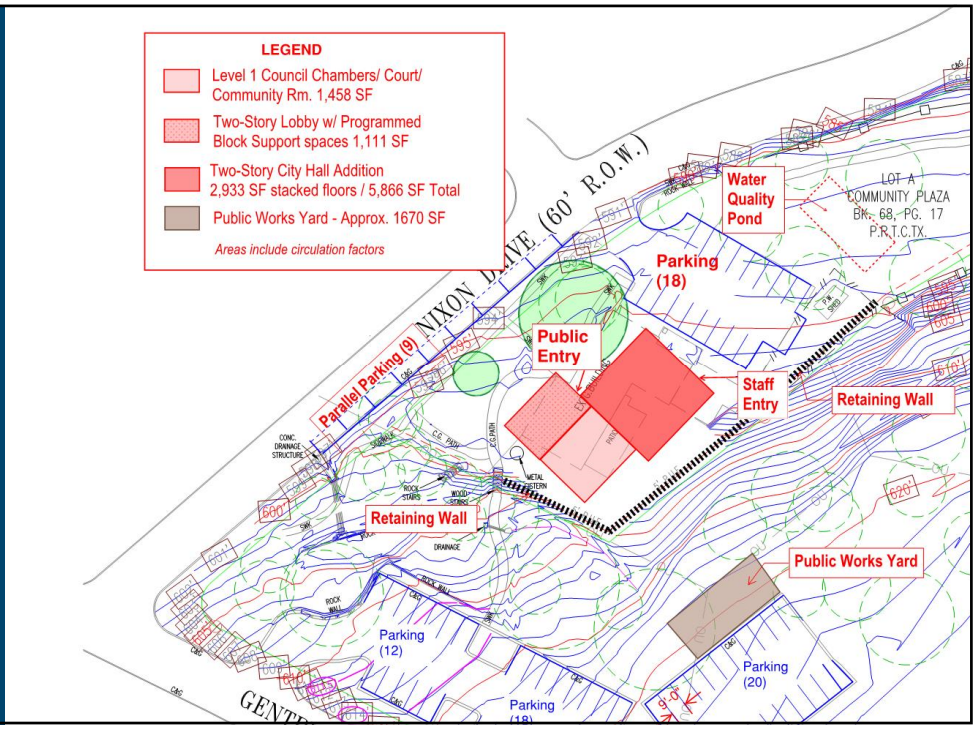
Option 1A –

Renovate existing Council structure and add two story addition

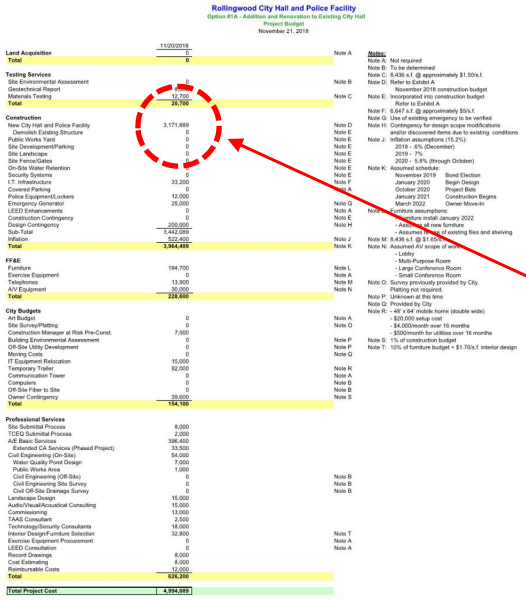


Option 2A -

New two story building with Council / Court / Community Room to the back



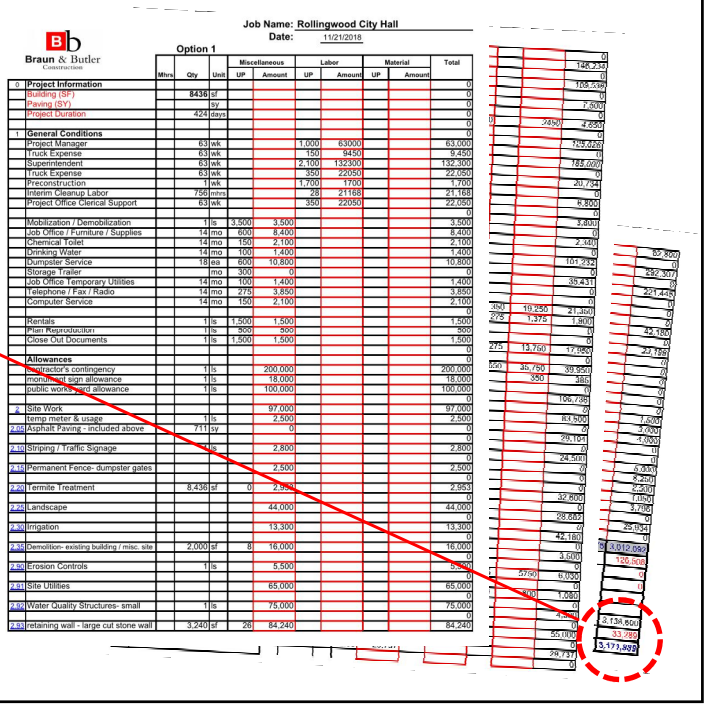
Comprehensive Budgeting



Rollingwood City Hall and Police Facility
Option #1A - Addition and Renovation to Existing City Hall
Project Budget
November 21, 2018

	11/20/2018	
Land Acquisition	0	Note A
Total	**0**	
Testing Services		
Site Environmental Assessment	0	Note B
Geotechnical Report	8,000	
Materials Testing	12,700	Note C
Total	**20,700**	
Construction		
New City Hall and Police Facility	3,171,889	Note D
Demolish Existing Structure	0	Note E
Public Works Yard	0	Note E
Site Development/Parking	0	Note E
Site Landscape	0	Note E
Site Fences/Gates	0	Note E
On-Site Water Retention	0	Note E
Security Systems	0	Note F
I.T. Infrastructure	33,200	Note F
Covered Parking	0	Note A
Police Equipment/Lockers	12,000	
Emergency Generator	25,000	Note G
LEED Enhancements	0	Note A
Construction Contingency	0	Note E
Design Contingency	200,000	Note H
Sub-Total	3,442,089	
Inflation	522,400	Note J
Total	**3,964,489**	Note K
FF&E		
Furniture	184,700	Note L
Exercise Equipment	0	Note A
Telephones	13,900	Note M
A/V Equipment	30,000	Note N
Total	**228,600**	
City Budgets		
Art Budget	0	Note A
Site Survey/Platting	0	Note O
Construction Manager at Risk Pre-Const.	7,500	
Building Environmental Assessment	0	Note P
Off-Site Utility Development	0	Note P
Moving Costs	0	Note Q
IT Equipment Relocation	15,000	
Temporary Trailer	92,000	Note R
Communication Tower	0	Note A
Computers	0	Note B
Off-Site Fiber to Site	0	Note B
Owner Contingency	39,600	Note S
Total	**154,100**	
Professional Services		
Site Submittal Process	8,000	
TCEQ Submittal Process	2,000	
A/E Basic Services	396,400	
Extended CA Services (Phased Project)	33,500	
Civil Engineering (On-Site)	54,000	
Water Quality Pond Design	7,000	
Public Works Area	1,000	
Civil Engineering (Off-Site)	0	Note B
Civil Engineering Site Survey	0	Note B
Civil Off-Site Drainage Survey	0	Note B
Landscape Design	15,000	
Audio/Visual/Acoustical Consulting	15,000	
Commissioning	13,000	
TAAS Consultant	2,500	
Technology/Security Consultants	16,000	
Interior Design/Furniture Selection	32,800	Note T
Exercise Equipment Procurement	0	Note A
LEED Consultation	0	Note A
Record Drawings	8,000	
Cost Estimating	8,000	
Reimbursable Costs	12,000	
Total	**626,200**	
Total Project Cost	**4,994,000**	

Notes:
Note A: Not required
Note B: To be determined
Note C: 8,436 s.f. @ approximately $1.50/s.f.
Note D: Refer to Exhibit A
November 2018 construction budget
Note E: Incorporated into construction budget
Refer to Exhibit A
Note F: 6,647 s.f. @ approximately $5/s.f.
Note G: Use of existing emergency to be verified
Note H: Contingency for design scope modifications and/or discovered items due to existing conditions
Note J: Inflation assumptions (15.2%):
2018 - .6% (December)
2019 - 3%
2020 - 5.8% (through October)
Note K: Assumed schedule:
November 2018 Bond Election
January 2020 Begin Design
October 2020 Project Bids
January 2021 Construction Begins
March 2022 Owner Move-In
Note L: Furniture assumptions:
- Replace/re-install January 2022
- Assumed all new furniture
- Assumes moving existing files and shelving
Note M: 8,436 s.f. @ $1.60/s.f.
Note N: Assumed AV scope of work:
- Lobby
- Multi-Purpose Room
- Large Conference Room
- Small Conference Room
Note O: Survey previously provided by City. Platting not required.
Note P: Unknown at this time
Note Q: Provided by City
Note R: - 48' x 64' mobile home (double wide)
- $20,000 setup cost
- $4,000/month over 16 months
- $500/month for utilities over 16 months
Note S: 1% of construction budget
Note T: 10% of furniture budget + $1.70/s.f. interior design



Braun & Butler Construction

Job Name: Rollingwood City Hall
Date: 11/21/2018

Option 1

		Mhrs	Qty	Unit	Miscellaneous UP	Miscellaneous Amount	Labor UP	Labor Amount	Material UP	Material Amount	Total
0	**Project Information**										0
	Building (SF)		8436	sf							0
	Paving (SY)			sy							0
	Project Duration		424	days							0
1	**General Conditions**										0
	Project Manager		63	wk			1,000	63000			63,000
	Truck Expense		63	wk			150	9450			9,450
	Superintendent		63	wk			2,100	132300			132,300
	Truck Expense		63	wk			350	22050			22,050
	Preconstruction		1	wk			1,700	1700			1,700
	Interim Cleanup Labor		756	mhrs			28	21168			21,168
	Project Office Clerical Support		63	wk			350	22050			22,050
											0
	Mobilization / Demobilization		1	ls	3,500	3,500					3,500
	Job Office / Furniture / Supplies		14	mo	600	8,400					8,400
	Chemical Toilet		14	mo	150	2,100					2,100
	Drinking Water		14	mo	100	1,400					1,400
	Dumpster Service		18	ea	600	10,800					10,800
	Storage Trailer			mo	300	0					0
	Job Office Temporary Utilities		14	mo	100	1,400					1,400
	Telephone / Fax / Radio		14	mo	275	3,850					3,850
	Computer Service		14	mo	150	2,100					2,100
											0
	Rentals		1	ls	1,500	1,500					1,500
	Plan Reproduction		1	ls	500	500					500
	Close Out Documents		1	ls	1,500	1,500					1,500
											0
	Allowances										0
	Contractor's contingency		1	ls		200,000					200,000
	monument sign allowance		1	ls		18,000					18,000
	public works yard allowance		1	ls		100,000					100,000
											0
2	Site Work					97,000					97,000
	temp meter & usage		1	ls		2,500					2,500
2.05	Asphalt Paving - included above		711	sy		0					0
2.10	Striping / Traffic Signage			ls		2,800					2,800
2.15	Permanent Fence- dumpster gates					2,500					2,500
2.20	Termite Treatment		8,436	sf	0	2,953					2,953
2.25	Landscape					44,000					44,000
2.30	Irrigation					13,300					13,300
2.35	Demolition- existing building / misc. site		2,000	sf	8	16,000					16,000
2.50	Erosion Controls		1	ls		5,500					5,500
2.51	Site Utilities					65,000					65,000
2.60	Water Quality Structures- small		1	ls		75,000					75,000
2.65	retaining wall - large cut stone wall		3,240	sf	26	84,240					84,240

Option 1A/2A Budget Detail

Testing Services – geotechnical engineering, materials testing during construction
Construction Costs – building construction cost, IT infrastructure, police equipment, emergency generator and design contingency
Fixtures, Furn. and Equip. – furniture, telephones and A/V equipment
City Budgets – CMAR preconstruction fee, IT equip, relocation, communication tower and owner contingency
Professional Services – site submittal process, TCEQ submittal, A/E basic services (arch, structural and MEP engineering), civil engineering inc. water quality pond and public works area, landscape arch., A/V consulting, commissioning, TAAS consultant, technology / security consultant, interior design, record dwgs., estimating and reimbursables

Bottom Line

Option 1A (Nov / 2019 Bond)

Testing Services	$20,700
Construction Costs	$3,964,489
Fixtures, Furn. and Equip.	$228,600
City Budgets	$168,100
Professional Services	$585,400
	$4,967,289

Option 2A (Nov / 2019 Bond)

Testing Services	$20,700
Construction Costs	$3,973,017
Fixtures, Furn. and Equip.	$221,500
City Budgets	$150,200
Professional Services	$550,800
	$4,916,217

Option 1A (May / 2019 Bond)

Testing Services	$20,700
Construction Costs	$3,812,589
Fixtures, Furn. and Equip.	$225,800
City Budgets	$166,600
Professional Services	$568,900
	$4,794,589

Option 2A (May / 2019 Bond)

Testing Services	$20,700
Construction Costs	$3,820,817
Fixtures, Furn. and Equip.	$212,700
City Budgets	$148,700
Professional Services	$535,600
	$4,738,517