

ZONING CHANGE REVIEW SHEET

CASE: C14-2015-0047 – 2303-2311 Thornton Road

P.C. DATE: October 13, 2015
October 27, 2015
November 10, 2015
December 8, 2015
January 12, 2015

ADDRESS: 2303-2311 Thornton Road

DISTRICT AREA: 5

OWNER/APPLICANT: UT Land Company, Ltd/Jimmy Nassour

AGENT: Alice Glasco Consulting/Alice Glasco

ZONING FROM: CS

TO: CS-MU-V

AREA: 3.56 acres (155,117sq. ft.)

SUMMARY STAFF RECOMMENDATION:

Staff recommends commercial services- mixed use – conditional overlay (CS-MU-CO) combining district zoning.

The conditional overlay will limit the site to 2000 vehicle trips and 156 multi-family residential units and prohibit the following uses and require transportation improvements:

- Adult-Oriented Business
- Alternative Financial Services
- Automotive – Washing/Sales
- Bail Bonds
- Campground
- Construction Sales/Services
- Drop-off Recycling Collection Facility
- Equipment Repair Services
- Exterminating Services
- Pawn Shop Services
- Service Station
- Telecommunications Tower
- Vehicle Storage

Improvements to Thornton Road include:

- Widening of Thornton Road within 200 ft of West Oltorf Street to allow one inbound from West Oltorf and two outbound from Thornton Road
- Intersection improvement to Thornton Road and West Oltorf to improve north-south pedestrian access.
- Sidewalk on the west side of Thornton Road from subject property equivalent to West Oltorf Street.

-Parking restricted to one side of Thornton to be determined by Transportation Department.

PLANNING COMMISSION RECOMMENDATION:

October 13, 2015: POSTPONEMENT to October 27 requested by staff.

October 27, 2015 POSTPONEMENT to November 10 requested by staff.

November 10, 2015: POSTPONEMENT to December 8 requested by applicant.

December 8, 2015: POSTPONEMENT to January 12 requested by South Lamar Neighborhood Association.

January 12, 2016: FORWARD TO COUNCIL WITHOUT A RECOMMENDATION.

Motion to DENY [*T. Nuckols; T. White – 2nd*] Failed (5-3-1) *T. Nuckols, T. White, F. Kazi, P. Seeger, N. Zaragoza – For, A. Pineyro De Hoyos, J. Thompson, M. Wilson – Against, J Vela – Abstaining, J. Schissler, J. Shieh – Recused, S. Oliver, J. Stevens – Absent.*

Motion to Approve Staff Recommendation [*J. Thompson, M. Wilson 2nd*] Failed (3-5-1), *A. Pineyro De Hoyos, J. Thompson, M. Wilson – For, T. Nuckols, T. White, F. Kazi, P. Seeger, N. Zaragoza – Against, J. Vela – Abstaining, J. Schissler, J. Shieh – Recused, S. Oliver, J. Stevens – Absent.*

Motion to Forward Without a Recommendation [*Pineyro De Hoyos, Nuckols – 2nd*] Passed (8-1-2) *T. Nuckols, T. White, P. Seeger, N. Zaragoza, A Pineyro De Hoyos, J. Thompson, J Vela, M. Wilson – For, F. Kazi – Against, J. Schissler, J. Shieh – Recused, S. Oliver, J. Stevens – Absent.*

COUNCIL ACTION:

FEBRUARY 11, 2016: POSTPONEMENT to March 3, 2016 requested by South Lamar Neighborhood Association.

MARCH 3, 2016:

DEPARTMENT COMMENTS:

The subject property is a 3.561 acre tract which is partially vacant and developed with an industrial park located at 2309 Thornton Road south of the intersection with West Oltorf Street. It is part of the Fredericksburg Road Acres Subdivision and located within the South Lamar Neighborhood Planning Area. The tract was zoned commercial in nineteen hundred sixty nine (1969) and the industrial park serves a mixture of art studios, commercial kitchen, recording studio, music schools, cross-fit gym, automotive repair, computer repair and other commercial services.

The applicant has requested CS-MU-V zoning and is proposing to construct a mixed use project with 212 residential units. If the “V” is granted, 10% of the units will be affordable at 60% median family income (mfi). The mixed use component will be Live/Work units. A residential use is not allowed under the current CS zoning district. The property is located within the South Lamar Neighborhood Planning (SLNP) area. The SLNP does not have an adopted plan at this time so a plan amendment is not required.

Surrounding properties include: single family residence (SF-3) to the north, mobile home park (CS) across the railroad tracks to the east, industrial park (CS) to the south and single and multi-family (SF-3 & MF-2) to the west. The project will be subject to compatibility standards.

Staff is recommending CS-MU combining district zoning. Staff does not support adding the "V" for Vertical Mixed Use as Thornton Road is not a core transit corridor where "V" is intended. Staff is supportive of allowing mixed-use at this site with consideration of the transportation capacity of Thornton Road. A Neighborhood Traffic Analysis (NTA) has been performed. The NTA (attached) identified the Thornton Road/W. Oltorf Street intersection as a limiting factor for traffic capacity. The NTA supported 218 units with the following improvements to Thornton Road: widening of Thornton Road within 200 feet of West Oltorf Street to allow two outbound east and west turn lanes to West Oltorf Street and one inbound lane to Thornton Road, a sidewalk from West Oltorf to the subject property, a pedestrian hybrid beacon on W. Oltorf and restricting parking along the widened portion of Thornton Road.

However, the NTA did not consider the vehicle trips generated by the Thornton Apartments, a permitted multi-family project at 2501 Thornton Road currently under construction (104 units). Because of this, Austin Transportation Department (ATD) staff requested an additional traffic study to focus on the Thornton Road/W. Oltorf intersection to determine if it warranted a traffic signal. The traffic study (attached) supported a future traffic signal at 212 units with the proposed improvements recommended in the NTA. They will improve the safety and mobility for all users and fill much needed gaps in sidewalk connectivity. ATD supports the required improvements if additional units are added to Thornton Road with this zoning case. 212 units would require VMU which zoning staff cannot support therefore staff is recommending restricting the site to 156 multi-family units.

This case also required an Educational Impact Statement by Austin Independent School District (attached). The impact of this development was evaluated based on the applicant's request for 218 units and showed projected enrollment would only force Zilker Elementary above its target range. However, this is because 1/3 of the students at Zilker Elementary are transfer students so the net effect would be the enrollment of transfers would decrease.

ISSUES: Adjacent residents and the SLNA have expressed concerns about the additional vehicle trips generated by the proposed development. There has also been concern raised regarding watershed/flooding issues in the area. During the Planning Commission hearing, tenants of the existing business park spoke in opposition to the request. The basis was many of the tenants are artists and affordable studio space in Austin is disappearing.

Zoning staff are supportive of the additional units based on ATD staff concurring the recommended improvements to Thornton road mitigate the resulting impact and provide an improved level of service to the intersection as well as all users of Thornton road.

There is an active site plan (SP-06-0796C) for this property which is for the expansion of the existing business/warehouse park. This site plan would not provide the additional 10% stormwater detention required by the South Lamar Neighborhood Mitigation Plan (Ordinance 20141211-200).

EXISTING ZONING AND LAND USES:

| | ZONING | LAND USES |
|--------------|---------------|----------------------------|
| <i>Site</i> | CS | Vacant/Industrial park |
| <i>North</i> | SF3 | Single Family residential |
| <i>South</i> | CS | Business Park |
| <i>East</i> | CS | Mobile Home Park |
| <i>West</i> | SF3 & MF2 | Single family & Townhouses |

NEIGHBORHOOD PLANNING AREA:

South Lamar NPA

WATERSHED: West Bouldin Creek

TIA or NTA: NTA (see attached)

DESIRED DEVELOPMENT ZONE: Yes

CAPITOL VIEW CORRIDOR: No

HILL COUNTRY ROADWAY: No

NEIGHBORHOOD ORGANIZATIONS:

Austin Heritage Tree Foundation
 Austin Independent School District
 Austin Neighborhoods Council
 Bike Austin
 Friends of Austin Neighborhoods
 Friends of Emma Barrientos MACC
 Perry Grid 614
 Preservation Austin
 SEL Texas
 Sierra Club, Austin Regional Group
 South Central Coalition
 South Lamar Neighborhood
 Association
 The Real Estate Council of Austin, Inc.

SCHOOLS: Zilker Elementary, O'Henry Middle, Austin High

CASE HISTORIES:

| NUMBER | REQUEST | PLANNING COMMISSION | CITY COUNCIL |
|---------------|----------------|----------------------------|---------------------|
| C14-69-208 | A to C | C | C |

RELATED CASES:

| NUMBER | REQUEST | PLANNING COMMISSION | CITY COUNCIL |
|---|------------------------|----------------------------|---------------------|
| SP-06-0796C Approve site plan | | | |
| C14-06-0220 2206-2210 Thornton Rd | SF-5-CO to SF-4B-CO | SF-4B-CO | SF-4B-CO |
| C14-86-092 2401-2405 Thornton Rd | A to MF-2 | MF-2 | MF-2 |
| C14-74-003 2313-2315 Thornton Rd | A to C | C | C |
| C14-67-158 2214 Thornton Rd | A to BB | BB | BB |
| C14-67-41 2401-2411 Thornton Rd | A to BB & A to C | BB & C | BB & C |

EXISTING STREET CHARACTERISTICS:

| NAME | ROW | PAVEMENT | CLASSIFICATION | BICYCLE PLAN | CAPITAL METRO |
|-------------|------------|-----------------|-----------------------|---------------------|----------------------|
| Thornton Rd | Varies | 28'-30' | Collector | No | No |

CITY COUNCIL DATE: FEBRUARY 11, 2016**ACTION: POSTPONEMENT TO 3/3/16****ORDINANCE READINGS: 1st****2nd****3rd****ORDINANCE NUMBER:****CASE MANAGER: Andrew Moore****PHONE: 512-974-7604****EMAIL:****Andrew.moore@austintexas.gov**

STAFF RECOMMENDATION

Staff recommends commercial services - mixed use – conditional overlay (CS-MU-CO) combining district zoning.

BASIS FOR RECOMMENDATION

1. *The proposed zoning should be consistent with the purpose statement of the district sought.*

The site currently has commercial services (CS) zoning and mixed use is intended to provide for and encourage development and redevelopment that contains a compatible mix of residential and nonresidential uses within close proximity to each other, rather than separating uses.

2. *Zoning changes should promote compatibility with adjacent and nearby uses.*

The subject tract was zoned commercial in nineteen hundred and sixty-nine. The proposed mixed-use project fits with the existing and adjacent commercial and surrounding residential uses. The project would be subject to compatibility standards.

3. *Zoning should promote a transition between adjacent and nearby zoning districts, land uses, and development intensities.*

The mixed use component of this project provides a transition from the single-family uses to the adjacent commercial uses.

4. *The rezoning should be consistent with the policies and principles adopted by the City Council or Planning Commission.*

The zoning request is located in an area without an adopted neighborhood plan. The redevelopment of existing commercial site to a mixed use (commercial and residential) is supported by *Imagine Austin*.

EXISTING CONDITIONS

Site Characteristics

The subject property is a 3.56 acre tract approximately half of which is undeveloped and the remainder is an industrial park located on Thornton Road south of the intersection with West Oltorf Street. Thornton Road is considered a neighborhood collector with approximately 28-30 feet of pavement. The uses along Thornton are a mix of single family (SF3) multi-family and commercial. The subject property backs to the Missouri- Pacific railroad and is impacted by West Bouldin Creek tributary setbacks as well as compatibility.

Impervious Cover

| <i>Development Classification</i> | <i>% of Gross Site Area</i> | <i>% of Gross Site Area with Transfers</i> |
|--|-----------------------------|--|
| Single-Family (minimum lot size 5750 sq. ft.) | 50% | 60% |
| Other Single-Family or Duplex | 55% | 60% |
| Multifamily | 60% | 70% |
| Commercial | 80% | 90% |

The maximum impervious cover allowed in the CS-MU zoning district is 95%. Note: The most restrictive impervious cover limit applies. Per Ordinance 20141211-200 this site will be required to reduce peak stormwater flow by an additional 10%.

NPZ Comprehensive Planning Review - Kathleen Fox 512-974-7877

CS to CS-MU-V

This zoning case is located on the east side Thornton Road on a property that contains two rows of connected metal warehouses and vacant land. This rezoning is not located within the boundaries of an area with an **adopted** neighborhood plan but is within the South Lamar Combined Planning Area. Surrounding land uses include single family housing to the north, an auto repair shop to the south, an easement and mobile home park to the east, and residential housing the west. The proposal is to rezone 3.56 acres to construct a mixed use project, which will contain 218 residential units or 61.22 units per acre.

Imagine Austin

The comparative scale of this site relative to other residential uses in this area, as well as the site not being located along an Activity Corridor or within an Activity Center, falls below the scope of Imagine Austin, which is broad in scope, and consequently Imagine Austin is neutral on this proposed residential rezoning. However, the residents of this mixed use project could either be better or worse off based following the City of Austin's current Land Development Code, depending what options they choose to include in this project. The Land Development Code has not been amended to reflect the values and policies of Imagine Austin, which promotes compact and connected communities. We recommend that the developer design this project so that it is connected to the adjoining residential neighborhood to be an asset to both the city **and support Imagine Austin** by adding the following features: add street trees, and install a shared path or sidewalk along their portion of Thornton Road so residents can access the shopping center located in the vicinity and along S. Lamar Blvd.

NPZ Environmental Review - Mike McDougal 512-974-6380

1. The site is not located over the Edwards Aquifer Recharge Zone. The site is located in the West Bouldin Creek Watershed of the Colorado River Basin, which is classified as an Urban Watershed by Chapter 25-8 of the City's Land Development Code. It is in the Desired Development Zone.
2. Zoning district impervious cover limits apply in the Urban Watershed classification.
3. According to floodplain maps there is a floodplain within or adjacent to the project location. Based upon the location of the floodplain, offsite drainage should be calculated to determine whether a Critical Water Quality Zone exists within the project location.
4. Standard landscaping and tree protection will be required in accordance with LDC 25-2 and 25-8 for all development and/or redevelopment.
5. Numerous trees will likely be impacted with a proposed development associated with this rezoning case. Please be aware that an approved rezoning status does not eliminate a proposed development's requirements to meet the intent of the tree ordinances. If further explanation or specificity is needed, please contact the City Arborist at 974-1876. At this time, site specific information is unavailable regarding other vegetation, areas of steep slope, or other environmental features such as bluffs, springs, canyon rimrock, caves, sinkholes, and wetlands.
6. This site is required to provide on-site water quality controls (or payment in lieu of) for all development and/or redevelopment when 8,000 s.f. cumulative is exceeded, and on site control for the two-year storm.
7. At this time, no information has been provided as to whether this property has any preexisting approvals that preempt current water quality or Code requirements.

DSD Transportation Review - Ivan Naranjo - 512-974-7649

TR1. If the requested zoning is recommended for this site, 30 feet of right-of-way should be dedicated from the centerline of Thornton Road in accordance with the Transportation Criteria Manual. LDC, 25-6-55; TCM, Tables 1-7, 1-12.

TR2. A traffic impact analysis was waived for this case because the applicant agreed to limit the intensity and uses for this development. If the zoning is granted, development should be limited through a conditional overlay to less than 2,000 vehicle trips per day. [LDC, 25-6-117]

TR3. A Neighborhood Traffic Analysis (NTA) is required and will be performed for this project by the Transportation Review staff. The applicant must provide recent traffic counts taken by a qualified transportation consultant for Thornton Road. Based on the NTA, additional right-of-way, participation in roadway improvements, or limitations on development intensity may be recommended. LDC, Sec. 25-6-114. Results of the NTA will be provided in a separate memo.

TR4. Thornton Road is not classified in the Austin Bicycle Plan.

TR5. Capital Metro bus service is not available along Thornton Road. However, Capital Metro Service is available within ¼ mile of this site on Oltorf and S. Lamar.

TR6. There are existing sidewalks along various sections of Thornton Road.

TR7. Existing Street Characteristics:

| NAME | ROW | PAVEMENT | CLASSIFICATION | BICYCLE PLAN | CAPITAL METRO | ADT |
|---------------|--------|----------|----------------|--------------|---------------|-------|
| Thornton Road | Varies | 30' | Collector | No | No | 1,809 |

AWU-Utility Development Service Review - Neil Kepple - 512-972-0077

FYI: The landowner intends to serve the site with City of Austin water and wastewater utilities. The landowner, at own expense, will be responsible for providing any water and wastewater utility improvements, offsite main extensions, water or wastewater easements, utility relocations and or abandonments required by the proposed land use. Depending on the development plans submitted, water and or wastewater service extension requests may be required. Water and wastewater utility plans must be reviewed and approved by the Austin Water Utility for compliance with City criteria and suitability for operation and maintenance. All water and wastewater construction must be inspected by the City of Austin. The landowner must pay the City inspection fee with the utility construction. The landowner must pay the tap and impact fee once the landowner makes an application for a City of Austin water and wastewater utility tap permit.

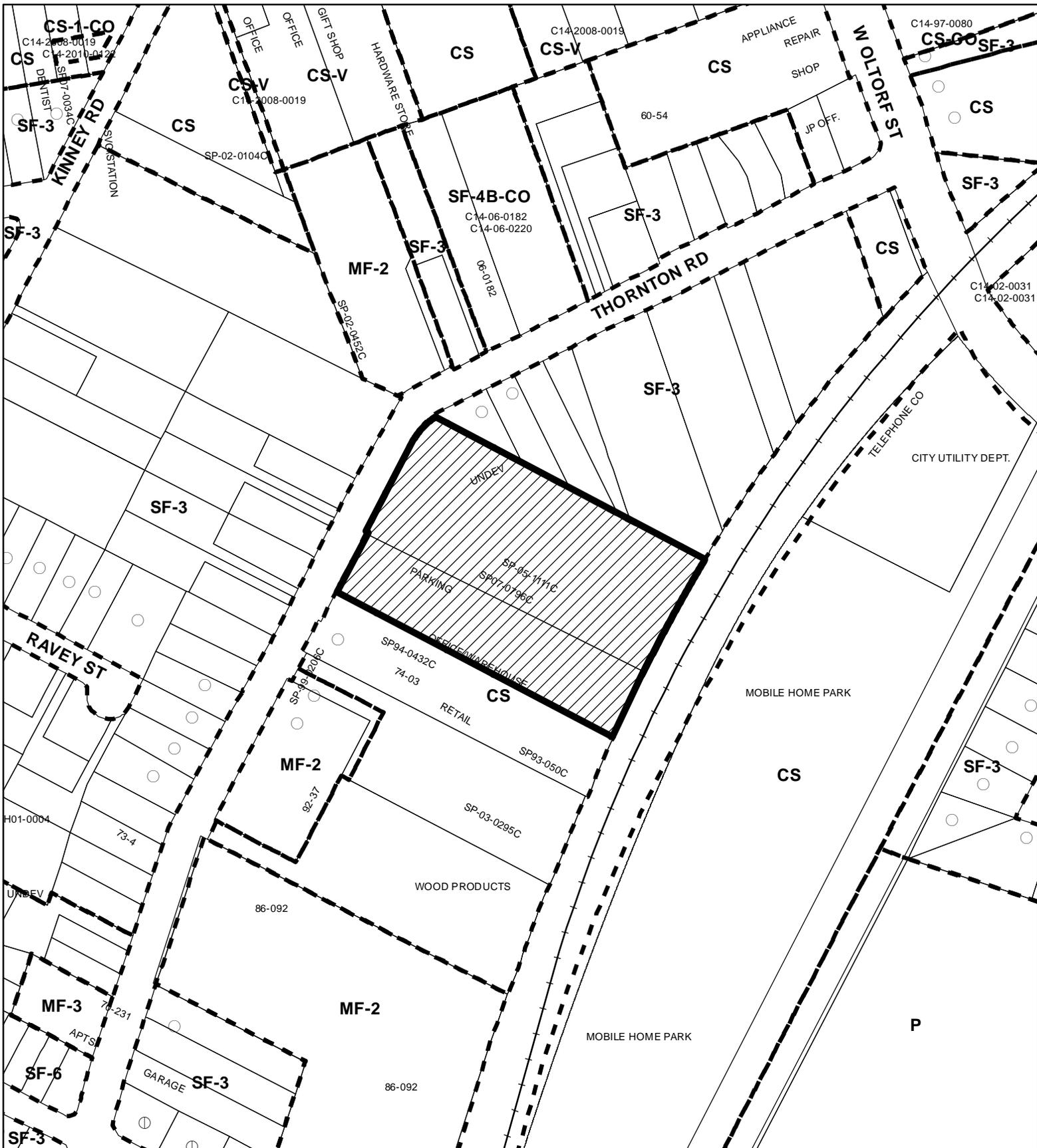
Storm Water Detention

Under current watershed regulations, development or redevelopment requires water quality control with increased capture volume and control of the 2 year storm on site. Runoff from the site is required to comply with pollutant load restrictions as specified in Land Development Code.

NPZ Site Plan Review - Scott Grantham - 512-974-2942

COMPATIBILITY STANDARDS

- SP 1 There are Single Family houses directly adjacent to the site to the north (zoned SF-3) and approximately 60 feet to the west (zoned SF-3) across Thornton Road. Along the north and west property lines, the following standards apply:
- No structure may be built within 25 feet of the property line.
 - No structure in excess of two stories or 30 feet in height may be constructed within 50 feet of the property line.
 - No structure in excess of three stories or 40 feet in height may be constructed within 100 feet of the property line.
 - No parking or driveways are allowed within 25 feet of the property line.
 - A landscape area at least 25 feet wide is required along the property line. In addition, a fence, berm, or dense vegetation must be provided to screen adjoining properties from views of parking, mechanical equipment, storage, and refuse collection.
 - For a structure more than 100 feet but not more than 300 feet from property zoned SF-5 or more restrictive, 40 feet plus one foot for each 10 feet of distance in excess of 100 feet from the property zoned SF-5 or more restrictive.
 - An intensive recreational use, including a swimming pool, tennis court, ball court, or playground, may not be constructed 50 feet or less from adjoining SF-3 property.
 - Additional design regulations will be enforced at the time a site plan is submitted.
- SP 2 Site plans will be required for any new development other than single-family or duplex residential.
- SP 3 Any development which occurs in an SF-6 or less restrictive zoning district which is located 540-feet or less from property in an SF-5 or more restrictive zoning district will be subject to compatibility development regulations.



-  SUBJECT TRACT
-  PENDING CASE
-  ZONING BOUNDARY

ZONING

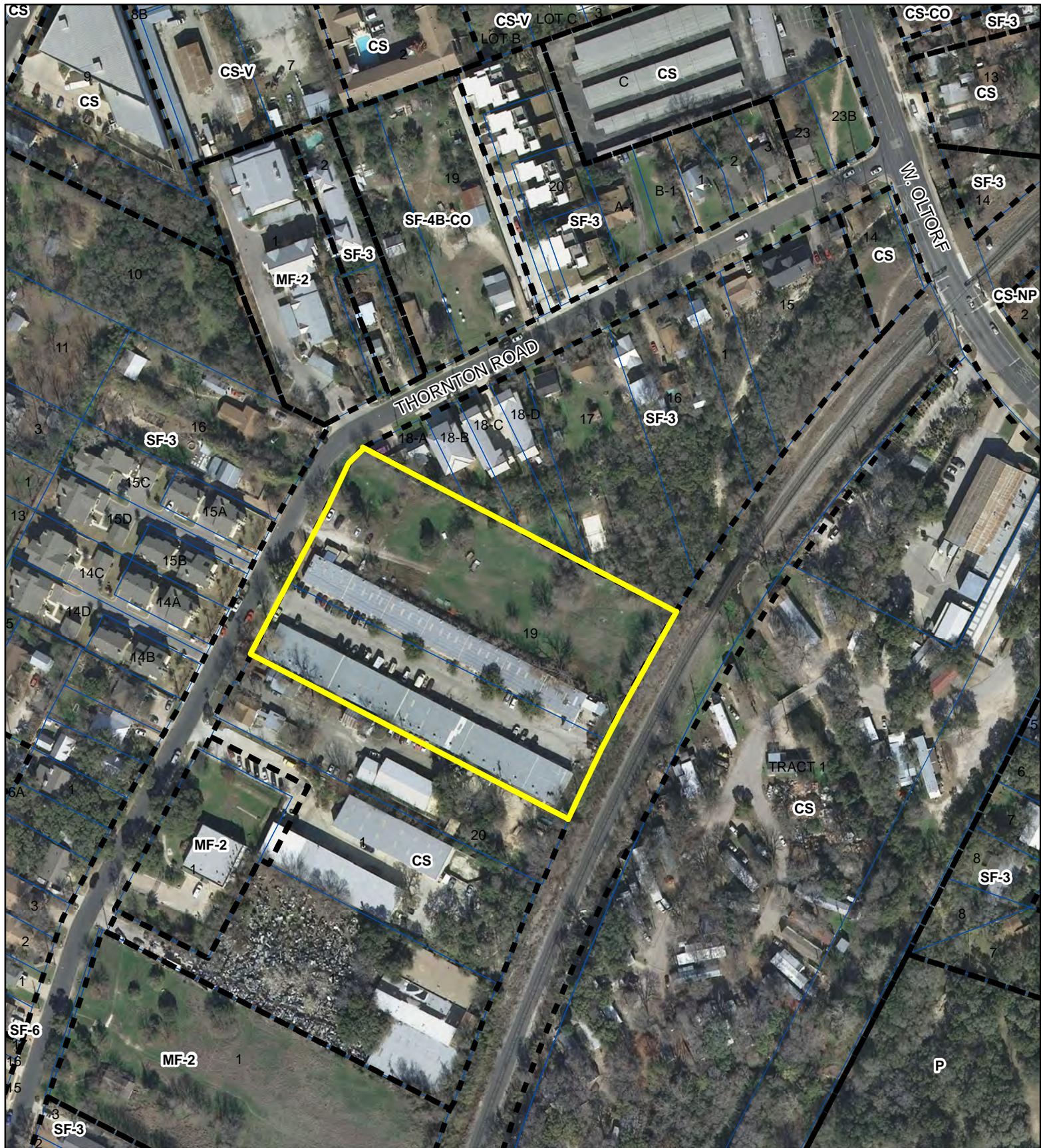
CASE#: C14-2015-0047

1" = 200'

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

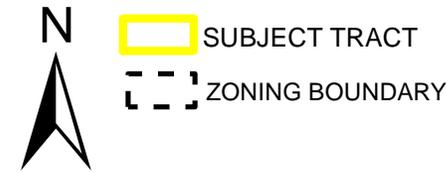
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ZONING

ZONING CASE#: C14-2015-0047
 LOCATION: 2303 -2309 Thornton Road
 SUBJECT AREA: 3.56 ACRES
 MANAGER: Andrew Moore



1' = 400'



This map has been produced by the Communications Technology Management Dept. on behalf of the Planning Development Review Dept. for the sole purpose of geographic reference. No warranty is made by the City of Austin regarding specific accuracy or completeness.



MEMORANDUM

TO: Andrew Moore, Zoning Case Manager
CC: Leslie Pollack, P.E., Anna Martin, P.E., Scott Gross, P.E.,
FROM: Ivan J. Naranjo, Senior Transportation Planner, DSD
DATE: September 15, 2015
SUBJECT: Neighborhood Traffic Analysis for Thornton Road
Zoning Case: UT Land Company (C14-2015-0047)

The Transportation Section has performed a neighborhood traffic impact analysis (NTA) for the above referenced case and offers the following comments:

The subject 3.6-acre tract is proposed as a residential multifamily development to consist of 218 residential units which include live-work units. The site is located in south Austin along the east side of Thornton Road at approximately 950 feet from the intersection with W. Oltorf Street. The site is currently zoned CS and the requested change is to CS-MU-V zoning. The project site currently exists as two tracts with the larger one being undeveloped land and the smaller one is developed with land uses that include warehousing and industrial offices. The properties surrounding this development include CS, MF-3, MF-2, and SF-3 zoning along with various existing land uses that include industrial, office/warehouse, commercial/retail, multi-family, mobile home park, and single-family residences. Thornton Road borders the west side of this site and the Missouri Pacific railroad creates the eastern border. The proposed development will have vehicular access to Thornton Road.

Roadways

Thornton Road is classified as a residential collector with varying right-of-way and a 30-ft. pavement section. Thornton Road extends for approximately ½ mile starting at W. Oltorf Street on the north and ending at Waterloo Trail on the south. Based on recent traffic counts taken by GRAM Traffic, Inc., Thornton Road carries approximately 1,766 vehicles per day. According to the Transportation Criteria Manual (TCM), the typical average daily traffic (ADT) for a residential collector built with standard curb and gutter and a 40' pavement section ranges from 500 to 3,000 vehicles per day.

Trip Generation and Traffic Analysis

Based on the ITE's publication Trip Generation Rates (9th Edition), the proposed development is estimated to generate approximately 1,267 vehicle-trips per day (vpd). However, the existing land uses (ITE 110 & ITE 150) generate approximately 217 vehicle-trips per day and thus the net increase in traffic for the proposed development is estimated to be approximately 1,050 vehicle-trips per day.

| Trip Generation | | | |
|-------------------|----------|-----------|--------------|
| LAND USE | ITE Code | SIZE | VPD |
| Residential Condo | 230 | 218 Units | 1,267 |
| TOTAL | | | 1,267 |

Based on the proposed 218 units for this development, the following table contains the estimated number of vehicle-trips per day that will affect Thornton Road:

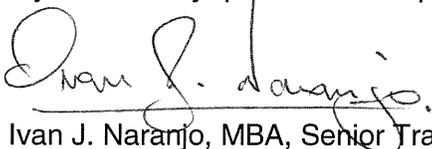
| Street | Existing Traffic (vpd) | Net Site Traffic(vpd) | Total Traffic after Project (vpd) |
|--------------|------------------------|-----------------------|-----------------------------------|
| Thornton Rd. | 1,766 | 1,050 | 2,816 |

Section 25-6-116 of the Land Development Code specifies the desirable operating levels for streets with various pavement widths. Based on this, a street with a pavement width of 30 feet should not exceed 1,800 vehicles per day (vpd) in order to continue to operate at a desirable level. The existing traffic on Thornton Road does not exceed the 1,800 vpd identified in LDC, 25-6-116. However, the traffic along Thornton Road is estimated to exceed the requirements of this section by 1,016 vpd due to the proposed development at full build-out.

Conclusions

1. The neighborhood traffic analysis (NTA) was prepared by the Development Services Dept. and the Austin Transportation Dept. Based on the results of the NTA, please find the following recommendations to mitigate the traffic that will be generated by the proposed development:
2. This site should be limited through a conditional overlay to a maximum of 218 residential units. With this limit, the projected traffic along Thornton Road is not expected to increase over 3,000 vehicles per day and would be within the criteria established in the TCM. All improvements should be completed prior to the issuance of Certificates of Occupancy.
3. Recommend the widening of Thornton Road within 200' of W. Oltorf Street. The recommended cross section for the widened roadway will allow for 1-14' inbound land and 2-10' outbound lanes (See Exhibit). The road widening would allow separating right and left turn movements onto Oltorf and improve operations as right-turning vehicles that are more likely to find gaps in opposing traffic will not be delayed by left-turning vehicles. As shown in the exhibit, the recommended widening would occur on the west side of Thornton Road and the developer would be responsible for the road widening construction costs plus obtaining any additional right-of-way if needed.
4. Recommend installing sidewalks along the west and east sides of Thornton Road, connecting the proposed development with existing pedestrian and transit facilities along W. Oltorf Street.
5. Recommend to restrict parking along Thornton Road within 200' of the intersection with W. Oltorf. Further parking restrictions to one side of Thornton Road may be necessary to allow sufficient width for vehicles to travel in both directions when the parking is occupied. Neighborhood support would be required for these parking modifications.
6. Recommend installation of a pedestrian hybrid beacon on W. Oltorf Street, just west of Thornton Road (exact location to be determined at site plan). This recommended improvement is to facilitate safe pedestrian crossing to access the existing Cap Metro bus stop on W. Oltorf Street.
7. The City Council may approve a zoning application if it is determined that the applicant has satisfactorily mitigated adverse traffic effects on the residential collector street.

If you have any questions or require additional information, please contact me at 974-7649.



Ivan J. Naranjo, MBA, Senior Transportation Planner

Development Services Department ~ Land Use Review Division



Thornton Traffic Study

Austin, Texas
November 25, 2015



Thornton Traffic Study

Austin, Texas
November 25, 2015

Prepared for
Oden|Hughes, LLC.

Prepared by
HDR Engineering, Inc.
Texas P.E. Firm Registration No. F-754
504 Lavaca Street, Suite 1175
Austin, Texas 78701 USA
Telephone 512 904-3700
Facsimile 512 904-3773
Website: hdrinc.com



Introduction

HDR Engineering, Inc. has been retained by Oden Hughes, LLC to perform a traffic study for a proposed development (Zoning Case C14-2015-0047) in Austin, Texas, located at 2303 and 2309 Thornton Road, south of Oltorf Street as shown in Figure 1. The development is proposed to consist of 212 apartment dwelling units and is expected to open in 2017. Parking for residents and guests of the apartments will be served on site. Access to the development is proposed via one driveway on Thornton Road. The property is currently improved with 39,622 square feet of industrial park. Additional industrial park development is anticipated for the site if the zoning change is not approved.

Existing Thoroughfare System

Thornton Road – Thornton Road currently operates as a 2-lane undivided roadway with a speed limit of 25 mph. According to traffic count data collected on June 2, 2015, the traffic volume on Thornton Road is approximately 2,600 vehicles per day (vpd) south of Oltorf Street. It should be noted that AISD was in session during the data collection. The City of Austin classifies Thornton Road as a Collector Street as it exhibits traffic volumes and the operational characteristics of a collector as defined by the City of Austin Transportation Criteria Manual. However, the existing roadway width (approximately 28' to 30') and right-of-way width (varies 50'- 60') is closer to that of a Local Street. City of Austin design criteria for these street classifications are included in the Appendix. Parking is currently allowed on both sides of the street with the exception of approximately 100' on the east side of Thornton Road along the existing roadway curve. Vehicles park along both sides of Thornton Road essentially narrowing the street to one travel lane.

Additional details on traffic volumes are provided in Table 1. Complete traffic count information is included in the Appendix.

Table 1.

June 2015 Existing Traffic Volume Summary: Thornton Road, South of Oltorf Street

| | Daily (vehicles) | AM Peak (vehicles) | PM Peak (vehicles) |
|--------------|---------------------|-----------------------|-----------------------|
| Northbound | 1,271 | 114 | 97 |
| Southbound | 1,359 | 48 | 94 |
| Total | 2,630 | 162 | 191 |

City of Austin Roadway Volume Threshold

Section 25-6-116 of the City of Austin Land Development Code defines volume thresholds for desirable operating levels for streets with various pavement widths. A street with a pavement width of 30 feet should not exceed 1,800 vpd to remain operating at the City's defined desirable level. The existing volume on Thornton Road is 2,630 vpd. Therefore, Thornton Road is currently over the City's defined threshold by 830 vpd. The results are summarized in Table 2.

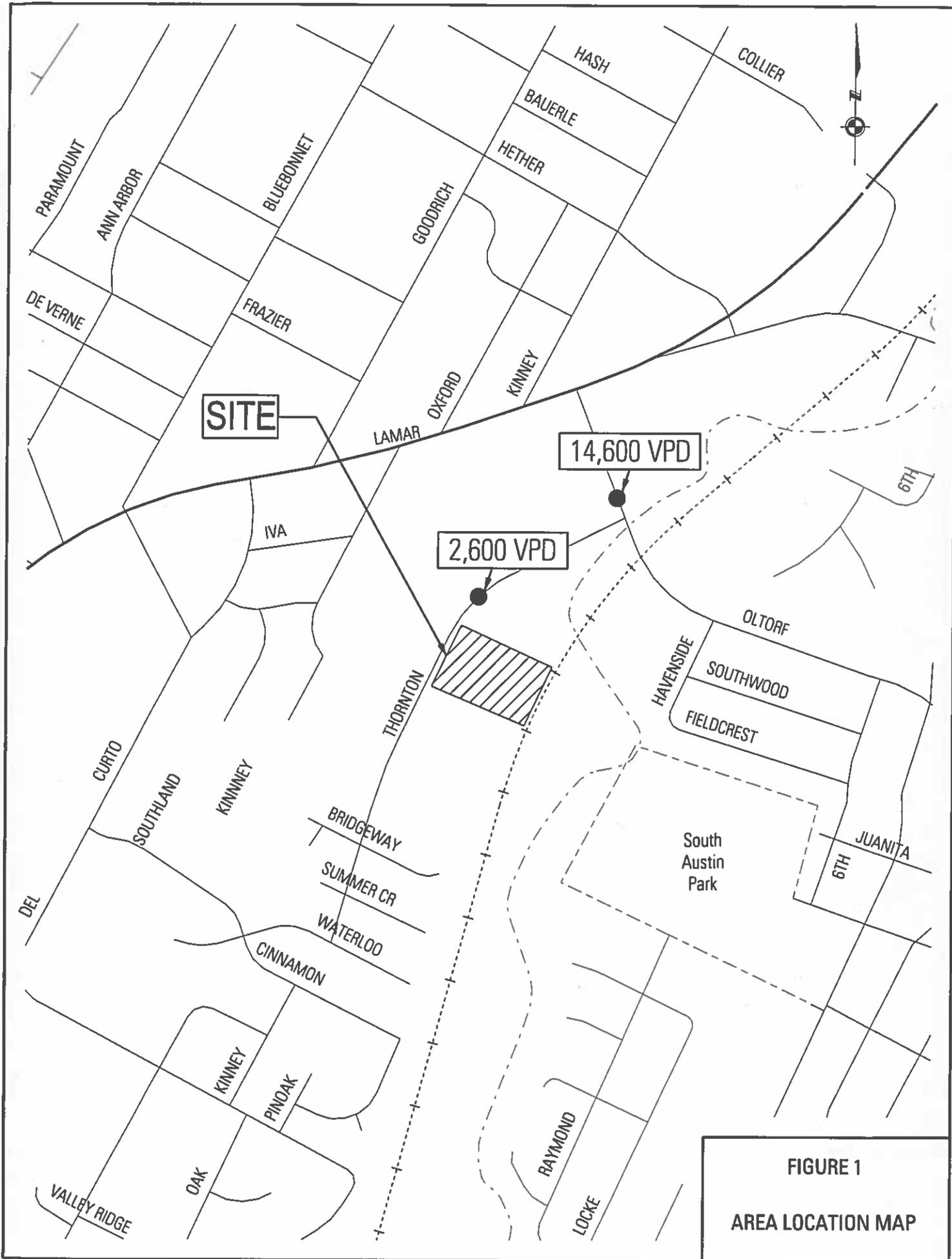


FIGURE 1
AREA LOCATION MAP

Table 2.
Daily Traffic Volume Threshold Analysis: Thornton Road, South of Oltorf Street

| | Average Daily Traffic (vpd) |
|---|-----------------------------|
| Existing Volume | 2,630 |
| Threshold for Pavement Width 30' to less than 40' | 1,800 |
| Daily Volume Over Threshold | 830 |

Oltorf Street – Oltorf Street operates as a 4-lane undivided arterial in the vicinity of the site. According to traffic count data collected on June 2, 2015, the traffic volume on Oltorf Street is approximately 14,600 vehicles per day (vpd) west of Thornton Road. This roadway has a speed limit of 35 mph in the vicinity of the project site.

Transit – Capital Metro route 331 provides service along Oltorf Street in the vicinity of Thornton Road. The eastbound and westbound bus stops for the route 331 bus are located just west of the intersection of Thornton Road and Oltorf Street. No transit reductions were assumed for this project to provide a conservative analysis.

Existing Site Conditions

The existing land use on the site is industrial park. Table 3 provides a detailed summary of existing traffic production. These values are based on national averages, provided by the Institute of Transportation Engineers' Trip Generation, 9th Edition.

Table 3.
Summary of Unadjusted Daily and Peak Hour Trip Generation for Existing Land Use

| Land Use | Size | 24-Hour Two-Way Volume | AM Peak Hour | | PM Peak Hour | |
|-----------------|-----------|------------------------|--------------|------|--------------|------|
| | | | Enter | Exit | Enter | Exit |
| Industrial Park | 39,622 SF | 876 | 37 | 8 | 13 | 48 |

Proposed Site Trip Generation

Based on recommendations and data contained in the Institute of Transportation Engineers' Trip Generation, 9th Edition, the proposed project will generate approximately 1,408 unadjusted daily trips upon build-out in 2017. Table 4 provides a detailed summary of traffic production, which is directly related to the assumed land use plan.

Table 4.
Summary of Unadjusted Daily and Peak Hour Trip Generation for Proposed Land Uses

| Land Use | Size | 24-Hour Two-Way Volume | AM Peak Hour | | PM Peak Hour | |
|-----------|--------|------------------------|--------------|------|--------------|------|
| | | | Enter | Exit | Enter | Exit |
| Apartment | 212 DU | 1,408 | 22 | 86 | 87 | 47 |

Traffic Analysis

The impact of the proposed development on Thornton Road and Oltorf Street was analyzed. Two (2) time periods and three (3) travel conditions were evaluated:

- 2015 Existing Conditions
- 2017 Forecasted (without Site) Conditions
- 2017 Site Plus Forecasted Conditions

Based on historical 24-hour traffic counts obtained from TxDOT, a 1.5% annual growth rate was assumed for the study. In addition, the following projects were included as background traffic under forecasted (without site) traffic conditions:

- Thornton Apartments (SP-2013-0278C.SH)
 - 104 Apartment Dwelling Units
- Future Development at Lamar Boulevard and Oltorf Street (TBD)
 - 10,675 SF of General Light Industrial
 - 7,152 SF of Specialty Retail Center
 - 20,185 SF of Shopping Center
 - 32,366 SF of General Office Building

Roadway Threshold Analysis

To provide an evaluation of the impact of the site on Thornton Road, a comparison of traffic volumes and City of Austin operational thresholds based on roadway classifications was completed. It should be noted that the operation of Thornton Road are primarily defined by the peak hours and the constraint points at the stop-controlled intersection of Thornton Road and Oltorf Street. Table 5 provide a summary of the average daily traffic volumes for existing and forecasted (without site) conditions. Table 6 incorporates the proposed development and documents site plus forecasted conditions.

Table 5.
Average Daily Traffic – Forecasted (without site) Traffic Conditions

| Scenario | Average Daily Traffic (vpd) |
|------------------------------------|-----------------------------|
| 2015 Existing | 2,630 |
| 2017 Existing with Growth | 2,709 |
| Thornton Apartments Development | 754 |
| 2017 Forecasted | 3,463 |
| Daily Volume Over Threshold | 1,663 |

As shown in Table 5, Thornton Road is expected to operate with average daily traffic volumes of approximately 3,500 vpd in 2017. Thornton Road will exceed the City's operating threshold of a 30' roadway (1,800 vpd) by 1,663 vpd. 2017 traffic volumes are in line with operations of a Neighborhood Collector (2,000 – 6,000 vpd).

Table 6.
Average Daily Traffic – Site Plus Forecasted Traffic Conditions

| Scenario | Average Daily Traffic (vpd) |
|------------------------------------|-----------------------------|
| 2015 Existing | 2,630 |
| 2017 Existing with Growth | 2,709 |
| Thornton Apartments Development | 754 |
| Existing Site | (876) |
| Site | 1,408 |
| 2017 Site + Forecasted | 3,995 |
| Daily Volume Over Threshold | 2,195 |

With the addition of traffic due to annual growth, surrounding developments, and the proposed development, Thornton Road's traffic volumes will continue to fall within the range of a Neighborhood Collector (2,000 – 6,000 vpd). Thornton Road will exceed the City's operating threshold of a 30' roadway (1,800 vpd) by 2,195 vpd. The City of Austin's LDC 25-6-116 recommends a 40' section for streets with traffic volumes up to 4,000 vpd.

To mitigate the increased volumes in accordance with LDC Sec. 25-6-141(C), the development is proposing widening of Thornton Road to a 34' section within 200' of the Oltorf Street intersection in addition to other infrastructure improvements (pedestrian safety, intersection operations, and parking), as discussed in more detail on pages 7 and 8.

Intersection Analysis

While daily traffic volumes provide a planning level view of corridor operations, the evaluation of intersections along the corridor provide a more detailed, quantitative analysis of peak-hour operations. Two types of intersections to be evaluated are signalized and unsignalized, which use different criteria for assessment of operating levels.

Signalized Intersection Level of Service

Signalized intersection LOS is defined in terms of delay, which is a direct and/or indirect measure of driver discomfort, frustration, fuel consumption, and lost travel time. The levels of service have been established based on driver acceptability of various delays. The City of Austin considers overall intersection levels of service A to D to be acceptable, while overall LOS of E and F is unacceptable. Table 7 summarizes the levels of service that are appropriate for different levels of average control delay, and a qualitative description for each.

Table 7.

Signalized Intersection: Level of Service Measurement

| Level of Service | Control Delay Per Vehicle (sec) | Qualitative Description |
|------------------|---------------------------------|--|
| A | < 10 | Good progression and short cycle lengths |
| B | > 10 and < 20 | Good progression or short cycle lengths, more vehicle stops |
| C | > 20 and < 35 | Fair progression and/or longer cycle lengths, some cycle failures |
| D | > 35 and < 55 | Congestion becomes noticeable, high volume to capacity ratio |
| E | > 55 and < 80 | Limit of acceptable delay, poor progression, long cycles, and/or high volume |
| F | > 80 | Unacceptable to drivers, volume greater than capacity |

Unsignalized Intersection Level of Service

Unsignalized intersection LOS is defined in terms of average control delay and, in some cases, v/c ratio. Control delay is that portion of total delay attributed to traffic control measures, either traffic signals or stop signs. Table 8 shows the relationship between the average control delay and the LOS. The LOS range for unsignalized intersections is different than that for signalized intersections. This difference is due to the fact that drivers expect different levels of performance from different kinds of transportation facilities.

Table 8.

Unsignalized Intersection: Level of Service Measurement

| Level of Service | Control Delay Per Vehicle (sec) |
|------------------|---------------------------------|
| A | < 10 |
| B | > 10 and < 15 |
| C | > 15 and < 25 |
| D | > 25 and < 35 |
| E | > 35 and < 50 |
| F | > 50 |

This study analyzed the intersection of Thornton Road and Oltorf Street, the primary access point for vehicles entering and exiting the development. This intersection is a T-intersection with Thornton Road operating as the stop-controlled approach. The intersection of Thornton Road and Oltorf Street was then analyzed with recommended improvements which include widening Thornton Road to separate right-turn and left-turn movements at Oltorf Street, and installing a signal at the intersection of Thornton Road and Oltorf Street. The results are summarized in Tables 9 and 10. Additional detail on each of these improvements follows.

Table 9.
Minor-Street Approach Level of Service and Delay (sec/veh) at Thornton Road and Oltorf Street

| Approach | 2015 Existing | | 2017 Forecasted (Without Site) | | 2017 Site + Forecasted | | 2017 Site + Forecasted with Widening | | 2017 Site + Forecasted with Signal and Widening | |
|---------------------|---------------|------|--------------------------------|-------|------------------------|-------|--------------------------------------|-------|---|------|
| | AM | PM | AM | PM | AM | PM | AM | PM | AM | PM |
| | B | F | C | F | C | F | C | F | A | B |
| Northbound Thornton | 13.2 | 61.8 | 15.8 | 221.6 | 23.0 | 758.0 | 16.4 | 453.5 | 8.2 | 15.7 |

As shown in Table 9, the intersection of Thornton Road and Oltorf Street has an overall Level of Service (LOS) F in the PM peak period under 2015 existing, 2017 forecasted, and 2017 site plus forecasted traffic conditions. **Widening Thornton Road to provide two outbound lanes will improve reduce northbound delays at the intersection. Additionally, installation of a traffic signal significantly reduces delays and improves the Thornton Road operations from LOS C and F under 2017 Forecasted (without site) traffic conditions to LOS A and B under 2017 Site plus Forecasted traffic conditions in the AM and PM peak periods, respectively.**

Table 10.
Minor-Street Movement Service Measurements at Thornton Road and Oltorf Street

| Movement | 2017 Site + Forecasted with Widening | | 2017 Site + Forecasted with Signal and Widening | |
|--------------------------------|--|------------|---|-----------|
| | AM | PM | AM | PM |
| | Level of Service / Delay (sec/veh) | | | |
| | AM | PM | AM | PM |
| Northbound Left Turn Thornton | C 24.1 | F 743.0 | B 13.2 | C 21.6 |
| Northbound Right Turn Thornton | B 10.9 | B 12.9 | A 4.6 | A 6.8 |
| | 95 th Percentile Queue Length | | | |
| | AM | PM | AM | PM |
| Northbound Left Turn Thornton | 34 feet | 264 feet | 46 feet | 70 feet |
| Northbound Right Turn Thornton | 16 feet | 12 feet | 28 feet | 22 feet |

Table 10 highlights the major source of intersection delay as the northbound left-turn movement from Thornton Road onto Oltorf Street. Installation of a traffic signal improves northbound left-turn operations from LOS C and F under 2017 Site plus Forecasted with Widening to LOS B and C under 2017 Site plus Forecasted with Signal and Widening during the AM and PM peak periods, respectively. Correspondingly, the northbound left-turn delays reduce from 743.0 seconds per vehicle under 2017 Site plus Forecasted with Widening to 21.6 seconds per vehicle under 2017 Site plus Forecasted with Signal and Widening during the PM peak period. Queue lengths are provided as guidance for the required length of widening.

Signal Warrant Analysis

To determine the need for a traffic signal at the intersection of Thornton Road and Oltorf Street, a peak hour signal warrant analysis (Warrant 3) was completed based on 2015 existing, 2017 forecasted (without site), and 2017 site plus forecasted conditions. Based on the analysis, Warrant 3 is met under 2017 site plus forecasted condition at the study intersection. A summary of the warrant analysis results are shown in Figure 2.

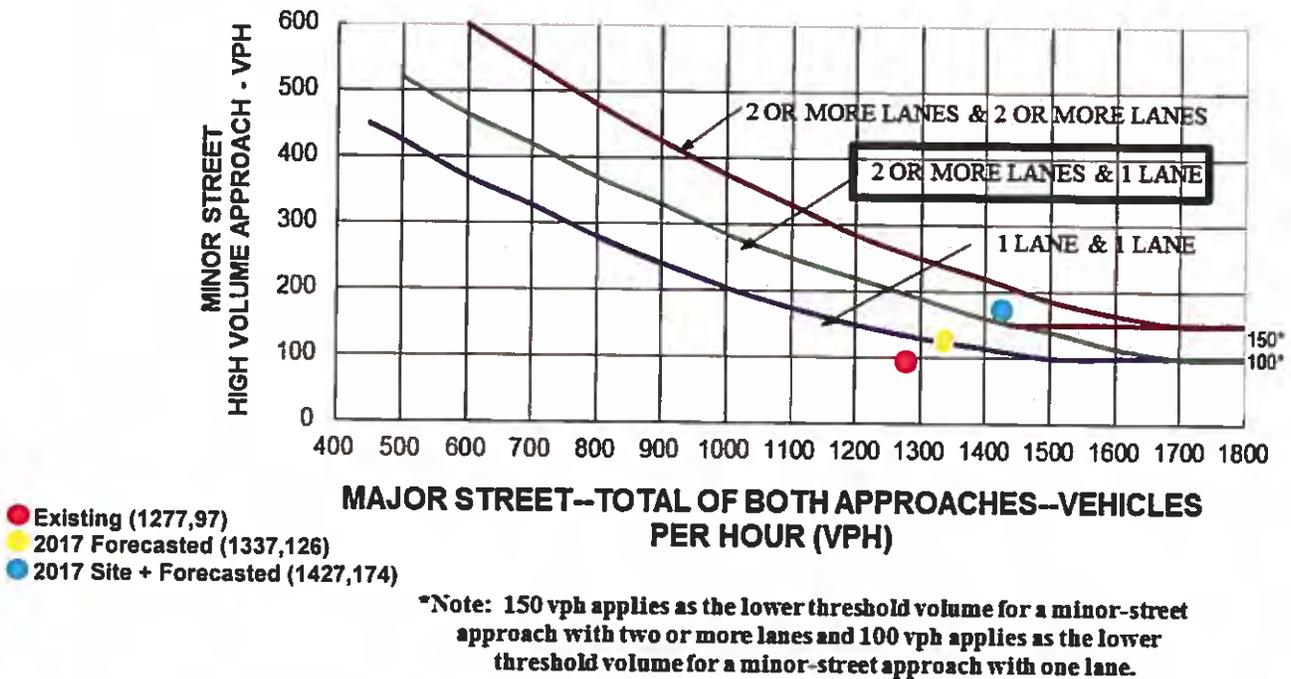


Figure 2: Peak Hour Volume Warrant. (Warrant 3)

Recommendations

Roadway and Intersection Operations

The stop-controlled Thornton Road approach currently operates at LOS F in the PM peak period. Delays are experienced by both left-turning and right-turning vehicles approaching Oltorf Street. Delays can be extended when trains are present on the adjacent railroad track. Separating right-turn and left-turn movements will result in improved operations as right-turning vehicles that are more likely to find gaps in opposing traffic and will not be delayed by left-turning vehicles. To separate right-turn and left-turn movements at Oltorf Street, it is recommended that Thornton Road be widened to a 34'-section within 200' of the intersection of Oltorf Street. The recommended cross-section for the widened roadway width will allow for 1-14' inbound lane and 2-10' outbound lanes. Widening of Thornton Road will reduce approach delays and improve the northbound right-turn operations from LOS F to LOS B during both the AM and PM peak periods. More specifically, the roadway widening reduces the northbound right-turn delay from 221.6 seconds per vehicle under 2017 Forecasted (without site) traffic conditions to 12.9 seconds per vehicle under 2017 Site + Forecasted with Widening traffic conditions during the PM peak period. Parking would need to be restricted within 200' of the intersection. Figure 2 depicts the proposed roadway configuration along Thornton Road. As shown in Figure 2, the recommended widening could occur within the existing ROW.

Signalization

Based on the analysis, Warrant 3 is met under 2017 site plus forecasted condition peak hour at the study intersection. Installation of a traffic signal significantly reduces delays and improves the Thornton Road operations from LOS C and F under 2017 Forecasted (without site) traffic conditions to LOS A and B under 2017 Site + Forecasted Traffic Conditions with Signal and Widening in the AM and PM peak periods, respectively. Although a traffic signal would reduce delays, discussion with the City of Austin would be required due to the intersection's location in proximity of the railroad crossing on Oltorf Street. The signal should be coordinated with the signal at the intersection of Lamar Boulevard and Oltorf Street. Coordination with the Lamar Boulevard signal will allow for progression along Oltorf Street and will not impact Lamar Boulevard operations.

Parking

Residents are currently discussing residential parking permits along a portion of Thornton Road. This will reduce parking turnover and deter commercial parking for businesses on adjacent streets. Due to parking being a contributing source of the congestion along Thornton Road, it is recommended that parking be further restricted to one side of Thornton Road to allow sufficient width for vehicles to travel in both directions when the parking is occupied. Neighborhood support would be required for these parking modifications. Eliminating parking within 200' of Oltorf Street will allow for a two-lane approach to the intersection. It should be noted that an on-site parking garage and inset street-parking are proposed by the project which will accommodate residents and guests of the apartments. Figure 3 depicts the existing and proposed sidewalk infrastructure along Thornton Road.

Pedestrian Safety

Sidewalk facilities are very limited on Thornton Road causing pedestrians to walk in the roadway. It is recommended that sidewalks be installed on Thornton Road, connecting the proposed development with existing pedestrian facilities along Oltorf Street, including the Capital Metro Bus Stop. This would improve pedestrian safety and increase connectivity which has the potential to decrease access to the site by automobile. It should be noted that the Thornton Apartments development to the south has plans to install sidewalks along the east side of Thornton Road. Sidewalks along the west side of Thornton Road should be installed with roadway widening.

As pedestrian volumes increase in the vicinity of the project area due to the proposed and surrounding developments, a Pedestrian Hybrid Beacon should be considered, across the east leg of Oltorf Street at Thornton Road to facilitate pedestrian crossings. The beacon should be installed when pedestrian and vehicular volumes in the field warrant installation. Guidelines for the Installation of Pedestrian Hybrid Beacons are provided in the Appendix. If a traffic signal is warranted and installed in the field, the pedestrian hybrid beacon would not be required.

The beacon and sidewalk access to Oltorf Street will create safer dedicated space for pedestrians and help to provide connectivity to local bus stops which have the potential to decrease access to the site by automobile.



- Existing Curb
- Proposed Curb
- Proposed Off-Site Sidewalk

Figure 3
Thornton Road
Improvements

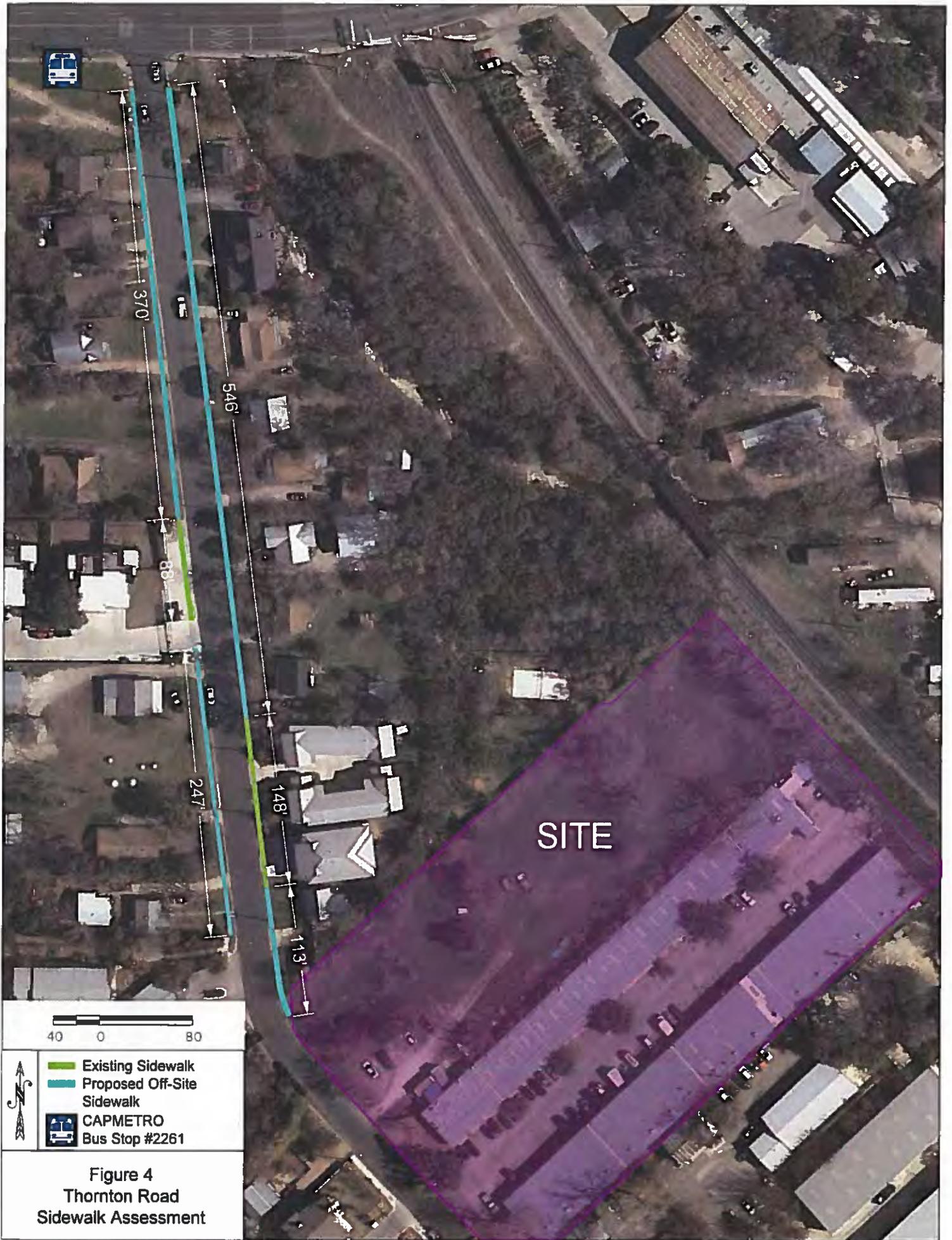


Figure 4
 Thornton Road
 Sidewalk Assessment

Summary and Recommendations

Existing Thornton Road volumes do not fall within the desirable operating threshold defined by the City of Austin. Based on field observations, the most substantial contributors to the current operational issues are pedestrian safety, stopped delays at the Oltorf Street intersection, and the presence of on-street parking. These issues are proposed to be mitigated by the Developer in accordance with LDC Sec. 25-6-141(C), with the following recommended improvements. See excerpts of data from Tables 9 and 10 summarized below in Tables 11 and 12.

Pedestrian Safety

- Pedestrian improvements, including installation of sidewalks and a pedestrian hybrid beacon (if a traffic signal is not installed) are recommended to improve pedestrian safety and increase connectivity. These improvements have the potential to decrease access to the site by automobile.

Intersection Operations

- The stop-controlled approach of Thornton Road at Oltorf Street operates at LOS F under existing conditions.
- Widening the approach to provide two lanes will improve northbound right-turn operations from LOS C and F (Table 11) to LOS B (Table 12).
- Installation of a signal should be considered once warrants are met in the field. This will improve Thornton Road operations from LOS C and F to LOS B and C (Table 11). Discussion with the City of Austin would be required to obtain approval due to the intersection's location in proximity to the railroad crossing on Oltorf Street.

Roadway Operations

- The existing daily traffic volume of Thornton Road is 2,630 vehicles, exceeding the LDC 25-6-116 threshold of 1,800 vehicles for pavement widths 30 feet to less than 40 feet.
- The proposed development will add approximately 1,408 vehicles per day on Thornton Road for a total estimated 2017 traffic volume of 4,000 vehicles per day. This is within the City of Austin threshold for a Neighborhood Collector.
- Additional parking restrictions could provide for improved operations along Thornton Road and will require neighborhood support.
- Widening of the entire Thornton Road segment to the site to a 40'-section would be required to meet City of Austin's LDC 25-6-116 desirable operating thresholds. The roadway widening is not recommended; instead widening at the intersection is recommended to improve operations at this constraint point. Improved interactions between parked vehicles and through vehicles will be accomplished via the parking restrictions recommended. The recommended roadway section (widening to 34' within 200' of Oltorf Street, allowing 1-14' inbound lane and 2-10' outbound lanes) is in line with current agency trends to effectively utilize the roadway section for all modes and not to focus solely on vehicular throughput. Additionally, the limited widening reduces unintended consequences such as increased travel speeds along Thornton Road.

Table 11.

Minor-Street Approach Level of Service at Thornton Road and Oltorf Street

| Approach | 2017 Forecasted (Without Site) | | 2017 Site + Forecasted with Signal and Widening | |
|---------------------|--------------------------------|----|---|----|
| | AM | PM | AM | PM |
| Northbound Thornton | C | F | A | B |

Table 12.

Minor-Street Movement Level of Service at Thornton Road and Oltorf Street

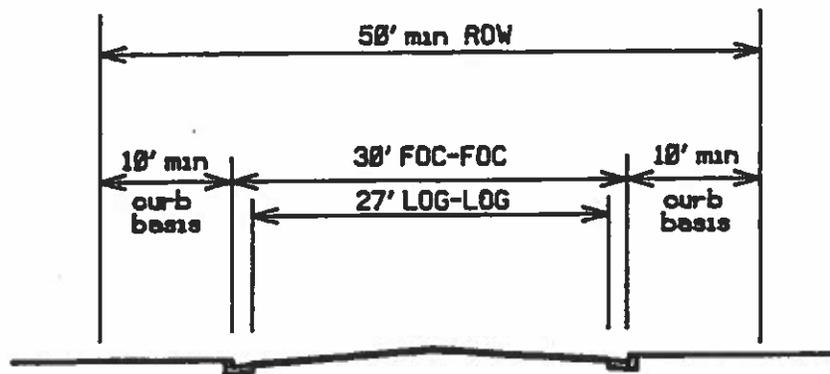
| Movement | 2017 Site + Forecasted with Widening | | 2017 Site + Forecasted with Signal and Widening | |
|--------------------------------|--------------------------------------|----|---|----|
| | Level of Service / Delay (sec/veh) | | | |
| | AM | PM | AM | PM |
| Northbound Left Turn Thornton | C | F | B | C |
| Northbound Right Turn Thornton | B | B | A | A |

Appendix A. Technical Addendum

Figure 1-22 Design Criteria For Local Streets (SF-1 or SF-2)

Typical ADT Range, less than 1000
Design Speed, 25, 30 mph
General Length, less than 1500'
Minimum Centerline Radius, See Page 1-8
Minimum Tangent Length Between Horizontal Curves, 50'
Minimum Curb Basis, 10'
Zoning, SF-1 or SF-2 (Or comparable land use) •

TYPICAL CROSS-SECTION

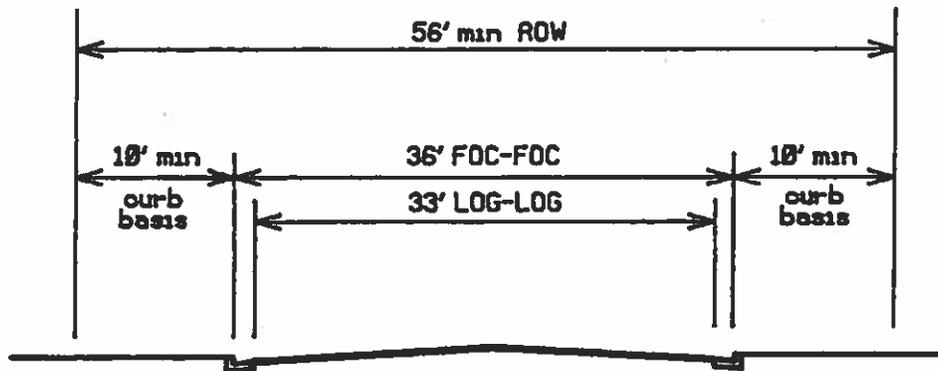


- NOTE: See Figure 1-23, for design criteria for local street where SF-3 thru SF-6 zoning is proposed.

Figure 1-23 Design Criteria for Local Streets (SF-3 thru SF-6)

Typical ADT Range, less than 1000
Design Speed, 25, 30 mph
General Length, less than 1500'
Minimum Centerline Radius, See Page 1-8
Minimum Tangent Length Between Horizontal Curves, 50'
Minimum Curb Basis, 10'
Zoning, SF-3 thru SF-6 (Or comparable land use)

TYPICAL CROSS-SECTION

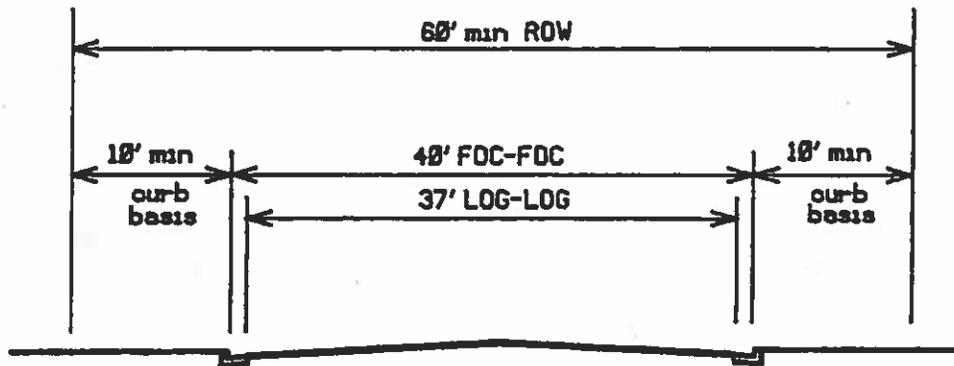


Source: City of Austin Transportation and Public Services Department

Figure 1-27 Design Criteria for Residential Collector Streets

Typical ADT Range, 500 to 3000
Design Speed, 30, 35 mph
General Length, less than 1 mile
Typical Spacing Between Residential Collectors, 1/4 mile
Typical Spacing Between Intersections, 300'
Minimum Centerline Radius, See Page 1-8
Minimum Tangent Length Between Horizontal Curves, 100'
Minimum Curb Basis, 10'
Zoning, SF-1 thru SF-6, MF-1 (Or comparable land use)

TYPICAL CROSS-SECTION



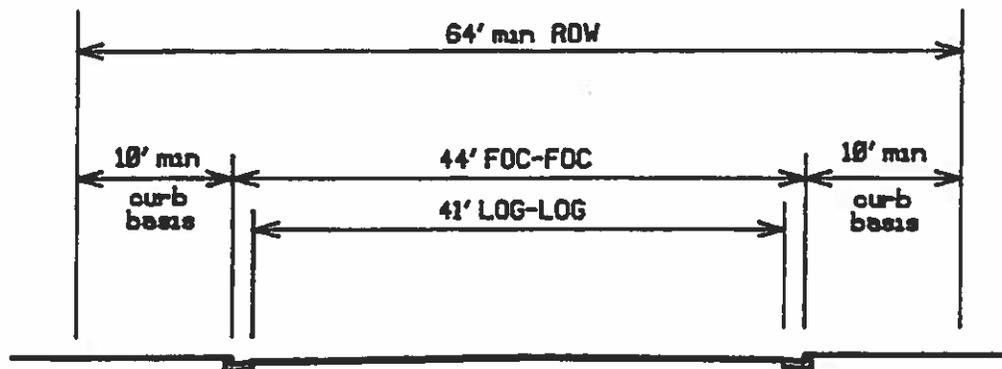
Source:

City of Austin Transportation and Public Services Department

Figure 1-28 Design Criteria for Neighborhood Collector Streets

Typical ADT Range, from 2000 to 6000
Design Speed, 35 mph
General Length, 1-2 miles
Typical Spacing Between Intersections, 500'
Typical Spacing Between Neighborhood Collectors, 1/2 mile
Minimum Centerline Radius, See Page 1-8
Minimum Tangent Length Between Horizontal Curves, 100'
Minimum Curb Basis, 10'

TYPICAL CROSS-SECTION



Source: City of Austin Transportation and Public Services Department

Groups Printed - Autos - Heavy Vehicles

| Start Time | Oltorf St Southbound | | | | | | Oltorf St Northbound | | | | | | Thrnnton Rd Eastbound | | | | | | | | | |
|------------------|----------------------|------|-------|------|------------|------|----------------------|-------|------|------------|-------|------|-----------------------|------|------------|------|-------|-------|------|------------|------------|------|
| | Left | | Thru | | Right | | Left | | Thru | | Right | | Left | | Thru | | Right | | | | | |
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Int. Total | |
| 07:00 | 0 | 21 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 20 | 4 | 0 | 2 | 0 | 0 | 6 | 47 |
| 07:15 | 0 | 62 | 1 | 0 | 63 | 0 | 0 | 0 | 0 | 0 | 78 | 0 | 0 | 0 | 85 | 11 | 0 | 20 | 0 | 0 | 31 | 179 |
| 07:30 | 0 | 68 | 3 | 0 | 71 | 0 | 0 | 0 | 0 | 0 | 106 | 0 | 0 | 0 | 112 | 12 | 0 | 16 | 0 | 0 | 28 | 211 |
| 07:45 | 0 | 98 | 2 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 89 | 0 | 0 | 0 | 94 | 10 | 0 | 12 | 0 | 0 | 22 | 216 |
| Total | 0 | 249 | 6 | 0 | 255 | 0 | 0 | 0 | 0 | 0 | 293 | 0 | 0 | 0 | 311 | 37 | 0 | 50 | 0 | 0 | 87 | 653 |
| 08:00 | 0 | 80 | 3 | 0 | 83 | 0 | 0 | 0 | 0 | 0 | 106 | 0 | 0 | 0 | 112 | 7 | 0 | 23 | 0 | 0 | 30 | 225 |
| 08:15 | 0 | 95 | 3 | 0 | 98 | 0 | 0 | 0 | 0 | 0 | 90 | 0 | 0 | 0 | 102 | 11 | 0 | 21 | 0 | 0 | 32 | 232 |
| 08:30 | 0 | 91 | 2 | 0 | 93 | 0 | 0 | 0 | 0 | 0 | 109 | 0 | 0 | 0 | 114 | 10 | 0 | 17 | 0 | 0 | 27 | 234 |
| 08:45 | 0 | 105 | 9 | 0 | 114 | 0 | 0 | 0 | 0 | 0 | 116 | 0 | 0 | 0 | 124 | 9 | 0 | 16 | 0 | 0 | 25 | 263 |
| Total | 0 | 371 | 17 | 0 | 388 | 0 | 0 | 0 | 0 | 0 | 421 | 0 | 0 | 0 | 452 | 37 | 0 | 77 | 0 | 0 | 114 | 954 |
| Grand Total | 0 | 620 | 23 | 0 | 643 | 0 | 0 | 0 | 0 | 0 | 714 | 0 | 0 | 0 | 763 | 74 | 0 | 127 | 0 | 0 | 201 | 1607 |
| Approch % | 0 | 96.4 | 3.6 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 93.6 | 0 | 0 | 0 | 100 | 36.8 | 0 | 63.2 | 0 | 0 | 0 | 0 |
| Total % | 0 | 38.6 | 1.4 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 44.4 | 0 | 0 | 0 | 47.5 | 4.6 | 0 | 7.9 | 0 | 0 | 12.5 | 0 |
| Autos | 0 | 607 | 22 | 0 | 629 | 0 | 0 | 0 | 0 | 0 | 698 | 0 | 0 | 0 | 745 | 73 | 0 | 126 | 0 | 0 | 199 | 1573 |
| % Autos | 0 | 97.9 | 95.7 | 0 | 97.8 | 0 | 0 | 0 | 0 | 0 | 97.8 | 0 | 0 | 0 | 97.6 | 98.6 | 0 | 99.2 | 0 | 0 | 99 | 97.9 |
| Heavy Vehicles | 0 | 13 | 1 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 18 | 1 | 0 | 1 | 0 | 0 | 2 | 34 |
| % Heavy Vehicles | 0 | 2.1 | 4.3 | 0 | 2.2 | 0 | 0 | 0 | 0 | 0 | 2.2 | 0 | 0 | 0 | 2.4 | 1.4 | 0 | 0.8 | 0 | 0 | 1 | 2.1 |

| Start Time | Oltorf St Southbound | | | | | | Oltorf St Northbound | | | | | | Thrnnton Rd Eastbound | | | | | | | | | |
|--------------|----------------------|-------|-------|-------|------------|-------|----------------------|-------|-------|------------|-------|-------|-----------------------|-------|------------|-------|-------|-------|-------|------------|------------|-------|
| | Left | | Thru | | Right | | Left | | Thru | | Right | | Left | | Thru | | Right | | | | | |
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Int. Total | |
| 08:00 | 0 | 80 | 3 | 0 | 83 | 0 | 0 | 0 | 0 | 0 | 106 | 0 | 0 | 0 | 112 | 7 | 0 | 23 | 0 | 0 | 30 | 225 |
| 08:15 | 0 | 95 | 3 | 0 | 98 | 0 | 0 | 0 | 0 | 0 | 90 | 0 | 0 | 0 | 102 | 11 | 0 | 21 | 0 | 0 | 32 | 232 |
| 08:30 | 0 | 91 | 2 | 0 | 93 | 0 | 0 | 0 | 0 | 0 | 109 | 0 | 0 | 0 | 114 | 10 | 0 | 17 | 0 | 0 | 27 | 234 |
| 08:45 | 0 | 105 | 9 | 0 | 114 | 0 | 0 | 0 | 0 | 0 | 116 | 0 | 0 | 0 | 124 | 9 | 0 | 16 | 0 | 0 | 25 | 263 |
| Total Volume | 0 | 371 | 17 | 0 | 388 | 0 | 0 | 0 | 0 | 0 | 421 | 0 | 0 | 0 | 452 | 37 | 0 | 77 | 0 | 0 | 114 | 954 |
| % App. Total | 0 | 95.6 | 4.4 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 93.1 | 0 | 0 | 0 | 91.1 | 32.5 | 0 | 67.5 | 0 | 0 | 89.1 | 90.7 |
| PHF | 0.000 | 0.883 | 0.472 | 0.000 | 0.851 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.907 | 0.000 | 0.000 | 0.911 | 0.911 | 0.841 | 0.000 | 0.837 | 0.000 | 0.000 | 0.891 | 0.907 |

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 08:00

| Start Time | Oltorf St Southbound | | | | Westbound | | | | Oltorf St Northbound | | | | Thorn-ton Rd Eastbound | | | | | | | | |
|--|----------------------|-------|-------|-------|------------|-------|-------|-------|----------------------|------------|-------|-------|------------------------|-------|------------|-------|-------|-------|-------|------------|--|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1 | | | | | | | | | | | | | | | | | | | | | |
| Peak Hour for Each Approach Begins at: | | | | | | | | | | | | | | | | | | | | | |
| | 07:00 | | | | 07:00 | | | | 08:00 | | | | 08:00 | | | | | | | | |
| +0 mins. | 0 | 80 | 3 | 0 | 83 | 0 | 0 | 0 | 0 | 0 | 6 | 106 | 0 | 0 | 112 | 7 | 0 | 23 | 0 | 30 | |
| +15 mins. | 0 | 95 | 3 | 0 | 98 | 0 | 0 | 0 | 0 | 0 | 12 | 90 | 0 | 0 | 102 | 11 | 0 | 21 | 0 | 32 | |
| +30 mins. | 0 | 91 | 2 | 0 | 93 | 0 | 0 | 0 | 0 | 0 | 5 | 109 | 0 | 0 | 114 | 10 | 0 | 17 | 0 | 27 | |
| +45 mins. | 0 | 105 | 9 | 0 | 114 | 0 | 0 | 0 | 0 | 0 | 8 | 116 | 0 | 0 | 124 | 9 | 0 | 16 | 0 | 25 | |
| Total Volume | 0 | 371 | 17 | 0 | 388 | 0 | 0 | 0 | 0 | 0 | 31 | 421 | 0 | 0 | 452 | 37 | 0 | 77 | 0 | 114 | |
| % App. Total | 0 | 95.6 | 4.4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6.9 | 93.1 | 0 | 0 | 32.5 | 0 | 0 | 67.5 | 0 | 0 | |
| PHF | 0.000 | 0.883 | 0.472 | 0.000 | 0.851 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.646 | 0.907 | 0.000 | 0.000 | 0.911 | 0.841 | 0.000 | 0.837 | 0.000 | 0.891 | |



File Name : HDR-OltorfandThornton-PM
 Site Code : 00000028
 Start Date : 6/2/2015
 Page No : 1

Groups Printed- Autos - Heavy Vehicles

| Start Time | Oltorf Southbound | | | | | | Westbound | | | | | | Oltorf Northbound | | | | | | Thornton Rd Eastbound | | | | | |
|------------------|-------------------|------|-------|------|------------|------------|-----------|------|-------|------|------------|------------|-------------------|------|-------|------|------------|------------|-----------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Int. Total | Left | Thru | Right | Peds | App. Total | Int. Total | Left | Thru | Right | Peds | App. Total | Int. Total | Left | Thru | Right | Peds | App. Total | Int. Total |
| | 16:00 | 0 | 106 | 13 | 0 | 119 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 84 | 0 | 0 | 93 | 0 | 8 | 0 | 9 | 0 | 17 |
| 16:15 | 0 | 152 | 7 | 0 | 159 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 109 | 0 | 0 | 119 | 0 | 8 | 0 | 10 | 0 | 18 | 296 |
| 16:30 | 0 | 136 | 8 | 0 | 144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 120 | 0 | 0 | 140 | 0 | 3 | 0 | 9 | 0 | 12 | 296 |
| 16:45 | 0 | 113 | 11 | 0 | 124 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 117 | 0 | 0 | 132 | 0 | 3 | 0 | 8 | 0 | 11 | 267 |
| Total | 0 | 507 | 39 | 0 | 546 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54 | 430 | 0 | 0 | 484 | 0 | 22 | 0 | 36 | 0 | 58 | 1088 |
| 17:00 | 0 | 134 | 9 | 0 | 143 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 117 | 0 | 0 | 131 | 0 | 10 | 0 | 7 | 0 | 17 | 291 |
| 17:15 | 0 | 182 | 2 | 0 | 184 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 222 | 0 | 0 | 225 | 0 | 21 | 0 | 3 | 0 | 24 | 433 |
| 17:30 | 0 | 132 | 7 | 0 | 139 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 134 | 0 | 0 | 155 | 0 | 7 | 0 | 8 | 0 | 15 | 309 |
| 17:45 | 0 | 136 | 17 | 0 | 153 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 126 | 0 | 0 | 147 | 0 | 28 | 0 | 13 | 0 | 41 | 341 |
| Total | 0 | 584 | 35 | 0 | 619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 59 | 599 | 0 | 0 | 658 | 0 | 66 | 0 | 31 | 0 | 97 | 1374 |
| Grand Total | 0 | 1091 | 74 | 0 | 1165 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 113 | 1029 | 0 | 0 | 1142 | 0 | 88 | 0 | 67 | 0 | 155 | 2462 |
| Approach % | 0 | 93.6 | 6.4 | 0 | 100.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9.9 | 90.1 | 0 | 0 | 100.0 | 0 | 56.8 | 0 | 43.2 | 0 | 100.0 | 100.0 |
| Total % | 0 | 44.3 | 3 | 0 | 47.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4.6 | 41.8 | 0 | 0 | 46.4 | 0 | 3.6 | 0 | 2.7 | 0 | 6.3 | 6.3 |
| Autos | 0 | 1082 | 70 | 0 | 1152 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 111 | 1018 | 0 | 0 | 1129 | 0 | 86 | 0 | 65 | 0 | 151 | 2432 |
| % Autos | 0 | 99.2 | 94.6 | 0 | 98.9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 98.2 | 98.9 | 0 | 0 | 98.9 | 0 | 97.7 | 0 | 97 | 0 | 97.4 | 98.8 |
| Heavy Vehicles | 0 | 9 | 4 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 11 | 0 | 0 | 13 | 0 | 2 | 0 | 2 | 0 | 4 | 30 |
| % Heavy Vehicles | 0 | 0.8 | 5.4 | 0 | 1.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.8 | 1.1 | 0 | 0 | 1.1 | 0 | 2.3 | 0 | 3 | 0 | 2.6 | 1.2 |

| Start Time | Oltorf Southbound | | | | | | Westbound | | | | | | Oltorf Northbound | | | | | | Thornton Rd Eastbound | | | | | |
|--------------|-------------------|-------|-------|-------|------------|------------|-----------|-------|-------|-------|------------|------------|-------------------|-------|-------|-------|------------|------------|-----------------------|-------|-------|-------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Int. Total | Left | Thru | Right | Peds | App. Total | Int. Total | Left | Thru | Right | Peds | App. Total | Int. Total | Left | Thru | Right | Peds | App. Total | Int. Total |
| | 17:00 | 0 | 134 | 9 | 0 | 143 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 117 | 0 | 0 | 131 | 0 | 10 | 0 | 7 | 0 | 17 |
| 17:15 | 0 | 182 | 2 | 0 | 184 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 222 | 0 | 0 | 225 | 0 | 21 | 0 | 3 | 0 | 24 | 433 |
| 17:30 | 0 | 132 | 7 | 0 | 139 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 134 | 0 | 0 | 155 | 0 | 7 | 0 | 8 | 0 | 15 | 309 |
| 17:45 | 0 | 136 | 17 | 0 | 153 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 126 | 0 | 0 | 147 | 0 | 28 | 0 | 13 | 0 | 41 | 341 |
| Total Volume | 0 | 584 | 35 | 0 | 619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 59 | 599 | 0 | 0 | 658 | 0 | 66 | 0 | 31 | 0 | 97 | 1374 |
| % App. Total | 0 | 94.3 | 5.7 | 0 | 100.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 91 | 0 | 0 | 100.0 | 0 | 68 | 0 | 32 | 0 | 100.0 | 100.0 |
| PHF | 0.000 | 0.802 | 0.515 | 0.000 | 0.841 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.702 | 0.675 | 0.000 | 0.000 | 0.731 | 0.000 | 0.589 | 0.000 | 0.596 | 0.000 | 0.591 | 0.793 |

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 17:00

| Start Time | Oltorf Southbound | | | | Westbound | | | | Oltorf Northbound | | | | Thornton Rd Eastbound | | | | | | | | | |
|--|-------------------|------|-------|------|------------|------|------|-------|-------------------|------------|------|------|-----------------------|------|------------|------|------|-------|------|------------|------------|--|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Int. Total | |
| Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1 | | | | | | | | | | | | | | | | | | | | | | |
| Peak Hour for Each Approach Begins at: | | | | | | | | | | | | | | | | | | | | | | |
| | 16:00 | | | | 16:00 | | | | 17:00 | | | | 17:00 | | | | | | | | | |
| +0 mins. | 0 | 134 | 9 | 0 | 143 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 117 | 0 | 0 | 131 | 10 | 7 | 0 | 17 | | |
| +15 mins. | 0 | 182 | 2 | 0 | 184 | 0 | 0 | 0 | 0 | 0 | 3 | 222 | 0 | 0 | 225 | 21 | 0 | 3 | 0 | 24 | | |
| +30 mins. | 0 | 132 | 7 | 0 | 139 | 0 | 0 | 0 | 0 | 0 | 21 | 134 | 0 | 0 | 155 | 7 | 0 | 8 | 0 | 15 | | |
| +45 mins. | 0 | 136 | 17 | 0 | 153 | 0 | 0 | 0 | 0 | 0 | 21 | 126 | 0 | 0 | 147 | 28 | 0 | 13 | 0 | 41 | | |
| Total Volume | 0 | 584 | 35 | 0 | 619 | 0 | 0 | 0 | 0 | 0 | 59 | 599 | 0 | 0 | 658 | 66 | 0 | 31 | 0 | 97 | | |
| % App. Total | 0 | 94.3 | 5.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 91 | 0 | 0 | 0 | 68 | 0 | 32 | 0 | 0 | | |
| PHF | .000 | .802 | .515 | .000 | .841 | .000 | .000 | .000 | .000 | .000 | .702 | .675 | .000 | .000 | .731 | .589 | .000 | .596 | .000 | .000 | .591 | |

GRAM Traffic, Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

Site Code: 727
Station ID:
Thornton Rd
South of of Oltorf
Latitude: 0' 0.0000 Undefined

| Start Time | 02-Jun-15 Tue | Southbound | | Hour Totals | | Northbound | | Hour Totals | | Combined Totals | |
|--------------------|------------------|------------------|--------------|-------------------|-----------|--------------|--------------|-------------|-----------|-----------------|--------------|
| | | Morning | Afternoon | Morning | Afternoon | Morning | Afternoon | Morning | Afternoon | Morning | Afternoon |
| 12:00 | | 2 | 15 | | | 4 | 21 | | | | |
| 12:15 | | 6 | 21 | | | 2 | 14 | | | | |
| 12:30 | | 2 | 17 | | | 3 | 23 | | | | |
| 12:45 | | 3 | 24 | 13 | 77 | 5 | 21 | 14 | 79 | 27 | 156 |
| 01:00 | | 5 | 29 | | | 1 | 23 | | | | |
| 01:15 | | 4 | 15 | | | 0 | 20 | | | | |
| 01:30 | | 0 | 32 | | | 1 | 20 | | | | |
| 01:45 | | 0 | 20 | 9 | 96 | 1 | 22 | 3 | 85 | 12 | 181 |
| 02:00 | | 2 | 16 | | | 3 | 14 | | | | |
| 02:15 | | 3 | 18 | | | 0 | 14 | | | | |
| 02:30 | | 4 | 22 | | | 1 | 16 | | | | |
| 02:45 | | 0 | 17 | 9 | 73 | 0 | 14 | 4 | 58 | 13 | 131 |
| 03:00 | | 0 | 21 | | | 2 | 28 | | | | |
| 03:15 | | 3 | 24 | | | 0 | 21 | | | | |
| 03:30 | | 2 | 21 | | | 0 | 13 | | | | |
| 03:45 | | 2 | 19 | 7 | 85 | 1 | 23 | 3 | 85 | 10 | 170 |
| 04:00 | | 0 | 31 | | | 2 | 19 | | | | |
| 04:15 | | 0 | 21 | | | 2 | 19 | | | | |
| 04:30 | | 1 | 30 | | | 0 | 20 | | | | |
| 04:45 | | 0 | 31 | 1 | 113 | 1 | 17 | 5 | 75 | 6 | 188 |
| 05:00 | | 0 | 25 | | | 1 | 21 | | | | |
| 05:15 | | 1 | 42 | | | 1 | 18 | | | | |
| 05:30 | | 2 | 33 | | | 2 | 14 | | | | |
| 05:45 | | 2 | 55 | 5 | 155 | 7 | 23 | 11 | 76 | 16 | 231 |
| 06:00 | | 4 | 26 | | | 2 | 24 | | | | |
| 06:15 | | 1 | 29 | | | 2 | 16 | | | | |
| 06:30 | | 7 | 33 | | | 4 | 15 | | | | |
| 06:45 | | 1 | 30 | 13 | 118 | 6 | 16 | 14 | 71 | 27 | 189 |
| 07:00 | | 11 | 18 | | | 9 | 22 | | | | |
| 07:15 | | 2 | 27 | | | 32 | 26 | | | | |
| 07:30 | | 13 | 21 | | | 26 | 21 | | | | |
| 07:45 | | 9 | 21 | 35 | 87 | 24 | 21 | 91 | 90 | 126 | 177 |
| 08:00 | | 20 | 19 | | | 26 | 24 | | | | |
| 08:15 | | 13 | 15 | | | 33 | 10 | | | | |
| 08:30 | | 16 | 12 | | | 26 | 20 | | | | |
| 08:45 | | 18 | 18 | 67 | 64 | 27 | 9 | 112 | 63 | 179 | 127 |
| 09:00 | | 10 | 21 | | | 21 | 9 | | | | |
| 09:15 | | 19 | 17 | | | 20 | 11 | | | | |
| 09:30 | | 17 | 20 | | | 28 | 8 | | | | |
| 09:45 | | 15 | 19 | 61 | 77 | 33 | 4 | 102 | 32 | 163 | 109 |
| 10:00 | | 11 | 14 | | | 22 | 3 | | | | |
| 10:15 | | 21 | 15 | | | 15 | 12 | | | | |
| 10:30 | | 22 | 14 | | | 14 | 8 | | | | |
| 10:45 | | 9 | 4 | 63 | 47 | 25 | 4 | 76 | 27 | 139 | 74 |
| 11:00 | | 14 | 10 | | | 25 | 8 | | | | |
| 11:15 | | 14 | 1 | | | 16 | 4 | | | | |
| 11:30 | | 14 | 1 | | | 13 | 0 | | | | |
| 11:45 | | 26 | 4 | 68 | 16 | 24 | 5 | 78 | 17 | 146 | 33 |
| Total | | 351 | 1008 | | | 513 | 758 | | | 864 | 1766 |
| Percent | | 25.8% | 74.2% | | | 40.4% | 59.6% | | | 32.9% | 67.1% |
| Grand Total | | 351 | 1008 | | | 513 | 758 | | | 864 | 1766 |
| Percent | | 25.8% | 74.2% | | | 40.4% | 59.6% | | | 32.9% | 67.1% |
| ADT | | ADT 2,587 | | AADT 2,587 | | | | | | | |

Figure 4F-1. Guidelines for the Installation of Pedestrian Hybrid Beacons on Low-Speed Roadways

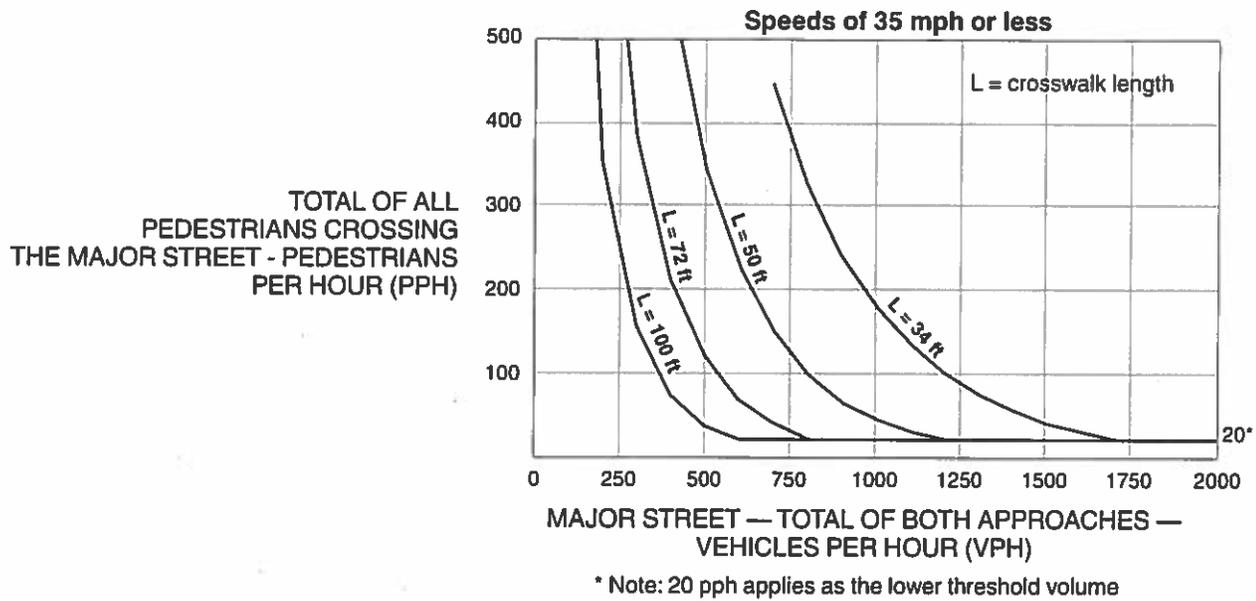
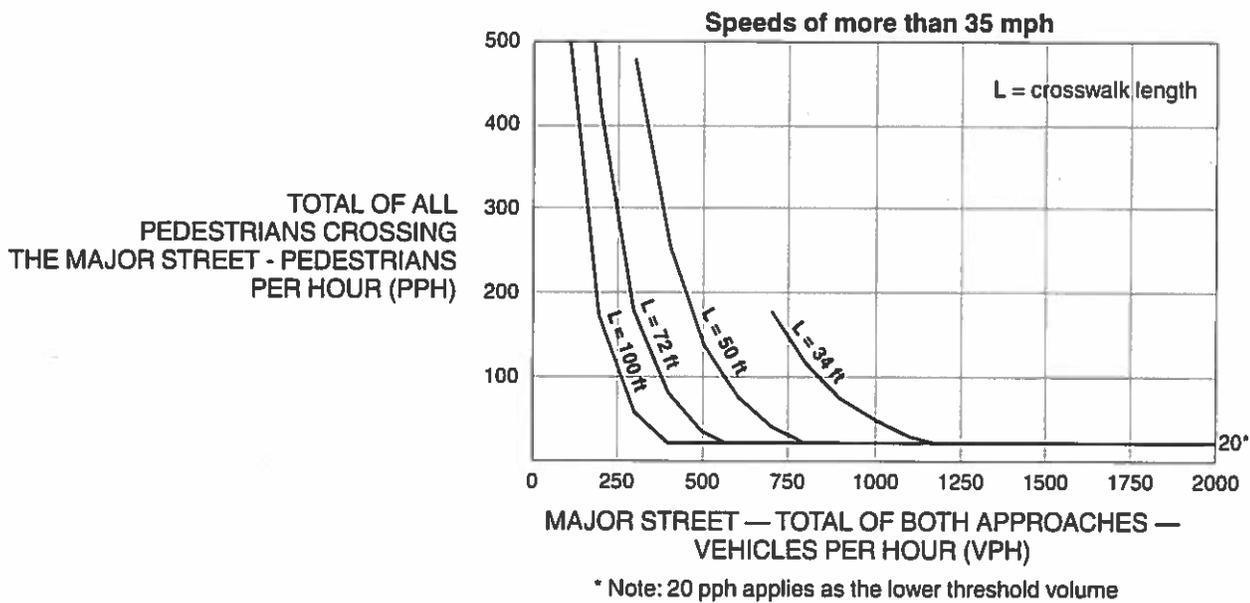


Figure 4F-2. Guidelines for the Installation of Pedestrian Hybrid Beacons on High-Speed Roadways



| Crash Date | Crash Time | Rpt. Street Name | Rpt. Street Sfx | Crash Speed Limit | Rpt. Sec. Street Name | Rpt. Sec. Street Sfx | FHE Colln. ID | Crash Desc | Crash Sev. ID | Day of Wk | |
|------------|------------|------------------|-----------------|-------------------|-----------------------|----------------------|---------------|----------------------------------|---------------|-------------------|-----|
| 7/16/2010 | 6:20 PM | OLDRF | ST | 35 | THORNTON | RD | 20 | SD BOTH GOING STRAIGHT-REAR END | 2 | NON-INCAPACTATING | FRI |
| 1/11/2011 | 11:35 AM | OLDRF | ST | 35 | THORNTON | RD | 21 | SD BOTH GOING STRAIGHT-SIDESWIPE | 5 | NOT INURED | TUE |
| 4/20/2011 | 8:06 PM | OLDRF | ST | 35 | THORNTON | RD | 34 | OD ONE STRAIGHT-ONE LEFT TURN | 2 | NON-INCAPACTATING | WED |
| 5/22/2011 | 8:54 PM | THORNTON | RD | 0 | OLDRF | ST | 1 | OMV VEHICLE GOING STRAIGHT | 0 | UNKNOWN | SUN |
| 11/1/2011 | 6:11 PM | THORNTON | RD | 0 | NOT REPORTED | | 3 | OMV VEHICLE TURNING LEFT | 5 | NOT INURED | TUE |
| 3/23/2012 | 5:46 PM | OLDRF | ST | 35 | THORNTON | RD | 20 | SD BOTH GOING STRAIGHT-REAR END | 5 | NOT INURED | FRI |
| 4/1/2012 | 11:23 AM | OLDRF | ST | 35 | THORNTON | RD | 1 | OMV VEHICLE GOING STRAIGHT | 2 | NON-INCAPACTATING | SUN |
| 5/25/2012 | 3:15 AM | THORNTON | RD | 30 | OLDRF | ST | 5 | OMV OTHER | 0 | UNKNOWN | FRI |
| 6/19/2012 | 4:44 PM | THORNTON | ST | 35 | THORNTON | RD | 10 | ANGLE - BOTH GOING STRAIGHT | 5 | NOT INURED | WED |
| 8/1/2012 | 12:06 PM | OLDRF | ST | 35 | THORNTON | RD | 22 | SD ONE STRAIGHT-ONE STOPPED | 2 | NON-INCAPACTATING | WED |
| 9/23/2012 | 3:30 AM | THORNTON | RD | 35 | OLDRF | ST | 1 | OMV VEHICLE GOING STRAIGHT | 5 | NOT INURED | SUN |
| 11/7/2013 | 3:54 AM | THORNTON | RD | 30 | OLDRF | ST | 1 | OMV VEHICLE GOING STRAIGHT | 5 | NOT INURED | SAT |
| 2/15/2014 | 7:21 PM | OLDRF | ST | 35 | THORNTON | RD | 22 | SD ONE STRAIGHT-ONE STOPPED | 3 | POSSIBLE INIURY | SAT |
| 8/18/2014 | 5:51 PM | OLDRF | ST | 30 | THORNTON | RD | 21 | SD BOTH GOING STRAIGHT-SIDESWIPE | 5 | NOT INURED | MON |
| 9/15/2014 | 2:59 AM | THORNTON | RD | 25 | W OLTRF | ST | 1 | OMV VEHICLE GOING STRAIGHT | 0 | UNKNOWN | MON |
| 11/20/2014 | 8:02 PM | THORNTON RD | RD | -1 | W OLTRF ST | ST | 11 | ANGLE - ONE STRAIGHT-ONE BACKING | 2 | NON-INCAPACTATING | THU |
| 12/19/2014 | 1:05 PM | OLDRF | ST | 35 | THORNTON | RD | 22 | SD ONE STRAIGHT-ONE STOPPED | 3 | POSSIBLE INIURY | FRI |
| 1/8/2015 | 12:59 PM | OLDRF | ST | 30 | THORNTON | ST | 22 | SD ONE STRAIGHT-ONE STOPPED | 3 | POSSIBLE INIURY | THU |

EDUCATIONAL IMPACT STATEMENT

Prepared for the City of Austin

Austin Independent
School District



PROJECT NAME: 2303 – 2309 Thornton Road

ADDRESS/LOCATION: 2303 – 2309 Thornton Road

CASE #: C14-2015-0047

NEW SINGLE FAMILY

DEMOLITION OF MULTIFAMILY

NEW MULTIFAMILY

TAX CREDIT

SF UNITS: _____ STUDENTS PER UNIT ASSUMPTION
Elementary School: _____ Middle School: _____ High School: _____

MF UNITS: 218 STUDENTS PER UNIT ASSUMPTION
Elementary School: 0.124 Middle School: 0.035 High School: 0.071

IMPACT ON SCHOOLS

The district-wide student yield factor (across all grade levels) is 0.23 for apartment homes. The 218 multifamily unit development is projected to add approximately 50 students across all grade levels to the projected student population. However, because the development is proposing approximately 74% one bedroom apartments, the number of students from this development is likely to be lower than the projected district-wide average of 50. It is estimated that of the 50 students, 27 will be assigned to Zilker Elementary School, 8 to O. Henry Middle School, and 15 to Austin High School.

The percent of permanent capacity by enrollment for SY 2019-20, including the additional students projected with this development, would be within the target range of 75-115% for O. Henry MS (106%) and Austin HS (99%), assuming the mobility rates remain the same. The projected additional students at Zilker ES would increase the 2019-20 percent of permanent capacity from 124% to 128%, and would remain above the target range of 75-115%. However, this calculation assumes the current mobility rate of +38.9%, meaning over 1/3 of Zilker's enrollment are students that transferred from other areas of the district. The administration could limit the number of transfers to accommodate for future student population growth, if needed.

TRANSPORTATION IMPACT

Students within the proposed development attending Zilker ES, O. Henry MS and Austin HS would qualify for transportation. Existing buses could most likely accommodate the additional students.

SAFETY IMPACT

There are no known safety impacts at this time.

Date Prepared: 10/12/15

Director's Signature: Paul Turner

EDUCATIONAL IMPACT STATEMENT

Prepared for the City of Austin

Austin Independent
School District



DATA ANALYSIS WORKSHEET

| | |
|---|--------------------------------|
| ELEMENTARY SCHOOL: Zilker | RATING: Met Standard |
| ADDRESS: 1900 Bluebonnet Lane | PERMANENT CAPACITY: 460 |
| % QUALIFIED FOR FREE/REDUCED LUNCH: 27.51% | MOBILITY RATE: +38.9% |

| POPULATION (without mobility rate) | | | |
|------------------------------------|--------------------|---|---|
| ELEMENTARY SCHOOL STUDENTS | 2014-15 Population | 5- Year Projected Population (without proposed development) | 5-Year Projected Population (with proposed development) |
| Number | 409 | 403 | 430 |
| % of Permanent Capacity | 89% | 88% | 94% |

| ENROLLMENT (with mobility rate) | | | |
|---------------------------------|--------------------|--|--|
| ELEMENTARY SCHOOL STUDENTS | 2014-15 Enrollment | 5- Year Projected Enrollment* (without proposed development) | 5-Year Projected Enrollment* (with proposed development) |
| Number | 568 | 560 | 587 |
| % of Permanent Capacity | 124% | 122% | 128% |

| | |
|---|--------------------------------|
| MIDDLE SCHOOL: O. Henry | RATING: Met Standard |
| ADDRESS: 2610 West 10 th Street | PERMANENT CAPACITY: 945 |
| % QUALIFIED FOR FREE/REDUCED LUNCH: 29.74% | MOBILITY RATE: +2.2% |

| POPULATION (without mobility rate) | | | |
|------------------------------------|--------------------|---|---|
| MIDDLE SCHOOL STUDENTS | 2014-15 Population | 5- Year Projected Population (without proposed development) | 5-Year Projected Population (with proposed development) |
| Number | 871 | 976 | 984 |
| % of Permanent Capacity | 92% | 103 | 104 |

| ENROLLMENT (with mobility rate) | | | |
|---------------------------------|--------------------|--|--|
| MIDDLE SCHOOL STUDENTS | 2014-15 Enrollment | 5- Year Projected Enrollment* (without proposed development) | 5-Year Projected Enrollment* (with proposed development) |
| Number | 890 | 997 | 1,005 |
| % of Permanent Capacity | 94% | 106% | 106% |

EDUCATIONAL IMPACT STATEMENT

Prepared for the City of Austin

Austin Independent School District



HIGH SCHOOL: Austin

RATING: Met Standard

ADDRESS: 1715 W. Cesar Chavez

PERMANENT CAPACITY: 2,205

% QUALIFIED FOR FREE/REDUCED LUNCH: 28.74%

MOBILITY RATE: +6.4%

POPULATION (without mobility rate)

| HIGH SCHOOL STUDENTS | 2014-15 Population | 5- Year Projected Population (without proposed development) | 5-Year Projected Population (with proposed development) |
|-------------------------|--------------------|---|---|
| Number | 1,962 | 2,036 | 2,051 |
| % of Permanent Capacity | 89% | 92% | 93% |

ENROLLMENT (with mobility rate)

| HIGH SCHOOL STUDENTS | 2014-15 Enrollment | 5- Year Projected Enrollment* (without proposed development) | 5-Year Projected Enrollment* (with proposed development) |
|-------------------------|--------------------|--|--|
| Number | 2,087 | 2,166 | 2,181 |
| % of Permanent Capacity | 95% | 98% | 99% |

*The 5-Year Projected Enrollment (with and without the proposed development) is an estimate calculated with the assumption that the stated mobility rates (transfers in and out of the school) remain the same over the 5-year period. These estimates are for the sole purpose of the Educational Impact Statement and should not be used for any other purposes.

CITY OF AUSTIN
WEST BOULDIN CREEK DRAINAGE STUDY
Technical Memorandum No. 1
Del Curto Project Area Phase 1A Study

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- Exhibit 3 - Underground Detention at Del Curto
- Exhibit 4 - Restore Channel from Bluebonnet to Kinney
- Exhibit 5 - Buyouts - Bluebonnet to Kinney
- Exhibit 6 - Curb and Gutter on Bluebonnet
- Exhibit 7 - Detention at 2323 S. Lamar
- Exhibit 8 - Stacked ponds near Bluebonnet
- Exhibit 9 - Install new underground detention facilities
- Exhibit 10 - Conveyance Enhancement between Kinney and Thornton
- Exhibit 11 - Detention at open tract between Kinney and Thornton
- Exhibit 12 - Detention at Confluence with W. Bouldin Creek
- Exhibit 13 - Green Streets – One Way Street Diets on Iva and Delcrest
- Exhibit 14 - Detention at 2303 Thornton
- Exhibit 15 - Conveyance Enhancements Thornton to Confluence

Introduction

The watershed area which contributes to West Bouldin Creek has been experiencing high levels of development / re-development in recent years, with some of the aging drainage infrastructure in the area being pushed to or beyond capacity. The net result is that there are areas within the watershed which have been experiencing flooding, and the likelihood of future flooding is anticipated to remain or increase in the future, unless improvements are made to the drainage infrastructure in the watershed. The purpose of this project is to reduce flooding in the West Bouldin Creek watershed, through the development of a coordinated watershed planning approach, and phased implementation of the planned capital and programmatic improvements according to priority needs and available funding.

A recent Preliminary Engineering Report (PER) identified a targeted area of the watershed, in the vicinity of Del Curto Road and South Lamar Boulevard, based on documented flood history and community input, with corresponding proposed improvements which would address the flood reduction needs, but fully planning/designing/constructing the scope of improvements would take several years. There is a strong desire within the local neighborhoods and the City of Austin to find and implement improvements in a quicker manner, with the project scope having been re-structured to help meet these short-term and long-term goals effectively.

Goals

The overall “Del Curto” drainage improvements project is being conducted in phases, with separate goals for each phase:

1. Phase 1A: Identify and prioritize potential short-term projects to address the most serious flooding concerns in the Del Curto project area.
2. Phase 1B: Design and implement the projects identified in Phase 1A.
3. Phase 2A: Identify and prioritize potential long-term projects to address the remainder of flooding concerns in the Del Curto project area.
4. Phase 2B: Design and implement the projects identified in Phase 2A.

The remainder of this technical memorandum is intended to address the Phase 1A goals, focusing on the most severe flooding concerns in the Del Curto project area, and to identify and prioritize projects which can be rapidly implemented in a cost effective manner. The goals of the other project phases will not be addressed in this technical memorandum, but will follow afterwards.

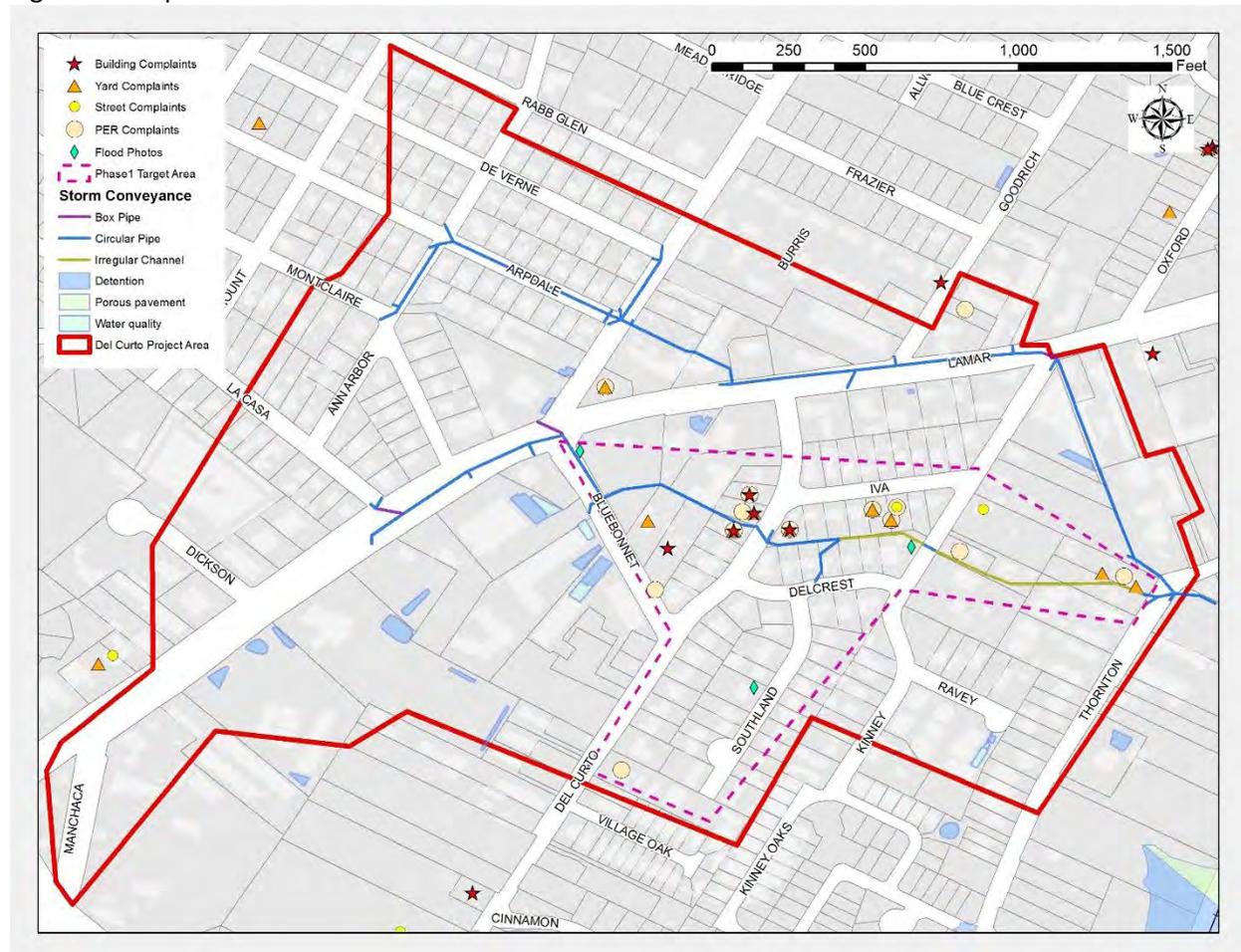
Problem Identification

The initial step in the process is a clear identification of the problems which are affecting the targeted project area. The Watershed Protection Department (WPD) has collected data from public complaints, maintenance records, photos and engineering models over the years, which can graphically identify the areas which are at the greatest risk of flooding. A map of these flood risk areas is shown in Figure 1.

Several types of flood concerns were apparent from the physical conditions and model results presented in the PER:

- Flooding of homes and businesses (structures, high threat)
- Flooding of private properties (non-structural, moderate threat)
- Flooding of roadways (high depth/velocity, high threat)
- Flooding of roadways (low depth/velocity, moderate threat)

Figure 1. Map of Flood Risk Areas



From this information, the portion of the project area having the highest threat from flooding appears to be along the former natural watercourse on the south side of S. Lamar Blvd, from Bluebonnet Lane to Thornton Road. A brainstorming meeting was held on 5-7-2015, with WPD and CAS staff discussing the project concerns, and the consensus opinion was that Phase 1 of the project should focus on reduction of flooding in this highest flood threat area. The remaining areas appear to have the majority of their flooding issues related to curb flows crossing streets and intersections or other low-moderate threat conditions, and will be addressed in Phase 2.

Potential Drainage Improvements

During the staff brainstorming meeting mentioned above, a number of projects / programmatic changes were discussed as having potential for flood reduction benefits in the Phase 1 project area as listed in Table 1. A more detailed assessment of these potential drainage improvements are described and illustrated on the following pages.

| Table 1. Project Alternatives | |
|-------------------------------|---|
| I. Short-Term | |
| 1) | Expanding private detention/WQ facilities |
| 2) | Bypass Bluebonnet to Kinney |
| 3) | Underground detention at Del Curto |
| 4) | Creek restoration |
| 5) | Buyouts |
| 6) | Curb and gutter (Bluebonnet) |
| 7) | Detention at 2323 S. Lamar |
| 8) | Stacked ponds near Bluebonnet |
| 9) | Detention options at Matt's El Rancho (UG) |
| 10) | Conveyance enhancement (open channel/ combined) |
| 11) | Detention at open tract between Kinney and Thornton |
| 12) | Detention and confluence w/ W. Bouldin |
| 13) | Green streets |
| 14) | Detention 2302 Thornton |
| 15) | Conveyance from Thornton to W. Bouldin |
| 16) | Easement acquisition |
| 17) | Rainwater harvesting |
| 18) | Porous Pavement for any current development |
| 19) | Cost participation with new developments |
| 20) | RSMP / Detention waiver + downstream reviews |
| II. Long-Term | |
| 21) | Green roofs |
| 22) | Green streets |
| 23) | RSMP |

Several detention project alternatives are included on the list and are discussed further in this report, but it is important to note that modeling of potential downstream impacts will need to be performed in Phase 1B, to confirm that no negative impacts will occur. An abbreviated estimation process was used to identify the approximate potential for peak flow reduction at each of these sites, these estimates were not determined from hydrologic modeling.

It should also be noted that property values for real estate acquisition costs were based on 2015 Travis County Appraisal District (TCAD) 2015 total appraised values, except where noted for Project 5, where market value comparisons were compiled (data from Zillow.com), with TCAD valuations being 10-30% below market values.

Project #1 - Expand Existing Private Detention

Description:

There are four properties near the intersection of Bluebonnet and S. Lamar which have multiple stormwater detention and water quality ponds on their properties. There is a potential for expansion of these existing detention facilities into adjacent green space to add storage capacity. These existing ponds were designed to manage runoff from the individual sites, and there is little contributing drainage from off-site properties. Discharge from the Matt's facilities is at the surface, while the remainder appear to connect to underground systems. There are varying amounts of green space adjacent to the existing ponds that could be utilized for additional storage volume in these detention facilities.

Flood Reduction Potential:

| <u>Property</u> | <u>Exist. Det. Ponds</u> | <u>Exist. WQ Ponds</u> | <u>Add'l Storage Vol.</u> | <u>Peak Reduction</u> |
|---------------------|--------------------------|------------------------|---------------------------|-----------------------|
| Matt's El Rancho | 4 | 0 | 2.1 ac-ft | -16 cfs* / -55%* |
| Verizon / Walgreens | 1 | 1 | 0.5 ac-ft | -3 cfs / -52% |
| Spaces 2525 | 1 | 1 | 0.8 ac-ft | -4 cfs / -71% |
| Sola City Homes | 1 | 1 | 1.2 ac-ft | -6 cfs / -43% |

* Proposed pond has a different drainage area than the existing pond, so the peak reductions are based on comparison of the proposed condition pond with the un-detained condition, whereas the other comparisons use the existing pond configuration for the initial condition.

Estimated Cost:

| | |
|----------------------|--------------------|
| Engineering | \$230,000 |
| Property Acquisition | \$6,760,000 |
| <u>Construction</u> | <u>\$1,320,000</u> |
| Total Cost | \$8,310,000 |

Potential Advantages and Disadvantages:

If all ponds at the 4 properties are expanded, the peak flow reduction would be at an estimated unit cost of \$286,000/cfs of reduction. There is a decent amount of peak reduction available and some of the space could be utilized for water quality enhancements with these pond expansions. However, with the limited amount of green space in this vicinity and several large trees in the potential project area, the impacts to the natural and visual environment are likely to be viewed negatively by the property owners and the environmental community. Also, with the high development potential in this area, property acquisition costs are significant.

Project #2 - Bypass System in ROW – Bluebonnet to Kinney

Description:

This project would add a storm sewer bypass system from where the existing storm sewer turns eastward from Bluebonnet and would tie back in to the existing infrastructure at Kinney, with the intent to reduce flow and subsequent flooding between these locations.

As suggested by the alternatives in the PER; a bypass system can be used to alleviate the undersized conduit and swale from Bluebonnet to Kinney, the area that experiences the most severe flooding in the project area. This conveyance system can be implemented in existing ROW beginning at the sag on Bluebonnet connecting to existing systems conveying runoff from the basin headwaters along Lamar. The alignment of the bypass system will carry runoff to the east to Del Curto, along Del Curto to Delcrest, along Delcrest to Kinney and along Kinney to the west to the existing channel on the north side of Kinney at the sag. As this diversion is directed away from a natural course there will be sections of pipe that run deep, “bucking grade”, which has higher costs for installation and maintenance. The deep piping can also facilitate a wider range of potential lateral configurations.

This trunk will be approximately 1,345 feet and include 15 junction boxes facilitating system laterals and bends.

| Line | Piping size | Length | Inlets | Junction Boxes |
|---------------------|-------------|--------|--------|----------------|
| Bypass Trunk | 60" | 1,330 | | |
| | 72" | 15 | 5 | 15 |

There are numerous collection options that can serve the area; lateral and inlet arrangement is crucial to meet design standards; scoping may allow for these to be minimized while maintaining effectiveness and leaving the door open for upgrades to the system at a later date.

Lateral Option A

The lateral arrangement as seen connecting to the similar trunk in PER Alternative 6, will include 4 major laterals to the system on Del Curto, Southland, Iva, and Kinney. This collection arrangement will address existing issues with ponding and clear roadway widths that do not comply with design standards.

| Line | Piping size | Length | Inlets | Junction Boxes |
|--------------------------|-------------|--------|--------|----------------|
| Del Curto Lateral | 18" | 235 | | |
| | 24" | 295 | 4 | 2 |
| Southland Lateral | 18" | 255 | | |
| | 30" | 440 | 5 | 5 |

| | | | | |
|-----------------------|-----|-----|---|---|
| Kinney Lateral | 18" | 126 | | |
| | 24" | 120 | 2 | 1 |
| | | | | |
| Iva Lateral | 18" | 12 | | |
| | 24" | 870 | 3 | 7 |

Lateral Option B

Option B will reduce lateral application as compared to option A. Considering the complaints registered in the area; few are with regard to ponding or clear width. Option B will allow water to flow in the streets to the sags at Bluebonnet and Del Curto as they do today, but at these places add requisite collection to keep flows below the curb. The only major lateral will carry flow from the sag at Del Curto to the trunk line at Del Curto and Delcrest. With the bypass system as currently described there is sufficient elevation to drain a lateral from Del Curto. Option B will minimize cost but likely not meet street clear zone/ponded width requirements.

Flood Reduction Potential:

This project would divert flows away from the areas at the greatest flood risk, and could benefit from other projects (upstream detention to reduce flows to this point, upstream diversion to reduce flows to this point, etc). There is also a potential for flows to increase downstream of Kinney, which would necessitate coupling with other upstream and/or downstream projects.

Estimated Cost:

| | <u>Main Bypass</u> | <u>Laterals- Option A</u> | <u>Laterals- Option B</u> |
|----------------------|--------------------|---------------------------|---------------------------|
| Engineering | \$151,000 | \$138,000 | \$17,200 |
| Property Acquisition | \$0 | \$0 | \$0 |
| <u>Construction</u> | <u>\$867,000</u> | <u>\$793,000</u> | <u>\$99,000</u> |
| Total Cost | \$1,020,000 | \$931,000 | \$116,000 |

Potential Advantages and Disadvantages:

This project has the potential to fully alleviate the flooding concerns along the natural stream course between Bluebonnet and Kinney thru the diversion of upstream flows, leaving the existing infrastructure to handle only local flows. One major advantage of this project is that no property acquisition is required. However, this project does not provide for any potential water quality enhancements.

Project #3 - Underground Detention at Del Curto

Description:

The intersection of Del Curto and Bluebonnet is situated advantageously for an underground storage system. Although respectively little flow passes through this intersection, there are more than two acres of highly impervious area that drains thru this intersection. Runoff from 2520 Bluebonnet and 2602 Del Curto that drains onto Del Curto appears to flow across the street and ultimately through 2500 and 2507 Del Curto toward Southland Drive. If this water could be captured at the street, the benefits could be twofold; first, some runoff that flows through yards could be diverted and second, there is detention potential.

Typical design for underground storage is to use conduit in parallel rather than a single vault because of constructability and cost advantages. To achieve the desired detention volume, a network of TxDOT standard culverts could be used. These are implementable as cast-in-place or precast, and can have a variety of sizes. The proposed location is on the hill above Del Curto/ Delcrest allowing the outlet for a deep structure to drain via gravity, requiring no pumping.

Flood Reduction Potential:

| <u>Property</u> | <u>Exist. Det. Ponds</u> | <u>Exist. WQ Ponds</u> | <u>Add'l Storage Vol.</u> | <u>Peak Reduction</u> |
|-----------------|--------------------------|------------------------|---------------------------|-----------------------|
| Public ROW | 0 | 0 | 0.9 ac-ft | -4 cfs / -28% |

Estimated Cost:

| | |
|----------------------|------------------|
| Engineering | \$161,000 |
| Property Acquisition | \$0 |
| <u>Construction</u> | <u>\$925,000</u> |
| Total Cost | \$1,090,000 |

Potential Advantages and Disadvantages:

The peak flow reduction would be at an estimated unit cost of \$273,000/cfs of reduction. If a bypass system were to be implemented, then storage at this location could become integrated with that system, reducing cost for any outlet apportioned to this sub project. This detention and a bypass option would function well together, if underground detention is desired.

Project #4 - Restore Channel from Bluebonnet to Kinney

Description:

Creek restoration through the 2300 block of S. Lamar and 2200 block of Delcrest / Iva is one option to alleviate drainage problems on these blocks. Initially, developers to the area built homes along the original stream through these blocks and some flow was collected via storm sewer. With the continued development of the neighborhood, existing infrastructure has been overwhelmed and runoff no longer is conveyed effectively in the sewer. Overflow is consistently conveyed overland through residents' yards. The drainage path is poorly defined and reportedly causes flooding of many of the homes on these blocks. The surface drainage swale has neither the capacity to handle flood flows, nor does it have the ecological character of the original watercourse. While the restoration of the stream to a more natural state is technically possible, it would likely require the buyout of all adjacent properties, which would make this project prohibitively expensive. The option under consideration would be for an engineered channel for additional conveyance capacity.

Flood Reduction Potential:

A quick normal depth estimate of the potential capacity for a 25' wide channel would be 150-200 cfs in this vicinity, which could contain a significant portion of the flood flows. With this option, restoration of the creek serving the area will begin near 2538 Bluebonnet Lane where runoff from Lamar, Del Curto Road south of Bluebonnet, and Bluebonnet Lane accumulate at the sag in the roadway. The channel will measure approximately 925 feet Bluebonnet Lane to Kinney Road assuming the channel alignment will follow that of the flow accumulation path (and undersized conduit) and outfall into the existing stream between Kinney and Thornton Road. The two major segments of this channel are Bluebonnet to Del Curto and Del Curto to Kinney. Upsizing of street crossings will be required at Del Curto, Kinney and Thornton.

| Segment | Q25 (adapted from PER) (cfs) | US FL (existing piping) | DS FL (existing piping) | Segment Length (ft.) | Roadway Elevation |
|----------------------------|---------------------------------------|-------------------------------|-------------------------------|----------------------------|----------------------|
| Bluebonnet Rd | 112 | | | | |
| Bluebonnet to Del Curto | 129 | 607.82 | 590.62 | 512.7 | |
| Del Curto Crossing | 204 | | | | 600 |
| Del Curto to Kinney | 145 | 589.7 | 580 | 412.1 | |
| Kinney Crossing | 323 | | | | 584.75 |
| Kinney to Thornton | 358 | 578.7 | 560.5 | 652.3 | |
| Thornton Crossing | 363 | | | | 564 |
| Thornton to Outfall | 363 | 559.4 | 554 | 152.8 | |

Estimated Cost:

| | |
|----------------------|------------------|
| Engineering | \$137,000 |
| Property Acquisition | \$730,000 |
| <u>Construction</u> | <u>\$788,000</u> |
| Total Cost | \$1,660,000 |

Potential Advantages and Disadvantages:

Construction of a channel through these blocks will provide needed conveyance and confine runoff. In addition to added capacity, a channel is an aesthetically pleasing natural long term solution. Channels provide both reach storage and water quality benefits when compared to storm sewer alternatives. The disadvantage to a channel in this circumstance is need for easements; as there are currently no drainage easements from Bluebonnet to Del Curto on the 2300 block of S. Lamar and easements on the 2200 block of Iva/Delcrest may be insufficient.

Maintenance of the proposed channel would be a critical component of the effectiveness of this project, with debris or vegetation buildup potentially removing the flood reduction benefits. The deficient drainage in the area is affecting most parcels on these two blocks. If a channel is chosen as a preferred option and the flow is contained as desired there is a possibility of the houses at 2300, 2302, and 2301 Del Curto being in conflict with the proposed channel.

Project #5 - Buyouts - Bluebonnet to Kinney

Description:

Buyouts are another option that can be used in conjunction with engineered solutions for collection, conveyance, and detention. Buyouts can permanently remove privately owned properties from problem areas providing a long term solution to these drainage problems, which can also provide opportunities for additional flood mitigation projects to make use of the property acquisition (channel restoration or detention could be viable supplemental projects in this location).

Because of inadequate capacity of the existing drainage infrastructure, there is often significant overland flow and ponding that regularly floods the homes at 2300, 2301, and 2302 Del Curto. These homes were constructed along the low path through these blocks and have upwards of 40 acres draining across their boundaries.

Flood Reduction Potential:

This project would not reduce flooding at all, but would provide benefits through the removal of properties at risk during flood events.

Estimated Cost:

| | |
|----------------------|-------------|
| Engineering | \$0 |
| Property Acquisition | \$1,190,000 |
| <u>Construction</u> | <u>\$0</u> |
| Total Cost | \$1,190,000 |

Potential Advantages and Disadvantages:

2302 and 2301 Del Curto are particularly good candidates for buyouts. 2302 Del Curto is located directly on the flow accumulation path and existing storm sewer. There is an area inlet in the back of the lot that frequently surcharges sending storm water from the storm sewer into the property. There appears to be no drainage easement on the parcel, but it is understood that the existing drain may pass underneath the house. Any channel alignment through the property will likely be in conflict with the house.

2301 Del Curto faces a similar problem, the overland flow path as it crosses Del Curto to the north encounters a choke point between the side of the house and the adjoining property 2210 Delcrest Drive. There is a 5' Drainage/PUE easement on the lot(s) which is insufficient for placement of a new channel.

Voluntary buyouts are an option even if a channel alternative isn't chosen; acquisition of these lots and removal of the houses will address the more severe complaints in the area and provide real estate for parkland, water quality, or detention facilities.

Project #6 - Curb and Gutter on Bluebonnet

Description:

Two parcels on the 2300 block of S. Lamar Blvd are experiencing localized flooding thought to be caused by inability of the street to carry runoff. At 2505 and 2507 Bluebonnet Lane there is no curb and gutter. Complaints in the area indicate that runoff from the southwest flows across Bluebonnet and across the yards from southwest to northeast. The currently proposed solution for this problem is to install curb and gutter for the length of these two properties.

It appears that runoff from the south on Del Curto will primarily stay on Del Curto as the roadway splits at the intersection with Bluebonnet Lane. Some water may divert during larger events but the drainage area that contributes directly to this issue is relatively small. The roadway in this segment of Bluebonnet Lane looks to have a super-elevation favoring conveyance on the north side of the roadway and with the lack of curb and gutter this runoff is passing through the yards and encroaching on the homes. Homeowners at this problem area have made makeshift curbs along their existing driveways and have raised planter boxes working as barricades. The effectiveness of these ad hoc implementations are unknown, but they indicate that a curb and gutter project might be welcome.

Flood Reduction Potential:

This project would retain flows in the street from entering the 2 properties currently experiencing flood issues.

Estimated Cost:

| | |
|----------------------|-----------------|
| Engineering | \$9,460 |
| Property Acquisition | \$0 |
| <u>Construction</u> | <u>\$54,400</u> |
| Total Cost | \$63,900 |

Potential Advantages and Disadvantages:

While this is an isolated issue that only affects these two parcels, it may be constructed with the proposed bypass project as part of a complete street solution. The curb construction would need to be accompanied with driveway improvements to keep flows in City right of way.

Project #7 - Detention at 2323 S. Lamar

Description:

2323 South Lamar is currently an asphalt paved lot that has development plans in process for a Chick-fil-A restaurant in the near future. The potential exists to supplement the detention requirement for this re-development (10% peak reduction required by the recent S. Lamar ordinance) for additional storage, especially if coupled with the adjacent vacant lot at the rear of the property (2421 Bluebonnet Rd). Together this could make approximately half an acre of land located along the natural watercourse available for detention.

Flood Reduction Potential:

| <u>Property</u> | <u>Exist. Det. Ponds</u> | <u>Exist. WQ Ponds</u> | <u>Add'l Storage Vol.</u> | <u>Peak Reduction</u> |
|-----------------|--------------------------|------------------------|---------------------------|-----------------------|
| 2323 S. Lamar | 0 | 0 | 2.7 ac-ft | -12 cfs / -8% |

Estimated Cost:

| | |
|----------------------|------------------|
| Engineering | \$46,100 |
| Property Acquisition | \$555,000 |
| <u>Construction</u> | <u>\$265,000</u> |
| Total Cost | \$866,000 |

Potential Advantages and Disadvantages:

The peak flow reduction would be at a unit cost of \$72,200/cfs of reduction. 2421 Bluebonnet Road is currently uninhabited as it has tremendous flooding issues, usage of this land would likely be less of a challenge than the neighboring 2323 S. Lamar. 2323 S. Lamar is a prime location for a detention project as it is along the natural watercourse in the area and is adjacent to the proposed bypass system. Partnering with developers may be possible as there is currently a permit in process, but the stage of development is currently unknown and a partnership may not be preferred by the owners.

Project #8 - Stacked ponds near Bluebonnet

Description:

This project would involve reconstructing the existing detention & separate water quality ponds at 3 properties along Bluebonnet into combined detention / WQ ponds, with the 2 retained volumes stacked one atop the other.

Flood Reduction Potential:

There is a potential to add detention volume through lowering the pond bottom, and for the purposes of this estimate, an additional 1' of depth was assumed across the pond footprints.

| <u>Property</u> | <u>Exist. Det. Ponds</u> | <u>Exist. WQ Ponds</u> | <u>Add'l Storage Vol.</u> | <u>Peak Reduction</u> |
|---------------------|--------------------------|------------------------|---------------------------|-----------------------|
| Verizon / Walgreens | 1 | 1 | 0.05 ac-ft | -0.3 cfs / -5% |
| Spaces 2525 | 1 | 1 | 0.04 ac-ft | -0.2 cfs / -3% |
| Sola City Homes | 1 | 1 | 0.05 ac-ft | -0.3 cfs / -2% |

Estimated Cost:

| | |
|----------------------|------------------|
| Engineering | \$71,000 |
| Property Acquisition | \$1,560,000 |
| <u>Construction</u> | <u>\$327,000</u> |
| Total Cost | \$1,960,000 |

Potential Advantages and Disadvantages:

If all 3 ponds are modified, the peak flow reduction would be at a unit cost of \$2,450,000/cfs of reduction. Exhibit #8 shows the locations of existing water quality/detention ponds near Bluebonnet that could possibly be used as stacked ponds to gain more detention. The principle is to build vertically, creating more storage volume in the same footprint as the existing ponds. However, at these locations there is insufficient elevation difference between the tops of the ponds and the existing areas that would flow into the ponds, but instead of raising the top of the ponds, the bottoms could be lowered, with a syphon type outfall to permanently retain a small WQ volume in the filter media.

Project #9 - Install new underground detention facilities

Description:

This project proposes to construct new detention facilities under the existing parking lots at Matt’s El Rancho. Site A would be under the primary front parking area, and Site B would be under the rear parking area. There are approximately 10 acres of headwaters above Matt’s El Rancho that accumulate on Lamar Blvd and are conveyed via curb and gutter. It may be possible to collect some of this runoff and route it into an underground facility that either feeds back into the existing storm sewer on Lamar or reroutes runoff from Lamar and outfalls with existing Matt’s El Rancho runoff.

Flood Reduction Potential:

| <u>Property</u> | <u>Exist. Det. Ponds</u> | <u>Exist. WQ Ponds</u> | <u>Add’l Storage Vol.</u> | <u>Peak Reduction</u> |
|-------------------|--------------------------|------------------------|---------------------------|-----------------------|
| A) Matt’s (front) | 2 | 0 | 1.4 ac-ft | -10 cfs* / -18%* |
| B) Matt’s (back) | 2 | 0 | 4.6 ac-ft | -24 cfs* / -35%* |

* Proposed pond has a different drainage area than the existing pond, so the peak reductions are based on comparison of the proposed condition pond with the un-detained condition, whereas the other comparisons use the existing pond configuration for the initial condition.

Estimated Cost:

| | <u>Site A</u> | <u>Site B</u> |
|----------------------|--------------------|--------------------|
| Engineering | \$270,000 | \$965,000 |
| Property Acquisition | \$1,040,000 | \$2,430,000 |
| <u>Construction</u> | <u>\$1,550,000</u> | <u>\$5,550,000</u> |
| Total Cost | \$2,860,000 | \$8,950,000 |

Potential Advantages and Disadvantages:

There is not sufficient contributing drainage area available to support construction of both sites; construction of Site A would be at a peak flow reduction unit cost of \$286,000/cfs of reduction, and construction of Site B would be at a peak flow reduction unit cost of \$373,000/cfs of reduction.

There are numerous challenges associated with this project. First would be obtaining permission from Matt’s which often uses most of its parking area, making construction a potential hardship. Second, and a more fundamental issue, would be outfalling detained storm water. At the north end of Matt’s on Lamar is the first curb inlet of the existing system that runs down Lamar toward the Del Curto project area; this would be the preferred location to release the outflow from the detention system. This first run of storm sewer starts at the curb inlet here having a flowline elevation of 643.29 and a top of approximately 647. This is less than 4’ of utilizable elevation, little when considering that the existing parking lot slopes to the southeast, away from Lamar.

To effectively use this area there would likely need to be improvements to either the storm sewer on Lamar or the storm sewer that Matt's runoff uses that flows through the Walgreens parking lot. If these infrastructure improvements were made, Matt's could provide a generous amount of storage to this project area.

There are also quite a few heritage trees scattered through the parking areas, potentially dividing up the potential storage areas into less efficient / more expensive shapes.

Project #10 - Conveyance Enhancement between Kinney and Thornton

Description:

There is an existing channel beginning between 2307 and 2309 Kinney. The channel curves to the east toward the back of these lots crossing a corner of 2304 Thornton, and flows through 2300 Thornton to an existing culvert at Thornton Road.

There have been numerous complaints and concerns on this block with regard to the existing channel. From logged complaints there are culvert capacity and backwater problems at Thornton Road. Additionally the City has concerns of erosion of the watercourse behind the townhouses at 2304 Thornton. While erosion is a natural occurrence in waterways, it can be exacerbated by overloading. The proposed solutions for this block are either channel improvement or bypass system or a combined channel/storm sewer system.

Among choices to improve conveyance is to improve the channel. Channel improvement will include augmentation of the channel about choke points, allowing collected flows to be confined within the banks, and potentially the lining of select areas. Side slope lining can be done to match existing limestone blocks, preventing erosion along bends, and improving conveyance at key locations.

Flood Reduction Potential:

While there have not been flooding complaints noted along this reach, the current channel is extremely constricted and has dense vegetation in several locations, making it seem possible that some degree of flooding could be currently be occurring, even if no complaints have been noted. There is also a potential for flood levels to increase from some of the other proposed projects.

Estimated Cost:

| | |
|----------------------|------------------|
| Engineering | \$125,000 |
| Property Acquisition | \$241,000 |
| <u>Construction</u> | <u>\$718,000</u> |
| Total Cost | \$1,080,000 |

Potential Advantages and Disadvantages:

Unlike residents to the south who are regularly flooded by the headwaters of this existing channel, owners along this creek segment have knowingly purchased along a creek. As an aesthetically pleasing feature this creek could potentially flourish without the overloading it experiences today. Suggested engineering options such as a 6'x6' channel would detract from the ambiance of the natural creek or the slightly improved portions with limestone lining. Another option to improve conveyance with minimal impact to the existing creek is installation of a storm sewer system to function in tandem with the existing channel. There are no current designs for a storm sewer system on this block, nor any criteria for the functionality of the system; whether it would be primary or secondary conveyance

mechanism, if the storm sewer would only carry flows from the west side of the block to the east end or to the confluence with West Bouldin.

There are numerous challenges to a combined channel/storm sewer system. The storm sewer system will need to be located on either side of the channel where there is little or no easement. Along with space requirements there may be conflicts with existing structures and large trees, depending on the alignment chosen. A combined system offers very little increase in capacity relative to the space needed to install the storm sewers, therefore sizing and costs were not developed for this option.

Project #11 - Detention at open tract between Kinney and Thornton

Description:

There are approximately 1.5 acres of undeveloped land just south of Lamar between Kinney and Thornton that has been proposed as a site for stormwater detention. There are around 33 acres that drain through this undeveloped tract of land, the majority of this is runoff from Lamar conveyed through storm sewer. Detainment at this site would involve diverting water in the storm sewer into a newly developed pond and discharging it back into sewer to cross Thornton Road towards the confluence of the Del Curto area with West Bouldin Creek.

Flood Reduction Potential:

| <u>Property</u> | <u>Exist. Det. Ponds</u> | <u>Exist. WQ Ponds</u> | <u>Add'l Storage Vol.</u> | <u>Peak Reduction</u> |
|------------------|--------------------------|------------------------|---------------------------|-----------------------|
| 2207-2209 Kinney | 0 | 0 | 7.4 ac-ft | -23 cfs / -21% |

Estimated Cost:

| | |
|----------------------|------------------|
| Engineering | \$58,000 |
| Property Acquisition | \$2,250,000 |
| <u>Construction</u> | <u>\$338,000</u> |
| Total Cost | \$2,650,000 |

Potential Advantages and Disadvantages:

The peak flow reduction would be at a unit cost of \$115,000/cfs of reduction. While this facility would not provide any direct flood reduction for the Phase 1 project area, it could be used if needed to mitigate increases in basin runoff from implementation of other projects from both Phases 1 and 2.

The cost of detention at this site would be high mainly as a result of land values. Further consideration will be needed with regard to the outlet from the pond; to not produce additional flooding downstream along West Bouldin creek; upsizing of the fallout that crosses Thornton may need to be upsized as well.

Project #12 - Detention at Confluence with W. Bouldin Creek

Description:

Downstream of this project area where runoff converges with West Bouldin Creek, this tributary crosses the backs of several lots along Thornton. Presumably the backs of these lots have little promise for future development as they are near, inside, or encompassed by the creek's floodplain. There is approximately one acre of land that could be usable for storage. While storing water here cannot provide benefits to residents in the Del Curto area; it could possibly be used to mitigate any increased flows from improved conveyance upstream. There is a possibility that this area can be used as either inline detention from the project area or for peak shaving from upstream on West Bouldin Creek.

Flood Reduction Potential:

| <u>Property</u> | <u>Exist. Det. Ponds</u> | <u>Exist. WQ Ponds</u> | <u>Add'l Storage Vol.</u> | <u>Peak Reduction</u> |
|--------------------|--------------------------|------------------------|---------------------------|-----------------------|
| 2111-2209 Thornton | 0 | 0 | 5.4 ac-ft | -13 cfs / -5% |

Estimated Cost:

| | |
|----------------------|------------------|
| Engineering | \$77,200 |
| Property Acquisition | \$1,180,000 |
| <u>Construction</u> | <u>\$444,000</u> |
| Total Cost | \$1,700,000 |

Potential Advantages and Disadvantages:

The peak flow reduction would be at an estimated unit cost of \$131,000/cfs of reduction. If this area were combined with 2303 Thornton the total area & volume would increase, thereby increasing overall performance.

There would be significant costs associated with both property acquisition and implementation.

Project #13 - Green Streets – One Way Street Diets on Iva and Delcrest

Description:

In order to mitigate infill development in the watershed and project area, the idea of transforming both Iva and Delcrest into green streets has been proposed. While any low impact improvements to the area will need to be thoroughly vetted, possibilities include reduction in pavement area by turning Iva and Delcrest into one-way streets, each transporting traffic in the opposite direction. This, in theory, would permit the pavement width to be reduced.

Flood Reduction Potential:

The reduction of impervious area would very slightly reduce the runoff in the target area, but the reductions are estimated at slightly less than 1 cfs.

Estimated Cost:

| | |
|----------------------|------------------|
| Engineering | \$109,000 |
| Property Acquisition | \$0 |
| <u>Construction</u> | <u>\$628,000</u> |
| Total Cost | \$737,000 |

Potential Advantages and Disadvantages:

The peak flow reduction would be at an estimated unit cost of \$737,000/cfs of reduction. Implementation of a low impact practices here would likely include reconstruction of pavement using a porous material, concrete or pavers, and base, as well as vegetated swales to convey runoff. The project would also have benefits to water quality, traffic calming, and could provide a peaceful aesthetic to the area.

Concerns include interim accessibility on Southland Drive and required street widths for passage of emergency vehicles.

Project #14 - Detention at 2303 Thornton

Description:

2303 Thornton is a parcel that appears to be currently under development. Although there is no construction activity at the moment, the parcel is surrounded with construction fencing and appears to have already been cleared. This lot is approximately 1.8 acres and could offer upwards of 9 acre-feet of storage. This is a very significant volume as approximately 80 acres of the Del Curto neighborhood drain to this parcel. This piece of land could offer significant peak outflow control and serve as dual purpose land. Residents of this area are consistently asking for additional park land and this could easily be transformed into a youth soccer field or dog park.

Flood Reduction Potential:

| <u>Property</u> | <u>Exist. Det. Ponds</u> | <u>Exist. WQ Ponds</u> | <u>Add'l Storage Vol.</u> | <u>Peak Reduction</u> |
|-----------------|--------------------------|------------------------|---------------------------|-----------------------|
| 2303 Thornton | 0 | 0 | 9.0 ac-ft | -21 cfs / -8% |

Estimated Cost:

| | |
|----------------------|------------------|
| Engineering | \$111,000 |
| Property Acquisition | \$783,000 |
| <u>Construction</u> | <u>\$637,000</u> |
| Total Cost | \$1,530,000 |

Potential Advantages and Disadvantages:

The peak flow reduction would be at an estimated unit cost of \$72,900/cfs of reduction. Because of the interplay of the catchments in the project area within the entire West Bouldin Creek watershed, the exact usage of this property will require further examination. Because project area peaks are around 20 minutes before the watershed upstream, it may be preferable to use this lot to store runoff already in West Bouldin rather than that from the Del Curto project area. The net effect of detaining runoff from the project area will be to reduce peak runoff but will also cause the project area catchment to peak later, coinciding more with upstream catchments. If West Bouldin is stored, peaks will be reduced for the upstream catchments (effects seen downstream as well) and increase the timing between the upstream and project areas. This could involve piping water from nearby 2505 Thornton to this lot. If this peak shaving storage is advantageous, then usage of the drainage easement at 2505 Thornton should also be explored.

The primary factor when considering this project alternative as with all detention alternatives will be the cost associated with the land acquisition. It also appears that the property may be in some level of development, although it may be on hold, as vegetation has begun to take over some of the previously leveled pad areas.

Project #15 - Conveyance Enhancements Thornton to Confluence

Description:

Registered complaints of flooding at 2300 Thornton are of yard flooding because of suspected clogging of the existing 48" culvert pipe. Even without clogging, the conduit is known to be undersized and has potential to overtop the roadway and produce backwater effects.

Scoping of this system will be required before more accurate design and cost can be assessed. The primary contributions of runoff will be from the creek that delivers runoff from the Phase 1 project area and runoff collected on Thornton Road. Preliminary design for the creek crossing alone shows adequate capacity from a 72" RCP. The line size will need to be upsized to 96" on the downstream side of the Thornton Road crossing, where the runoff from a drainage trunk line serving the Phase 2 portion of the project area connects into the existing system.

Flood Reduction Potential:

The addition of conveyance thru this area can reduce flooding immediately upstream of Thornton thru reduced backwater.

Estimated Cost:

| | |
|----------------------|------------------|
| Engineering | \$84,600 |
| Property Acquisition | \$0 |
| <u>Construction</u> | <u>\$487,000</u> |
| Total Cost | \$572,000 |

Potential Advantages and Disadvantages:

There are existing easements in this area, so land acquisition is not required. Due to the flow contributions from the Phase 2 area, it may be prudent to wait until Phase 2 to fully design this project.

Project #16 - Easement Acquisition – Bluebonnet to Del Curto

Description:

Regardless of the need for easements for proposed projects, there are significant gaps in the easements for existing drainage infrastructure. This project would acquire easements along the existing infrastructure paths, sometimes adding entirely new easements, other times simply widening or re-aligning existing easements to meet existing and proposed project needs.

Flood Reduction Potential:

There is no flood reduction potential for this project, but is required for City maintenance of public drainage infrastructure.

Estimated Cost:

| | |
|----------------------|------------|
| Engineering | \$0 |
| Property Acquisition | \$948,000 |
| <u>Construction</u> | <u>\$0</u> |
| Total Cost | \$948,000 |

Discussion by Reach:

Easement Acquisition - Bluebonnet to Del Curto

Current topography causes runoff from approximately 25 acres to converge at the sag near 2421 Bluebonnet Lane either by overland flow or storm sewer. Flow is then conveyed through the block, namely through the parcels tabulated below toward the street in front of 2300 and 2302 Del Curto. There are no apparent drainage easements in this segment to provide conveyance of storm water runoff via overland or existing storm sewer systems. Purchasing easements through these properties will give the City needed control of runoff in the area, providing protection for residents and conveyance of storm water. Given that the City requires a minimum drainage width of 15 feet, a variance will be required for the lesser width easements.

The purchase of these easements would be a necessary step for implementation of a channel through the block. A proposed bypass system could in theory eliminate flood threats to the block, but the inter-block drainage may be sufficient to warrant the need for easements here. If a bypass were implemented in this area, obtaining these easements would be wise as systems can fail or become compromised, causing flows to revert to natural overland flowpaths.

Easement Acquisition – Del Curto to Kinney

Along this overland flow segment there appear to be drainage easements in place, but systems therein are observably insufficient. The easements in place today are poorly aligned with actual flow paths and are littered with obstacles including trees, fences, gardens and a house at 2301 Del Curto. Easement acquisition at these locations can provide a continuous uninterrupted path for overland

flow and improve access for maintenance. Acquiring these easements will be critical for the construction of any channel through the 2200 block of Iva/ Delcrest.

Easement Acquisition – Kinney to Thornton

An existing channel serves this block, starting between 2307 and 2311 Kinney Rd. the creek travels the length of the lots, reaches the back of 2304 Thornton and turns to the north into 2300 Thornton where it turns back east running through the center of the property to Thornton Rd. Along 2307 and 2311 Thornton Rd the channel appears to be maintained in variable width drainages within the properties. There is noticeable discontinuity between these easements and the next easement downstream at 2304 Thornton and there is a complete absence of easement throughout 2300 Thornton.

Acquisition of these easements will be necessary for any conveyance improvements in the area, whether bypass system or channel improvement. With trending development of the area, the procurement of these easements now will prevent future conflicts and provide options in the future.

Easement Acquisition – Thornton to Outfall

There are currently drainage easements at 2209 and 2211 Thornton Road. These easements contain storm sewer from the culvert upstream of Thornton Road, and likely convey overland flow. There is an outfall in the vicinity of 2211 Thornton Road and from there water flows through a heavily wooded area at 2201 and 2111 Thornton Road to the confluence with West Bouldin Creek. There are no easements currently at 2201 or 2111 Thornton.

Easements at these parcels will give the City control needed for future improvements and to control development along this creek.

Programmatic Alternatives

Project #17 - Rainwater Harvesting

Rainwater harvesting of runoff from private property offers an opportunity to reduce total storm runoff volume through the capture of local runoff in barrels or cisterns. While it is theoretically possible to reduce peak flood discharges through harvesting, it is difficult to collect enough volume to capture up to the peak timing, and once the barrels are full, the runoff bypasses unabated. The fact that this captured runoff can be retained for later local use in yards and gardens can have the added benefit of reducing demand on the drinking water supply.

Implementation of this program would involve providing barrels / cisterns and training to local residents, who would then be responsible for their installation and maintenance.

Estimated Cost:

Capital expenses (residential barrels, commercial cisterns) are estimated at \$60,000, and City labor (materials acquisition and training workshops) is estimated at \$20,000, for a total estimated project cost of \$80,000.

Pros:

- Reduces total storm runoff volume.
- Reduces demand on drinking water supply.
- Allows residents to participate in the solution.
- Can be implemented quickly.
- No property acquisition.

Cons:

- Unlikely to have significant impact on flood reduction, and could result in sharp rise in downstream discharges (as barrels rapidly shift from no discharge to full discharge).
- Barrels / cisterns not drained prior to storm events will have less storage volume available.
- As privately owned facilities, property owners would need to perform their own maintenance.

Project #18 - Porous Pavement

Through the replacement of existing impervious paved surfaces (roads, parking lots) with pervious materials, it is possible to reduce storm runoff volumes and peak discharges, and to provide a degree of water quality enhancement. TXDoT has begun to implement porous pavement in some locations, with varying degrees of success. Maintenance of roadways typically requires periodic cleaning with high pressure washing equipment for roadways with traffic speeds under 35 MPH.

Implementation of this program in public ROW is not likely to be recommended under current Street & Bridge guidance (low volume, low velocity roadways, would require cleaning). Implementation in privately owned parking lots would be voluntary, as would their maintenance programs.

Estimated Cost:

Capital expenses (roadway construction in public ROW in the Del Curto project area south of Lamar) are estimated at \$560,000, and City labor (project management) is estimated at \$20,000, for a total estimated project cost of \$580,000.

Pros:

- Can reduce runoff and peak discharge somewhat through increased initial abstraction and increased travel time.
- No property acquisition

Cons:

- Flood reduction benefits decrease after the first flush as pavement becomes saturated.
- Maintenance cleanings would be required to keep effectiveness, which would be an additional cost for public facilities, and a risk for private facilities.

Project #19 - Cost Participation with New Development

When new developments are planned, there is an opportunity for the City to coordinate and cost-share on the design of onsite detention / water quality facilities for additional capacity. This additional capacity could provide benefits beyond the footprint of the development under design, at a reduced incremental cost to the City. Such cooperative efforts would be designed to have minimal impact on the property owners, else the owners will have little interest in participating.

Possible alternatives could include increasing pond depth for additional storage volume, or additional storage under parking areas.

Estimated Cost:

Project expenses (incremental costs: design, land acquisition, construction, City labor) cannot be estimated until development opportunities arise.

Pros:

- Potential reduced project cost (reduced land acquisition, shared common expenses for plan development and permitting).

Cons:

- Only possible as development is in the planning stage, little control of project timing.
- Property owners / developers may feel little incentive to participate in voluntary program.
- Maintenance responsibilities would be more complicated and would require agreements.
- Easements would be required for City maintained components.

Project #20 - RSMP

The Regional Stormwater Management Program (RSMP) presents opportunities for funding watershed level drainage improvements from incremental development projects. If a development is being planned, there is an option for the developer to pay a fee in lieu to the RSMP and not to provide flood detention onsite.

No specific capital projects are proposed under this alternative, as it is a funding mechanism only. While the West Bouldin Creek watershed is not in the current list of RSMP watersheds, the ordinance does allow for non-RSMP watershed funding as well.

Estimated Cost:

There is no capital cost for this alternative, and the only administrative costs would be the staff labor to process developer requests and regional improvements.

Pros:

- Allows for an additional funding source.
- Allows for a planned regional approach, which can be more effective at meeting watershed goals.

Cons:

- Funding trickles in as development occurs, no actual flood reduction until actual projects have been funded and implemented, projects needing rapid implementation would still require traditional funding, with reimbursement from the RSMP over time.
- Some projects in this area may not have meaningful detention requirements (no increase in impervious cover, if already fully developed).

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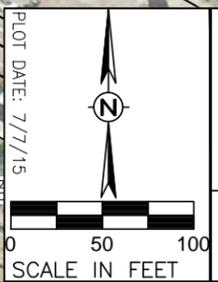


EXHIBIT 1 EXPAND PRIVATE DETENTION & WQ FACILITIES

WEST BOULGIN CREEK - DEL CURTO DRAINAGE IMPROVEMENTS

CAS CONSULTING & SERVICES, INC.
CIVIL ENGINEERING | PROGRAM MANAGEMENT | CONSTRUCTION MANAGEMENT
7908 Cameron Road | Austin, TX 78754
REG. NO. F-003572 | Main: 512.836.2388 | Fax: 512.836.4515

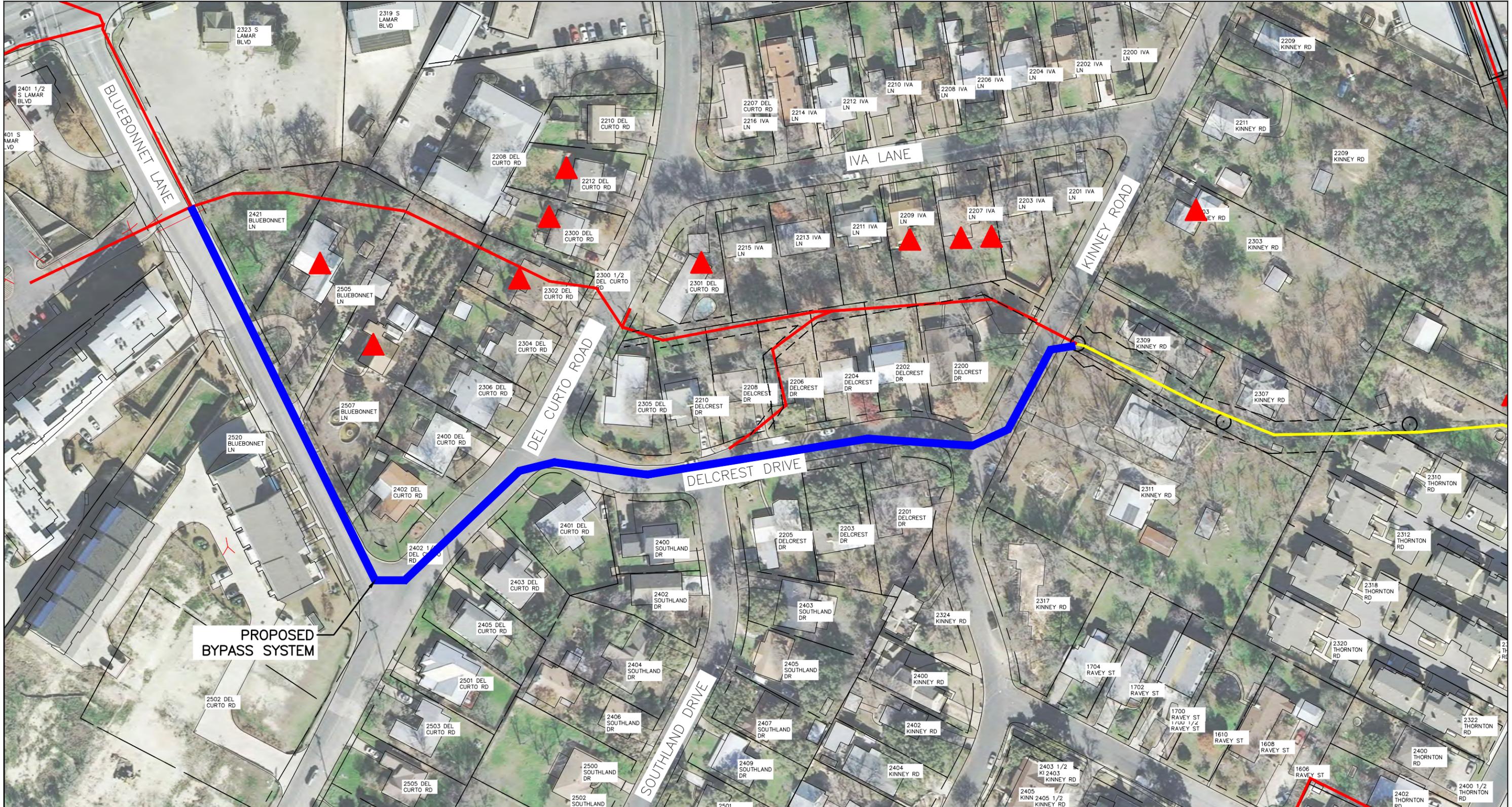
City of Austin
WATERSHED PROTECTION

| LEGEND | |
|--------|-----------------------------------|
| | PROPOSED ALTERNATIVE |
| | EX. CHANNEL |
| | EX. STORM SEWER DRAINAGE EASEMENT |
| | 100 YR FLOODPLAIN |
| | 500YR FLOODPLAIN |
| | EX. DETENTION |
| | EX. WATER QUALITY |
| | REGISTERED COMPLAINT |

SHEET NUMBER
1

DRAFT (7-7-2015)

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PROPOSED BYPASS SYSTEM

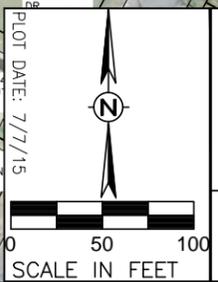


EXHIBIT 2 BYPASS SYSTEM BLUEBONNET TO KINNEY

WEST BOULDRIN CREEK -
DEL CURTO DRAINAGE IMPROVEMENTS

CAS CONSULTING & SERVICES, INC.
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Main: 512.836.2388 | Fax: 512.836.4515

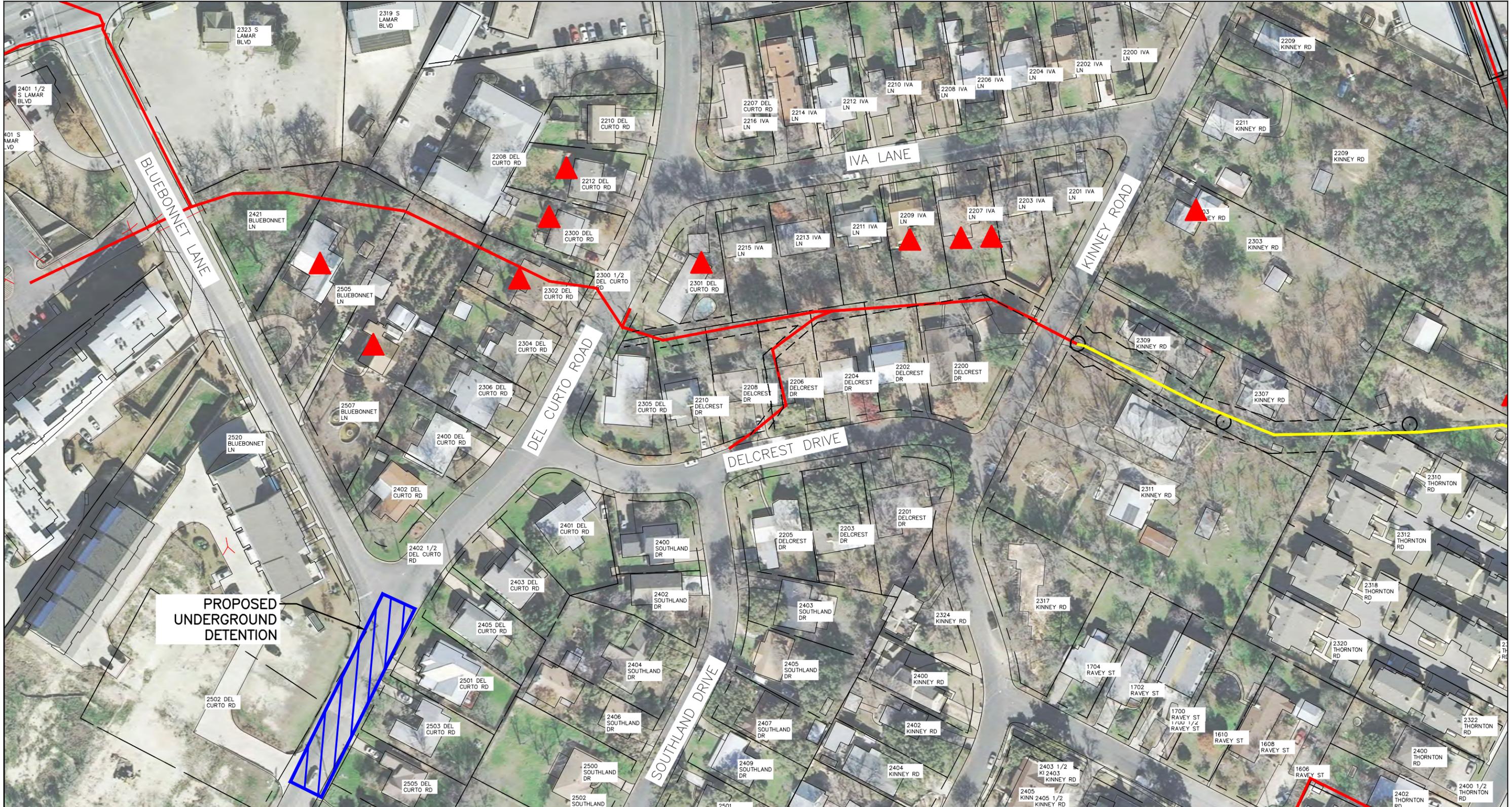
City of Austin
WATERSHED PROTECTION

| LEGEND | |
|--------|----------------------|
| | PROPOSED ALTERNATIVE |
| | EX. CHANNEL |
| | EX. STORM SEWER |
| | DRAINAGE EASEMENT |
| | 100 YR FLOODPLAIN |
| | 500YR FLOODPLAIN |
| | EX. DETENTION |
| | EX. WATER QUALITY |
| | REGISTERED COMPLAINT |

SHEET NUMBER
2

DRAFT (7-7-2015)

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PROPOSED UNDERGROUND DETENTION

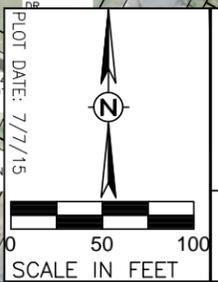


EXHIBIT 3 UNDERGROUND DETENTION @ DEL CURTO & BLUEBONNET

WEST BOULDRIN CREEK - DEL CURTO DRAINAGE IMPROVEMENTS

CAS CONSULTING & SERVICES, INC.
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 7908 Cameron Road | Austin, TX 78754
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 Main: 512.836.2388 | Fax: 512.836.4515

City of Austin
WATERSHED PROTECTION

| LEGEND | |
|--------|-----------------------------------|
| | PROPOSED ALTERNATIVE |
| | EX. CHANNEL |
| | EX. STORM SEWER DRAINAGE EASEMENT |
| | 100 YR FLOODPLAIN |
| | 500YR FLOODPLAIN |
| | EX. DETENTION |
| | EX. WATER QUALITY |
| | REGISTERED COMPLAINT |

SHEET NUMBER
3

DRAFT (7-7-2015)

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CREEK RESTORATION

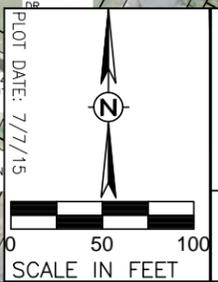


EXHIBIT 4 CREEK RESTORATION

WEST BOULDRIN CREEK - DEL CURTO DRAINAGE IMPROVEMENTS

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 7908 Cameron Road | Austin, TX 78754
 REG. NO. F-003572
 Main: 512.836.2388 | Fax: 512.836.4515

City of Austin
WATERSHED PROTECTION

| LEGEND | |
|--------|----------------------|
| | PROPOSED ALTERNATIVE |
| | EX. CHANNEL |
| | EX. STORM SEWER |
| | DRAINAGE EASEMENT |
| | 100 YR FLOODPLAIN |
| | 500YR FLOODPLAIN |
| | EX. DETENTION |
| | EX. WATER QUALITY |
| | REGISTERED COMPLAINT |

SHEET NUMBER
4

DRAFT (7-7-2015)

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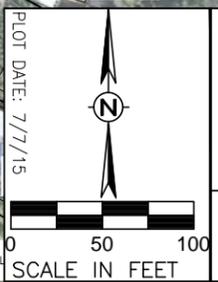


EXHIBIT 5 BUYOUTS

WEST BOULDRIN CREEK - DEL CURTO DRAINAGE IMPROVEMENTS

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City of Austin
WATERSHED PROTECTION

| LEGEND | |
|--------|----------------------|
| | PROPOSED ALTERNATIVE |
| | EX. CHANNEL |
| | EX. STORM SEWER |
| | DRAINAGE EASEMENT |
| | 100 YR FLOODPLAIN |
| | 500YR FLOODPLAIN |
| | EX. DETENTION |
| | EX. WATER QUALITY |
| | REGISTERED COMPLAINT |

SHEET NUMBER
5

DRAFT (7-7-2015)

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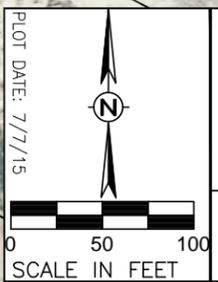
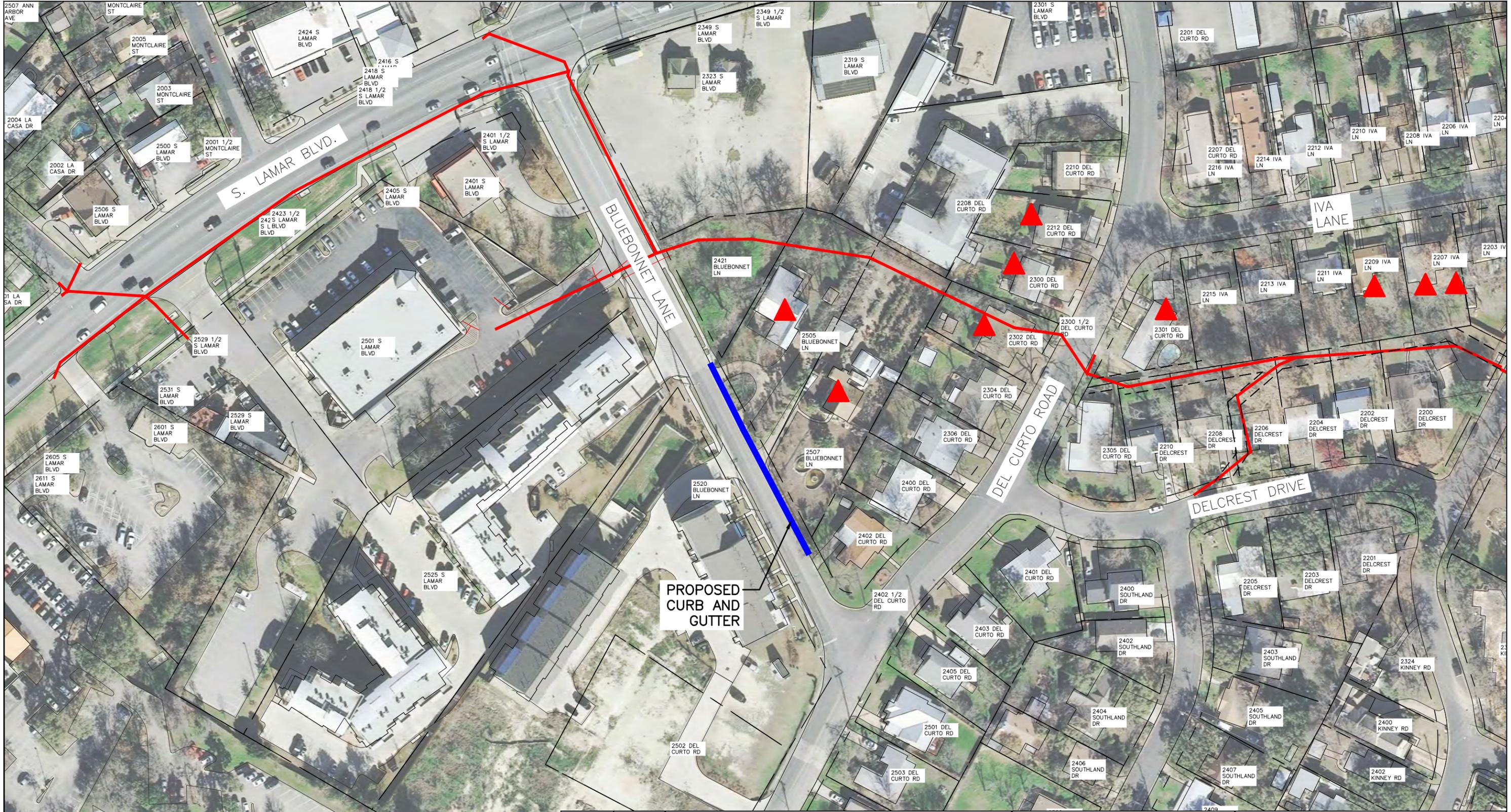


EXHIBIT 6 CURB & GUTTER ON BLUEBONNET LANE

WEST BOULDN CREEK - DEL CURTO DRAINAGE IMPROVEMENTS

CAS CONSULTING & SERVICES, INC.
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7908 Cameron Road | Austin, TX 78754
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City of Austin
WATERSHED PROTECTION

| LEGEND | |
|--------|-----------------------------------|
| | PROPOSED ALTERNATIVE |
| | EX. CHANNEL |
| | EX. STORM SEWER DRAINAGE EASEMENT |
| | 100 YR FLOODPLAIN |
| | 500YR FLOODPLAIN |
| | EX. DETENTION |
| | EX. WATER QUALITY |
| | REGISTERED COMPLAINT |

SHEET NUMBER
6

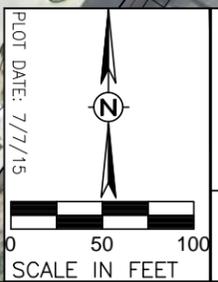
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EXHIBIT 7 DETENTION @ 2323 S LAMAR

WEST BOULDRIN CREEK - DEL CURTO DRAINAGE IMPROVEMENTS



PLOT DATE: 7/7/15

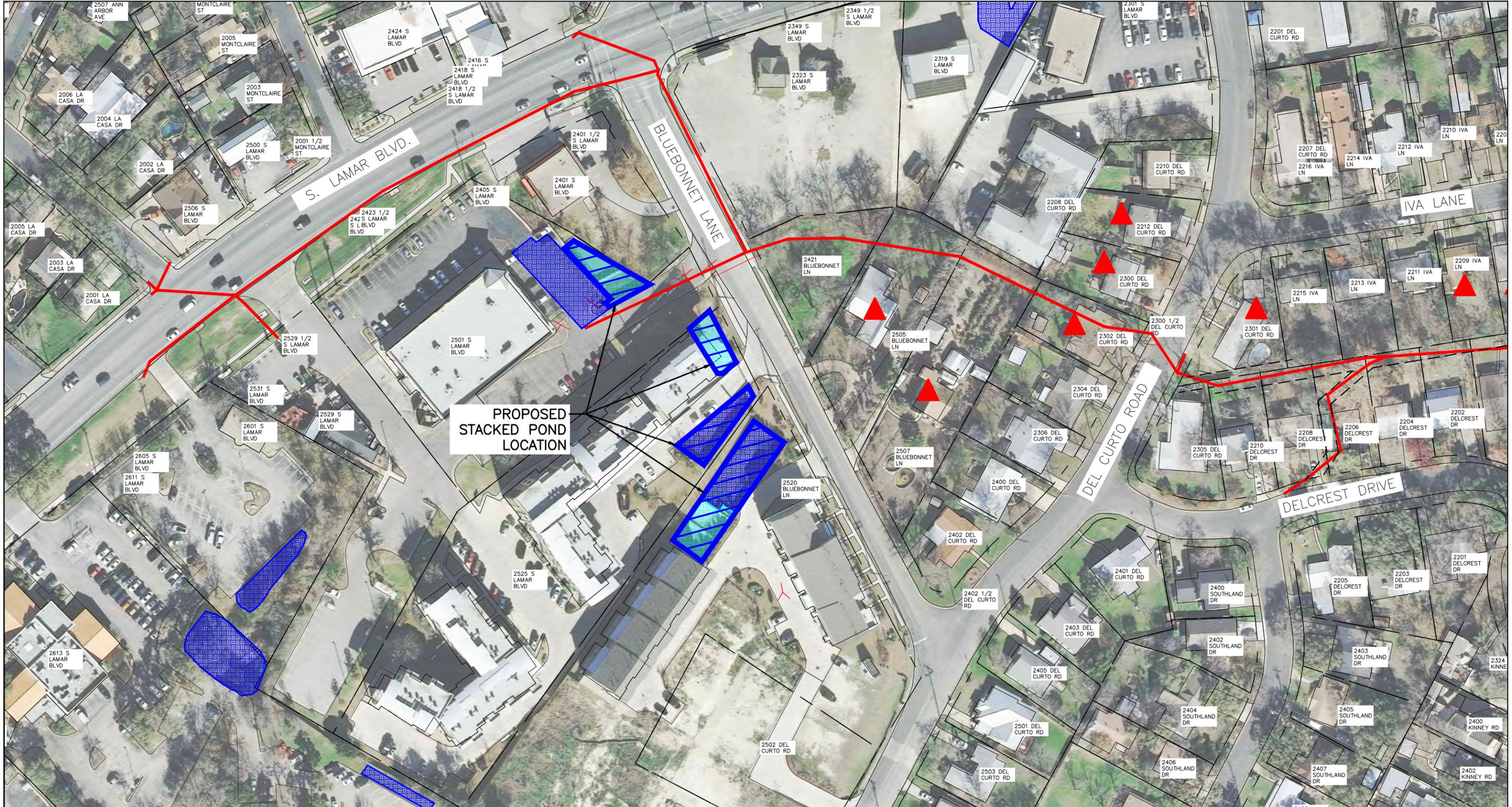
CAS CONSULTING & SERVICES, INC.
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 7908 Cameron Road | Austin, TX 78754
 REG. NO. F-003572
 Main: 512.836.2388 | Fax: 512.836.4515

City of Austin
WATERSHED PROTECTION

| LEGEND | | SHEET NUMBER |
|--------|-----------------------------------|--------------|
| | PROPOSED ALTERNATIVE | 7 |
| | EX. CHANNEL | |
| | EX. STORM SEWER DRAINAGE EASEMENT | |
| | 100 YR FLOODPLAIN | |
| | 500YR FLOODPLAIN | |
| | EX. DETENTION | |
| | EX. WATER QUALITY | |
| | REGISTERED COMPLAINT | |

DRAFT (7-7-2015)

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PROPOSED STACKED POND LOCATION

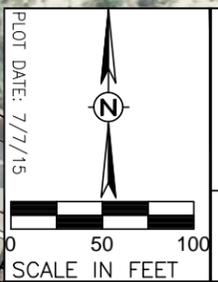


EXHIBIT 8 STACKED PONDS ON BLUEBONNET LANE

WEST BOULDRIN CREEK - DEL CURTO DRAINAGE IMPROVEMENTS

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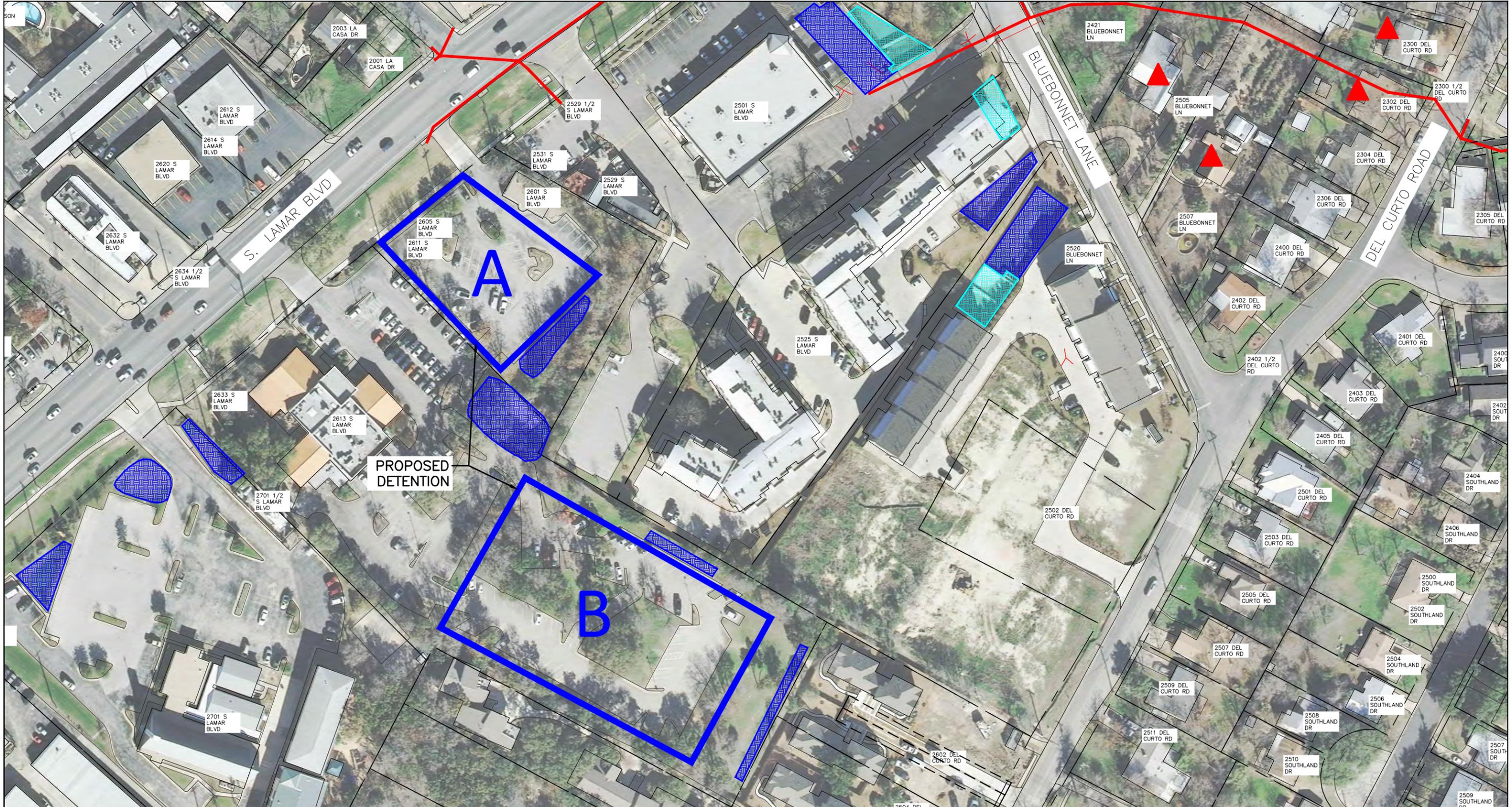
City of Austin
WATERSHED PROTECTION

| LEGEND | |
|--------|-----------------------------------|
| | PROPOSED ALTERNATIVE |
| | EX. CHANNEL |
| | EX. STORM SEWER DRAINAGE EASEMENT |
| | 100 YR FLOODPLAIN |
| | 500YR FLOODPLAIN |
| | EX. DETENTION |
| | EX. WATER QUALITY |
| | REGISTERED COMPLAINT |

SHEET NUMBER 00

DRAFT (7-7-2015)

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2807 MANCHACA RD

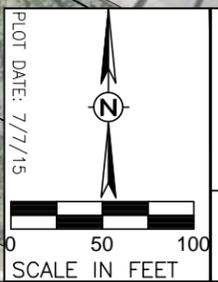


EXHIBIT 9 UNDERGROUND DETENTION @ MATT'S EL RANCHO

WEST BOULDRIN CREEK - DEL CURTO DRAINAGE IMPROVEMENTS

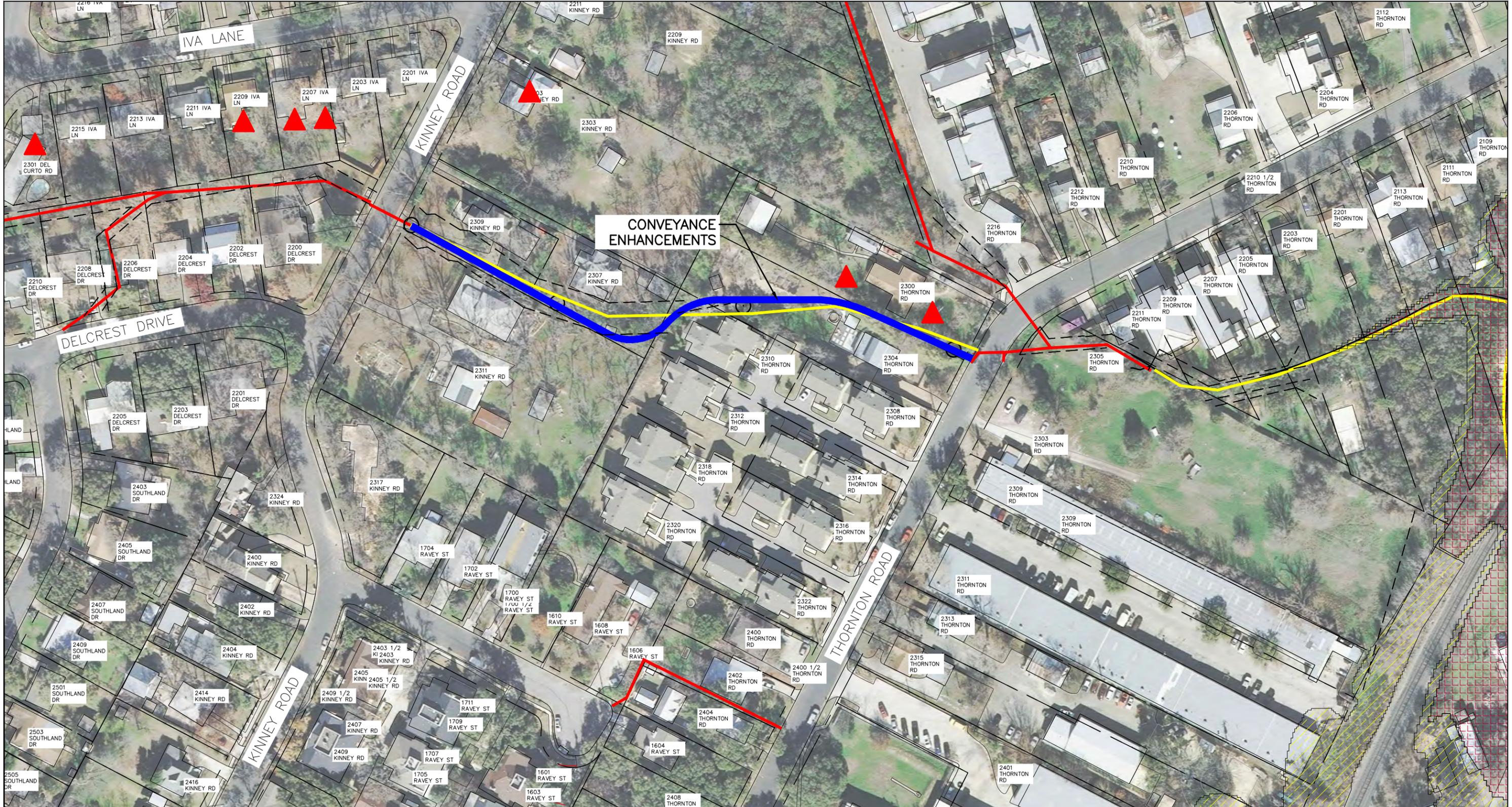
CAS CONSULTING & SERVICES, INC.
 CIVIL ENGINEERING | PROGRAM MANAGEMENT | CONSTRUCTION MANAGEMENT
 7908 Cameron Road | Austin, TX 78754
 [REG. NO. F-003572] Main: 512.836.2388 | Fax: 512.836.4515

City of Austin
WATERSHED PROTECTION

| LEGEND | | SHEET NUMBER |
|--------|----------------------|--------------|
| | PROPOSED ALTERNATIVE | 6 |
| | EX. CHANNEL | |
| | EX. STORM SEWER | |
| | DRAINAGE EASEMENT | |
| | 100 YR FLOODPLAIN | |
| | 500YR FLOODPLAIN | |
| | EX. DETENTION | |
| | EX. WATER QUALITY | |
| | REGISTERED COMPLAINT | |

DRAFT (7-7-2015)

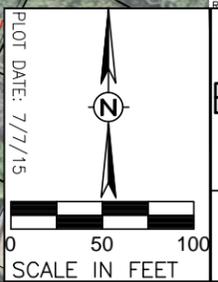
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CONVEYANCE ENHANCEMENTS

EXHIBIT 10 CONVEYANCE ENHANCEMENT OPEN CHANNEL - STORM SEWER

WEST BOULDRIN CREEK - DEL CURTO DRAINAGE IMPROVEMENTS



PLOT DATE: 7/7/15



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| LEGEND | |
|--------|----------------------|
| | PROPOSED ALTERNATIVE |
| | EX. CHANNEL |
| | EX. STORM SEWER |
| | DRAINAGE EASEMENT |
| | 100 YR FLOODPLAIN |
| | 500YR FLOODPLAIN |
| | EX. DETENTION |
| | EX. WATER QUALITY |
| | REGISTERED COMPLAINT |

SHEET NUMBER 10

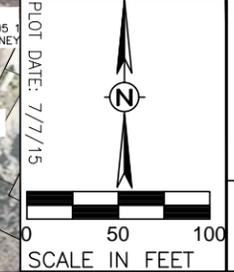
DRAFT (7-7-2015)

CADD FILE: L:\ACTIVE PROJECTS\COA WATERSHED FLOOD HAZARD MITIGATION RL 2011-14\CAS BOULDRIN CRK\3.02 EXHIBITS\000STRM12 PLOTTED: 7/7/2015 4:53:44 PM BY: BRANDY CTB FILE: CAS.CTB



EXHIBIT 11 DETENTION @ 2209 KINNEY ROAD

WEST BOULDRIN CREEK -
DEL CURTO DRAINAGE IMPROVEMENTS



CAS CONSULTING & SERVICES, INC.
CIVIL ENGINEERING | PROGRAM MANAGEMENT | CONSTRUCTION MANAGEMENT
7908 Cameron Road | Austin, TX 78754
REG. NO. F-003572
Main: 512.836.2388 | Fax: 512.836.4515

City of Austin
WATERSHED PROTECTION

| LEGEND | |
|--------|-----------------------------------|
| | PROPOSED ALTERNATIVE |
| | EX. CHANNEL |
| | EX. STORM SEWER DRAINAGE EASEMENT |
| | 100 YR FLOODPLAIN |
| | 500YR FLOODPLAIN |
| | EX. DETENTION |
| | EX. WATER QUALITY |
| | REGISTERED COMPLAINT |

SHEET NUMBER
11

DRAFT (7-7-2015)

CADD FILE: L:\ACTIVE PROJECTS\COA WATERSHED FLOOD HAZARD MITIGATION RL 2011-14\CAS BOULDIN CRK\3.02 EXHIBITS\0000STRM13 PLOTTED: 7/7/2015 4:54:17 PM BY: BRANDY CTB FILE: CAS.CTB

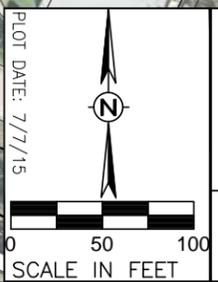


EXHIBIT 12 DETENTION @ CONFLUENCE WITH WEST BOULDIN CREEK

WEST BOULDIN CREEK - DEL CURTO DRAINAGE IMPROVEMENTS

CAS CONSULTING & SERVICES, INC.
 CIVIL ENGINEERING | PROGRAM MANAGEMENT | CONSTRUCTION MANAGEMENT
 7908 Cameron Road | Austin, TX 78754
 [REG. NO. F-003572 Main: 512.836.2388 | Fax: 512.836.4515]

City of Austin
WATERSHED PROTECTION

| LEGEND | |
|--------|-----------------------------------|
| | PROPOSED ALTERNATIVE |
| | EX. CHANNEL |
| | EX. STORM SEWER DRAINAGE EASEMENT |
| | 100 YR FLOODPLAIN |
| | 500YR FLOODPLAIN |
| | EX. DETENTION |
| | EX. WATER QUALITY |
| | REGISTERED COMPLAINT |

SHEET NUMBER
12

DRAFT (7-7-2015)

CADD FILE: L:\ACTIVE PROJECTS\COA WATERSHED FLOOD HAZARD MITIGATION RL 2011-14\CAS BOULDRIN CRK\3.0 CAD\3.02 EXHIBITS\000STRM14 PLOTTED: 7/7/2015 4:54:46 PM BY: BRANDY CTB FILE: CAS.CTB

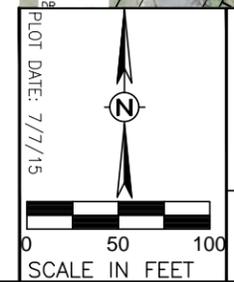
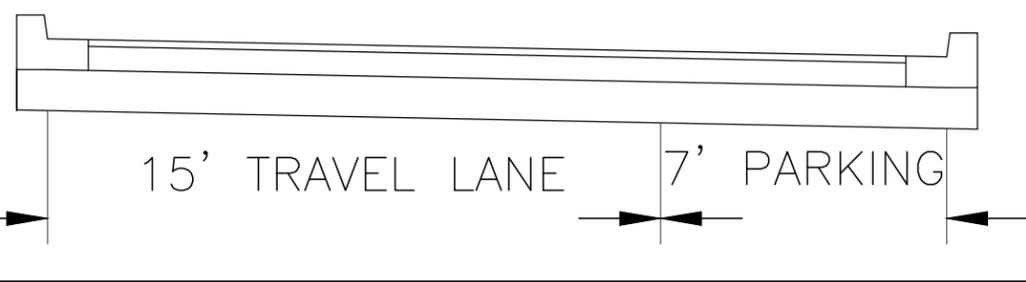
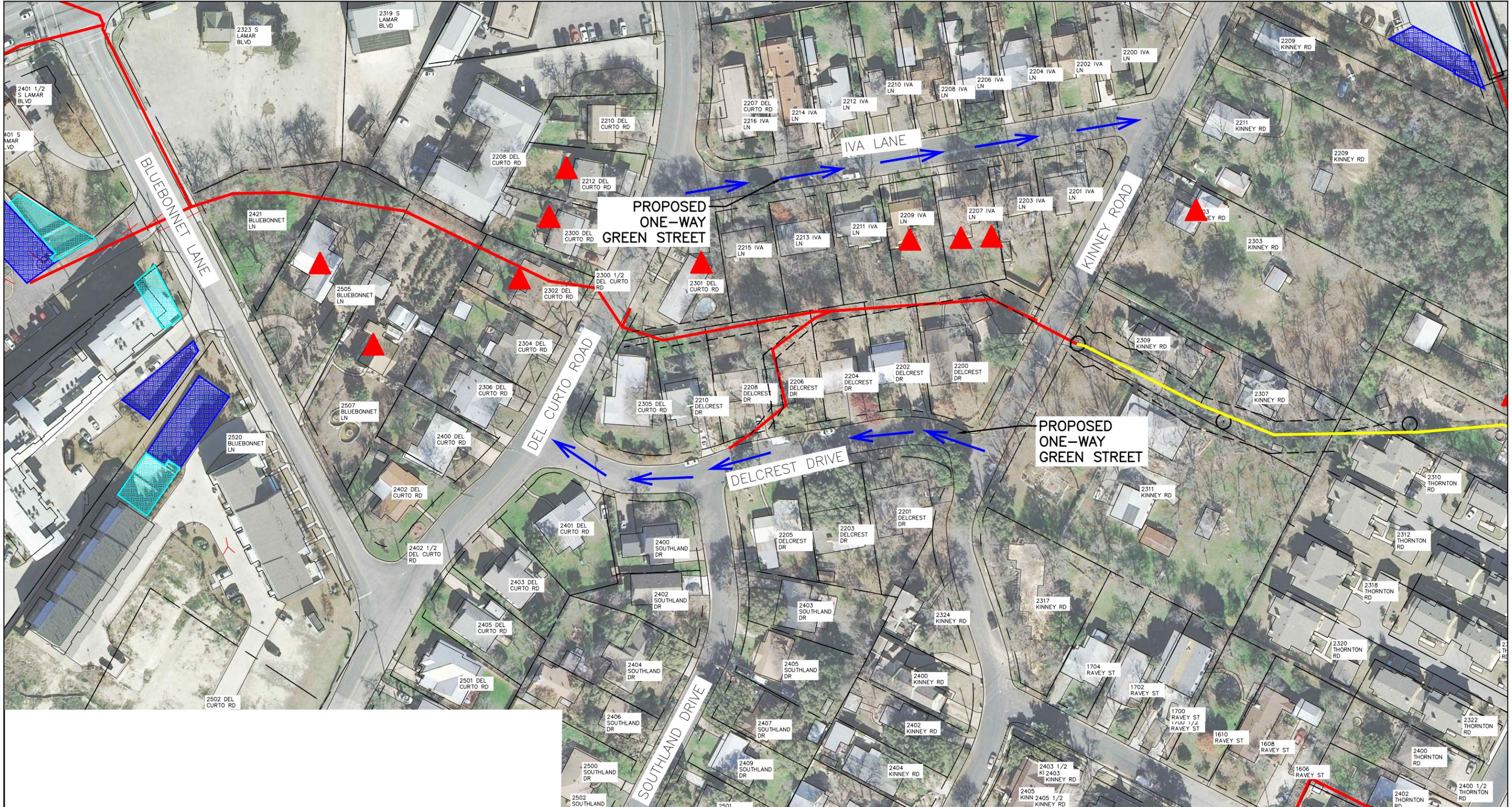


EXHIBIT 13 GREEN STREETS ON IVA & DELCREST

WEST BOULDRIN CREEK - DEL CURTO DRAINAGE IMPROVEMENTS

CAS CONSULTING & SERVICES, INC.
CIVIL ENGINEERING | PROGRAM MANAGEMENT | CONSTRUCTION MANAGEMENT
7908 Cameron Road | Austin, TX 78754
REG. NO. F-003572 | Main: 512.836.2388 | Fax: 512.836.4515

City of Austin
WATERSHED PROTECTION

| LEGEND | |
|--------|-----------------------------------|
| | PROPOSED ALTERNATIVE |
| | EX. CHANNEL |
| | EX. STORM SEWER DRAINAGE EASEMENT |
| | 100 YR FLOODPLAIN |
| | 500YR FLOODPLAIN |
| | EX. DETENTION |
| | EX. WATER QUALITY |
| | REGISTERED COMPLAINT |

SHEET NUMBER
13

DRAFT (7-7-2015)

CADD FILE: L:\ACTIVE PROJECTS\COA WATERSHED FLOOD HAZARD MITIGATION RL 2011-14\CAS BOULDIN CRK\3.0 CAD\3.02 EXHIBITS\000STRM15 PLOTTED: 7/7/2015 4:55:23 PM BY: BRANDY CTB FILE: CAS.CTB

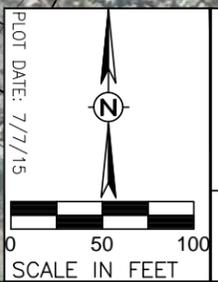


EXHIBIT 14 DETENTION @ 2303 THORNTON ROAD

WEST BOULDIN CREEK -
DEL CURTO DRAINAGE IMPROVEMENTS

CAS CONSULTING & SERVICES, INC.
CIVIL ENGINEERING | PROGRAM
MANAGEMENT | CONSTRUCTION
MANAGEMENT
7908 Cameron Road | Austin, TX 78754
REG. NO. F-003572
Main: 512.836.2388 | Fax: 512.836.4515

City of Austin
**WATERSHED
PROTECTION**

| LEGEND | |
|--------|----------------------|
| | PROPOSED ALTERNATIVE |
| | EX. CHANNEL |
| | EX. STORM SEWER |
| | DRAINAGE EASEMENT |
| | 100 YR FLOODPLAIN |
| | 500YR FLOODPLAIN |
| | EX. DETENTION |
| | EX. WATER QUALITY |
| | REGISTERED COMPLAINT |

SHEET NUMBER
14

DRAFT (7-7-2015)

CADD FILE: L:\ACTIVE PROJECTS\COA WATERSHED FLOOD HAZARD MITIGATION RL 2011-14\CAS BOULDIN CRK\3.0 CAD\3.02 EXHIBITS\0000STRM17 PLOTTED: 7/7/2015 4:55:50 PM BY: BRANDY CTB FILE: CAS.CTB

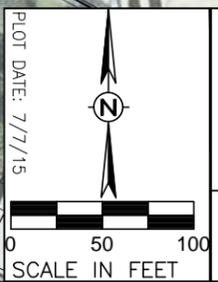
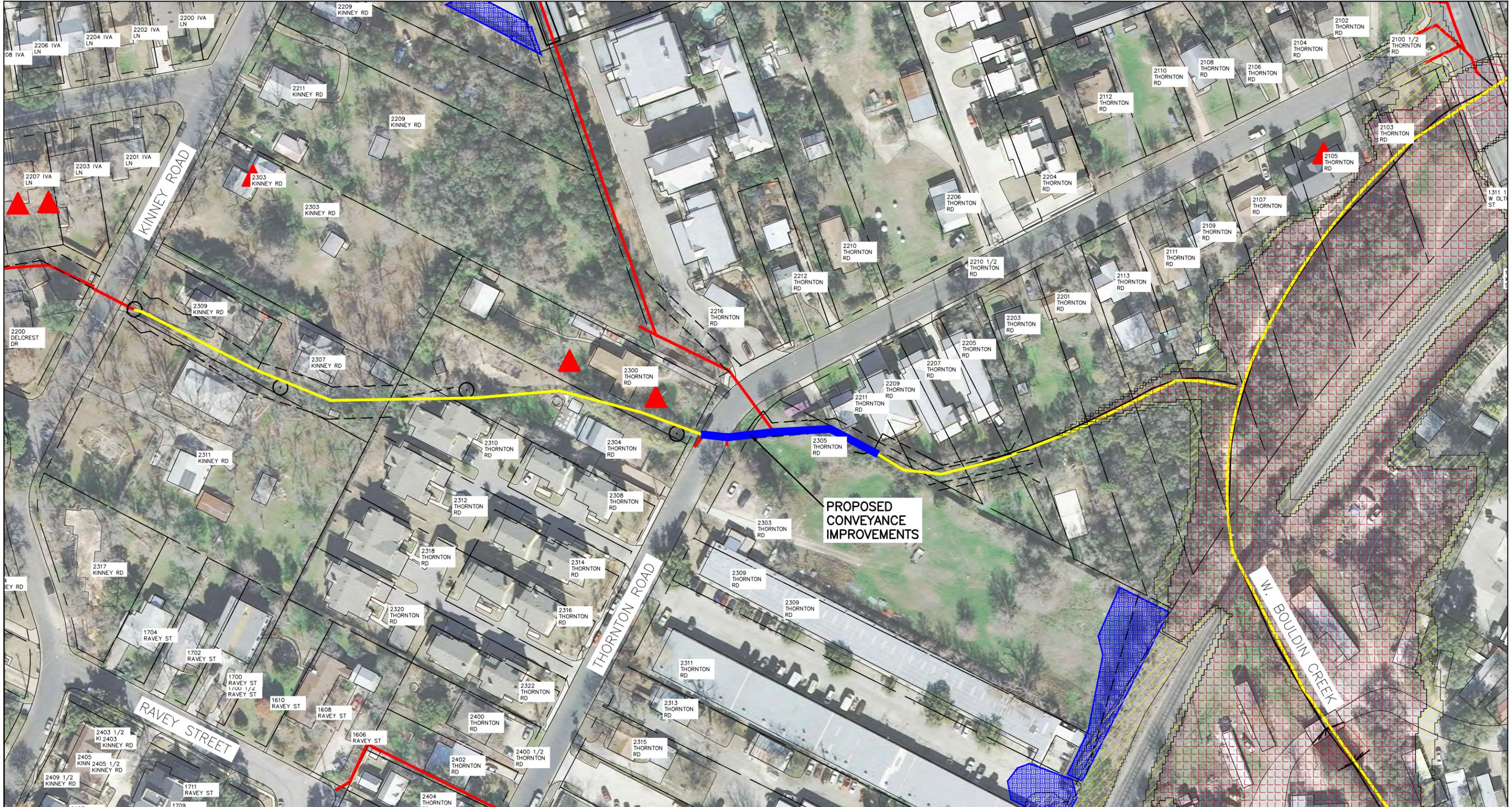


EXHIBIT 15 CONVEYANCE ENHANCEMENT – THORNTON TO OUTFALL

WEST BOULDIN CREEK - DEL CURTO DRAINAGE IMPROVEMENTS

CAS CONSULTING & SERVICES, INC.
CIVIL ENGINEERING | PROGRAM MANAGEMENT | CONSTRUCTION MANAGEMENT
7908 Cameron Road | Austin, TX 78754
Main: 512.836.2388 | Fax: 512.836.4515

City of Austin
WATERSHED PROTECTION

| LEGEND | |
|--------|-----------------------------------|
| | EX. CHANNEL |
| | EX. STORM SEWER DRAINAGE EASEMENT |
| | EX. STORM SEWER DRAINAGE EASEMENT |
| | 100 YR FLOODPLAIN |
| | 500YR FLOODPLAIN |
| | EX. DETENTION |
| | EX. WATER QUALITY |
| | REGISTERED COMPLAINT |

SHEET NUMBER
15

DRAFT (7-7-2015)

CADD FILE: L:\ACTIVE PROJECTS\COA WATERSHED FLOOD HAZARD MITIGATION RL 2011-14\CAS BOULDIN CRK\3.0 CAD\3.02 EXHIBITS\0000STRM16 PLOTTED: 7/7/2015 4:56:21 PM BY: BRANDY CTB FILE: CAS.CTB

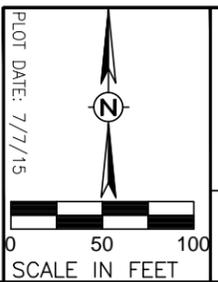
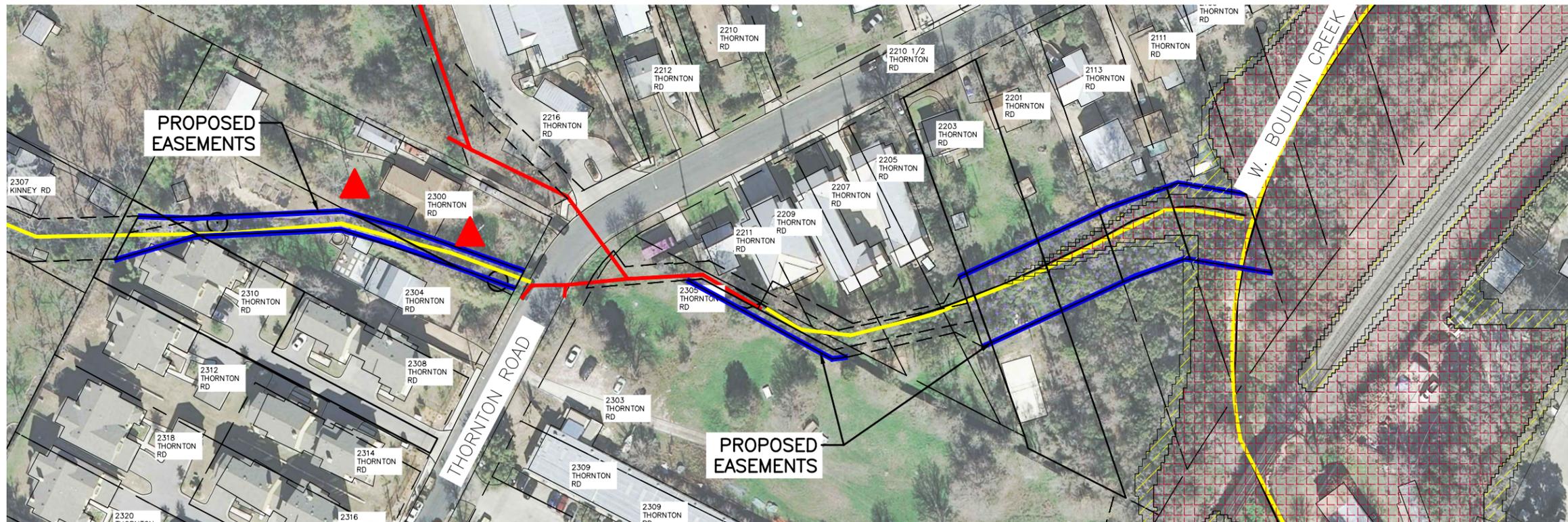
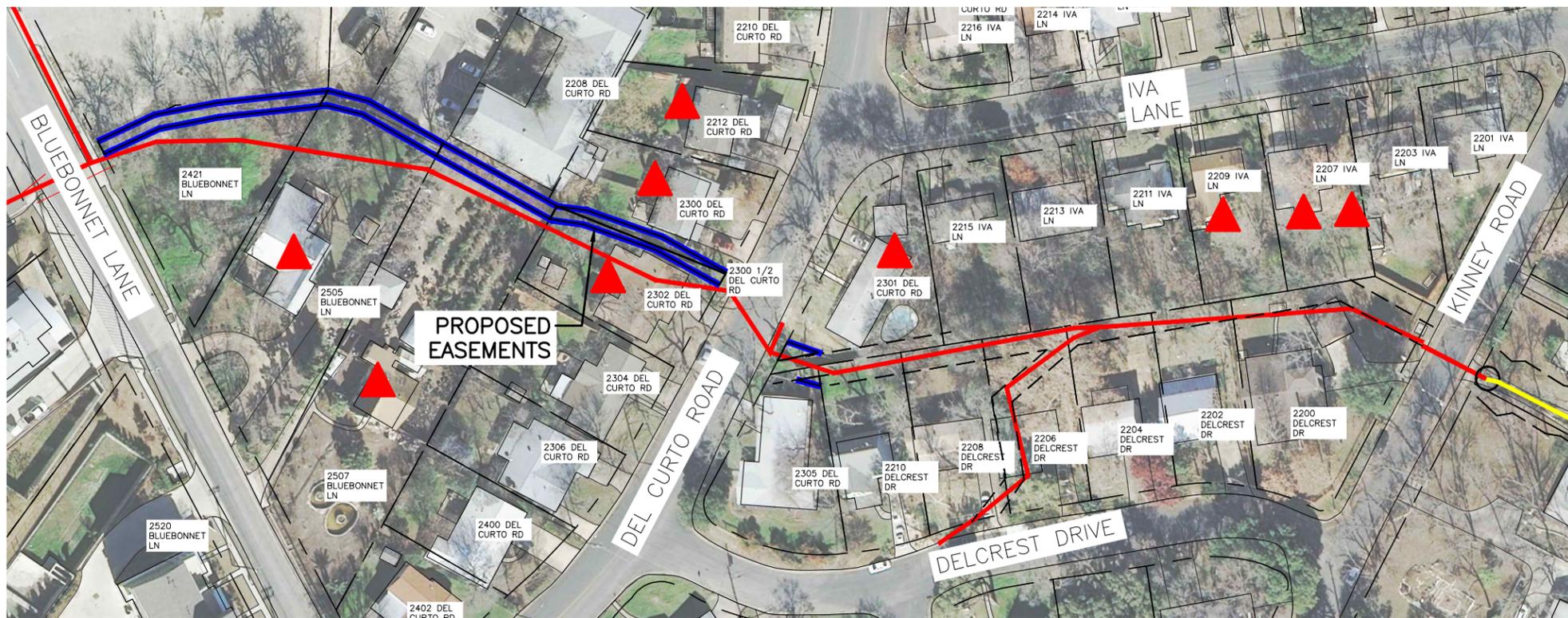


EXHIBIT 16 EASEMENT ACQUISITION

WEST BOULDIN CREEK - DEL CURTO DRAINAGE IMPROVEMENTS

CAS CONSULTING & SERVICES, INC.
 CIVIL ENGINEERING | PROGRAM MANAGEMENT | CONSTRUCTION MANAGEMENT
 7908 Cameron Road | Austin, TX 78754
 REG. NO. F-003572
 Main: 512.836.2388 | Fax: 512.836.4515

City of Austin
WATERSHED PROTECTION

| LEGEND | |
|--------|----------------------|
| | PROPOSED ALTERNATIVE |
| | EX. CHANNEL |
| | EX. STORM SEWER |
| | DRAINAGE EASEMENT |
| | 100 YR FLOODPLAIN |
| | 500YR FLOODPLAIN |
| | EX. DETENTION |
| | EX. WATER QUALITY |
| | REGISTERED COMPLAINT |

SHEET NUMBER
16

DRAFT (7-7-2015)



South Lamar Neighborhood Association

August 31, 2015

Alice Glasco
5117 Valbum Court
Suite A
Austin, TX 78731

Dear Alice:

In June, South Lamar Neighborhood Assc. communicated to you and Jerry Rusthoven at the City's Planning and Zoning Department that we would not support a Vertical Mixed Use upzone proposal for the Thornton Road project. We also understand the City of Austin has rejected the initial upzone request as well.

Imagine our surprise then, when our neighbors at Carriage Park Condominium Association invited all neighbors to a meeting on Aug 26, 2015 to discuss this exact project with materially new information – the result of the traffic study and a proposal to widen Thornton Road – and no apparent effort to contact SLNA directly.

Just to be plain, it strikes many members of the neighborhood as a none-too-subtle effort to divide and conquer. Additionally, until SLNA members asked at the meeting, it appears that you had never informed Carriage Park residents of either the SLNA position or the pending rejection from City of Austin staff.

Clearly and rightfully so, you have your agenda to advance, and really that is fine and understood, but even with a generous benefit of the doubt, it simply does not do your project any favors when the neighbors feel developers and their consultants are less than transparent, or playing games with interested parties -- especially since the effort to address this division would be a simple email.

We are working with Carriage Park and all the residents of South Lamar Neighborhood to develop a more complete response to changes we would like to see. We are grateful that Council Member Kitchen has taken a direct interest and that her Senior Policy Advisor Donna Tiemann was able to attend parts of the meeting.

If you have new, evolving or alternate proposals for this project, please consider contacting SLNA directly.

Sincerely

/s Mario M Champion /s

Mario Champion,
President, South Lamar Neighborhood Association

Cc: Council Member Ann Kitchen
District 5 Senior Policy Advisor Donna Tiemann
Jerry Rusthoven City of Austin
Karl Popham – President Carriage Park Condominium Association

www.southlamar.org Austin, TX 78704 512.916.1258

Moore, Andrew

From: David Hartman <[REDACTED]>
Sent: Thursday, December 03, 2015 4:41 PM
To: Moore, Andrew
Cc: Alice Glasco ([REDACTED])
Subject: FW: SLNA Letter of 8/31/15

FYI.

From: Alice Glasco [mailto:[REDACTED]]
Sent: Tuesday, September 01, 2015 3:22 PM
To: [REDACTED]
Cc: ann.kitchen@austintexas.gov; [donna.tiemann \(donna.tiemann@austintexas.gov\)](mailto:donna.tiemann@austintexas.gov); Karl P ([REDACTED]); Jerry Rusthoven - City Of Austin (jerry.rusthoven@austintexas.gov); Kim Johnson
Subject: SLNA Letter of 8/31/15

Dear Mario:

I received your letter dated August 31, 2015, and on behalf of the entire project team, I wanted to respond with the following clarifying information.

We have been transparent in our dealings on the Thornton Road zoning case, and will continue to do so. The South Lamar Neighborhood Association list serve (SouthLamarNA@yahoogroups.com) has been copied directly on numerous emails pertaining to this rezoning case. In fact, the SLNA list serve was copied directly on the attached 7-10-15 email distribution (see attached) that contains the roadway widening and sidewalk improvements you mention in your letter, and the list serve was copied directly on email inviting residents to attend the meeting August 26, 2015. Additionally, we understand from City staff that there has been no formal recommendation by zoning staff, in part because a neighborhood traffic analysis has not yet been completed by transportation staff.

If you or other members of SLNA would like to meet to discuss any information in connection with this rezoning case, we are more than glad to do so and can accommodate your schedule. Thank you for staying connected and we look forward to continue having a dialogue with all interested parties!

Moore, Andrew

From: [REDACTED]
Sent: Saturday, October 10, 2015 12:43 PM
To: Moore, Andrew
Subject: Case Number: C14-2015-0047

Hi Andrew –

I am emailing you regarding the rezoning of 2303 and 2309 Thornton Road (case number listed above). I live directly across the street from this property. I have lived on Thornton Road for over 10 years, and have watched it grow and change like the rest of the area. Because of this growth, and also because of the overflow parking from the Austin Beer Garden on Oltorf, Thornton Road becomes virtually impassable at times. Parking is allowed on both sides of the street, there are a few sidewalks, but not many, and there is now a constant flow of traffic.

The city has already approved an apartment development on Thornton which is currently under construction. Once that is completed, we will have even more cars going up and down this narrow street every day. There is no traffic light at Oltorf and Thornton, and I don't believe the City could install one because of the proximity of the train track. The lack of safe access onto Oltorf makes for an even more dangerous situation.

If the city allows the rezoning of the property across the street from where I now live, I cannot imagine how those of us who are already living here will have any kind of quality of life. And I do not think it is an overstatement to say that it is a matter of time before someone is killed, or seriously injured on our street because of the traffic as it is right now. So, add to that another 1,000 car trips a day (minimum from the apartment complex already under construction, and this proposed development), and we will truly be living in an unlivable area.

If you have not done so, please take the time to drive to Thornton any time of the day, and I think you will see exactly what I am talking about. But, come at night when it is dark, and you will really 'get it'.

I just want you to know that I strongly oppose this rezoning and do not believe there is anything positive about the proposal.

Thanks for taking the time to read this email.

Best regards -

Karen Kennedy
Austin, TX

PUBLIC HEARING INFORMATION

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During its public hearing, the board or commission may postpone or continue an application's hearing to a later date, or may evaluate the City staff's recommendation and public input forwarding its own recommendation to the City Council. If the board or commission announces a specific date and time for a postponement or continuation that is not later than 60 days from the announcement, no further notice is required.

During its public hearing, the City Council may grant or deny a zoning request, or rezone the land to a less intensive zoning than requested but in no case will it grant a more intensive zoning.

However, in order to allow for mixed use development, the Council may add the MIXED USE (MU) COMBINING DISTRICT to certain commercial districts. The MU Combining District simply allows residential uses in addition to those uses already allowed in the seven commercial zoning districts. As a result, the MU Combining District allows the combination of office, retail, commercial, and residential uses within a single development.

For additional information on the City of Austin's land development process, visit our website: www.austintexas.gov/planning.

Written comments must be submitted to the board or commission (or the contact person listed on the notice) before or at a public hearing. Your comments should include the board or commission's name, the scheduled date of the public hearing, and the Case Number and the contact person listed on the notice.

Case Number: C14-2015-0047

Contact: Andrew Moore, 512-974-7604

Public Hearing: Oct 13, 2015, Planning Commission

Nov. 12, 2015, City Council

Michele Owens

Your Name (please print)

2412A Thornton 78704

Your address(es) affected by this application

Michele Owens

Signature

11-2-15

Date

Daytime Telephone: 512 785 3135

Comments: I am so disappointed in

city leaders allowing this growth without concern for quality of life.

You have got to be kidding with this development. Thornton road continually

bottlenecks & you cannot even get out on Olto rf in a reasonable way

A huge apartment complex across street from me is going to add

100 more apartments and that is

If you use this form to comment, it may be returned to: already too much

City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810
Please come live on this street and for once, think about infrastructure before property tax revenue

PUBLIC HEARING INFORMATION

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Case Number: C14-2015-0047
Contact: Andrew Moore, 512-974-7604
Public Hearing: Oct 13, 2015, Planning Commission
Nov. 12, 2015, City Council

Your Name (please print) Christine Phillips & Bart Phillips

I am in favor
 Object

6113 Laurel Valley Ct

Your address(es) affected by this application

76132

Gina Phillips

Signature

10-27-15

Date

Daytime Telephone: 817-239-5997c

Comments:

We own condo at

Carroll Park in The Starline.

#220. We are part of

Cap I Enterprises, INC

If you use this form to comment, it may be returned to:

City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

PUBLIC HEARING INFORMATION

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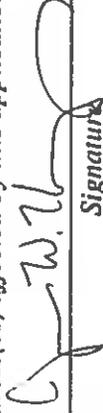
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Case Number: C14-2015-0047
Contact: Andrew Moore, 512-974-7604
Public Hearing: Oct 13, 2015, Planning Commission
Nov. 12, 2015, City Council

James Henderson
Your Name (please print)

2204 Thornton Road, #2

Your address(es) affected by this application



Signature

10.9.15

Date

Daytime Telephone: 412-400-8694

Comments:

If you use this form to comment, it may be returned to:

City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

PUBLIC HEARING INFORMATION

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Case Number: C14-2015-0047

Contact: Andrew Moore, 512-974-7604

Public Hearing: Oct 13, 2015, Planning Commission

Nov. 12, 2015, City Council

SPENCER PRICE/ENASH

Your Name (please print)

1704 RAVEY ST.

Your address(es) affected by this application

Spencer U. Price/Enash

Signature

10/13/2015

Date

Daytime Telephone: 512 404 6815

Comments:

If you use this form to comment, it may be returned to:

City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

PUBLIC HEARING INFORMATION

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Case Number: C14-2015-0047
Contact: Andrew Moore, 512-974-7604
Public Hearing: Oct 13, 2015, Planning Commission
Nov. 12, 2015, City Council

Robert Schneider
Your Name (please print)

2204 Thornhill Rd 78704
Your address(es) affected by this application



Signature

Date

10/12/15

I am in favor
 I object

Daytime Telephone: 512 480 2426

Comments:

density for proposed development is dramatically more than other residential units on the street. My concern is that many people will be out on bike, or on foot.

If you use this form to comment, it may be returned to:

City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

PUBLIC HEARIN INFORMATION

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Case Number: C14-2015-0047
Contact: Andrew Moore, 512-974-76
Public Hearing: Oct 13, 2015, Planning Commission
Nov. 12, 2015, City Council

JAYNE TRUCKENBROD
Your Name (please print)

2216 THORSTON RD # 310

Your address(es) affected by this application

Jayne S. Truckenbrod
Signature

10/9/15
Date

Daytime Telephone: 217-992-2269

I am in favor
 Object

Comments:

If you use this form to comment, it may be returned to:

City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

PUBLIC HEARING INFORMATION

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Case Number: C14-2015-0047

Contact: Andrew Moore, 512-974-7604

Public Hearing: Oct 13, 2015, Planning Commission

Nov. 12, 2015, City Council

John Froelich
Your Name (please print)

2318 Thornton Rd

Your address(es) affected by this application

John Froelich

Signature

9 Oct 2015

Date

Daytime Telephone: 512-966-9618

Comments: Thornton Rd is too narrow to allow more traffic. There is only room for one lane of traffic. It is a dangerous street for cars bicycler and pedestrians. Need to build sidewalks and restrict parking to one side of the street only.

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Case Number: C14-2015-0047

Contact: Andrew Moore, 512-974-7604

Public Hearing: Oct 13, 2015, Planning Commission
Nov. 12, 2015, City Council

DAVID ANSEL

Your Name (please print)

2509 THORNTON RD

Your address(es) affected by this application

DAVID ANSEL

Signature

Daytime Telephone: 512 577 7687

10/13/15

Date

I am in favor
 I object

Comments: THIS REZONE TAKES SERIOUS CHUTZPAH.

VMU IN OUR NEIGHBORHOOD? ON AN OVER-STATECASE,

DANGEROUS COLLECTOR? UTTERLY INAPPROPRIATE,

BAWD-FACED PROFITEERING AT THE EXPENSE OF

THE QUALITY OF LIFE OF THE NEIGHBORHOOD.

NAUSEATING.

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Case Number: C14-2015-0047

Contact: Andrew Moore, 512-974-7604

Public Hearing: Oct 13, 2015, Planning Commission

Nov. 12, 2015, City Council

Randall C. Huntsinger

Your Name (please print)

2204 Thornton Road, #3, ATX 78704

Your address(es) affected by this application

Randall Huntsinger

Signature

10-9-2015

Date

Daytime Telephone: 512 707 9900

Comments: Our street is already at capacity. We cannot permit the additional influx of people this proposed zone change is intended to permit. It would be unsafe. It would reduce quality of life. It would be disruptive. NO ONE WHO LIVES HERE SUPPORTS THIS!! Do not override our universal opposition!

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Case Number: C14-2015-0047

Contact: Andrew Moore, 512-974-7604

Public Hearing: Oct 13, 2015, Planning Commission

Nov. 12, 2015, City Council

TERRY HEWEYER

Your Name (please print)

2216 THORNTON ROAD #420
AUSTIN TX 78704

Your address(es) affected by this application

Larry Deemy 8 OCT 2015

Signature

Date

Daytime Telephone: 713 819-1322

Comments: TRAFFIC AND PARKING

ON THORNTON ROAD IS ALREADY

UN-BEARABLE. VEHICLE

MIXTURE WILL FURTHER

DEGRADE THE RESIDENTIAL

CHARACTER OF THE NEIGHBORHOOD.

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Planning & Zoning Department

Andrew Moore

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ANDREW.MOORE@AUSTINTEXAS.GOV

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Case Number: C14-2015-0047
Contact: Andrew Moore, 512-974-7604
Public Hearing: Oct 13, 2015, Planning Commission
Nov. 12, 2015, City Council

CARLIE McDONALD
Your Name (please print)

I am in favor
 I object

2216 THORNTON ROAD #413
Your address(es) affected by this application

CARLIE McDONALD
Signature

10/13/15
Date

Daytime Telephone: 512-680-5109

Comments:

DONT DO THIS - THE

DENSITY IS FINE ON

LAMAR, BUT NOT THIS

DEEP INTO THE NEIGHBORHOOD

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Case Number: C14-2015-0047

Contact: Andrew Moore, 512-974-7604

Public Hearing: Oct 13, 2015, Planning Commission

Nov. 12, 2015, City Council

Karen Kennedy

Your Name (please print)

2308 A Thornton Rd

Your address(es) affected by this application

Karen Kennedy

Signature

10/10/15

Date

Daytime Telephone: (512) 653-0554

Comments: Thornton is a narrow

road with parking allowed on

both sides. Already almost

impassable most evenings due to

growth in the area and overflow

parking from ABGB. No traffic

light at oilport and Thornton.

Absolutely no way this little

street can safely accommodate

this level of traffic. This

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Andrew Moore

P.O. Box 1088

Austin, TX 78767-8810

I strongly Oppose !!

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Case Number: C14-2015-0047
Contact: Andrew Moore, 512-974-7604
Public Hearing: Oct 13, 2015, Planning Commission
Nov. 12, 2015, City Council

Karl Popham

Your Name (please print)

2216 Thornton Rd # 422

Your address(es) affected by this application T8104

Kul W Fay

Signature

10/16/15

Date

Daytime Telephone: (512) 294-8093

Comments:

Chief concerns around volume of traffic and safety issues w/ this project.

The size of the project in relation to the scale of the neighborhood is way too large. Flooding & run-off is already a problem in this flood prone area

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Case Number: C14-2015-0047

Contact: Andrew Moore, 512-974-7604

Public Hearing: Oct 13, 2015, Planning Commission

Nov. 12, 2015, City Council

MEHUL PATEL

Your Name (please print)

2216 THORNTON ROAD #110, 78704

Your address(es) affected by this application

10/14/2015

Date

Signature

Daytime Telephone: **512-494-4508**

Comments: **THORNTON ROAD ALREADY HAS MAJOR TRAFFIC PROBLEMS RIGHT NOW**

DUE TO THE NEARBY AUSTIN BEER GARDEN AND BREWERY. LACK OF SIDEWALKS

AND STREET LIGHTING, ALONG WITH PARKING ON BOTH SIDES OF THE STREET MEANS

TWO-WAY VEHICLE TRAFFIC, BIKES, AND PEDESTRIANS ALREADY HAVE TO NAVIGATE

IN A SINGLE LANE OFTEN IN THE DARK. WHEN TRAINS COME BY, THE INTERSECTION

AT OLTORF AND THORNTON CAN BECOME AN EXTENDED MESS. THE STREET IS

DESIGNED FOR QUIET RESIDENTIAL USE AND CANNOT HANDLE ANY MAJOR

COMMERCIAL PROPERTIES OR LARGE APARTMENT COMPLEXES. IT WOULD CREATE

A HUGE TRAFFIC NIGHTMARE THAT WOULD OVERWHELM THE AREA.

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Andrew Moore

P. O. Box 1088

Austin, TX 78767-8810

I am in favor
 I object

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Case Number: C14-2015-0047
Contact: Andrew Moore, 512-974-7604
Public Hearing: Oct 13, 2015, Planning Commission
Nov. 12, 2015, City Council

Deborah Pederson

Your Name (please print)

2216 Thornton

Your address(es) affected by this application

[Signature]

Signature

10/7/15

Date

Daytime Telephone: 512 391 8250

Comments: This project is too large for the neighborhood. Thorton Road cannot handle the traffic nor parking. Thorton Road is already ~~dangerous~~ dangerous with the street parking.

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Case Number: C14-2015-0047
Contact: Andrew Moore, 512-974-7604
Public Hearing: Oct 13, 2015, Planning Commission
Nov. 12, 2015, City Council

Kristine Hanford
Your Name (please print)

2216 Thornton Rd #430
Your address(es) affected by this application

Kristine Hanford
Signature

10/9/15
Date

Daytime Telephone: 600-276-9379

I am in favor
 I object

Comments: Thornton Rd. can't accommodate the current traffic flow & will not be able to handle the increased traffic from an influx of new residents. There is limited visibility when driving & due to there being no restrictions on parking, only cars can get down the road at a time. There are also no sidewalks to accommodate pedestrian traffic & no stoplight to control traffic flow.

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Case Number: C14-2015-0047

Contact: Andrew Moore, 512-974-7604

Public Hearing: Oct 13, 2015, Planning Commission
Nov. 12, 2015, City Council

Camille Perry
Your Name (please print)

2211 Eva Lane, Austin 78704

Your address(es) affected by this application

Camille M. Perry

Signature

Daytime Telephone: (512) 444-0754

Date

same day as heard

Comments: This stretch of Thornton Rd. is too busy and dangerous already. Changing the zoning to Commercial would make it even worse. The road is too narrow and the area has no sidewalks. This route really needs to be passable at all times for emergency vehicles to use as there are only a few ways into and out of the South Lamar neighborhood Assn. area and the population has already grown immensely. No! No! No! to this zoning request.

Vertical
Commercial
(M U)

| |
|--|
| <input type="checkbox"/> I am in favor |
| <input checked="" type="checkbox"/> I object |

Saturday,

Oct. 3, 2015

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Case Number: C14-2015-0047
Contact: Andrew Moore, 512-974-7604
Public Hearing: Oct 13, 2015, Planning Commission
Nov. 12, 2015, City Council

Elizabeth (Beth) Guillot
Your Name (please print)

I am in favor
 I object

2216 Thornton #210, Austin, Texas 78704

Your Address(es) affected by this application



Signature

10.13.15

Date

Daytime Telephone: 512-699-3083

Comments:

If you use this form to comment, it may be returned to:

City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

PUBLIC HEARING INFORMATION

This zoning/rezoning request will be reviewed and acted upon at two public hearings: before the Land Use Commission and the City Council. Although applicants and/or their agent(s) are expected to attend a public hearing, you are not required to attend. However, if you do attend, you have the opportunity to speak FOR or AGAINST the proposed development or change. You may also contact a neighborhood or environmental organization that has expressed an interest in an application affecting your neighborhood.

During its public hearing, the board or commission may postpone or continue an application's hearing to a later date, or may evaluate the City staff's recommendation and public input forwarding its own recommendation to the City Council. If the board or commission announces a specific date and time for a postponement or continuation that is not later than 60 days from the announcement, no further notice is required.

During its public hearing, the City Council may grant or deny a zoning request, or rezone the land to a less intensive zoning than requested but in no case will it grant a more intensive zoning.

However, in order to allow for mixed use development, the Council may add the MIXED USE (MU) COMBINING DISTRICT to certain commercial districts. The MU Combining District simply allows residential uses in addition to those uses already allowed in the seven commercial zoning districts. As a result, the MU Combining District allows the combination of office, retail, commercial, and residential uses within a single development.

For additional information on the City of Austin's land development process, visit our website: www.austintexas.gov/planning.

Written comments must be submitted to the board or commission (or the contact person listed on the notice) before or at a public hearing. Your comments should include the board or commission's name, the scheduled date of the public hearing, and the Case Number and the contact person listed on the notice.

Case Number: C14-2015-0047

Contact: Andrew Moore, 512-974-7604

Public Hearing: Dec. 8, 2015, Planning Commission
Feb. 11, 2016, City Council

Lary White
Your Name (please print)

2216 Thornton Rd #421 Austin

Your address(es) affected by this application

Lary White

12-1-15

Date

Signature

Daytime Telephone: 512 423 6157

Comments: Thornton Rd can not take any more traffic. The fact that there CAN NOT be a traffic signal at Thornton and offset should be enough reason this should be rejected

Thornton Rd is NOT LAMAR

If you use this form to comment, it may be returned to:

City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

2111 Thornton Rd
Austin TX 78704

October 27, 2015

City of Austin
Planning & Zoning Department
Andrew Moore
PO Box 1088
Austin TX 78767

RE: Case number C14-2015-0047

I am opposed to the proposed zoning change to property at 2303 and 2309 Thornton Road.

The proposed change from commercial to VMU is not compatible with the surrounding neighborhood.

It will create a traffic load that exceeds what the infrastructure can provide; especially with the new traffic that will be generated by the PSW apartment complex at 2505 soon to be completed. The project is being sold as a mixed-use, "work-live" development which is supposed to reduce the number of car trips per day however the actual number of work-live units is a very small minority of the total number of residential units. The developers skirted a city-sponsored traffic study by asserting their traffic load was below the threshold to initiate a study based on this assertion. I don't think a reasonable person would agree with that logic.

Once that land is zoned CS/VMU the potential development well into the future could have even more detrimental effect on the street and neighborhood. I'm not comfortable opening up that possibility. I asked the developer about that when I met them in person and was told "large scale commercial development is not their plan." But we all know that the plans of future owners could be very different. I don't understand how that property was ever zoned commercial in the first place. If down-zoning it were possible I would support that.

I also personally believe that the existing use of the property contributes a culture and community to the neighborhood that exceeds that offered by another multi-family development. There is immeasurable value added by the creative individuals and businesses that operate out of those existing workspaces and warehouses. If the developer wanted to add more of that, I would be supportive. I am not suggesting that cultural aspects always override the rights of a property owner to do what they please with their property but in this case I do think it is a compelling fact to consider along with all of the project's other negative factors.

Sincerely,



signed October 27, 2015

Heath Marr
(512) 997-8911

Moore, Andrew

From: Said Aziz [REDACTED]
Sent: Tuesday, December 08, 2015 2:45 PM
To: Moore, Andrew
Subject: Case Number C14-2015-0047

Dear Sir,

I am the owner of 2316A Thornton Road and president of the Thornton City Homes (South) HOA. I write today to express my concern over the rezoning of 2303-2311 Thornton Road. While I understand and appreciate the value that new development brings, both in terms of vitality and tax revenue, I am extremely concerned that Thornton Road is already unsafe. As someone who is planning to start a family in the next year or two, it concerns me that there is no safe way for children who live on Thornton, to walk to Oltorf to access public transportation. Thornton Road is fundamentally unsafe for pedestrians and bikers. The danger stems from several factors:

- 1) Lack of sidewalks for pedestrian transit forces bikers and people into the street
- 2) The width of the road is not sufficient for two cars to pass each other without pulling over, if cars are parked on both sides of the street. Pedestrians are literally forced to dodge cars
- 3) Lack of street lights make it challenging to see pedestrians when driving the road at night
- 4) The use of Thornton Road by local businesses as overflow commercial parking.

Given the above, the addition of over a hundred residents and vehicles to this road would be irresponsible, unless action is taken to mitigate the risk associated the current situation on Thornton. I purchased my home with the hopes of walking to local eateries and it just isn't safe anymore. If you drive down Thornton on a Friday night, you will see patrons of the Austin Beer Garden parking the road completely full, all the way down to my home at 2316 Thornton. The fact that these people do not live in this neighborhood is made clear, when on the following morning, the street is completely vacant. There is simply no parking for residents or their guests, coming home from work on the weekends. Additionally, due to the large amount of construction, and people avoiding traffic on South Lamar by driving at 40mph down Thornton to access the neighborhood to the south, the road is carrying a capacity that it isn't capable of sustaining.

If nothing is done, it is only a matter of time before someone is seriously injured or killed on Thornton. This situation is one that has transcended nuisance or inconvenience to residents and instead become one of public danger. I therefore implore the Council to consider taking action to re-mediate the situation. Again, development is necessary and good, provided that it can be done in a way that is additive to the neighborhood, and not dangerous or over-burdening. I would suggest the following, if the Council wants to allow further development on Thornton:

- 1) Make one side of the street no parking, or establish a neighborhood parking rule as the Council has done near South Congress Avenue to protect local resident's street access.
- 2) Provide a sidewalk on at least one side of the street to ensure pedestrian safety
- 3) Add street lights for better visibility.

Sincerely,
Said Aziz II
2316A Thornton Road

PETITION

Date: _____
File Number: C14-2015-0047
Address of Rezoning Request: 2303 Thornton Road & 2311 Thornton Road

To: Austin City Council

We, the undersigned owners of property affected by the requested zoning change described in the referenced file, do hereby protest against any change of the Land Development Code which would zone the property to any classification other than CS.

The subject property is not in a transit corridor though the present application seeks Vertical Mixed Use (VMU) designation. The increased volume of traffic from a change would negatively affect transportation on Thornton Road and dramatically alter the neighborhood character. The density of the proposed site plan may impede the implementation of the Del Curto Storm Drain Improvements project as part of the South Lamar Mitigation and increase the potential for flooding on neighboring properties in the West Boulder Creek Watershed.

(PLEASE USE BLACK INK WHEN SIGNING PETITION)

| Signature | Printed Name | Address |
|----------------------------|---------------------|-------------------------|
| <i>Delva Zimmer</i> | Delva Zimmer | 2313 Thornton Rd |
| <i>Delva Zimmer</i> | Delva Zimmer | 2315 Thornton Rd |
| <i>Blaine Zimmer</i> | Blaine Zimmer | 2313 Thornton Rd |
| <i>Blaine Zimmer</i> | Blaine Zimmer | 2315 Thornton Rd |
| <i>Mencel F Bustamante</i> | Mencel F Bustamante | 2401 Thornton Rd |
| <i>Jill Bustamante</i> | Jill Bustamante | 2401 Thornton Rd |
| <i>SAID AZIZI</i> | SAID AZIZI | 2316a Thornton Rd |
| <i>David Kyle</i> | David Kyle | 2308A Thornton Rd |
| <i>Korey Kenney</i> | Korey Kenney | 2308A Thornton Rd |
| <i>Adam Gauvin</i> | Adam Gauvin | 2322A Thornton Rd |
| <i>BETTY JANE McHAUL</i> | BETTY JANE McHAUL | 2308 UNIT B THORNTON RD |
| <i>Stewart Hind</i> | Stewart Hind | 2207 Thornton Rd |
| <i>Stewart Hind</i> | Stewart Hind | 2209 Thornton Rd |
| <i>Thornton Centurys</i> | Thornton Centurys | 2205 Thornton Rd |

Date: _____
Contact Name: _____
Phone Number: _____

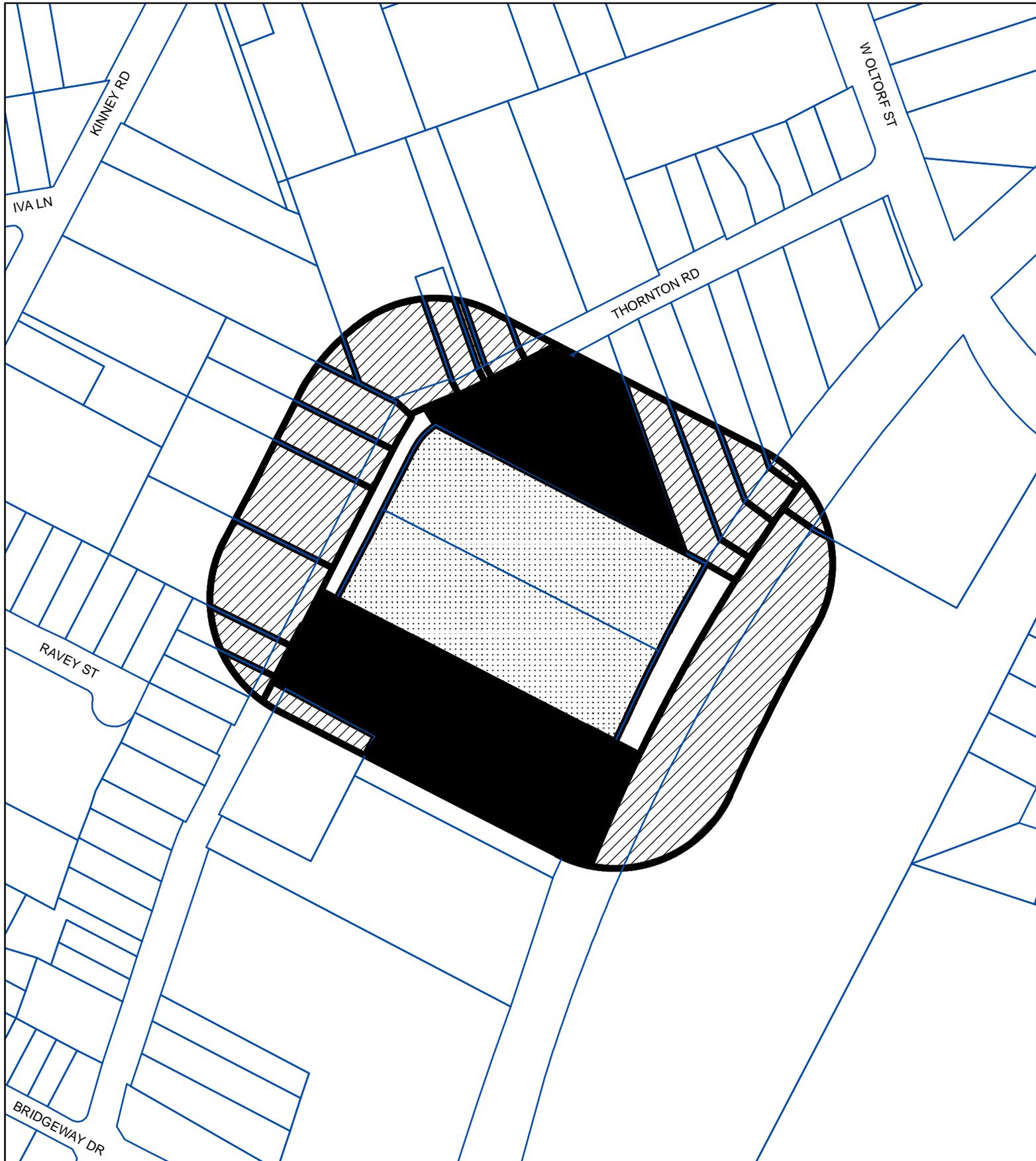
Case Number:
C14-2015-0047

PETITION

Date: 2/8/2016
 Total Square Footage of Buffer: 447744.7833
 Percentage of Square Footage Owned by Petitioners Within Buffer: 31.00%

Calculation: The total square footage is calculated by taking the sum of the area of all TCAD Parcels with valid signatures including one-half of the adjacent right-of-way that fall within 200 feet of the subject tract. Parcels that do not fall within the 200 foot buffer are not used for calculation. When a parcel intersects the edge of the buffer, only the portion of the parcel that falls within the buffer is used. The area of the buffer does not include the subject tract.

| TCAD ID | Address | Owner | Signature | Petition Area | Percent |
|--------------|---------------------------|---|-----------|------------------|---------------|
| 0401060225 | 2210 THORNTON RD 78704 | 3423 HOLDINGS LLC | no | 6118.38 | 0.00% |
| 0401060224 | 2206 THORNTON RD 78704 | 3423 HOLDINGS LLC | no | 1979.31 | 0.00% |
| 0401060333 | 2401 THORNTON RD 78704 | BUSTAMANTE MANUEL F & JILL | yes | 41492.49 | 9.27% |
| 0401060334 | 2211 THORNTON RD 78704 | DAVIS GARY | yes | 8668.96 | 1.94% |
| 0401060233 | 2402 THORNTON RD 78704 | FEINGERSH LARRY & KATIE | no | 2533.41 | 0.00% |
| 0401060328 | 2109 THORNTON RD 78704 | HAGERMAN STEPHEN | no | 1096.02 | 0.00% |
| 0401060335 | 2209 THORNTON RD 78704 | LINDE STUART A | yes | 9479.13 | 2.12% |
| 0401060336 | 2207 THORNTON RD 78704 | LINDE STUART A | yes | 12976.03 | 2.90% |
| 0401060309 | 2201 THORNTON RD 78704 | LUNEBERG GRIFF | no | 18280.75 | 0.00% |
| 0401060311 | 2111 THORNTON RD 78704 | MARR HEATH | no | 7770.42 | 0.00% |
| 0401060310 | 2113 THORNTON RD 78704 | MCINTYRE AARON J & EMILY B | no | 14170.69 | 0.00% |
| 0401060501 | 1301 13 W OLTORF ST 78704 | MULTIPLE OWNERS | no | 85935.61 | 0.00% |
| 0401060503 | 1305 W OLTORF ST 78704 | NOUVELLE MAISON L P | no | 2836.65 | 0.00% |
| 0401060232 | 2400 THORNTON RD 78704 | RICHTERMEYER CURT & PAULOMI SHETH PAULOMI SHETH RICHTERMEYER | no | 6714.45 | 0.00% |
| 0401060203 | 2211 KINNEY RD 78704 | SMITH CAROL SYLVIA | no | 1953.83 | 0.00% |
| 0401060331 | 2409 THORNTON RD 78704 | SPRINT COMMUNICATIONS COMPANY COMPANY L P | no | 6544.95 | 0.00% |
| 0401060229 | 2300 THORNTON RD 78704 | TUCICH GLENN ANDREW | no | 11827.16 | 0.00% |
| 0401060230 | 2304 THORNTON RD 78704 | VISIO R-2 I LP | no | 11989.28 | 0.00% |
| 0401060227 | 2212 THORNTON RD 78704 | WYMER ROBERT | no | 6968.38 | 0.00% |
| 0401060302 | 2315 THORNTON RD 78704 | ZIMMER BLAINE & DELVA ZIMMER APT C | yes | 31874.77 | 7.12% |
| 0401060303 | 2313 THORNTON RD 78704 | ZIMMER BLAINE & DELVA ZIMMER APT C | yes | 34326.75 | 7.67% |
| 0401061501 | Address Not Found | | no | 23964.57 | 0.00% |
| 0401061401 | Address Not Found | | no | 22192.55 | 0.00% |
| 0401061601 | Address Not Found | | no | 23222.88 | 0.00% |
| 0401062101 | Address Not Found | | no | 10004.81 | 0.00% |
| 0401062001 | Address Not Found | | no | 18034.69 | 0.00% |
| Total | | | | 422956.94 | 31.00% |



N



-  BUFFER
-  PROPERTY_OWNER
-  SUBJECT_TRACT

PETITION

CASE#: C14-2015-0047

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

This product has been produced by CTM for the sole purpose of geographic reference. No warranty is made by the City of Austin regarding specific accuracy or completeness.



1" = 200'

On-line submittal of opposition conducted by Bantaid School of Music

| Timestamp | Name | Signature |
|---------------------|-----------------------|-----------------------------|
| 11/19/2015 13:28:08 | michael walker | MPW |
| 11/19/2015 13:30:37 | Ismael Quintanilla | IQ |
| 11/19/2015 13:32:07 | Jennie Glasscock | JG |
| 11/19/2015 13:33:38 | Lesley tibbits | Lt |
| 11/19/2015 13:35:54 | Joan Wolfe | JW |
| 11/19/2015 13:36:14 | Kelly Besecke | Kelly Besecke |
| 11/19/2015 13:36:19 | Sadie Wolfe | SW |
| 11/19/2015 13:38:08 | Kate Semple | KVS |
| 11/19/2015 13:38:57 | Michelle brown | Michelle brown |
| 11/19/2015 13:44:54 | Bryan King | BK |
| 11/19/2015 13:50:17 | Jared Driscoll | JD |
| 11/19/2015 13:52:39 | Naomi Jacobsen | Naomi Jacobsen |
| 11/19/2015 13:54:36 | Darbi Lockridge | DLockridge |
| 11/19/2015 14:14:26 | Nancy Radding | nr |
| 11/19/2015 14:20:08 | Leslie McCulloch | LM |
| 11/19/2015 14:23:05 | asha poyzer | poyzer |
| 11/19/2015 14:25:28 | Elena Rivera | Elena Rivera |
| 11/19/2015 14:28:29 | Irma Malfavon | IM |
| 11/19/2015 14:43:09 | Blair Randle | MBR |
| 11/19/2015 14:43:35 | stephen bidwell | sb |
| 11/19/2015 16:09:26 | Frank J. Garza | FJG |
| 11/19/2015 16:14:52 | Debbie Stanley | DAS |
| 11/19/2015 16:41:05 | Walt Brewer | WB |
| 11/19/2015 16:41:55 | Jania Ashby | I am opposed to changing |
| 11/19/2015 17:23:19 | Emily Miller | EM |
| 11/19/2015 17:38:10 | Caren M. SOULE-Morton | CMSM |
| 11/19/2015 18:00:34 | Neesha Thakkar | NT |
| 11/19/2015 19:01:07 | Kimberly Taylor | Kdtaylor |
| 11/19/2015 19:06:43 | Gabriel Hall | GH |
| 11/19/2015 19:18:24 | Alex Hargadon | AH |
| 11/19/2015 19:42:45 | Angie Meier | AJM |
| 11/19/2015 20:04:58 | Maite Jimenez Vidal | MJV |
| 11/19/2015 20:43:57 | No to this! | EM |
| 11/19/2015 21:22:09 | Howard Brown | Yes. Do not demolish this j |
| 11/19/2015 21:30:14 | Anne Kempter | AK |
| 11/19/2015 21:44:12 | Lauren Butler | LB |
| 11/19/2015 22:44:26 | Joel Laviolette | JL |
| 11/19/2015 22:55:38 | Tami Corbett | Tc |
| 11/19/2015 23:43:08 | Don Pitts | DP |
| 11/20/2015 0:33:00 | Kevin "7" Walter | 7W |
| 11/20/2015 0:57:57 | Lauren Atencio | LTA |

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| 11/20/2015 1:36:28 Dale Whistler | Dw |
| 11/20/2015 5:11:21 Johanna Eckler | JE |
| 11/20/2015 6:33:08 Jennifer Gold | JG |
| 11/20/2015 6:41:11 Arwen Tedhams | A.T. |
| 11/20/2015 7:25:06 Carolyn | CB |
| 11/20/2015 7:52:46 elexia | el |
| 11/20/2015 8:02:43 David Baker | David Baker |
| 11/20/2015 8:03:17 David Baker | David Baker |
| 11/20/2015 8:08:41 April Lewis | AL |
| 11/20/2015 8:22:51 Michele Pain | Mp |
| 11/20/2015 8:40:37 Mary Fagan | MF |
| 11/20/2015 9:55:54 Greta Olivas | GO |
| 11/20/2015 10:07:35 Margery Segal | MS |
| 11/20/2015 13:03:37 Dana Wyss | Dana Wyss |
| 11/20/2015 13:04:26 Chris Sawyer | CS |
| 11/20/2015 14:25:53 Rothko Hauschildt | RH |
| 11/20/2015 14:56:37 Elyse Yates | Elyse Yates |
| 11/20/2015 15:30:53 Patricia Jang | Patricia Jang |
| 11/20/2015 15:42:47 Stephen Brueggerhoff | SB |
| 11/20/2015 16:32:44 Cynthia Netting | CN |
| 11/20/2015 17:00:20 Carolyn Collins | CC |
| 11/20/2015 17:22:29 Barbara White | bw |
| 11/20/2015 19:09:53 Mary Ann Reynolds | Mary Ann Reynolds |
| 11/20/2015 19:18:16 Deanna Miesch | Deanna Miesch |
| 11/20/2015 20:03:42 Jules Esh/ Earphoria | jae |
| 11/20/2015 20:28:53 claudia cobianchi | cjc |
| 11/20/2015 20:36:03 Manuel Jimenez | M. A. Jimenez |
| 11/21/2015 0:00:51 Jennifer Thayer | jrt |
| 11/21/2015 0:01:52 roberto sanguinetti | roberto sanguinetti |
| 11/21/2015 0:02:50 Barbara Newitt | Bn |
| 11/21/2015 3:45:26 Kimberly Engleman | Kimberly Engleman |
| 11/21/2015 6:17:28 Liz Tucker | LT |
| 11/21/2015 6:39:37 Maria Morrissey | MCM |
| 11/21/2015 7:09:19 David Bowerbank | db |
| 11/21/2015 8:21:33 Tammy west | Tw |
| 11/21/2015 8:45:40 Lori conley | LC |
| 11/21/2015 9:43:08 Paul Brown Jarmon | pbj |
| 11/21/2015 11:54:49 Dorothy G. Peterson | Dorothy G. Peterson |
| 11/21/2015 13:36:10 Sandy Palacios | Sap |
| 11/22/2015 13:58:00 Jeff Rowe | JR |
| 11/22/2015 14:53:53 Christian shaw | Christian Shaw |
| 11/23/2015 11:27:47 Yolanda Zielinski | YZ |
| 11/23/2015 13:10:00 girendar | GP |

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| 11/23/2015 13:18:00 Brian Steele | BJS |
| 11/23/2015 23:54:32 Kat Lindsay | KL |
| 11/24/2015 10:02:10 Chrissie Natoli | CN |
| 11/24/2015 11:00:09 Brittany Highland | BH |
| 11/24/2015 11:36:19 Jamers J. Natoli | JJN |
| 11/24/2015 13:58:15 Randy Kerr | Randy Kerr |
| 11/24/2015 15:49:54 Trish Smith | TS |
| 11/24/2015 16:16:39 Alan Carsrud | Dr. Alan Carsrud |
| 11/24/2015 16:25:54 Lisa Jacobs | Lisa Jacobs |
| 11/24/2015 16:36:55 Janet Coretti MacRae | JCM |
| 11/24/2015 16:45:12 Sherry Stephens | SS |
| 11/24/2015 16:49:26 Joyce Bertolacini | JB |
| 11/24/2015 16:51:31 Livi Rodríguez Stidham | LRS |
| 11/24/2015 17:25:13 Ernest Trevino | ET |
| 11/24/2015 17:29:52 Taylor Love | TL |
| 11/24/2015 17:41:40 Mindy Graber | MG |
| 11/24/2015 17:48:38 Karen Sullivan | KS |
| 11/24/2015 18:13:33 Dell Hollingsworth | DH |
| 11/24/2015 18:36:17 Connie Miller | CSM |
| 11/24/2015 18:44:41 Keith Hajovsky | kh |
| 11/24/2015 18:49:44 Jarrell D. Matkins, Jr. | JDM |
| 11/24/2015 18:59:39 Jill Cardinal | Jill Cardinal |
| 11/24/2015 19:03:53 Robin gary | Rfg |
| 11/24/2015 19:17:32 Victor Eijkhout | VLE |
| 11/24/2015 19:36:31 Ruth Glendinning | RLG |
| 11/24/2015 19:47:34 Kathryn Defee | KD |
| 11/24/2015 20:31:03 Nora McMullen | NJM |
| 11/24/2015 20:33:54 Jennie Bennett | JB |
| 11/24/2015 20:50:09 Stephanie Sterling | SS |
| 11/24/2015 20:57:11 Shawn Kanning | SK |
| 11/24/2015 21:14:22 Carla Shepherd | CS |
| 11/24/2015 21:22:39 Ashlee duffin | Ashlee Duffin |
| 11/24/2015 21:24:16 Alicia Lasby | AL |
| 11/24/2015 21:27:01 Caren Betz | Caren Betz |
| 11/24/2015 21:28:02 Kelly Hankamer | KEH |
| 11/24/2015 21:35:36 Holly Bullington | Holly Bullington |
| 11/24/2015 21:47:31 Deborah Barbee | DDB |
| 11/24/2015 21:47:54 Lanny Short | Lanny Short - WLS |
| 11/24/2015 21:50:26 Heidi Bray | HGB |
| 11/24/2015 22:12:17 Al Bianchi | ARB |
| 11/24/2015 22:13:06 Rachel koper | Rk |
| 11/24/2015 22:35:44 Shanna Pharis | Shanna Pharis |
| 11/24/2015 22:36:26 Blake Brunson | LBB |

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| 11/24/2015 22:51:57 Michael Cricjett | .c MRC |
| 11/24/2015 22:57:21 Claire Fielden | i C.F. |
| 11/24/2015 22:58:32 Callan Muckleroy | CM |
| 11/24/2015 23:11:19 erin houser | eh |
| 11/25/2015 0:04:17 Edgar Diaz | EMD |
| 11/25/2015 0:08:57 hallie hughes hawkins | hhh |
| 11/25/2015 0:31:02 Beth McElhaney | VBM |
| 11/25/2015 0:35:26 A Miller | AM |
| 11/25/2015 4:59:50 Christopher Sweeny | Christopher Sweeny |
| 11/25/2015 5:11:10 Heidi Axelrod | HA |
| 11/25/2015 6:15:56 Dej Mejia | Dej Mejia |
| 11/25/2015 6:28:26 Teri Stegall | Teri A. Stegall |
| 11/25/2015 6:48:25 Janine Gropp | .i JG |
| 11/25/2015 7:02:22 Diane Hill | D H |
| 11/25/2015 7:04:14 Sarah Hinojosa Martin | SM |
| 11/25/2015 7:04:16 Teresa Jackson | TJ |
| 11/25/2015 7:06:02 Laura Wilcox | LLW |
| 11/25/2015 7:25:46 Lori Perry | LP |
| 11/25/2015 7:45:09 mindy johnson-hicks | MJH |
| 11/25/2015 7:53:37 Keely Smith | KS |
| 11/25/2015 8:36:23 Whitney Roberts | WR |
| 11/25/2015 8:39:30 Marta Guzman | n MG |
| 11/25/2015 8:43:22 Christal boyd | Cb |
| 11/25/2015 9:00:12 Jan Meeks | jdm |
| 11/25/2015 9:21:48 Irma Malfavon | IM |
| 11/25/2015 9:27:13 Karen Clevidence | KRC |
| 11/25/2015 9:31:59 Linda A. Cox | LAC |
| 11/25/2015 9:37:17 Alex Anderson | a AA |
| 11/25/2015 10:04:08 Anne Johnson | AJ |
| 11/25/2015 12:13:06 Sandy Muckleroy | S.M. |
| 11/25/2015 13:05:11 Adrienne Balkany | AB |
| 11/25/2015 13:12:21 Greg Davis | GD |
| 11/25/2015 14:09:38 Diana Seidel | DMS |
| 11/25/2015 14:16:48 James Thatcher | JWT |
| 11/25/2015 15:18:23 Chris Mayes | ctm |
| 11/25/2015 16:20:12 Jason Midkiff | i JM |
| 11/25/2015 17:01:07 Kandi Morley | Kkm |
| 11/25/2015 17:26:39 Gina Choo | G C |
| 11/25/2015 17:36:09 Pepper Chastain | .c PC |
| 11/25/2015 17:45:36 cathy brown | Cb - save it |
| 11/25/2015 18:00:21 Patrice Carter | PRC |
| 11/25/2015 20:05:50 Shyamali Ghosh | .i Shyamali Ghosh |
| 11/25/2015 20:06:43 Charles K. Castle | x Chas.K.Castle |

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| 11/25/2015 20:56:32 | Autumn | | Autumn elias |
| 11/25/2015 22:19:32 | Jo Ann Ellis | | JE |
| 11/25/2015 22:41:22 | Karen Phillips | € | <P |
| 11/25/2015 22:57:55 | Janine Gropp | j | JG |
| 11/26/2015 8:33:35 | Mary Word | | new |
| 11/26/2015 11:02:24 | Shauna Woullard | t | SW |
| 11/26/2015 13:18:21 | Albert Bellard | / | AB |
| 11/26/2015 17:34:06 | Allen Pomeroy | € | AP |
| 11/26/2015 17:34:32 | Amanda Hull | € | AH |
| 11/26/2015 21:46:38 | Chris Hamm | h | Chph |
| 11/29/2015 8:02:00 | Nick karpen | | NAK |
| 11/29/2015 9:00:45 | Erica Luckstead | € | ELL |
| 11/29/2015 9:23:51 | Freddie Krc | f | F K |
| 11/29/2015 9:40:04 | Chelsea Rene Taylor | | CRt |
| 11/29/2015 9:40:58 | R j malott | | Ron malott |
| 11/29/2015 9:55:23 | Art Beaudet | € | AB |
| 11/29/2015 10:14:16 | Rose Lynn Scott | f | Rose Lynn Scott |
| 11/29/2015 10:27:39 | Judith Julian | f | JWJ |
| 11/29/2015 10:36:04 | Carrie Young | c | Cy |
| 11/29/2015 10:52:56 | Beverly Baker Moore | b | bbm |
| 11/29/2015 11:03:26 | KK McMillan | | KRMc |
| 11/29/2015 11:35:18 | Annie Harding | € | ah |
| 11/29/2015 12:22:28 | Mart Teresa Hall | T | MTH |
| 11/29/2015 13:02:34 | Tracy Gehman | | Tgag |
| 11/29/2015 14:59:17 | Ted Ward | t | Ted Ward/tw |
| 11/29/2015 15:00:04 | Edward Ward | € | EW |
| 11/29/2015 15:02:15 | Don Herrera | c | DHH |
| 11/29/2015 15:40:57 | Christine Gilbert | | CMG |
| 11/29/2015 16:00:05 | Nancy Webb | | Nancy Webb |
| 11/29/2015 16:06:49 | Lissa Hattersley | l | _H |
| 11/29/2015 16:39:48 | Marcia Evers | f | MCE |
| 11/29/2015 17:53:27 | Dixie Beal | c | J.D.B. |
| 11/29/2015 19:28:05 | Mary Kay Hagen | r | MKH |
| 11/29/2015 23:23:28 | k doyle | h | c doyle |
| 11/30/2015 0:44:19 | Lee Follender | l | SLF |
| 11/30/2015 1:46:26 | hank alrich | h | Hank Alrich |
| 11/30/2015 4:11:17 | Becki Jackson | | BJ |
| 11/30/2015 7:22:33 | Richard Ribb | r | RHR |
| 11/30/2015 8:30:09 | Jill Robinson | j | JR |
| 11/30/2015 9:31:20 | Penny verner | | Pgv |
| 11/30/2015 10:14:26 | Shirley Overton | € | SO |
| 11/30/2015 10:15:10 | Volma Overton | | VO |
| 11/30/2015 10:22:31 | Renée Mauzy | | RM |

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| 11/30/2015 10:26:25 Judy Knowlton | JCK |
| 11/30/2015 11:22:19 Dominic Eidson | c DjE |
| 11/30/2015 11:28:15 Roberta Hill | RH |
| 11/30/2015 11:51:56 Lynn Ferguson-Cash | Lynn Ferguson-Cash |
| 11/30/2015 15:53:29 Mary Plowman | Mary Plowman |
| 11/30/2015 17:15:26 Anita Gordon | ALG |
| 11/30/2015 18:45:12 shelley lewis | shelley lewis |
| 11/30/2015 18:45:52 brett mcmillin | 1 brett mcmillin |
| 11/30/2015 18:46:23 david lewis | david lewis |
| 11/30/2015 18:46:59 bryon mcmillin | 1 bryon mcmillin |
| 11/30/2015 18:50:14 Judy Lawson | Judy Lawson |
| 11/30/2015 22:59:47 Emma Little | E L |
| 12/1/2015 4:04:03 Carole Radford | cr |
| 12/1/2015 8:51:11 Sara Ratliff | SLR |
| 12/1/2015 9:23:03 Lawrence Anderson | LBA |
| 12/1/2015 16:04:45 Jennifer Voss | jv |
| 12/1/2015 17:13:31 Valerie Nelson | Valerie Nelson |
| 12/1/2015 19:16:34 Sonia Dahdah Ksiazek | SDK |
| 12/1/2015 19:50:50 Elise Winters | EW |
| 12/1/2015 21:18:08 Marissa Seiferman | 1 MS |
| 12/2/2015 11:03:59 Laura Niederhofer | ai LMN |
| 12/2/2015 13:20:46 Melissa Weir | MW |
| 12/2/2015 14:41:12 Darrell Cole | DC |
| 12/2/2015 19:01:46 Malcolm Jackson | mj |
| 12/2/2015 19:13:30 mercedes hubbard | ai mah |
| 12/2/2015 19:15:12 Colleen flynn | Colleen flynn |
| 12/2/2015 19:17:00 Jay Reynolds | c Jr |
| 12/2/2015 19:17:55 Kara Weinstein | c kw |
| 12/2/2015 19:20:26 Sophie Marceline | S.M |
| 12/2/2015 19:26:42 Priscilla Jones | Priscilla Jones |
| 12/2/2015 19:29:32 Marcellina Kampa | .1 Mk |
| 12/2/2015 19:30:59 Amanda Zoch | Amanda Zoch |
| 12/2/2015 19:33:26 Richard A Villanueva | RAV |
| 12/2/2015 19:33:27 Doug Mercer | Dm |
| 12/2/2015 19:37:54 Audrey Phillips | AP |
| 12/2/2015 19:38:21 Liz Ferguson | LF |
| 12/2/2015 19:38:58 Charles Husbands | CH |
| 12/2/2015 19:39:10 Glynn Wedgewood | GW |
| 12/2/2015 19:42:07 Lee Wright | LW |
| 12/2/2015 19:43:45 Honor Turner | HT |
| 12/2/2015 19:48:05 Tina Sasser | Ts |
| 12/2/2015 19:51:19 Steven Allen | Steve @familycommunications SMA |
| 12/2/2015 19:51:59 A SHAME IF IT HAPPENS | JAY JARA |

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| 12/2/2015 20:56:01 | Brian Steele | Bjs |
| 12/2/2015 20:59:06 | Michael Muirhead | MM |
| 12/2/2015 22:02:08 | Tony Galindo | TG |
| 12/2/2015 22:10:55 | Yvonne Beamon | Yb |
| 12/2/2015 23:06:41 | Dina Flores | DVF |
| 12/2/2015 23:26:21 | Jim barlow | JB |
| 12/2/2015 23:31:31 | George Turner | GPT |
| 12/3/2015 1:47:56 | Josh Mosier | jm |
| 12/3/2015 3:04:43 | Gary Davis | GD |
| 12/3/2015 3:22:53 | Ann Turner | AT |
| 12/3/2015 5:20:53 | Suzi Sande | SS |
| 12/3/2015 6:17:36 | Javier Montesinos | Javier Montesinos |
| 12/3/2015 7:42:00 | Sandra bannister | sb |
| 12/3/2015 7:59:47 | Sara poston | SP |
| 12/3/2015 8:00:39 | Lisa Strong | ls |
| 12/3/2015 9:24:54 | Nic Armstrong | NA |
| 12/3/2015 9:58:50 | Maureen Honey | mh |
| 12/3/2015 11:24:01 | Todd Hotz | TEH |
| 12/3/2015 11:24:44 | Judy Lister-Patrick | JLP |
| 12/3/2015 11:37:40 | Suzanne Johnson | slrj |
| 12/3/2015 11:47:36 | Rob Elliott | RE |
| 12/3/2015 12:33:38 | Bruce "BJ" Nelson | BJN |
| 12/3/2015 12:36:03 | Deron McCraw | dhm |
| 12/3/2015 13:01:16 | Mitchell C. McCraw | mcm |
| 12/3/2015 13:34:45 | A.J. Vincent | AJV |
| 12/3/2015 13:56:26 | Christina Flores | Scf |
| 12/3/2015 13:58:35 | Michael Olson | MO |
| 12/3/2015 14:22:41 | Tammy west | Tw |
| 12/3/2015 14:25:45 | Danielle Kolakowski | DK |
| 12/3/2015 14:28:20 | michelle | michelle I |
| 12/3/2015 14:32:29 | Jacqueline May | JM |
| 12/3/2015 14:46:30 | Sarah Ryan | Sarah Ryan |
| 12/3/2015 14:50:01 | Christiane Michaelis | CM |
| 12/3/2015 14:51:15 | John Spae | JS |
| 12/3/2015 14:51:33 | Brittany Hoover | Brittany N Hoover |
| 12/3/2015 14:51:53 | Cyndee Kavula | CK |
| 12/3/2015 14:52:28 | Chaprece | Chaprece Henry |
| 12/3/2015 14:53:02 | Chris Turner-Neal | CTN |
| 12/3/2015 14:58:13 | Bianca Neal | B.N. |
| 12/3/2015 14:58:41 | Erin Scruggs | Erin Scruggs |
| 12/3/2015 14:59:54 | Adam David | AD |
| 12/3/2015 15:00:44 | Sangye O'Mara | so |
| 12/3/2015 15:03:28 | Oscar Alarcon | OA |

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| 12/3/2015 15:05:58 Patrick Slevin | Patrick Slevin |
| 12/3/2015 15:09:49 Karlie Lemos | KL |
| 12/3/2015 15:12:19 Colin Gilmore | CG |
| 12/3/2015 15:14:25 Marc Utter | T Marc Utter |
| 12/3/2015 15:19:50 Cindy Linn | CL |
| 12/3/2015 15:21:07 Cynthia Jones | CJ |
| 12/3/2015 15:21:20 Brenda Feindel | BKF |
| 12/3/2015 15:32:56 Heather Singleton | :HS |
| 12/3/2015 15:33:05 Kelly Freeman | Kelly Freeman |
| 12/3/2015 15:38:17 Sherry Scott | SS |
| 12/3/2015 15:47:55 Julie Baker | JB |
| 12/3/2015 15:48:14 John Craig Wilkinson | John Craig Wilkinson |
| 12/3/2015 15:59:02 Linda "Libby" Valenti | LV |
| 12/3/2015 16:01:22 Barbara Hollenbeck | BH |
| 12/3/2015 16:10:13 Carlene Brady | C B |
| 12/3/2015 16:14:46 Clayton Ernst | Clayton Ernst |
| 12/3/2015 16:15:41 Roy Hughes | REH |
| 12/3/2015 16:19:48 Jo Hamilton | JH |
| 12/3/2015 16:20:39 Mary Quin Matteson | MQM |
| 12/3/2015 16:22:59 Craig Finkelstein | CF |
| 12/3/2015 16:25:34 Ashleigh Amoroso | Ashleigh Amoroso |
| 12/3/2015 16:28:31 Kate Semple | KVS |
| 12/3/2015 16:28:46 Kerry Smith | KLS |
| 12/3/2015 16:29:38 Brad Carlin | Brad Carlin |
| 12/3/2015 16:31:49 Missy | Mc |
| 12/3/2015 16:35:17 Laurie A. Ely | LAE |
| 12/3/2015 16:38:00 Kami Wilt | KW |
| 12/3/2015 16:50:02 Melissa Sommer | MS |
| 12/3/2015 16:52:09 Connor Finnigan | Cf |
| 12/3/2015 16:56:38 Stephen Scott | SS |
| 12/3/2015 17:10:05 Adam Hettler | Adam Hettler |
| 12/3/2015 17:13:58 Theresa Bradley | Theresa A. Bradley |
| 12/3/2015 17:24:41 David Rosenblad | JDR |
| 12/3/2015 17:47:31 Daniela De Jongh | :Ddj |
| 12/3/2015 17:52:43 Karen & Kenneth Balthrop | kb |
| 12/3/2015 17:58:02 Kaylyn Morgan | Km |
| 12/3/2015 18:02:18 Loulia Miller | Loulia |
| 12/3/2015 18:04:10 Teresa Austin | TA |
| 12/3/2015 18:33:18 john hayward | j.h. |
| 12/3/2015 18:33:19 Elizabeth Asnes | EA |
| 12/3/2015 18:33:41 Will Gudeman | WJG |
| 12/3/2015 18:38:53 Kristen Hattaway | KH |
| 12/3/2015 18:42:18 Anne Cusick | ac |

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| 12/3/2015 19:18:47 Erin | Erin fox |
| 12/3/2015 19:28:19 Lee Follender | SLF |
| 12/3/2015 19:33:56 Molly Martin | MM |
| 12/3/2015 19:52:38 Kristin Galindo | KG |
| 12/3/2015 20:07:22 Peter Breithaupt | PB |
| 12/3/2015 20:13:57 Shane Anciso | SA |
| 12/3/2015 20:29:08 Kay Belanger | KB |
| 12/3/2015 20:38:00 anne braseby | amb |
| 12/3/2015 20:39:18 Robert Packer | Robert Packer |
| 12/3/2015 20:47:36 Holly Klemm | Hk |
| 12/3/2015 20:49:21 Heather Labus | HL |
| 12/3/2015 20:51:17 Rev. Linda McWhorter | Rev. Linda McWhorter |
| 12/3/2015 21:17:20 Liz Arreguy | LA |
| 12/3/2015 21:42:21 Chantell Kirwyn | CK |
| 12/3/2015 21:49:50 Tammy Foster | TF |
| 12/3/2015 22:01:09 Hannah Ford | HF |
| 12/3/2015 22:18:21 David Baker | DB |
| 12/3/2015 22:32:03 Deborah K. Dobbs | DKD |
| 12/3/2015 22:36:12 Maggie Schleich | MS |
| 12/3/2015 22:53:56 Robin Swenson | RS |
| 12/3/2015 23:00:32 Cara Jackson | CJ |
| 12/3/2015 23:17:29 Annette Saarikoski | Annette Saarikoski |
| 12/3/2015 23:37:45 holly bronko | hb |
| 12/3/2015 23:40:30 Gabrielle Velázquez | gv |
| 12/4/2015 0:09:31 Shelley Strickland | Shelley Strickland |
| 12/4/2015 0:37:28 Bo Boatwright | Bo Boatwright |
| 12/4/2015 0:45:45 Curt Darling | cd |
| 12/4/2015 2:04:19 Marylou Castillo | MC |
| 12/4/2015 5:31:52 Emily Heckroth | EH |
| 12/4/2015 6:26:27 Karen Green | KBG |
| 12/4/2015 7:23:15 Sean Sunderland | Ss |
| 12/4/2015 8:01:34 Nancy Harte | NYH |
| 12/4/2015 8:44:30 Abigail kagan | Abigail kagan |
| 12/4/2015 8:57:51 Joe Zakes | JZ |
| 12/4/2015 10:16:02 Geoffrey S. Ryder | GSR |
| 12/4/2015 10:32:58 pati shampton | pati shampton |
| 12/4/2015 10:34:33 nancy scholl | nts |
| 12/4/2015 11:29:26 Crawford Morgan | CM |
| 12/4/2015 13:16:50 Lea Comte | Lea Comte |
| 12/4/2015 14:14:12 Thomas Jagger | TAJ |
| 12/4/2015 14:17:35 Adam Leonard | AL |
| 12/4/2015 14:24:12 David Goldstein | DSG |
| 12/4/2015 14:46:50 Priscilla Jane Rundquist | PJR |

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| 12/4/2015 14:54:20 Beth crowns | Beth crowns |
| 12/4/2015 14:55:00 Alex Podwalny | Alexandra Podwalny |
| 12/4/2015 15:15:17 Alexa Walker | o AW |
| 12/4/2015 15:48:11 Angela Mathias | anm |
| 12/4/2015 16:17:16 Allison Gurley | AG |
| 12/4/2015 16:20:57 Megan Rouch | Megan Rouch |
| 12/4/2015 16:27:01 Micah Paredes | MP |
| 12/4/2015 16:37:03 Amanda Love | x Amanda Love |
| 12/4/2015 17:11:00 Lacey Crawford | LC |
| 12/4/2015 17:31:43 BETH Freeby | BF |
| 12/4/2015 17:52:04 robert page | rp |
| 12/4/2015 18:00:21 Jean-Pierre | Jpv |
| 12/4/2015 18:11:25 Valentina Dorsa | x VD |
| 12/4/2015 18:43:22 Gaubrielle Pritchard | GSP |
| 12/4/2015 18:45:32 Catherine McBee | o CM |
| 12/4/2015 18:48:17 Cheryl Brandner Archer | i CBA |
| 12/4/2015 19:43:23 Whitney Turetzky | Whitney Turetzky |
| 12/4/2015 19:46:41 Pamela A. Smith | PAS |
| 12/4/2015 20:29:38 Michael Stephen Hardin | n MSH |
| 12/4/2015 20:49:04 Frank Franks | n FF |
| 12/4/2015 20:53:07 Kelly McClain | KM |
| 12/4/2015 23:14:20 Karen turner | kt |
| 12/4/2015 23:23:11 LAURA COLGIN | LC |
| 12/4/2015 23:38:16 Robert connolly | RC |
| 12/5/2015 0:08:12 Jacob Colburn | n JGC |
| 12/5/2015 7:00:02 Amy Hoffman-Shehan | Amy Hoffman-Shehan |
| 12/5/2015 8:48:08 Mike Bird | M.B.. |
| 12/5/2015 8:54:17 Ariel Ximenes | AX |
| 12/5/2015 9:27:09 Anna Marie Riley | Anna Marie Riley |
| 12/5/2015 10:57:49 Carol Hirsh | CH |
| 12/5/2015 11:18:16 Lisa | LG |
| 12/5/2015 12:11:10 Loretta Sturca | Loretta Sturca |
| 12/5/2015 12:51:10 Alison Gallaway | Alison Gallaway |
| 12/5/2015 13:14:51 Sallie Wood | i SSW |
| 12/5/2015 14:30:39 Karl Popham | Kwp |
| 12/5/2015 14:56:44 Claudia | CS |
| 12/5/2015 15:04:31 Brianna Baine | Brianna Baine |
| 12/5/2015 21:47:45 Andrea citrin | Andrea citrin |
| 12/6/2015 0:15:50 Diane Henderson | DH |
| 12/6/2015 8:09:06 Kirsten Dean | KD |
| 12/6/2015 9:14:00 Alyson Stringer Steakley | n aps |
| 12/6/2015 9:30:50 Margie Albrecht | MCA |
| 12/6/2015 10:01:52 Laura Newby | LEN |

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| 12/6/2015 11:08:42 | Amanda winters | Amanda winters |
| 12/6/2015 11:31:10 | Roxane Ward | RW |
| 12/6/2015 12:38:15 | Anastasia Gregoire | AG |
| 12/6/2015 14:37:01 | Karen Smid | KS |
| 12/6/2015 15:33:08 | Rosslyn Ramsey | RR |
| 12/7/2015 12:30:51 | Cherie Wilson | SCW |
| 12/7/2015 14:04:57 | cathi howell | ch |
| 12/7/2015 15:17:42 | Sarah Hardin | Sarah Hardin |
| 12/7/2015 15:37:40 | Ingrid Croan-Ellerbee | r ICE |
| 12/7/2015 22:58:51 | Meredith Morrow | Meredith Morrow |
| 12/9/2015 11:21:31 | Carolyn Boudreau | . CB |
| 12/9/2015 11:21:33 | Eric Freeman | Eric Freeman |
| 12/9/2015 11:22:06 | Raphael Esch | RME |
| 12/9/2015 11:22:28 | Sara Morris | SM |
| 12/9/2015 11:22:31 | Beth Crowley | BC |
| 12/9/2015 11:22:39 | Ally Hemenway | AH |
| 12/9/2015 11:22:59 | William Crowley | WC |
| 12/9/2015 11:23:00 | Marilyn Roberts | MR |
| 12/9/2015 11:23:12 | Eric Roberts | ER |
| 12/9/2015 11:23:23 | Chloe Leiva | CL |
| 12/9/2015 11:23:26 | James Crowley | JC |
| 12/9/2015 11:23:44 | Megan Warner | MW |
| 12/9/2015 11:23:46 | Christina Crowley | CC |
| 12/9/2015 11:23:50 | Anikan Wilkinson-Utter | 1 Anikan Ray |
| 12/9/2015 11:24:06 | Madeleine Crowley | MC |
| 12/9/2015 11:24:42 | Ben Crowley | BTC |
| 12/9/2015 11:24:48 | Melissa Manzelmann | MLM |
| 12/9/2015 11:25:05 | Anneliese Crowley | AC |
| 12/9/2015 11:25:13 | Sophia | SW |
| 12/9/2015 11:25:20 | Any Dyer | AD |
| 12/9/2015 11:25:44 | Jimmy Dyer | JD |
| 12/9/2015 11:27:49 | John lopez | JI |
| 12/9/2015 11:27:57 | Jordan Husmann | Jordan husmann |
| 12/9/2015 11:29:21 | Astrid Burgelin | AB |
| 12/9/2015 11:30:04 | Mona Nafziger | MN |
| 12/9/2015 11:30:08 | Claire Domingue | Claire Domingue |
| 12/9/2015 11:30:13 | Brenda Gonzalez | BG |
| 12/9/2015 11:30:41 | Jorge Gonzalez | JG |
| 12/9/2015 11:31:02 | Sabrina Garza | SG |
| 12/9/2015 11:31:50 | Corie McKendry | CLM |
| 12/9/2015 11:36:29 | lee miller | lm |
| 12/9/2015 11:36:53 | Rhonda Heffernan | 2 Rhonda Heffernan |
| 12/9/2015 11:38:00 | Mic F | MF |

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| 12/9/2015 11:38:35 | December Lee | n DL |
| 12/9/2015 11:38:56 | Charlie Scott | CS |
| 12/9/2015 11:39:23 | Keilani Lee | KL |
| 12/9/2015 11:39:39 | Cody Lee | CL |
| 12/9/2015 11:39:58 | Sydney Scott | SS |
| 12/9/2015 11:41:50 | Christopher messina | Cristopher messina |
| 12/9/2015 11:42:08 | David Herrington | n DH |
| 12/9/2015 11:45:53 | David Igletree | David Ofletree |
| 12/9/2015 11:49:02 | Staci Radtke | SR |
| 12/9/2015 11:52:32 | John Oates | JO |
| 12/9/2015 11:53:58 | Sara Partridge | SFP |
| 12/9/2015 11:56:04 | Christi Reece | CMR |
| 12/9/2015 11:57:29 | Debbie Neuberger | DN |
| 12/9/2015 12:01:31 | Jeannie moler | JM |
| 12/9/2015 12:03:02 | Deidre Madres | DAM |
| 12/9/2015 12:06:35 | Katy Sledge | n Katy Sledge |
| 12/9/2015 12:08:49 | Kelly Sampley | KMS |
| 12/9/2015 12:09:46 | Celine Halioua | CH |
| 12/9/2015 12:17:32 | edward perez | n ep |
| 12/9/2015 12:26:32 | Jeff McCord | JMc |
| 12/9/2015 12:30:08 | Bridget Esch | Bridget Esch |
| 12/9/2015 12:30:15 | Chip cramer | n JCC |
| 12/9/2015 12:35:31 | Linda R. Estrada | LRE |
| 12/9/2015 12:38:15 | Art Cardenas | c AC |
| 12/9/2015 12:42:20 | maria Archuleta | maria Archuleta |
| 12/9/2015 12:44:35 | Dalton Jackson | DJ |
| 12/9/2015 12:50:04 | Allie McCann | n Allie McCann |
| 12/9/2015 13:02:54 | Caroline Morris | o CM |
| 12/9/2015 13:05:24 | Charlotte Lawson | n CL |
| 12/9/2015 13:16:49 | Signi Johnson | SLJ |
| 12/9/2015 13:17:10 | Meredith Miller | MHM |
| 12/9/2015 13:29:25 | Julie Shah | Julie Shah |
| 12/9/2015 13:36:22 | Keith Langford | n kl |
| 12/9/2015 13:37:40 | keith langford | n keith langford |
| 12/9/2015 13:41:06 | Catherine Crane | ccc |
| 12/9/2015 13:54:29 | David Applewhite | Dwa |
| 12/9/2015 13:58:30 | Gretchen Scardino | Gns |
| 12/9/2015 14:02:53 | Samuel H. Thompson | sht |
| 12/9/2015 14:06:21 | Colin Hegarty-Perez | CHP |
| 12/9/2015 14:08:18 | Paola Rego | Paola |
| 12/9/2015 14:15:11 | Jennifer Cooper | n jmc |
| 12/9/2015 14:16:00 | Somdipta Basu Roy | SBR |
| 12/9/2015 14:30:36 | Madeline Silvestro | M.S. |

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|---------------------|--------------------|------------------|
| 12/9/2015 14:41:54 | annie oldacre | AO |
| 12/9/2015 14:54:21 | Bethany Ansell | Bethany Ansell |
| 12/9/2015 14:54:39 | Kristy Battani | Kristy Battani |
| 12/9/2015 14:56:47 | Karen Marie | KM |
| 12/9/2015 15:11:45 | Angela Dunn | Angela dunn |
| 12/9/2015 15:16:22 | Charlotte Grant | :CSG |
| 12/9/2015 15:41:14 | Rachel Thompson | Rachel Thompson |
| 12/9/2015 15:46:38 | Rusty Cloyes | RC |
| 12/9/2015 16:03:45 | Julie van de Zande | JV |
| 12/9/2015 16:04:38 | Lisa Trahan | LT |
| 12/9/2015 16:24:44 | Cody Pileski | CSP |
| 12/9/2015 16:35:36 | adriana | ar |
| 12/9/2015 16:47:00 | Shannon Smith | SLS |
| 12/9/2015 16:47:26 | Lanette Cutter | LC |
| 12/9/2015 16:47:42 | Everson Smith | ETS |
| 12/9/2015 16:53:12 | Ty Smith | TS |
| 12/9/2015 16:56:11 | Claudia Lynch | Claudia A. Lynch |
| 12/9/2015 17:09:41 | Erin Crowder | EC |
| 12/9/2015 17:34:00 | Brendan Lenahan | BI |
| 12/9/2015 17:34:06 | Kimberly Weller | Kimberly Weller |
| 12/9/2015 17:39:04 | Janet George | JBG |
| 12/9/2015 17:47:17 | Samantha Murray | Samantha Murray |
| 12/9/2015 17:49:27 | Leya Samiloglu | :LSS |
| 12/9/2015 18:06:58 | INNA solodky | Inna solodky |
| 12/9/2015 18:14:16 | Carmen Morris | CM |
| 12/9/2015 19:43:38 | Mike hurewitz | Mh |
| 12/9/2015 20:28:05 | Andrea Depwe | Andrea Depwe |
| 12/9/2015 20:56:07 | Regina Pegues | RMP |
| 12/9/2015 20:58:56 | Jeremy Ringwood | JR |
| 12/9/2015 21:42:00 | Patricia Mercado | PM |
| 12/9/2015 22:42:20 | Katie | Kf |
| 12/9/2015 22:47:36 | Olivia | OO |
| 12/9/2015 22:48:38 | Chris Burt | CB |
| 12/9/2015 23:41:27 | Jessica Rodriguez | JNR |
| 12/10/2015 7:03:16 | Emily | EC |
| 12/10/2015 7:16:11 | Stephen Ross | Stephen J Ross |
| 12/10/2015 8:42:26 | Monica Grace | MG |
| 12/10/2015 9:16:59 | Adam Garner | akg |
| 12/10/2015 9:19:05 | Jennifer Parker | JP |
| 12/10/2015 9:22:35 | Kaye Lynch | KL |
| 12/10/2015 9:55:02 | Courtney Langford | C.C. L. |
| 12/10/2015 13:35:29 | Joshua Johnson | JDJ |
| 12/10/2015 16:59:33 | Phyllis Campos | PbC |

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| 12/10/2015 18:19:07 Peter George | o. PG |
| 12/10/2015 18:49:08 Caroline Parker | oo CP |
| 12/10/2015 21:05:47 Philip Kurzawski | l.cc PK |
| 12/10/2015 21:24:49 Chrystal Clark | Chrystal Clark |
| 12/10/2015 21:26:39 kelli tucci | KT |
| 12/10/2015 21:28:54 Shelley tucci | n Shelley tucci |
| 12/10/2015 21:40:32 Kyle Groover | om KG |
| 12/10/2015 21:44:06 David Depwe | DWD |
| 12/10/2015 21:49:43 Michael Jekot | om MJ |
| 12/10/2015 22:02:31 Christine Henry Andresen | CHA |
| 12/10/2015 22:03:07 Cheryl Smith | CS |
| 12/10/2015 22:25:46 reinae kessler | RK |
| 12/10/2015 23:43:35 Michelle Applebaum | MA |
| 12/10/2015 23:52:28 Jack | JKS |
| 12/11/2015 1:39:41 Evan Estep | EVE |
| 12/11/2015 7:06:58 Elyse Emerich | im EE |
| 12/11/2015 8:39:59 MacKenzie | MD |
| 12/11/2015 8:59:29 Betina foreman | af Betina foreman |
| 12/11/2015 10:03:52 shelly foreman | sf |
| 12/11/2015 18:29:26 Laura Ringwood | LMR |
| 12/11/2015 18:29:45 Alan Ringwood | ARR |
| 12/11/2015 23:33:01 Susan driver | Sd |
| 12/12/2015 6:24:02 Ruth Glendinning | RG |
| 12/12/2015 9:58:01 Rothko Hauschildt | RH |
| 12/13/2015 1:54:20 Cheryl Brandner Archer | m CBA |
| 12/13/2015 6:34:48 Karen turner | Kt |
| 12/14/2015 12:03:39 Florence Hite | feh |
| 12/14/2015 16:00:59 Jenine Wexler | JW |
| 12/14/2015 16:14:48 Diane Hargis | DH |
| 12/15/2015 12:35:18 Sandy keller | SK |
| 12/15/2015 12:49:25 J Cunningham | jcj |
| 12/16/2015 3:17:45 Maryann Wolff | Maryann wolff |
| 12/16/2015 7:47:46 Mark Haller | MH |
| 12/16/2015 7:50:49 Mia Spennato | MS |
| 12/16/2015 8:45:31 Cathleen Porter | Cathleen Porter |
| 12/16/2015 11:33:28 Franz Weller | FW |
| 12/16/2015 14:30:17 Katie Chafizadeh | n Kathryn A Chafizadeh |
| 12/16/2015 20:18:53 Eric Pham | Eric Pham |
| 12/17/2015 7:07:06 Becky Nolan | BN |
| 12/21/2015 21:21:22 Jason Lockie | JNL |
| 12/22/2015 13:24:28 katelin frey | kmf |
| 12/22/2015 21:53:07 Rothko Hauschildt | RH |
| 12/23/2015 5:02:26 Lacy Weyler | LW |

12/26/2015 12:09:51 Erin Flynn
12/26/2015 14:09:33 Kathleen Donnelly

r EF
Kathleen Donnelly



South Lamar Neighborhood Association

February 2, 2016

Andrew Moore
Senior Planner
City of Austin - Planning & Zoning Department
505 Barton Springs Road, 5th Floor
Austin, Texas 78704

Re: Case C14-2015-0047 2303-2311 Thornton Road

Dear Andy,

Please accept this summary document regarding of the discussions we have had regarding Case C14-2015-0047 2303-2311 Thornton Road for your backup. This document will incorporate previous information and provide additional background regarding the history and character of existing development on Thornton Road.

We still believe that the proposed development is not consistent with the goals of the South Lamar Mitigation Plan and will unnecessarily displace small businesses that contribute to the neighborhood character. We remain concerned that, despite your requests, we have not received any additional or specific information from Watershed regarding the impact of this development on the Del Curto Phase 1A plans or any alternatives to prevent flooding from upstream impacts or current drainage deficiencies. While the transportation analysis appropriately accounts for current designed projects, we believe that there is or will be additional development on Thornton Road in 2016 that should be included to meet the goal of anticipating the “cumulative effects of increasing density” and the impact of this development on other neighborhood roads.

The attached document will provide information including:

1. The South Lamar Mitigation Plan Goals
2. Thornton Road Description and Existing Density
3. Lack of precedent for VMU
4. Traffic Analysis and Limitation of Proposed Solutions
5. Watershed Impacts
6. Cumulative Development Impacts and Mitigation Tool Limitations
7. Defining Neighborhood Character
8. Thornton Road History Highlights

Sincerely,



Kim Johnson
President South Lamar Neighborhood Association

Cc: SLNA Thornton Road Working Group

2303-2311 Thornton Road Background

1. South Lamar Mitigation Plan Review

As we presented at the Planning Commission meeting, the South Lamar Neighborhood Mitigation Plan¹, the South Lamar Mitigation Plan included a requirement to address the effects of infill development on several issues. The October 3 staff memo highlights goals including:

- “address the challenges created by many years of development on a site-by-site basis, lacking water detention and exacerbated by recent infill developments where inadequate infrastructure exists”
- . “anticipate the cumulative effects of increasing density on a neighborhood’s natural and manmade infrastructure”
- “incorporate methods to define and protect a neighborhood’s character, infrastructure and safety and provide commensurate mitigation requirements to better manage density and its associated costs.

This proposed zoning change fails on all measures. The applicant proposal for VMU along with current construction would represent a 348% increase in the number of residential units on this dead end street that is already overburdened and at times impassable. By proposing a solution that is designed for a transit corridor, the applicant seeks to establish a precedent for transit corridor density in any environment rather than a solution compatible neighboring properties.

The staff recommendation also fails to address the core issue of *anticipating* the cumulative effects of increasing density and protecting the neighborhood’s character and infrastructure.

South Lamar Neighborhood has worked successfully to implement affordable housing along the Lamar transit corridor including the 107-unit Foundation Communities Bluebonnet Studios project at Lamar and Del Curto.

2. Thornton Road Description and Existing Density– It is a Local Road acting as a Collector

The applicant’s presentation to Planning Commission incorrectly describes the property as being located at Thornton and Oltorf. The property is 0.21 miles from the intersection of Oltorf and Thornton. Thornton Road has a total length of 2700’ or .51 miles. The road dead ends at Oltorf on the north and provides limited access to other Local Roads via Bridgeway and Waterloo Trail on the south. The property is 0.21 miles from the nearest bus stop for the 338 bus route, and 0.41 miles to the 3/803 and 0.6 miles to the 5 bus stop. Figure 1 shows the overview of Thornton Road.



Figure 1

¹ Memorandum to Mayor and Council From Gregory I Guernsey October 3, 2014
www.southlamar.org Austin, TX 78704 Page 2 of 10

Thornton Road is currently home to 136 residences located in 79 properties with a predominant zoning of SF-3. The estimated size of the properties bordering Thornton Road is 29.8 acres. Current projects under construction will add 104 units increasing the residential units by 76%. The following Table 1 shows the present characteristics.

| Zoning | Properties | Acreage |
|----------|------------|---------|
| SF3 | 63 | 0.326 |
| SF-4B-CO | 2 | 1.490 |
| SF-6 | 3 | 0.326 |
| MF-2 | 3 | 6.280 |
| MF-3 | 1 | 0.330 |
| CS | 6 | 7.870 |

Table 1

The characteristics above are graphically presented in Figure 2. The current 6 CS properties are located 1000 feet into the core of the neighborhood and surrounded by residential properties. Historically these properties were listed as Residential A per Austin City Code or the equivalent of SF-3. Section 8 provides a brief history of Thornton Road zoning cases.

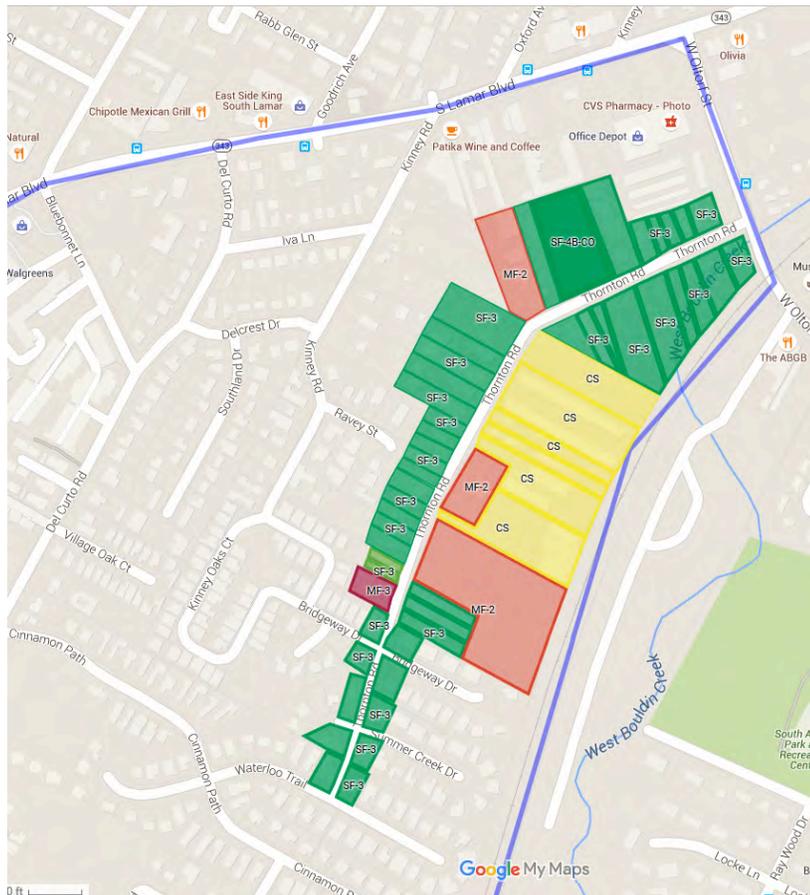


Figure 2

3. Lack of Precedent for VMU

The applicant recommends VMU on non-designated transit corridors and presents two cases where this has happened in the Rundberg Revitalization area. Neither example is relevant. SLNA has supported VMU on the Lamar Transportation corridor as well as congregate living such as the present Bluebonnet Studios project providing 107 permanent supportive housing units at Lamar and Del Curto.

Our belief is that VMU should be located on Core Transit Corridors per §4.3 of Austin Land Development Code. It should be noted that SLNA has “opted-in” to any additional VMU exceptions as allowed by section 4.3.2.A.3 at any time.

The precedent of VMU on this street would present the option for a 580% increase in total dwelling units if universally applied, with no potential for infrastructure improvement such as road widening or additional connectivity.

In addition to not being on a transit corridor, the location is poorly served by bus transportation. The closest bus stop for the 331 is 0.21 miles from the property and does not connect to downtown. The 3 and 803 can be reached in just under 0.5 miles and the 5 can be reached in 0.6 miles.

4 Traffic Analysis and Limitation of Proposed Solutions

Thornton Road is currently over capacity. The Traffic Study² suggests that the volume of traffic on the road is currently equal to that of a Collector Street according to the City of Austin. The Traffic Study continues with the following statement on page 1 (Item C17 page 4 of 30); “However, the existing roadway width (approximately 28’ to 30’) and right-of-way width (varies 50’ to 60’) is closer to that of a Local Street....Vehicles park along both sides of Thornton Road essentially narrowing the street to one travel lane.” The photos below show the state of the road Saturday January 16, 2016.



Figure 3 Thornton Just South of Oltorf January 16, 2016

The study further indicates that current daily volume over threshold is 830 vpd leading to a service level of F.

² The Traffic Study references the Thornton Traffic Study dated November 25, 2015 attached as backup to Planning Commission Item C17 pages 1 through 30.

While the applicant and staff recommendation includes a plan for an additional traffic lane, there is no discussion of the impacts of the additional volume on the remainder of the road, which will remain undersized and overburdened. The current bottleneck will move 200 feet, not be solved. Figure 4 shows the same street on the same day. The present volume on Thornton Road is exacerbated by overflow parking from Austin Beer Garden Brewing Company (ABGB). The pictures below are from a video from a recent Saturday promotion. The overflow parking stretched from Thornton to and past the subject property. Throughout this area, the traffic was essentially limited to one lane except for the no parking zone at the curve.



Figure 4. Approximately 2211 Thornton Road January 16

Even given this congestion at north end of Thornton and Oltorf, The Traffic Study does not address the impact of increased traffic on alternative routes that are in use shown in red. Residents and businesses on the subject property normally avoid the Thornton Oltorf intersection. The traffic analysis and future plans should address the traffic considerations for these developments and future developments on other streets that are not Collectors.



Figure 5 Existing Traffic Patterns for Thornton Road

The staff recommendation includes a plan for widening the road to include a left turn lane for northbound traffic on Oltorf with a pedestrian signal near the 338 bus stop. The road-widening plan with pedestrian signal would produce no net benefit to users other than accelerating right turn traffic according to the traffic study. The service level for the intersection would remain the same grade F as it is today in 2017. In addition, the pedestrian signal would encourage additional parking for new “Enchanted Forest” entertainment complex planned on the north side of Oltorf. No engineering has been attempted to analyze the potential path of the road widening and easements, or utility relocation that would be required to accomplish the road widening at Oltorf.

The applicant proposal suggests installation of a signal at Thornton and Oltorf as part of a condition of VMU designation. The traffic signalization is a recent proposal and has not been analyzed from a cost standpoint. The traffic signal would meet only one of 9 potential warrants for signal installation, would require coordination with the railroad signal, increase the interruption to traffic along Oltorf which is already significantly disrupted by train traffic 28 times on an average day. It is unclear that this proposal meets the City of Austin requirements for signal installation.

5. Watershed Impacts

The watershed impacts from this development have not been fully addressed. The West Bouldin Creek Drainage Study Technical Memorandum No. 1; Del Curto Project Area Phase 1A Study³ identified the subject property as a potential solution for the area flooding problems.

The subject property is at the West Bouldin Creek confluence that is the central draining point for the Del Curto area as shown by Exhibit 10 of the Study. As the study indicates, “80 acres of the Del Curto neighborhood drain to this parcel”. This exhibit shows the connection of the existing inadequate infrastructure as it meets the property. The connection point of all drainage lines is at the north corner of the property in red.

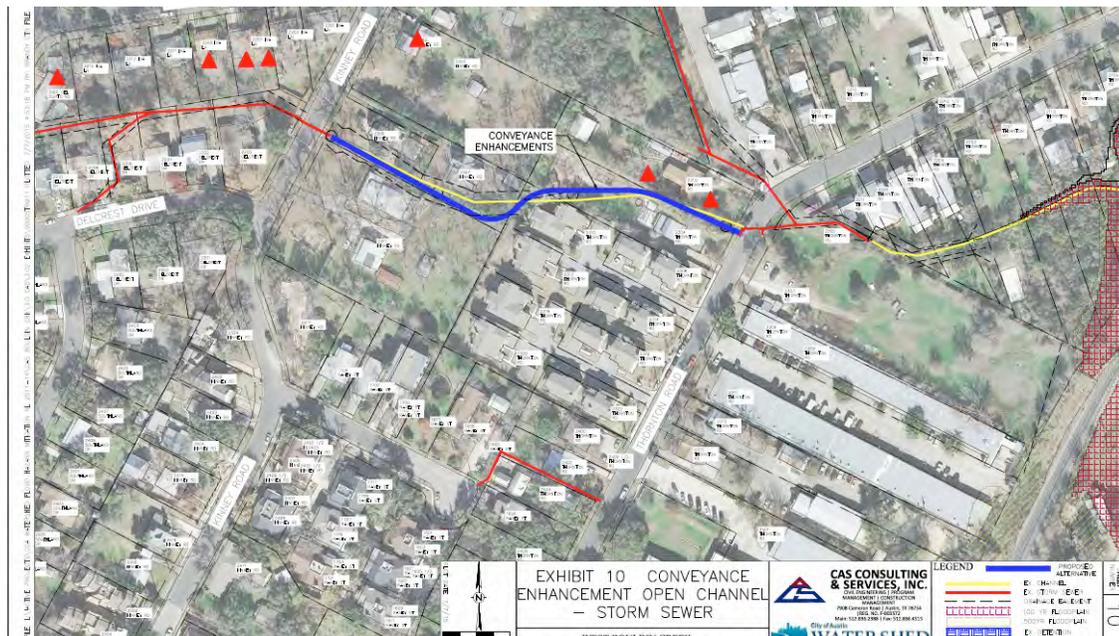


Figure 6 Drainage of Del Curto Watershed to Subject Property

In the initial study a proposal was included a recommendation number 14 to evaluate the utilization of 2303 Thornton as a retention basin. This recommendation was among the lowest cost on a cfs basis for those projects with cost listed. The sole response from Watershed received in January suggested another potential solution was being considered “upstream” without a specific reference to current solutions being considered from the original list. It also suggests that Watershed is “interested in ensuring that we will have a sufficiently wide drainage easement to accommodate our storm drain pipes. The intent is to keep the proposed alignment as close to

³ This study was presented to South Lamar Neighborhood September 3 2015 and can be found at the following link http://southlamar.org/?page_id=648

the current alignment as possible.” The email currently says a number of projects have “gone into design”. SLNA has not received any information regarding the list, which we provided feedback on at the original meeting.

The Watershed comments should specifically address the necessary easements as well as ensure that any solution will not negatively impact the homes to the north of the subject property on Thornton Road from either drainage or upstream flows as described in project 15.

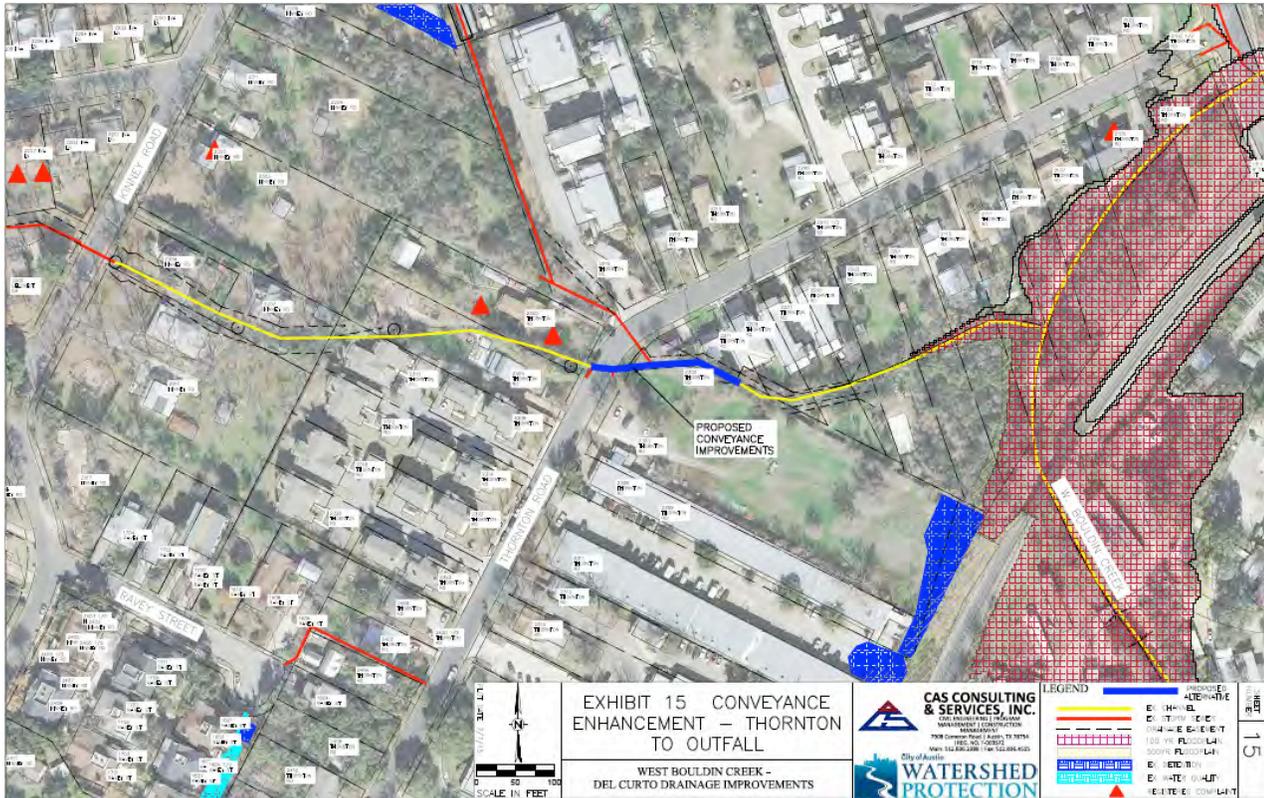


Figure 7

The following picture shows the impact of flooding on Bridgeway on October 21, 2015.



Figure 8

6. Cumulative Development Effects and Mitigation Tools

As noted in Section 1 the South Lamar Mitigation plan objectives include “Develop recommendations for enhanced tools that will better anticipate the cumulative effects of increasing density on a neighborhood’s natural and manmade infrastructure”. The current analysis by the Transportation department did include a review if existing plans on file. The staff recommendation includes a provision for anticipated traffic for the 104 unit PSW Thornton Apartments under construction. This information was analyzed in connection with the Rough Proportionality policy. This analysis does not provide the staff with tools to go beyond past applications and determine true cumulative effects of development on this street, nor does it provide a capacity-planning tool that recognizes existing entitlements. As noted in section 4 no other improvements to this road are proposed to remove the overall bottleneck from the current volume.

As noted in section 1, the area is predominantly Single Family with MF-2 in certain locations. While this analysis looks only CS properties up zoned to MU, the analysis should also consider additional infill development allowed under SF-3 or current CS requirements. The most logical assumptions for CS property analysis based on the applicant and staff recommendations would be that:

- A. More Development will occur and will likely occur in the current CS areas
- B. The precedent from this case will guide the future development.

The following table shows the cumulative effects of all current CS properties being built out at varying densities compared to the current residences on Thornton. 104 units will come on line from PSW Thornton at 2505 Thornton.

| Assumed Density | Additional Units | EOY 2015 Units | % Increase |
|---|------------------|----------------|------------|
| Baseline 2016 | 104 | 136 | 76% |
| Baseline with Applicant | 212 + 104 = 316 | 136 | 232% |
| Baseline with Staff Rec | 156 + 104 = 260 | 136 | 191% |
| Calculation of Cumulative Development Effects for all CS at Varying Densities | | | |
| VMU 60/ac | 473 + 104 = 577 | 136 | 424% |
| Staff 44/ac | 347 + 104 = 453 | 136 | 331% |
| MF-2 23/ac | 181 + 104 = 285 | 136 | 209% |

Table 2

7 Neighborhood Character

The subject property is currently home to the Thornton Road Studios and a collection of small businesses that are low impact commercial establishments. We believe that maintaining the small businesses and artists in the Austin community is vital to our neighborhood character and the character of Austin. The Thornton Road Studios presentation will be provided as a separate attachment. Thornton Road Studios includes award-winning artists that work and live in the neighborhood.

8 Thornton Road History Highlights

There are currently six commercial properties on Thornton which were zoned commercial in 3 separate zoning cases:

- 1 July 21, 1967: 2401-2413 Thornton
- 2 Nov 6, 1969: 2301-2311 Thornton
- 3 Mar 7, 1974: 2313-2315 Thornton

Note that in the final CS zoning, the planning commissioner recommended that “this tract should be more restrictive in its use”, and Thornton should be widened to 60’.

The first commercial uses on Thornton Road were around 1955 at #2401 which was then just outside the city limits. City limits extended only through #2315 at that time.

Around 1960, the city annexed the remaining southern section of Thornton Road.

Here is the history with some highlighted quotes from the meeting minutes discussing the problems of Thornton Road. There are pertinent quotes in the planning commission minutes for which links are provided.

Apr 6, 1961

First zoning request for Commercial in interior of Thornton which was not granted
City Council heard the application for zoning from "A" residential to "C" commercial at 2317-2409 Thornton ([Roy F. Beal, E.F. Evans Company](#)) and 2519-2707 Thornton (H.G. Linscomb) which was NOT RECOMMENDED by the Planning Commission with the following notes:

*The Planning Commission had studied these cases at length, and the problem of the zoning was a street problem. Mr. Beal's operations (E.F. Evans - sheet metal company) are under a non-conforming use, and are of an industrial or commercial type that is permitted under "C". Mr Linscomb (property at the south dead end of Thornton) has 6-1/2 acres and wants to put a contractor's office and equipment yard with some warehouses that will store only durable goods. He explained that about 25 acres would be earmarked for commercial uses. Discussion of former zoning, and dedication for right-of-way boulevard was held. Mr. Linscomb state he would give whatever they wanted as a reasonable amount. The Director of Planning stated the Railroad Company had indicated it would dedicate a right-of-way provided someone else developed it; and **he pointed out certain problems concerning the dedicated thoroughfare stating it would be necessary to rechannel the creek; concerning the development of Lightsey Lane in connection with the residential subdivision of South Terrace in which houses are under construction; concerning Thornton Road which is not opened on the ground on the Lindsey Tract; and concerning the early development of the entire area as residential with houses selling on three sides and the commercial area in the middle, away from the thoroughfare. He stated ultimately there would be a public responsibility to develop the streets in a large commercial area; in the meantime the residential developers are required to develop the street, put in the utilities and handle the drainage. Councilman Bechtol discussed the traffic flow, and state it would be up to the applicants to work that out and that the I&GN Railroad to join in it, and asked Mr. O'Quinn to contact the railroad and work this out. Mayor Pro-tem Palmer stated the Council would make a personal inspection of the area.***

<http://www.ci.austin.tx.us/edims/document.cfm?id=41208>

Discussion at Planning Commission 2/14/61:

<http://www.ci.austin.tx.us/edims/document.cfm?id=215317>

AND ON 3/14/61 where they voted to DENY:

<http://www.ci.austin.tx.us/edims/document.cfm?id=215318>

This case stayed pending for years, finally denied after no response from applicant:

<http://www.ci.austin.tx.us/edims/document.cfm?id=38206>

July 27, 1967

1st successful zoning on Thornton #2401

[2401-2411 Thornton from "A" residence to "BB" residence \(street side\) and 4 acres 2401-2413 Thornton \(adjacent to railroad tracks\) from "A" to "C"](#)

<http://www.ci.austin.tx.us/edims/document.cfm?id=38224>

<http://www.austintexas.gov/edims/document.cfm?id=39039>

Planning Commission minutes:

<http://www.ci.austin.tx.us/edims/document.cfm?id=215219>

Nov 6, 1969

[Council approves 2nd CS zoning in interior of Thornton](#)

<http://www.austintexas.gov/edims/document.cfm?id=38488>

[2301-2311 Thornton from "A" residence district to "C" commercial district](#)

[Planning Commission minutes:](#)

<http://www.ci.austin.tx.us/edims/document.cfm?id=215286>

Apr 9, 1970

Council heard 2316-2318 Thornton from "A" to "C", NOT recommended by Planning Commission which recommended "BB" instead.

<http://www.ci.austin.tx.us/edims/document.cfm?id=24632>

Jan 7, 1970

Council approved 2512-2514 from "A" to "B" w/ restrictive covenant to limit of 15 units. Planning Commission did not recommend change to "B" but instead recommended "BB" which was less intensive - **"because of the limited access to this interior area from Oltorf Street and not wishing to set a precedent for more intensive zoning"**. Restrictive covenant of 15 units and subject to 5' right-of-way
<http://www.ci.austin.tx.us/edims/document.cfm?id=24553>

Mar 8, 1973

Council DENIED 2502-2504 Thornton from "A" to "C" but APPROVED "A" to "BB" which is what Planning Commission recommended "BB", explaining: **"Thornton Road is a dead-end street extending southerly off of Oltorf. It is an area developed prior to annexation and many of the uses there now are still single family. Recent zonings cover very deep lots, fronting on Thornton Road; and there is a warehouse fronting on the railroad track. Three zoning requests had been zoned "BB" residence and "B" residence and the fourth request was recommended for denial of the "C" Commercial zoning, but recommended for (low density- hence "BB") apartment zoning."**

[Mar 7, 1974](#)

3rd successful commercial zoning case

Council approved 2313-2315 Thornton from "A" to "C"

Planning Commission recommended the change **subject to 1/2 the r-o-w (5') to increase Thornton Road to 60'**. Planning commission comments: **"this was an older area in South Austin on a very long dead-end street and was predominantly residential. The previous requests for "C" Commercial, which had been granted, had either been dismissed because of incompleteness of requirements or their not being used for "C" purposes. He added that it was the opinion of the staff that rather than continue to zone "C", this tract should be more restrictive in its use."**

<http://www.ci.austin.tx.us/edims/document.cfm?id=27013>

<http://www.austintexas.gov/edims/document.cfm?id=27345>