



**AGENDA
REGULAR CITY COUNCIL
CITY OF LEANDER, TEXAS**

Pat Bryson Municipal Hall
201 North Brushy Street ~ Leander, Texas

Thursday ~ December 18, 2014 at 7:00 PM



Mayor – Christopher Fielder
Place 1 – Andrea Navarrette
Place 2 – Kirsten Lynch
Place 3 – Simon Garcia (Mayor Pro Tem)

Place 4 – Ron Abruzzese
Place 5 – Jason Dishongh
Place 6 – David Siebold
City Manager – Kent Cagle

1. Open meeting, Invocation, Pledges of Allegiance
2. Roll Call
3. Staff Comments: Tom Yantis – recognition of Martin Siwek for AICP Certification
4. Citizen Comments: Three (3) minutes allowed per speaker
Please turn in speaker request form before the meeting begins
5. Recognition of Michael Malone, Chair of the Veterans Park Ground Breaking Festival
Sponsored by Mayor Fielder

CONSENT AGENDA: ACTION

6. Approval of the minutes: December 4, 2014
7. Resolution Supporting Funding for Local Park Grants & State Parks
8. Approval of a Special Event Permit for the American Cancer Society
9. Approval of a Letter of Agreement with Pedernales Electric
10. License Agreement with Taylor Morrison for the installation and maintenance of irrigation, landscape, hardscape, and decorative lighting within the City rights-of-way in the Bluffs at Crystal Falls Subdivision
11. License Agreement with Transit Village Investments, Ltd. for the installation and maintenance of irrigation, installation of landscaping, and construction of internal driveways with the City rights-of-way of Hero Way and Mel Mathis Avenue
12. Amendment to the Development Agreement for the Marbella Tract between the City of Leander and NK Land Development, LLC
13. Dedication and Acceptance of Subdivision Infrastructure Improvements for Pecan Creek Phase 2

PUBLIC HEARING: NO ACTION

14. First Public Hearing on the proposed annexation of a certain area of land being 166.47 acres, more or less, in Williamson County, Texas, and being generally located north of Crystal Falls Parkway, south of Old 2243 W and west of Bagdad Road, also known as the Falcon Oaks area

PUBLIC HEARING: ACTION

15. **Public Hearing** on Zoning Case #14-Z-031: Consider a zoning change for a 5.88 acre tract of land, more or less, generally located to the northwest of the intersection of South Bagdad Road and Marsala Circle from LO-2-B, Local Office and MF-2-B, Multi Family to LC-2-B, Local Commercial and MF-2-B, Multi Family, Leander, Williamson County, Texas
Applicant: Ken Liem on behalf of Emmet J. and Sally Hawkes

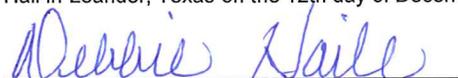
Action on Zoning Case #14-Z-031: amending Ordinance #05-018, the Composite Zoning Ordinance for the property located to the northwest of the intersection of South Bagdad Road and Marsala Circle, Leander, Williamson County, Texas

REGULAR AGENDA

16. Consider Award to LandDesign for the Comprehensive Plan Update Consulting Services and authorize the City Manager to execute the contract in an amount not to exceed \$147,981
17. Discussion and possible action to appoint the members of the Comprehensive Plan Steering Committee
18. Consider Change Order To Purchase One (1) Additional Vehicle For Building Inspections Division
19. Consider Professional Services Agreement and Task Order HVJ-01 with HVJ Associates for professional engineering services to complete a Pavement Management System with the option of a Sign Inventory and Retro-reflectivity Survey
20. Consider Emergency Purchase of Water Line Relocations for Hero Way PEC Transmission Line Relocations
21. Consider Contract Proposal for Engineering Services for Phase 2 Deep Water Intake Preliminary Design by and between the Brushy Creek Regional Utility Authority and HDR Engineering, Inc.
22. Council Members Closing Statements
23. Adjournment

CERTIFICATION

This meeting will be conducted pursuant to the Texas Government Code Section 551.001 et seq. At any time during the meeting the Council reserves The right to adjourn into executive session on any of the above posted agenda items in accordance with the sections 551.071 [litigation and certain Consultation with attorney], 551.072 [acquisition of interest in real property], 551.073 [contract for gift to city], 551.074 [certain personnel deliberations Or 551.076 [deployment/implementation of security personnel or devices]. The City of Leander is committed to compliance with the American with Disabilities Act. Reasonable modifications and equal access to communications will be provided upon request. Please call the City Secretary at (512) 528-2743 for information. Hearing impaired or speech disabled persons equipped with telecommunication devices for the deaf may call (512) 528-2800. I certify that the above agenda for this meeting of the City Council of the City of Leander, Texas, was posted on the bulletin board at City Hall in Leander, Texas on the 12th day of December, 2014 by 5:00 pm pursuant to Chapter 551 of the Texas Government Code.


Debbie Haile, TRMC, City Secretary



**MINUTES
REGULAR CITY COUNCIL
CITY OF LEANDER, TEXAS**

Pat Bryson Municipal Hall
201 North Brushy Street ~ Leander, Texas



Thursday ~ December 4, 2014 at 7:00 PM

**Mayor – Christopher Fielder
Place 1 – Andrea Navarrette
Place 2 – Kirsten Lynch
Place 3 – Simon Garcia (Mayor Pro Tem)**

**Place 4 – Ron Abruzzese
Place 5 – Jason Dishongh
Place 6 – David Siebold
City Manager – Kent Cagle**

1. Open meeting, Invocation, Pledges of Allegiance
**Mayor Fielder opened the meeting at 7:00 pm and welcomed those in attendance
Council Member Dishongh delivered the invocation**
2. Roll Call
All present
3. Staff Comments: Steve Bosak, Parks & Recreation Director – Christmas Tree Recycling
Steve Bosak, Parks & Recreation Director talked about the Christmas Parade and Tree Lighting and Christmas Tree Recycling
4. Citizen Comments: Three (3) minutes allowed per speaker
Please turn in speaker request form before the meeting begins
Stan Holcomb 1301 Still Meadow Drive – spoke about the program that Clawson Disposal sponsored for painting a trash bin and thanked the Public Arts for their participation
5. Proclamation recognizing December 2014 as “Williamson County Children’s Advocacy Center” month in the City of Leander
Sponsored by Council Member Dishongh
Council Member Dishongh read the Proclamation and presented it to Kelly Tourere Forister, Interim Executive Director of the Williamson County Children’s Advocacy Center
6. Recognition of Leander Fire Department Firefighter Combat Challenge Team
Chief Gardner recognized members of the Firefighter Combat Challenge Team

CONSENT AGENDA: ACTION

7. Approval of the minutes: November 20, 2014
8. Second reading of an Ordinance on Zoning Case #14-Z-027: amending Ordinance #05-018, the Composite Zoning Ordinance for the property located at 1001 Horizon Park Blvd., Leander, Williamson County, Texas
9. Second reading of an Ordinance on Zoning Case #14-Z-028: amending Ordinance #05-018, the Composite Zoning Ordinance for the property generally located at the northwest corner of the intersection of Old 2243 W. and N. Bagdad Road, Leander, Williamson County, Texas

10. Second reading of an Ordinance on Zoning Case #14-TOD-Z-026: amending Ordinance #05-018, the Composite Zoning Ordinance for the property located 850 feet from the northwest corner of the intersection of W. San Gabriel Pkwy. and US 183, Leander, Williamson County, Texas
11. Second reading of an Ordinance on Composite Zoning Ordinance Case #14-OR-008: consider amendments to the Composite Zoning Ordinance
12. Dedication and Acceptance of Subdivision Infrastructure Improvements for Travisso Section 1, Phase 2
13. Award of Construction Contract for Traffic Signal Pole Installation for Old 2243 W. at Bagdad Road
Items # 8, 10 and 13 were pulled from the consent agenda to be considered separately

Motion made by Council Member Navarrette to approve the consent agenda for items 7, 9, 11 & 12. Second by Mayor Pro Tem Garcia. Motion passes, all voting “aye”

Motion made by Council Member Siebold to approve item # 8 with the stipulation of no neon bulbs. Second by Mayor Pro Tem Garcia. Motion passes, 5 to 2 with Mayor Fielder and Council Member Dishongh voting against.

Motion made by Council Member Dishongh to approve item # 10. Second by Mayor Pro Tem Garcia. Motion passes, 4 to 3 with Council Members Lynch, Abruzzese and Siebold voting against.

Motion made by Council Member Navarrette to approve item # 13. Second by Council Member Siebold. Motion passes, all voting “aye”

PUBLIC HEARING: ACTION

14. **Public Hearing** on Zoning Case #14-Z-029: Consider a zoning change for a 53.589 acre tract of land, more or less, located at 10744 E. Crystal Falls Parkway from Interim zoned SFR-1-B, Single Family Rural to GC-2-A, General Commercial, Leander, Williamson County, Texas
Applicant: Bowman Consulting (W.L. Gabler) on behalf of Premas Global Leander, LLC
This item has been postponed by the applicant

Mayor Fielder announced that this item was postponed by the applicant

15. **Public Hearing** on Zoning Case #14-Z-030: Consider a zoning change for a 51.84 acre tract of land, more or less, located at 1208 S. Bagdad Road from MF-2-B, Multi Family and GC-3-C, General Commercial to SFC-2-B, Single Family Compact, Leander, Williamson County, Texas
Applicant: Fred C. Lockwood on behalf of Kaymac V. LTP
Tom Yantis, Assistant City Manager explained

No speakers

Action on Zoning Case #14-Z-030: amending Ordinance #05-018, the Composite Zoning Ordinance for the property located at 1208 S. Bagdad Road, Leander, Williamson County, Texas
Fred Lockwood, Applicant explained

Motion made by Council Member Siebold to approve. Second by Mayor Pro Tem Garcia. Motion passes, all voting “aye”

REGULAR AGENDA

16. Consider a Resolution of the City of Leander, Texas, accepting a petition for annexation of approximately 35.48 acres of land located in Williamson County, Texas; setting an annexation schedule; providing for open meetings and other related matters

Tom Yantis, Assistant City Manager explained

Motion made by Council Member Navarrette to approve. Second by Council Member Siebold. Motion passes, all voting "aye"

EXECUTIVE SESSION

17. Convene into Executive Session pursuant to Section 551.072, Texas Government Code, to consider the acquisition and value of real property

Council convened into executive session at 7:50 pm

Council reconvened into open session at 8:00 pm

18. Reconvene into open session to take action as deemed appropriate in the City Council's discretion regarding the acquisition and value of real property

No action taken

19. Council Members Closing Statements

Council Members gave their closing statements

20. Adjournment

With there being no further business, the meeting adjourned at 8:02 pm

Attest:

Christopher Fielder, Mayor

Debbie Haile, TRMC, City Secretary



Executive Summary

December 18, 2014

Subject: Resolution Supporting Funding for Local Park Grants & State Parks

Background: The 84th Session of the Texas State Legislature will convene in January and resolutions of support for the Local Park Grant Program and State Park funding are being requested by the Texas Recreation & Parks Association. Local governments statewide are being asked to approve resolutions of support that will be presented to State leadership to demonstrate the overwhelming support for local and state parks. A resolution of support is attached for Council consideration.

Leander has benefited from Local Park Fund Grants in Bledsoe Park and Benbrook Ranch Park and we are currently awaiting a decision on the \$400,000 application submitted in August for Lakewood Park.

Financial Consideration: None

Recommendation: Staff respectfully recommends Council approval of the Resolution of Support to restore funding for the Local Park Grant Program and State Park funds.

Attachments: Resolution of Support

Prepared by: Stephen Bosak, Parks & Recreation Director

RESOLUTION NO. _____

A RESOLUTION OF THE CITY OF LEANDER, TEXAS CITY COUNCIL REQUESTING THE MEMBERS OF THE 84th LEGISLATIVE SESSION OF THE STATE OF TEXAS TO SUPPORT LEGISLATION THAT INCREASES FUNDING FOR THE TEXAS RECREATION & PARKS ACCOUNT AND LARGE COUNTY AND MUNICIPALITY RECREATION AND PARKS ACCOUNT LOCAL PARK GRANT PROGRAMS, AND THE TEXAS STATE PARK SYSTEM

WHEREAS, the Texas Parks & Wildlife Department (“TPWD”) administers the Texas Recreation & Parks Account Local Park Grant Program (“TRPA”) and the Large County and Municipality Recreation and Parks Account (Urban Account) and manages 94 State parks and historical sites in Texas; and

WHEREAS, TPWD has separate accounts in their general revenue fund referred to as the TRPA and Urban Account for the purpose of providing matching grants to political subdivisions for parks and recreation projects, and for outreach grants to introduce new populations to outdoor experiences; and

WHEREAS, the matching grants provided by the TPWD are utilized for the planning, acquisition, and development of local park, recreation and open space areas to be owned and maintained by political subdivisions; and

WHEREAS, funds granted to political subdivisions under the TRPA and Urban Account guidelines have funded 1,629 projects of the 3,470 submitted over 30 years delivering over \$800 million to the local Texas economy; and

WHEREAS, political subdivisions throughout the State of Texas depend on grants from TPWD through the TRPA to stimulate the acquisition and development of parks and recreational areas for the benefit and enjoyment of their citizenry; and

WHEREAS, the TRPA, Urban Account, and State parks are funded from sales tax on sporting goods and that the development of new parks stimulates the purchase of sporting goods; and

WHEREAS, the TRPA, Urban Account, and State parks are partially funded from federal dollars used for parks, recreation, open space, trails, and tourism from the United States Department of the Interior Land and Water Conservation Fund (LWCF), the Sport Fish Restoration Boat Access program and the United States Department of Transportation Recreation Trails; and

WHEREAS, the maintenance and improvements of State park and historic sites and the addition of new parks is a priority to Texans due to the State’s expanding population and extensive tourism industry; and

WHEREAS, the development of parks encourages and promotes public health, economic development, job creation, education; corporate relocations, an improved quality of life, and juvenile crime prevention; and

WHEREAS, funds are needed for major repairs at Local and State parks and for the acquisition and development of parks and facilities; and

WHEREAS, it is the desire of this City Council that a copy of this resolution with appropriate names affixed be presented to the Governor of Texas and the leadership of the 84th Texas Legislature.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LEANDER, TEXAS:

1. That members of the 84th Legislature of Texas seek passage of legislation maximizing the use of revenues from the sporting goods sales tax and federal funds to increase funding for parks and recreation programs for both Local and State parks and that all TRPA and Urban Account funded park projects be subject to the established TPWD competitive scoring system.
2. That members of the 84th Legislature of Texas restore funding to the TRPA and Urban accounts in the amount of at least \$15.5 million per year.

PASSED AND APPROVED by the City of Leander City Council on this the 18th day of December 2014.

Approved

Attest

Chris Fielder, Mayor

Debbie Haile, City Secretary



Executive Summary

December 18, 2014

Subject: Consider Approval of a Special Event Permit for the American Cancer Society

Background: The American Cancer Society has asked to use Bledsoe Park again this year for their annual Relay for Life Event. This will be the second year Leander will host the event that is scheduled for May 2nd from 6:00 pm until midnight.

Council approval of a Special Event Permit is needed because the park must be open past the 10:00 pm closing time as established by ordinance. The event will end at midnight, but the breakdown and clean up may go until 2:00 am in the morning. Therefore, Council authorization is requested to allow ACS to be in the park from 10:00 pm May 2nd to no later than 2:00 am May 3rd.

Financial Consideration: None.

Recommendation: Staff respectfully requests Council approval of a Special Event Permit to allow the American Cancer Society to hold the Relay for Life of Leander & Cedar Park in Bledsoe Park beyond the 10:00 pm closing time established by ordinance on May 2, 2015 until to 2:00 am May 3, 2015.

Attachments: Special Permit Application and Special Permit

Prepared by: Stephen Bosak, Parks & Recreation Director

Special Event Permit Application

Applicant/Organization Name: American Cancer Society

Type of Organization: Relay for Life of Leander & Cedar Park

Name & Contact Information of Responsible Individual:

Addison Elliot, Community Manager

American Cancer Society

2433 Ridgepoint Drive - Suite B

Austin, TX 7754

Phone: 512.919.1941

Email: Addison.Elliott@cancer.org

Description of Event: The American Cancer Society (ACS) requests approval for their 2015 Relay for Life in Bledsoe Park on May 2-3, 2015. The event will be from 6:00 pm to midnight May 2, 2015. Use of the park is requested from 1:30 pm May 2nd until 2:00 am May 3rd to allow for event setup, breakdown and cleanup. Therefore, a Special Permit is needed to use the park beyond the 10:00 pm closing time established by ordinance.

The event will be a fundraiser and include amplified music, food and beverages, games for children and luminaria ceremony. The event is open to the public and approximately 250 people are expected to attend.

City Services Needed:

Utilities & Services Needed: Electricity, Restrooms & Water

Sanitation/Litter Pick Up: American Cancer Society volunteers

Security: Private Security Company

Traffic Control: Not applicable

Will alcohol be served or sold? No.

Will the proposed activity interfere or detract from the general public use of the area?

The park will be open to the general public, but the pavilion, amphitheater and ball fields will used exclusively by ACS

Will the proposed activity adversely impact or affect City, adjacent/nearby property owners? No.

Will the activity cause/create health or safety risks to the public or damage to other property? No.

Will the event require local or state permits, or violate any federal, state or municipal laws? A Temporary Food Establishment Permit will be required from the Williamson County.

What measures will be taken to prevent/minimize adverse impacts or affects? ACS will ;provide medical services staff and event security will be provided by a private security firm.

Proof of Insurance: ACS will provide insurance naming the city as an insured party.

Addison Elliott
Community Manager, American Cancer Society

December 18, 2014



Executive Summary

December 18, 2014

Subject: Approval of a *Letter of Agreement* with Pedernales Electric

Background: In July the Council approved a public utility easement in Benbrook Ranch Park so that Pedernales Electric could provide electric service to the new baseball fields.

After working closely with the PEC staff to establish the public utility easement, PEC is now requiring a *Letter of Agreement* to clarify their rights to do work within the public utility easement. The proposed *Letter of Agreement* addresses PEC's right to displace, remove and disturb improvements within the easement without having to replace or repair damage from their construction.

Financial Consideration: None

Recommendation: Staff respectfully requests Council approval of the *Letter of Agreement* with Pedernales Electric and authorization for the City Manager to execute the letter.

Attachments: *Letter of Agreement*; Recorded Public Utility Easement

Prepared by: Stephen Bosak, Parks & Recreation Director

December 18, 2014

Pedernales Electric Cooperative, Inc.
Attn: Joe Lockhart, Director, Liberty Hill District
P.O. Box 1
Johnson City, TX 78636-0001

RE: Use of City Public Utility Easement

Dear Mr. Lockhart:

This letter sets forth the agreement between the City of Leander (the "City") and the Pedernales Electric Cooperative, Inc. ("PEC") regarding PEC's use of the Public Utility Easement recorded as Document Number 2014055321, Official Public Records of Williamson County, Texas (the "PUE") attached hereto as Exhibit A and incorporated herein for all purposes. The use of the PUE includes the placement, construction, operation, repair, maintenance, rebuilding, replacement, relocation, and removal of structures and improvements reasonably necessary and useful for an underground electric distribution line consisting of variable number of wires and all necessary or desirable appurtenances and other facilities useful or necessary for the transmission of electric utility service. PEC is authorized to install electric infrastructure and appurtenances (the "Facilities") within the public places of the City under its franchise agreement with the City adopted under Ordinance No. 98-005-00, as it may be amended from time to time (the "Franchise"). By this letter agreement, the City acknowledges and agrees that the PUE is a public place within which PEC is authorized to install Facilities as authorized by the Franchise and the PUE, and that the use of the PUE by PEC includes: a) the right to inspect, patrol, relocate, remove, and maintain the Facilities within the PUE; and b) the right to remove trees and parts thereof, or other obstructions which endanger or may interfere with the efficiency of said Facilities; provided that PEC shall not remove City-owned structures, utilities, or facilities within the PUE without the consent of the City. The Facilities within the PUE shall be located underground.

Sincerely,

Kent Cagle, City Manager

THE STATE OF TEXAS §
COUNTY OF WILLAMSON §

This instrument was acknowledged before me on _____, 2014, by Kent Cagle, City Manager, on behalf of said City.

Notary Public, State of Texas

Agreed:

Pedernales Electric Cooperative, Inc.

Name: _____
Title: _____

THE STATE OF TEXAS §
COUNTY OF WILLIAMSON §

This instrument was acknowledged before me on _____, 2014, by _____,
_____, on behalf of Pedernales Electric Cooperative, Inc.

EXHIBIT A

PUE



DEDICATION OF PUBLIC UTILITY EASEMENT

STATE OF TEXAS §

COUNTY OF WILLIAMSON §

The City of Leander, Texas, the owner of the hereinafter described tract of land located within the City of Leander, Williamson County, Texas, hereby dedicates such tract of land to the use of the public as a public utility easement, subject to the continuing and future control and regulation of the use of such easement by the City of Leander, the following tract of land:

PROPERTY: A 0.36, more or less, acre tract of land situated in Williamson County, Texas out of the Charles Cochran Survey, Abstract 34, being a portion of a 36.27 acre tract described as Lot 3 Block "H", Benbrook Ranch, Section Two, Phase One, a subdivision in Williamson County, Texas according to a plat as recorded in Cabinet "CC", slides "3-9" of the plat records of Williamson County, Texas, said easement being more fully described in Exhibit "A" attached hereto and made a part hereof for all purposes.

The City of Leander, Texas hereby assigns, an exclusive, perpetual Public Utility Easement for the purpose of placing, constructing, operating, repairing, maintaining, rebuilding, replacing, relocating and removing or causing to be placed, constructed, operated, repaired, maintained, rebuilt, replaced, relocated and removed structures or improvements reasonably necessary and useful for: water and/or wastewater mains, lines and pipes; the supplying of water, sanitary sewer, drainage and conveyance of storm water run-off; the City's drainage system; an underground electric distribution line consisting of variable number of wires, and all necessary or desirable appurtenances and other facilities useful or necessary for the transmission and distribution of electric utility service; and/or other such related utility services (the "Facilities") in, under and across the Property more fully described in Exhibit "A" attached hereto.

This Public Utility Easement is subject to the following covenants:

1. The City of Leander reserves the right to use the Property for all purposes that do not unreasonably interfere with or prevent the use of the Property as provided herein. Specifically, and without limiting the generality of the forgoing, City of Leander has the right to place, construct, operate, repair, replace and maintain roadways, driveways, drainage, landscaping and signage on, in, under, over and across the Property, so long as such use does not unreasonably interfere with or prevent the use of the Property as provided herein. But City of Leander may not construct any buildings or similar improvements on the Property.
2. This Public Utility Easement is granted and accepted subject to any and all easements, covenants, rights-of-way, conditions, restrictions, encumbrances, mineral reservations and royalty reservations, if any, relating to the Property to the extent and only to the extent, that the same may still be in force and effect, and either shown of record in the Office of the County Clerk of Williamson County, Texas, or apparent on the ground.
3. The repair of any damage caused by the placement and installation of the Facilities within the Property, the City of Leander's adjacent property, and any improvements located therein or thereon shall be finalized within thirty (30) days of completion of any construction, maintenance, repairs or other subsequent work within or upon the Property so as to restore the Property and City of Leander's adjacent property to substantially the same condition as existed prior to commencement of such construction, maintenance, repairs or other work.

The covenants and terms of this Public Utility Easement are covenants running with the land and enforcement of this Public Utility Easement shall be proceedings at law or in equity against any person or persons violating or attempting to violate the restrictions of this Public Utility Easement, either to restrain the violation or to recover damages. Invalidation of any of the restrictions or uses (covenants) by a judgment or court order shall not affect any of the other provisions of the easements herein, which shall remain in full force and effect.

When the context requires, singular nouns and pronouns include the plural.

Executed the 10th day of July 2014 and filed of record by the County Clerk in the Official Records of Williamson County.

City of Leander, Texas
Kent Cagle
Kent Cagle, City Manager

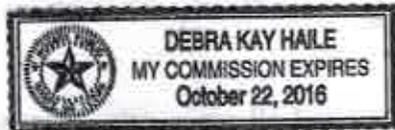
THE STATE OF TEXAS §

COUNTY OF Williamson §

BEFORE ME, the undersigned authority, a Notary Public in and for said County and State, on this day personally appeared Kent Cagle, City Manager for the City of Leander, Texas and known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged that he executed the same for the purposes and consideration therein expressed and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE on this the 10th day of July 2014.

(SEAL)



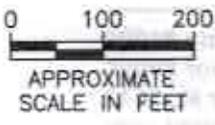
Debra Kay Haile
Notary Public - State of Texas

AFTER RECORDING RETURN TO:

City of Leander
Attn: City Secretary
P.O. Box 319
Leander, TX 78646-0319

SURVEY SKETCH

10 FOOT WIDE ELECTRIC EASEMENT SITUATED IN LOT 3, BLOCK "H", BENBROOK RANCH, SECTION TWO, PHASE ONE, A SUBDIVISION IN WILLIAMSON COUNTY, TEXAS, ACCORDING TO PLAT AS RECORDED IN CABINET "CC", SLIDES "3-9" OF THE PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS.



- LEGEND
- IRON ROD FOUND
 - IRON ROD SET
 - * COTTON SPINDLE FOUND
 - △ CALCULATED POINT

BENBROOK RANCH
SECTION TWO, PHASE ONE
CABINET CC, SLIDES 3-9
P.R.W.C.T.

R=1070.0'
T=163.4'
A=324.3'
CB=N39°04'05"E
C=323.1'

R=1080.0'
T=165.4'
A=328.2'
CB=S39°02'40"W
C=327.0'

R=1035.0'
T=98.2'
A=195.9'
CB=N53°10'19"E
C=195.6'

R=1045.0'
T=99.2'
A=197.7'
CB=S53°10'19"W
C=197.4'

R=25.0'
T=12.5'
A=23.2'
CB=N32°01'41"E
C=22.4'

LOT 3
BLOCK H
36.270 ACRES
PUBLIC PARK

BENBROOK RANCH
SECTION ONE, PHASE ONE
CABINET W, SLIDES 295-299
P.R.W.C.T.

BAGDAD ROAD
(ROW VARIES)

HALSEY DRIVE
(70' ROW)

DRAINAGE EASEMENT

Steven W. Womack

10 May 2014

Steven Warner Womack, RPLS, PLS, NCEES
National Council of Examiners for Engineering and Surveying #1928
Texas Registered Professional Land Surveyor #5025
North Carolina Professional Land Surveyor # L-5043
E-Mail: SWRPLS@gmail.com Phone/Text: (512) 638-0220

Date



DATE: 10-06-2014
DRAWN BY: Staff
FILE NAME: 13-001.dwg
PROJ. NO. : 13-001

Steven Warner Womack, RPLS, PLS, NCEES

National Council of Examiners for Engineering and Surveying #1928
Texas Registered Professional Land Surveyor #5025
North Carolina Professional Land Surveyor #L-5043
E-Mail: SWRPLS@Gmail.com
(512) 638-0220

METES AND BOUNDS DESCRIPTION

10 FOOT WIDE ELECTRIC EASEMENT SITUATED IN LOT 3, BLOCK "H", BENBROOK RANCH, SECTION TWO, PHASE ONE, A SUBDIVISION IN WILLIAMSON COUNTY, TEXAS, ACCORDING TO THE MAP OR PLAT THEREOF RECORDED IN CABINET "CC", SLIDES 3-9 OF THE PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS, SAID TRACT BEING MORE PARTICULARLY DESCRIBED AS METES AND BOUNDS AS FOLLOWS;

BEGINNING at a called iron rod on the south right-of-way of Halsey Drive at the southeast corner of the intersection with the east right-of-way of Bagdad Road, being the northeast corner of said Lot 3, for the northeast corner of the herein described tract and **POINT-OF-BEGINNING**;

Thence with the said southerly right-of-way of Halsey Drive the following courses and distances:

N58°35'35"E 224.6 feet to a called iron rod;
with a curve to the left whose radius = 1035.0 feet, tangents = 98.2 feet, arc = 195.9 feet and whose chord bears
N53°10'19"E 195.6 feet to a called iron rod;
N47°45'04"E 777.9 feet to a called iron rod;
with a curve to the left whose radius = 1070.0 feet, tangents = 163.4 feet, arc = 324.3 feet and whose chord bears
N39°04'05"E 323.1 feet to a called iron rod at the southwest corner of Lot 2 of said subdivision, for the northeast corner of the herein described tract;

Thence with the common line between Lot 3 and Lot 2 of said subdivision S64°42'31"E 10.0 to a point, for the southeast corner of the herein described tract;

Thence traversing across and over the said Lot 3 the following courses and distances:

with a curve to the right whose radius = 1080.0 feet, tangents = 165.4 feet, arc = 328.2 feet and whose chord bears
S39°02'40"W 327.0 feet;
S47°45'04"W 457.4 feet;
S42°14'56"E 60.0 feet;
S47°45'04"W 10.0 feet;
N42°14'56"W 50.0 feet;
N87°14'56"W 14.1 feet;
S47°45'04"W 300.5 feet;
with a curve to the right whose radius = 1045.0 feet, tangents = 99.2 feet, arc = 197.7 feet and whose chord bears
S53°10'19"W 197.4 feet;
S58°35'35"W 244.6 feet to a point on the southeasterly corner of the intersecting right-of-ways of Bagdad Road and Halsey Drive;

Thence with a curve to the right whose radius = 25.0 feet, tangents = 12.5 feet, arc = 23.2 feet and whose chord bears
N32°01'41"E 22.4 feet to the **POINT-OF-BEGINNING**.

Steven W. Womack
Registered Professional Land Surveyor
No. 5025, State of Texas

12 June 2014
Date





Executive Summary

December 18, 2014

Agenda Subject: Consideration of a License Agreement for the installation and maintenance of irrigation, landscape, hardscape, and decorative lighting within the City rights-of-way.

Background: Taylor Morrison Homes has requested a license agreement to construct, install, and maintain (1) irrigation system for landscaping; (2) landscaping; (3) hardscape; and (4) decorative street lighting the rights of way in the Bluffs at Crystal Falls Subdivision as shown in Exhibits A & B.

Origination: Applicant: Michael Slack on behalf Taylor Morrison

Financial Consideration: None

Recommendation: Staff recommends approval of the license agreement.

Attachments:

1. License Agreement
2. Exhibits A & B
3. Insurance Certificate
4. Bluffs Location Exhibit

Prepared By: Tom Yantis, AICP
Assistant City Manager

12/10/2014

LICENSE AGREEMENT

The City of Leander, Texas, a municipal corporation and political subdivision of the State of Texas situated in Travis & Williamson Counties, Texas (“the City” or “Licensor”), and Taylor Morrison at Crystal Falls, LLC, a Texas limited liability company (“Licensee”) enter into this License Agreement (“Agreement”) on this the ____ day of _____, 2014, upon the terms and conditions set forth below.

I. PURPOSE OF LICENSE AGREEMENT. The City grants to Licensee permission to use the licensed property for the following purposes only:

Construction, installation, and maintenance of the following improvements for the Bluffs at Crystal Falls Subdivision (the “Subdivision”) located in the rights-of-way of all roadways located in the Subdivision and the lots shown on Exhibit A, being: landscaping, irrigation, hardscape, and decorative street lights; hereinafter referred to as the “Improvements”. The general locations of the rights-of-way and lots containing the Improvements are more particularly shown in Exhibits “A” Limits of Landscaping, Irrigation & Hardscape and Exhibit “B” Decorative Street Lights Limits. The rights-of-way and lots are more particularly shown on the approved final plats of the Subdivision proposed within the boundary of the Subdivision shown in Exhibits “A” and “B”.

The above-described properties, hereinafter referred to as the “licensed property”, are further shown in Exhibit “A” and “B” attached to this Agreement and incorporated by reference for all purposes.

The City makes this grant solely to the extent of its right, title and interest in the licensed property, without any express or implied warranties.

Licensee agrees that: (A) the construction of the Improvements permitted by this Agreement shall be done in compliance with all applicable City, County, State and/or Federal laws, ordinances, regulations and policies now existing or later adopted; (B) that all construction and installation of the Improvements will be completed in a timely manner without delay; (C) the Licensee will construct the Improvements according to plans filed with the City. Any changes in construction must be approved the City; and (D) any Improvements located in the City’s right-of-way shall be subject to City approval prior to placement and installation. Any such encroachment in the City’s right-of-way may necessitate further requirements and contractual agreements to be executed by Licensee with the City. Any provision herein to the contrary notwithstanding, Licensee shall be liable for, and shall indemnify and hold the City harmless from all damages, causes of action, and claims arising out of or in connection with Licensee’s installation, operation, maintenance or removal of the improvements permitted under this Agreement.

II. FEE. No annual fee shall be due in connection with this Agreement.

III. THE CITY’S RIGHTS TO LICENSED PROPERTY. This Agreement is expressly subject and subordinate to the present and future right of the City, its successors, assigns, lessees, grantees,

and Licensees, to construct, install, establish, maintain, use, operate, and renew any public utilities facilities, franchised public utilities, rights-of-way, roadways, or streets on, beneath, or above the surface of the licensed property.

Said uses of the licensed property by the City are permitted even though such use may substantially interfere with or destroy Licensee's use of the licensed property, or the Improvements. In case of a declared emergency, damage to or destruction of Licensee's property shall be at no charge, cost, claim, or liability to the City, its agents, contractors, officers, or employees.

Notwithstanding any provisions in this Agreement to the contrary, the City retains the right to enter upon the licensed property, at any time and without notice, assuming no obligation to Licensee, to remove any of the licensed improvements or alterations thereof whenever such removal is deemed necessary for: (a) exercising the City's rights or duties with respect to the licensed property; (b) protecting persons or property; or (c) the public health or safety with respect to the licensed property.

IV. INSURANCE. Licensee shall, at its sole expense, provide a commercial general liability insurance policy, written by a company acceptable to the City and licensed to do business in Texas, with a combined single limit of not less than \$600,000.00, which coverage may be provided in the form of a rider and/or endorsement to a previously existing insurance policy. Such insurance coverage shall include the City as an additional-insured. This insurance coverage shall cover all perils arising from the activities of Licensee, its officers, employees, agents, or contractors, relative to this Agreement, or otherwise within the public right-of-way and property within the licensed area. Licensee shall be responsible for any deductibles stated in the policy. A certificate of insurance evidencing such coverage shall be delivered to the City Secretary of the City within thirty (30) days of the effective date of this Agreement.

Licensee shall not cause any insurance to be canceled nor permit any insurance to lapse. All insurance certificates shall include a clause to the effect that the policy shall not be canceled, reduced, restricted or otherwise limited until forty-five (45) days after the City has received written notice as evidenced by a return receipt of registered or certified mail.

V. INDEMNIFICATION. Licensee shall indemnify, defend, and hold harmless the City and its officers, agents and employees against all claims, suits, demands, judgments, expenses, including attorney's fees, or other liability for personal injury, death, or damage to any person or property which arises from or is in any manner caused by the Licensee's construction or maintenance of the Improvements or use of the licensed property. This indemnification provision, however shall not apply to any claims, suits, damage, costs, losses, or expenses arising solely from the negligent or willful acts of the City; provided that for the purposes of the foregoing, the City's act of entering into this Agreement shall not be deemed to be a "negligent or willful act."

VI. CONDITIONS.

A. Licensee's Responsibilities. Licensee will be responsible for any damage to or repair of the Improvements. Further, Licensee shall reimburse the City for all costs of replacing or repairing any property of the City or of others which was damaged or destroyed as a result of activities under this

Agreement by, or on behalf of, Licensee.

B. Maintenance. Licensee shall maintain the licensed property and the Improvements in good condition and making any necessary repairs to the Improvements at its expense.

C. Modification of Improvements. Licensee agrees that modification of the Improvements shall be at Licensee's expense. Licensee shall obtain the proper permits prior to any modification of the Improvements. This Agreement, until its expiration or revocation, shall run as a covenant with the land, and the terms and conditions of this Agreement shall be binding on the grantees, successors and assigns of Licensee. Licensee shall cause any immediate successors-in-interest to have actual notice of this Agreement.

D. Default. In the event that Licensee fails to maintain the licensed property or otherwise comply with the terms or conditions as set forth herein, then the City shall give Licensee written notice thereof, by registered or certified mail, return receipt requested, to the address set forth below. Licensee shall have thirty (30) days from the date of receipt of such notice to take action to remedy the failure complained of, and, if Licensee does not satisfactorily remedy the same within the thirty (30) day period, the City may terminate this Agreement.

Licensee Address

Taylor Morrison at Crystal Falls, LLC
Attn: Adib R. Khoury
11200 Lakeline Blvd., Ste 150A
Austin, Texas 78717

Licensor Address

City of Leander
Attention: City Manager
P.O. Box 319
Leander, Texas 78641

VII.COMMENCEMENT AND TERMINATION. This Agreement shall begin with the effective date and continue thereafter for so long as Licensee is constructing or maintaining the Improvements as set forth herein. If Licensee abandons construction or maintenance of all or any part of the Improvements or licensed property as set forth in this Agreement, then this Agreement shall expire and terminate following thirty (30) days written notice to the Licensee if such abandonment has not been remedied by the Licensee within such period. The City shall thereafter have the same complete title to the licensed property so abandoned as though this Agreement had never been made and shall have the right to enter the licensed property and terminate the rights of Licensee, its successors and assigns hereunder. All installations of Licensee not removed shall be deemed property of the City as of the time abandoned.

VIII. TERMINATION.

A. Termination by Licensee. This Agreement may be terminated by Licensee by delivering written notice of termination to the City not later than thirty (30) days before the effective date of termination. If Licensee so terminates, then it shall remove all installations, other than the Improvements, that it made from the licensed property within the thirty (30) day notice period at its sole cost and expense. Failure to do so shall constitute a breach of this Agreement.

B. Termination by City. Subject to prior written notification to Licensee or its successor-in-

interest, this Agreement is revocable by the City if:

1. The licensed Improvements, or a portion of them, interfere with the City's right-of-way;
2. Use of the right-of-way area becomes necessary for a public purpose;
3. The licensed Improvements, or a portion of them, constitute a danger to the public which the City deems not be remediable by alteration or maintenance of such Improvements;
4. Despite thirty (30) days written notice to Licensee, maintenance or alteration necessary to alleviate a danger to the public has not been made; or
5. Licensee fails to comply with the terms and conditions of this Agreement including, but not limited to any insurance or license fee requirements specified herein.

IX. EMINENT DOMAIN. If eminent domain is exerted on the licensed property by paramount authority, then the City will, to the extent permitted by law, cooperate with Licensee to effect the removal of Licensee's affected installations and Improvements thereon, at Licensee's sole expense. Licensee shall be entitled to retain all monies paid by the condemning authority to Licensee for Licensee's installations and Improvements taken, if any.

X. INTERPRETATION. Although drawn by the City, this Agreement shall, in the event of any dispute over its meaning or application, be interpreted fairly and reasonably, and neither more strongly for or against either party.

XI. APPLICATION OF LAW. This Agreement shall be governed by the laws of the State of Texas. If the final judgment of a court of competent jurisdiction invalidates any part of this Agreement, then the remaining parts shall be enforced, to the extent possible, consistent with the intent of the parties as evidenced by this Agreement.

XII. VENUE. Venue for all lawsuits concerning this Agreement will be in Williamson County, Texas.

XIII. COVENANT RUNNING WITH LAND; WAIVER OF DEFAULT. This Agreement and all of the covenants herein shall run with the land; therefore, the conditions set forth herein shall inure to and bind each party's successors and assigns. Either party may waive any default of the other at any time, without affecting or impairing any right arising from any subsequent or other default.

XIV. ASSIGNMENT; HOMEOWNER'S ASSOCIATION. (a) Licensee shall not assign, sublet or transfer its interest in this Agreement without the written consent of the City, which consent shall not be unreasonably withheld.

(b) The City Manager may approve an assignment, sublease, or transfer of interest in this

Agreement to a home owner's association for the Subdivision (the "HOA") that meets the requirements of this paragraph. The HOA must have been legally established and maintenance obligations for the Improvements must have been assigned to the HOA. The HOA must have a binding, continuing responsibility for the maintenance and operation of the Improvements and shall establish adequate funding for such maintenance and operation. The HOA's maintenance obligation shall be noted on the plat for the Subdivision and in the restrictive covenants filed of record for the Subdivision in a form that is acceptable to the City. The restrictive covenants shall: provide for a monthly, semi-annual or annual assessment(s) sufficient to fund the maintenance and operation of the Improvements; shall give the City the authority to judicially enforce the covenants requiring adequate assessments to be made and collected and the streets to be maintained and repaired; and shall provide for the City to recover any attorney's fees and expenses incurred in judicial enforcement. Provided however, that nothing herein shall obligate the City to maintain and repair the Improvements. This Agreement may not be assigned, sublet, or transferred until the Licensee or the HOA submits proof to the City of compliance with this paragraph and the insurance requirements under this Agreement. Subject to compliance with this paragraph and the insurance requirements set forth herein, Licensee shall furnish to the City a copy of any such assignment or transfer of any of Licensee's rights in this Agreement, including the name, address, and contact person of the assignee, along with the date of assignment or transfer.

ACCEPTED, this the ____ day _____, 2014.

LICENSOR: CITY OF LEANDER, TEXAS

By: _____
Name: Kent Cagle
Title: City Manager

LICENSEE: TAYLOR MORRISON AT CRYSTAL FALLS, LLC, a Texas limited liability company

By: Taylor Morrison of Texas, Inc., a Texas corporation, its Manager

By: _____
Adib R. Khoury, Vice President

THE STATE OF TEXAS §
COUNTY OF _____ §

This instrument was acknowledged before me on this the ____ day of _____, 2014, by Kent Cagle, City Manager for the City of Leander, Texas, on behalf of the City.

Notary Public - State of Texas

THE STATE OF TEXAS §
COUNTY OF _____ §

This instrument was acknowledged before me on this the ____ day _____ 2014, by Adib R. Khoury, Vice President of Taylor Morrison of Texas, Inc., a Texas corporation as Manager of Taylor Morrison at Crystal Falls, LLC, a Texas limited liability company, on behalf of said corporation and said limited liability company.

Notary Public - State of Texas

C:\Projects-Taylor-Morrison\Bluffs\Exh-Misc-Files\2014\Sept\Bluffs_Limits-Landscape_11-24-14.dwg

PROPOSED
Lot 86 Blk Q
Bluffs @ Crystal Falls
Sec.3-Ph. 30

PROPOSED
Lot 83 Blk K
Bluffs @ Crystal Falls
Sec.3-Ph. 3F

PROPOSED
Lot 91 Blk G
Fairways @ Crystal Falls
Sec.2-Ph. 6A

Lot 18 Blk K
Bluffs @ Crystal Falls
Sec.2-Ph. 2F

Lot 23 Blk H
Bluffs @ Crystal Falls
Sec.1-Ph. 1B

PROPOSED
Lot 25 Blk Q
Bluffs @ Crystal Falls
Sec.3-Ph. 3G

Lot 1 Blk G
Bluffs @ Crystal Falls
Sec.1-Ph. 1B



PHASE LINE

Landscaping, Irrigation and Hardscape Areas

THE FAIRWAYS

THE BLUFFS

THE HIGHLANDS

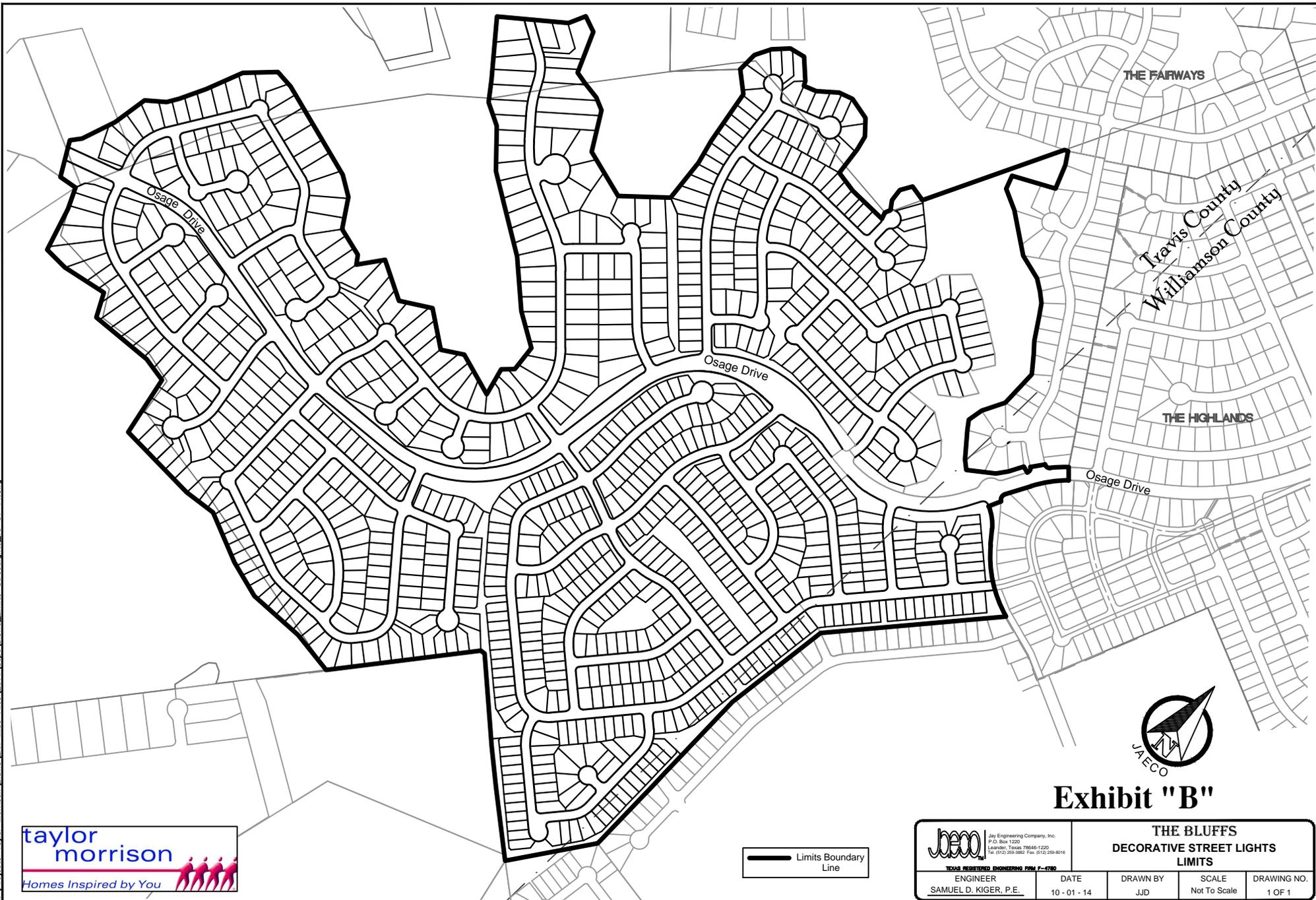
Travis County
Williamson County



Exhibit "A"

		Jay Engineering Company, Inc. P.O. Box 1220 Leander, Texas 78646-1220 Tel. (512) 259-3882 Fax. (512) 259-8016		LANDSCAPING, IRRIGATION AND HARDSCAPE	
TEXAS REGISTERED ENGINEERING FIRM F-4780		ENGINEER	DATE	DRAWN BY	SCALE
SAMUEL D. KIGER, P.E.		11 - 24 - 14	JJD	Not To Scale	DRAWING NO. 1 OF 1

C:\Projects-Taylor-Morrison\Bluffs\Exh-Misc-Files\2014\Sept\Bluffs_Limits-Streetlights_10-01-14.dwg

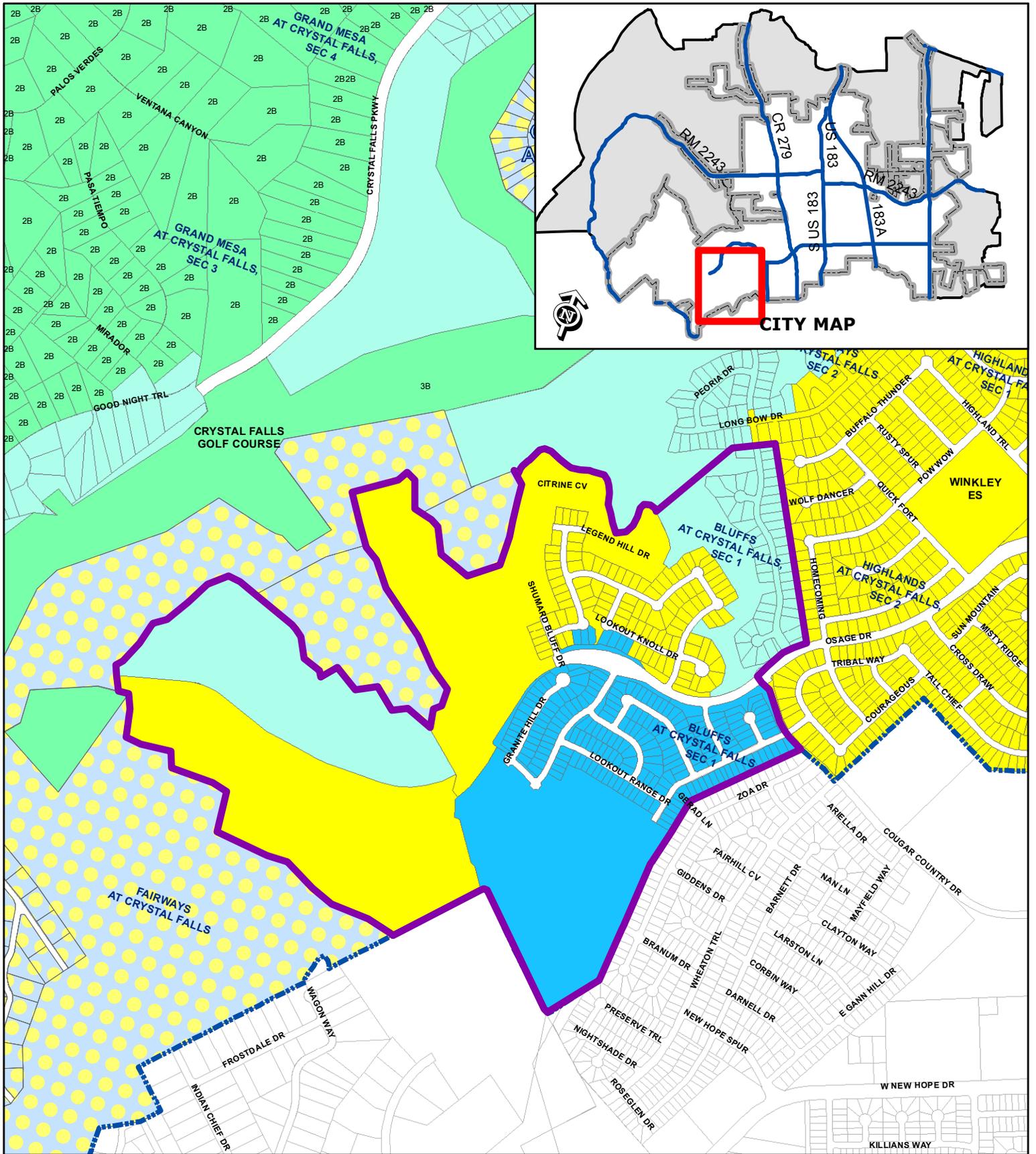


— Limits Boundary Line



Exhibit "B"

 Jay Engineering Company, Inc. P.O. Box 1200 Leander, Texas 78645-1200 Tel: (512) 259-9883 Fax: (512) 259-8016 <small>TEXAS REGISTERED ENGINEERING FIRM # 4780</small>	THE BLUFFS DECORATIVE STREET LIGHTS LIMITS			
	ENGINEER SAMUEL D. KIGER, P.E.	DATE 10 - 01 - 14	DRAWN BY JJD	SCALE Not To Scale



License Agreement

Attachment #4

Current Zoning Map
Bluffs at Crystal Falls

-  Subject Property
-  City Limits

- | | | |
|---|--|---|
|  SFR |  SFT |  GC |
|  SFE |  SFU/MH |  HC |
|  SFS |  TF |  HI |
|  SFU |  MF |  PUD |
|  SFC |  LO | |
|  SFL |  LC | |





Executive Summary

December 18, 2014

Agenda Subject: Consideration of a License Agreement for the installation and maintenance of irrigation, installation of landscaping, and construction of internal driveways within the City rights-of-way.

Background: Transit Village Investments, Ltd has requested a license agreement to construct, install, and maintain (1) irrigation system for landscaping; (2) landscaping; and (3) internal driveways in the rights of way of Hero Way and Mel Mathis Avenue as shown in Exhibit A.

Origination: Applicant: Jeff Musgrove on behalf Transit Village Investments, Ltd

Financial Consideration: None

Recommendation: Staff recommends approval of the license agreement.

Attachments:

1. License Agreement
2. Exhibits A & B
3. Insurance Certificate
4. Bluffs Location Exhibit

Prepared By: Tom Yantis, AICP
Assistant City Manager

12/10/2014

LICENSE AGREEMENT

The **City of Leander**, a Texas home-rule municipal corporation and political subdivision of the State of Texas situated in Williamson and Travis County, Texas (“the City”), and **Transit Village Investments Ltd.**, a Texas limited partnership (the “Licensee”), enter into this License Agreement (“Agreement”) on this the 18th day of December, 2014, upon the terms and conditions set forth below.

I. PURPOSE OF LICENSE AGREEMENT. The City grants to Licensee permission to use the property, located within that portion of the right-of-way between Hero Way and Mel Mathis Avenue and Licensors’ Property, all as more particularly illustrated as the cross-hatched area on Exhibit “A” attached hereto and incorporated herein for all purposes (collectively, the “Licensed Property”), for the following purposes only: (1) the installation of landscaping; (2) the installation of an irrigation system for the landscaping; (3) the construction of all approved internal driveway(s); and (4) the repair, maintenance and replacement of the landscaping, irrigation system, and driveway(s) within Licensed Property. The landscaping, irrigation system and driveway(s) are sometimes collectively referred to herein as the “improvements”.

The City makes this grant solely to the extent of its right, title and interest in the Licensed Property, without any express or implied warranties.

Licensee agrees that all construction installation and maintenance permitted by this Agreement shall be done in compliance with plans and specifications approved in writing by the City Engineer and all applicable City, County, State and/or Federal laws, ordinances, regulations and policies now existing or later adopted.

Any provision herein to the contrary notwithstanding, Licensee shall be liable for, and shall indemnify and hold the City harmless from all damages, causes of action, and claims arising out of or in connection with Licensee’s installation, operation, maintenance or removal of the improvements permitted under this Agreement.

II. ANNUAL FEE. No annual fee shall be due in connection with this License Agreement.

III. CITY’S RIGHT TO LICENSED PROPERTY. This Agreement is expressly subject and subordinate to the present and future right of the City, its successors, assigns, lessees, grantees, and Licensee, to construct, install, establish, maintain, use, operate, and renew any public utilities facilities, franchised public utilities, rights-of-way, roadways, or streets on, beneath, or above the surface of the Licensed Property. The uses of the Licensed Property are subject to the City’s right to interfere with or destroy Licensee’s use of the Licensed Property, or any property or the improvements placed thereon or therein by Licensee, if such use or action is determined necessary by the City.

Notwithstanding any provision of this Agreement to the contrary, the City retains the right to enter upon the Licensed Property, at any time and without notice, and assuming no obligation to Licensee, to remove any of the improvements or alterations thereof whenever such removal is deemed necessary for: (a) exercising the City’s rights or duties with respect to the licensed property; (b) protecting persons or property; or (c) the public health or safety.

IV. INSURANCE. Licensee shall, at its sole expense, provide a commercial general liability insurance policy, written by a company acceptable to the City and licensed to do business in Texas, with a

combined single limit of not less than \$600,000.00, which coverage may be provided in the form of a rider and/or endorsement to a previously existing insurance policy. The City may require the Licensee to increase the combined single limit of such coverage from time to time in the discretion of the City. Such insurance coverage shall specifically name the City as an additional-insured. The insurance shall cover all perils arising from the activities of Licensee, its officers, employees, agents, or contractors, relative to this Agreement. Licensee shall be responsible for any deductibles stated in the policy. A true copy of each such policy shall be delivered to the City Manager of City on or before the Licensee's use or occupancy of the Licensed Property.

Licensee shall not cause any insurance to be canceled nor permit any insurance to lapse. All insurance certificates shall include a clause to the effect that the policy shall not be canceled, reduced, restricted or otherwise limited until forty-five (45) days after the City has received written notice as evidenced by a return receipt of registered or certified mail.

V. INDEMNIFICATION. Licensee shall indemnify, defend, and hold harmless the City and its officers, agents and employees against all claims, suits, demands, judgments, expenses, including attorney's fees, or other liability for personal injury, death, or damage to any person or property which arises from or is in any manner caused by the Licensee's construction, maintenance or use of the Licensed Property. This indemnification provision, however shall not apply to any claims, suits, damage, costs, losses, or expenses (i) for which the City shall have been compensated by insurance provided under Paragraph IV, above, or (ii) arising solely from the negligent or willful acts of the City; provided that for the purposes of the foregoing, the City's entering into this Agreement shall not be deemed to be a "negligent or willful act."

VI. CONDITIONS. A. Licensee's Responsibilities. Licensee will be responsible for any and all damage to or relocation of existing facilities. Further, Licensee shall reimburse the City for all costs of replacing or repairing any property of the City, or of others, that is damaged by or on behalf of Licensee as a result of activities under this Agreement.

B. Maintenance. Licensee shall maintain the Licensed Property by keeping the area free of debris and litter. Removal of dead or dying plants shall also be handled by Licensee at its expense. Further, the City may require Licensee to take action to maintain the Licensed Property including, but not limited to, the removal of dead or dying vegetation. Such removal shall be completed within thirty (30) days following receipt of a written request from the City.

C. Removal or Modification. Licensee agrees that removal or modification of any of the improvements now existing or to be later placed on the Licensed Property shall be a Licensee's expense. Provided the City has given prior written approval of the plans and specifications for the improvements, said removal or modification shall be at Licensee's sole discretion.

D. Default. In the event that Licensee fails to maintain the Licensed Property or otherwise comply with the terms or conditions as set forth herein, the City shall give Licensee written notice thereof, by registered or certified mail, return receipt requested, to the address set forth below. Licensee shall have thirty (30) days from the date of receipt of such notice to take action to remedy the failure complained of, and, if Licensee does not satisfactorily remedy the same within the thirty (30) day period, the City may perform the work or contract for the completion of the work. Licensee agrees to pay within thirty (30) days of written demand by the City, all reasonable costs expenses incurred by the City in completing the work.

Licensee Address

City Address

City of Leander
Attn: City Manager
P. O. Box 319
Leander, Texas 78646-0319

VII. COMMENCEMENT AND TERMINATION BY ABANDONMENT. This Agreement shall begin with the effective date and continue thereafter for so long as the Licensed Property shall be used for the purposes set forth herein. If Licensee abandons the use of all or any part of the Licensed Property for the purposes set forth in this Agreement, this Agreement shall expire and terminate, as to the portion or portions abandoned, following thirty (30) days written notice by the City to the Licensee or by Licensee to the City. If all or a part of the Licensed Property is abandoned by Licensee, the City shall thereafter have the same complete title to the Licensed Property so abandoned as though this Agreement had never been made, and shall have the right to enter on the Licensed Property and terminate the rights of Licensee, its successors and assigns hereunder, to the abandoned part of the Licensed Property. All installations of Licensee on a portion of the Licensed Property that is abandoned shall be deemed property of the City unless removed with the consent of the City.

VIII. TERMINATION. A. Termination by Licensee. This Agreement may be terminated by Licensee by delivering written notice of termination to the City not later than thirty (30) days before the effective date of termination. If Licensee terminates, then it shall remove all installations that it made from the Licensed Property within the thirty day notice period, at its sole cost and expense. Failure to do so shall constitute a breach of this Agreement.

B. Termination by City. Notwithstanding any other term, provision or conditions of this Agreement, subject only to prior written notification to Licensee or its successor-in-interest, this Agreement is revocable by the City if:

1. The improvements, or a portion of them, interfere with the City's right-of-way;
2. Use of the Licensed Property becomes necessary for a public purpose;
3. The improvements, or a portion of them, constitute a danger to the public which the City deems not be remediable by alteration, repair or maintenance;
4. Despite thirty (30) days written notice to Licensee, maintenance or alteration necessary to alleviate a danger to the public has not been made; or
5. Licensee fails to comply with the terms and conditions of this Agreement including, but not limited to the insurance requirements specified herein.

If Licensee abandons or fails to maintain the Licensed Property, and the City receives no substantive response within thirty (30) days following written notification to Licensee, then the City may remove and/or replace all of the improvements and collect from Licensee the City's actual expenses incurred in connection therewith.

IX. EMINENT DOMAIN. If eminent domain is exerted on the licensed property the City

will, to the extent permitted by law, cooperate with Licensee to effect the removal of Licensee's affected installations and the improvements thereon, at Licensee's sole expense. Licensee shall be entitled to retain all monies paid by the condemning authority to Licensee for Licensee's installations taken, if any.

X. INTERPRETATION. This Agreement shall, in the event of any dispute over its intent, meaning or application, shall be interpreted fairly and reasonably, and neither more strongly for or against either party.

XI. APPLICATION OF LAW. This Agreement shall be governed by the laws of the state of Texas. If the final judgment of a court of competent jurisdiction invalidates any part of this Agreement, then the remaining parts shall be enforced, to the extent possible, consistent with the intent of the parties as evidenced by this Agreement.

XII. VENUE. Venue for all lawsuits concerning this Agreement will be in the Williamson County, Texas.

XIII. COVENANT RUNNING WITH LAND; WAIVER OF DEFAULT. This Agreement and all of the covenants herein shall run with the land; therefore, the conditions set forth herein shall inure to and bind each party's successors and assigns. Either party may waive any default of the other at any time by written instrument, without affecting or impairing any right arising from any subsequent or other default.

XIV. ASSIGNMENT. Licensee shall not assign, sublet or transfer its interest in this Agreement without the written consent of the City, which consent shall not be unreasonably withheld. Subject to the assignee's compliance with the insurance requirements set forth herein, if any, Licensee shall furnish to the City a copy of any such assignment or transfer of any of Licensee's rights in this Agreement, including the name, address, and contact person of the assignee, along with the date of assignment or transfer.

TERMS AND CONDITIONS ACCEPTED, this the ___ day of _____, 2014.

LICENSOR
City of Leander

By: _____
Name: Kent Cagle
Title: City Manager

LICENSEE
Transit Village Investments Ltd.,
a Texas limited partnership

By: _____
Name: _____
Title: _____

THE STATE OF TEXAS §
 §
COUNTY OF WILLIAMSON §

This instrument was acknowledged before me on this the ____ day of _____, 20__, by Kent Cagle, City Manager, City of Leander, Texas, on behalf of the City.

Notary Public - State of Texas

THE STATE OF TEXAS §
 §
COUNTY OF _____ §

This instrument was acknowledged before me on this the ____ day of _____, 20__, by _____ of _____, a _____ partnership (or corporation), on behalf of said partnership (or corporation).

Notary Public, State of Texas

AFTER RECORDING RETURN TO:
City of Leander
Attn: City Secretary
P. O. Box 319
Leander, Texas 78646-0319

EXHIBIT "A" TO LICENSE AGREEMENT

Licensed Property

CERTIFICATE OF LIABILITY INSURANCE

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER USI Southwest Austin C/L 7600-B N. Capital of TX Hwy #200 Austin, TX 78731 512 451-7555	CONTACT NAME: Marlene Stevens
	PHONE (A/C, No, Ext): 512 451-7555 FAX (A/C, No): 512 467-0113 E-MAIL ADDRESS: marlene.stevens@usi.biz
	INSURER(S) AFFORDING COVERAGE NAIC # INSURER A: Scottsdale Insurance Company 41297
INSURED Transit Village Investments, Ltd. 1301 Capital of Texas Hwy., Suite A-300 Austin, TX 78746	INSURER B :
	INSURER C :
	INSURER D :
	INSURER E :
	INSURER F :

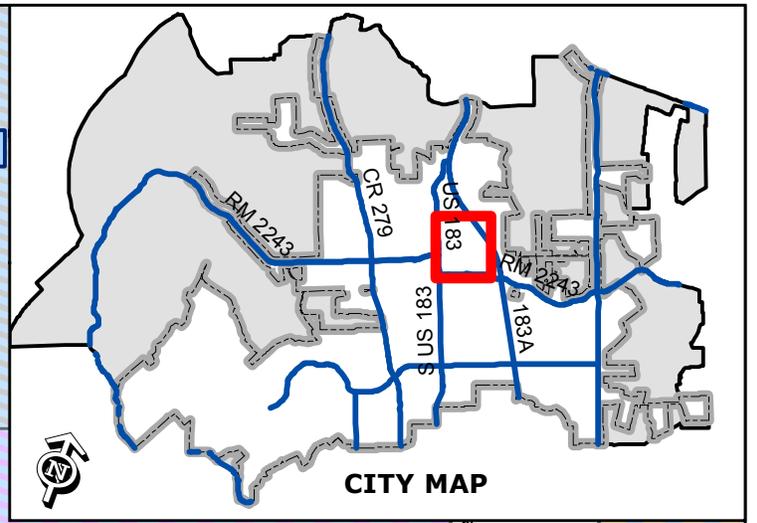
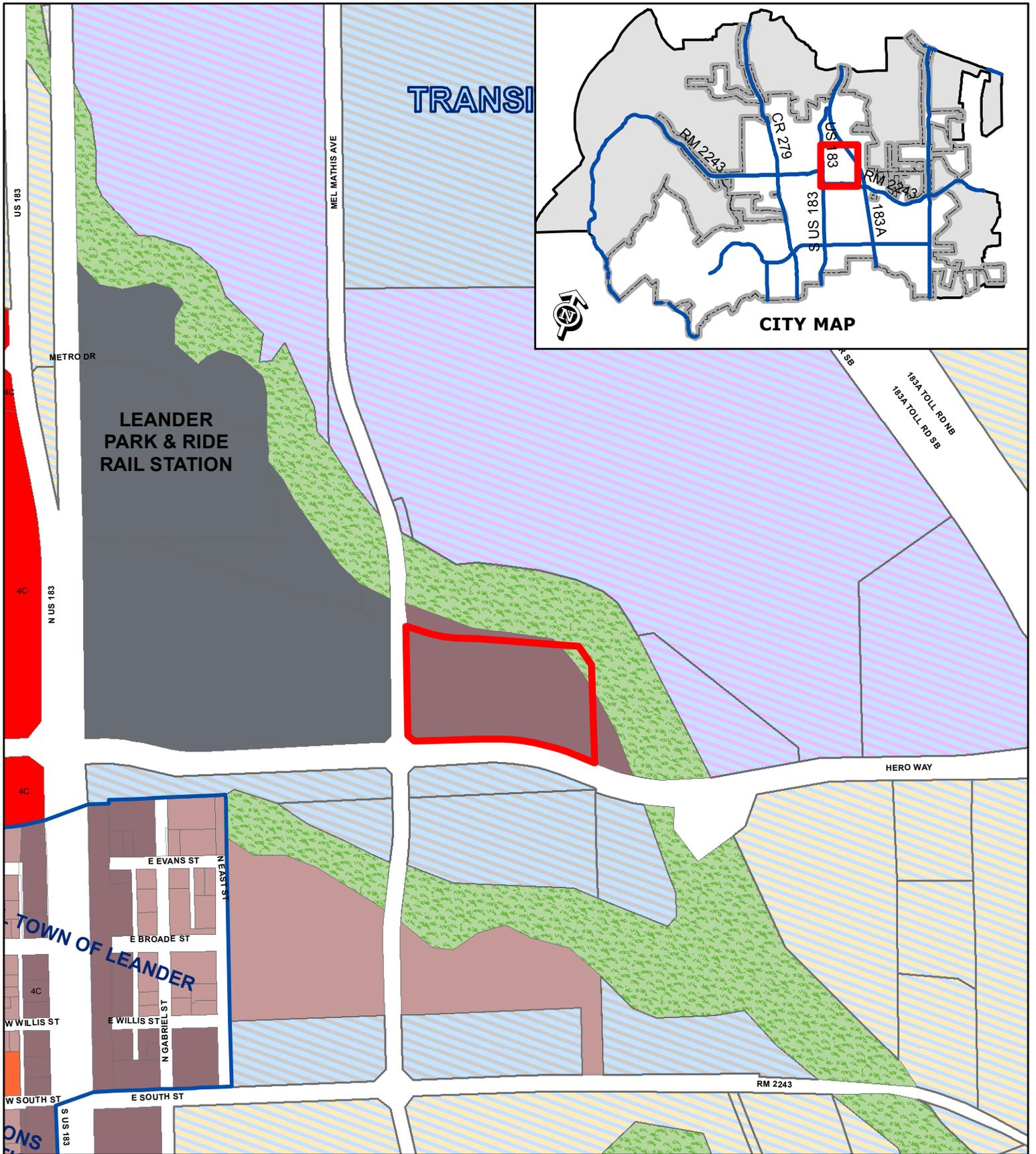
COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC			CPS1895596	12/28/2013	12/28/2014	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 50,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 1,000,000 \$
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? <input type="checkbox"/> Y / <input type="checkbox"/> N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below						WC STATU-TORY LIMITS OTH-ER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)
RE: 149.88 Acres of Land off of Hwy 183, Leander, TX 78641

CERTIFICATE HOLDER City of Leander 200 W. Willis Leander, TX 78641	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE <i>J.W. Wagner</i>



License Agreement

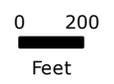
Attachment #4

Current Zoning Map
Village at Leander Station



-  Subject Property
-  City Limits

- | | | |
|---|--|---|
|  SFR |  SFT |  GC |
|  SFE |  SFU/MH |  HC |
|  SFS |  TF |  HI |
|  SFU |  MF |  PUD |
|  SFC |  LO | |
|  SFL |  LC | |





Executive Summary

December 18, 2014

Council Agenda Subject: Consideration of Amendment to the Development Agreement for the Marbella Tract between the City of Leander and NK Land Development, LLC

Background: The City and Developer entered into the Development Agreement for the Marbella Tract on August 21, 2014. The Marbella Tract consists of approximately 90 acres generally located $\frac{3}{4}$ of a mile to the east of the intersection of 183A Toll Road and RM 2243 along the south side of RM 2243 and north of the northeast corner of E, Woodview Drive (formerly CR 270). The developer wishes to amend the Development Agreement to allow the use of HDPE storm sewer pipe only outside of the structural limits of the roadways, i.e., the pavement, curb, and gutter of the private streets of Marbella Subdivision. All storm sewer pipe to be used under pavement, curb, and gutter shall be reinforced concrete pipe. The Marbella Subdivision Home Owners Association shall be responsible for the maintenance and repair for the HDPE storm sewers. This proposed amendment, attached herein, was prepared by the City Attorney's office.

Origination: Wayne S. Watts, P.E., CFM, City Engineer

Financial Consideration: N/A

Recommendation: Staff recommends approval of Amendment to the Development Agreement for the Marbella Tract.

Attachments: Amendment to Development Agreement for the Marbella Subdivision

Prepared by: Wayne S. Watts, P.E., CFM, City Engineer

**AMENDMENT TO THE
DEVELOPMENT AGREEMENT
FOR THE MARBELLA TRACT**

This Amendment to the Development Agreement for the Marbella Tract (the “**Amendment**”) is made and entered into as of _____, 2014, by and between the **City of Leander**, a Texas home-rule municipal corporation (the “**City**”), and **NK Land Development, LLC**, a Texas limited partnership (“**Developer**”). The City and Developer are sometimes referred to herein collectively as the “**Parties**”.

RECITALS

Whereas, the City and the Developer entered into the Development Agreement for the Marbella Tract, effective as of August 21, 2014 (the “**Agreement**”);

Whereas, the City and the Developer wish to amend the Agreement to set forth their agreements regarding the type of pipe to be used for drainage improvements and the parties’ respective obligations related to maintenance of such improvements;

AGREEMENT

For and in consideration of the mutual promises, covenants, obligations, and benefits described in this Amendment the City and Developer hereby contract, covenant and agree as follows:

Section 1. Amendment of Section 6.01(e). Section 6.01(e) of the Agreement is hereby amended in its entirety to read as follows:

(e) after completion and final acceptance by the City of the Project and the water and wastewater infrastructure constructed by Developer for the Property, to accept the Project and such infrastructure as part of the City’s water and wastewater utility systems, and to maintain such infrastructure in accordance with the City’s policies, practices and procedures;

Section 2. Amendment of Article VII.

1.01. The title of Article VII of the Agreement is hereby amended to be “Development of the Subdivision”.

1.02. Article VII of the Agreement is hereby amended by adding sections 7.02, 7.03, and 7.04 to read as follows:

7.02. Developer may use HDPE pipe for storm sewers located outside of the limits of pavement, curb, and gutter. Any storm sewer pipe located under pavement, curb, or gutter shall be reinforced concrete pipe.

7.03. The storm sewer system and the private streets within the Property will be maintained by a home owner's association created by the Developer in accordance with the City's ordinances and this Agreement.

7.04 The Developer will create one or more home owners associations for the Property (collectively the "**Owner's Association**"), and shall establish bylaws, rules, regulations and restrictive covenants (collectively the "**Association Regulations**") to assure the Owner's Association performs and accomplishes the duties and purposes required to be performed and accomplished by the Owner's Association pursuant to this Section and the City's ordinances. The Owner's Association will have binding, continuing responsibility for the maintenance, repair and operation of the storm water system and the private streets located on the Property (the "**Maintenance Obligation**"). The HOA's Maintenance Obligation shall be noted on the plat and in the restrictive covenants filed of record for the subdivision. The owner of each lot within the Property shall be required to be a member of the Owner's Association, and unpaid dues or assessments shall be and constitute a lien on the lot for which they are assessed. The Association Regulations will establish periodic Owner's Association dues and assessments, to be charged and paid by the lot owners in within the Property, which are and will be sufficient to fund the Maintenance Obligation. The Association Regulations will require the periodic dues and assessments to be increased from time to time as necessary to provide the funds required for the Maintenance Obligation, and to provide funds required for the management and operation of the Owners' Association. The Association Regulations shall give the City authority to judicially enforce the covenants requiring the Maintenance Obligation and shall provide for the City to recover any attorney's fees and expenses incurred in judicial enforcement. The Association Regulations shall be subject to the City's approval. Compliance with this section shall be a condition of final plat approval.

Section 3. Amendment of Developer's Contact Information in Article XI. The Developer's contact information for the purposes of giving notices set forth in Article XI of the Agreement is hereby amended in its entirety to read as follows:

Any notice mailed to the Developer shall be mailed to:

NK Land Development, LLC
Attn: Nelson R. Shipman
PO Box 572
Burnet, Texas 78611

with copy to:

NK Land Development, LLC
Attn: Keith Stewart
13740 Research Blvd.
Building D, Suite 2
Austin, Texas 78750

Section 4. Entire Agreement. This Amendment, together with the Agreement, sets forth the entire understanding of the parties and supersedes all prior agreements and understandings, whether written or oral, with respect to the subject matter hereof.

Section 5. Binding Effect. This Amendment will extend to and be binding upon and inure to the benefit of the parties hereto their respective successors and permitted assigns.

Section 6. Effect of Amendment. The parties agree that, except as modified hereby, the Agreement remains valid, binding, and in full force and effect. If there is any conflict or inconsistency between this Amendment and the Agreement, this Amendment will control and modify the Agreement.

Section 7. Counterparts. This Amendment may be executed in any number of counterparts, including, without limitation, facsimile counterparts, with the same effect as if the parties had signed the same document, and all counterparts will constitute one and the same agreement.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

In Witness Whereof, this instrument is executed and in effect as of _____.

City of Leander

Attest:

By: _____

Name: Christopher Fielder

Title: Mayor

Debbie Haile, City Secretary

THE STATE OF TEXAS §

§

COUNTY OF WILLIAMSON §

This instrument was acknowledged before me on this the ____ day of _____, 2014, by Kent Cagle, City Manager, City of Leander, Texas, on behalf of the City.

NOTARY PUBLIC, State of Texas

NK Land Development, LLC, a Texas
limited liability company

By: _____
Name: _____
Title: _____

THE STATE OF TEXAS §
 §
COUNTY OF _____ §

This instrument was acknowledged before me on this the ____ day of _____, 2014, by _____ as _____ of NK Land Development, LLC, a Texas limited liability company, on behalf of said limited liability company.

NOTARY PUBLIC, State of Texas



Executive Summary

December 18, 2014

Council Agenda Subject: Consider Dedication and Acceptance of Subdivision Infrastructure Improvements for: **Pecan Creek Phase 2**

Background: The subdivision infrastructure improvements required for Pecan Creek Phase 2 have been installed, inspected, and found to be satisfactorily completed. All documentation required for acceptance of the subdivision has been received, including record drawings, statement of substantial completion prepared by a Professional Engineer licensed in the State of Texas, copies of all inspection reports and certified test results, electronic files of the improvements and final plat, affidavit of all bills paid, and a two-year term Maintenance Bond. The Maintenance Bond will commence its two year term upon City Council acceptance, as anticipated, on December 18, 2014 which will provide warranty and maintenance coverage for the infrastructure improvements through December 18, 2016. The Engineering Department will perform a formal inspection of the improvements approximately 30 days prior to the expiration of the Maintenance Bond to assure that any defects in materials, workmanship, or maintenance are corrected prior to expiration of the bond.

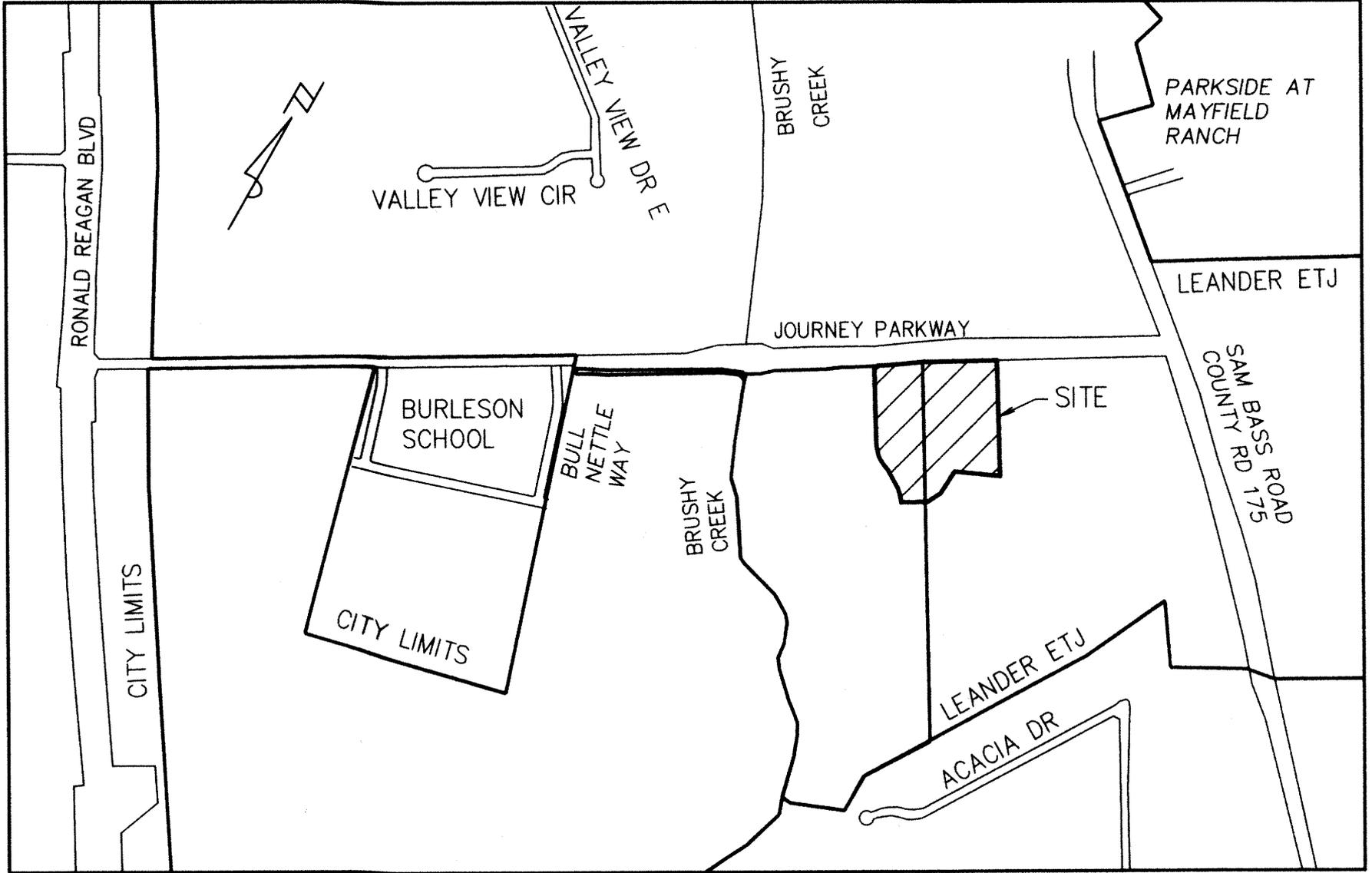
Origination: Wayne S. Watts, P.E., CFM, City Engineer

Financial Consideration: N/A

Recommendation: Staff recommends City Council's formal acceptance of the subdivision infrastructure improvements for Pecan Creek Phase 2.

Attachments: Location Map, Engineer's Concurrence Letter, Maintenance Bond, Affidavits of All Bills Paid, and Final Pay Estimates.

Prepared by: Wayne S. Watts, P.E., CFM, City Engineer



RONALD REAGAN BLVD



VALLEY VIEW CIR

VALLEY VIEW DR E

BRUSHY CREEK

PARKSIDE AT MAYFIELD RANCH

LEANDER ETJ

JOURNEY PARKWAY

BURLESON SCHOOL

BULL NETTLE WAY

BRUSHY CREEK

SITE

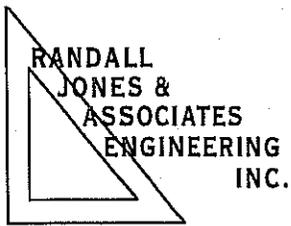
SAM BASS ROAD
COUNTY RD 175

CITY LIMITS

CITY LIMITS

LEANDER ETJ

ACACIA DR



1212 EAST BRAKER LANE • AUSTIN, TEXAS 78753

ENGINEER'S CERTIFICATE OF COMPLETION

Owner of Property:
Gehan Homes, Ltd.

Kind of Project, Contract Identification:
Pecan Creek Phase 2

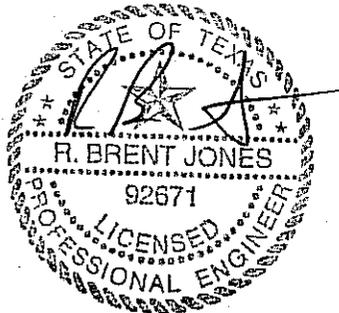
Name of Contractor: Cash Construction Company, Inc.

Name of Consulting Engineer: Randall Jones & Associates Engineering, Inc. / TBPE
Reg. No. F-9784

Address of Consulting Engineer: 1212 E. Braker Ln., Austin, TX 78753

I certify that this Project was complete on November 18, 2014; that the project was under observation, under the supervision of City of Leander; that to the best of my knowledge the Project was in accordance with and includes all items in plans and specifications approved by all authorities having jurisdiction; and "Record Drawings" have been furnished to the City.

This concurrence letter does not include the inspection or approval of any ADA related improvements. The opinion expressed in this letter is based on a general visual inspection of the project. As engineer, I was not engaged to perform inspection services during construction.



T: engconc

Signature
Texas Registration Number
92671

MAINTENANCE BOND
Subdivision Improvements

Bond No. MNT9178255

THE STATE OF TEXAS §

COUNTY OF WILLIAMSON §

KNOW ALL BY THESE PRESENTS, that Cash Construction Company, Inc. as Principal, whose address is 18607 Heatherwilde, Pflugerville, Texas 78660 and Fidelity and Deposit Company of Maryland, Colonial American Casualty and Surety Company a Corporation organized under the laws of the State of Maryland, and duly authorized to do business in the State of Texas, as Surety, are held and firmly bound unto the City of Leander, Texas as Obligee, in the penal sum of One Hundred Fourteen Thousand Five Hundred Forty Eight and 14/100's Dollars (\$114,548.14) to which payment will and truly to be made we do bind ourselves, our and each of our heirs, executors, administrators, successors and assigns jointly and severally, firmly by these presents.

WHEREAS, the said Principal has constructed Savanna Ranch Section 3 – Streets and Utilities Improvements (*insert description of subdivision improvements*) (the “improvements”) pursuant to the ordinances of the Obligee, which ordinances are hereby expressly made a part hereof as though the same were written and embodied herein;

WHEREAS, said Obligee requires that the Principal furnish a bond conditioned to guarantee for the period of two (2) years after acceptance by the Obligee, against all defects in workmanship and materials which may become apparent during said period;

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH that, if the Principal keeps and perform the requirement of the Obligee’s ordinances and this Maintenance Bond to maintain the improvements and keep the same in good repair and shall indemnify the Obligee for all loss that the Obligee may sustain by reason of any defective materials or workmanship which become apparent during the period of two (2) years from and after the date of acceptance by the Owner, then this obligation shall be void, otherwise to remain in full force and effect, and Owner shall have and cover from said Principal and Surety damages in the premises, as provided, and it is further agreed that this obligation shall be a continuing one against the Principal and Surety hereon, and that successive recoveries may be had thereon for successive breaches until the full amount shall have been exhausted; and it is further understood that the obligation herein to maintain said improvements shall continue throughout the maintenance period, and the same shall not be diminished in any manner from any cause during said time..

Principal agrees to repair or reconstruct the improvements in whole or in part at any time within the two year period to such extent as the Obligee deems necessary to properly correct all defects except for normal wear and tear. If the Principal fails to make the necessary corrections within ten days after being notified, the Obligee may do so or have done all said corrective work and shall have recovery hereon for all expenses thereby incurred. Principal will maintain and keep in good repair the improvements for a period of two years from the date of acceptance; it being understood that the purpose of this Maintenance Bond is to cover all defective conditions arising by reason of defective material, work, or labor performed by said Principal or its

subcontractors, and in the case the said Principal shall fail to do so within ten days after being notified, it is agreed that the Obligee may do said work and supply such materials, and charge the same against Principal and Surety on this obligation.

The Surety shall notify the Obligee at least fifteen (15) days prior to the end of the first full calendar year and prior to the lapse of this Maintenance Bond at the end of the second full calendar year.

Surety and Principal agree that whenever a defect or failure of the improvement occurs within the period of coverage under this Bond, the Surety and Principal shall provide a new maintenance bond or other surety instrument in a form acceptable to the Obligee and compliant with the Obligee's ordinances conditioned to guarantee for the period of one (1) year after the Obligee's acceptance of the corrected defect or failure, against all defects in workmanship and materials associated with the corrected defect or failure which may become apparent during said period, which shall be in addition to this Maintenance Bond.

The Surety agrees to pay the Obligee upon demand all loss and expense, including attorneys' fees, incurred by the Obligee by reason of or on account of any breach of this obligation by the Surety. Provided further, that in any legal action be filed upon this bond, venue shall lie in the county where the improvements are constructed.

This Bond is a continuing obligation and shall remain in full force and effect until cancelled as provided for herein.

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the improvements, or the work to be performed thereon, or the plans, specifications or drawings accompanying the same, shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the improvements, or the work to be performed thereon.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this 1st day of December, 2014.

Cash Construction Company, Inc.

Principal

Fidelity and Deposit Company of Maryland
Colonial American Casualty and Surety Company
Surety

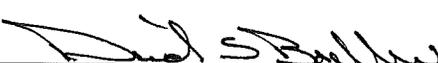
By: 

Title: Secretary / Treasurer

Address: _____

P.O. Box 1279

Pflugerville, Texas 78691

By: 

Title: David S. Ballew, Attorney-In-Fact

Address: _____

1400 American Lane, Tower I, 18th Floor

Schaumburg, IL 60196-1056

The name and address of the Resident Agent of Surety is:

Ballew Surety Agency, Inc., David S. Ballew

8140 N. Mopac Expy., Bldg. 1, Suite 100, Austin, Texas 78759

(Seal)

**ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by **JAMES M. CARROLL, Vice President**, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **David S. BALLEW, of Austin, Texas**, its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings, EXCEPT bonds on behalf of Independent Executors, Community Survivors and Community Guardians.** and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND**, this 12th day of December, A.D. 2012.

ATTEST:

**ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND**



Eric D. Barnes

By: _____
*Assistant Secretary
Eric D. Barnes*

James M. Carroll

*Vice President
James M. Carroll*

State of Maryland
City of Baltimore

On this 12th day of December, A.D. 2012, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **JAMES M. CARROLL, Vice President, and ERIC D. BARNES, Assistant Secretary**, of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, depose and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

Constance A. Dunn



Constance A. Dunn, Notary Public
My Commission Expires: July 14, 2015



Fidelity and Deposit Companies

Home Office: 3910 Keswick Road Baltimore, MD 21211

IMPORTANT NOTICE

To obtain information or make a complaint:

You may call the Fidelity and Deposit Company of Maryland, Colonial American Casualty and Surety Company, and/or Zurich American Insurance Company's toll-free telephone number for information or to make a complaint at:

1-800-654-5155

You may contact the Texas Department of Insurance to obtain information on companies, coverages, rights, or complaints at:

1-800-252-3439

You may write the Texas Department of Insurance:

**P.O. Box 149104
Austin, TX 78714-9104
FAX # (512) 475-1771**

PREMIUM OR CLAIM DISPUTES: Should you have a dispute concerning the premium or about a claim, you should first contact Fidelity and Deposit Company of Maryland or Colonial American Casualty and Surety Company. If the dispute is not resolved, you may contact the Texas Department of Insurance.

ATTACH THIS NOTICE TO YOUR POLICY: This notice is for information only and does not become a part or condition of the attached document.

APPLICATION FOR PAYMENT

CONTRACTOR:
 CASH CONSTRUCTION COMPANY, INC.
 P.O. BOX 1279
 PFLUGERVILLE, TEXAS 78691
 (512) 251-7872
 Fax (512) 990-5609

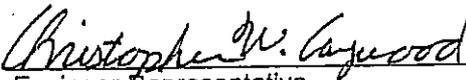
OWNER:
 GEHAN HOMES 1, LTD.
 3815 SOUTH CAPITAL OF TEXAS HIGHWAY, STE. 275
 AUSTIN, TEXAS 78704

PROJECT NAME: PECAN CREEK, PHASE 2
 CASH JOB NO: 722

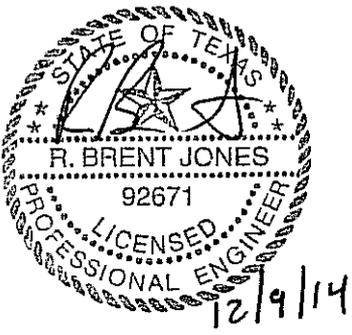
PROJECT DATE AS OF:	11/25/2014
BILLED TO PAY REQUEST NO.:	5
TOTAL WORK COMPLETED TO DATE	\$1,061,116.92
RETAINAGE:	\$53,055.85
AMOUNT DUE THIS ESTIMATE:	\$1,008,061.07
PREVIOUS BILLINGS:	\$950,026.60
CURRENT AMOUNT DUE	\$58,034.47

CONTRACT DATE:	07/07/2014
ORIGINAL CONTRACT AMOUNT:	\$1,045,929.50
CHANGE ORDER #1	\$3,780.00
CHANGE ORDER #2	\$7,357.42
CHANGE ORDER #3	\$4,050.00
CHANGE ORDER #4	
CHANGE ORDER #5	
REVISED CONTRACT AMOUNT:	\$1,061,116.92


 Contractor's Representative _____
 Date 11/26/14


 Engineer Representative _____
 Date 12/1/14

Owner's Representative _____
 Date



TO: GEHAN HOMES 1, LTD.
3815 SOUTH CAPITAL OF TEXAS HIGHWAY, STE. 275
AUSTIN, TEXAS 78704

APPLICATION FOR PAYMENT

JOB NAME: PECAN CREEK, PHASE 2
JOB# 722
ESTIMATE # 5
DATE 11/25/2014
ORIG. AMOUNT \$1,045,929.50
REV. AMOUNT \$1,081,116.92
RETAINAGE 5%

FROM: CASH CONSTRUCTION COMPANY, INC.
P.O. BOX 1279
PFLUGERVILLE TX. 78691

TOTAL WORK THIS ESTIMATE \$61,088.92
TOTAL COMPLETED TO DATE \$1,061,116.92
LESS RETAINAGE \$53,055.85
TOTAL DUE TO DATE \$1,008,061.07
PREVIOUS BILLINGS \$950,026.80
AMOUNT DUE THIS ESTIMATE \$58,034.47

ITEM NO.	DESCRIPTION	UNIT	CONTRACT QUANTITY	CONTRACT AMOUNT	UNIT PRICE	PREVIOUS QUANTITY	THIS ESTIMATE	AMOUNT THIS ESTIMATE	QUANTITY TO DATE	AMOUNT TO DATE	PERCENT COMPLETE
EROSION CONTROLS											
SCE		EA	1.00	\$1,500.00	\$1,500.00	1	0.00	\$0.00	1	\$1,500.00	100.00%
BILT FENCE		LF	2,950.00	\$5,900.00	\$2.00	2950	0.00	\$0.00	2,950	\$5,900.00	100.00%
ROCK BERM		LF	175.00	\$3,500.00	\$20.00		175.00	\$3,500.00	175	\$3,500.00	100.00%
INLET PROTECTION		EA	13.00	\$1,040.00	\$80.00	13	0.00	\$0.00	13	\$1,040.00	100.00%
TREE PROTECTION (CL)		LF	560.00	\$1,740.00	\$3.00	560	0.00	\$0.00	560	\$1,740.00	100.00%
REVEG ROW		BY	4,699.00	\$2,349.50	\$0.50		4,699.00	\$2,349.50	4,699	\$2,349.50	100.00%
TOTAL EROSION CONTROLS				\$16,029.50				\$5,849.50		\$16,029.50	
STREETS											
CLEAR/GRUB (ROW)		SY	12,019.00	\$12,019.00	\$1.00	12019	0.00	\$0.00	12,019	\$12,019.00	100.00%
EXCAVATION/EMBANKMENT (ROW)		SY	12,019.00	\$30,047.50	\$2.50	12019	0.00	\$0.00	12,019	\$30,047.50	100.00%
6" STD SUBGRADE PREP (1" BOC)		SY	8,159.00	\$16,318.00	\$2.00	8159	0.00	\$0.00	8,159	\$16,318.00	100.00%
15" BASE (1" BOC)		SY	8,159.00	\$114,226.00	\$14.00	8159	0.00	\$0.00	8,159	\$114,226.00	100.00%
1.5" HOT MIX		SY	6,746.00	\$64,087.00	\$9.50	6746	0.00	\$0.00	6,746	\$64,087.00	100.00%
6" CURB & GUTTER		LF	4,168.00	\$50,018.00	\$12.00	4168	0.00	\$0.00	4,168	\$50,018.00	100.00%
RIBBON CURB		LF	61.00	\$671.00	\$11.00	61	0.00	\$0.00	61	\$671.00	100.00%
ADA RAMPS		EA	16.00	\$16,000.00	\$1,000.00	16	0.00	\$0.00	16	\$16,000.00	100.00%
CONC VALLEY GUTTER		EA	2.00	\$9,000.00	\$4,500.00	2	0.00	\$0.00	2	\$9,000.00	100.00%
4' CONC SIDEWALKS		LF	554.00	\$11,080.00	\$20.00		554.00	\$11,080.00	554	\$11,080.00	100.00%
CONC DRIVEWAY (POND ACCESS)		EA	1.00	\$2,000.00	\$2,000.00	1	0.00	\$0.00	1	\$2,000.00	100.00%
BARRICADE		EA	2.00	\$1,600.00	\$800.00		2.00	\$1,600.00	2	\$1,600.00	100.00%
STOP/STREET SIGN & BAR		EA	6.00	\$3,600.00	\$600.00		6.00	\$3,600.00	6	\$3,600.00	100.00%
DIRECTIONAL & REGULATORY SIGNS		EA	9.00	\$2,160.00	\$240.00		9.00	\$2,160.00	9	\$2,160.00	100.00%
EMERGENCY ACCESS GATE		EA	1.00	\$1,600.00	\$1,600.00		1.00	\$1,600.00	1	\$1,600.00	100.00%
STAKING		LF	4,229.00	\$4,229.00	\$1.00	4229	0.00	\$0.00	4,229	\$4,229.00	100.00%
TOTAL STREETS				\$336,853.60				\$20,240.00		\$336,853.60	
WASTEWATER											
0" PVC SDR26 0'-8'		LF	1,309.00	\$45,815.00	\$35.00	1309	0.00	\$0.00	1,309	\$45,815.00	100.00%
0" PVC SDR26 8'-10'		LF	650.00	\$28,000.00	\$40.00	650	0.00	\$0.00	650	\$28,000.00	100.00%
0" PVC SDR26 10'-12'		LF	100.00	\$4,400.00	\$44.00	100	0.00	\$0.00	100	\$4,400.00	100.00%
4" DIA MANHOLE (STD)		EA	10.00	\$40,000.00	\$4,000.00	10	0.00	\$0.00	10	\$40,000.00	100.00%
4" IDA EXTRA DEPTH MANHOLE		VF	10.00	\$3,150.00	\$315.00	10	0.00	\$0.00	10	\$3,150.00	100.00%
TIE TO EXIST WW		EA	1.00	\$1,200.00	\$1,200.00	1	0.00	\$0.00	1	\$1,200.00	100.00%
DOUBLE SERVICE		EA	16.00	\$14,400.00	\$900.00	16	0.00	\$0.00	16	\$14,400.00	100.00%
SINGLE SERVICE		EA	9.00	\$7,200.00	\$800.00	9	0.00	\$0.00	9	\$7,200.00	100.00%
CEMENT STAB SAND BEDDING		LF	110.00	\$2,750.00	\$25.00	110	0.00	\$0.00	110	\$2,750.00	100.00%
TRENCH SAFETY		LF	2,059.00	\$2,059.00	\$1.00	2059	0.00	\$0.00	2,059	\$2,059.00	100.00%
STAKING		LF	2,059.00	\$2,059.00	\$1.00	2059	0.00	\$0.00	2,059	\$2,059.00	100.00%
TOTAL WASTEWATER				\$149,033.00				\$0.00		\$149,033.00	
DRAINAGE											
18" RCP CL III		LF	532.00	\$20,748.00	\$39.00	532	0.00	\$0.00	532	\$20,748.00	100.00%
24" RCP CL III		LF	494.00	\$24,700.00	\$50.00	494	0.00	\$0.00	494	\$24,700.00	100.00%
30" RCP CL III		LF	107.00	\$7,278.00	\$68.00	107	0.00	\$0.00	107	\$7,278.00	100.00%
36" RCP CL III (WATER TIGHT)		LF	291.00	\$31,428.00	\$108.00	291	0.00	\$0.00	291	\$31,428.00	100.00%
42" RCP CL III (WATER TIGHT)		LF	120.00	\$16,800.00	\$140.00	120	0.00	\$0.00	120	\$16,800.00	100.00%
10" COA STD CURB INLET		EA	13.00	\$45,500.00	\$3,500.00	13	0.00	\$0.00	13	\$45,500.00	100.00%
STORM SEWER MANHOLE		EA	2.00	\$7,400.00	\$3,700.00	2	0.00	\$0.00	2	\$7,400.00	100.00%
36"x42" SET (4:1)		EA	1.00	\$4,500.00	\$4,500.00	1	0.00	\$0.00	1	\$4,500.00	100.00%
24" HEADWALL (W/CONC RIPRAP)		EA	2.00	\$17,000.00	\$8,500.00	2	0.00	\$0.00	2	\$17,000.00	100.00%
6' FLAT BTM CHANNEL (GRASS)		LF	973.00	\$14,595.00	\$15.00		973.00	\$14,595.00	973	\$14,595.00	100.00%
TRENCH SAFETY		LF	1,544.00	\$1,544.00	\$1.00	1544	0.00	\$0.00	1,544	\$1,544.00	100.00%
STAKING		LF	1,544.00	\$1,544.00	\$1.00	1544	0.00	\$0.00	1,544	\$1,544.00	100.00%
TOTAL DRAINAGE				\$193,035.00				\$14,595.00		\$193,035.00	
WATER											
0" PVC-900		LF	2,255.00	\$72,180.00	\$32.00	2,255.00	0.00	\$0.00	2,255	\$72,160.00	100.00%
5 1/4" FIRE HYDRANT ASSEMBLY		EA	5.00	\$23,000.00	\$4,600.00	5.00	0.00	\$0.00	5	\$23,000.00	100.00%
0" GATE VALVE		EA	8.00	\$10,400.00	\$1,300.00	8.00	0.00	\$0.00	8	\$10,400.00	100.00%
SINGLE SERVICE		EA	8.00	\$5,600.00	\$700.00	8.00	0.00	\$0.00	8	\$5,600.00	100.00%
DOUBLE SERVICE		EA	17.00	\$17,000.00	\$1,000.00	17.00	0.00	\$0.00	17	\$17,000.00	100.00%
1" IRRIGATION SERVICE (EXCL RP2/METER)		EA	1.00	\$1,200.00	\$1,200.00	1.00	0.00	\$0.00	1	\$1,200.00	100.00%
12"x6" TS&V		EA	1.00	\$6,000.00	\$6,000.00	1.00	0.00	\$0.00	1	\$6,000.00	100.00%

ITEM NO.	DESCRIPTION	UNIT	CONTRACT		UNIT PRICE	QTY		AMOUNT THIS ESTIMATE	QUANTITY TO DATE	AMOUNT TO DATE	PERCENT COMPLETE
			QUANTITY	AMOUNT		PREVIOUS QUANTITY	THIS ESTIMATE				
0" WET CONNECTION		EA	1.00	\$3,000.00	\$3,000.00	1.00	1.00	\$0.00	1	\$3,000.00	100.00%
2" BLOW OFF		EA	2.00	\$2,400.00	\$1,200.00	2.00	2.00	\$0.00	2	\$2,400.00	100.00%
TRENCH SAFETY STAKING		LF	2,355.00	\$1,177.50	\$0.50	2,355.00	2,355.00	\$0.00	2,355	\$1,177.50	100.00%
	TOTAL WATER		2,355.00	\$2,355.00	\$1.00	2,355.00	2,355.00	\$0.00	2,355	\$2,355.00	100.00%
				\$144,292.50				\$0.00		\$144,292.50	
	POND IMPR										
CLEAR/GRUB		SY	4,312.00	\$4,312.00	\$1.00	4312	4312	\$0.00	4,312	\$4,312.00	100.00%
EXCAVATION/EMBANKMENT		SY	4,312.00	\$47,432.00	\$11.00	4312	4312	\$0.00	4,312	\$47,432.00	100.00%
SEDIMENT MARKER		EA	1.00	\$900.00	\$900.00	1	1	\$0.00	1	\$900.00	100.00%
3" PVC		LF	100.00	\$1,500.00	\$15.00	100	100	\$0.00	100	\$1,500.00	100.00%
6" PVC		LF	125.00	\$2,250.00	\$18.00	125	125	\$0.00	125	\$2,250.00	100.00%
6" GATE VALVE		EA	1.00	\$1,100.00	\$1,100.00	1	1	\$0.00	1	\$1,100.00	100.00%
45 MIL EPDM POND LINER		BY	2,559.00	\$83,975.00	\$25.00	2559	2559	\$0.00	2,559	\$83,975.00	100.00%
BERMUDA REVEG		BY	2,559.00	\$1,279.50	\$0.50	2,559.00	2,559.00	\$1,279.50	2,559	\$1,279.50	100.00%
POND STAKING		LS	1.00	\$3,000.00	\$3,000.00	1	1	\$0.00	1	\$3,000.00	100.00%
	TOTAL POND IMPR			\$125,749.80				\$1,279.50		\$125,749.80	
	MISC ITEMS										
LOT GRADING - EXCV/EMBK		SY	42,165.00	\$83,247.50	\$1.50	40000	2,165.00	\$3,247.50	42,165	\$63,247.50	100.00%
DEMO EXIST STRUCTURES		LS	1.00	\$12,000.00	\$12,000.00	1	1	\$0.00	1	\$12,000.00	100.00%
RESET LOT PINS		SFL	41.00	\$3,690.00	\$90.00		41.00	\$3,690.00	41	\$3,690.00	100.00%
	TOTAL EROSION			\$78,937.50				\$6,937.50		\$78,937.50	
	CHANGE ORDER #1										
STREET IMPROVEMENTS											
ADD - ADA RAMPS (PG 9)		EA	2.00	\$2,000.00	\$1,000.00	2	2	\$0.00	2	\$2,000.00	100.00%
ADD - CROSSWALK STRIPING (PG 19)		LS	1.00	\$780.00	\$780.00	0	1.00	\$780.00	1	\$780.00	100.00%
WATER IMPROVEMENTS											
DELETE - DOUBLE SERVICE (PG 14)		EA	-1.00	-\$1,000.00	\$1,000.00	-1	1	\$0.00	-1	-\$1,000.00	100.00%
ADD - SINGLE SERVICE (PG 14)		EA	1.00	\$700.00	\$700.00	1	1	\$0.00	1	\$700.00	100.00%
ADD - 8" GATE VALVE		EA	1.00	\$1,300.00	\$1,300.00	1	1	\$0.00	1	\$1,300.00	100.00%
	TOTAL CHANGE ORDER #1			\$3,780.00				\$780.00		\$3,780.00	
	CHANGE ORDER #2										
POND IMPROVEMENTS											
INSTALL FLOAT ASSEMBLY, FLOAT SWITCH & WIRING		LS	1.00	\$5,630.42	\$5,630.42	0	1.00	\$5,630.42	1	\$5,630.42	100.00%
INSTALL STAND PIPE AND CONCRETE PAD		LS	1.00	\$1,495.00	\$1,495.00	0	1.00	\$1,495.00	1	\$1,495.00	100.00%
INSTALL TERMINATION BAR FOR SYNTHETIC LINER		LF	8.00	\$232.00	\$29.00	0	8.00	\$232.00	8	\$232.00	100.00%
	TOTAL CHANGE ORDER #2			\$7,357.42				\$7,357.42		\$7,357.42	
	CHANGE ORDER #3										
CHANNEL IMPROVEMENTS											
ROCK RIPRAP (LOOSE)(12" MAX AGG SIZE)		BY	450.00	\$4,050.00	\$9.00	0	450.00	\$4,050.00	450	\$4,050.00	100.00%
	TOTAL CHANGE ORDER #3			\$4,050.00				\$4,050.00		\$4,050.00	
	TOTAL CONTRACT			\$1,081,116.92				\$61,086.92		\$1,061,116.92	

From: CASH CONSTRUCTION COMPANY, LTD.
P.O. BOX 1279
PFLUGERVILLE, TEXAS 78691

To: GEHAN HOMES
3815 SOUTH CAPITAL OF TEXAS HIGHWAY, SUITE 375
AUSTIN, TEXAS 78704

CONSTRUCTION CHANGE ORDER

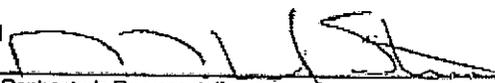
Project: PECAN CREEK PHASE 2

Project No.: 722
Original Contract Amount: \$1,045,929.50
This Change Order: \$7,357.42
Change Orders to Date: \$3,780.00
Original Contract Amount Plus Change Orders: \$1,057,066.92

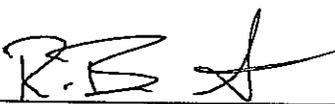
Change Order No.: 2
Change Order Date: 10/01/2014

CHANGE DATA

Item No.	Description (Including Reason)	Quantity	Unit	Unit Price	Amount
<i>Additional items and/or quantities:</i>					
<i>Make Up Water System Improvements</i>					
1	INSTALL FLOAT ASSEMBLY, FLOAT SWITCH & WIRING	1.00	LS	5,630.42	\$5,630.42
2	INSTALL STAND PIPE AND CONCRETE PAD	1.00	LS	1,495.00	\$1,495.00
3	INSTALL TERMINATION BAR FOR SYNTHETIC LINER	8.00	LF	29.00	\$232.00
Total Change Order No. 2					\$7,357.42

Approved by:  Date: 10/24/14
Contractor's Representative

Approved by: _____ Date: _____
Gehan Homes

Approved by:  Date: 11/12/14
Design Engineer - Randall Jones Engineering

AFFIANT:

Signature: 

Typed Name: Michael Nixon

Title: Secretary/Treasurer

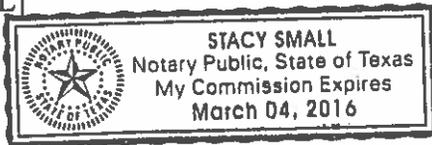
STATE OF TEXAS '

COUNTY OF TRAVIS '

BEFORE ME the undersigned authority on this day personally appeared Michael Nixon, known to me to be the person noted above, and acknowledged to me the following: that he/she executed the foregoing for the purpose and consideration therein expressed, in the capacity therein stated, and as the duly authorized act and deed of the party releasing and waiving the lien therein; and that every statement therein is within his/her knowledge and is true and correct.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this 9th day of December, 2014.

[S E A L]




Notary in and for the State of Texas

Name: Stacy Small

My commission expires: March 4, 2016



Executive Summary

December 18, 2014

Agenda Subject: First public hearing on the proposed annexation of a certain area of land being 166.47 acres, more or less, in Williamson County, Texas, and being generally located north of Crystal Falls Parkway, south of Old 2243 West and west of Bagdad Road, also known as the Falcon Oaks area.

Background: On March 6, 2014, Council adopted an ordinance amending the City's annexation plan to add the Falcon Oaks area to the plan. Property owners within the area were notified of the inclusion of their property in the annexation plan. Staff notified existing service providers in the area requesting an inventory of services currently provided. No responses were received by the deadline and the inventory of services was completed and posted on the City's web site.

The public hearings on the annexation are required to be completed within 90 days after the inventory of services is completed. Based upon the annexation calendar these public hearings must be completed by January 30, 2015. The second public hearing is scheduled for January 15, 2015.

By State law, the Williamson County Commissioners Court is required to appoint 5 representatives from the area being annexed to negotiate with the City on the provision of services to the area upon annexation. The Commissioners Court will be appointing the five representatives in December. After the public hearings, City staff will meet with the appointed representatives to negotiate the services to be provided to the area and complete the service plan by August 31, 2015.

Origination: City of Leander

Financial

Consideration: The cost of providing services will be determined as the service plan is finalized.

Recommendation: Staff recommends conducting the first public hearing.

Attachments:

1. Annexation Plan Ordinance
2. Annexation schedule
3. Map exhibit of annexation area

Prepared By: Tom Yantis, AICP
Development Services Director

12/10/2014

ORDINANCE NO. 14-010-00

AN ORDINANCE OF THE CITY OF LEANDER, TEXAS, AMENDING THE ANNEXATION PLAN TO ADD A PROPERTY TO THE PLAN; PROVIDING FOR THE AMENDMENT OF THE ANNEXATION PLAN; PROVIDING FOR ANNEXATIONS EXEMPT FROM THE ANNEXATION PLAN; AND PROVIDING FOR RELATED MATTERS.

WHEREAS, it is necessary and reasonable for the City of Leander, Texas, a Texas home rule municipality, (herein the “City”) to provide, modify and amend the annexation plan for land in the extra territorial jurisdiction of the City; and

WHEREAS, the City in anticipation of growth and expansion desires to plan for the orderly and efficient growth of the City.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LEANDER, TEXAS, THAT:

Section 1. Findings. The foregoing recitals are hereby found to be true and correct and are hereby adopted by the City Council and made a part hereof for all purposes as findings of fact.

Section 2. Annexation Plan. The Annexation Plan, adopted January 2, 2003, and subsequently amended January 20, 2005 to remove all properties listed in the Annexation Plan, is hereby amended to add a property to the Annexation Plan. The amended and revised Annexation Plan attached as Exhibit “A” is hereby adopted. From time to time the City Council may amend the Annexation Plan to add or remove properties. The Annexation Plan shall consist of all properties to be annexed under the City Charter and Texas Local Government Code § 43.052 that are not exempt from the Annexation Plan. Upon the addition of any property to the Annexation Plan, the city staff is hereby directed to enter the dates of completion of each task indicated on the Annexation Plan and to complete the dates in a timely fashion consistent with Chapter 43.

Section 3. Annexations Exempt from the Plan. All annexations by petition or under authority conferred to the City pursuant to the Texas Local Government Code that fall within one of the following categories shall not be placed on the Annexation Plan, land areas that:

- a. contain fewer than 100 separate tracts of land on which one or more residential dwellings are located on each tract;
- b. will be annexed by petition of more than 50 percent of the real property owners in the area proposed for annexation or by vote or petition of the qualified voter or real property owners;

- c. were the subject of:
 - (i.) an industrial district contract under § 42.044, Tex. Loc. Gov't Code; or
 - (ii.) a strategic partnership agreement under Section § 43.0751, Tex. Loc. Gov't Code.
- d. are located in a colonia;
- e. are annexed under specific annexation grants in the Tex. Loc. Gov't Code, such areas being:
 - (i.) owned by the City;
 - (ii.) a navigable stream adjacent to and within the ETJ of the City; or
 - (iii.) authorized to be annexed pursuant to §§ 43.029, 43.031 or 43.035 Tex. Loc. Gov't Code; or
 - (iv.) as otherwise authorized pursuant to Tex. Loc. Gov't Code, Chapter 43.
- f. are located completely within the boundaries of a closed military installation; or
- g. the municipality determines are necessary to be annexed to protect the City or an area proposed for annexation from:
 - (i.) imminent destruction of property or injury to persons; or
 - (ii.) a condition or use that constitutes a public or private nuisance as defined by background principles of nuisance and property law of this state.

Section 4. Severability. It is hereby declared to be the intention of the City Council that the sections, paragraphs, sentences, clauses and phrases of this Ordinance are severable and, if any phrase, sentence, paragraph or section of this Ordinance should be declared invalid by the final judgment or decree of any court of competent jurisdiction, such invalidity shall not affect any of the remaining phrases, clauses, sentences, paragraphs and sections of this Ordinance, since the same would have been enacted by the City Council without the incorporation of this Ordinance of any such invalid phrase, clause, sentence, paragraph or section. If any provision of this Ordinance shall be adjudged by a court of competent jurisdiction to be invalid, the invalidity shall not affect other provisions or applications of this Ordinance which can be given effect without the invalid provision, and to this end the provisions of this Ordinance are declared to be severable.

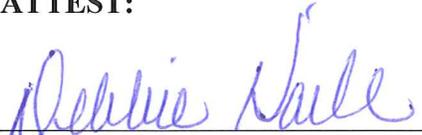
Section 5. Amendment of Ordinance No. 02-058-01. Ordinance number 02-058-01 is hereby amended in its entirety as provided in this Ordinance and all ordinances or parts thereof conflicting or inconsistent with the provisions of this Ordinance as adopted and amended herein, are hereby amended to the extent of such conflict. The effect of the amendment is to add to the Annexation Plan a property that is not exempt. In the event of a conflict or inconsistency between this Ordinance and any other code or ordinance of the City, the terms and provisions of this Ordinance shall govern.

Section 6. Effective Date. This Ordinance shall be in force and effect from and after its passage on the date shown below.

Section 7. Open Meetings. It is hereby officially found and determined that the meeting at which this Ordinance is passed was open to the public as required and that public notice of the time, place, and purpose of said meeting was given as required by the Open Meetings Act, *Chapt. 551, Tex. Gov't. Code.*

PASSED AND APPROVED on this the 6th day of March, 2014.

ATTEST:


Debbie Haile, City Secretary

THE CITY OF LEANDER, TEXAS


Christopher Fielder, Mayor



Annexation Plan for the City of Leander
[March 6, 2014]

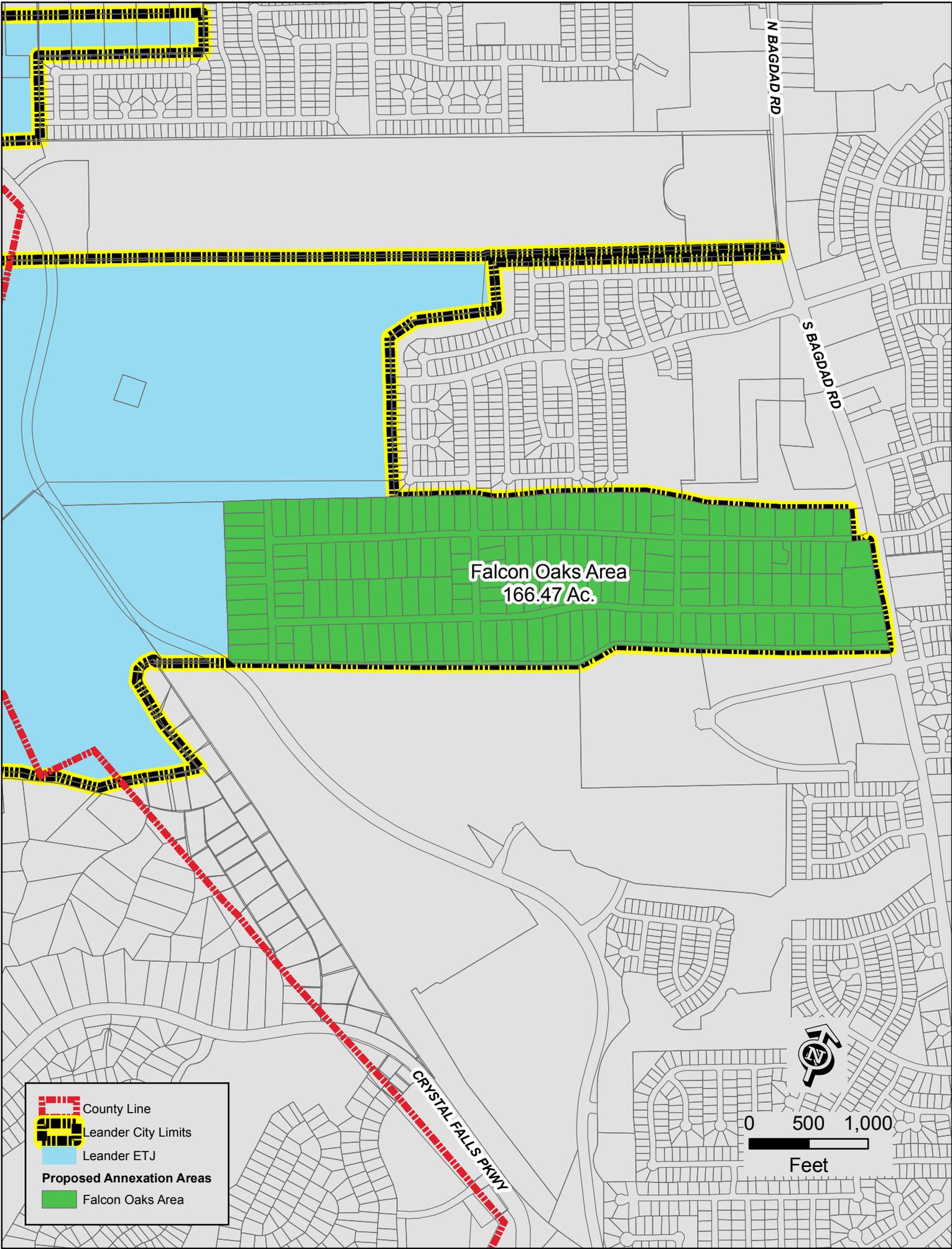
EXHIBIT "A"

Property Description	Date: Added to Plan	Date: Inventory Complete	Date: Service Plan Draft	Date: Removed from Plan
Falcon Oaks Subdivision	March 6, 2014			

**SCHEDULE FOR ANNEXATION APPLICABLE ONLY TO PROPERTY
INCLUDED IN AN ANNEXATION PLAN - FALCON OAKS SUBDIVISION**

STEP	DATE	ACTION/EVENT
1	March 6, 2014	COUNCIL BY WRITTEN ORDINANCE amended Annexation Plan to include Falcon Oaks Subdivision (Loc. Gov't Code §§ 43.051 & 43.052)
2	After adoption of Annexation Plan Amendment	POST AND MAINTAIN ANNEXATION PLAN ON CITY'S WEBSITE (Loc. Gov't Code §43.052(j))
3	By June 4, 2014	NOTICE TO PROPERTY OWNERS AND SERVICE PROVIDERS of inclusion of property in Annexation Plan (If applicable, Notice to Railroad) (Loc. Gov't Code §43.052(f)) INCLUDE REQUEST TO SERVICE PROVIDERS for information necessary to compile inventory of services and facilities in Step 4 <i>[Note: Service Providers have 90 days to provide the requested information, unless the City and the service provider agree to an extension.]</i> (Loc. Gov't Code § 43.053(c) – (f))
4	By the 60 th day after receiving information from service providers (<u>November 1, 2014 latest possible deadline if notice sent June 4th, unless agreed to extend the period for providing the information</u>) [Generally 8 months after adoption of the Annexation Plan]	COMPLETE INVENTORY OF SERVICES AND FACILITIES provided by services provides to the area in the Annexation Plan. MAKE INVENTORY AVAILABLE for public inspection. (Loc. Gov't Code, § 43.053(g)) City may monitor the services provided in the area proposed for annexation and verify the inventory information provided by the service provider. (Loc. Gov't Code, § 43.053(h)) <i>[Note: If service providers do not provide the requested information within 90 days or by the agreed extension deadline, the City is not obligated to include the service in the inventory]</i> (Loc. Gov't Code, § 43.053(c))
5	Before the public hearings in Step 7 [Generally 10 months after amendment of the Annexation Plan]	COMPLETE A DRAFT SERVICE PLAN for extension of municipal services to the area in the Annexation Plan (Loc. Gov't Code § 43.056(j))
6	Not less than 10 days nor more than 20 days before each public hearing	NEWSPAPER NOTICE OF PUBLIC HEARINGS NOTICE BY CERTIFIED MAIL TO SERVICE PROVIDERS and, if applicable, to the Railroad SCHOOL DISTRICT NOTICE (notify each school district of possible impact) POST NOTICE ON WEB SITE and MAINTAIN UNTIL COMPLETE (Loc. Gov't Code § 43.0561(c))
7	By the 90 th day after the Inventory complete and made available to the public (<u>January 30, 2015 latest possible deadline, unless extension to provide the service information</u>) [Generally 11 months after adoption of the Annexation Plan]	HOLD TWO PUBLIC HEARINGS <i>[Note: The Council has some flexibility in scheduling these hearings. For example, Council could hold the public hearings at two consecutive, regularly scheduled meetings, as long as both hearings are held before the 90th day after completion of the Inventory in Step 4.]</i> (Loc. Gov't Code, § 43.0561(a)) At least one hearing must be held in the area proposed for annexation if a suitable site is available and more than 20 adult, permanent residents of the area to be annexed file a written protest within 10 days after the date of publication of the hearing notice. (Loc Gov't Code § 43.0561(b))

8	After the public hearings	<p>NEGOTIATE WITH PROPERTY OWNERS FOR THE PROVISION OF SERVICES TO THE ANNEXED AREA (Loc. Gov't Code, §§ 43.0562 -- 43.0564 (a)). County commissioner's court shall select five representatives to negotiate with the City for provision of services. (Loc. Gov't Code §43.0562(b)). The City may negotiate and enter a written agreement with the representatives for the provision and funding of services to the area. (Loc. Gov't Code §43.0563(a)). If the parties cannot reach an agreement, either party may request arbitration in writing before the 60th day after the service plan is completed in Step 9. (Loc. Gov't Code §43.0564(a))</p>
9	<p>By the 10th month after completion of the Inventory in Step 4. <i>(August 31, 2015 latest possible deadline)</i></p> <p>[Generally 18 months after adoption of the Annexation Plan]</p>	<p>COMPLETE MUNICIPAL SERVICES PLAN for extension of municipal services to the area in the Annexation Plan (Loc. Gov't Code § 45.056(a))</p>
10	<p><u>Institution Date</u> March 9, 2017</p> <p>[Property may be annexed not earlier than March 6, 2017 and not later than April 5, 2017]</p>	<p>FIRST READING OF ORDINANCE <i>[Note: Property included in the Annexation Plan cannot be annexed sooner than the third anniversary of the date the property is included in the Annexation Plan, and must be annexed no later than the 31st day after the third anniversary of the date the property was included in the Annexation Plan.]</i> (Loc. Gov't Code, §§ 43.052(c) & (g))</p>
11	<p>March 16, 2017</p> <p>[Property may be annexed not earlier than March 6, 2017 and not later than April 5, 2017]</p>	<p>SECOND-FINAL READING OF ORDINANCE [See note in Step 10]</p>
12	<p>By April 14, 2017</p>	<p>CITY SENDS COPY OF MAP showing boundary changes to County Voter Registrar in a format that is compatible with mapping format used by registrar Election Code §42.0615</p> <p>CITY PROVIDES CERTIFIED COPY OF ORDINANCE AND MAPS TO:</p> <ol style="list-style-type: none"> 1. County Clerk 2. County Appraisal District 3. County Tax Assessor Collector 4. 911 Addressing 5. Sheriff's Office 6. City Department Heads 7. State Comptroller 8. Franchise Holders





Executive Summary

December 18, 2014

Agenda Subject: Zoning Case 14-Z-031: Hold a public hearing and consider action on the rezoning of a portion of a tract of land, for 5.88 acres more or less, generally located to the northwest of the intersection of South Bagdad Road and Marsala Circle, WCAD Parcel R430194. Currently, the property is zoned LO-2-B (Local Office) and MF-2-B (Multi-Family) and the applicant is proposing to zone the property LC-2-B (Local Commercial) and MF-2-B (Multi-Family), Leander, Williamson County, Texas.

Background: This request is the second step in the rezoning process.

Origination: Applicant: Ken Liem on behalf of Emmet J. and Sally Hawkes.

Financial Consideration: None

Recommendation: See Planning Analysis. The Planning & Zoning Commission recommended approval of the staff recommendation of approval of the MF-2-B (Multi-Family) and denial of the LC-2-B (Local Commercial) with a 5 to 2 vote (Commissioners Stephenson and Anderson opposed) at the December 11, 2014 meeting.

Attachments:

1. Planning Analysis
2. Current Zoning Map
3. Proposed Zoning Map
4. Aerial Map
5. Letter of Intent
6. Ordinance
7. Minutes–Planning & Zoning Commission December 11, 2014

Prepared By: Tom Yantis, AICP
Assistant City Manager

12/12/2014



PLANNING ANALYSIS

ZONING CASE 14-Z-031 THE VILLAGE AT CARNEROS REZONING

GENERAL INFORMATION

- Owner:** Emmet J. and Sally Hawkes
- Current Zoning:** LO-2-B (Local Office)
MF-2-B (Multi-Family)
- Proposed Zoning:** LC-2-B (Local Commercial)
MF-2-B (Multi-Family)
- Size and Location:** The property is located to the northwest of the intersection of South Bagdad Road and Marsala Circle and includes approximately 5.88 acres.
- Staff Contact:** Robin M. Griffin, AICP
Senior Planner

ABUTTING ZONING AND LAND USE:

The table below lists the abutting zoning and land uses.

	ZONING	LAND USE
NORTH	GC-3-C	Undeveloped land zoned for commercial uses
EAST	LC-2-B	Undeveloped land zoned for commercial uses
SOUTH	OCL SFU-2-B	Property located outside of the City Limits Established Neighborhood (Vista Ridge)
WEST	SFU-2-B	Neighborhood under construction (Vista Ridge Estates aka Carneros Ranch)

COMPOSITE ZONING ORDINANCE & SMARTCODE INTENT STATEMENTS

MF – MULTI-FAMILY:

Features: Apartments (25 un./ac. if Type A; 18 un./ac. if Type B)

Intent: Development of multi-family dwelling structures. Such components are generally intended to serve as a buffer between single-family neighborhoods and more intensive uses such as commercial uses or arterial roadways. Such components are also intended to create more variety in housing opportunities in the fabric of the community but are intended to be utilized in small areas to avoid large tracts devoted to strictly multi-family residential development. The goal is to avoid more than twenty-five (25) acres of contiguous land having a Multi-Family component. Access should be provided by a collector or higher classification street.

LC – LOCAL COMMERCIAL:

Features: Any use in LO plus retail sales and services, restaurants, banks, nursery or greenhouse, grocery sales, pharmacies, fitness centers, dance and music academies, artist studio, colleges and universities, bed and breakfast. Hours of operation: 5:00 a.m. to 10:00 Sun.-Thurs., 5:00 a.m. to 11:00 p.m. Fri. and Sat.

Intent: Development of small scale, limited impact commercial, retail, personal services and office uses located in close proximity to their primary customers, which cater to the everyday needs of the nearby residents, and which may be located near residential neighborhoods. Access should be provided by a collector or higher classification street.

TYPE 2:

Features: Accessory buildings greater of 10% of primary building or 120 sq. ft.; accessory dwellings for SFR, SFE and SFS; drive-thru service lanes; uses not to exceed 40,000 sq. ft.; multi-family provides at least 35% of units with an enclosed garage parking space.

Intent:

- (1) The Type 2 site component may be utilized with non-residential developments that are adjacent to a residential district or other more restrictive district to help reduce potential negative impacts to the more restrictive district and to provide for an orderly transition of development intensity.
- (2) The Type 2 site component is intended to be utilized for residential development not meeting the intent of a Type 1 site component and not requiring the additional accessory structure or accessory dwelling privileges of the Type 3 site component.
- (3) This component is intended to be utilized with the majority of LO and LC use components except those that meet the intent of the Type 1 or Type 3 site component or with any use requiring drive-through service lanes.
- (4) This component is generally not intended to be utilized with LI and HI use components except where such component is adjacent to, and not adequately buffered from, residential districts or other more restricted districts, and except as requested by the land owner.

TYPE B:

Features: 85% masonry 1st floor, 50% overall; 4 or more architectural features.

Intent:

- (1) The Type B architectural component is intended to be utilized for the majority of residential development except that which is intended as a Type A architectural component.

- (2) Combined with appropriate use and site components, this component is intended to help provide for harmonious land use transitions.
- (3) This component may be utilized to raise the building standards and help ensure compatibility for non-residential uses adjacent to property that is more restricted.
- (4) This component is intended for the majority of the LO and LC use components except those meeting the intent of the Type A or C architectural components.

COMPREHENSIVE PLAN STATEMENTS:

The following Comprehensive Plan statements may be relevant to this case:

- Plan for continued growth and development that improves the community's overall quality of life and economic viability.
- Provide for a variety of sustainable housing options for all age groups and economic levels. Determine ways to successfully integrate this variety within neighborhoods so as to accommodate the different needs of families throughout their life cycle. Create more desirable and livable neighborhoods while respecting the goal of maintaining stable real estate values and housing marketability.
- Residential neighborhoods are the predominate land use within the City and it's ETJ. Neighborhoods are primarily composed of single-family detached housing and include other compatible uses including parks, schools, and places of worship. Neighborhoods may be low to moderate density depending upon the topography and the feasibility of providing organized sewer service. Areas with steep topography, flood plain or other natural features that are intended to be preserved and served by on-site sewage systems will be the lowest density while areas that are relatively flat and where organized sewer systems are feasible will be of medium density. Residential neighborhoods provide connections to each other and to neighborhood, community and town center nodes. A variety of lot and house sizes are encouraged within residential neighborhoods.

ANALYSIS:

The applicant is requesting to rezone the property to MF-2-B (Multi-Family) and LC-2-B (Local Commercial) in order to allow for the development of a multi-family community and retail center at this location. There are established single-family neighborhoods located to the west and south with commercial zoning located along Bagdad Road and to the north. The proposal is to add more MF-2-B zoning to the north of the property and add LC-2-B zoning to the site. Currently there are 11.7 acres of MF-2-B zoning and 5.94 acres of LO-2-B zoning. The new total would be 13.83 acres of MF-2-B and 3.58 acres of LC-2- B zoning.

The proposed MF use component would permit the construction of multi-family units. The intent of this use component is to serve as a buffer between single-family neighborhoods and more intensive uses such as commercial uses or arterial roadways. In this situation, the proposed multi-family would serve as a buffer between the existing residential and S Bagdad Road. This use component is also intended to create more variety in housing opportunities in the fabric of the community but are intended to be utilized in small areas to avoid large tracts devoted to strictly multi-family residential development. The goal is to avoid more than twenty-five (25) acres of contiguous land having a Multi-Family component. Access should be provided by a

collector or higher classification street. Access to this project would be from S Bagdad Road which is classified as a major arterial on the Transportation Plan.

The Type 2 site component would require that 35% of the multi-family units have an enclosed garage parking space. This site component would also limit the outdoor uses associated with the nonresidential development. This site component does allow for drive through service lanes and accessory buildings. This site component does not allow outdoor storage, display, overhead service doors, carwashes or fueling stations.

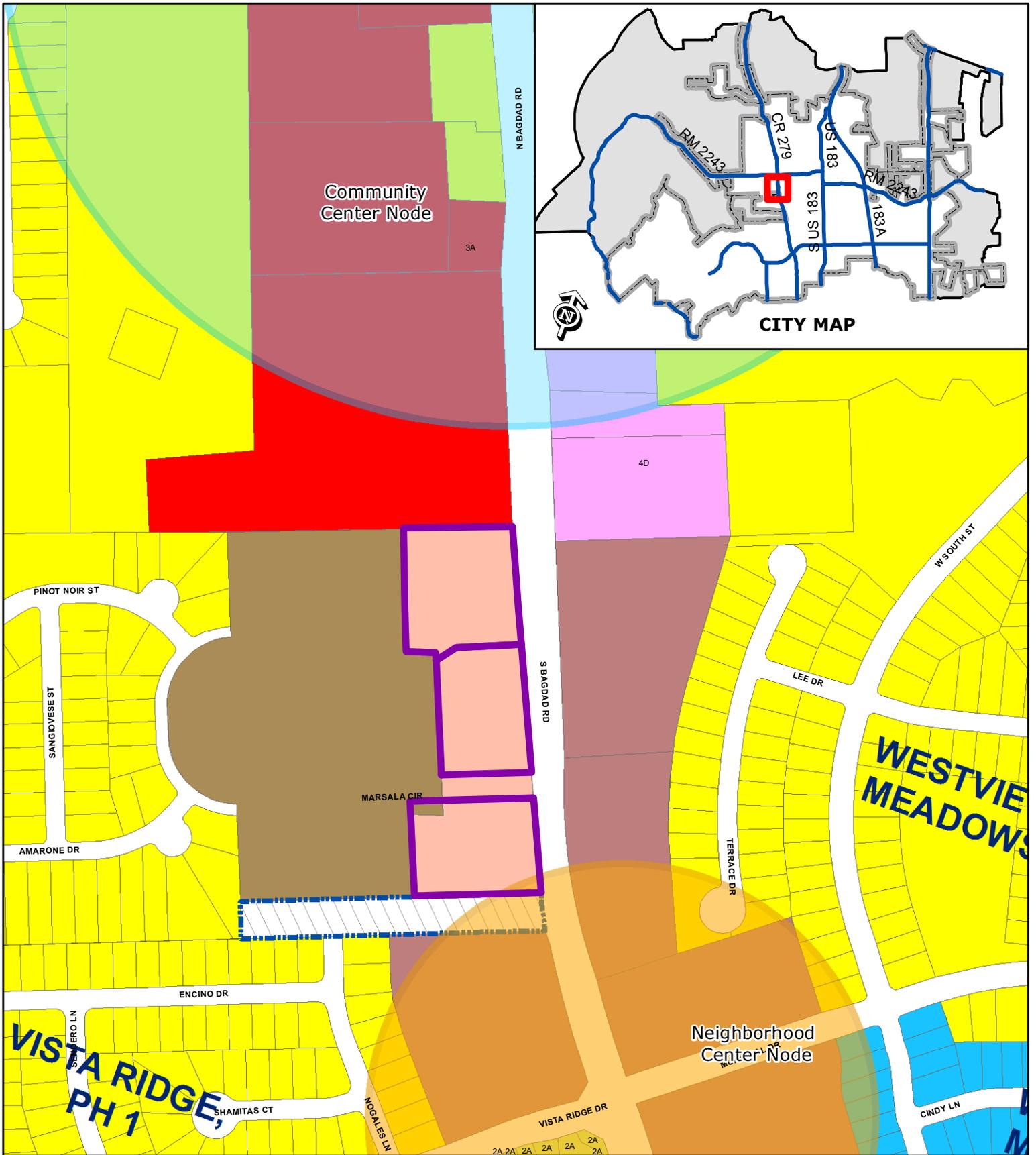
The Type B architectural component would permit a maximum density of 18 units per acre for the multi-family portion of the property and requires that the buildings consist of eight-five (85%) percent masonry for the first story walls and fifty (50%) percent masonry on second story walls.

This property is located within the area designated for residential neighborhoods on the Future Land Use Map. Residential neighborhoods are the predominate land use within the City and it's ETJ. Neighborhoods are primarily composed of single-family detached housing and include other compatible uses including parks, schools, and places of worship. Neighborhoods may be low to moderate density depending upon the topography and the feasibility of providing organized sewer service. Residential neighborhoods provide connections to each other and to neighborhood, community and town center nodes. A variety of lot and house sizes are encouraged within residential neighborhoods.

The property is adjacent to a Neighborhood Center that is centered at the intersection of Municipal Drive and South Bagdad Road. These nodes are approximately one quarter mile in diameter and incorporate approximately 30 acres. These areas are intended for neighborhood scale commercial, retail and office uses that serve the immediately adjacent neighborhoods. These areas are also intended for higher density single-family, two-family and other compatible housing types including townhouses and condominiums. Development within these nodes should be integrated through internal streets and should provide pedestrian and bicycle connections to adjacent residential neighborhoods.

STAFF RECOMMENDATION:

Staff recommends approval of the requested MF-2-B (Multi-Family) district and denial of the LC-2-B (Local Commercial) district. This property is not located within a node identified on the Future Land Use Map. The Comprehensive Plan does not support this zoning district within the residential neighborhood area. The LC use component is more appropriate closer to the intersection of Vista Ridge Drive and South Bagdad Road. In addition, the proposed MF-2-B zoning district will serve as a buffer between South Bagdad Road and the neighborhood that is currently under construction to the west.



ZONING CASE 14-Z-031

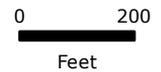
Attachment #2

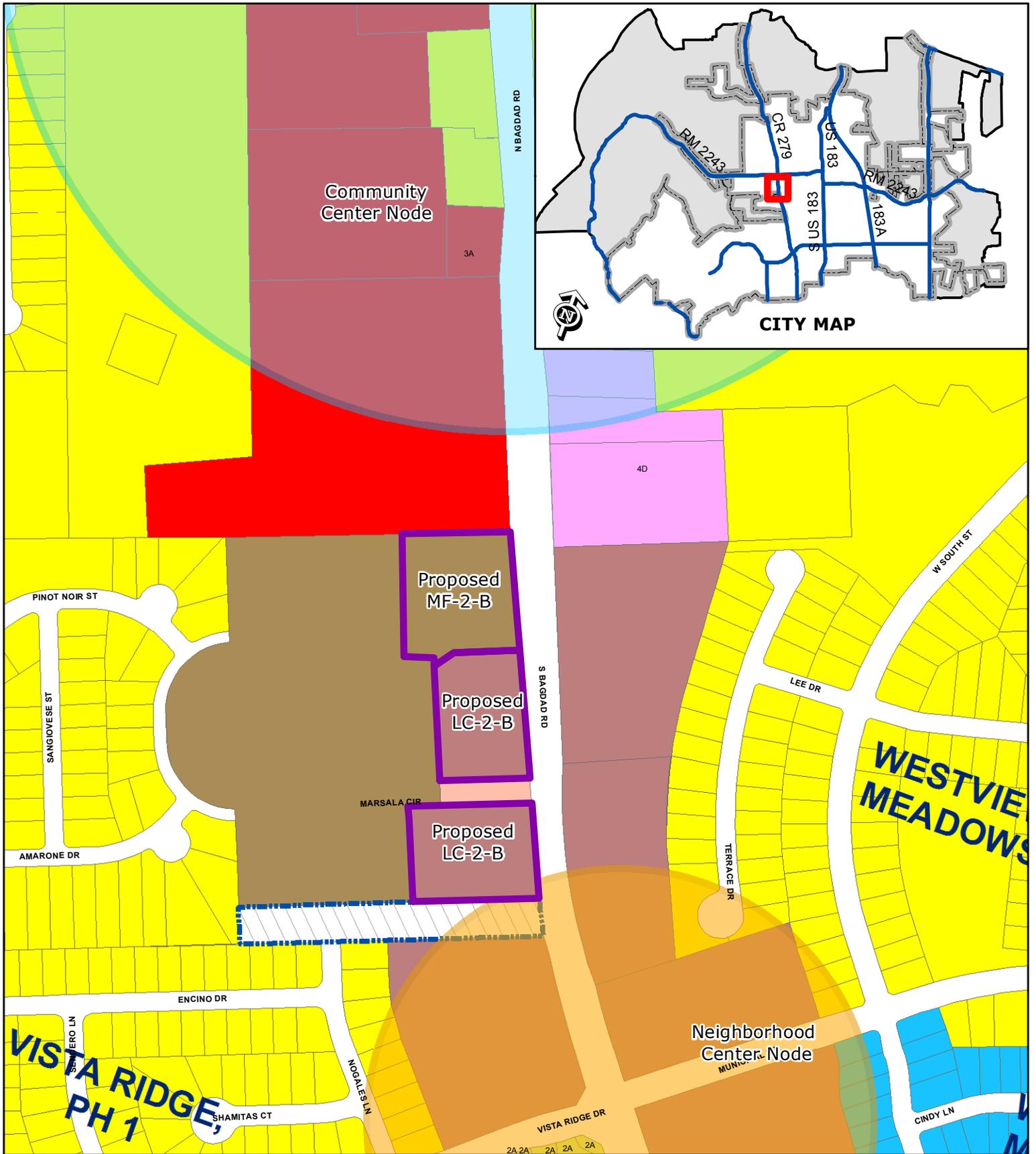
Current Zoning Map
Village at Carneros



-  Subject Property
-  City Limits

- | | | |
|---|--|---|
|  SFR |  SFT |  GC |
|  SFE |  SFU/MH |  HC |
|  SFS |  TF |  HI |
|  SFU |  MF |  PUD |
|  SFC |  LO | |
|  SFL |  LC | |





ZONING CASE 14-Z-031

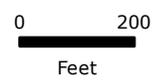
Attachment #3

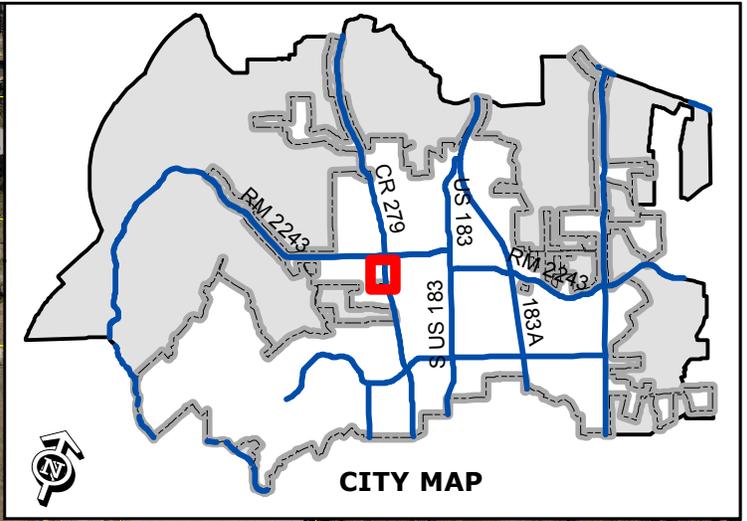
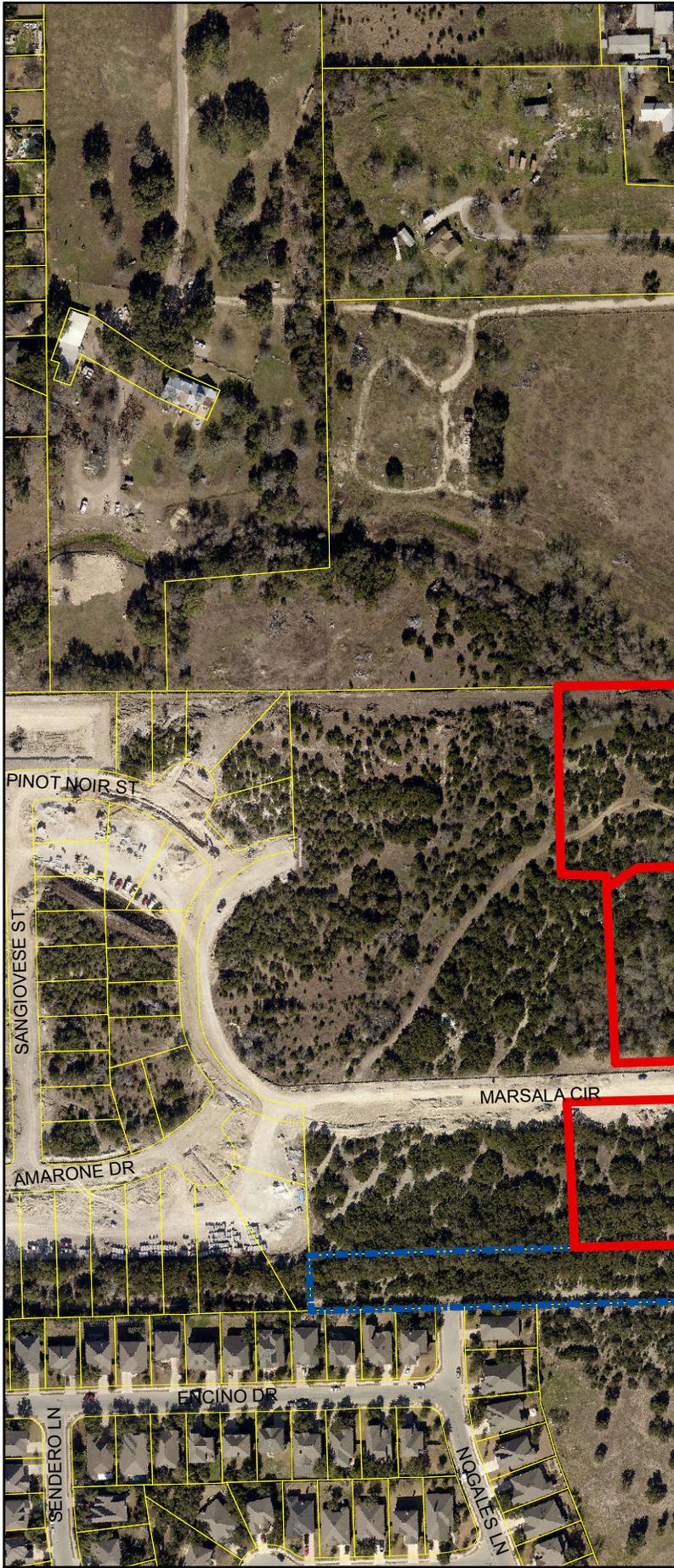
Proposed Zoning Map
Village at Carneros



-  Subject Property
-  City Limits

- | | | |
|---|--|---|
|  SFR |  SFT |  GC |
|  SFE |  SFU/MH |  HC |
|  SFS |  TF |  HI |
|  SFU |  MF |  PUD |
|  SFC |  LO | |
|  SFL |  LC | |

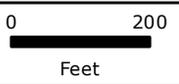




CITY MAP

ZONING CASE 14-Z-031 Attachment #4

Aerial Exhibit - Approximate Boundaries
Village of Carneros



-  Subject Property
-  City Limits

Letter of Intent for Zoning Change

We would like to request a zoning change property along Bagdad Road from “LO-2-B” (A1) to “MF-2-B” in order to get a better use of the Multi Family site. The water detention of this parcel will be located at the northern corner of (A1).

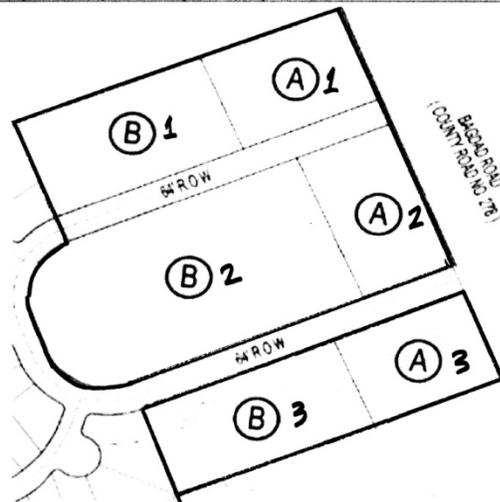
Secondly, we would like to rezone “LO-2-B” (A2) to “LC-2B” To support the immediate area and surrounding.

Thirdly, to rezone the “LO-2-B” (A3) TO “LC-2-B”

This lower parcel requires a separate water detention from the multi family due to Marsala Circle has been constructed.

This Multi family project will be acting as the transition or buffering site between the surrounding GC, LC and Carneros Ranch single family to the West.

PHASE	PARCEL	ZONING	ACRES	USE / LOT COUNT
ONE	A	LO	5.13	LOCAL OFFICE
	B	MF	10.45	MULTI-FAMILY



ORDINANCE NO #

ORDINANCE OF THE CITY OF LEANDER, TEXAS, AMENDING THE ZONING ORDINANCE BY REZONING A PORTION OF A TRACT OF LAND FROM MF-2-B (MULTI-FAMILY) AND LO-2-B (LOCAL OFFICE) TO MF-2-B (MULTI-FAMILY) AND LC-2-B (LOCAL COMMERCIAL); MAKING FINDINGS OF FACT; AND PROVIDING FOR RELATED MATTERS.

Whereas, the owner of the property described herein after (the "Property") has requested that the Property be rezoned;

Whereas, after giving at least ten days written notice to the owners of land within two hundred feet of the Property, the Planning & Zoning Commission held a public hearing on the proposed rezoning and forwarded its recommendation on the rezoning to the City Council;

Whereas, after publishing notice of the public hearing at least fifteen days prior to the date of such hearing, the City Council at a public hearing has reviewed the request and the circumstances of the Property and finds that a substantial change in circumstances of the Property, sufficient to warrant a change in the zoning of the Property, has transpired;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LEANDER, TEXAS, THAT:

Section 1. Findings. The foregoing recitals are hereby found to be true and correct and are hereby adopted by the City Council and made a part hereof for all purposes as findings of fact.

Section 2. Amendment of Zoning Ordinance. Ordinance No. 05-018, as amended, the City of Leander Composite Zoning Ordinance (the "Zoning Ordinance" or "Code"), is hereby modified and amended by rezoning the Property as set forth in Section 3.

Section 3. Applicability. This ordinance applies to the following portion of a parcel of land, which is herein referred to as the "Property." That certain portion of a parcel of land being 5.88 acres, more or less, generally located at the northwest corner of the intersection of South Bagdad Road and Marsala Circle in Leander, Williamson County, Texas, being more particularly described in Exhibit "A", legally described as 5.88 acres out of the Moses S. Hornsby Survey Abstract 292; identified by tax identification number R430194; more particularly described in document number 1993005005 recorded in the Williamson County Official Public Records.

Section 4. Property Rezoned. The Zoning Ordinance is hereby amended by changing the zoning district for the Property from MF-2-B (Multi-Family) and LO-2-B (Local Office) to MF-2-B (Multi-Family) and LC-2-B (Local Commercial) as shown in Exhibit "A".

Section 5. Recording Zoning Change. The City Council directs the City Secretary to record this zoning classification on the City's official zoning map with the official notation as prescribed by the City's zoning ordinance.

Section 6. Severability. Should any section or part of this ordinance be held unconstitutional, illegal, or invalid, or the application to any person or circumstance for any reasons thereof ineffective or inapplicable, such unconstitutionality, illegality, invalidity, or ineffectiveness of such section or part shall in no way affect, impair or invalidate the remaining portion or portions thereof; but as to such remaining portion or portions, the same shall be and remain in full force and effect and to this end the provisions of this ordinance are declared to be severable.

Section 7. Open Meetings. That it is hereby officially found and determined that the meeting at which this ordinance is passed was open to the public as required and that public notice of the time, place, and purpose of said meeting was given as required by the Open Meetings Act, Chapt. 551, Loc. Gov't. Code.

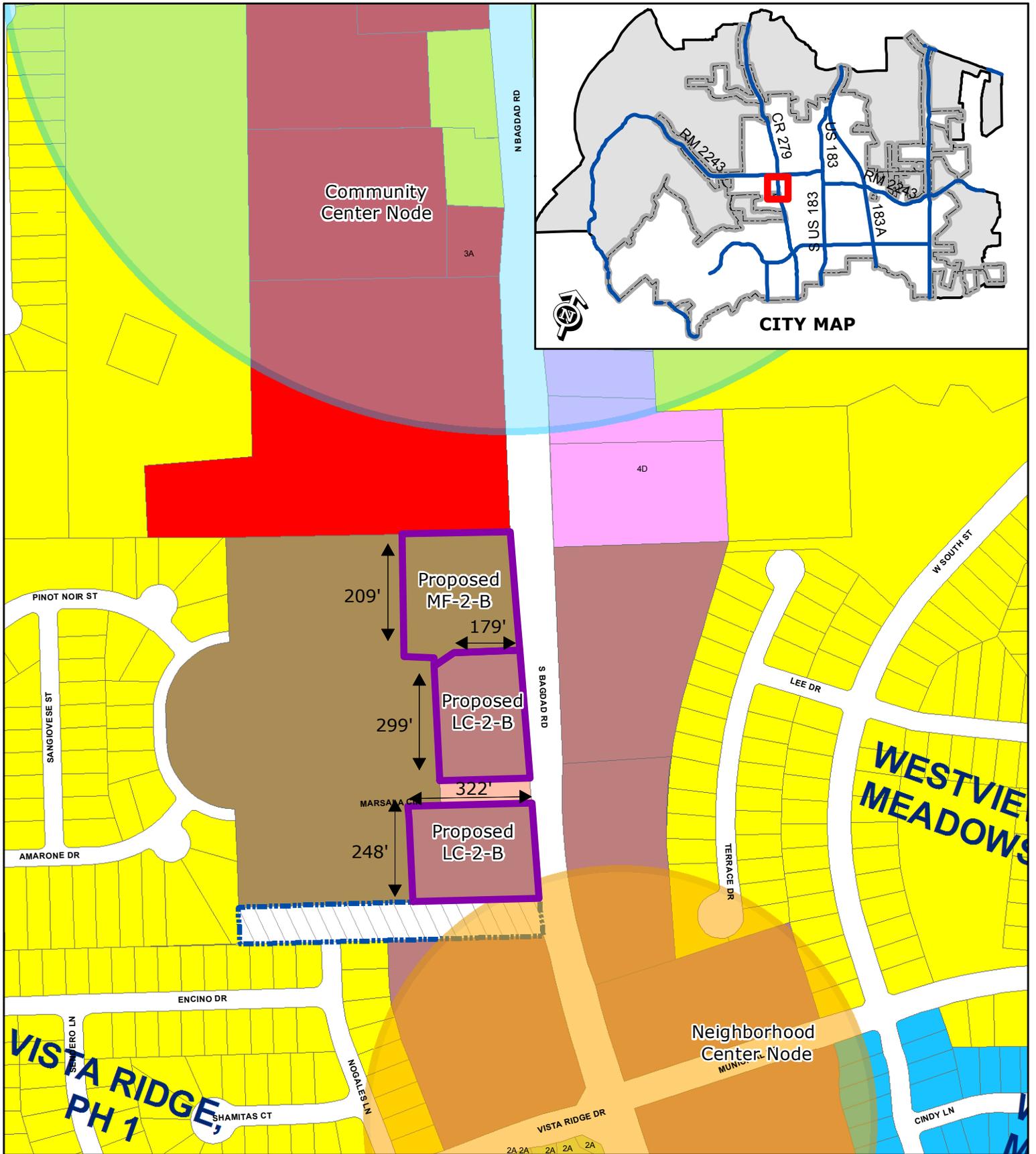
PASSED AND APPROVED on First Reading this the 18th day of December, 2014.
FINALLY PASSED AND APPROVED on this the 15th day of January, 2015.

THE CITY OF LEANDER, TEXAS

ATTEST:

Christopher Fielder, Mayor

Debbie Haile, City Secretary



ZONING CASE 14-Z-031

Exhibit A

Proposed Zoning Map
Village at Carneros



-  Subject Property
-  City Limits

- | | | |
|---|--|---|
|  SFR |  SFT |  GC |
|  SFE |  SFU/MH |  HC |
|  SFS |  TF |  HI |
|  SFU |  MF |  PUD |
|  SFC |  LO | |
|  SFL |  LC | |
- 0 200
Feet

6. Citizen Communications - Three (3) minutes of time is allowed, per speaker
No citizens wished to speak

Consent Agenda

Commissioner Wixson Recused himself on case # 14-FP-003

7. Subdivision Case 14-FP-003: Consider action on the Borho Phase 3 Final Plat for 5.758 acres more or less; WCAD Parcel # R031532; generally located on the northeast corner of the intersection of Abilene Ln and Trinity Woods St., Williamson County, Texas. Applicant/Agent: James A. Huffcut on behalf of Meritage Homes of Texas, LLC.
8. Subdivision Case 14-PP-013: Consider action on the Parkway Crossing Preliminary Plat for 27.623 acres more or less; WCAD Parcel #R497326; generally located 800 feet from the northeast corner of the intersection of Hwy 183A and E. Crystal Falls Pkwy; Williamson County, Texas. Applicant/Agent: Brian J. Parker on behalf of Crystal Falls LTD

Motion made by Commissioner Sokol to approve the consent agenda items, Seconded by Commissioner Allen. Motion passed unanimously.

Regular Agenda

9. Subdivision Case 14-TOD-PP-011: Consider action on the Hero Way Multi-Family Preliminary Plat for 9.674 acres more or less; WCAD Parcel R510024; generally located to the northeast of the intersection of Mel Mathis Avenue and Hero Way, Leander, Williamson County Texas. Applicant/Agent: Russell Kotara (Big Red Dog) on behalf of Jeff Musgrove (Transit Village Investments, LTD).

a) Staff Presentation

Robin Griffin, Senior Planner, stated that staff reviewed the request and it has staff approval with the approved warrants listed in the executive summary.

b) Applicant Presentation

Russell Kotara was present for questions.

c) Discussion

Some discussion took place.

d) Consider Action

Commissioner Wixson moved to approve with staff recommendation, Vice Chairman Stephenson seconded the motion. Motion passed unanimously.

Public Hearing

10. **Zoning Case 14-Z-031**: Hold a public hearing and consider action on the rezoning of a portion of a tract of land, for 5.88 acres more or less, generally located to the northwest of the intersection of South Bagdad Road and Marsala Circle, WCAD Parcel R430194. Currently, the property is zoned LO-2-B (Local Office) and MF-2-B (Multi-Family) and the applicant is proposing to zone the property LC-2-B (Local Commercial)

and MF-2-B (Multi-Family), Leander, Williamson County, Texas. Applicant: Ken Liem on behalf of Emmet J. and Sally Hawkes.

a) Staff Presentation

Robin Griffin, Senior Planner, stated that staff reviewed the request and staff recommends approval the proposed MF-2-B (Multi-Family) zoning district and denial of the proposed LC-2-B (Local Commercial) zoning district.

b) Applicant Presentation

Ken Liem and Eric Visser, P.C. were present for questions and answered Commissioners questions.

c) Open Public Hearing

Chairman Seiler opened the public hearing. Marshall Hines spoke against.

d) Close Public Hearing

Chairman Seiler closed the public hearing.

e) Discussion

Discussion took place.

f) Consider Action

Commissioner Sokol moved to approve with staff recommendation of approval of the MF-2-B (Multi-Family) zoning district and denial of the LC-2-B (Local Commercial) zoning district, Commissioner Allen seconded the motion. Motion passed 5 to 2 with Vice Chairman Stephenson and Commissioner Anderson opposing.

11. Consider and take action to select two P & Z members to serve on the Comprehensive Plan Update Steering Committee.

Commissioner Wixson and Commissioner Anderson will serve on the Comprehensive Plan Update Steering Committee.

12. Meeting Adjourned at **7:52 p.m.**

Chairman Seiler

ATTEST:

Ellen Pizalate, P & Z Secretary



Executive Summary

December 18, 2014

Subject: Consider award to LandDesign for the Comprehensive Plan update consulting services and authorize the City Manager to execute the contract in an amount not to exceed \$147,981.

Background: The City is required to update the Comprehensive Plan every five years. A solicitation was issued to procure the consulting firm that will assist with this process. Six consultants submitted proposals on November 7th for the City's Comprehensive Plan Update.

LandDesign proposed the most qualified team of consultants and provided the most advantageous proposal. The price for services is \$147,981 which includes travel and other project related expenses.

Funds are budgeted in the Planning Department's Contractual Services Account 01-20-5600 in the amount of \$150,000.

Financial Consideration: \$147,981.

Recommendation: Staff respectfully recommends that the City Council award and authorize the City Manager to enter into an agreement for consulting services with LandDesign for the update of the Comprehensive Plan.

Attachments:

1. Recommendation from the City Purchasing Agent;
2. Evaluation Matrix;
3. Firm Brochure;
4. Contract
- 5.

Prepared by: Tom Yantis, Assistant City Manager
Joy Simonton, Purchasing Agent



City of Leander

INTEROFFICE MEMO

DATE: December 8, 2014

TO: Tom Yantis

FROM: Joy Simonton

RE: Recommendation for Award for Solicitation #S15-007 Comprehensive Plan Update

The Purchasing Division recommends Land Design for the award of an agreement to provide Comprehensive Plan Update Consulting Services in accordance with the Best Value Evaluation Process.

Six (6) responses were received. Ten (10) HUBS were notified of the solicitation.

Joy Simonton, Purchasing Agent

CC: FILE

Bid Info: City of Leander
 Comprehensive Plan Update
 Solicitation No. #S15-007
 Opening: 07/07/2014

EVALUATION CRITERIA	Max Points	 Asakura Robinson	 HALFF	 Freese & Nichols	 Public Management	 Stantec	 Land Design
Project Pricing	20	19	19	18	20	19	19
Service Fee		\$150,000	\$147,500	\$153,081	\$140,000	\$145,000	\$147,981
Includes reimbursable expenses		NO	YES	YES	NO	YES	YES
Additional			Public meetings not included?				
Project Team Qualifications	40	20	40	30	15	30	35
Team qualifications; Texas municipal experience; issues facing Leander; available resources		Leander issues not adequately addressed and compared Leander to Rosenberg. Austin experience listed but is not comparable. Experience appears to be with smaller plans but not comprehensive plans. 19 Full Time - Austin	Superior qualifications. Shows comparable Texas municipality experience with comprehensive plans. Award winning plans. Demonstrated an understanding of Leander issues. 40 Full Time - Austin Office	Adequate qualifications. Leander issues not adequately addressed. 56 Full Time - Austin and San Marcos	Adequate qualifications. Texas municipalities were smaller cities and not comparable to Leander. Leander issues not adequately addressed. 12 Full Time - Dallas, San Antonio & Cleveland, Texas	Adequate qualifications, however, Project Manager only with firm one year. Texas municipality experience was hers from another firm. Representative projects were from larger cities with bigger budgets. Good understanding of Leander issues. 30 Full Time - Austin Office (planners and PM not in Austin)	Superior qualifications. Limited Texas municipality experience but specific TOD experience is valuable. Demonstrated understanding of Leander issues. Award winning plans in North Carolina; 125 Full Time - Nationwide, out of state offices
Proposed Approach To Project	20	15	20	15	15	15	20
Methodology and approach to include community engagement, steering committees, facilitation tools, revising plan elements; maps and graphics and unique techniques		Adequate. One day charrette was good idea.	Superior methodology. Interview elementary school children; Superior data collection methodology. Timeline longer than spec'd, but still acceptable.	Adequate.	Adequate.	Adequate.	Superior methodology. Plan should have brand and steering committee tour are good ideas.
Work Samples	20	15	20	15	10	15	18
Comprehensive plan work samples		Adequate.	Quality work samples.	Adequate for proposed Project Manager.	Not adequate. Inferior graphics.	Adequate.	Quality work samples but some limit on detail.
TOTAL:	100	69	99	78	60	79	92
			FINALIST Interviewed 12/3/14				FINALIST Interviewed 12/5/14
							AWARD

Point Value Calculation for Price = Low price Divided by Bid Then Multiplied by Points



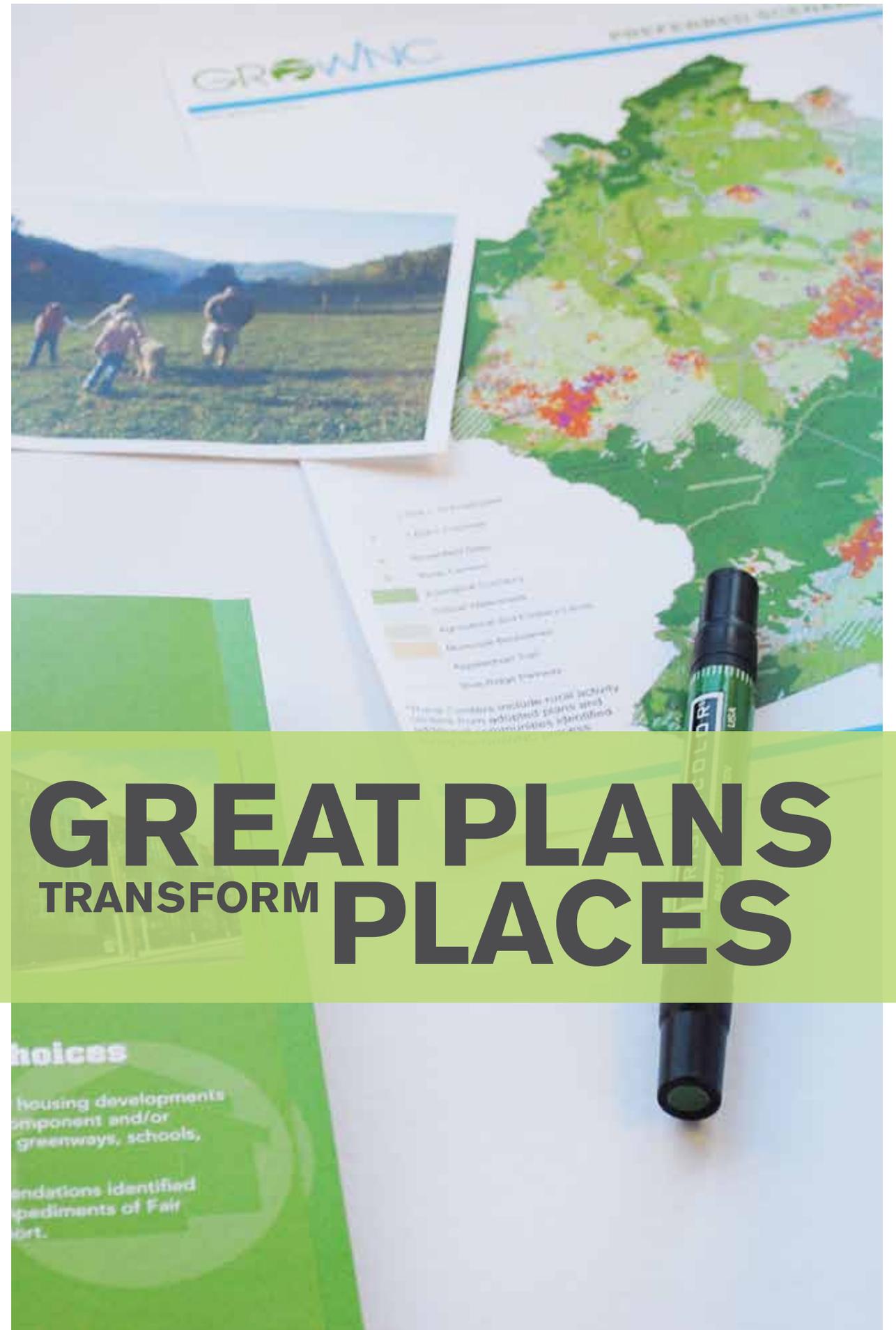
LandDesign™

PLANNING

Good plans inform decisions, great plans transform places. Over LandDesign's 36 year history, we have been in the business of working to transform communities into the kinds of places where people want to live, work and visit. Our award-winning planning group collaborates with project partners to develop an innovative framework of solutions that capitalize on assets and mitigate impacts to achieve realistic goals. We know that successful implementation depends on public support, the political will to endorse change and private sector participation. Our team stands by the idea that plans alone don't make great places. People make great places. Therefore, we structure each project to include a customized public involvement strategy that is tailored to meet that project's scale, complexity and objectives. LandDesign knows what a community does in response to a plan makes the difference between a good community and a great one. We measure success not by the number of plans we produce, but by the quality of places we help create.

GOOD PLANS
INFORM **DECISIONS**

LandDesign™



GREAT PLANS
TRANSFORM **PLACES**

MULTIJURISDICTIONAL **PLANS**



REGIONAL COORDINATION, LOCAL IMPLEMENTATION

Mobile populations, rising infrastructure costs and stretched municipal budgets lead to the increasingly important need to address land use, infrastructure and resources at a regional scale. LandDesign recognizes the unique challenges of planning at a regional level and has refined a process that provides a platform for local governments, businesses, nonprofits, citizens and others to realize unprecedented coordination on jobs, energy, housing, transportation, resources and other interconnected issues. This fosters an environment that supports quality job growth, smart infrastructure investments, critical resource conservation and a better quality of life. This, in turn, ensures a more prosperous future for the local communities involved.

RELEVANT EXPERIENCE

Carolina Thread Trail

GroWNC

Onslow County Joint Land Use Study

Strategic Regional Open Space Framework

Sustainable Growth Management Strategy for the Fort Bragg Region

NAMPO Tri-County Transportation and Land Use Study

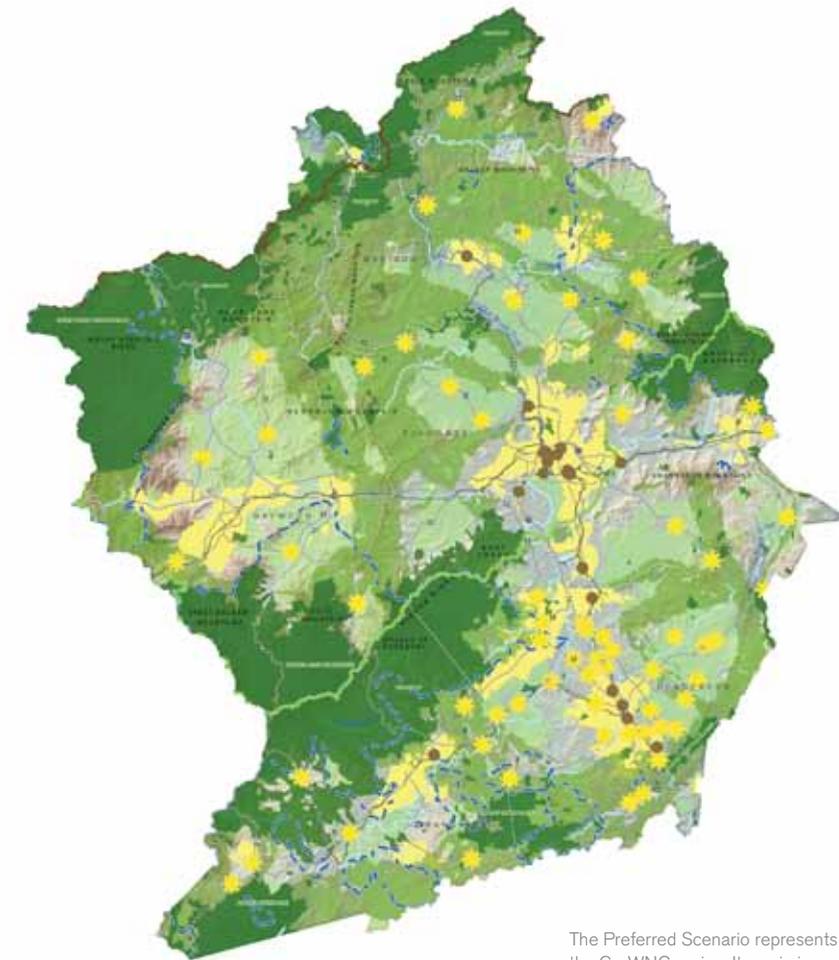
GROWNC

LandDesign led the three-year GroWNC project to develop a regional framework of market-based solutions to accelerate job growth and promote economic development, while protecting and enhancing natural and cultural resources in a five-county region of western North Carolina. During the effort, LandDesign developed a regional GIS-based growth model in CommunityViz that enabled project participants to visualize and compare alternative future growth scenarios to ensure that as the region grows, it remains a place for existing and future generations to thrive.

GroWNC provided the platform for local governments, businesses, non-profits, citizens and others to realize unprecedented regional coordination on jobs, energy, housing, transportation, land use, natural and cultural resources, and health. Over 5,000 individuals participated in the project. As a result, the region is working on numerous implementation projects including AgriVentures, a collaborative effort to build a stronger regional agriculture industry cluster and fill gaps in the production chain with local entrepreneurs.



[award-winning]

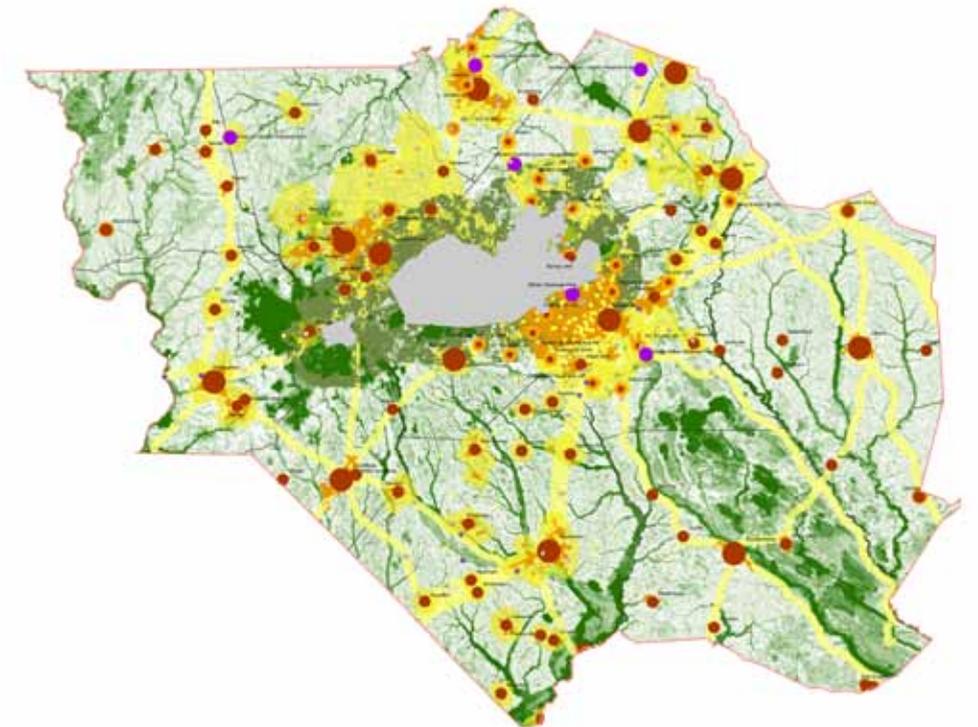


The Preferred Scenario represents the vision of the future for the GroWNC region. It maximizes community goals and priorities by protecting critical watersheds, investing in rural job creation, encouraging growth in areas that are not in conflict with natural or cultural resources, redeveloping brownfield sites, and preserving key ecological corridors, habitats and agriculture and forestry lands.



Fort Bragg in Fayetteville, NC is the nation's largest military base. The 11-county region surrounding the installation includes some of North Carolina's most productive agriculture areas and spans three distinct and diverse eco-regions. A comprehensive evaluation of these three systems, the military, working lands, and natural resources, revealed that protection and promotion of one of supports the other, and provides economic development opportunities among the three.

LandDesign led a team of consultants to develop the Sustainable Growth Management Strategy (SGMS) for the Fort Bragg Region. The main objective of the SGMS is to protect mission operability at Fort Bragg while promoting economic development opportunities throughout the 11-county region. LandDesign developed a GIS-based land use model in CommunityViz and set of implementation strategies that promote economic growth through the preservation of prime farmlands for agribusiness operations, protection of important and critical to preserve lands for mission operability, identification of development and redevelopment areas such as brownfield sites, and the conservation of natural assets for ecotourism and recreation-based businesses. Today, many local planners are using the SGMS and the land use model to inform local decision-making and promote local economic development opportunities.



SUSTAINABLE GROWTH MANAGEMENT STRATEGY

The Preferred Scenario promotes economic development in the region by encouraging compatible land uses on lands designated by the military as either critical-to-serve or important-to-serve as well as key agricultural lands. In addition, it promotes land use policies that encourage a mix of residential and non-residential development in existing town centers and new economic development nodes.

COUNTY, CITY + TOWN PLANS



VISIONARY SOLUTIONS, CATALYTIC RESULTS

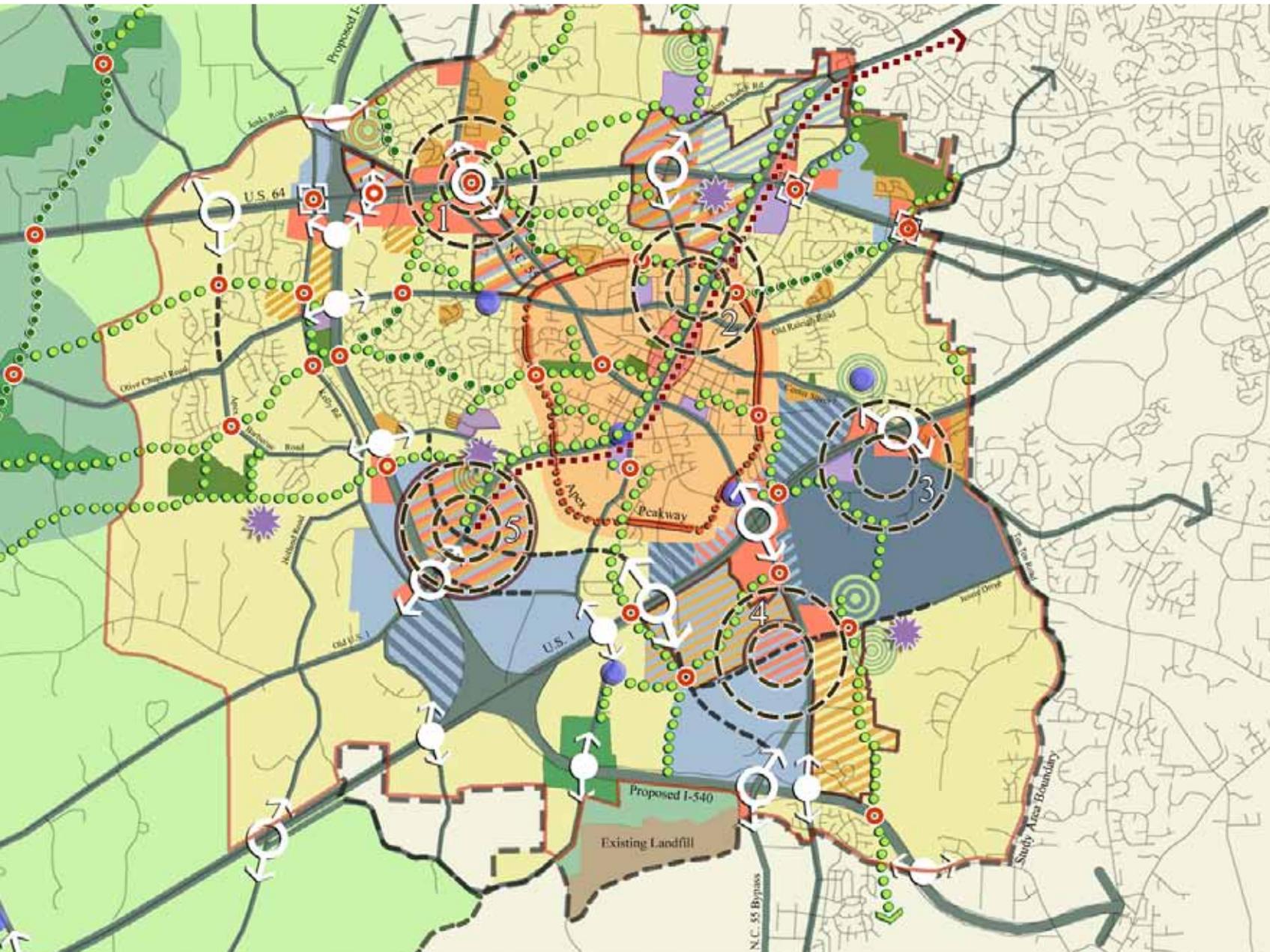
No two communities are alike. LandDesign approaches county, city and town planning as an opportunity to immerse in a community to better understand its residents, defining characteristics and evolution over time. We specialize in developing plans for communities that not only establish an appropriate direction for growth and development, but also build consensus among affected stakeholders. Our balanced approach positions communities to achieve multiple objectives from resource conservation to economic development. In addition, our private sector experience ensures that all of our public sector planning projects are sensitive and responsive to the realities of the local market. LandDesign's extensive experience provides communities with implementation strategies that connect a vision with the local policies, programs, projects and plans needed to achieve that future.

RELEVANT EXPERIENCE

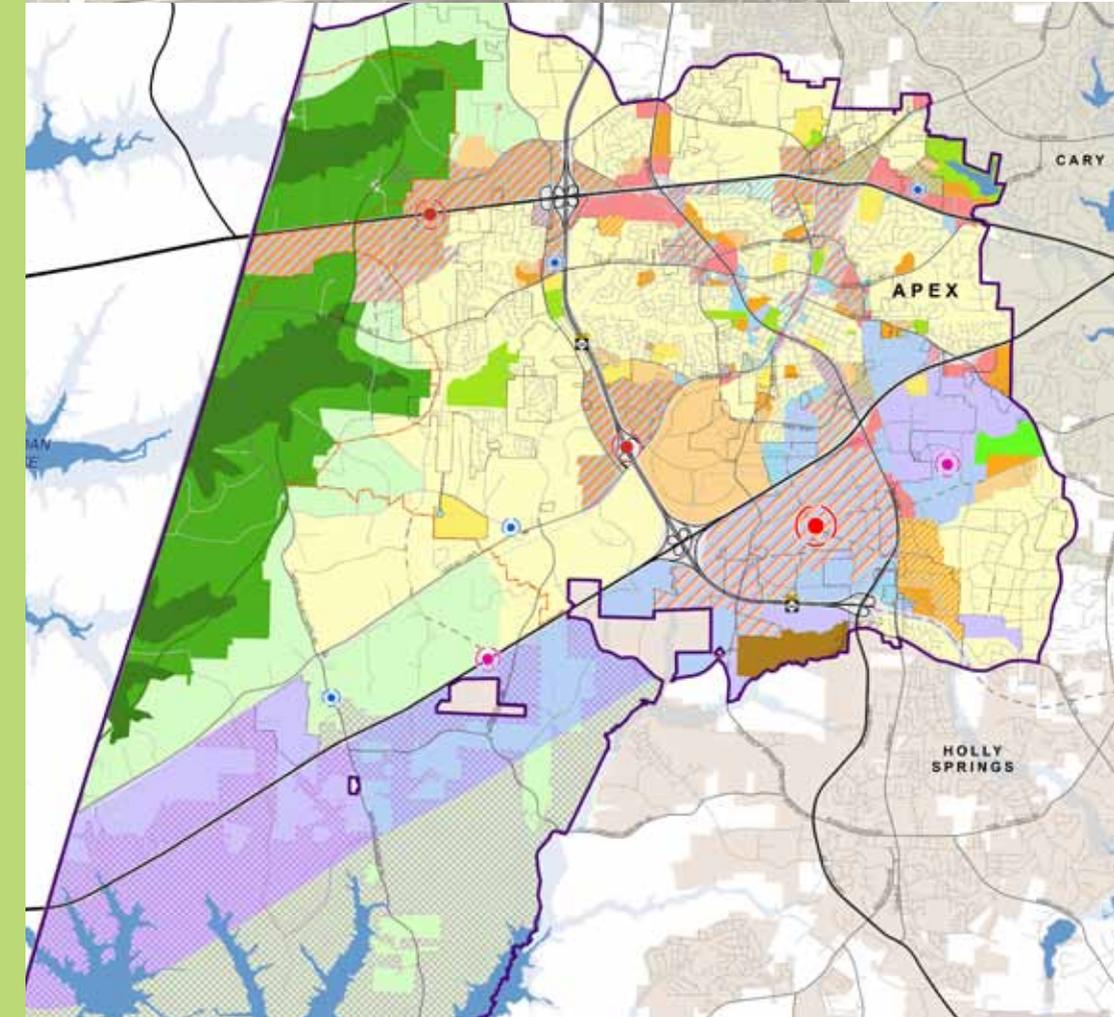
- Apex Comprehensive Plan and Plan Update
- Buncombe County Comprehensive Land Use Plan
- Cabarrus County Land Use Plan
- Central Franklin Area Plan
- Fort Mill Comprehensive Plan and Plan Update
- Gaston County Comprehensive Planning Program
- Greensboro Western Area Plan
- Lake Lure Comprehensive Plan
- Lincoln County Land Use Plan
- Lower Richland Community Master Plan
- Spring Hill Community Master Plan
- Waynesboro Land Use Guide

APEX COMPREHENSIVE PLAN + APEX PEAK PLAN 2030

In 2013, Money Magazine ranked Apex, NC as the #9 Best Place to Live in America, and the #1 Best Place to Live in North Carolina. Apex has a long-standing tradition of utilizing plans to help guide growth and development decisions to ensure a high quality of life for existing and future generations. In 2003, the Town retained LandDesign to prepare a comprehensive plan in response to a period of unprecedented growth. In 2012, an expanded jurisdiction and major infrastructure projects warranted an update to that plan. "Peak Plan 2030" recognizes that mixed-use development is a key component of Apex's future land use pattern, and defines mixed-use development in terms of scale and intensity that is appropriate for a small-town setting. Apex is preparing to grow in a way that maximizes resources while respecting key community values so that the Town remains the "Peak of Good Living."

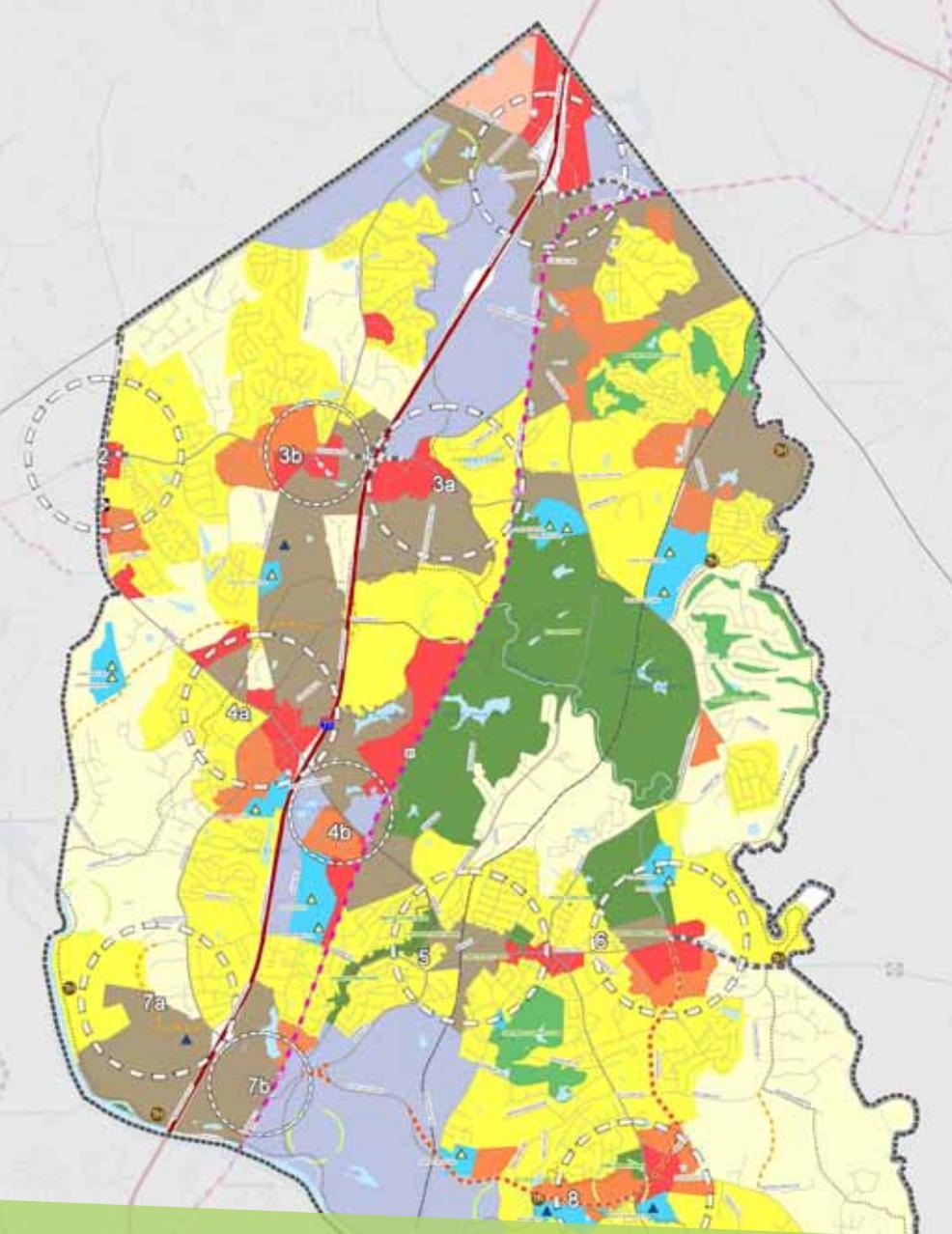


Developers are responding to the mixed-use concepts developed during Peak Plan 2030 by integrating many of the elements recommended in the concepts into their site design.



[award-winning]

[unprecedented growth]



FORT MILL COMPREHENSIVE PLAN + PLAN UPDATE

The Town of Fort Mill is one of the fastest growing municipalities in the upstate of South Carolina. The Town's highly-regarded school system, low taxes, rich history, overall quality of life and proximity to Charlotte's employment centers and international airport make it an attractive area to live. The Town first retained LandDesign in 2006 to develop The Fort Mill Comprehensive Plan. The 2006 plan defined a development pattern that delineated areas appropriate for concentrations of commercial and employment development as well as natural resource conservation areas that were worthy of protection. Concerned about the impacts of the Great Recession and to acknowledge recent annexations and infrastructure projects, Town leaders decided to revisit the conditions affecting growth and development and update the plan in 2011. LandDesign led the process to update the plan and focused on identifying areas where growth is most likely to occur. Recommendations from the Plan, including the development of a corridor overlay district for the Fort Mill Southern Bypass are currently being implemented.



STRATEGIC AREA PLANS

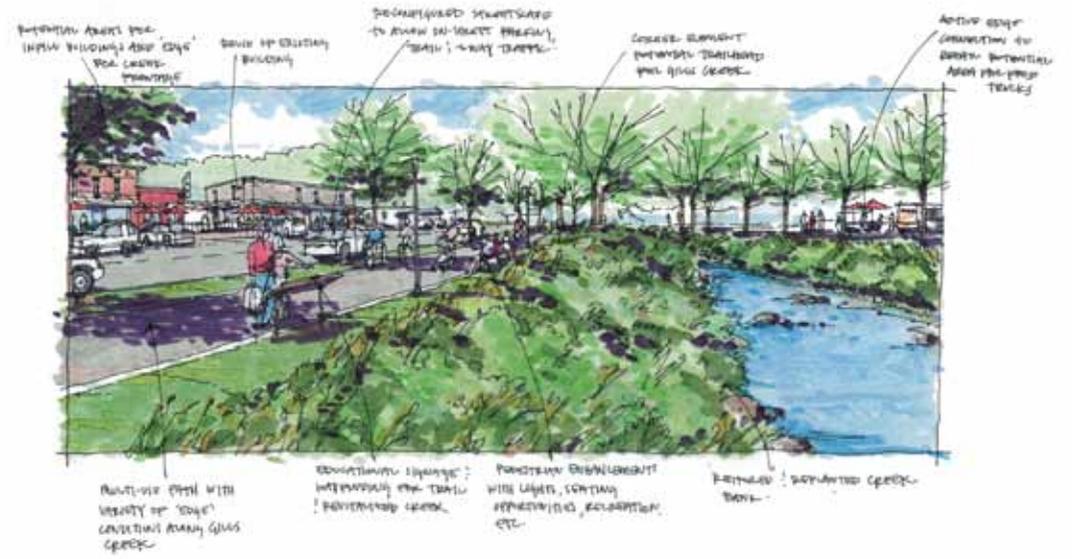


COMPREHENSIVE APPROACH, TARGETED IMPLEMENTATION

Area planning offers an opportunity to take an in-depth look at the internal systems and assets that define a place. LandDesign's integrated approach to planning at this scale results in a set of dynamic and meaningful strategies based on a set of goals articulated by the community and tied to market and environmental realities. By integrating traditional land use, transportation, infrastructure, economic and environmental planning into a holistic and collective process, LandDesign's team of experts develops a plan that capitalizes on strengths, confronts challenges and envisions a future that enhances the quality of life for a community.

RELEVANT EXPERIENCE

- Central Franklin Area Plan
- Devine Street Commercial Node Plan
- Dorthea Dix Campus Master Plan
- Flat Rock Strategic Master Plan
- Hickory Inspiring Spaces
- Monroe Downtown Plan
- San Juan Waterfront Plan
- Statesville Downtown & NC-115 Streetscape and Land Use Master Plan
- University Research Park



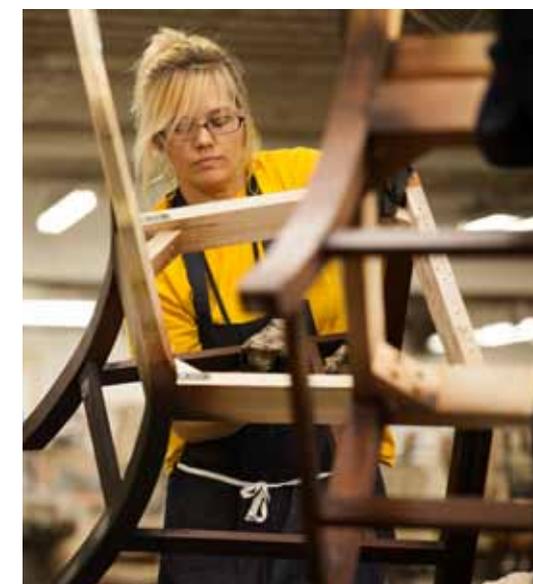
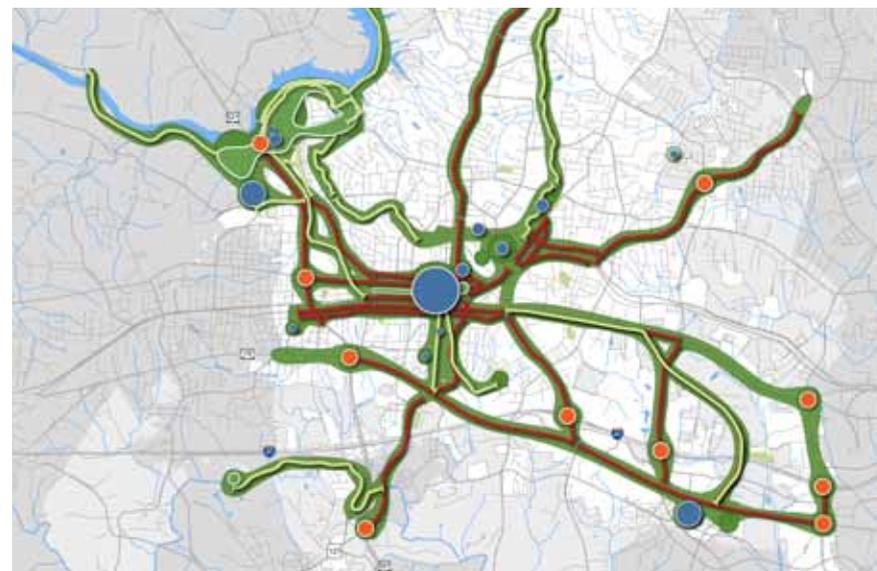
[community revitalization]

DEVINE STREET COMMERCIAL NODE PLAN

Devine Street is a primary gateway and commercial destination in the City of Columbia, SC. Over time and through periods of economic growth and decline, the area has grown from a small collection of neighborhood shops to a regional commercial center. Today, many of the older storefronts are either vacant or in disrepair. However, catalyzed by the recent redevelopment of the Cross Hill, the area is again experiencing a period of renaissance. To maintain this momentum, the City initiated a planning process and hired LandDesign to develop a vision and plan that identifies implementation projects that improve the area's vibrancy, walkability and aesthetics. The plan LandDesign produced presents a clear vision for the future of the area; addresses issues and opportunities related to development, transportation, community amenities (i.e., greenways); establishes standards for future development to ensure cohesiveness; and outlines strategies so the public and private sectors can jointly implement the Plan. One of the key recommendations of the Devine Street Commercial Node Plan was the enhancement of Gills Creek into a community amenity. The City of Columbia, Gills Creek Watershed Association and other project partners are currently working on this project within the study area.

HICKORY INSPIRING SPACES

Hickory, NC is best known for its thriving furniture industry. For decades, Hickory enjoyed a reputation for being a leading source of quality furniture. However, the loss of manufacturing in recent years has led to the City's economic decline. The City hired LandDesign to develop The Inspiring Spaces Master Plan to enhance economic development efforts of many individuals and organizations throughout the Hickory area by defining a specific set of investment opportunities that will produce both tangible and intangible benefits. By investing in the public realm, the City can improve the visitor and resident experience, effectively reshape the image and perceptions of the City, create vibrant centers of activity within the City and attract the private investment it desires.



UNIVERSITY RESEARCH PARK



This 2,000-acre University Research Park Area Plan is helping to reposition the 40-year old business park into a vibrant mixed-use community with a central park. In collaboration with transportation and market research consultants, LandDesign created a vision plan for the next 20-30 years that calls for a mix of compatible uses; greenways, parks and natural open space; infrastructure to support additional development; modifications to the transportation network to improve circulation for multiple modes and make the Park more accessible; improvements to signage and wayfinding; and the leveraging of the combination of assets to seize future economic development opportunities. Immediately following plan adoption, LandDesign assisted the City of Charlotte with zoning to facilitate mixed use of higher densities. As a result, employment in the Park has increased to over 30,000, which is a 50% increase from the 20,000 that were employed in the Park when the master planning process began. In addition, the park has enjoyed numerous corporate relocations and expansions.

INFRASTRUCTURE PLANS

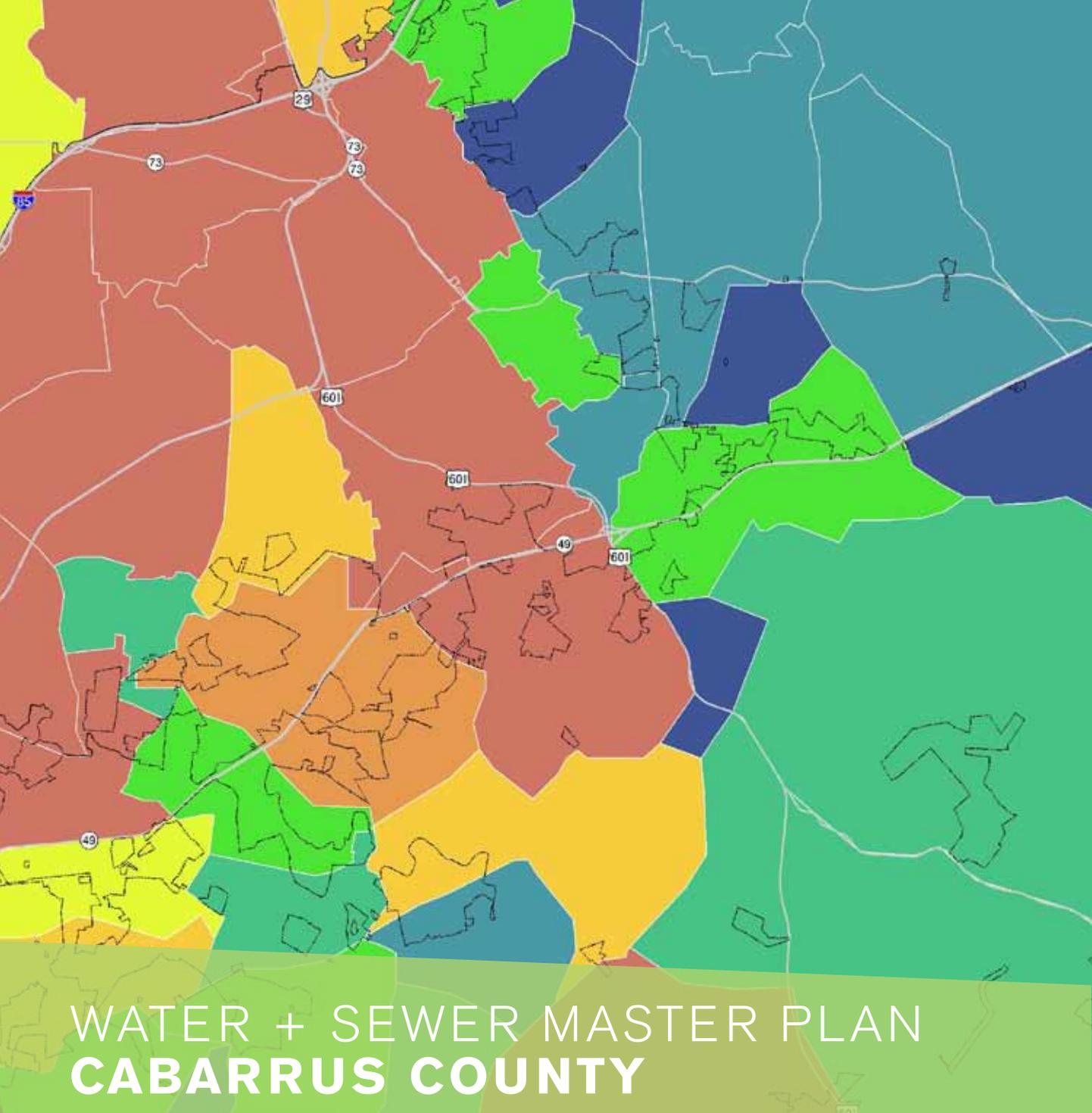


PLANNING FOR SMART INVESTMENTS

Increasing demand for infrastructure and services coupled with increasing costs requires that governments at all levels ensure the efficient use of resources. By developing plans that emphasize cost effective solutions, user benefits, and return on investment, LandDesign contributes to infrastructure plans and implementation strategies in a manner that supports smart and efficient investments. Techniques include integrated stakeholder involvement, demand forecasting, level of service analysis, and development of decision support systems that inform prioritization efforts for grey and green infrastructure investment plans.

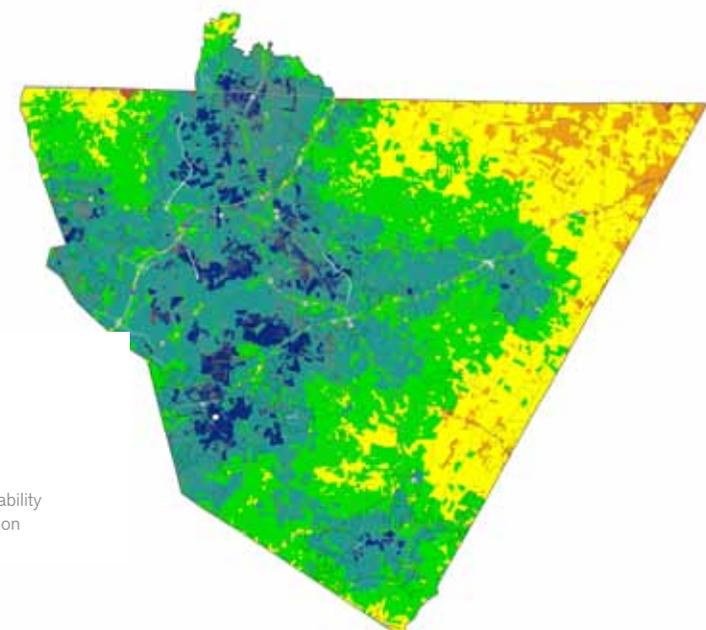
RELEVANT EXPERIENCE

- CATS Station Area Planning
- Murchison Road Corridor
- Northeast Area Study
- Ramsey Street Corridor
- Saluda Street Corridor Master Plan
- SC-19 Corridor
- West Boulevard Corridor Design
- US 64-NC49 Corridor Study
- US 311 Bypass Interchange Study
- Water and Sewer Master Plan for Cabarrus County

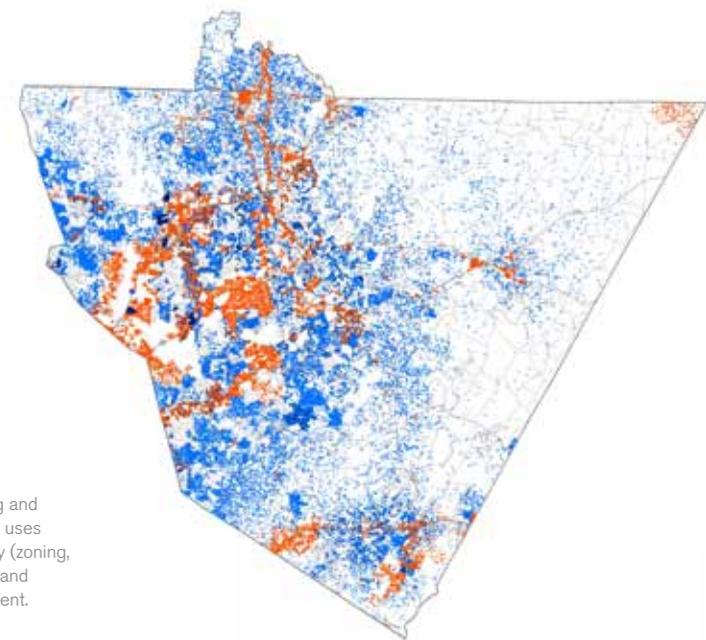


WATER + SEWER MASTER PLAN CABARRUS COUNTY

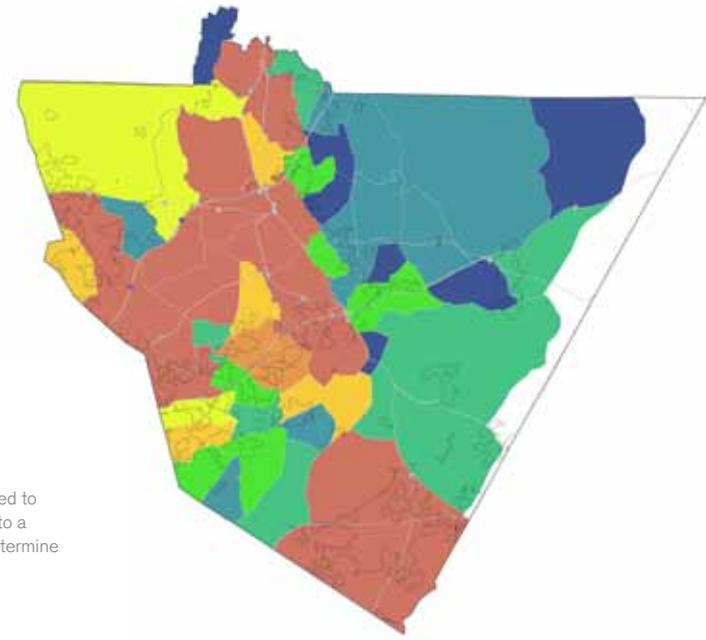
LandDesign was part of a multi-disciplinary team of consultants hired by the Water + Sewer Authority of Cabarrus County (WSACC) to help develop the FY 2012-2013 Master Plan (Master Plan) to inform decision about future investment in regionally significant water and sewer infrastructure. LandDesign created a customized, probability-based model in GIS to forecast future utility demand at parcel and sub basin levels. This project represents an innovative approach to utility demand forecasting in that it takes into consideration actual market forces in the determination of projected housing and employment growth. Furthermore, using the model, growth is distributed based on land suitability and adopted land use plans; it is not uniformly distributed across the service area. The resulting master plan is a dynamic plan that is easily updated to reflect major land use changes and adjust capital improvement programming.



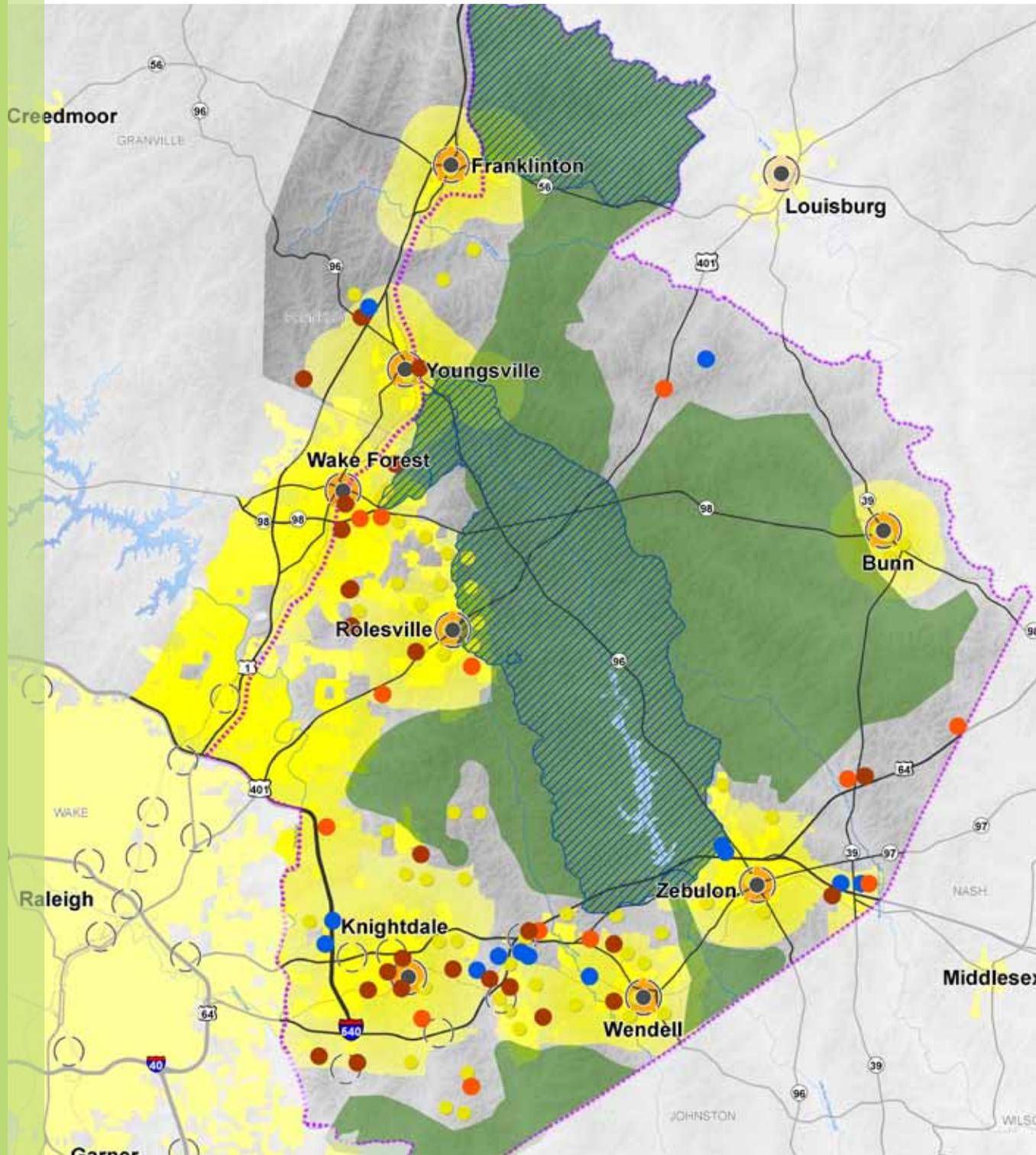
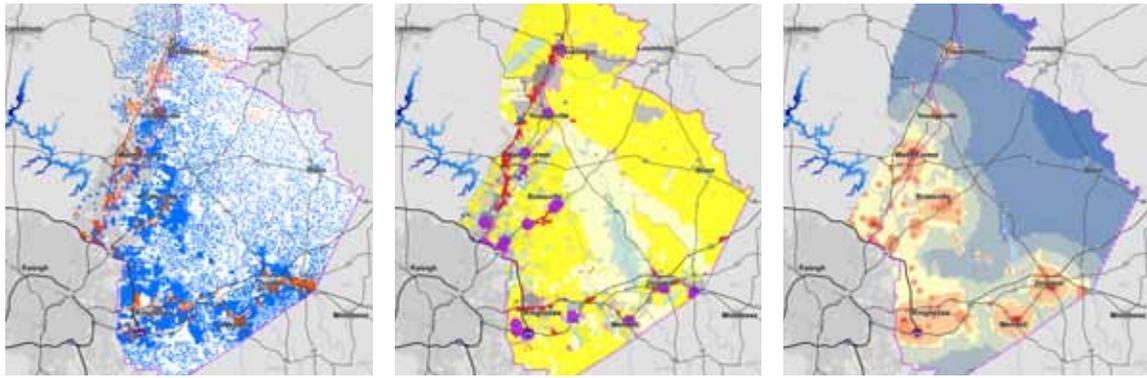
Residential land use suitability, or probability of development, was calculated based on environmental and economic factors.



Forecasted growth, in terms of housing and dwelling units, was based on allowable uses and densities from local land use policy (zoning, future land use and small area plans), land availability, and probability of development.



Parcel based forecasts were aggregated to the basin level and used as an input into a wastewater transportation model to determine projects needed in the plan timeframe.



NORTHEAST AREA STUDY

Residential growth northeast of Raleigh, NC has outpaced infrastructure investments. As part of an interdisciplinary team, LandDesign worked with the Capital Area Metropolitan Planning Organization (CAMPO) to study this multi-jurisdictional region and address interrelated transportation and land use issues and opportunities. LandDesign was responsible for socio-economic data forecasting, scenario planning, group facilitation, and the development of a best practices policy guidebook for the CAMPO Northeast Area Study (NEAS).

PARKS, RECREATION + TRAILS MASTER PLANS



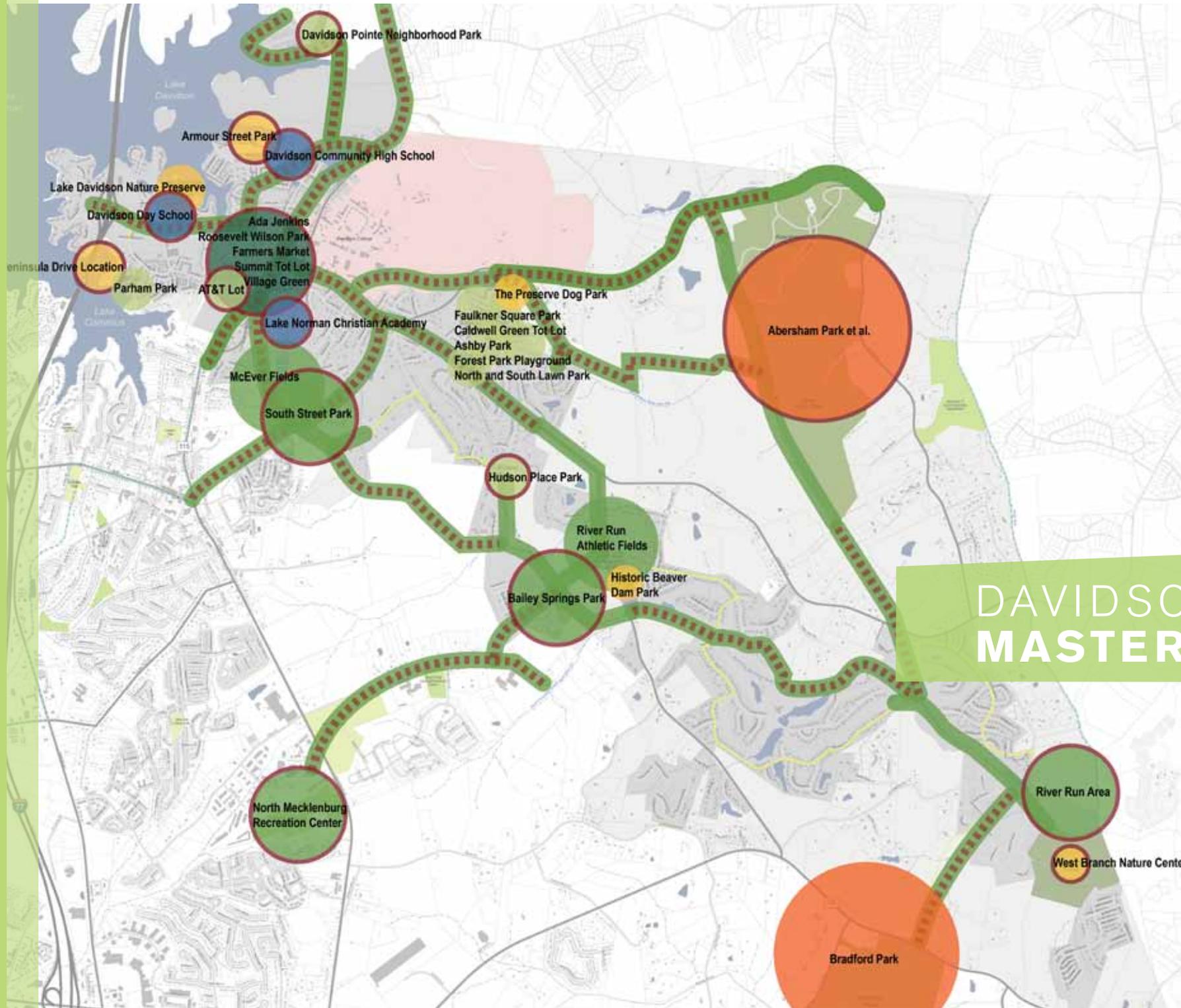
HEALTHIER, STRONGER COMMUNITIES

LandDesign's approach to parks, recreation and trail planning is aimed at enhancing the livability of a community and the health and well-being of its citizens. Successful parks, recreation and trail systems not only improve community welfare but catalyze development (or redevelopment) and stimulate private investment. By integrating traditional recreation planning with a deep understanding of land use, transportation, economic development, infrastructure and community facilities, LandDesign's team of experts develops plans that allow improvements so serve as the intervention that enhances the physical, economic, environmental, and social health of communities.

RELEVANT EXPERIENCE

Carolina Thread Trail Master Plan
Creedmoor Cross City Trail
Creedmoor Parks and Recreation Master Plan
Davidson Parks and Recreation Master Plan
Greenwood Linear Park Master Plan
Little Sugar Creek Greenway Master Plan
Rail Trail Framework Plan
Union County Parks and Recreation Master Plan
Waxhaw Parks and Recreation Master Plan

[promoting a healthy community]



DAVIDSON PARKS + RECREATION MASTER PLAN

Davidson, NC residents recognize the health, economic, social and environmental value of parks. The town expressed a dedication to improving community health and an interest in investing in parks and related recreation facilities to ensure that Davidson is a location of choice for residents, businesses and visitors alike. More importantly, they have demonstrated support for taking formal steps to develop a plan through an inclusive public process to determine the appropriate future investments. With assistance from LandDesign, the Town developed a Parks and Recreation Master Plan that proposes a multi-faceted system focused on the seven dimensions of health.

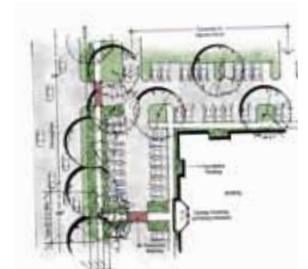
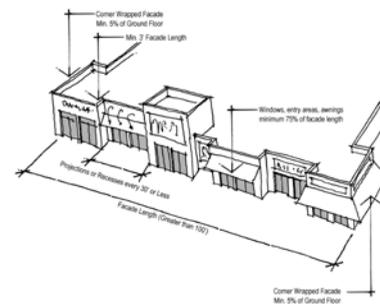
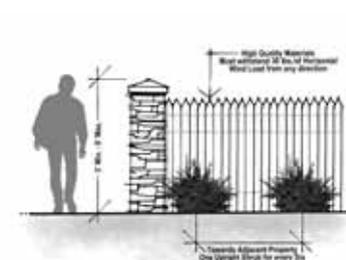
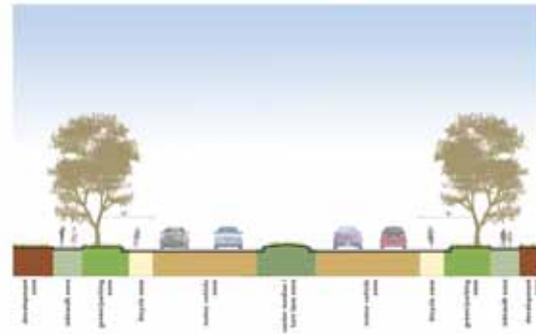
[connect community, commerce and culture]

Charlotte's four-mile-long Rail Trail is envisioned to be a unique urban experience—a “linear commons” where neighbors and visitors can meet and explore a dynamic and evolving platform for creativity, economy, and recreation. LandDesign was retained by Charlotte Center City Partners to develop a Framework Plan to address how to build upon that foundation, not only to improve the underlying infrastructure and everyday functionality of the Trail, but to create a string of creatively-designed and engaging activity nodes that make the Trail a truly one-of-a-kind destination.



RAIL TRAIL FRAMEWORK PLAN

REGULATIONS + DESIGN GUIDELINES



RELEVANT EXPERIENCE

- Alachua County TND District, FL
- Baxter Pattern Book, Fort Mill, SC
- Buncombe County Zoning Ordinance, NC
- Brunswick County UDO, NC
- Cabarrus County Subdivision Regulations, NC
- Carrollton Village Design Guidelines, Winston-Salem, NC
- City of Charlotte Research District Text Amendments, NC
- City of Franklin Design Guidelines, TN
- Crosstrail Design Guidelines, Loudoun County, VA
- Fort Mill MXU District, SC
- Hasentree Green Book, Raleigh, NC
- Hidden Lake Green Book, Raleigh, NC
- Town of Highlands UDO, NC
- Lincoln County UDO, NC
- Loch Lloyd Zoning Ordinance, MI

- Massey Vision Plan Book, Fort Mill, SC
- Moore County PUD Districts, NC
- Moore County Conservation Subdivision Regulations, NC
- Riverwalk Residential Design Guidelines, NC
- Sanctuary Green Book, Charlotte, NC
- Saybrook Vision Book, Myrtle Beach, SC
- Southern Pines PUD District, NC
- Spartanburg County Commercial Design Guidelines, SC
- Waynesboro UDO, VA
- City of White House Commercial Design Guidelines, TN
- Whitewater Design Guidelines, Charlotte, NC
- Wilmington Subdivision Regulations, DE
- Wilmington/New Hanover County UDO, NC
- York County TND District, SC

CREATING DESIRED COMMUNITY OUTCOMES

Comprehensive, tailored ordinances and thoughtful design guidelines are the set of regulatory tools necessary to implement adopted plans and ensure future growth reflects community expectations. In partnership with the client and stakeholders, LandDesign translates desired outcomes into specific standards and guidelines consisting of written provisions and graphic illustrations. Regulations are tailored to the unique needs of the community and address a full spectrum of uses including residential, retail, commercial, industrial, mixed and special uses. In addition, LandDesign drafts ordinances so that they are accessible to a variety of audiences including designers, developers, commissions, review boards, government staff and the public. Guidelines are created to ensure cohesive, high-quality development that can be easily administered by developers and followed by builders.

PUBLIC ENGAGEMENT



PLANS ALONE DON'T MAKE GREAT PLACES. PEOPLE MAKE GREAT PLACES.

A good plan can do a lot. It can tell the story of a place. It can reveal its past. It can acknowledge the present. It can even convey the community's vision for the future. And, a well-constructed plan can provide a roadmap to transform that vision into reality. But it takes people to make the investments and lead the initiatives that ultimately benefit the community. LandDesign knows that successful plan implementation depends on public support, the political will to endorse change and private sector participation. We know that some of the best ideas for the future live within the heads and hearts of those who reside in the community. Whether in-person or online, our process unlocks these ideas and develops them, through meaningful discourse, into a community-supported vision and set of prioritized initiatives. The result is an empowered populace that champions the plan and takes responsibility for implementation.

LandDesign™

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222 West Las Colinas Boulevard
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Irving, TX 75039
214.785.6009

LandDesign offers award winning urban design, planning, branding, civil engineering and landscape architecture solutions to public and private sector clients across the globe. With four offices in the United States, the LandDesign team effectively brings innovative, buildable, sustainable and ecologically responsible projects to life worldwide.

35 years. Unprecedented talent. Superior solutions.

www.LandDesign.com

DECEMBER 10, 2014

**AGREEMENT FOR
PROFESSIONAL PLANNING SERVICES**

COMPREHENSIVE PLAN UPDATE

**CITY OF LEANDER
LANDDESIGN PN: 1014430**

This agreement made this _____ day of _____, 2014, by and between City of Leander hereinafter referred to as "Client", and LandDesign, Inc., hereinafter referred to as "Consultant", for the provision of planning services for the Comprehensive Plan Update for the City of Leander in Leander, Texas.

Now, therefore, the Client and LandDesign agree as follows:

SCOPE OF SERVICES

The following paragraphs describe the scope of work to be provided under this agreement.

PHASE 1: PROJECT INITIATION

PHASE 100

1.1. PROJECT COORDINATION PLAN

The Consultant will develop a detailed Project Coordination Plan (PCP) to ensure optimal coordination among project partners (LandDesign team members, City staff, and Advisory Committee members). In addition to project partner contact information and process goals, the PCP will include the following:

- Project Overview
- Scope of Services Summary
- Project Team Contact Information
- Communication Protocols
- Quality Control Measures

1.1.1. Project Coordination Meetings

Quality control/quality assurance (QA/QC) is achieved through regular coordination, as this provides an opportunity for internal review of work products throughout the process. Therefore, the following meetings and other coordination activities are included in the Scope.

- Project Coordination Teleconferences – To ensure a successful and efficient process, regular communication between Consultant team members and the Client must be maintained. LandDesign will facilitate project coordination teleconferences every two weeks with the Client to discuss project updates, answer questions, discuss key issues, and disseminate critical information.
- Client Meetings – Beginning with a meeting to discuss the details of the draft PMP at project kick-off, the Consultant will conduct up to 6 meetings with the Client during the planning process.

The Consultant will provide necessary staff/resources for all meetings necessary to complete the project as defined in the Scope. A list of Project Team members available to attend each meeting will be provided in the Project Coordination Plan. The Project Team will not be changed without prior consent of the City. In addition, the Consultant will make every effort to minimize project costs by taking advantage of joint travel opportunities and consolidating meetings, interviews, and field reconnaissance. Some of the meetings listed in the Scope will be scheduled for the same day.

1.2. PUBLIC INVOLVEMENT PLAN (PIP)

The Consultant will develop a Public Involvement Plan (PIP) to describe a comprehensive strategy for communications and outreach. It will detail specific activities and related tasks that should be carried out to reach the greatest number of people and a diverse audience.

Formatted as a menu, it will indicate the activities that are included in the Scope of Services, optional add-on activities for which the Consultant will be responsible for, and all other tasks— optional or required--- that will be carried out by the Client or will be conducted by the Consultant as additional services and billed on an hourly basis in accordance with LandDesign's hourly fee schedule in Exhibit A.

The following activities are included in the Scope of Services:

- Advisory Committee Meetings– the Consultant team will conduct up to 8 meetings with the Advisory Committee. The team will rely on this group to represent the viewpoints of a diverse cross-section of residents and other stakeholder groups and to provide key input and guidance at critical points during the planning process. The Consultant will provide guidance on the composition of the Advisory Committee.
- Community Meetings – Up to three (3) community meetings will be held, each in a location selected and secured by the Client.
 - Community Meeting #1: Community Vision and Goals
 - Community Meeting #2: Shaping Leander's Future Workshop
 - Community Meeting #3: Putting The Plan Into Action
- Project Web Site – Working with the Client, the Consultant will manage the MindMixer site. The Consultant will prepare content for the site and based on the strategy described in the PIP will work with the Client to ensure maximum utilization of the site.
- Stakeholder Interviews - The Consultant will conduct up to 6 interviews with key stakeholders (or stakeholder groups). The list of interviewees will be determined by the Client with input from the Consultant. Interviews will be in person in a location selected by the City, and will be scheduled by the Client to occur in a one-day period as consecutive one-hour sessions.

All other tasks will be carried out by the Client or other entity, or will be conducted by the Consultant as additional services and billed on an hourly basis in accordance with LandDesign's hourly fee schedule in Exhibit A.

1.3. PROJECT BRAND

Developing a brand for the project will bolster current efforts to communicate the future vision for the City as well as the unique history, character, and features that define Leander. The first step will be to formally develop a unique custom identity that will become the consistent visual representation of both the process and resulting Plan. Based on this identity, the Consultant

Washington DC

Charlotte NC

Raleigh NC

Dallas TX

will create a set of graphic standards to ensure that all correspondence and deliverables associated with this project are consistent and easily identifiable. The Consultant will also develop the following templates based on the project brand:

- PowerPoint
- Meeting Agenda
- Meeting Notes
- Sign-in Forms
- Map Title blocks
- Project Memorandums
- Project Reports

All other requests for branded materials will be considered additional services and billed on an hourly basis in accordance with LandDesign's hourly fee schedule in Exhibit A.

1.4. DATA COLLECTION | PLAN REVIEW

At project initiation, the Consultant will gather data to be utilized during the update to the Comprehensive Plan. The Consultant will prepare a data inventory, which will identify the types and formats of data required. The Consultant will provide the data inventory to the Client for fulfillment.

The Consultant will also review relevant regulations, plans, and studies (supplied by the Client) to glean from them details, particularly recommendations, to be considered in the Plan update. The Consultant will also review information supplied by the Client (or identified by the Client) related to local services, programs, initiatives, and private investments that will likely have a bearing on future growth and development in the planning area.

1.5. SUMMARY OF CURRENT GOALS, POLICIES AND STRATEGIES

The Consultant will provide a summary of the goals, policies, and strategies contained in the adopted Comprehensive Plan. These will be supplemented with goals, policies, and strategies contained in other relevant plans. Together, they will provide a starting point for updating the Plan. As current issues and opportunities are defined, the team will refer to these goals, policies, and strategies to determine which, if any, are most relevant given current circumstances and should therefore be carried forward.

1.6. INITIAL MEETINGS

A focused session in which the project partners, including the Consultant team, City staff and key stakeholders examine the study area through the project lens is an effective way to simultaneously engross the Consultant team and City staff in the project, and to forge a productive working relationship. Over a three-day period, key members of the Consultant team will lead the following meetings with assistance from City staff:

1.6.1. Kickoff Meeting

This will be an informal gathering to kick off the Consultant's work, provide an opportunity for planning staff and the team to become better acquainted, review the project schedule and potential meeting dates and discuss data to be acquired. The team will initiate a discussion of the group's initial thoughts regarding issues and opportunities followed by a discussion of project goals and expectations.

1.6.2. Study Area Tour

A tour of the area following the Kickoff Meeting will strengthen the team's grasp of the existing conditions and stimulate the generation of ideas to explore during the planning process. The Consultant will rely on the Client to provide transportation for the Consultant Team, City staff and key stakeholders participating in the Study Area Tour.

Washington DC
Charlotte NC
Raleigh NC

1.6.3. Advisory Committee Meeting #1

A meeting with the Advisory Committee will convene after the tour of the study area. The LandDesign team and representatives of City staff will jointly facilitate a brief meeting to introduce the project team members. The primary objective of this meeting is to discuss the project goals, which will provide the basis for evaluating the Plan elements as they evolve through the process. A discussion of the project schedule, upcoming meetings and the Committee's role in the project will also be discussed.

PHASE 1: DELIVERABLES

- Project Coordination Plan (Developed in Word, electronically delivered as a PDF)
- Public Involvement Plan (Developed in Word, electronically delivered as a PDF)
- Project Brand (Delivered in native software format)
 - Custom Logo
 - Graphic Standards
 - Project Templates
- Data Inventory (Excel)
- Summary of Goals, Policies and Strategies (Developed in Word, electronically delivered as a PDF)
- Initial Meeting Materials
 - Meeting Agenda
 - Meeting Handouts
 - Display Boards (maps, concepts and supporting imagery)
 - PowerPoint Presentation
 - Meeting Notes

PHASE 1: MEETINGS (UP TO 3 DAYS ON-SITE)

- Initial Meetings
 - Kickoff Meeting
 - Study Area Tour
 - Advisory Committee Meeting #1

At least two Project Team members, including the Project Manager, will be present at all meetings. The Project Team will not change without prior consent of the City.

PHASE 1: CLIENT RESPONSIBILITIES

City Staff will be expected to be involved in the process. The responsibilities of the staff include but are not limited to the following:

- Project coordination – Participate in project coordination efforts.
- Input – In addition to gathering data and documents, Staff will act as a member of the project team by providing input throughout the process regarding existing conditions, issues, opportunities, concept plans, recommendations and implementation strategies.
- Meeting space – Secure meeting space for all presentations, meetings with staff, Advisory Committee Meetings, Community Meetings and Workshops and other meetings that are required as part of this planning process. Staff will also set up these facilities in preparation for each meeting in accordance with guidelines established by the Consultant. The Client will be responsible for paying any fees associated with reserving and using meeting space.
- Meeting facilitation – Participate in Community Meetings by helping the Consultant with facilitation, preparation and distribution of agendas, management of attendees (i.e., sign-in table), etc.

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- The Client will be responsible for scheduling and noticing (as required) all meetings.
- Dissemination of information – Meeting notices, plan details, and other information that is disseminated to the public, stakeholders, interested groups and individuals, etc. shall be the responsibility of Staff. The Consultant will provide information at the appropriate times in PDF format so that it may be utilized by Staff in a variety of ways, such as uploading onto the City's web site and printing.

PHASE 2: CITY ASSESSMENT

PHASE 200

2.1. CITY ASSESSMENT

The Consultant team will assess the current and emerging conditions of the City to prepare a State of the City Assessment, noting any significant changes since completion of the adopted Plan. The Consultant will address the following topics:

2.1.1. Community Profile and Demographics

The Consultant will conduct a thorough demographic analysis of the study area. Projections will be provided to 2045, in five year increments. These projections will inform subsequent elements of the Plan.

2.1.2. Land Use

In this task, the Consultant will examine the existing development pattern and the likely distribution of new development to assess the issues and opportunities.

- **Development Pattern-** The Consultant will examine the existing development pattern, employing GIS data and aerial photography. The primary purpose of this step is to examine the diversity of development in terms of uses and intensity, and define a generalized set of land use categories.
- **Land Supply-** The second step in the analysis is an assessment of available land to determine whether there is a sufficient supply to accommodate the projected development. The land supply is a combination of undeveloped parcels (or "vacant" parcels, as noted in the tax records) and parcels considered to be underutilized, and therefore likely to be redeveloped, given the value of the improvements on the parcel relative to the land value. The Consultant will delineate the parcels that comprise the land supply as part of this task.
- **Suitability-** The land supply must be evaluated to better understand the land's capacity to support future development. Land suitability represents the likelihood that a parcel will be developed. The set of characteristics associated with each will determine its attractiveness for certain uses. Typically, factors that influence the suitability of land include topography; parcel size; access to infrastructure (water, wastewater, roads, rail, transit); proximity to jobs, services, and compatible uses; distance to community facilities (schools, parks); and distance from incompatible uses (landfill, airport).

This analysis will inform the development of the alternative land use concepts in later phases of the planning process.

2.1.3. Transportation

Having a complete inventory of the transportation system will be critical to developing functional recommendations that will produce noticeable benefits for the residents, employers/employees and visitors of the county. The Consultant will inventory the existing roadway, bicycle and pedestrian, transit, and freight networks. Data will include major access

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points, existing traffic signals and timing, school zones, railroad crossings, multimodal facilities, and rights of way. Traffic data, crash data and heavy vehicle information will be gathered from existing sources.

In addition, existing transit operations will be identified. Operational and ridership data for existing routes will be compiled, as well as any existing transit infrastructure and facilities, such as stops, shelters, and turnouts. Existing connections between pedestrian/bicycle facilities and transit facilities will also be identified. The inclusion of transit information will provide a complete transportation dataset of the existing conditions in the area.

The analysis will identify any existing deficiencies in the operations of the transportation network in the area, and will also identify any potential deficiencies based on existing development patterns and committed development. The existing conditions will provide a basis for developing alternative scenarios later in the process.

2.1.4. Economic Development

The Consultant will analyze economic factors and identify major market trends to understand the drivers of growth in the City. This growth will be analyzed in the context of Central Texas to understand the City's competitive position in the region. In addition, we will relate these growth trends to demand for new housing by type (rental vs. for-sale, attached vs. detached) and non-residential product type (retail, office, industrial, etc).

2.1.5. Housing

The Consultant will assess the City's existing housing stock in terms of occupancy, supply, affordability, and quality. Furthermore, based on demographic projections, the Consultant will analyze the size and growth of the market by income, household type, tenure, and other key metrics. We will then relate that growth back to potential product types including single-family homes, townhomes, and apartments. In addition, we will frame this analysis within the larger context of the regional housing market to understand Leander's competitive housing opportunities.

2.1.6. Health and Human Services

Working with local and regional public health professionals, the Consultant will employ a community health assessment tool which will augment the findings set forth in the Community Health Assessment and Community Health Improvement Plan. Through this exercise, we will assess the attributes of the community to determine the health impacts of the built and natural environment on citizens as well as the presence or effectiveness of various programs.

Key to this effort will be identifying connections between CHA findings and several community development factors, including, but not limited to, the following: the economy; the environment; access to nutritious foods; educational opportunities and attainment; opportunities for leadership; walkability and multi-modal transportation options; access to parks and recreation facilities; availability of programs; crime rates. The results of the assessment will allow for a more integrated approach to plan development to ensure the range of recommended policies work in concert to advance the City's efforts to become a healthier community that people choose to live, work and visit.

2.1.7. Public Buildings and Facilities

The Consultant will examine the City's plans for facilities and services. Following a review of relevant plans, the Consultant will discuss the adequacy of existing and planned facilities with City staff and representatives of each service provider during stakeholder interviews so that an inventory can be confirmed and any existing deficiencies in the systems can be better

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understood.

This analysis will be combined with the additional Comprehensive Plan elements that are already updated or in the process of being updated including the parks, recreation and open space element, utilities element and public safety element. The Consultant will work with City staff to ensure seamless integration of all elements into the updated State of the City Assessment.

2.2. COMMUNITY SURVEY

The Consultant will work with the Client to develop the survey within MindMixer to gain community feedback regarding particular issues and opportunities facing Leander.

2.3. STAKEHOLDER INTERVIEWS

In conjunction with the City Assessment, the Consultant team will interview key stakeholders, such as property owners, business owners, area residents, representatives of the local organizations, developers, etc. The primary purpose of the interviews is to gather data to augment the assessment, building on the information the team has gleaned from GIS mapping and analysis, plan and report reviews, observations in the field, and input from staff. The Consultant will conduct up to 6 interviews with key stakeholders (or stakeholder groups). The list of interviewees will be determined by the Client with input from the Consultant. Interviews will be in person in a location selected by the City, and will be scheduled by the Client to occur in a one-day period as consecutive one-hour sessions.

2.4. TECHNICAL MEMORANDUM: "STATE OF THE CITY"

The Consultant will prepare a "State of the City" report, a technical memo that describes the existing conditions in the study area, the emerging trends, and the findings of the assessment of such existing conditions and trends. The report will be supported by the maps and model results generated in this phase. The Client and Advisory Committee will review this memo prior to completion, as they will use it as a basis for the presentation and discussion at Community Meeting #1.

2.5. ADVISORY COMMITTEE MEETING #2 AND COMMUNITY MEETING #1: COMMUNITY VISION AND GOALS

The Consultant will conduct the second Advisory Committee meeting to present current issues and opportunities. More importantly, the Consultant will engage the Committee in an exercise to articulate the Vision and Objectives that will guide the development of the Plan. The second Advisory Committee Meeting will be held immediately preceding the first community meeting.

The first community meeting will bring together a diverse group of stakeholders including local elected officials, key institutional leaders, and members of the general public for a public meeting to develop an initial vision of the future for Leander and determine a set of sound, community-supported goals. The goals preliminarily defined in existing adopted plans will be used as a starting point. To be realistic, such goals must be refined with a keen awareness of the realities of the study area. The agenda will take attendees from the big-picture view of the City through a focused look at subareas with a discussion of the issues and opportunities. The meeting will culminate in an interactive session using live polling technology to update, refine, and prioritize the goals through an expression of values, which will inform the direction of the plan.

PHASE 2: DELIVERABLES

- Community Survey (Developed in MindMixer)
- State of the City Technical Memorandum (Developed in Word, electronically delivered as a PDF)

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- Supporting GIS Maps (Developed in ArcGIS 10.1, Service Pack 1/ ArcGIS 10.2, electronically delivered as PDFs, ArcGIS shape files and mpks)
- Meeting Materials
 - Meeting Agenda
 - Meeting Handouts
 - Display Boards (maps, concepts and supporting imagery)
 - PowerPoint Presentation
 - Meeting Notes

PHASE 2: MEETINGS (UP TO 2 DAYS ON-SITE)

- Client Meeting
- Advisory Committee Meeting #2
- Community Meeting #1

At least two Project Team members, including the Project Manager, will be present at all meetings. The Project Team will not change without prior consent of the City.

PHASE 2: CLIENT RESPONSIBILITIES

City Staff will be expected to be involved in the process. The responsibilities of the staff include but are not limited to the following:

- Project coordination – Participate in project coordination efforts.
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PHASE 3: CONCEPT PLAN DEVELOPMENT

PHASE 300

3.1 INITIAL CONCEPT PLAN

Based on the results of Phase 2 and community values as expressed in the goals and objectives during the first Community Meeting, the Consultant will develop an initial Concept Plan to depict an alternative policy direction. This will be the first concept and will be used as a starting point in the community meeting described below. Up to three land use concepts will be developed.

3.2 ADVISORY COMMITTEE #3 AND COMMUNITY MEETING #2: SHAPING LEANDER'S FUTURE WORKSHOP

This workshop is a two-day event during which the Consultant will work with City staff,

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Advisory Committee members, and key stakeholders to review and evaluate the draft concept plan(s) prepared by the Consultant. The remainder of the workshop, which will be open to the public, will be devoted to the refinement of a preferred concept.

The workshop will begin with a brief meeting with the Advisory Committee (#3) to get initial feedback on the preliminary concepts and will conclude with a community drop-in session to solicit feedback from citizens, property owners, business owners and others interested in the future of the City.

3.3 CONCEPT PLAN REFINEMENT AND SUBAREA PLANS

The Concept Plan that is developed in 3.1 and evaluated in 3.2 will be refined. In many cases, one of the most helpful ways to communicate the spirit of the overall plan is by demonstrating the results of putting it into action. To this end, the team will prepare up to three conceptual subarea plans. Each subarea plan will illustrate development design at that specific location, representing the physical manifestation of the policies implied in the Concept Plan. At this level of detail, the team can graphically express more specific ideas pertaining to building form, mixture of uses, infill development approaches, street pattern and streetscape, parks and open space, etc.

PHASE 3: DELIVERABLES

- Draft Concept Plan(s) (delivered in native software format and PDF)
- Preferred Concept Plan (delivered in native software format and PDF)
- Up to three (3) Subarea Concepts (delivered in native software format and PDF)
- Meeting Materials
 - Meeting Agenda
 - Meeting Handouts
 - Display Boards (maps, concepts and supporting imagery)
 - PowerPoint Presentation
 - Meeting Notes

PHASE 3: MEETINGS (UP TO 2 DAYS ON-SITE)

- Client Meeting
- Advisory Committee Meeting #3
- Community Meeting #2

At least two Project Team members, including the Project Manager, will be present at all meetings. The Project Team will not change without prior consent of the City.

PHASE 3: CLIENT RESPONSIBILITIES

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- Meeting facilitation – Participate in Community Meetings by helping the Consultant with facilitation, preparation and distribution of agendas, management of attendees (i.e., sign-

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in table), etc.

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PHASE 4: POLICY RECOMMENDATIONS & IMPLEMENTATION STRATEGIES

PHASE 400

4.1 POLICY FRAMEWORK & IMPLEMENTATION STRATEGIES

Based on goals, objectives, and the details of the concept plan and related subarea plans, the Consultant will draft a set of policy recommendations and strategies tailored to meet the needs and expectations of the City. The team will refer to precedents throughout the US for best practices and lessons learned to ensure a policy framework that is up-to-date yet meaningful for this region given its unique circumstances. The array of policies to be addressed will include but not be limited to economic development that can then fuel the creation of additional jobs and tax base; housing location and affordability; transportation and adequate access to jobs and services; natural resource protection; and infill development and redevelopment.

The recommended policies will be supported by an updated set of implementation strategies documented in the form of a "toolbox," which will provide a menu of techniques to be considered as the City moves into the plan implementation stage. The toolbox will include an assortment of regulatory and incentive-based tools, capital needs, funding options, model ordinance provisions, programs that foster local government collaboration, and programs that attract private investment, particularly catalyst projects.

Following staff review of the policy framework and implementation strategies, the Consultant will conduct a day-long work session with the City to discuss, refine and prioritize recommendations and implementation strategies. The purpose of the work session is to develop real, creative solutions in a focused session with key decision makers present.

4.2 ACTION PLAN

The Consultant will further assist the City by creating an action plan that identifies the implementation strategies to be carried out in the short term, and indicating possible timeframes for the remaining strategies to be undertaken in the long term. The action plan will provide specific strategies on critical needs regarding updates to various plans and zoning, subdivision regulations, design guidelines, and recommended enforcement provisions, as well as a listing of potential design- and market-based incentives appropriate for the City. The Consultant will name the types of entities that would be best suited to execute each strategy listed, so that responsibilities can be assigned (or assumed) at the local and regional levels. The worksheet will serve as an effective tool in not only guiding the implementation activities but in monitoring progress and recording successes.

Within the action plan, the Consultant will identify up to five major strategic initiatives to be led by the City. The initiatives will be selected conferring with City staff and elected and appointed officials. The initiatives will focus on critical needs regarding capital improvements, modifications to existing regulations, and potential design- and market-based incentives appropriate for the City.

4.3 ADVISORY COMMITTEE #4 AND COMMUNITY MEETING #3: PUTTING THE PLAN INTO ACTION

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This workshop is a one-day event during which the Consultant will present the Policy

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Framework and Action Plan to the Advisory Committee members and the public. Attendees will be provided an opportunity to discuss specific recommendations and implementation strategies with the project team. Input received will be documented and inform the City's prioritization of implementation activities after plan adoption. The Workshop will conclude with a meeting with the Advisory Committee (#4) to get feedback on recommendations and implementation strategies taking into consideration input provided by the public.

PHASE 4: DELIVERABLES

- Draft Policy Framework and Implementation Strategies (prepared in Word, electronically delivered as a PDF)
- Meeting Materials
 - Meeting Agenda
 - Meeting Handouts
 - Display Boards (maps, concepts and supporting imagery)
 - PowerPoint Presentation
 - Meeting Notes

PHASE 4: MEETINGS (UP TO 3 DAYS ON-SITE)

- Client Workshop
- Advisory Committee Meeting #4
- Community Meeting #3

At least two Project Team members, including the Project Manager, will be present at all meetings. The Project Team will not change without prior consent of the City.

PHASE 4: CLIENT RESPONSIBILITIES

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PHASE 5: PLAN DOCUMENTATION

PHASE 500

5.1 UPDATED COMPREHENSIVE PLAN DOCUMENTS

The Consultant will produce the plans and companion document to provide the Client and others with a suite of products that will facilitate plan implementations:

5.1.1 First Draft Report – Client/Advisory Committee Review

This report will present the plan in a single document with a detailed appendix that contains technical memos, maps, and other pertinent information gathered or produced during the process. The first draft will be intended for review by the Client and Advisory Committee. The following elements will be included in the Plan:

- Demographics
- Land Use
- Transportation
- Economic Development
- Housing
- Health and Human Services
- Public Building and Facilities

5.1.2 Second Draft Report – Public Review

A second draft of the full report will incorporate feedback on the First Draft and will be delivered to the Client in electronic form for distribution via the web site. Following an adequate review period, the Client will compile a single set of public review comments and deliver it to the Consultant team.

5.1.3 Plan Presentation

A PowerPoint presentation will be prepared that gives an overview of the plans and highlights various sections contained within it. More importantly, the presentation will generally explain the intended use of the document by the City and any others who will actively participate in the implementation of the plans. This presentation will be used by the Consultant team in making a presentation to the elected and appointed officials in one joint meeting as part of the formal adoption process (see 5.1.2).

5.1.4 Plan Adoption

The Consultant will attend up to two separate meetings or one joint meeting to assist the Client in making presentation(s) to the Planning Board and City Council as part of the adoption process. An updated PowerPoint presentation that summarizes the updated Plan will be prepared for use by the Client and/or Consultant. Following the meeting, the PowerPoint presentation will be delivered to the Client as a PDF for uploading onto the City's web site.

5.1.5 Final Report

The final report will incorporate feedback from the adoption meetings and will be delivered to the Client in electronic form for distribution via the web site.

5.2 EXECUTIVE SUMMARY

One key to the successful implementation of any plan is the effective communication of it after the planning process. Public education efforts designed to rally support for both plans are key to this communication effort. Therefore, a brief summary of the plan will be prepared. The Consultant will design this illustrative piece so that it can be produced by the Client in a cost-effective manner. The end product will serve as a marketing tool for the implementers of the plans, helping them "sell" others on the vision and methods for achieving it.

PHASE 5: DELIVERABLES

- First Draft Report (prepared in InDesign, delivered as a PDF and with InDesign files)

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- Second Draft Report (prepared in InDesign, delivered as a PDF and with InDesign files)
- 20 bound hard copy submissions of Final Report (prepared in InDesign, electronically delivered as a PDF and with InDesign files)
- Plan Presentation (prepared in PowerPoint)
- 20 hard copy submissions of Executive Summary (prepared in InDesign, electronically delivered as a PDF and with InDesign files)
- Meeting Materials
 - Meeting Agenda
 - Meeting Handouts
 - Display Boards (maps, concepts and supporting imagery)
 - PowerPoint Presentation
 - Meeting Notes

PHASE 5: MEETINGS (UP TO 2 DAYS ON-SITE)

- Client Meeting
- Advisory Committee Meeting #5
- Elected and Appointed Officials Joint Meeting

ADDITIONAL MEETINGS IF NEEDED (INCLUDED IN FEE)

- Advisory Committee Meetings 6-8
- Second presentation to Elected/Appointed Officials

At least two Project Team members, including the Project Manager, will be present at all meetings. The Project Team will not change without prior consent of the City.

PHASE 5: CLIENT RESPONSIBILITIES

City Staff will be expected to be involved in the process. The responsibilities of the staff include but are not limited to the following:

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CLIENT'S RESPONSIBILITY

- A. City Staff will be expected to be involved in the process. The responsibilities of the staff include but are not limited to the following:

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- Project coordination – Participate in project coordination efforts.
 - Input – In addition to gathering data and documents, Staff will act as a member of the project team by providing input throughout the process regarding existing conditions, issues, opportunities, concept plans, recommendations and implementation strategies.
 - Meeting space – Secure meeting space for all presentations, meetings with staff, Advisory Committee Meetings, Community Meetings and Workshops and other meetings that are required as part of this planning process. Staff will also set up these facilities in preparation for each meeting in accordance with guidelines established by the Consultant. The Client will be responsible for paying any fees associated with reserving and using meeting space.
 - Meeting facilitation – Participate in Community Meetings by helping the Consultant with facilitation, preparation and distribution of agendas, management of attendees (i.e., sign-in table), etc.
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 - Dissemination of information – Meeting notices, plan details, and other information that is disseminated to the public, stakeholders, interested groups and individuals, etc. shall be the responsibility of Staff. The Consultant will provide information at the appropriate times in PDF format so that it may be utilized by Staff in a variety of ways, such as uploading onto the City's web site and printing.
- B. The Client shall provide full information at its disposal/available that is relevant to the project in the format requested. (Note: If requested by the Client, all documentation provided by the Client for purposes of this study shall be returned to the Client at the completion of this study).

PROJECT TEAM MEMBERS

- Meg Nealon- Partner-in-Charge
- Kate Pearce- Project Manager
- Heth Kendrick- Project Staff
- Brian Dench- Project Staff
- Jake Petrosky- Project Staff
- Rick Mobley- Project Staff
- Nicholi Arnio- Project Staff
- Beverly Davis- Project Staff

The Project Team will not change without prior consent of the City.

SERVICES NOT INCLUDED IN THE SCOPE OF SERVICES IN THIS CONTRACT

Additional services shall be provided only when authorized in writing by the Client and shall be paid for by the Client as hereinafter provided. Any work required in addition to that outlined under Scope of Services or additional work requested by the Client, but not required to secure regulatory agency permits, will be billed on an hourly basis according to the attached rate schedule or a negotiated lump sum fee. Extra work will include, but not be limited to:

- A. Meetings other than those identified in Scope of Services.
- B. Interviews other than those identified with assistance from Client, or interviews in excess of the interviews identified in the Scope of Services.
- C. Conduct in-depth review/critique of existing plans and regulations. While such documents will be reviewed and utilized as appropriate, assessments of each (written or verbal) are not included in this Scope of Services. However, an update to the Comprehensive Plan is included in the

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- D. In-depth study of small areas or corridors identified as “key areas” during the process, though each of these areas will be studied at a level sufficient to prepare conceptual development scenarios. Excluded will be detailed site planning and acknowledgement of specific site features and constraints often documented through field survey.
- E. Data creation (Note: All data used for the project shall be limited to data that is readily available and easily obtained from City, County and other sources at no additional cost to the Consultant. Data produced in order to fulfill the scope of work is excluded.)
- F. Detailed small area plans, which typically involve a separate public planning process to study all aspects addressed in a jurisdiction-wide comprehensive plan but at a greater level of detail than possible in a jurisdiction-wide comprehensive planning process.
- G. Detailed design or construction documents.
- H. Detailed traffic engineering plans or conduct detailed transportation planning study or traffic impact analysis.
- I. Comprehensive review of, or the development of, an individual Traffic Impact Analysis for any proposed development.
- J. Draft new development codes/ordinances (zoning, subdivision, etc.), or draft specific code/ordinance language to be added. (Recommended solutions to regulatory obstacles and model language, however, will be provided.)
- K. In-depth review or updating of existing municipal plans not included in the scope.
- L. Design guidelines other than those that might be included to further explain a Plan recommendation.
- M. Architectural design or standards.
- N. Assessment of the structural condition of buildings.
- O. Assessment of condition of government facilities.
- P. Detailed streetscape plans.
- Q. Changes to the organization of the Plan following the City’s approval of the outline.
- R. Fiscal Impact Analysis
- S. GIS coordination or support other than that which is included in the Scope of Services.
- T. GIS training or other training of City’s staff
- U. Surveys pertaining to cultural or natural resources (data available through Federal, State, and local agencies will be utilized).
- V. Revisions to the plan after the one final set of input has been delivered and utilized to make final revisions and create the final version of the plan
- W. Inflation Index Analysis
- X. Park Infrastructure Cost Estimates
- Y. Detailed design development drawings
- Z. Construction document drawings
- AA. Construction details
- BB. Site engineering documents
- CC. Specifications
- DD. Traffic study and analysis
- EE. Landscape plans
- FF. Irrigation plans
- GG. Stormwater management design and engineering
- HH. Architectural design and standards
- II. Additional GIS mapping service beyond that specified in the scope, including digitizing data
- JJ. Wetland identification and mitigation
- KK. In-depth branding study and branding materials beyond that specified in the scope

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CONTRACT FEE SUMMARY

DESCRIPTION	PHASE	FEE
Project Initiation	100	\$15,301
City Assessment	200	\$37,450
Concept Plan Development	300	\$44,940
Policy Recommendations & Implementation Strategies	400	\$31,030
Plan Documentation	500	\$19,260
	Total not to exceed:	\$147,981

Invoicing will be in accordance with the Standard Terms and Conditions of Contract, incorporated into this contract by reference herein and attached as Exhibit A. Provided with each phase in the Scope of Services above is an approximate percentage of the total effort. Monthly invoices will be based on percent complete consistent with these percentages. Only the completed portions of a phase shall be invoiced; however, some phase work may overlap and such work may be invoiced simultaneously on an invoice. The Client may retain up to 10% of the total fee until the final deliverables are provided in accordance with this Scope of Services and approved by the Client.

Direct project expenses (travel, printing, etc.) shall be included in the lump sum amount. Such expenses are limited to those required to accomplish the tasks described in the Scope of Services. Printing of draft or final documents (reports, maps, meeting handouts, etc.) in excess of the number specified in the Scope of Services, mailing/postage costs, and facility fees are specifically excluded and all such costs shall be the responsibility of the Client.

All work will be performed according to our Standard Terms and Conditions of Contract, incorporated into this contract by reference herein and attached as Exhibit A. The timeframe for this project shall be approximately 8 months. At project initiation, a project schedule will be developed that will be generally based on the schedule provided in the project proposal as well as Client input and incorporated into the work plan (see Task 1.1). Such schedule may be modified from time to time at the Client's request to avoid holidays, allow time for adequate public meeting notice, etc. Any schedule delays resulting from any circumstance, whether such circumstance is associated with the project defined in this Agreement or not, shall not in any way affect the Client's payment of fees to the Consultant in accordance with the terms specified in this Agreement as well as in Exhibit A, Standard Terms and Conditions of Contract, attached to this Agreement.

If this proposal is acceptable and outlines our complete agreement, please signify your acceptance in the space provided and return both originals to our office for execution by LandDesign. This document will then constitute our complete agreement.

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Dallas TX

Thank you for the opportunity to assist you with this project.

LandDesign, Inc.

By: _____
Margaret Nealon, AICP, RLA for LandDesign, Inc.
Partner

Date: _____

City of Leander

By: _____
Kent Cagle, City of Leander

Date: _____

Washington DC

Charlotte NC

Raleigh NC

Dallas TX

**EXHIBIT A
LANDDESIGN, INC.
STANDARD TERMS AND CONDITIONS OF CONTRACT**

Contract Billing: Billing for contracts shall be on a monthly basis. Invoices are due upon receipt. Payment not received within thirty-one (31) days of invoice date will be subject to a service charge in the amount of the lower of one and one-half percent (1.5%) per month or such lesser rate allowed by law. The City may dispute invoices pursuant to Section 2251.042, Texas Government Code. If account is not paid per the terms of this agreement, LandDesign is entitled to recover any and all reasonable attorney fees associated related to the collection from client. In addition, LandDesign reserves the right to suspend all work in any case where invoices remain unpaid more than sixty (60) days from issue.

Reimbursable Expenses: Expenses incurred by LandDesign solely in the interest of the project are included in the project fee. Reimbursable expenses shall include but not be limited to all shipping and mailing costs, courier services, travel, long distance telephone and facsimile transmittals, supplies, printing and photographic reproductions. All permitting fees as well as project related expenses incurred by consultants and billed to LandDesign are expressly excluded from inclusion in the project fee. Permitting fees and consultant costs shall be billed to the Client at cost plus 1.1 multiplier. All reimbursable expenses shall be billed monthly and shall be payable upon the same terms and conditions applicable to labor and fee invoices due LandDesign, as set forth above.

Overtime Charges: LandDesign shall be paid overtime in any case in which the Client requests work to be complete prior to previously agreed upon completion date.

Commencement of Work: Client acknowledges that the fees of LandDesign set forth in this Contract contemplate prompt commencement by LandDesign of the work to which such fees relate. Accordingly, LandDesign shall have the unilateral right to terminate all or any portion of this Contract to the extent Client does not authorize LandDesign to promptly commence and complete performance of the work to be performed by LandDesign hereunder. LandDesign reserves the right to renegotiate contract fees if work is not completed within two years of the original date of this contract.

Additional Services: Any work required in addition to that detailed in this Contract will be billed on an hourly basis according to our then current rates or a negotiated lump sum fee. Extra work will include, but not be limited to: Changes in the Scope of Services; Changes made in response to Client specified program changes; Changes due to revision of site/base information provided by others or updates to data/information provided by the Client or others once the data/information approved for use in the project has been acquired and utilized in the appropriate phase of the project; and modifications requested by the Client subsequent to prior approval.

Project Team Hourly Rates: Our hourly rates are as follows:

Meg Nealon (LDI)	\$200.00/Hour	Brian Dench (LDI)	\$180.00/Hour
Kate Pearce (LDI)	\$130.00/Hour	Cara Murph (LDI)	\$50.00/Hour
Jake Petrosky (LDI)	\$130.00/Hour	Rick Mobley (RS&H)	\$238.00/Hour
Heth Kendrick (LDI)	\$160.00/Hour	Nicholi Arnio (RS&H)	\$173.00/Hour
		Beverly Davis (RS&H)	\$223.00/Hour

All billing rates are subject to periodic adjustments at the discretion of LandDesign.

Ownership and Use of Documents: Upon payment in full of all sums due LandDesign by Client for a particular phase pursuant to this Agreement, the drawings, sketches, specifications, and other contract documents prepared by LandDesign for such phase ("the Documents") shall become the property of Client, provided: (1) the Documents shall not be used by Client or any third party on any other project without the prior express written consent of LandDesign; (2) Client acknowledges that any machine readable or electronic copies of the Documents may vary or contain information different from physical copies and that LandDesign, will have no responsibility for such differences; (3) Client warrants that it will not make, allow or authorize any use to be made of the Documents which is in violation of any statute, rule, regulation or code or which is in any way illegal or contrary to law; and (4) To the extent authorized by law, Client agrees to indemnify and hold LandDesign harmless from and against all liability, damage or claims, including reasonable attorneys' fees, resulting from any claim against LandDesign by any third party arising out of the use of any of the Documents contrary to the provisions of this Agreement.

Governing Body: This Agreement shall be governed by, interpreted, construed, and enforced by the laws of the State of Texas without regard to its conflicts of laws statutes. Venue for any disputes, claims or suits shall lie exclusively in Williamson County, Texas or in the case of federal claims, the United States District Court, Western District of Texas, Austin Division.

Termination: Contract may be terminated at any time, by either LandDesign or Client, by notification in writing. In the event of termination, LandDesign shall be paid for services performed and reimbursable expenses incurred to the date of notification. Any expenses incurred by LandDesign due to termination of project by Client shall be paid by Client.

Acts of God and Third Parties: Notwithstanding any provision contained in this Contract to the contrary, LandDesign shall not be deemed in default hereunder, or otherwise liable or responsible, if any failure of its performance shall be due to any governmental regulations or controls, the need to obtain any governmental approvals, inability to obtain any material or service, strike, act of war, act of God, act of any third party, or any other cause whatsoever beyond the reasonable control of LandDesign, and the time for performance by LandDesign shall be extended by the period of delay resulting from or due to any of such causes.

General Provisions: LandDesign assumes no liability arising from this Contract Proposal or the work involved except in so far as it is liable for its acts or the acts of its employees. It is our policy to complete our services promptly and within established schedules, however, there is no expressed or implied guarantee as to when plans will be approved by the applicable governing agencies. We will progress our work in an expeditious and professional manner at all times.

Liability: LandDesign's liability for any and all injuries, claims, losses, expenses, damages or claim expenses arising out of this agreement, from any cause or causes, shall not exceed the total amount of \$50,000 or the amount of LandDesign's

fee, whichever is greater. Such causes include, but are not limited to, LandDesign's negligence, errors, omissions, strict liability, breach of contract or breach of warranty.



**City Council Meeting
December 18, 2014**

Executive Summary

Agenda Subject: Discussion and possible action to appoint the members of the Comprehensive Plan Steering Committee.

Background: The City Charter requires the City to prepare a comprehensive plan and to review and consider amendments every five years. The last time the plan received a major update was in 2009. The proposed FY 2014-15 budget includes funds for consulting services to update the comprehensive plan.

Council discussed the process for the comprehensive plan update with the Planning and Zoning Commission at the August 7, 2014 work session and adopted a plan for the update at its October 2, 2014 meeting. At the October 2, 2014 meeting Council directed staff to form a steering committee to work with the consultant selected for the project to include members from several standing boards and commissions and other community representatives. The Council specifically recommended including members from the following groups:

- City Council - 2 members
- Planning & Zoning Commission - 2 members
- Parks & Recreation Advisory Board - 1 member
- Public Arts Commission - 1 member
- Tax Increment Reinvestment Zone - 1 member
- Economic Development Committee - 1 member
- Leander Independent School District - 1 member
- Austin Community College District - 1 member
- Leander Chamber of Commerce - 1 member

Staff requested members from each of these groups and the list of proposed members is attached. Council will need to select the two members from its membership to serve on the committee.

The committee will meet with the consultant and staff beginning in January with a project kick-off meeting. The date has not yet been determined.

Origination: Tom Yantis, Assistant City Manager

**Financial
Consideration:** None

Attachments:

1. Proposed membership for the Comprehensive Plan Steering Committee

Prepared By: Tom Yantis, Assistant City Manager

Comprehensive Plan Steering Committee

City Council:

- 1.
- 2.

Planning and Zoning Commission

1. Joel Wixson, Commissioner, Place 2
2. Jason Anderson, Commissioner, Place 3

Parks Board

1. Jayne Serna, Board Member

Public Arts Commission

1. Nancy Knickerbocker-Penick, Commissioner

TIRZ Board

1. Virginia Naumann, Board Member

Economic Development Committee

1. Michael Cook

Leander ISD

1. Will Streit, Board Member, Place 7, Board of Trustees

Austin Community College District

1. Dr. Vic Villarreal, Vice Chair of the Board and Trustee of Austin Community College District

Leander Chamber of Commerce

1. Bridget Brandt, President



Executive Summary

December 18, 2014

Subject: Consider Change Order to purchase one (1) additional vehicle for Building Inspections Division.

Background: The City purchased twelve (12) new fleet vehicles earlier this year as fleet replacements and for new positions. Subsequent to adoption of the FY 2014-15 Budget, it is necessary to hire an additional Building Inspector due to the continued increase in building activity beyond projections at the time the budget was prepared. Consequently, the purchase of an additional ½ ton truck is necessary.

In September 2014, Solicitation #S15-001 for Police Pursuit and Citywide Fleet Vehicles was issued for the 12 fleet vehicles approved in the budget. Awards for the FY14/15 fleet schedule were made from this solicitation. Grapevine DCJ, LLC in Grapevine, Texas was the low bidder on Item #9, ½ ton, 4-door, 2WD truck, white. The bidder has agreed to honor their pricing from this bid.

Financial Consideration: \$23,609 plus delivery fee, if applicable (01-51-7000)

Recommendation: Staff recommends approval of Change Order with Grapevine DCJ, LLC in the amount of \$23,609 plus delivery fee for the purchase of one (1) half-ton Dodge Ram 4-door, two wheel drive truck.

Attachments: Award Schedule from Solicitation #S15-001.

Prepared by: Robert Powers, Finance Director
Joy Simonton, Purchasing Agent

City of Leander Vehicle Award Schedule FY 14/15

ITEM #	NEW OR REPLACEMENT	VEHICLE DESCRIPTION	STAFF TITLE	VEHICLE BEING REPLACED	VENDOR	MAKE	MODEL	YEAR ('13, '14 or '15)	DAYS TO DELIVER	VEHICLE PRICE
#1 PD	NEW	PPV 2WD SUV - White	Patrol		Caldwell Country Ford-Chevy	Chevy	Tahoe	2015	90	\$29,116.00
#2 PD	NEW	PPV 2WD SUV - White	Patrol		Caldwell Country Ford-Chevy	Chevy	Tahoe	2015	90	\$29,116.00
#3 PD	REPLACEMENT	PPV 2WD SUV - White	Patrol	L-2	Caldwell Country Ford-Chevy	Chevy	Tahoe	2015	90	\$29,116.00
#4 PD	REPLACEMENT	PPV 2WD SUV - White	Patrol	L-7	Caldwell Country Ford-Chevy	Chevy	Tahoe	2015	90	\$29,116.00
#5 PD	REPLACEMENT	PPV 2WD SUV - White	Patrol	L-11	Caldwell Country Ford-Chevy	Chevy	Tahoe	2015	90	\$29,116.00
#6 PD	REPLACEMENT	PPV 2WD SUV - White	Patrol	L-19 (This may stay for COP Program)	Caldwell Country Ford-Chevy	Chevy	Tahoe	2015	90	\$29,116.00
#7 PD	NEW	Mid-sized SUV - 4-door, Grey	Victims Services		Prestige Ford	Ford	Interceptor (Explorer)	2015	90-120	\$25,500.00
#8 PW/ENG	NEW	1/2 Ton Pick-Up Truck with 4-Door Crew Cab, 4WD - White	Stormwater Inspector		Grapevine Dodge	Dodge	Ram	2015	60-75	\$25,906.00
#9 PW	NEW	1/2 Ton Pick-Up Truck with 4-Door Crew Cab, 2WD - White	WW Superintendent		Grapevine Dodge	Dodge	Ram	2015	60-75	\$23,609.00
#10 PW	NEW	3/4 Ton Pick-up Truck, 2-Door Regular Cab and Utility Bed - White	WW Treatment Plant Operator		Caldwell Country Ford-Chevy	Ford	F250	2015	120-150	\$24,872.00
#11 FIRE	REPLACEMENT	1/2 Ton Pick-Up Truck with 4-Door Crew Cab - Red Special Service Vehicle (SSV) Package, 4x4	Inspector Vehicle (Shared)	Expedition	Grapevine Dodge	Dodge	Ram	2015	75	\$25,507.00
#12 FIRE	REPLACEMENT	1/2 Ton Pick-Up Truck with 4-Door Crew Cab - Red Special Service Vehicle (SSV) Package, 4x4	Asst. Chief Stuart Heater	N/A	Grapevine Dodge	Dodge	Ram	2015	75	\$25,507.00
									TOTAL	\$325,597.00



Executive Summary

December 18, 2014

Council Agenda Subject: Consideration of a Professional Services Agreement and Task Order HVJ-01 with HVJ Associates for professional engineering services to complete a Pavement Management System with the option of a Sign Inventory and Retro-reflectivity Survey.

Background: The proposed Pavement Management Program and Sign Inventory would be the City's first formal assessment of the entire inventory of City-maintained streets (approximately 172 centerline miles) and all Regulatory and Warning classified signs (approximately 2,600 signs).

Services include:

1. Project Management – project kickoff meeting, monthly progress reports
2. Pavement data collection & processing – visual pavement condition surveys to establish pavement ratings or scores
3. An Infrastructure Maintenance Management Program (IMMP) with Budgeting Module – a database of all street segments for multi-year budget analysis
4. Sign Data Collection, Processing and Retroreflectivity Measurements – locate signs with coordinates, photograph each sign, and measure retroreflectivity readings.
5. Software Training for City Staff – training to use and update the IMMP software
6. 5-Year Capital Improvement Plan (CIP) Report with rehabilitation and maintenance strategies, with an emphasis on arterial and collector streets.

The proposed total amount (\$166,748.00) is comparable to other studies HVJ has prepared for the City of Round Rock and includes additional items 5 & 6. Fees for the Pavement Management System and the Sign Inventory are \$86,886.00 and \$79,862.00, respectively. A second pavement and sign study is suggested 5 years after this one.

Origination: Patrick A. Womack, P.E., Public Works Director

Financial Consideration: \$166,748.00, from the General Fund, Public Works #01-21-5600 (Contract Labor)

Recommendation: Staff respectfully requests authorization for the City Manager to negotiate and execute the Standard Professional Services Agreement for a Pavement Management System and the option for a Sign Inventory and Retro-reflectivity Survey.

Attachments: Standard Professional Services Agreement,
Task Order HVJ-01 (including HVJ Proposal)

Prepared by: Patrick A. Womack, P.E., Public Works Director

PROFESSIONAL SERVICES CONTRACT

This Professional Services Contract ("Contract") between the City Of Leander ("OWNER") and _____, ("Professional"), collectively referred to as the "Parties", is an agreement for the Professional to provide the OWNER with the professional services described in this Contract, for and in consideration of the payment terms and performance obligations herein described. The effective date of this Contract shall be the date set forth on the signature page.

Article 1. Work to be Provided

(a) Professional shall provide Work (the "Work") to OWNER under individual assignments. A general description of the Work required by this Contract includes water and wastewater utility engineering services, design and studies of hydrology and hydraulics, and design and studies of transportation infrastructure. OWNER will provide a written Task Order, including a written Statement of Work describing the tasks to be performed, to Professional for the particular Task and a specific price or a formula by which the price can be determined. No Work is authorized unless authorized representatives of both parties sign such a Task Order. This Contract does not guarantee a minimum amount Professional will be paid or a minimum number of Task Orders.

(b) Notwithstanding anything to the contrary contained in this Agreement, OWNER and Professional agree and acknowledge that OWNER is entering into this Agreement in reliance on Professional's special and unique abilities with respect to performing the Work, and Professional's special and unique abilities with respect to engineering services. The Professional accepts the relationship of trust and confidence established between it and the OWNER by this Agreement. Professional covenants with OWNER to use its best efforts, skill, judgment, and abilities to perform the Work and to further the interests of OWNER in accordance with OWNER's requirements and procedures, in accordance with the standards of Professional's profession or business. Professional represents that there are no undisclosed obligations, commitments, or impediments of any kind that will or could taint, limit or prevent performance of the Work.

(c) Changes In Scope of Work. OWNER may request additional Work or changes in the Work as the project progresses. If so, changes in the Scope of Work shall be initiated by a written change order signed by an authorized representative of each party. The change order shall describe the Work to be added, changed or deleted and shall state the additional cost or cost reduction and schedule changes, if any. Verbal change orders shall have no effect, except in cases of an emergency threatening personal injury or property damage. The terms and conditions of this Contract may be modified only by a writing signed by an authorized representative of each party.

Article 2. Contract Documents

(a) General Definition. The Contract Documents, in order of precedence consist of:

- ☞ All written Change Orders executed after the effective date of this Contract by an authorized representative of each Party;

- ☞ Each Task Order executed pursuant to this Contract by an authorized representative of both parties;
- ☞ The Statement of Work attached to each Task order;
- ☞ This Contract; and
- ☞ Any other documents specifically identified as Contract Documents in the General Conditions.

(b) Exclusion from Contract Documents. No term, condition, or provision of any Task Order or other document that conflicts with the terms and conditions contained in this Professional Services Contract will be considered part of the Contract Documents, or otherwise valid, unless expressly provided and accepted in writing by the OWNER.

Article 3. Term

This Contract is for a three (3) year period subject to extension as provided in this Article, but not to exceed a maximum five (5) year period. The primary term begins upon execution of this Contract by an authorized representative of the OWNER and expires in three years. OWNER shall thereafter have the option to extend the contract for up to, but not to exceed, two extended terms of one year each. Any extension by the OWNER shall be effective upon 30 days notice to Professional prior to the end of the then current term. The extension shall be deemed automatically accepted by Professional unless Professional refuses the extension by written notice to OWNER within ten (10) days after the Professional receives the notice of extension from the OWNER.

Article 4. Schedule

Time is an important element of the performance of this contract. Professional will put forth its best efforts to complete the Work in accordance with any deadlines to which the parties agree in any Task Order. Professional agrees to perform all obligations and render the Work set forth in this Contract or any Task Order issued pursuant hereto in accordance with the any timelines included in the Statement of Work, except as the Parties may hereafter mutually agree in writing otherwise. If required by the Statement of Work, a specific work progress schedule will be developed for each individual task in compliance with that Statement of Work.

Article 5. Price

The Price to be paid for Work under any Task Order shall be as agreed in a particular Task Order.

Article 6. Payment

(a) Anything in this agreement to the contrary notwithstanding, all payments to be made by the OWNER hereunder are subject to Ch. 2251 of the Texas Government Code, popularly known as the Prompt Payment Act. Payment in full for invoices shall be due within thirty (30) days from date the invoice is received by OWNER. Invoices paid more than thirty (30) days after the invoice is received are subject to a late charge of 1% per month (12% APR) on the amount of the undisputed past due balance.

(b) Invoices for payment under this Contract shall be sent to:

Wayne S. Watts, P.E.
City Engineer
City of Leander
P.O. Box 319
Leander, Texas 78646-0319

Payments may be based on completion of the Work, fulfillment of milestones, progress payments or any other method that is established in the agreed Statement of Work. In no event shall Professional invoice OWNER more than once monthly.

Article 7. Acceptance of the Work

When Professional can demonstrate that the Work is complete in accordance with the acceptance criteria included in the Statement of Work and so notifies OWNER, OWNER shall review the Work for general compliance with the Contract. If the Work appears to comply with the Contract requirements, and Professional has furnished all required documentation, OWNER shall notify Professional in writing of OWNER's Acceptance of the Work. Acceptance of the Work shall not limit nor diminish Professional's responsibilities, duties and warranties with respect to the Work. The Work shall be performed by the Professional in a manner consistent with good practices for the profession, and the standards and skills of the professionals practicing such profession in Travis County and Williamson County, Texas.

Article 8. Jobsite Inspection

If required by OWNER, Professional's representatives shall observe the jobsite and clearly understand the requirements and risks of the Work to be performed, the jobsite conditions, traffic conditions, the proximity of high-voltage power lines, utilities, and other local conditions likely to affect Professional's performance before accepting any Task Order. Acceptance of a Task Order shall constitute the Professional's certification that it has by observation satisfied itself with respect to all such local conditions and is willing to accept all risks they impose.

Article 9. Independent Contractor

(a) Professional shall perform in all respects as an independent contractor and not as an employee, partner, joint venture or agent of the OWNER. The Work to be performed by Professional shall be subject to the OWNER's review, approval and acceptance as provided in the Contract Documents, but the detailed manner and method of performance shall be under the control of Professional. The accuracy, completeness, and scheduling of the Work and the application of proper means and methods for performance of the Work are entirely the responsibility of Professional. Professional shall be solely responsible for hiring, supervising and paying its employees, subcontractors and suppliers. Professional shall be solely responsible for payment of all (i) compensation, including any employment

benefits, to its employees, (ii) taxes, including withholding for federal income tax purposes, employment and unemployment taxes, and (iii) such other expenses as may be owed to Professional's employees. However, because Professional's Work may be associated in the minds of the public with OWNER, Professional shall ensure that all Work by its employees, subcontractors and agents is performed in an orderly, responsible and courteous manner. Non-citizen workers shall be properly documented.

(b) Upon prior notification to and written approval of OWNER, Professional may hire subcontractors to perform work hereunder. Professional shall be responsible to OWNER for the performance of all such subcontractors. OWNER shall require any and all such subcontractors to sign agreements with Professional that bind the subcontractors to perform subcontracts in accordance with the Contract Documents. Upon the request of OWNER, Professional shall furnish OWNER with copies of such subcontracts. In addition, Professional agrees that it is Professional's responsibility to ensure that such subcontractors make all appropriate tax payments or tax withholding in relation to subcontractor's employees providing work to OWNER through Professional under this Contract. Professional represents that it and its subcontractors are fully trained to perform the tasks required by this Contract and that they need no training by the OWNER. Professional further understands and agrees that it will be responsible to OWNER for the quality and performance of any Work performed by any such subcontractor.

Article 10. Licenses and Permits

(a) Professional shall procure and maintain at its expense all licenses and permits necessary for it to perform the Work.

(b) Professional shall ensure that its subcontractors' and their employees are all properly licensed to perform their respective portions of the Work.

Article 11. Governing Laws, Regulations & Standards

(a) This Contract shall be governed, interpreted and enforced under the laws of the State of Texas, without regard to its conflict of law principles. In the event of litigation between the Parties arising out of this Contract issued under it, venue for such litigation shall be in a court of competent jurisdiction in Williamson County, Texas.

(b) Professional shall be aware of and shall comply with all non-conflicting Federal, State, and local laws, ordinances, codes (including applicable Professional codes) and regulations applicable to the Work, any equipment to be fabricated and delivered and for compliance with standards and codes of technical societies that have been adopted by law or regulation or compliance with which is required in the Contract Documents. If any of the Work fails to comply with such laws, ordinances, codes, and regulations, Professional shall bear any expense arising from that failure, including the costs to bring the Work into compliance.

(c) Without limiting the generality of the foregoing, during the performance of the Agreement, Professional agrees to comply with all applicable regulations of Executive Order No. 11246 of September 24, 1965, and the rules, regulations, and relevant orders of

the Secretary of Labor as they may apply to Equal Employment Opportunity. Professional will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor pursuant thereto, and will permit access to its books, records, and accounts by the cognizant agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

Article 12. Intoxicants & Drugs: Employee Conduct

OWNER shall not allow intoxicants or illegal drugs on its jobsite. Professional shall not at any time allow personnel for whom it is responsible on the jobsite if they are under the influence of any substance that may impair their performance. Professional shall promptly remove from the jobsite any person who is or appears to be under the influence of any of these substances or is otherwise unsafe or disorderly. Professional shall ensure that its employees, subcontractors and their employees avoid excessive noise, exceeding speed limits or reckless driving, use of weapons, or trespass on land not owned by or under easement to OWNER. If private property must be entered or crossed to perform the Work, Professional shall obtain permission from the property owner before entering.

Article 13. Risk of Loss

(a) Professional shall bear the expense and risk of loss or damage to work in progress, completed Work, materials, equipment, and all other incidents of the Work prior to Acceptance of the Work. Professional shall promptly replace or repair any loss or damage at its own expense. In the event of substantial loss or damage due to Force Majeure, the schedules shall be equitably extended. Professional shall bear the expense of storage space for stored materials, whether on-site or off-site, and shall bear the risk of loss or damage to all such materials. Professional shall take reasonable precautions to protect the materials from weather damage, burglary, pilferage and similar hazards.

(b) Professional shall bear the risk of loss or damage to its own equipment, tools, supplies and property and those of its subcontractors and suppliers, regardless of the cause of loss or damage throughout the project.

Article 14. Warranties and Representations

(a) **Warranty of Title.** Professional warrants the title to any goods it delivers to OWNER incidental to the performance of the Work and that said goods will be free and clear of all liens, mortgages, security interests or other encumbrances.

(b) **General Warranty of the Work.** Professional represents that all Work shall be performed in a Professional manner consistent with the industry standards and the standards of the profession of Professional. Professional shall correct, without delay and at its own expense, any portion of the Work that does not meet the foregoing warranty and is discovered within one year after Acceptance of the Work by re-performing that portion of the Work. Any repair, replacement, or modification of the Work performed pursuant to the provisions of this paragraph shall be supplied or repaired on the same terms and conditions as provided for herein for the Work.

(c) **Intellectual Property Representation.** Professional represents that the Work and the processes used in performing it shall not infringe on any valid United States patent, registered United States copyright, trademark or trade secret.

(d) **Business Standing Warranty.** Professional warrants, represents, and agrees that if (i) it is a corporation or limited liability company, then it is a corporation duly organized, validly existing and in good standing under the laws of the State of Texas, or a foreign corporation or limited liability company duly authorized and in good standing to conduct business in the State of Texas, that it has all necessary corporate power and has received all necessary corporate approvals to execute and deliver the Agreement, and the individual executing the Agreement on behalf of Professional has been duly authorized to act for and bind Professional; or (ii) if it is a partnership, limited partnership, or limited liability partnership, then it has all necessary partnership power and has secured all necessary approvals to execute and deliver this Agreement and perform all its obligations hereunder; and the individual executing this Agreement on behalf of Professional has been duly authorized to act for and bind Professional.

Article 15. General Indemnity

(a) Professional shall hold the OWNER and its councilmember's, officers, employees, agents and professionals harmless from all claims, damages, losses and expenses (jointly, "Claims"), including reasonable attorneys' fees, arising out of, or resulting from or arising under this Agreement, provided that any such liabilities, damage, loss, or expense is caused by the negligent, grossly negligent or intentional act or willful misconduct of Professional, anyone directly or indirectly employed by it, or anyone for whose acts it is legally liable.

(b) To the extent allowed by law, OWNER agrees to indemnify and hold harmless Professional, its directors, officers and employees, from and against any and all losses, claims, attorneys' fees and expenses arising from the negligent act or omission or willful misconduct of the OWNER related to this Contract which causes the death of, injury to or damage to the property of, any person.

(c) If the parties are concurrently negligent, each party's liability shall be limited to that portion of negligence attributable to it as determined under the applicable proportionate responsibility rules of the state of Texas.

(d) Anything to the contrary herein notwithstanding, neither party shall be liable to indemnify the other for the negligence, gross negligence or willful misconduct of the other.

(e) The foregoing indemnity provisions shall be deemed independent covenants and shall survive completion of or any termination of the Agreement or any claimed breach thereof. Professional's indemnity responsibility as specified in this clause shall not include special, incidental, punitive or consequential damages.

Article 16. Intellectual Property Indemnity

(a) Professional shall, at its own expense, defend all suits or proceedings instituted

against OWNER, its officers, agents, employees, or professionals based upon any claim that the Work, or any part thereof, or the process performed thereby constitutes an infringement of either any patent or copyright of the United States or of any trademark or trade secret protected by either federal or state law. Professional shall pay all awards of damages assessed which result from any such claim, suit, or proceeding and shall indemnify and save OWNER harmless against losses, expenses (including reasonable attorney's fees), and damages resulting from any such claim, suit, or proceeding, including obedience to resulting decrees and to resulting compromises for which Professional is legally liable.

(b) If, in any such suit, a restraining order or temporary injunction is granted, Professional shall make every reasonable effort, by giving a satisfactory bond or otherwise, to secure the suspension of any such restraining order or temporary injunction. If, in any such suit, the Work or any part thereof or the process performed thereby is held to constitute an infringement and its use be permanently enjoined, Professional shall at once make every reasonable effort to secure for OWNER a license at Professional's expense authorizing the continued use of the alleged infringing portion of the Work. If Professional is unable to secure such license within a reasonable time, Professional shall, at its own expense and without impairing performance requirements, either provide non-infringing replacements or modify the Work to eliminate the infringement. In addition to indemnifying and saving OWNER harmless, Professional shall reimburse OWNER for any costs incurred as a result of the unavailability of the infringing item or its non-infringing replacement.

(c) Such indemnity shall not apply to infringement claims that are based upon patent, copyright, trademark, or trade secret violations where such information was supplied by OWNER or which were directed for use by OWNER.

Article 17. Indemnity Procedures

With respect to any claim for Indemnity, the following procedures shall apply:

(a) **Notice.** Promptly after receipt by any entity entitled to indemnification of notice of the commencement or threatened commencement of any civil, administrative, or investigative action or proceeding involving a claim in respect of which the indemnities shall seek indemnification, the indemnities shall notify the indemnitor of such claim in writing. No failure to so notify an indemnitor shall relieve the Indemnitor of its obligations under this Agreement except to the extent that it can demonstrate damages attributable to such failure. Within fifteen (15) days following receipt of written notice from the indemnitee relating to any claim, but no later than ten (10) days before the date on which any response to a complaint or summons is due, the indemnitor shall notify the indemnitee in writing if the indemnitor elects to assume control of the defense and settlement of that claim (a "Notice of Election"). It is specifically provided that any indemnitee may by separate legal counsel participate in any proceeding brought by a third party and raise defenses available to indemnities, without waiving or limiting the benefits of this article or any duty or responsibility of indemnitor; provided that such indemnitee shall not attempt to limit or waive any defenses raised by indemnitor.

(b) **Procedure for Notice of Election.** If the indemnitor delivers a Notice of Election relating to any claim within the required notice period, the indemnitor shall be entitled to have sole control over the defense and settlement of such claim; provided, however, that (i) the indemnities shall be entitled to participate in the defense of such claim and to employ counsel at its own expense to assist in the handling of such claim, and (ii) the indemnitor shall obtain the prior written approval of the indemnities before entering into any settlement of such claim or ceasing to defend against such claim. After the indemnitor has delivered a Notice of Election relating to any claim in accordance with the preceding paragraph, the indemnitor shall not be liable to the indemnities for any legal expenses incurred by such indemnities in connection with the defense of that claim. In addition, the indemnitor shall not be required to indemnify the indemnities for any amount paid or payable by such indemnities in the settlement of any claim for which the indemnitor has delivered a timely Notice of Election if such amount was agreed to without the written consent of the indemnitor.

(c) **Procedure Where No Notice of Election Is Delivered.** If the indemnitor does not deliver a Notice of Election relating to any claim within the required notice period, the indemnities shall have the right to defend the claim in such manner as it may deem appropriate. If the indemnitor fails to deliver a Notice of Election for any claim for which indemnitor is obligated to indemnify the indemnities pursuant to the terms of this Agreement, then the indemnitor will be solely responsible for any and all costs and expenses incurred by the indemnities in defending such claim and the indemnitor shall promptly reimburse the indemnities for all such costs and expenses.

Article 18. Insurance

Professional shall obtain and maintain the insurance coverage specified below on an occurrence-basis and shall provide to Owner an insurance certificate listing the coverage before starting work on any OWNER property. **THE COVERAGE SHALL NOT BE CONSTRUED AS ESTABLISHING OR LIMITING PROFESSIONAL'S LIABILITY UNDER THE INDEMNITY PROVISION.** OWNER shall be listed as an "additional insured" on all policies other than the Workers Compensation and Professional Liability policies. Professional for itself and its insurers hereby waive subrogation against OWNER, its affiliates, their Boards of Directors, Directors, officers, employees and agents. Professional's failure to maintain the required insurance coverage at any time during the contract period may be grounds for OWNER to suspend the Contract and withhold payment until insurance coverage is satisfactory.

	<u>Type of Insurance</u>	<u>Minimum Coverage</u>
(a)	<u>Workers' Compensation</u>	
	Coverage A -	statutory
	Coverage B -	\$250,000 employer's liability
(b)	<u>General Liability</u>	
	Bodily Injury	\$500,000 per person
	Bodily Injury	\$1,000,000 per occurrence
	Property Damage	\$1,000,000 per occurrence

- (c) Automobile Liability
(including owned or leased vehicles and heavy equipment)

Bodily Injury	\$1,000,000 per occurrence
Property Damage	\$ 500,000 per occurrence

The automobile liability coverage shall apply to owned, non-owned, hired and leased vehicles. Before work begins, a certificate of all required insurance shall be filed with Project Manager of OWNER.

- (d) Professional Liability \$1,000,000 per occurrence

Article 19. Force Majeure

(a) The nonperformance or delayed performance by Professional or OWNER of any obligation under the Agreement shall be excused if such nonperformance or delay is caused by an event beyond the control of the affected party ("Force Majeure"), except to the extent that Professional knew of or should reasonably have been able to foresee such an event and failed to take reasonable measures to avoid the event. Items beyond the control of the parties include, but are not limited to: acts of war, acts of a public enemy; acts of domestic or foreign terrorism, natural disasters; strikes, epidemics or quarantine restrictions; riot, or sabotage; and acts of civil or military authority having jurisdiction.

(b) Upon occurrence of a Force Majeure, the date for performance of the Work shall be extended for a period equal to the time lost by reason of the delay, provided Professional or OWNER has taken reasonable steps to proceed with the performance of the Agreement and has made written notification of such delay and of any corrective action taken. Professional shall not be entitled to any increase in compensation by reason of Force Majeure.

(c) The following delays shall not constitute excusable delays in performance by Professional and shall not constitute a reason for extending the date for performance of the Work:

1. Delays by subcontractors or by suppliers for reasons other than Force Majeure;
2. Delays in approval of documentation because of inadequate performance or to unrealistic approval schedules;
3. Delays caused by Professional's lack of sufficient personnel with the necessary skills.

Article 20. General Safety, Environmental and Site Operations Requirements

(a) Safety. All parts of this Contract shall be performed in strict accordance with the safety requirements of applicable codes and statutes, federal, state, and local requirements, and the best industry practice. Professional is solely responsible in its procedures for the safety of its jobsite personnel, equipment, and properties involved in this project, including Professional's subcontractors. However, Professional is not responsible for jobsite safety of others, including Construction Contractor personnel or Construction Contractor means, methods, or procedures.

(b) Environmental. Professional is solely responsible for all costs incurred by OWNER for any spills or leaks caused by Professional or its subcontractors or sub consultants during performance of, or in connection with, the Work. Without limiting the foregoing sentence, Professional shall be responsible for all costs incurred to contain, remediate, and restore the site of the spill according to applicable state and federal laws and regulations, and if on OWNER's property, according to OWNER's requirements.

OWNER shall be responsible for all notifications required by and federal, state, or local law or regulation. Professional shall immediately notify OWNER with the nature and location of the spill. Professional shall provide a written report to OWNER whose representative shall identify the substance, quantity released, location of the spill, and perform clean up and remediation activities. If the spill occurs off OWNER's property, then the Professional shall also notify the OWNER of any agencies notified and the representatives of the agencies contacted. The report shall be a narrative that summarizes on-scene activity and remediation efforts. If long-term remediation will be required, it shall be noted in the report. The initial report shall be provided to OWNER within 24 hours after the incident. Follow-up reports shall be provided to OWNER weekly until remediation efforts have been completed and the spill has been properly remediated.

PROFESSIONAL SHALL INDEMNIFY AND HOLD OWNER HARMLESS FROM ANY AND ALL LIABILITIES, INCLUDING, BUT NOT LIMITED TO, REMEDIATION COSTS, FINES, PENALTIES, COURT COSTS, AND ATTORNEY'S FEES RESULTING FROM SPILLS, RELEASES, IMPROPER HANDLING AND/OR DISPOSAL OF WASTES CAUSED BY PROFESSIONAL, ITS SUBCONTRACTORS, AND/OR SUBCONSULTANTS.

Article 21. Assignment

This Contract is to be considered a personal Work Contract. Professional may not assign this Contract without the consent of OWNER. Any permitted assignee must notify the OWNER in writing that it accepts the assignment on the same terms and conditions contained in this Contract. No permitted assignment shall limit Professional's responsibility for performance of this contract. Attempted assignment or delegation of this Contract, including obligations under it, without the written consent of OWNER shall be void, and not merely voidable.

Article 22. Termination for Convenience

(a) OWNER shall have the right to terminate this Contract for its convenience at any time. After receipt of the notice of termination, the Professional shall immediately proceed with the following obligations, regardless of any delay in determining or adjusting any amounts due at that point in the Contract:

1. Stop all ongoing Work.
2. Place no further subcontracts or orders for materials or Work.
3. Terminate all subcontracts.
4. Cancel all materials and equipment orders, as applicable.
5. Take any action that is necessary to protect and preserve all property related to this Contract that is in the possession of the Professional.

(b) In the event of a termination under paragraph (a) of this Article, OWNER shall pay equitable termination charges, for all billable time expended or portions of Work completed (as applicable) and materials purchased, and if the Work includes construction profit on completed portions, and out-of-pocket costs that have been reasonably incurred by Professional as a result of terminating this Contract. OWNER shall not be liable in connection with any termination under this Article for special, incidental, consequential, or punitive damages, or for loss of anticipated future work, anticipated profits, administrative costs or overhead on anticipated work, or other indirect costs.

Article 23. Termination for Cause

(a) The occurrence of any one or more of the following events will constitute an event of default:

- (1) Professional's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers, suitable materials or equipment, or to adhere to project schedules as adjusted from time to time pursuant by the parties);
- (2) Professional's disregard of applicable laws or regulations;
- (3) Professional's disregard of the authority of OWNER's Representative;
- (4) Professional's violation in any substantial way of any provisions of the Contract Documents;

- (5) Failure of Professional to pay subcontractors and/or material suppliers; or
- (6) Professional's violation of OWNER's ethics policy.

(b) If one or more of the events identified in paragraph (a) occur, OWNER may terminate this Agreement, if after giving Professional (and the surety, if any) seven (7) calendar days prior written notice, unless such event of default shall have been cured.

(c) If this Contract has been so terminated by OWNER, the termination will not affect any rights or remedies of OWNER against Professional or any surety then existing or which may thereafter accrue. No retention or payment of moneys due Professional by OWNER will release Professional from liability.

(d) In such a circumstance, OWNER shall notify Professional in writing of the termination, with copies of the notice to OWNER's jobsite personnel. Upon notice of termination, Professional and its subcontractors shall promptly stop the Work and allow OWNER to take possession of the jobsite including any equipment and materials identified to the project (whether stored on-site or off-site), after securing the jobsite from safety and environmental hazards.

Article 24. Suspension

(a) OWNER may, at any time and at its sole option, suspend all or any portions of the Work to be performed under this Agreement by providing ten (10) calendar days written notice to the Professional. Upon receipt of any such notice, Professional shall:

1. Immediately discontinue the Work on the date and to the extent specified in the notice.
2. Place no further orders or subcontracts for materials, Work, or facilities with respect to the suspended portion of the Work, other than to the extent necessary to protect any portion of the Work already performed.
3. Promptly make every reasonable effort to obtain suspension, upon terms satisfactory to OWNER, of all orders, subcontracts, and rental agreements to the extent that they relate to performance of the portion of Work suspended by the notice.
4. Continue to protect and maintain the portion of the Work already completed, including the portion of the Work suspended hereunder, unless otherwise specifically stated in the notice.
5. Continue to perform Professional's obligations for the portions of the Work not suspended.

(b) As full compensation for such suspension, Professional will be reimbursed for the following costs, reasonably incurred, without duplication of any item, to the extent that such costs actually result from such suspension of Work.

1. A reasonable standby charge to be negotiated between OWNER and the Professional sufficient to compensate Professional for keeping (to the extent required in the notice) its organization and equipment committed to the Work in a standby status.
2. All reasonable costs associated with demobilization of Professional's facility, forces, and equipment.
3. A reasonable amount to be negotiated between OWNER and the Professional to reimburse the Professional for the cost of maintaining and protecting that portion of the Work upon which activities have been suspended.
4. All billable time reasonably extended or portions of Work completed (as applicable) prior to the suspension, materials purchased, and if the Work includes construction profit on completed portions, and out-of-pocket costs that have been reasonable incurred by Professional.

(c) Upon receipt of notice to restart the suspended portion of the Work, Professional shall immediately resume performance on the suspended portion of the Work to the extent required in the notice. Within 14 calendar days after receipt of notice to restart the suspended portion of the Work, the Professional shall submit a revised schedule for approval by OWNER. If, as a result of any suspension, the cost to Professional of subsequently performing the Work or the time required to do so is changed, a claim for an adjustment in the contract price may be made. Any claim on the part of Professional for change in price or extension of time shall be made in accordance with this Agreement.

Article 25. Dispute Resolution

The Parties agree that in the event of a dispute concerning the performance or non-performance of any obligations flowing from or as a result of this Contract and prior to the initiation of any litigation, the Parties will voluntarily submit the dispute to the Travis County Dispute Resolution Center for mediation as though it were referred through the operation of the Texas Alternative Dispute Resolution Procedures Act, Title 7, Chapter 154, TEX. CIV. PRAC. & REM. ANN., (Vernon's 1986). No record, statement, or declaration resulting from or in connection with such alternate dispute resolution procedure may be used in evidence in subsequent litigation except to demonstrate that this article has been complied with in good faith by a party. The use of such center shall not be or constitute a waiver of venue.

Article 26. Notices

All notices or other communications required under this Contract may be made either by personal delivery in writing or by certified mail, postage prepaid, return receipt requested. Notice shall be deemed to have been given when delivered or mailed to the parties at their respective addresses as set forth below or when mailed to the last address provided in writing to the other party by the addressee.

Owner: Wayne S. Watts, P.E.
City Engineer
City Of Leander
P.O. Box 319
Leander, TX 78464-0319

Professional: _____

Article 27. Titles and Section Headings

The titles and section headings of this Contract are included for convenience only and shall not be deemed to constitute a part of this Contract.

Article 28. Interpretation and Reliance

While this Contract form was initiated by OWNER, Professional had the opportunity to take exception to and seek clarification of it. Thus, this Contract is the product of negotiations between the Parties. No presumption will apply in favor of any party in the interpretation of this Contract or in resolution of any ambiguity of any provision.

Article 29. Failure to Act

No action or failure to act by either party shall be a waiver of a right or duty afforded under the Contract, nor shall such action or failure to act constitute a breach of this Contract, except as specifically agreed to in writing.

Article 30. Contract Non-Exclusive

The Contract is not exclusive. Professional has the right to perform Work for others during the term of the Contract, and OWNER has the right to hire others to perform the same or similar tasks.

Article 31. Third Party Beneficiaries

There are no third party beneficiaries to this Contract and the provisions of this Contract shall not create any legal or equitable right, remedy or claim enforceable by any person, firm, or organization other than the Parties and their permitted successors and permitted assigns.

Article 32. Mitigation of Damages

In all cases the Party establishing or alleging a breach of contract or a right to be indemnified in accordance with this Contract shall be under a duty to take all necessary measures to mitigate the loss which has occurred, provided that it can do so without unreasonable inconvenience or cost.

Article 33. Severability

This Contract is severable and if any one or more parts of it are found to be invalid, such invalidity shall not affect the remainder of this Contract if it can be given effect without the invalid parts.

Article 34. Integration & Contract Modification

This Contract contains the entire and integrated agreement between Professional and OWNER as to its subject matter and supersedes all prior negotiations, correspondence, understandings, representations and agreements, written or oral, related to it. In case of conflict between the terms and conditions of this Contract and those of any standard sales forms presented by Professional or such forms appearing in or referenced by Professional's bid or proposal, the terms and conditions of this Contract shall prevail. The terms and conditions of this Contract can be modified only by a writing signed by an authorized representative of both Professional and OWNER.

| Executed to be effective as of the _____ day of _____, 2014.

City of Leander: _____:

By: _____

Chris Fielder, Mayor

By _____

Name: _____

Title: _____

TASK ORDER FOR PROFESSIONAL SERVICES

TASK ORDER NO. HVJ-01

This will constitute authorization by the City of Leander, Texas (Owner), for HVJ Associates, Inc., (Engineer) to proceed with the following described engineering services.

**PAVEMENT MANAGEMENT SYSTEM, SIGN INVENTORY
& RETRO-REFLECTIVITY SURVEY**

A. PROJECT DESCRIPTION

The City of Leander has requested HVJ prepare and implement a Pavement Management System including pavement condition surveys of the City street network as well as the option of a Sign Inventory and Retro-reflectivity Survey.

B. SCOPE OF SERVICES

HVJ will perform the services as described in the Scope of Work section of the attached Proposal, dated November 4, 2014 and revised on December 4, 2014. HVJ will initially perform Tasks 1-3, 5, and 6 (the Pavement Management Study) with a second, separate authorization for the Sign Inventory and Retro-reflectivity Survey (Task 4).

C. DELIVERABLES

HVJ will provide deliverables as described in the Scope of Work section of the attached Proposal, dated November 4, 2014 and revised on December 4, 2014.

D. BASIS OF COMPENSATION

Compensation for the Pavement Management System shall be \$86,886.00 and \$79,862.00 for the Sign Inventory and Retro-reflectivity Study for a total not to exceed \$166,748.00 without prior authorization from the Owner. The City shall make payments to the Engineer on a monthly billing basis in accordance with the attached Proposal. Final Payment is due upon completion of the Final Report.

E. TIME FOR COMPLETION

The Engineer will work expeditiously to complete the services in the shortest length of time possible, not exceeding 12 months, unless otherwise agreed.

APPROVED:

CITY OF LEANDER, TEXAS

By _____

Attest _____

Date _____

ACCEPTED:

HVJ ASSOCIATES

By _____

Attest _____

Date _____



Houston	4201 Freidrich Lane, Ste. 110
Austin	Austin, TX 78744-1045
Dallas	512.447.9081 Ph
	512.443.3442 Fax
San Antonio	www.hvj.com

November 4, 2014 **(Revised December 4, 2014)**

Mr. Kent Cagle
City Manager
City of Leander, Texas
200 W. Willis
Leander, Texas 78641

Re: Proposal for Pavement Management System and Sign Inventory Survey
Owner: City of Leander, Texas
HVJ Proposal No. AP1415660

Dear Mr. Cagle:

In response to your request and meetings with you and City staff, HVJ Associates, Inc. (HVJ) is pleased to submit this revised proposal to perform the following engineering services for the implementation of a Pavement Management System including pavement condition surveys of the City street network as well as the option of sign inventory and retro-reflectivity. HVJ intends to implement the system which we have installed for the City of Round Rock in 2013. Revisions to the proposal were made based on a more detailed GIS analysis of the City's network.

Scope of Work

Task 1 Project Planning and Management

A kickoff meeting will be held to discuss the overall project scope and to collect available historical data. The City has provided HVJ with a GIS based file, if updates have been made since HVJ's receipt of the GIS file on October 1, 2014, the City will provide the revised version to include a comprehensive street network identifying which streets are maintained by the city, and including street name, cross street names, low and high address, block length, pavement width, class, council district (if applicable), whether street is divided, number of lanes, subdivision (if applicable), and map grid reference (if applicable). The City will provide any GIS files relevant to their sign inventory, if available.

Monthly progress reports will be submitted with each invoice. The HVJ project manager will plan and coordinate to provide the appropriate staffing levels, equipment, and vehicles necessary to complete the job as scheduled. This task also includes QA/QC reviews of the field data collection.

Mr. Kent Cagle
AP1415660
December 4, 2014

Task 2 Pavement Data Collection and Processing

HVJ will conduct a manual visual condition survey of all the City maintained streets. For this survey HVJ will use the visual survey procedures and definitions as stated in the HVJ Street Surface Condition and Inventory Rating Guidelines and Pavement Rating Application (PRA) User's Manual to develop the Pavement Condition Rating (PCR) score for each street segment as HVJ has used in surrounding Texas cities.

The initial GIS file received by HVJ from the City indicated approximately 172 centerline miles under the maintenance authority of the City of Leander. This number was used for budgeting purposes.

Task 3 Infrastructure Maintenance Management Program (IMMP) with Budgeting Module

HVJ will add all City of Leander maintained street segments. This will result in a block by block representation of the City's street network in the IMMP database which forms the basis for further data storage within the system. The average condition of each segment is determined by calculating a length weighted average Pavement Condition Rating (PCR) and assigning a priority score based on functional classification and PCR. These priority scores are used by the budgeting tool built into the program for multiyear budget analysis.

Task 4 Sign Data Collection, Processing, and Retro-reflectivity Measurements

The sign survey will include locating and classifying the full inventory of all City of Leander owned or maintained street signs inside the city limits of the Leander, Texas. This will include all ground mounted, signal mounted, and gantry mounted signs. All classifications of these signs will be captured.

The final deliverable will be in the form of a GIS shapefile or database file in either Microsoft Access or SQL format based on the needs of the City of Leander. The inventory will include coordinates of the pole (in the coordinate system preferred by the city), classification of pole type, classification (MUTCD ID number) of all panel types attached to that pole. In the case of signal or gantry mounted signs, the coordinate will reflect the location of the foundation outside the roadway. The coordinates captured will be accurate to approximately 2 meters in any direction or better.

Photographs will be taken of each sign to be used by HVJ for internal QA/QC of the classification of each panel. These can be provide to the City of Leander if desired by the City. The quality of the photographs is affected by time of day, shadows, angle of the sun, and other factors. No photograph quality standard is intended, however the photos can be useful to City staff.

The retro-reflectivity survey will build on the sign survey inventory and the data will be included in the same database as the sign survey inventory. In addition to the sign survey data, the retro-reflectivity survey will capture retro-reflectivity data for regulatory and warning sign panels. This data will include sheeting type, manufacture and/or install date where available, and the retro-reflectivity readings.

Mr. Kent Cagle
AP1415660
December 4, 2014

Task 5 Provide Software Training & 1-Year of Software Support

The purpose of this task will be to train City of Leander staff in the use of all delivered software packages. HVJ will train City staff on use of the analysis software and field data collection software. Software packages to be included are:

- Pavement Rating Application (PRA) for field data collection of pavement condition surveys,
- IMMP with Budgeting Module software which allows review and reporting of all inventory and condition survey data and also provides for export of data to the City GIS system for visual presentation,

Documentation accompanying each program will be provided. This comprehensive training will include discussions of the engineering parameters selected on the project and how these may be modified or enhanced in the future to meet changing conditions. Training will include background information and the basis upon which the engineering recommendations were made and how the IMMP software predicts street maintenance and rehabilitation priorities. Training will consist of:

- Classroom executive overview for all City staff involved
- Classroom computer analysis (IMMP with Budgeting Module) for engineers/managers
- Classroom session for data collection personnel (PRA Module)

Software training for several people within the City allows for:

- Backup support when key staff are assigned elsewhere.
- Consensus understanding of the software capabilities of each software package.
- Knowledge of how to collect the required input data.

Also included in this task is up to 10 hours of software assistance and support for up to 1-year after software installation.

Task 6 – Provide 5-year Capital Improvement Plan Report

HVJ will prepare a 5-year CIP report based on current survey ratings of the street sections. HVJ will coordinate with City staff to determine pavement rehabilitation and maintenance strategies employed by the City for use in the CIP with priorities for Arterial and Collector streets. A draft final report will be prepared for the City of Leander to review. A final report will be prepared to incorporate City comments.

Schedule

HVJ anticipates final delivery of this project data 12 months following our receipt of a written notice to proceed.

Fees

Based on the scope of work outlined, the fee for HVJ's services is \$166,748. A cost breakdown is attached.

Mr. Kent Cagle
AP1415660
December 4, 2014

Insurance

Insurance certificates verifying HVJ's general liability, auto, workers' compensation, and errors and omissions insurance coverage, listing The City of Leander as a certificate holder, will be provided upon request.

Invoice

HVJ's accounting procedures call for the submittal of invoices on a month-end basis or at the conclusion of the project should its duration last less than a month. HVJ's credit terms are net 30 days.

Conditions

Pavement Survey Assumptions

- The City will provide a GIS based file with a comprehensive street network identifying City maintained streets, and including street name, cross street names, low and high address, block length, pavement width, class, whether street is divided, number of lanes, and subdivision (if applicable). GIS data will need to reference original HVJ ID included in the original survey for tracking purposes.
- Current centerline miles to be surveyed do not exceed the centerline miles provided in the GIS shapefile of October 1, 2014 by more than 2% centerline miles.
- No TxDOT, County, or private streets will be surveyed.

Sign Survey Assumptions

- Sign survey information will not be integrated into the Pavement Management software.
- Traffic control is not included. It is assumed that all sign locations will be able to be surveyed without utilizing traffic control. If there are areas found that require traffic control to access additional funding will be required for traffic control services.
- Number of signs to be inventoried does not exceed the assumed number of 2,600 signs (point assets – poles). Each pole may have multiple panels and HVJ will include all panels in the inventory.
- No TxDOT, County, or private signs will be inventoried.

Retro-reflectivity Survey Assumptions

- No elevated, arm, or gantry mounted signs will have a measured retro-reflectivity. Only signs accessible with the standard retro-reflectivity meter extension pole from the ground will be measured.
- Retro-reflectivity will only be measured on Regulatory and Warning classified signs. Parking regulation signs will not be measured.
- Retro-reflectivity information will not be integrated into the Pavement Management software.
- Number of panels for which retro-reflectivity measurements will be collected does not exceed the assumed number of 2,600 panels.

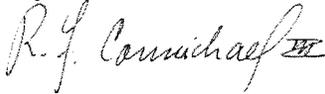
Mr. Kent Cagle
AP1415660
December 4, 2014

If this proposal meets with City of Leander approval, please sign and complete the information below in the indicated spaces and forward a copy of the proposal to us.

HVJ looks forward to working the City of Leander for a successful completion of this project and final delivery of an updated pavement evaluation management database and sign inventory including retro-reflectivity data. Please call if you have any questions or require additional information.

Sincerely,

HVJ ASSOCIATES, INC.



R. F. (Frank) Carmichael III, PE
Austin Branch Manager



Gina M. Ellison, PE
Project Manager

FC/rj/ge

Agreed to this _____ day of _____, 20_____

By: _____

Title: _____

Firm: _____

Phone No. _____

Date to Start Work: _____

Mr. Kent Cagle
 AP1415660
 December 4, 2014

Task Description	Total Hours	Subtask Labor Subtotal	Subtask Direct Subtotal	Total Costs
Project Planning, Coordination, & Administration				
Subtotal	44	\$6,180.00	\$0.00	\$6,180.00
Pavement Data Collection and Processing (Streets)				
Subtotal	597	\$54,105.00	\$4,681.00	\$58,786.00
IMMP with Budgeting Module				
Subtotal	52	\$7,080.00	\$3,500.00	\$10,580.00
Sign Data Collection and Processing (Signs)				
Subtotal	986	\$73,050.00	\$6,812.00	\$79,862.00
IMMP & PRA Software Training				
Subtotal	22	\$3,120.00	\$0.00	\$3,120.00
Reporting				
Subtotal	44	\$8,220.00	\$0.00	\$8,220.00
Total	1723	\$151,755.00	\$14,993.00	\$166,748.00



Executive Summary

December 18, 2014

Council Agenda Subject: Consideration of Emergency Purchase of Water Line Relocations for Hero Way PEC Transmission Line Relocations

Background: On September 4, 2014, City Council approved Transmission Facilities Relocation Contract for the relocation of PEC's transmission facilities in conflict with the Hero Way roadway improvements project in an estimated amount of \$989,604.00. On November 7, 2014, City Staff was notified by our engineering consultant's project manager that PEC's final transmission line relocation plans showed four conflicts with the existing 12-inch water line along the north side of Old 2243 West (soon to be considered for renaming as Hero Way). PEC's relocation project's schedule requires them to drill transmission pole foundations beginning on January 7, 2015. City Staff received final plans for the four water line relocations on Wednesday, December 3, 2014. That same day, Staff solicited quotes from four contractors, i.e., Joe Bland Construction, Inc., Cash Construction, Inc., Ross Construction, Inc., and Facilities Rehabilitation, Inc., which were due by 4:00 p.m., Friday, December 5, 2014. Ross Construction, Inc., and Facilities Rehabilitation, Inc., were the only respondents with quotes of \$66,125.00 and \$87,650.00, respectively, attached herein.

Due to the extremely tight timeframe during which the need for the waterline relocations became apparent as PEC refined their relocation project and the ongoing necessity to maintain PEC's transmission line relocation construction schedule with its planned transmission line outage linked directly with the City's contract for safety of the installation of three new traffic signal masts and mast arms that was awarded at the December 4, 2014, Council Meeting, there was no time available to carry out the competitive bid process required for purchases over \$50,000.00.

City Staff believes that this situation meets the exemption from the competitive sealed bid process provided in Section 252.022(a) (2) related to the preservation of public health and safety during the installation by PEC of relocated transmission line structures and the City's installation of traffic signal masts and mast arms in proximity to a 147,000 volt transmission line, given that the expenditure is for the purpose of ensuring continuous and adequate water supply to the City's customers and the relocation project will include a planned outage of electric service that must be carefully coordinated and timed, and which has already been scheduled.

Origination: Wayne S. Watts, P.E., CFM, City Engineer

Financial Consideration: \$66,125.00

Recommendation: Staff requests a finding by City Council that this purchase is an emergency purchase exempt from competitive sealed bid requirements due to the emergency nature of the purchase and that it is necessary for the preservation and protection of the City's residents and that Ross Construction, Inc., be approved to perform the work for their quote of \$66,125.00.

Attachments: Quotes from Ross Construction, Inc., and Facilities Rehabilitation, Inc.

Prepared by: Wayne S. Watts, P.E., CFM, City Engineer

Wayne Watts

From: Michael O'Neal
Sent: Friday, December 05, 2014 4:49 PM
To: Wayne Watts
Subject: Fwd: Hero Way Waterline Quote
Attachments: Hero Way Waterline Relocatin Bid 120514 Ross Const Inc.xlsx; ATT00001.htm

Sent from my iPhone

Begin forwarded message:

From: Randall Delgado <delgado@me.com>
Date: December 5, 2014 at 2:25:35 PM CST
To: Michael O'Neal <moneal@leandertx.gov>
Cc: Terri Crauford <tcrauford@leandertx.gov>
Subject: Hero Way Waterline Quote

Mike,
Attached is our proposal for the waterline relocation work.

Thank you for the opportunity to bid this. Randy

Bid Form

Project City of Leander - Hero Way
Waterline Relocations

Date

12/5/2014

FROM:

Ross Construction, Inc.
8700 Manchaca Rd. Suite 105
Austin, TX 78746
512-288-5344

randy@totalproject.net

Description	Quantity	Unit	Unit Price (\$/unit)	Total (\$)
Division #1 - General Requirements				
Mobilization & Insurance			5%	\$ 3,200
Division #2 - Site Work				
Clear and Grub	1	LS	\$ 4,500	\$ 4,500
Site Restoration	0.25	AC	\$ 23,500	\$ 5,875
Trench Protection	300	LF	\$ 5	\$ 1,500
SWPPP	1	LS	\$ 2,000	\$ 2,000
Silt Fence	400	LF	\$ 4	\$ 1,600
Testing and Disinfection	1	LS	\$ 2,500	\$ 2,500
Division #3 - Concrete				
Thrust Blocks	5	CY	\$ 350.00	\$ 1,750
Abandon existing 12" Waterline	6	CY	\$ 550.00	\$ 3,300
Division #15 - Mechanical				
Utility Verification	4	EA	\$ 1,500	\$ 6,000
12" 45 Degree Elbow	16	EA	\$ 350	\$ 5,600
12" PVC Piping	300	LF	\$ 75	\$ 22,500
18" PVC Piping for casing	20	LF	\$ 80	\$ 1,600
Water meter relocation	1	EA	\$ 2,000	\$ 2,000
12" Gate Valve	1	EA	\$ 2,200	\$ 2,200
Subtotal				\$ 66,125

Wayne Watts

From: Michael O'Neal
Sent: Friday, December 05, 2014 4:49 PM
To: Wayne Watts
Subject: Fwd: Old FM 2243 - Water Line Relocations
Attachments: image001.gif; ATT00001.htm; Hero Way Waterline Relocatin Cost Estimate 112114.xlsx; ATT00002.htm

Sent from my iPhone

Begin forwarded message:

From: Richard <richard@facilitiesrehab.com>
Date: December 5, 2014 at 1:54:01 PM CST
To: 'Michael O'Neal' <moneal@leandertx.gov>
Subject: RE: Old FM 2243 - Water Line Relocations

Michael,

Please find attached the pricing for the water line relocation work on the referenced project.

Thank you,

Richard Bowsher, Vice President
Mobile 512-351-2331

Facilities Rehabilitation, Inc.
716 N. Main
Taylor, Texas 76574
Office 512-352-6035, Fax 512-352-6036

From: Michael O'Neal [<mailto:moneal@leandertx.gov>]
Sent: Wednesday, December 03, 2014 12:54 PM
To: [Richard@facilitiesrehab.com](mailto:richard@facilitiesrehab.com)
Cc: Terri Crauford; Wayne Watts
Subject: Old FM 2243 - Water Line Relocations

Hi Richard,

Please see the attached bid form and plans for the water line work we're breaking out of the Old FM 2243 widening project. Please review provide a quote by this Friday at 4:00 pm. It's important that work be completed by January 7, 2015 when PEC begins the foundations for their new poles.

Thank you.

Sincerely,

Bid Form

Project **City of Leander - Hero Way
Waterline Relocations**

Date

12/--/2014

Description	Quantity	Unit	Unit Price (\$/unit)	Total (\$)
Division #1 - General Requirements				
Mobilization & Insurance			5%	\$ 4,200
Division #2 - Site Work				
Clear and Grub	1	LS	\$ 2,000	\$ 2,000
Site Restoration	0.25	AC	\$ 10,000	\$ 2,500
Trench Protection	300	LF	\$ 1	\$ 300
SWPPP	1	LS	\$ 300	\$ 300
Silt Fence	400	LF	\$ 3	\$ 1,200
Testing and Disinfection	1	LS	\$ 8,000	\$ 8,000
Division #3 - Concrete				
Thrust Blocks	5	CY	\$ 500.00	\$ 2,500
Abandon existing 12" Waterline	6	CY	\$ 200.00	\$ 1,200
Division #15 - Mechanical				
12" 45 Degree Elbow	16	EA	\$ 400	\$ 6,400
12" PVC Piping	300	LF	\$ 162	\$ 48,600
18" PVC Piping for casing	20	LF	\$ 100	\$ 2,000
Water meter relocation	1	EA	\$ 2,250	\$ 2,250
12" Gate Valve	1	EA	\$ 6,200	\$ 6,200
Subtotal				\$ 87,650



Executive Summary

December 18, 2014

Council Agenda Subject: Consideration of Contract Proposal for Engineering Services for Phase 2 Deep Water Intake Preliminary Design by and between the Brushy Creek Regional Utility Authority and HDR Engineering, Inc.

Background: This proposed contract between the Brushy Creek Regional Utility Authority (BCRUA) and HDR Engineering, Inc., (HDR) provides for the preliminary design of BCRUA's Phase 2 Deep Water Intake as described in HDR's October 1, 2014, cover letter with Exhibits A through E, attached herein. The compensation for this work is a combination of a lump sum amount of \$4,390,100.00 and time and materials not exceed \$1,555,200.00, totaling \$5,945,300.00, as detailed in Exhibit D. The BCRUA Board approved this contract proposal on Wednesday, November 19, 2014. Each of the three BCRUA member Cities is also required to approve this proposed contract. The City of Round Rock approved this contract proposal on Thursday, December 4, 2014; and the City of Cedar Park considers this proposal on Thursday, December 18, 2014. Leander's share of the costs of this preliminary design contract is 43.76%.

Origination: Wayne S. Watts, P.E., CFM, City Engineer

Financial Consideration: \$2,601,663.28 (43.76% of \$5,945,300.00) from construction cost savings from the Brushy Creek Regional Utility Authority, Inc., City of Leander, Texas, Contract Revenue Bonds (\$91,180,000) for Phase 1

Recommendation: Staff requests approval of Contract Proposal for Engineering Services for Phase 2 Deep Water Intake Preliminary Design by and between the Brushy Creek Regional Utility Authority and HDR Engineering, Inc.

Attachments: HDR's October 1, 2014, cover letter with Exhibits A through E

Prepared by: Wayne S. Watts, P.E., CFM, City Engineer



October 1, 2014

Mr. Tom Gallier, General Manager
Brushy Creek Regional Utility Authority
221 East Main Street
Round Rock, TX 78664

RE: Updated Engineering Services Proposal for Phase 2 Deep Water Intake Preliminary Design

Dear Mr. Gallier,

HDR Engineering, Inc. (HDR) is pleased to submit this proposal for professional engineering services in connection with the Brushy Creek Regional Utility Authority (BCRUA) Phase 2 Deep Water Intake. The proposal has been updated in response to comments from the Oversight Committee at our meeting on September 29, 2014.

The Phase 2 project is a complex and significant undertaking to ensure the reliability of future water supplies to meet the needs of cities of Cedar Park, Leander and Round Rock. To address the specific technical challenges of this project, HDR has assembled a core design team which includes the following teaming partners:

- LAN
- AECOM
- K Friese & Associates
- Brierley Associates
- Northwest Hydraulic Consultants
- Surveying And Mapping
- aci consulting / E&PA

The services to complete preliminary design are described in the accompanying Exhibits. These services reflect the project scoping discussions held during the July 9, 2014 meeting with the BCRUA Oversight Committee. The primary objectives of the preliminary design phase are to identify the primary project requirements and constraints and to advance design sufficiently to identify and address major conflicts. Some specific goals of this phase are as follows:

- Collect, organize and analyze required data, including geotechnical boring information
- Develop and evaluate alternative intake and pump station design concepts
- Recommend specific design alternatives and obtain team consensus
- Develop the overall project layout, including tunnel alignments and pump station and intake site layouts
- Clearly define major project design approaches and criteria
- Set the path for future easement acquisition and permitting efforts
- Establish project quality and risk plans
- Provide ongoing coordination with affected stakeholders

This proposal includes the work tasks and level of effort required to achieve these goals and objectives. The following is a summary of the proposed tasks included in Exhibit B.

- Task 1.0 - Project Management, Coordination and Meetings
- Task 2.0 - Jurisdictional and Environmental Permitting Agency Coordination
- Task 3.0 - Right-of-Way and Land Acquisition
- Task 4.0 - Preliminary Geotechnical Investigation Data Collection and Underground Engineering
- Task 5.0 - Intake and Intake Maintenance Facilities
- Task 6.0 - Gravity Main Tunnel and Pipeline from Intake to Pump Station
- Task 7.0 - Pump Station
- Task 8.0 - Pressure Main Tunnel and Pipeline from Pump Station to Phase 1 Pipeline
- Task 9.0 - Risk Management
- Task 10.0 - Value Engineering
- Task 11.0 - Surveying and Mapping
- Task 12.0 - Electrical Service Evaluation
- Task 13.0 - Project Delivery Evaluation
- Task 14.0 - Preliminary Engineering Report

Task 15.0 includes additional services that are not included in the scope of services and will not be performed unless specifically authorized by the BCRUA.

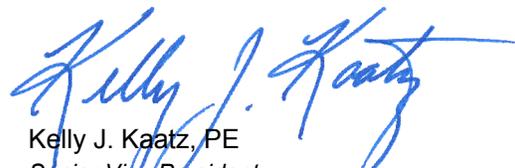
We propose to provide the Basic Services set forth in Exhibit B for a total compensation amount of \$5,945,300. Per our earlier discussions and the compensation terms set forth in Exhibit D, compensation for Tasks 1.0, 2.0, 3.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0 and 14.0 will be on the basis of lump sum per task and compensation for Tasks 4.0 and 13.0 will be on the basis of per diem. Specific information on the distribution of compensation per task is included in Exhibit D. We propose to complete preliminary design within 15 months of execution of a professional services agreement.

Please review this proposal at your convenience and contact me if you have any questions or need additional information to support your review. We appreciate the opportunity to partner with you on this important project.

Sincerely,
HDR Engineering Inc.



Aaron Archer, PE
Project Manager



Kelly J. Kaatz, PE
Senior Vice President

EXHIBIT A
OWNER SERVICES

In addition to the other responsibilities of OWNER as set forth in this Agreement, the OWNER shall at its expense:

- A. Review and comment on all deliverables. OWNER will provide a single set of consolidated OWNER review comments on all deliverables.
- B. Coordinate with cooperating jurisdictional and environmental permitting agencies as needed and issue payment for required reviews, approvals, and permits.
- C. Participate in project meetings, workshops, and conference as described in the scope of services.
- D. OWNER is responsible for posting meetings and other technical materials on the OWNER website.
- E. Provide ENGINEER in a timely manner with all criteria and full information as to OWNER'S requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility, and expandability, and any budgetary limitations; and furnish copies of all design and construction standards which OWNER will require to be included in the Drawings and Specifications; and furnish copies of OWNER'S standard forms, conditions, and related documents for ENGINEER to include in the Bidding Documents, when applicable.
- F. Furnish to ENGINEER any other available information pertinent to the Project including reports and data relative to previous designs, or investigation at or adjacent to the Site.
- G. Provide a location for storage of boring core boxes for the life of the project that is accessible to ENGINEER for photographing and testing. Core boxes shall also be made available for a contractor core show.
- H. Following ENGINEER'S assessment of initially-available Project information and data and upon ENGINEER'S request, furnish or otherwise make available in a timely manner such additional Project related information and data as is reasonably required to enable ENGINEER to complete its Basic and Additional Services.
- I. Give prompt written notice to ENGINEER whenever OWNER observes or otherwise becomes aware of the presence at the Site of any Constituent of Concern, or of any other development that affects the scope or time of performance of ENGINEER'S services, or any defect or nonconformance in ENGINEER'S services, the Work, or in the performance of any Contractor.
- J. Authorize ENGINEER to provide Additional Services as set forth in this Agreement as required.
- K. Examine all alternate solutions, studies, reports, sketches, Drawings, Specifications, proposals, and other documents presented by ENGINEER (including obtaining advice of an attorney, insurance counselor, and other advisors or consultants as OWNER deems appropriate with respect to such examination) and render in writing timely decisions pertaining thereto.

- L. Provide reviews of all permits that may be necessary for completion of each phase of the Project.
- M. Provide, as required for the Project:
 - 1) Accounting, bond and financial advisory, independent cost estimating, and insurance counseling services.
 - 2) Legal services with regard to issues pertaining to the Project as OWNER requires or deems appropriate, Contractor raises, or ENGINEER reasonably requests, including but not limited to the review of Contract Documents supplied by ENGINEER.
 - 3) Such auditing services as OWNER requires to ascertain how or for what purpose Contractor has used the moneys paid
 - 4) Placement and payment for advertisement for Bids in appropriate publications.
- N. Advise ENGINEER of the identity and scope of services of any independent consultants employed by OWNER to perform or furnish services in regard to the Project, including, but not limited to, cost estimating, project peer review, value engineering, and constructability review.
- O. Attend the construction progress and other job related meetings, and Substantial Completion and final payment inspections.
- P. Provide the services of an independent testing laboratory to perform all inspections, tests, and approvals of Samples, materials, and equipment required by the Contract Documents, or to evaluate the performance of materials, equipment, and facilities of OWNER, prior to their incorporation into the Work with appropriate professional interpretation thereof.
- Q. Provide ENGINEER with the findings and reports generated by the entities providing services to OWNER pursuant to this paragraph.

EXHIBIT B ENGINEERING SERVICES

GENERAL

The Phase 2 project consists of a permanent raw water intake in a deeper location on Lake Travis to deliver water by gravity to a new high capacity pumping station located adjacent to the City of Cedar Park Water Treatment Plant (WTP). The pumping station will convey water to the Phase 1 raw water pipeline on Trails End Road. Phase 2 includes multiple key elements that will result in the construction of a Deep Water Intake System with an ultimate capacity of 141.7 million gallons per day (MGD). These elements include an intake assembly, maintenance building, gravity flow tunnel, pump station, transmission tunnel, and electrical improvements.

ENGINEER will perform Professional Engineering Services for preliminary and final design, bidding, and construction phases of the Phase 2 project. The purpose of this Exhibit is to describe preliminary engineering services for the Phase 2 Deep Water Intake. The primary tasks of this agreement include:

- 1.0 Project Management, Coordination and Meetings*
- 2.0 Jurisdictional and Environmental Permitting Agency Coordination*
- 3.0 Right-of-Way and Land Acquisition*
- 4.0 Preliminary Geotechnical Investigation Data Collection and Underground Engineering*
- 5.0 Intake and Intake Maintenance Facilities*
- 6.0 Gravity Main Tunnel and Pipeline From Intake to Pump Station*
- 7.0 Pump Station*
- 8.0 Pressure Main Tunnel and Pipeline from Pump Station to Phase 1 Pipeline*
- 9.0 Risk Management*
- 10.0 Value Engineering*
- 11.0 Surveying and Mapping*
- 12.0 Electrical Service Evaluation*
- 13.0 Project Delivery Evaluation*
- 14.0 Preliminary Engineering Report*
- 15.0 Additional Services*

ASSUMPTIONS

ENGINEER'S assumptions apply to all task set forth in this Exhibit.

- 1. The ultimate system capacity is 141.7 MGD allocated among the OWNER WTP (105.8 MGD), the City of Cedar Park WTP (23.9 MGD), and the City of Leander (Sandy Creek) WTP (12.0 MGD).*

2. *Water will be delivered to the City of Cedar Park and Sandy Creek WTPs by direct feed rather than the use of dedicated pumps. A study will be performed to evaluate alternative delivery methods to each WTP.*
3. *Reports and Technical Memorandums (TMs) will be provided in electronic (PDF) format and 10 printed copies of the bound draft report or TM will be provided to OWNER for review prior to final report preparation. ENGINEER will address comments from OWNER and prepare a final report or TM within three weeks of receiving comments. Final reports and TMs will be provided in electronic (PDF) format and 20 printed copies will be prepared. All other deliverables will be provided in electronic (PDF) format only.*

BASIC SCOPE OF SERVICES

Task 1.0 - Project Management, Coordination, and Meetings

1.1 Project Administration.

- 1.1.1 Project Management Plan (PMP). Develop and document the following plans and procedures to coordinate administration of the contract: team communication, quality management, risk management, document control, change management, and cost and schedule control.
- 1.1.2 Manage and coordinate staff resources, subconsultants, and project planning.
- 1.1.3 Prepare monthly invoices and project progress reports and updates for the OWNER website portal. As a minimum, monthly progress reports shall include a summary description of tasks completed as of the report date, description of activities planned for the next 60 days, financial status of the project, status of schedule for project, and identification of technical or other issues which may have an impact to the overall project budget and/or schedule.
- 1.1.4 Provide and maintain a project schedule in MS Project format that is updated and submitted monthly with each invoice.
- 1.1.5 Facilitate document control and document sharing by utilizing Projectwise for electronic filing of documents. Develop and coordinate drawing and graphic standards.

1.2 Project Meetings. Participants include staff from OWNER and ENGINEER, as well as key ENGINEER subconsultant staff. ENGINEER will prepare meeting minutes and submit for review and comment within 10 days of each meeting. Workshops for specific preliminary engineering task are included under the associated task.

- 1.2.1 Attend a project kickoff meeting with OWNER.
- 1.2.2 Attend monthly progress meetings with OWNER for a total of 15 meetings.
- 1.2.3 Attend two Design Workshops with OWNER.
 - 1.2.3.1 Design Criteria Workshop includes the review and discussion of design alternatives and selection of design criteria for the overall project and principal project features.

- 1.2.3.2 Design Review Workshop includes presentation and review of the Preliminary Engineering Report.
- 1.2.4 Attend up to four meetings with the OWNER Board to provide a presentation on the background and status of the Phase 2 project and provide regular progress and status updates.

Task 1.0 Deliverables

- *Project Management Plan*
- *Monthly invoices and project progress reports*
- *Project schedule (submitted monthly)*
- *Kickoff meeting agenda and minutes*
- *Monthly progress meeting agendas and minutes (15)*
- *Design Criteria Workshop agenda and minutes*
- *Design Review Workshop agenda, presentation, and minutes*
- *Board presentations (4)*

Task 2.0 - Jurisdictional and Environmental Permitting Agency Coordination

2.1 Village of Volente (Village).

- 2.1.1 Meetings. Attend four meetings with the OWNER and the Village of Volente.
 - 2.1.1.1 Attend a pre-application meeting with Village staff to discuss the requirements of a Concept Plan. Work associated with the Concept Plan is included under Task 2.1.2.
 - 2.1.1.2 Attend a meeting with Village staff to submit and discuss the Concept Plan.
 - 2.1.1.3 Attend the Village council or commission meeting that considers the Concept Plan.
 - 2.1.1.4 Develop and present one town-hall style presentation to provide a project update to the Village of Volente.
- 2.1.2 Village of Volente Concept Plan. Prepare draft and final copies of the Concept Plan. Include a general site layout, survey limits, identification of adjacent properties and owners, identification of zoning and proposed use, tree preservation strategies, summary report, and other information listed in the Village ordinance. Review other Village ordinances to assess approval requirements.
- 2.1.3 Site 4 Noise Analysis Technical Memorandum (TM). Evaluate noise emissions resulting from the Site 4 maintenance facilities through ambient monitoring and noise modeling using 3-D software-based acoustical technology designed for outdoor noise propagation. Monitoring of existing noise levels will be limited to measurement at one location in the project area for 24 continuous hours. Monitored (existing) noise levels will be compared to modeled (project-related) noise levels. Results will be displayed using noise contours. Document results in a

- TM. Submit draft and final versions of the TM. Attach the Noise Analysis TM as an Appendix to the Preliminary Engineering Report.
- 2.1.4 Coordinate activities associated with land borings in the Village of Volente corporate limits and obtain appropriate permits or approvals.
 - 2.2 **Lower Colorado River Authority (LCRA).** Attend three meetings with LCRA to discuss the LCRA permitting process, intake land acquisition requirements, boring locations, and technical concepts and layouts for the intake and pump station sites.
 - 2.3 **Travis County.** Attend two meetings with Travis County to discuss construction activities and boring locations at the pump station site, Trails End Road, and Lime Creek Road.
 - 2.4 **City of Jonestown.** Attend two meetings with the City of Jonestown to provide updates on the project and discuss construction activities occurring on or through City of Jonestown ETJ.
 - 2.5 **U.S. Army Corps of Engineers (USACE).**
 - 2.5.1 The final size and layout of the pump station may impact an ephemeral tributary on the pump station site that is classified as waters of the U.S. Coordinate the layout of the pump station site to reduce impacts to this tributary. Confirm the use of a Nationwide permit with the USACE District Engineer and determine preconstruction notification requirements.
 - 2.5.2 The type of authorization required from USACE is determined based on the amount of fill placed on the lakebed at the intake location. Using preliminary engineering concepts, determine the estimated amount of fill to be placed and coordinate with USACE to identify the appropriate permit and determine preconstruction notification requirements.
 - 2.5.3 Review and coordinate intake screen opening size and screen velocity on the intake structure with USACE.
 - 2.6 **Balcones Canyonlands Conservation Plan (BCCP) Participation.**
 - 2.6.1 Coordinate participation in BCCP for *Golden-cheeked warbler* impacts at the pump station site based on preliminary engineering concepts.
 - 2.6.2 Perform an environmental review of gravity tunnel main alignment alternatives and determine if a BCCP Section 10(a)(1)(B) permit for a minor amendment can be obtained. This task may involve discussions and coordination with City of Austin BCCP staff and the USFWS.
 - 2.6.3 Perform a desktop review of Pedernales Electric Cooperative (PEC) electrical transmission alignment alternatives and determine what environmental clearances are required.
 - 2.7 **Texas Commission on Environmental Quality (TCEQ).** Provide an update on the project and discuss the layout of the existing restricted zone radius variance with TCEQ. Issue monitoring well reports for land borings fitted with piezometers.
 - 2.8 **Trails End Road Site Environmental Reconnaissance.** Perform site reconnaissance of the proposed construction and staging area on Trails End Road to assess the presence of critical environmental and cultural features. Reconnaissance of the proposed temporary

construction easement will be performed from existing right-of-way; right-of-entry will not be obtained.

Task 2.0 Deliverables

- *Village of Volente meeting minutes (2)*
- *Village of Volente council meeting minutes*
- *Village of Volente town-hall presentation*
- *Village of Volente Concept Plan (draft and final)*
- *Site 4 Noise Analysis TM (draft and final)*
- *LCRA meeting agenda and minutes (3)*
- *Travis County meeting agenda and minutes (2)*
- *Briefing summary of discussions with agencies*
- *TCEQ meeting agenda and minutes*
- *Briefing summary of findings from Trails End Road environmental reconnaissance*

Task 3.0 - Right-of-Way and Land Acquisition

- 3.1 **Property Research.** Research property requirements for the project including requirements for PEC power supply upgrades.
- 3.1.1 Perform property research and ownership evaluations.
 - 3.1.2 Perform title research and identify potential encumbrances associated with LCRA property at intake assembly site.
 - 3.1.3 Perform title research and identify potential encumbrances associated with BCCP property along the alternative gravity tunnel alignment and PEC power supply upgrade routes.
 - 3.1.4 Set up and maintain parcel files.
 - 3.1.5 Maintain copies of correspondence and contacts with property owners.
- 3.2 **Right-of-Entry.** Obtain right-of-entry for up to 12 parcels for purposes of surveying, geotechnical borings, and/or well mapping.
- 3.3 **Project Land Requirements.** Prepare exhibits of project land requirements including PEC power supply upgrades easement requirements. Develop costs associated with right-of-way and land acquisition and prioritize acquisition activities for final design phase.

Task 3.0 Deliverables

- *Correspondence and contracts with property owners*
- *Right-of-entry documents (12)*
- *Easement parcel maps and keys*

Task 4.0 - Preliminary Geotechnical Data Collection and Underground Engineering

- 4.1 **Existing Data Review.** Assemble and review existing geotechnical information at and near the project for the purpose of characterizing subsurface conditions and making recommendations for the location and spacing of borings and specification of testing parameters.
- 4.2 **Conduct Site Reconnaissance.** Conduct reconnaissance at Site 4 (intake maintenance facilities) and Site 8 (pump station) and key points along the tunnel routes. Define boring locations. Coordinate activities with OWNER, surveyor, and right-of-way professionals.
- 4.3 **Rock Outcrop Mapping.** Complete field geologic mapping of exposed rock outcrop at the intake location adjacent to Site 4. Coordinate mapping with the surveyor. Conduct stability analysis of exposed rock outcrop.
- 4.4 **Reconnaissance and Field Exploration Program Technical Memorandum (TM).** Prepare a TM to summarize existing data, document site reconnaissance and rock outcrop mapping results, and develop the field exploration program recommendations. Provide a summary explanation of the field exploration program recommendations and identify specific borehole locations. Submit draft and final versions of the TM. Attach the Reconnaissance and Field Exploration TM as an Appendix to the Preliminary Engineering Report.
- 4.5 **Field Exploration and Laboratory Testing Program.** Coordinate and perform geotechnical investigations. Coordinate boring and testing locations with surveyor and OWNER.
 - 4.5.1 Subsurface Field Exploration and Field Testing Program. Haul away boring spoils and grout boreholes that are not fitted with a piezometer upon completion of boring activities.
 - 4.5.1.1 Land Borings. Perform a total of eight borings, including five gravity tunnel borings, one pump station site boring, and two transmission tunnel borings. Additional borings will be required in final design.
 - 4.5.1.2 Marine Borings. Perform a total of seven borings, including three intake structure borings, three gravity tunnel borings, and one transmission tunnel boring. Additional borings may be required in final design.
 - 4.5.1.3 Perform packer/pressure tests in all borings.
 - 4.5.1.4 Install piezometers in all preliminary phase land borings. Perform bail-down tests and water level measurements at each piezometer up to four times.
 - 4.5.1.5 Perform downhole camera logging in four land borings and three marine borings.
 - 4.5.2 Laboratory Testing Program. Perform geotechnical testing using procedures that are consistent in quality with standard tunnel engineering practice.
 - 4.5.2.1 Conventional soil/rock tests including Atterberg Limits, Sieve Analysis, Unconfined Compression, and Confined (Triaxial) Compression.
 - 4.5.2.2 Specialized rock tests including Cerchar Abrasivity, Brazilian Tensile, Punch Penetration, and Slake Durability.

- 4.5.2.3 Corrosivity and chemistry tests including electromagnetic conductivity, Wenner 4-pin tests and electro resistivity tomography.
- 4.5.3 Core Documentation. Photograph and store samples in core boxes. OWNER shall store and make cores available to ENGINEER. Cores shall also be made available for construction contractors for pre-bid core show.
- 4.5.4 **Preliminary Geotechnical Data Report.** Prepare and submit draft and final versions of the Preliminary Geotechnical Data Report (GDR). The Preliminary GDR will also identify and recommend additional future geotechnical explorations needed to support final design. The Preliminary GDR shall document activities performed under Task 4.4.
- 4.6 **Tunnels and Shafts Design Assessment Technical Memorandum (TM).** Prepare a TM documenting tunnel and shaft design evaluations and recommendations performed in Tasks 5.4, 6.3, 7.4, and 8.2. Submit draft and final versions of the TM. Attach the Tunnels and Shafts Assessment TM as an Appendix to the Preliminary Engineering Report.

Task 4.0 Deliverables

- *Reconnaissance and Field Exploration Program Technical Memorandum (draft and final)*
- *Preliminary Geotechnical Data Report (draft and final)*
- *Tunnels and Shafts Design Assessment Technical Memorandum (draft and final)*

Task 5.0 - Intake and Intake Maintenance Facilities

- 5.1 **Lake Tap Location.** Review bathymetric surveys and define location for the lake tap to achieve a low water withdrawal level and enhance constructability. Coordinate the location of marine borings. Coordinate with surveyor to correlate bathymetric datum and project controls.
- 5.2 **Water Quality Evaluations.** Define the number and elevation of intake screens. Conduct field investigations to retrieve water quality samples at various depths near the intake location to define lake stratification and optimum water withdrawals levels. Collect samples up to three times to account for seasonal impacts on lake stratification and temperature profiles. Sampling shall include temperature, dissolved oxygen, pH, turbidity, alkalinity, hardness, total and dissolved organic carbon, total dissolved solids, threshold odor number, UV254, iron, manganese, and color. Contact LCRA to request and review existing water quality information collected near the project area.
- 5.3 **Preliminary Intake Layouts.** Evaluate two preliminary layouts for the intake facilities. Proposed alternatives include a sloping lakebed header and individual vertical riser. Perform the following tasks for each alternative. Recommend a layout for selection by OWNER.
 - 5.3.1 Develop and evaluate screen designs.
 - 5.3.1.1 Establish external loading design criteria including wave, impact, current, wind, and thermal loads.

- 5.3.1.2 Evaluate screen type, number, geometry, screen opening size, screen blinding percentage, and water approach velocity to the screen. Coordinate with permitting activities and consider negotiation of the rock outcrop adjacent to Site 4.
- 5.3.1.3 Perform computational fluid dynamics (CFD) modeling to assess hydraulic capacity and water flow characteristics to each screen and internal screen hydraulics.
- 5.3.1.4 Consider intake construction techniques and logistic needs including construction staging area requirements adjacent to the site or at an alternative location.
- 5.3.1.5 Analyze intake structural support and foundation requirements.
- 5.3.2 Prepare site plan and cross-section views.
- 5.3.3 Evaluate possible construction methodologies and construction cost impacts. Assess overall constructability, geotechnical and structural considerations, construction sequencing, serviceability, and other factors appropriate to the analysis.
- 5.3.4 Prepare an Intake Alternatives Technical Memorandum (TM) documenting the intake alternatives analysis and recommendations. Submit draft and final versions of the TM. Recommend one alternative for selection by OWNER.
- 5.4 **Preliminary Design Criteria Development.** Develop preliminary engineering design criteria and applicable discipline codes and standards for inclusion in the Preliminary Engineering Report. Prepare preliminary engineering estimate of probable construction cost and update the anticipated project schedule based on the preliminary design criteria. Prepare relevant drawings listed in Task 14.2.
 - 5.4.1 Lake Tap Design.
 - 5.4.1.1 Determine excavation methods and estimate quantities. Coordinate with permitting activities.
 - 5.4.1.2 Review spoils handling systems. Coordinate requirements with environmental best management practices or techniques that are negotiated with LCRA, USACE, and TPWD
 - 5.4.1.3 Prepare allowable water control recommendations.
 - 5.4.1.4 Develop lake tap support and grouting requirements.
 - 5.4.1.5 Prepare the lake tap sequence of construction and coordinate the lake tap and tunnel connection.
 - 5.4.1.6 Develop the intake structural foundation.
 - 5.4.1.7 Develop caisson design criteria including internal and external design pressure requirements.
 - 5.4.1.8 Assess corrosion protection requirements including material selection, concrete and grout types and inhibitors, lining systems and lining system interaction with water quality in a submerged environment, and

cleaning and pigging systems to remove biofilm and invasive species accumulations.

5.4.2 Intake Design.

5.4.2.1 Describe screen type, number, geometry, opening size, screen blinding percentage, and water approach velocity to the screen. Include other relevant design criteria from selected screen alternative in the Intake Alternatives TM.

5.4.2.2 Develop intake and lake tap interface design criteria.

5.4.2.3 Select methods to operate and maintain screens including invasive mussel prevention and control.

5.4.2.4 Evaluate corrosion protection including material and coatings recommendations to meet design life objectives and avoid or reduce invasive mussel attachment.

5.4.2.5 Define intake connections, materials, flow control methods, and coatings.

5.4.2.6 Develop water quality monitoring recommendations.

5.4.2.7 Develop a 3D rendering of the intake screen assembly using aerial oblique photographs of the site to address project aesthetics.

5.4.3 Maintenance Building and Site 4 Improvements. Coordinate these activities with development of the Village Concept Plan.

5.4.3.1 Mechanical Design. Determine utility requirements for building HVAC equipment, screen cleaning, valve operation, and invasive mussel control.

5.4.3.2 Architectural Design. Develop building floor plan and produce exterior elevations. It is assumed that 3D maintenance building renderings will be produced under a separate contract to support site acquisition. Modifications or updates to the maintenance building renderings are an additional service.

5.4.3.3 Structural Design. Preliminary design of major structural elements and design criteria, including structural foundations and walls and narrative of materials of construction.

5.4.3.4 Electrical Design. Identify, size, and define electrical systems and loads. Develop electrical equipment layout and locations. Assess electrical grounding isolation and cathodic protection requirements.

5.4.3.5 Site Civil Design. Develop the following preliminary designs: grading and drainage plan (during and after construction); erosion and sedimentation controls; site security; construction access and material storage/laydown plan; hauling and routing plan that considers traffic impacts and public roadway repair issues; tree removal and mitigation plan; site roadway and access plan; storm water management.

5.4.3.6 Control and Automation Design. Instrumentation and monitoring requirements. Communication system requirements. Preliminary I/O list. PLC and SCADA requirements.

5.5 **Preliminary Drawings.** Prepare preliminary design drawings of the principal intake and maintenance facility features for use in defining a functional project and for use in preparing a preliminary engineering estimate of probable construction cost. A list of preliminary drawings is provided under Task 14.2.

Task 5.0 Deliverables

- *Briefing summary of water quality evaluations*
- *Intake Alternatives Technical Memorandum (draft and final)*
- *Preliminary Engineering Report and Preliminary Drawings (draft and final) as described above and in Task 14.0*

Task 6.0 - Gravity Main Tunnel and Pipeline from Intake to Pump Station

6.1 **Alignment Analysis.** Evaluate feasible tunnel alignment alternatives and recommend an alternative for selection by OWNER.

6.1.1 Horizontal Alignment. Evaluate up to two alternative tunnel alignments - one alignment through BCP and the other outside of BCP. Identify key constraints including property boundaries, wells in close proximity to the tunnel, structures, geography, construction considerations, BCCP boundaries, geology, and existing easements. Select one horizontal alignment with OWNER.

6.1.2 Vertical Alignment. Establish the tunnel vertical alignment in coordination with the lake tap and pump station access shaft designs.

6.1.3 Prepare a Gravity Main Alignment Technical Memorandum (TM) documenting the alignment alternatives analysis and recommendations. Submit draft and final versions of the TM. Recommend one alternative for selection by OWNER.

6.2 **Preliminary Well Mapping, Monitoring and Mitigation Plan.** Prepare a preliminary well mapping, monitoring, and mitigation plan for wells within proximity of the Project (gravity and pressure tunnels). Determine hydrogeological conditions using existing literature and information collected during the geotechnical investigation. Establish the horizontal tunnel offset criterion for well mapping based on hydrogeological conditions. Develop a preliminary well mapping database of wells within the determined horizontal tunnel offset using driller's reports. Record information available in driller's reports. Information may include well location, depth, size, water elevation, and functional pumping capacity of subject wells. Prepare a preliminary well monitoring plan for implementation during final design to baseline the water level and quality within horizontal tunnel offset using piezometers installed in project borings. Develop preliminary strategies to reduce impacts to wells during and after construction. Develop a preliminary mitigation plan to address possible project impacts. Prepare a Well Mitigation Technical Memorandum documenting the well mapping, monitoring, and mitigation evaluation. Submit draft and final versions of the TM. The Well Mitigation Technical Memorandum will be updated during Final Design

as described in Additional Services to baseline existing water quality and survey the coordinates of each well within the horizontal tunnel offset.

6.3 **Preliminary Design Criteria Development.** Develop preliminary engineering design criteria and applicable discipline codes and standards for inclusion in the Preliminary Engineering Report. Prepare cost estimates and update the project schedule based on the preliminary design criteria. Prepare relevant drawings listed in Task 14.2.

6.3.1 Tunnel Design.

6.3.1.1 Evaluate excavation methods and provisions required for retrieval of tunneling equipment or abandonment-in-place.

6.3.1.2 Develop the allowable temporary support system.

6.3.1.3 Assess groundwater control requirements and allowable methods.

6.3.1.4 Determine truck trips and muck disposal plans.

6.3.1.5 Coordinate the connection and transition to the lake tap and the pump station access shaft.

6.3.2 Pipeline Design.

6.3.2.1 Perform hydraulic modeling to evaluate pipeline diameter.

6.3.2.2 Evaluate pipeline and lining design including pipeline and lining type, materials, pressure class and placement, mix design, and contact grouting.

6.3.2.3 Identify corrosion control requirements and strategies.

6.4 **Preliminary Drawings.** Prepare preliminary design drawings of the principal tunnel and pipeline features for use in defining a functional project and for use in preparing a preliminary engineering estimate of probable construction cost. A list of preliminary drawings is provided under Task 14.2.

Task 6.0 Deliverables

- *Gravity Main Alignment Technical Memorandum (draft and final)*
- *Well Mitigation Technical Memorandum (draft and final)*
- *Preliminary Engineering Report and Preliminary Drawings (draft and final) as described above and in Task 14.0*

Task 7.0 - Pump Station

7.1 **Cedar Park and Sandy Creek WTP Connections.** Evaluate delivery to the Cedar Park and Sandy Creek WTPs. The pre-design, single wetwell shaft concept will be used for this evaluation. Other pump station layouts will not be considered.

7.1.1 Examine pumping and control strategies including direct feed from the pump station with pressure reducing valves at each WTP, dedicated pumps in the OWNER pump station to each WTP, and the use of jockey pumps.

7.1.2 Evaluate pipeline connections to deliver water the Cedar Park and Sandy Creek WTPs.

- 7.1.3 Perform a present worth analysis to estimate and compare capital costs and annual energy consumption costs of each delivery strategy.
- 7.1.4 Cedar Park and Sandy Creek WTP Connections Technical Memorandum (TM). Prepare a TM documenting the Cedar Park and Sandy Creek WTP connections analysis and recommendations. Submit final and draft versions of the TM. Recommend an alternative for selection by OWNER. OWNER shall authorize Additional Services for preliminary engineering of dedicated pump or jockey pump alternatives.
- 7.2 **Preliminary Pump Station Layouts.** Evaluate up to three preliminary general layouts for the pump station facilities. Proposed alternatives include single shaft, dual shaft, and individual pump shaft designs. Perform the following tasks for each alternative and recommend one alternative.
 - 7.2.1 Prepare site plan and cross-section views of each alternative.
 - 7.2.2 Perform a CFD modeling evaluation of each design alternative to compare hydraulics.
 - 7.2.3 Evaluate possible construction methodologies and construction cost impacts. Assess overall constructability, geotechnical and structural impacts, construction sequencing and staging, phasing, performance, serviceability, and other factors appropriate to the analysis.
 - 7.2.4 Pump Station Alternatives Technical Memorandum (TM). Prepare a TM documenting the pump station layout alternatives analysis and recommendations. Submit final and draft versions of the TM. Recommend an alternative for selection by OWNER.
- 7.3 **Hydraulic Analysis.** Prepare an analysis of pump station hydraulics for the required range of flows and conditions.
 - 7.3.1 Develop system curves for delivery to the OWNER, Cedar Park, and Sandy Creek WTPs.
 - 7.3.2 Prepare system hydraulic profiles for flow from the intake to the pump station and from the pump station to each delivery point.
 - 7.3.3 Pump Selection Analysis. Select the size, type, number, space requirements and configuration of the pumping units. Determine submergence, power, and operation and maintenance requirements. Evaluate pump flow control options including variable frequency drives and modulating valves. Consult with pump manufacturers and obtain cut sheets.
 - 7.3.4 Perform a system pressure transient analysis (gravity and pressure systems) and identify surge protective measures. A detailed proposal of transient analysis activities is included as Attachment A. Prepare a Pressure Transient Analysis Technical Memorandum (TM) documenting transient analysis and recommendations. Submit final and draft versions of the TM.
 - 7.3.5 Physical Hydraulic Model. A detailed proposal of Physical Hydraulic Model activities is included as Attachment A.

- 7.3.5.1 Complete a physical model study of the selected pump station design by a specialty lab to evaluate if flow approaching the pumps meets Hydraulic Institute Intake Design Standards. The study involves building and operating a scale model of the pump station to evaluate the hydraulic characteristics of design recommendations.
 - 7.3.5.2 Coordinate a one-day witness test with OWNER to observe the model's operation and performance, consult with the laboratory's engineering staff regarding their findings and recommendations, and discuss whether modifications to the model or design concepts may be warranted to improve performance.
 - 7.3.5.3 Physical Hydraulic Model Technical Memorandum (TM). Prepare a TM documenting the physical hydraulic model analysis and recommendations. Submit final and draft versions of the TM.
- 7.4 **Preliminary Design Criteria Development.** Develop preliminary engineering design criteria and applicable discipline codes and standards for inclusion in the Preliminary Engineering Report. Prepare preliminary engineering estimates of probable construction cost and update the project schedule based on the preliminary design criteria. Prepare relevant drawings listed in Task 14.2.
- 7.4.1 Geotechnical Design.
 - 7.4.1.1 Shaft construction techniques.
 - 7.4.1.2 Excavation and allowable temporary support systems for the shaft or shafts at the pump station site.
 - 7.4.1.3 Allowable groundwater control and dewatering/water disposal.
 - 7.4.1.4 Coordinate design of the tunnel and shaft interface.
 - 7.4.1.5 Muck disposal system.
 - 7.4.1.6 Permanent shaft lining system.
 - 7.4.2 Architectural Design.
 - 7.4.2.1 Pump station building floor plan.
 - 7.4.2.2 Pump station exterior elevations including wall facades and roof components.
 - 7.4.2.3 Establish the building architectural theme. Modify one of the two 3D architectural renderings developed during site acquisition in support of the Chapter 26 hearing to reflect the architectural theme and floor plan. Provide two views – one from the perspective of the lake and one from Lime Creek Road.
 - 7.4.3 Structural Design.
 - 7.4.3.1 Pump station and shaft interface, including geotechnical coordination/recommendations and preliminary building foundation analysis of loads acting on the shaft.

- 7.4.3.2 Preliminary design of major structural elements, including structural foundations and walls and narrative of materials of construction.
- 7.4.3.3 Bridge crane requirements based on pump selection recommendations.
- 7.4.4 Electrical Design.
 - 7.4.4.1 Identify, size, and define major electrical systems and loads.
 - 7.4.4.2 Electrical equipment layout and locations.
 - 7.4.4.3 Transformer and switchgear requirements.
 - 7.4.4.4 Lightning protection plan and site grounding requirements.
 - 7.4.4.5 Cathodic protection requirements.
 - 7.4.4.6 Interior and exterior lighting design and layout.
 - 7.4.4.7 Emergency power generator requirements.
- 7.4.5 Mechanical Design.
 - 7.4.5.1 Pump layout, suction, and discharge configuration.
 - 7.4.5.2 Update acoustic model based on pump selections and facility configuration to evaluate compliance with LCRA requirements.
 - 7.4.5.3 Valve requirements and schedule.
 - 7.4.5.4 Piping requirements and schedule.
 - 7.4.5.5 Flow meter requirements.
 - 7.4.5.6 HVAC equipment sizing and preliminary selections.
- 7.4.6 Site Civil Design. Coordinate design with presence of environmentally sensitive tributary.
 - 7.4.6.1 Cut and fill slopes including preliminary design of the retaining wall(s) between the pump station building and the lake.
 - 7.4.6.2 Set preliminary finished floor levels.
 - 7.4.6.3 Groundwater treatment and disposal.
 - 7.4.6.4 Grading and drainage plan (during and after construction).
 - 7.4.6.5 Storm water management controls and facilities.
 - 7.4.6.6 Erosion and sedimentation controls.
 - 7.4.6.7 Site security requirements.
 - 7.4.6.8 Construction access and material storage/laydown plan.
 - 7.4.6.9 Hauling and routing plan that considers traffic impacts and public roadway repair issues.
 - 7.4.6.10 Tree removal and mitigation plan.
 - 7.4.6.11 Site roadway, access, and parking plan.
 - 7.4.6.12 Coordinate with PEC for relocation of existing electrical utilities.
 - 7.4.6.13 Requirements for on-site utilities including water, septic, and fire suppression systems.

- 7.4.6.14 Corrosion control requirements.
- 7.4.6.15 Landscaping.
- 7.4.7 Control and Automation Design.
 - 7.4.7.1 Instrumentation and monitoring requirements.
 - 7.4.7.2 Process and instrumentation diagrams.
 - 7.4.7.3 Communication system requirements.
 - 7.4.7.4 Control loop strategies.
 - 7.4.7.5 Preliminary I/O list.
 - 7.4.7.6 PLC and SCADA requirements.
- 7.5 **Preliminary Drawings.** Prepare preliminary design drawings of the principal pump station features for use in defining a functional project and for use in preparing a preliminary engineering estimate of probable construction cost. A list of preliminary drawings is provided under Task 14.2.

Task 7.0 Deliverables

- *Cedar Park and Sandy Creek WTP Connections Technical Memorandum (draft and final)*
- *Pump Station Alternatives Technical Memorandum (draft and final)*
- *Pressure Transient Analysis Technical Memorandum (draft and final)*
- *Physical Hydraulic Model Technical Memorandum (draft and final)*
- *Preliminary Engineering Report and Preliminary Drawings (draft and final) as described above and in Task 14.0*

Task 8.0 - Pressure Main Tunnel and Pipeline from Pump Station to Phase 1 Pipeline

- 8.1 **Alignment Analysis.** Establish the alignment of the tunnel.
 - 8.1.1 Horizontal Alignment. Identify key constraints from existing data and a field survey (Task 11.2) including property boundaries, wells, structures, geography, construction considerations, geology, and existing easements.
 - 8.1.2 Vertical Alignment. Establish the tunnel vertical alignment based on marine boring results at this lake crossing and in coordination with the Trails End Road riser and pump station access shaft designs.
- 8.2 **Preliminary Design Criteria Development.** Develop preliminary engineering design criteria and applicable discipline codes and standards for inclusion in the Preliminary Engineering Report. Prepare preliminary engineering estimates of probable construction cost and update the project schedule based on the preliminary design criteria. Prepare relevant drawings listed in Task 14.2.
 - 8.2.1 Trails End Road Riser Design and Phase 1 Connection Plan.
 - 8.2.1.1 Evaluate riser excavation methods and estimate excavation quantities. Coordinate with permitting activities.
 - 8.2.1.2 Evaluate temporary support systems for the shaft.

- 8.2.1.3 Evaluate riser design including type and placement, support and grouting requirements, and pressure class.
- 8.2.1.4 Prepare the riser sequence of construction and coordinate the riser and tunnel connection.
- 8.2.1.5 Assess groundwater control requirements and methods.
- 8.2.1.6 Identify corrosion control requirements and strategies.
- 8.2.1.7 Coordinate with utility companies to locate existing utilities and identify conflicts.
- 8.2.1.8 Prepare a plan for connection to existing Phase 1 raw water pipeline.
- 8.2.1.9 Develop site civil design including a site plan with workspace requirements, construction access and material storage/laydown areas, traffic control, hauling and routing plans, roadway restoration, erosion and sedimentation controls, and grading and drainage plan.
- 8.2.2 Tunnel Design.
 - 8.2.2.1 Evaluate excavation methods.
 - 8.2.2.2 Develop allowable temporary support system design criteria.
 - 8.2.2.3 Assess allowable groundwater control requirements and methods.
 - 8.2.2.4 Determine truck trips and muck disposal plans.
 - 8.2.2.5 Coordinate the connection and transition to the Trails End Road riser and the pump station access shaft.
- 8.2.3 Pipeline Design.
 - 8.2.3.1 Perform hydraulic modeling to evaluate pipeline diameter.
 - 8.2.3.2 Evaluate pipeline and lining design including pipeline and lining type, materials, pressure class and placement and contact grouting requirements.
 - 8.2.3.3 Identify corrosion control requirements and strategies.
- 8.3 **Preliminary Drawings.** Prepare preliminary design drawings of the principal tunnel and pipeline features for use in defining a functional project and for use in preparing a preliminary engineering estimate of probable construction cost. A list of preliminary drawings is provided under Task 14.2.

Task 8.0 Deliverables

- *Briefing summary of the alignment analysis*
- *Preliminary Engineering Report and Preliminary Drawings (draft and final) as described above and in Task 14.0*

Task 9.0 - Risk Management

- 9.1 **Risk Management Plan.** Prepare a Risk Management Plan to develop a collaborative process for risk identification, risk quantification, risk mitigation, and the monitoring and

management of identified risks for the project. Assign risk management key staff roles and responsibilities. Develop the strategic approach for risk management using a collaborative approach for identification and mitigation with OWNER. Incorporate the risk register developed in Task 9.2 into the Risk Management Plan once it has been completed. Prepare and submit a draft Risk Management Plan.

- 9.2 **Risk Management Workshop.** Schedule and conduct a workshop with OWNER. The primary objectives of the workshop are risk identification and development of initial risk response strategies. Develop the initial project risk register.
- 9.3 **Risk Register Database.** Develop a customized Excel based database to track and monitor risks, response efforts, trigger events, and impacts to project costs and schedule.
- 9.4 **Risk Management Updates.** Develop quarterly updates (total of four) and metrics to continue reporting on the risk management process. Summarize top risks, key updates to risk response actions, and upcoming risk trigger events.

Task 9.0 Deliverables

- *Risk Management Plan (draft)*
- *Risk Management Workshop agenda and minutes*
- *Quarterly Risk Management Plan updates (4)*

Task 10.0 - Value Engineering

- 10.1 **Value Engineering Evaluation.** Provide a systematic value engineering review using a multi-disciplined team of specialists. The value engineering team shall consist of four reviewers.
 - 10.1.1 Review project concepts, design criteria, and preliminary plans.
 - 10.1.2 Provide a function analysis by identifying high cost and/or low value functions.
 - 10.1.3 Prepare possible modifications to the designs which, if implemented, have the likelihood for lowering the project's cost of construction while maintaining functionality, service life, and overall quality. Assign costs to design alternatives.
 - 10.1.4 Develop and summarize prioritized alternatives for cost reductions considering cost, availability, serviceability, quality, and constructability.
- 10.2 **Value Engineering Workshop.** Present the results of the value engineering evaluation to the OWNER in a workshop. Work with OWNER to select recommendations for implementation, which could include Additional Service for ENGINEER as appropriate.
- 10.3 **Value Engineering Report.** Prepare and submit draft and final versions of the Value Engineering Report. Document alternatives adopted or rejected and the anticipated cost savings for each adopted recommendation.

Task 10.0 Deliverables

- *Value Engineering Workshop agenda and minutes*
- *Value Engineering Report (draft and final)*

Task 11.0 - Surveying and Mapping

- 11.1 **Survey Control.** Coordinate and normalize existing survey data collected during prior project phases to establish overall project control. Establish horizontal and vertical control including a minimum of 18 points within the project limits. Survey control points (5/8" iron rods) will be set in locations that will likely be undisturbed by construction or other activities. Project control will be placed on horizontal and vertical datums (NAD83/NAVD88 Texas State Plane, Central Zone).
- 11.2 **Trails End Road Survey.** Survey existing ROW along Trails End Road from approximately 550 feet south of the intersection of Trails End Road and East Darleen Drive, extending southward approximately 450 feet to the dead end of Trails End Road. Produce one-foot interval contours and collect visible improvements including driveways, pipes, drainage structures (size, material, flow line elevation), edge of pavement, edge (shoulder) line, crown (physical centerline), guardrail, fences, signs (with text), mailboxes, visible utilities, and visible evidence of underground utilities. Size, type, and location of trees six inches or larger in diameter within the project limits. Contact One-Call to facilitate the location of existing buried utilities.
- 11.3 **Stake Geotechnical Borings.** Stake the location of up to 15 geotechnical soil borings using X, Y, and Z coordinates. Locate the drilled soil borings as placed and drilled.

Task 11.0 Deliverables

- *Survey Control Index and Horizontal and Vertical Control Sheet*
- *Survey point and descriptor code list*
- *Trails End Road survey drawing*
- *Survey file of geotechnical boring locations*

Task 12.0 - Electrical Service Evaluation

- 12.1 Coordinate project electrical power requirements with PEC to determine PEC requirements, cost, and schedule for upgrading infrastructure to serve project facilities at Site 4 and Site 8. Attend up to three meetings with PEC. Evaluate up to three alternative routes for extension of electrical service and evaluate costs, schedule, and permitting requirements. Compile an electrical service plan, cost estimate, and estimated schedule.
- 12.2 Coordinate power utility relocations at the pump station site with PEC. Assess corrosion protection requirements to protect facilities at Site 8 from stray current sources.

Task 12.0 Deliverables

- *Briefing summary of conversations and meetings with PEC*
- *Electrical service plan*

Task 13.0 - Project Delivery Evaluation

- 13.1 **Contractor Constructability Workshop.** Identify qualified contractors to participate in a constructability review of the project. Separate workshops may be held with up the three contractors (marine, tunnel, pump station).
- 13.1.1 Construction Scheme. Evaluate the proposed construction scheme and sequence of construction for the recommended design configuration based on the use of current construction techniques.
- 13.1.2 Construction Packaging. Evaluate construction contract packaging alternatives with respect to cost, schedule, and interface risk impacts. Recommend a construction contract packaging plan.
- 13.2 **Project Delivery.** Compare feasible project delivery models including traditional design-bid-build, construction manager-at-risk, and progressive design-build. Conduct a half-day workshop with OWNER to identify project delivery drivers and goals. Subsequent to the workshop, rank the importance of the drivers and goals and evaluate the ability of the various project delivery models to achieve those goals. Submit the results to OWNER for selection of a delivery method. Develop contractor prequalification process concept in accordance with state statutes and local procurement rules. Prepare a Project Delivery Technical Memorandum (TM) documenting the project delivery analysis and recommendations. Submit final and draft versions of the TM.

Task 13.0 Deliverables

- *Briefing summary of Contractor Constructability Workshop*
- *Project Delivery Workshop agenda and minutes*
- *Project Delivery Technical Memorandum (draft and final)*

Task 14.0 - Preliminary Engineering Report

- 14.1 **Preliminary Engineering Report.** Prepare and submit draft and final versions of the Preliminary Engineering Report (PER). The PER shall organize and document the information and design criteria developed under previous tasks and include a preliminary opinion of probable construction cost and a schedule for final design and construction. An executive summary of the conclusions and recommendations shall be included. All TMs will be included as appendices to the PER. Prepare the following preliminary engineering design drawings for inclusion in the PER.
- 14.1.1 Overall Site Plan
- 14.1.2 Gravity System Hydraulic Profile
- 14.1.3 Discharge System Hydraulic Profile
- 14.1.4 Intake – Site Plan
- 14.1.5 Intake – Profile
- 14.1.6 Intake – Plan and Sections
- 14.1.7 Intake – Lake Tap Section and Details

- 14.1.8 Intake – Lake Tap Construction Sequence
- 14.1.9 Site 4 – Site Plan
- 14.1.10 Site 4 – Maintenance Building Plan and Sections
- 14.1.11 Site 4 – Maintenance Building Architectural Floor Plan and Section
- 14.1.12 Site 4 – Maintenance Building Architectural Exterior Elevations
- 14.1.13 Site 4 – Maintenance Building Electrical One-Line Diagram
- 14.1.14 Gravity Line – Plan and Profile 1
- 14.1.15 Gravity Line – Plan and Profile 2
- 14.1.16 Gravity Line – Plan and Profile 3
- 14.1.17 Gravity Line – Lake Tap Connection Plan
- 14.1.18 Gravity Line – Tunnel Section and Details
- 14.1.19 Pump Station – Site Plan
- 14.1.20 Pump Station – Enlarged Site Plan
- 14.1.21 Pump Station – Shaft Section and Details
- 14.1.22 Pump Station – Delivery Connections Plan
- 14.1.23 Pump Station – Building Plan and Sections
- 14.1.24 Pump Station – Building Sections
- 14.1.25 Pump Station – Architectural Floor Plan and Sections
- 14.1.26 Pump Station – Architectural Roof Plan
- 14.1.27 Pump Station – Architectural Exterior Elevations
- 14.1.28 Pump Station – Process and Instrumentation Diagram (P&ID)
- 14.1.29 Pump Station – Electrical One-Line Diagram
- 14.1.30 Pressure Line – Plan and Profile 1
- 14.1.31 Pressure Line – Plan and Profile 2
- 14.1.32 Pressure Line – Phase 1 Connection Plan
- 14.1.33 Pressure Line – Tunnel Section and Details
- 14.1.34 Power Supply – Site Plan
- 14.1.35 Power Supply – Site 8 Relocation Plan
- 14.1.36 Easements – Parcels and Easement Key
- 14.1.37 Easements – Parcels and Easement Key (Power Supply)
- 14.1.38 Construction Access and Haul Routes Layout

Task 14.0 Deliverables

- *Preliminary Engineering Report and Preliminary Drawings (draft and final) as described above.*

Task 15.0 - Additional Services

The following Additional Services are not included in the Scope of Services and will not be performed unless specifically authorized by the OWNER:

- 15.1 Real estate acquisition or appraisal services.
- 15.2 Preliminary engineering of dedicated pump or jockey pump systems to deliver water to the City of Cedar Park and Sandy Creek WTPs.
- 15.3 Environmental, biological, historical, and cultural field investigations for efforts other than those associated with the Trails End Road laydown area. Investigations at the Trails End Road laydown area exclude Phase I Environmental Site Assessments, endangered species assessments, jurisdictional water assessments, and cultural resources surveys.
- 15.4 Performing the following final design tasks for inclusion in the Well Mitigation Technical Memorandum: initiating monitoring of existing wells, performing water quality testing to baseline existing water quality, surveying the location of existing wells, and collecting field data of actual well dimensions and characteristics (depth, capacity, construction details, etc.).
- 15.5 Preparing applications or informational documents for additional permits including but not limited to:
 - 15.5.1 Individual Permit from USACE if the project elevates USACE authorization at Site 4 or Site 8 from a Nationwide permit to an Individual Permit.
 - 15.5.2 Minor amendment to BCCP Section 10(a) permit.
 - 15.5.3 Village of Volente permits or approvals other than a Concept Plan.
 - 15.5.4 Any revisions to the existing TWDB Environmental Information documents.
- 15.6 Coordination with other regulatory including but not limited to Texas Parks & Wildlife Department (TPWD), U.S. Fish & Wildlife Service (USFWS), Texas Historical Commission (THC), and U.S. Environmental Protection Agency (USEPA).
- 15.7 Site clearing and grading for drilling equipment access to boring locations and site restoration activities beyond the removal of boring spoils.
- 15.8 Survey and environmental reconnaissance of the temporary construction easement or other privately owned property on Trails End Road.
- 15.9 ROW and aerial surveying and mapping services.
- 15.10 Final Design Phase Services. After acceptance by OWNER of the Final Preliminary Engineering Report and other deliverables and upon written authorization, final plans and contract documents shall be completed. Work tasks for final design will be defined in a future scope of services.
- 15.11 Preparation of applications and supporting documents (in addition to those furnished under Basic Services) for private or governmental grants, loans, or advances in

- connection with the Project; preparation or review of environmental assessments and impact statements; review and evaluation of the effects on the design requirements for the Project of any such statements and documents prepared by others; and assistance in obtaining approvals of authorities having jurisdiction over the anticipated environmental impact of the Project.
- 15.12 Services to make measured drawings of or to investigate existing conditions or facilities, or to verify the accuracy of drawings or other information furnished by OWNER or others.
 - 15.13 Services resulting from significant changes in the scope, extent, or character of the portions of the Project designed or specified by ENGINEER or its design requirements including, but not limited to, changes in size, complexity, OWNER'S schedule, character of construction, or method of financing; and revising previously accepted studies, reports, Drawings, Specifications, or Contract Documents when such revisions are required by changes in Laws and Regulations enacted subsequent to the Effective Date of this Agreement or are due to other causes beyond ENGINEER'S control.
 - 15.14 Services required as a result of OWNER'S providing incomplete or incorrect Project information to ENGINEER.
 - 15.15 Services required beyond 2015 due to delays or other causes beyond ENGINEER'S control.
 - 15.16 Undertaking investigations and studies including, but not limited to, detailed consideration of operations, maintenance, and overhead expenses; the preparation of feasibility studies, cash flow and economic evaluations, rate schedules, and appraisals; assistance in obtaining financing for the Project; evaluating processes available for licensing, and assisting OWNER in obtaining process licensing; detailed quantity surveys of materials, equipment, and labor; and audits or inventories required in connection with construction performed by OWNER.
 - 15.17 Furnishing services of Consultants for other than Basic Services.
 - 15.18 Services attributable to assisting the OWNER in prequalifying prime contractors and/or subcontractors/suppliers for this Project.
 - 15.19 Preparing for, coordinating with, participating in and responding to structured independent review processes, including, but not limited to, construction management, cost estimating, project peer review, value engineering, and constructability review requested by OWNER; and performing or furnishing services required to revise studies, reports, Drawings, Specifications, or other Bidding Documents as a result of such review processes.
 - 15.20 Providing assistance in responding to the presence of any Constituent of Concern at the Site, in compliance with current Laws and Regulations.
 - 15.21 Preparing to serve or serving as a consultant or witness for OWNER in any litigation, arbitration, or other dispute resolution process related to the Project.
 - 15.22 Providing more extensive services required to enable ENGINEER to issue notices or certifications requested by OWNER.
 - 15.23 Other services performed or furnished by ENGINEER not otherwise provided for in this Agreement.

ATTACHMENTS

A – Northwest Hydraulic Consultants, Inc. Scope of Services

**EXHIBIT C
WORK SCHEDULE**

Brushy Creek Regional Utility Authority - Phase 2 Deep Water Intake
Preliminary Design Schedule



EXHIBIT D
COMPENSATION

Total compensation for Basis Services set forth in Exhibit B is estimated to be \$5,945,300. OWNER shall pay ENGINEER for Basic Services Tasks 1.0, 2.0, 3.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0, and 14.0 set forth in Exhibit B on the basis of Lump Sum as described in Paragraph D1.01. OWNER shall pay ENGINEER for Basic Services Tasks 4.0 and 13.0 set forth in Exhibit B on the basis of Direct Labor Costs times a Factor as described in Paragraph D1.02.

D1.01 OWNER shall pay ENGINEER for Basic Services Tasks 1.0, 2.0, 3.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0, and 13.0 set forth in Exhibit B as follows:

A. A Lump Sum amount of \$4,390,100 based on the following estimated distribution of compensation:

1. Task 1.0 – Project Management, Coordination, and Meetings	\$514,900
2. Task 2.0 – Jurisdictional & Environmental Permitting Agency Coordination	\$299,400
3. Task 3.0 – Right-of-Way and Land Acquisition	\$60,600
4. Task 5.0 – Intake and Intake Maintenance Facilities	\$734,300
5. Task 6.0 – Gravity Main Tunnel and Pipeline from Intake to Pump Station	\$402,900
6. Task 7.0 – Pump Station	\$1,406,600
7. Task 8.0 – Pressure Main Tunnel and Pipeline	\$316,300
8. Task 9.0 – Risk Management	\$155,300
9. Task 10.0 – Value Engineering	\$155,300
10. Task 11.0 – Surveying and Mapping	\$98,400
11. Task 12.0 – Electrical Service Evaluation	\$77,600
12. Task 14.0 – Preliminary Engineering Report	\$168,500

B. The portion of the Lump Sum amount billed for ENGINEER'S services will be based upon ENGINEER'S estimate of the percentage of the total services actually completed during the billing period for each Task described in Paragraph D1.01.A.

C. ENGINEER may not alter the distribution of compensation between individual phases noted herein and shall not exceed the total Lump Sum amount unless approved in writing by the OWNER.

- D. The Lump Sum includes compensation for ENGINEER'S services and services of ENGINEER'S Consultants, if any. Appropriate amounts have been incorporated in the Lump Sum to account for labor costs, overhead, profit, expenses, and Consultant charges.

D1.02 OWNER shall pay ENGINEER for Basic Services Tasks 4.0 and 13.0 set forth in Exhibit B as follows:

- E. An amount equal to ENGINEER'S Direct Labor Costs times a factor of 3.26 for the services of ENGINEER'S personnel engaged on the Project, plus Reimbursable Expenses, estimated to be \$324,500, and ENGINEER'S Consultant's charges, estimated to be \$1,230,700.
- F. The total compensation for services under Paragraph D1.02 is estimated to be \$1,555,200 based on the following distribution of compensation:
 - 1. Task 4.0 – Preliminary Geotechnical Investigation Data Collection and Underground Engineering \$1,386,200
 - 2. Task 13.0 – Project Delivery Method \$169,000
- G. ENGINEER may not alter the distribution of compensation between individual phases of the work noted herein and shall not exceed the total estimated compensation amount unless approved in writing by OWNER.
- H. The total estimated compensation for ENGINEER'S services included in the breakdown by phases as noted in Paragraph D1.02.B, incorporates all labor, overhead, profit, Reimbursable Expenses, and ENGINEER'S Consultant's charges.
- I. If it becomes apparent to Engineer that the compensation amount for Engineer's services will be exceeded, Engineer shall give Owner written notice thereof for review of the matter.
- J. The portion of the amounts billed for ENGINEER'S services which are related to services rendered on a Direct Labor Costs times a Factor basis will be billed based on the applicable Direct Labor Costs for the cumulative hours charged to the Project by ENGINEER'S principals and employees multiplied by the above-designated factor, plus Reimbursable Expenses and ENGINEER'S Consultant's charges incurred during the billing period.
- K. The amounts payable to ENGINEER for Reimbursable Expenses will be the Project-related internal expenses actually incurred or allocated by ENGINEER multiplied by a factor of 5%.
- L. Direct Labor Costs means salaries and wages paid to ENGINEER'S employees but does not include payroll-related costs or benefits.

D1.03 General Compensation

- M. Whenever ENGINEER is entitled to compensation for the charges of ENGINEER'S Consultants, those charges shall be the amounts billed by ENGINEER'S Consultants to Engineer times a factor of 5%.

Brushy Creek Regional Utility Authority Phase 2 Deep Water Intake

Preliminary Design Basis of Compensation

Fee Summary

TASK DESCRIPTION	HDR Total Fee	Subconsultant Fee							Total Fee
		LAN	AECOM	KFA	Brierley	NHC	SAM	aci	
1.0 Project Management, Coordination, and Meetings									
1.1 Project Administration	\$129,187	\$24,115	\$51,169	\$18,280	\$11,861	\$14,722		\$5,000	\$254,334
1.2 Project Meetings									
1.2.1 Kickoff Meeting	\$10,825	\$5,360	\$1,305	\$790	\$1,839			\$750	\$20,869
1.2.2 Monthly Progress Meetings	\$72,372	\$18,519	\$13,581	\$11,850	\$13,917			\$3,350	\$133,589
1.2.3 Design Workshops	\$48,528	\$5,290	\$9,740	\$6,112	\$7,852				\$77,522
1.2.4 BCRUA Board Updates	\$17,245								\$17,245
Sub Management Fee	\$11,300								\$11,300
TASK SUBTOTAL	\$289,457	\$53,284	\$75,795	\$37,032	\$35,469	\$14,722		\$9,100	\$514,900
2.0 Jurisdictional and Environmental Agency Coordination									
2.1 Village of Volente									
2.1.1 Meetings	\$59,310	\$22,110	\$1,100	\$7,014	\$2,677			\$2,400	\$94,611
2.1.2 Concept Plan	\$53,842								\$53,842
2.1.3 Noise Analysis TM	\$36,813								\$36,813
2.1.4 Borings Coordination	\$20,295								\$20,295
2.2 LCRA	\$15,299		\$4,940						\$20,239
2.3 Travis County	\$10,727			\$1,952					\$12,679
2.4 City of Jonestown	\$5,402			\$1,580					\$6,982
2.5 USACE	\$7,279		\$7,050					\$8,800	\$23,129
2.6 BCCP	\$4,162	\$1,500						\$11,500	\$17,162
2.7 TCEQ	\$3,002								\$3,002
2.8 Trails End Road Site Env Reconnaissance	\$1,626			\$1,350				\$3,800	\$6,776
Sub Management Fee	\$3,900								\$3,900
TASK SUBTOTAL	\$221,658	\$23,610	\$13,090	\$11,896	\$2,677			\$26,500	\$299,400
3.0 ROW and Land Acquisition									
3.1 Property Research	\$3,476	\$15,800	\$1,190	\$3,012					\$23,478
3.2 Right-of-Entry	\$6,344	\$10,710	\$1,190		\$1,139				\$19,383
3.3 Project Land Requirements	\$3,110	\$11,180	\$1,190						\$15,480
Sub Management Fee	\$2,300								\$2,300
TASK SUBTOTAL	\$15,230	\$37,690	\$3,570	\$3,012	\$1,139				\$60,600
4.0 Preliminary Geotech Data Collection & Underground Eng									
4.1 Existing Data Review	\$9,871				\$13,703				\$23,574
4.2 Site Reconnaissance	\$16,152				\$6,421				\$22,573
4.3 Rock Outcrop Mapping	\$3,198				\$18,508				\$21,706
4.4 Reconnaissance and Field Exploration Program TM	\$6,996				\$17,140				\$24,136
4.5 Field Exploration and Laboratory Testing Program									
4.5.1 Subsurface Field Exploration and Field Testing									
4.5.1.1 Land Borings	\$16,542				\$383,319				\$399,861
4.5.1.2 Marine Borings	\$13,100				\$427,887				\$440,987
4.5.1.3 Packer/Pressure Tests	\$3,682				\$41,360				\$45,042
4.5.1.4 Piezometers	\$3,682				\$56,750				\$60,432
4.5.1.5 Downhole Camera Logging	\$3,682				\$21,247				\$24,929
4.5.2 Laboratory Testing	\$26,569				\$68,832				\$95,401
4.5.3 Core Documentation	\$3,253				\$39,983				\$43,236
4.5.4 Preliminary Geotechnical Data Report	\$10,278				\$74,203				\$84,481
4.6 Tunnels and Shafts Assessment TM	\$10,369				\$29,609				\$39,978
Sub Management Fee	\$59,900								\$59,900
TASK SUBTOTAL	\$187,274				\$1,198,962				\$1,386,200
5.0 Intake and Intake Maintenance Facilities									
5.1 Lake Tap Location	\$4,641		\$16,000		\$910				\$21,551
5.2 Water Quality Evaluations	\$3,587		\$53,045						\$56,632
5.3 Preliminary Intake Layouts	\$19,115		\$106,840		\$12,855	\$83,190			\$222,000
5.4 Preliminary Design Criteria Development									
5.4.1 Lake Tap Design	\$7,036		\$71,940		\$29,121				\$108,097
5.4.2 Intake Design	\$22,275		\$62,050		\$10,485				\$94,810
5.4.3 Maintenance Building and Site 4 Improvements	\$137,033		\$16,210						\$153,243
5.5 Preliminary Drawings	\$32,995		\$14,276		\$6,541				\$53,812
Sub Management Fee	\$24,200								\$24,200
TASK SUBTOTAL	\$250,881		\$340,361		\$59,912	\$83,190			\$734,300
6.0 Gravity Main Tunnel and Pipeline from Intake to PS									
6.1 Alignment Analysis	\$12,075	\$89,260	\$1,740		\$10,247			\$1,400	\$114,722
6.2 Preliminary Well Mapping, Monitoring, and Mitigation Plan	\$36,174	\$2,200			\$4,626				\$43,000
6.3 Preliminary Design Criteria Development									
6.3.1 Tunnel Design	\$24,425	\$23,995	\$2,610		\$53,682				\$104,712
6.3.2 Pipeline Design	\$7,705	\$63,675	\$870		\$2,795				\$75,045
6.4 Preliminary Drawings	\$6,243	\$34,040			\$10,018				\$50,301
Sub Management Fee	\$15,100								\$15,100
TASK SUBTOTAL	\$101,722	\$213,170	\$5,220		\$81,368			\$1,400	\$402,900
7.0 Pump Station									
7.1 Cedar Park and Sandy Creek WTP Connections	\$72,617								\$72,617
7.2 Preliminary Pump Station Layouts	\$144,742				\$13,952	\$121,415			\$280,109
7.3 Hydraulic Analysis									
7.3.1 System Curves	\$30,847								\$30,847
7.3.2 Hydraulic Profiles	\$25,468		\$2,470						\$27,938
7.3.3 Pump Selection Analysis	\$76,800								\$76,800
7.3.4 Transient Analysis	\$26,659					\$28,750			\$55,409
7.3.5 Physical Hydraulic Model	\$55,239					\$194,825			\$250,064
7.4 Preliminary Design Criteria Development									
7.4.1 Geotechnical Design	\$22,474		\$6,123		\$21,300				\$49,897
7.4.2 Architectural Design	\$80,952								\$80,952
7.4.3 Structural Design	\$63,681				\$3,260				\$66,941
7.4.4 Electrical Design	\$85,784								\$85,784
7.4.5 Mechanical Design	\$57,487								\$57,487
7.4.6 Site Civil Design	\$108,512				\$1,377				\$109,889
7.4.7 Control and Automation Design	\$81,037								\$81,037
7.5 Preliminary Drawings	\$54,259				\$6,541				\$60,800
Sub Management Fee	\$20,000								\$20,000
TASK SUBTOTAL	\$1,006,556		\$8,593		\$46,430	\$344,990			\$1,406,600
8.0 Pressure Main Tunnel and Pipeline to Phase 1									
8.1 Alignment Analysis	\$8,028		\$1,650	\$23,688	\$8,891			\$700	\$42,957
8.2 Preliminary Design Criteria Development									
8.2.1 Trails End Road Riser Design and Phase 1 Connection	\$8,583		\$4,953	\$81,764	\$17,189				\$112,489
8.2.2 Tunnel Design	\$9,818		\$3,300	\$14,904	\$43,632				\$71,654
8.2.3 Pipeline Design	\$7,705		\$1,100	\$38,400	\$1,014				\$48,219
8.3 Preliminary Drawings	\$6,243			\$11,092	\$10,526				\$27,861
Sub Management Fee	\$13,100								\$13,100
TASK SUBTOTAL	\$53,477		\$11,003	\$169,848	\$81,252			\$700	\$316,300
9.0 Risk Management									
9.1 Risk Management Plan	\$61,992	\$8,550	\$7,020	\$4,560	\$6,438			\$3,960	\$92,520
9.2 Risk Management Workshop	\$21,375	\$2,000	\$5,404	\$1,170	\$1,822				\$31,771
9.3 Risk Register Database	\$12,014								\$12,014
9.4 Risk Management Updates	\$16,988								\$16,988
Sub Management Fee	\$2,000								\$2,000
TASK SUBTOTAL	\$112,369	\$10,550	\$12,424	\$5,730	\$8,260			\$3,960	\$155,300
10.0 Value Engineering									
10.1 Value Engineering Evaluation	\$55,647	\$3,000	\$16,330	\$1,520	\$17,849	\$7,770			\$102,116
10.2 Value Engineering Workshop	\$13,555		\$7,480		\$3,699				\$24,734
10.3 Value Engineering Report	\$20,284		\$5,050						\$25,334
Sub Management Fee	\$3,100								\$3,100
TASK SUBTOTAL	\$92,586	\$3,000	\$28,860	\$1,520	\$21,548	\$7,770			\$155,300
11.0 Surveying and Mapping									
11.1 Survey Control	\$4,549		\$915					\$36,680	\$42,144
11.2 Trails End Road Survey	\$4,549			\$2,282				\$11,340	\$18,171
11.3 Stake Geotechnical Borings	\$3,037				\$6,763			\$24,206	\$34,006
Sub Management Fee	\$4,100								\$4,100
TASK SUBTOTAL	\$16,236		\$915	\$2,282	\$6,763			\$72,226	\$98,400
12.0 Electrical Service Evaluation									
12.1 PEC Coordination	\$13,994	\$22,110							\$36,104
12.2 Power Utility Relocation Plan	\$40,418								\$40,418
Sub Management Fee	\$1,100								\$1,100
TASK SUBTOTAL	\$55,512	\$22,110							\$77,600
13.0 Project Delivery Evaluation									
13.1 Contractor Constructability Workshop	\$84,129	\$6,010	\$10,530	\$2,670	\$8,350				\$111,689
13.2 Project Delivery	\$51,584				\$4,161				\$55,745
Sub Management Fee	\$1,600								\$1,600
TASK SUBTOTAL	\$137,313	\$6,010	\$10,530	\$2,670	\$12,511				\$169,000
14.0 Preliminary Engineering Report									
14.1 Preliminary Engineering Report	\$80,826	\$26,105	\$28,320	\$15,088	\$4,833	\$7,628		\$1,520	\$164,320
Sub Management Fee	\$4,200								\$4,200
TASK SUBTOTAL	\$85,026	\$26,105	\$28,320	\$15,088	\$4,833	\$7,628		\$1,520	\$168,500
Total Fee	\$2,625,297	\$395,529	\$538,681	\$249,078	\$1,561,124	\$458,300	\$72,226	\$43,180	\$5,945,300

EXHIBIT E
CERTIFICATE OF INSURANCE



CERTIFICATE OF LIABILITY INSURANCE

6/1/2015

DATE (MM/DD/YYYY)

10/1/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Lockton Companies 444 W. 47th Street, Suite 900 Kansas City MO 64112-1906 (816) 960-9000	CONTACT NAME:	
	PHONE (A/C, No, Ext):	FAX (A/C, No):
	E-MAIL ADDRESS:	
INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A: Hartford Fire Insurance Company		19682
INSURER B: Travelers Property Casualty Co of America		25674
INSURER C: New Hampshire Insurance Company		23841
INSURER D: Lexington Insurance Company		19437
INSURER E: National Union Fire Ins Co Pittsburgh PA		19445
INSURER F:		

COVERAGES HDRIN01 CERTIFICATE NUMBER: 13140664 REVISION NUMBER: XXXXXXX

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> Contractual Liab. GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC <input type="checkbox"/> OTHER:	N	N	37CSEQU0950	6/1/2014	6/1/2015	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
A A A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS	N	N	37CSEQU0951 (AOS) 37CSEQU0952 (HI) 37CSE1160 (MA)	6/1/2014 6/1/2014 6/1/2014	6/1/2015 6/1/2015 6/1/2015	COMBINED SINGLE LIMIT (Ea accident) \$ 2,000,000 BODILY INJURY (Per person) \$ XXXXXXXX BODILY INJURY (Per accident) \$ XXXXXXXX PROPERTY DAMAGE (Per accident) \$ XXXXXXXX \$ XXXXXXXX
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$ \$0	N	N	ZUP-10R64084-14-NF (EXCLUDES PROF. LIAB)	6/1/2014	6/1/2015	EACH OCCURRENCE \$ 1,000,000 AGGREGATE \$ 1,000,000 \$ XXXXXXXX
C C E	<input checked="" type="checkbox"/> WORKERS COMPENSATION AND EMPLOYERS' LIABILITY <input type="checkbox"/> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A	N	027527762 (AOS) 027527764 (ME) 027527763 (CA)	7/1/2014 7/1/2014 7/1/2014	7/1/2015 7/1/2015 7/1/2015	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
D	<input checked="" type="checkbox"/> ARCHS & ENGS PROFESSIONAL LIABILITY	N	N	061853691	6/1/2014	6/1/2015	PER CLAIM: \$1,000,000. AGG: \$1,000,000.

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
 RE: PHASE 2 DEEP WATER INTAKE , PRELIMINARY DESIGN.

CERTIFICATE HOLDER**13140664**

BRUSHY CREEK REGIONAL UTILITY AUTHORITY
 ATTENTION: TOM GALLIER, GENERAL MANAGER
 221 EAST MAIN STREET
 ROUND ROCK TX 78664

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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ATTACHMENT A
Northwest Hydraulic Consultants, Inc.
Scope of Services

**BRUSHY CREEK REGIONAL UTILITY AUTHORITY
PHASE 2 DEEP WATER INTAKE**

**CFD, HYDRAULIC TRANSIENT ANALYSIS, AND PHYSICAL MODELING
SCOPE OF WORK**

REVISED PROPOSAL

Prepared for

HDR Engineering, Inc.
Austin, TX

Prepared by

Northwest Hydraulic Consultants
Seattle, WA

September 18, 2014

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Appendix A: Resumes of Key Personnel

1.0 INTRODUCTION

1.1 BACKGROUND INFORMATION

Northwest Hydraulic Consultants (NHC) is pleased to submit this Scope of Work (SOW) and cost estimate to support HDR in the hydraulic design of the Phase 2 Deep Water Intake for Brushy Creek Regional Utility Authority (BCRUA). Our proposal is based on information provided in Exhibit B – Engineering Services provided in an email dated August 7, 2014.

1.2 PROJECT DESCRIPTION

The Phase 2 project consists of a permanent raw water intake in a deeper location on Lake Travis to deliver water by gravity to a new high capacity pumping station located adjacent to the City of Cedar Park Water Treatment Plant (WTP). The pumping station will convey water to the Phase 1 raw water pipeline on Trails End Road. Phase 2 includes multiple key elements that will result in the construction of a Deep Water Intake System with an ultimate capacity of 141.7 million gallons per day (MGD). These elements include an intake assembly, maintenance building, gravity flow tunnel, pump station, transmission tunnel, and electrical improvements. The intake capacity is allocated among the owners with BCRUA WTP (105.8 MGD), the City of Cedar Park WTP (23.9 MGD), and the City of Leander WTP (12.0 MGD).

2.0 SCOPE OF WORK

Scope of Work tasks is defined as per Exhibit B – Engineering Services Document, dated August 7, 2014.

TASK 1.0 - PROJECT MANAGEMENT, COORDINATION AND MEETINGS

Task 1.1 - Project Administration

NHC will provide monthly progress reports with an updated schedule with each invoice.

TASK 5.0 – INTAKE AND SITE 4 MAINTENANCE FACILITIES

Task 5.3.1.3 – Perform CFD Modeling of the Selected Alternative

A review of design challenges posed by intakes of WTPs can be found in AWWA and ASCE (1990)¹. Depending on the location and orientation, velocity on the screen could be highly non-uniform. Adjacent intakes or screens could interfere and degrade their capacity. Intakes withdrawing water from a lake or a river could affect aquatic organisms such as juvenile fish. If endangered species are present, intakes should include screens to minimize impingement and entrainment. A custom designed screen may need additional considerations, as internal support structures could create eddies and dead-flow zones and increase head losses.

Scope of Work

Workshop

NHC will participate in a one day workshop at HDR’s office in Austin to review the selected design, determine data requirements from HDR, identify operating conditions, water levels for the modeling, discuss possible improvements to the design, and review the schedule.

Two people from NHC are proposed for the workshop: Tom Demlow, Project Manager, and Liaqat Khan, CFD Modeling Lead.

Computational Fluid Dynamics (CFD) Modeling

The proposed conceptual raw water intake assembly includes up to four intakes connected to an 84-inch diameter header, a lake-tap, and a 96-inch diameter gravity tunnel. The highest and lowest elevations of the intakes are 660 and 565 ft-msl. As currently proposed, four intake levels will be used, and only one of the intakes will be used to withdraw up to 141.7 MGD.

NHC proposes the use of STAR-CCM+, a state-of-the-art CFD modeling software package to evaluate the selected Alternative determined in Task 5.3.1.2.

The following tasks will be performed for the initial evaluation of the hydraulics of the selected intake layout:

¹ AWWA and ASCE (1990). *Water Treatment Plant Design*. McGraw-Hill, New York, New York.

- *Data Collection and Review:* The data necessary for the study are bathymetry of the lake, detailed drawings of both preliminary intake structures, and lake water levels corresponding to intake withdrawal rates. This task assumes that all data and information necessary for this study will be provided by HDR. NHC will perform a QA/QC evaluation before using them for the study.
- *Lake Bathymetric Data Processing:* For an accurate prediction of the approach flow, bathymetry of the lake extending sufficiently far from the intake will be necessary. The bathymetric data to be provided by HDR will be analyzed and processed to create a 3-D surface to define the lower boundary of the model domain. If requested, NHC will provide a quote to acquire the necessary bathymetric information.
- *Geometric Rendering of Model Domain:* A 3-D rendering of the selected intake will be created, and will include the intake screens, riser pipe, 84-inch header pipe, and a segment of the 96-inch gravity tunnel. This intake will be combined with lake bed to define the model domain.
- *Computational Mesh Generation:* The model domain for the selected intake arrangement will be imported into STAR-CCM+, and a computation mesh will be generated to resolve all the important geometric features. However, note that the screen will be represented by the porous baffle option of STAR-CCM+, without resolving wires creating the porous screen surface.
- *Baseline Flow Simulation and Analysis:* Appropriate boundary conditions will be applied to simulate a steady state for withdrawal of 141.7 MGD through the screens. The model results will be analyzed to visualize the approach flow, velocity distribution on the screens, interaction/interference among the screens, and circulation pattern inside the screen (for internal hydraulics).

The following tasks will be performed to optimize the hydraulics of the selected intake layout:

- *Design Modification Modeling:* Both the external and internal hydraulics of the selected layout will be reviewed and design modifications will be proposed to improve hydraulic performance of the screens and the intake. For the purpose of cost estimate and schedule, this proposal assumes that three (3) modifications will be sufficient to finalize the design. In addition to updating the model domain geometry, each design modification will require remeshing. This proposal assumes design modifications will be performed for the lowest lake water level at which the intake will be operational.
- *Performance Verification Modeling:* This task will verify that optimized design will perform equally well for other lake water levels and water withdrawal rates. For the purpose of cost estimate and schedule, four (4) model runs have been assumed, representing two water levels and two flow rates. This task will require the development of a new computational mesh corresponding to a different water level in the lake.
- NHC will prepare a report on the model study. The report will describe the technical approach, key assumptions, results of the study, and summary, conclusions, and

recommendation. Following a quality assurance review, NHC will provide a draft report to HDR. Upon receipt of a consolidated set of comments, NHC will finalize the report and distribute an electronic (PDF) and five (5) printed copies to HDR.

Assumptions and Limitations

The SOW, cost, and schedule of this proposal are based on the following assumptions:

- HDR will provide all data and information for this study, including bathymetry of lake, detailed drawings of the intake structure, and lake water levels, and operating conditions. The SOW does not include task for field data collection.
- The proposed system consists of four intakes at different elevations. However, only one intake will be used at a time to withdraw a maximum of 141.7 MGD. In case this assumption is invalid, NHC will request additional work authorization from HDR for the study.
- For each operating scenario, the CFD model will simulate steady state flow by applying time independent boundary conditions, and assuming a horizontal water surface throughout the model domain. Further, thermal stratification of the lake, if any, will not be considered in the CFD model.
- The design development task will be performed for three (3) design modifications. Further, modeling of four (4) operating scenarios representing different lake water levels and water withdrawal rates will be sufficient for performance verification. If these assumptions become invalid, NHC will request additional work authorization from HDR for completing the study.

Task 5.3.4 - Intake Technical Memorandum

NHC will prepare a report on the model study. The report will describe the technical approach, key assumptions, results of the study, and summary, conclusions, and recommendations. Following a quality assurance review, NHC will provide a draft report to HDR. Upon receipt of a consolidated set of comments, NHC will finalize the report and distribute an electronic (PDF) and five (5) printed copies to HDR.

TASK 7.0 – PUMP STATION

Task 7.2 – Preliminary Pump Station Layouts

Task 7.2 - Develop Three Concepts

Workshop and Desktop Analysis

NHC will participate in a one day workshop at HDR's office in Austin to develop the conceptual design alternatives for the pump station. Three preliminary alternatives have been proposed including a single shaft, dual shaft, and individual pump shaft designs. These will be evaluated and enhanced as need be. Two people from NHC are proposed for the workshop: Tom Demlow, Project Manager, and Liaqat Khan, CFD Modeling Lead.

From the Design Criteria Workshop, up to three alternatives will be further developed. The hydraulic evaluation for each concept will be further developed and refined. This will include the potential for high flow pre-swirl, vortex formation, and unbalanced velocities at the pump. This will be based on desktop evaluation along with the CFD results (see Section 7.2.2).

Task 7.2.2 – CFD Evaluation of the Three Concepts

Operational performance of pumps is strongly influenced by velocity distribution in the approach channel, as determined by the wet well geometry and influent conditions. The HI guidelines for satisfactory hydraulic performance of a pump include an average flow pre-swirl of less than 5°, less than 10 percent deviation of point axial velocity from the mean, and the absence of vortices stronger than Type 1. (Note that these performance criteria are for CFD modeling only, whereas for physical modeling the performance criteria take into account non-steady hydraulics.) For the proposed pump station, a CFD model will be used to evaluate three alternate layouts of the pump station to identify the most promising option that will be further refined using a physical model.

Initial Evaluation of the Alternatives

The proposed raw water pump station will include a wet well shaft(s) approximately 300-feet deep, and approximately 10 submersible or vertical turbine pumps. Alternatives being considered include single shaft, dual shaft, and individual shaft designs. Exhibit B suggests evaluation of up to three layouts of the pump station to identify the most promising option for further analysis. NHC will perform the following tasks for each of the alternatives:

- *Data Collection and Review:* The data necessary for this study are drawings of the pump station for each alternative, and pump operating conditions. This task assumes that data and information necessary for this study will be provided by HDR. NHC will review the data and perform a QA/QC before using them for developing the model. In addition, considering low, normal, and high flows, the review will also identify up to four (4) critical scenarios for performance evaluation for each alternative (three flow rates at one water level and one test at a different water level).
- *Geometric Renderings of Model Domain:* The first step after collecting project related data and information is generating a 3-D CAD rendering of each model domain. Each model domain will encompass the wet well, the pumps, and a sufficiently long segment of the 96-inch diameter inlet tunnel. Depending on the water level in the lake, several model domains may be necessary. The SOW assumes three model domains corresponding to low, normal, and high flows will be sufficient for the analysis.
- *Computational Mesh Generation:* The model domains will be imported into STAR-CCM+, and computation meshes will be generated to accurately resolve

the important geometric features of the model domain. Because of possible changes in water level, up to three (3) computational meshes will be developed for this task for each alternative.

- *Baseline Flow Simulation and Analyses:* For each of the computational meshes, appropriate boundary conditions will be applied, and the model will be run to obtain a steady state solution. The results will be analyzed to visualize the approach flow, determine pre-swirl and deviation of the velocity at the pump bell throat, and identify surface and subsurface vortices. Up to four (4) model runs for each alternative will be made and analyzed in this task.
- *Selection of an Pump Intake Layout:* The hydraulic characteristics will be compared to determine a preferred pump station layout. This analysis will not take into account any fatal flaws in terms of constructability or maintenance and operating costs.

Completion of these tasks will result in nine computational meshes and 12 model runs.

Advance Selected Design using CFD (Preliminary 30% Design)

Design modifications will be made to improve the approach flow, and reduce pre-swirl and non-uniform velocity at the pump bell throat for each alternative. For the purpose of cost estimate and schedule, this proposal assumes that three (3) design modifications for the selected alternative will be sufficient to achieve an acceptable hydraulic performance. This will result in three model runs at the worst operating condition identified in the initial evaluation.

Assumptions and Limitations

The SOW, cost, and schedule of this proposal are based on the following assumptions:

- HDR will provide all data and information necessary for this study, including conceptual-level drawings of the three layouts of the pump station.
- The CFD modeling approach described in this proposal will simulate steady state flow field in the model domain for each modeling scenario. This modeling approach will not capture temporal variability of the vortices; however, most reported CFD model studies have successfully used this approach for optimizing pump sump hydraulics.

Task 7.2.4 – Pump Station Alternatives TM

The hydraulic portion of the Pump Station Alternatives Technical Memorandum will be prepared and submitted to HDR. This will include pertinent plots from the CFD analysis for each alternative and other graphics as need be. Recommendations for one of the alternatives will be included with justification. The results from design development of the selected design will be included in the technical memorandum. NHC will provide a draft report in electronic format (PDF) to HDR. Upon receipt of a consolidated set of

comments, NHC will finalize the report and distribute an electronic (PDF) and five (5) printed copies to HDR.

Task 7.3 – Hydraulic Analysis

Task 7.3.4 – System Pressure Surge Analysis

Project Understanding for Pressure Surge Analysis

NHC will perform pressure surge analyses for the pump station, gravity flow tunnel (i.e., deep water intake to the wet well at pump station), proposed pressure main/tunnel (i.e., pump station discharge to connection with Phase 1 raw water transmission main), and the existing Phase 1 raw water transmission main.

The deep water intake capacity will be allocated to the City of Cedar Park WTP (23.9 MGD), the City of Leander's Sandy Creek WTP (12 MGD), and the Brushy Creek Regional Utility Authority WTP (105.8 MGD). The ultimate capacity is 141.7 MGD. The Cedar Park WTP is adjacent to the pump station site, whereas the Sandy Creek WTP is located approximately one mile downstream of the pump station and the Regional WTP is at the terminus of the Phase 1 raw water transmission main.

The deep water intake will have the capability of removing water from Lake Travis at various elevations between El. 565 ft and El. 660 ft. The 96-inch diameter gravity flow tunnel between the deep water intake and the pump station (El. 500 ft) will be approximately 1.7 miles in length. The pump station wetwell configuration will be developed in Task 7.2. Ten (10) submersible or vertical turbine raw water pumps will be installed in the wet well. Vertical pipes will be installed in the wet well between the discharge of each pump and the 84-inch diameter pressure main/tunnel (El. 780 ft). The concept level drawings show that surge relief valves are being planned for installation at the pump station. The pressure main/tunnel will be approximately 0.5 miles in length and will connect to the existing 78-inch diameter Phase 1 raw water transmission main. The Phase 1 raw water transmission main is approximately 4.6 miles in length and terminates at the storage tanks located at the Regional WTP. There are several combination air and vacuum valves installed on the existing Phase 1 raw water transmission main.

An analysis of the operation of the interim floating barge pump station near the Cedar Park WTP and the open/close operation of the existing pressure reducing valves at the turnouts to the Cedar Park WTP and Sandy Creek WTP are beyond the scope of NHC's analyses. For this analysis, the take offs to the Cedar Park WTP and Sandy Creek WTP will be treated as constant demands when they are open and zero demand when they are closed.

Of primary interest for this project are the pressure transients created by the loss of power to and start-up of the pumps at the pump station.

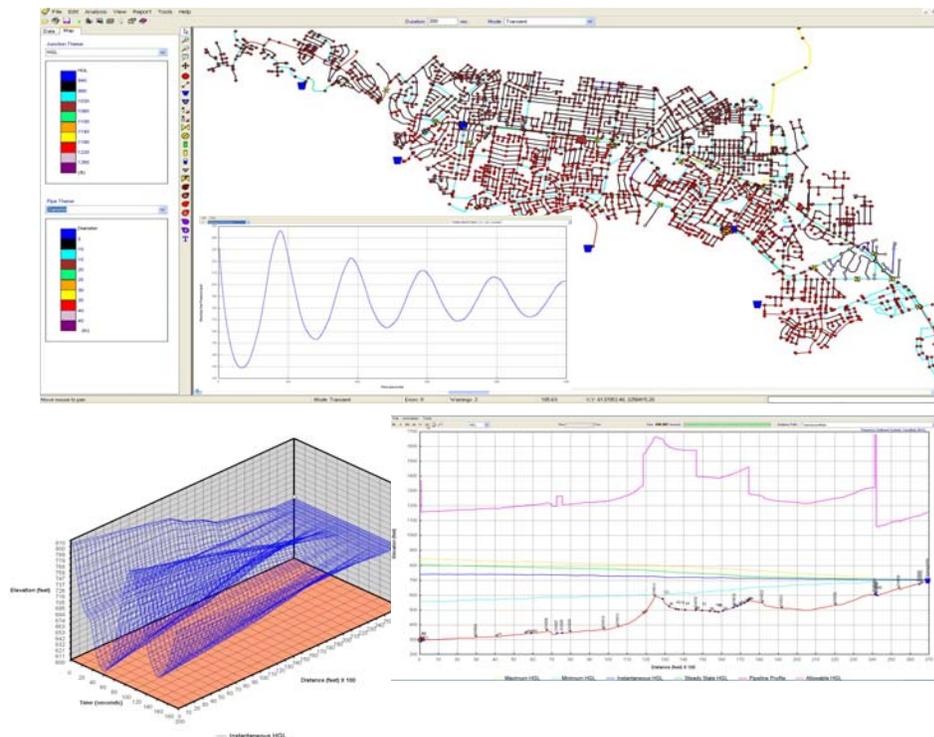
- A power failure at the pump station is likely to cause the worst-case pressure transients in the system. For example, a loss of power to the pump station will create a pressure drop wave that will propagate out from the discharge side of the pump station and into the pressure main/tunnel and existing Phase 1 raw water transmission main toward the Regional WTP. If the pressure drops sufficiently low in the pipelines to create vapor pressure, vapor cavities will form, and fluid column separation will occur. Upon re-pressurization of the pipelines by flow reversal and/or a reflected water hammer wave, the vapor cavities will collapse back into solution and the fluid columns will rejoin. When the fluid columns rejoin, very high magnitude pressure spikes will be created that could damage the pipelines. The pipelines may also be damaged by large magnitude negative pressures resulting from the initial pressure drop wave and/or large magnitude high pressures created by a reflected water hammer wave. Simultaneously with the pressure drop wave, a pressure upsurge wave will propagate out from the suction side of the pump station into the gravity flow tunnel toward the deep water intake. If the pressure in the gravity flow tunnel were to increase above the maximum allowable pressure for this conduit, damage could occur. Also, if the pressure in the gravity flow tunnel between the deep water intake and the pump station were to drop below the crown of the pipe harmful negative pressures would develop that would have to be eliminated with appropriately sized vents or other means. Furthermore, if the water level in the wet well was to drop too low it could impact the performance of the pumps when they are re-started.
- If the pumps are brought up to speed too quickly, the pipelines downstream of the pump station could be over-pressurized by an upsurge wave while the gravity flow tunnel could experience low or even negative pressures resulting from the creation of a simultaneous downsurge wave.

NHC's pressure surge analysis will predict the maximum and minimum HGL envelopes for the gravity flow tunnel, pressure main/tunnel and existing Phase 1 raw water transmission main following pump power failure and pump startup, and will recommend surge control, if necessary, to protect the system from adverse pressure transients. Recommendations will also be provided for safely starting the pumps.

Technical Approach for Pressure Surge Analysis

NHC proposes to construct a pressure surge analysis model of the system using the TransAM hydraulic transient analysis software. This Method of Characteristics (MOC) based computer model has been used by NHC to perform hydraulic transient analyses of pipeline systems with diameters as large as 22 ft and flow rates up to 1485 cfs. NHC has used TransAM to perform hydraulic transient analyses for the City of Dallas, Metropolitan Water District of Southern California, San Diego County Water Authority, Los Angeles Department of Water and Power, the Southern Nevada Water Authority,

Calleguas Municipal Water District, Irvine Ranch Water District, City of San Diego, City of Stockton, City of Lodi, City of Elk Grove and many other water and wastewater agencies. TransAM has been extensively verified by comparison of computed transient pressures and flows with those measured in the field (e.g., Axworthy and Chabot, 2004²) and laboratory (e.g., Axworthy, et al., 2000³), and predicted by codes developed by others.



TransAM Transient Analysis Software

TransAM is one of the first transient analysis software products to fully exploit the parallel processing capabilities of the multi-core processor and has been used to analyze hundreds of pipelines and distribution systems. The resulting fast computer execution time makes this transient analysis software ideal for performing analyses of large and complex pipeline systems.

Scope of Work for 30 Percent Design Pressure Surge Analysis

- Extract lengths, diameters, and elevations from the alignment/plan and elevation drawings for the gravity flow tunnel, pressure main/tunnel and existing Phase 1 raw water transmission main, and piping associated with the pump station. Calculate acoustic wavespeeds and Darcy-Weisbach friction

² Axworthy, D.H. and Chabot, N. (2004). "Pressure transients in a Canadian sewage force main." Canadian Journal of Civil Engineering, NRC, Canada, 31, 1039-1050.

³ Axworthy, D.H., Ghidaoui, M.S., and McInnis, D.A. (2000). "Extended thermodynamics derivation of energy dissipation in unsteady pipe flow." Journal of Hydraulic Engineering, ASCE, 126(4), 276-287.

factors for the pipelines. Gather data (e.g., diameters, discharge coefficients, etc.) from manufacturer literature associated with the pumps and valves. Develop pump characteristics for the hydraulic transient analysis computer model using the pump performance curves supplied by HDR. Setup the pressure surge analysis computer model of the system including the pump station, gravity flow tunnel, pressure main/tunnel and existing Phase 1 raw water transmission main, deep water intake, storage tanks, surge relief valves, and pressure reducing valves.

- Define the critical operating scenarios for the system. This will involve the definition of maximum and minimum flow rates and hydraulic grade lines, as well as facilities status (e.g., operating, idle, open, closed, etc.) for the primary function of the pump station. Establish hydraulic grade line (HGL) elevations for the tunnels and pipelines under steady state operation and static conditions at the pump station for the critical scenarios.
- NHC will use the above initial HGL elevations to perform pressure surge analysis simulations for the operation of the pump station. Simulations will be performed for the critical operating scenarios defined and will include the following:
 - pump power failure
 - pump startup
 - controlled (powered) pump shutdown
- Evaluate the results (i.e., predicted maximum and minimum pressures) of the simulations and determine whether or not surge control measures are required to protect the pump station, tunnels and pipelines from adverse pressure transients (e.g., over-pressurization, vapor cavity formation, and large magnitude negative pressures) created by the loss of power and startup of the pumps.
- If surge protection is deemed necessary, NHC will determine surge control measures (e.g., diameter and set point pressure of surge/pressure relief valves, diameter and location of controlled venting vacuum relief valves, volume and dimensions of pressurized surge tank, etc.) for the pump station and pipelines. The surge control measures will be designed to ensure that the maximum pressures do not exceed the maximum allowable pressure for the system, and to eliminate the possibility of vapor cavity formation and large magnitude negative pressures in the pipelines following pump power failure and pump startup. The results of the pressure surge analysis with the recommended surge protection improvements in place will also be provided. In addition, recommendations for safely starting the pumps will be provided.
- A 30 percent design technical memorandum will be prepared that will include (1) a description of the pressure surge analysis modeling approach, (2) a

description of the physical facilities, including a schematic showing the pressure surge analysis model, (3) component data and assumptions used for the analyses, (4) the results of the pressure surge analyses, including graphical plots of the maximum and minimum HGL envelopes and maximum allowable pressure along the pipeline, and plots of pressure head at the pump station and significant locations on the tunnels and pipelines, etc., (5) recommendations for surge control, and (6) movies of the most pertinent pressure surge analysis simulations.

- Quality Assurance/Quality Control review. Following quality assurance review, NHC will provide a draft 30 percent design memo in portable document format (i.e., PDF) to HDR.
- Upon receipt of a consolidated set of comments from HDR, NHC will prepare five (5) bound copies of the final 30 percent design memo including CD-ROMs with movies and an electronic version (i.e., PDF) of the final 30 percent design memo.

Task 7.3.5 – Physical Hydraulic Model

Acceptance Criteria

The performance criteria to be used in evaluating the pump station wet well configuration determined in Task 7.2 are based on the Hydraulic Institute 2012 Standards³:

- Free surface and sub-surface vortices entering the pump should be less severe than vortices with coherent dye cores (free-surface vortices of Type 3 and sub-surface vortices of Type 2). Dye core vortices may be acceptable only if they occur for less than 10% of the time or only for infrequent operating conditions.
- Swirl angles, both the short-term (10 to 30 second model) maximum and the long-term (10 minute model) average indicated by the swirl meter rotation, should be less than 5 degrees. Maximum short-term (10 to 30 seconds model) swirl angles up to 7 degrees may be acceptable, only if they occur less than 10% of the time or for infrequent pump operating conditions. The swirl meter rotation should be reasonably steady, with no abrupt changes in direction when rotating near the maximum allowable rate (angle).
- Time-averaged velocities at points in the throat of the bell should be within 10% of the cross-sectional area average velocity.
- Time-varying velocity fluctuations measured at a point should produce a standard deviation from the time-averaged signal of less than 10%.

Model Scale

Scale hydraulic models require that the force relationships in the model and prototype are dynamically similar. To achieve this similarity, inertial to gravity, pressure, viscous,

and surface tension forces must be the same between model and prototype; only a 1:1 scale model can achieve these criteria. Modeling at reduced scale involves identifying the primary force relationship to accurately simulate prototype conditions, then selecting a model scale to minimize any scale effects.

For free-surface flow conditions, inertial and gravitational forces are the dominant forces that define the hydrodynamic flow conditions. As a result, the Froude number, as defined below, is the key force ratio that must be equal in the model and prototype.

That is,

$$F_r = \frac{F_M}{F_P} = 1$$

where, F_M = Froude number in the model = $\frac{U_M}{\sqrt{gL_M}} = \frac{\text{Inertial Force}}{\text{Gravitational Force}}$

$$F_P = \text{Froude number in the prototype} = \frac{U_P}{\sqrt{gL_P}}$$

and, U = characteristic flow velocity

g = gravitational acceleration

L = characteristic length

M = model values

P = prototype values

In modeling flow in a pump station structure to evaluate the potential for the formation of vortices, the geometric scale is selected to minimize viscous and surface tension scale effects. Also, the model should be large enough to allow flow visualization, accurate measurements of flow pre-swirl and pump inlet velocities, and sufficient dimensional control. The Reynolds number relates to viscous effects and the Weber number relates to surface tension effects, as defined below.

$$R_e = \text{Reynolds number} = \frac{UL}{\nu} = \frac{\text{Inertial Force}}{\text{Viscous Force}}$$

$$W_e = \text{Weber number} = \frac{\rho U^2 L}{\sigma} = \frac{\text{Inertial Force}}{\text{Surface Tension Force}}$$

Based on HI (2012)³, the influence of viscous and surface tension forces is negligible if the Reynolds number and Weber number at the model suction bell inlet are above 6×10^4 and 240, respectively.

Based on the above-mentioned scaling criteria, NHC proposes to construct and test a 1:5 scale physical model. This scale will be confirmed once the recommended design is

selected. Adherence to the Froude criterion for dynamic similarity leads to the following range of scale ratios:

Model Scale Relationships

Parameter	Relation	Ratio
Length	L_r	1 : 5.0
Velocity	$L_r^{1/2}$	1 : 2.24
Discharge	$L_r^{5/2}$	1 : 55.9

Model Description

The model will be fabricated to include a section of the 96-inch diameter inlet conduit tunnel extending upstream at least 10 diameters from the pump station, the junction into the wet well, the wet well configuration determined under Task 7.2, and ten (10) pumps. The wet well will include any support structures that may impact flow to the pumps. For budgeting purposes NHC has assumed that the pumps selected will be vertical turbine pumps. The model will extend vertically 30-ft (prototype) above the wet well floor.

The model basin will be mounted on a raised wooden deck framed with dimensional lumber, and sheathed with clear acrylic plastic to permit visualization of the flow patterns throughout. The pump suction piping will be fabricated from acrylic plastic to permit visualization of the flow in the wet well and pumps, and for dimensional control.

Flow will be circulated through the model using a centrifugal laboratory pump with the model inflow controlled using a butterfly valve installed downstream from the laboratory pump. Model inflow rates will be adjusted with a butterfly valve installed in the model discharge lines. The estimated total floor space required for the model (including space for the laboratory pump and viewing) is estimated at approximately 30 ft x 30 ft (900 ft²).

Model Measurements

The following measurements will be required for the physical model study:

Flow Rate - The model inflow rates will be measured in the model supply lines using either an orifice-plate flow meter with an air-water manometer used to measure the pressure differential, or an ultrasonic flow meter. Practicality and ease of model piping will be used to determine which measurement device is best suited for this particular project. Individual pump flows will be determined using elbow meters that measure the pressure differential between the inside and outside of an elbow installed in the discharge line for each model pump. These elbow meters will be calibrated in-place using the orifice-plate flow meter or ultrasonic flow meter. Experience with these

discharge measurement techniques has shown that the measured flow rates are accurate to within two percent.

Free-Surface and Subsurface Vortices - Vortices within the wet wells and in the vicinity of the pump bells will be measured by visual observation using dye and will be based on the ANSI/HI 9.8 vortex strength scale.

Water Levels - Staff gages will be placed throughout the wet well and screening chamber to provide water level measurements. Water level measurements will be accurate to nearest 0.1 ft (prototype).

Flow Pre-swirl - A swirl meter installed in each pump will provide a measure of intensity of swirl. The swirl meters will consist of four neutrally-pitched vanes installed approximately four pipe diameters downstream of the beginning of the instrumentation spool piece. Swirl angles will be computed from the angular velocity of the swirl meter and the axial flow rate.

Flow Patterns - Colored dye will be used to document the flow patterns in the wet well and entering the pump bells.

Velocity Distribution at the Pump Impeller Location – Velocities will be measured at the impeller location at two pumps. The pump inlet velocities in each modeled pump that has a velocity probe will be measured using a miniature propeller velocity probe and a Pitot tube installed in an instrumentation spool equipped with a turn-column that will allow positioning of the instrumentation at any point in the plane of measurement on a constant radii (8 locations will be monitored). The velocity probe will be connected to a computer that will record the probe readings and display the average velocity (and other statistical values such as standard deviation, maximum, and minimum) over a specified time period (typically 30 – 60 seconds model). Spatial velocity fluctuations will be measured using the Pitot tube by taking the maximum and minimum recorded velocities and dividing by the average velocity using all the measured points.

Photographs and Video - Still photographs and video footage will be taken throughout the initial design and final design test phases to provide a visual documentation of the model study progress and key results.

Location of Model

NHC's laboratories are located in our Edmonton, Alberta; Vancouver, B.C.; Montreal, Quebec, and Seattle, WA offices. The decision on which laboratory will be utilized will be made based on workload, resources, and space availability at the time when the project commences.

Testing

Initial Design Testing - Upon completion of model construction and shakedown (i.e., tests to ensure that the model is functioning effectively over the full range of operating conditions, and that the instrumentation is properly calibrated and fully functional),

model tests will commence with evaluation of the initial design. It is assumed that ten (10) tests will be sufficient to evaluate the initial design over the range of flows specified. The operating combinations include different pump combinations and different water levels. These pump and screen combinations will be developed with HDR.

Design Development Testing - Design development testing will be conducted to evaluate possible geometry changes or additions to the initial configuration if unsatisfactory pump performance is identified. Modifications are all expected to be restricted to adding or modifying devices and/or structures within the wet well. Design modifications will be developed in collaboration with HDR as required.

It is difficult to predict the number of design modifications that may be required to achieve satisfactory hydraulic performance; however, based on experience with similar studies previously conducted, NHC anticipates that fifteen (15) working days for the Influent Pumping Station will be adequate to develop modifications to meet the acceptance criteria.

Witness Test - A one-day witness test of the model study will be conducted for HDR personnel and BCRUA. A “hands-on” demonstration of the model will be conducted. In addition, the witness test will include a presentation of study results, including a brief description of the model construction, scaling and instrumentation, and a summary of the data collected. Two weeks advance notice of the demonstration will be provided to HDR to assist in scheduling.

Detailed Documentation Testing of the Final Design - After completion of design development and witness testing, sixteen (16) tests will be conducted to confirm the selected design. It is anticipated that the operating combinations include the same operating combinations used in the Initial Design Testing plus six additional combinations. The actual conditions to be examined in the model will be agreed upon between HDR and NHC at the onset of detailed documentation testing.

Reporting

NHC will prepare a draft technical report summarizing the model study for review by HDR. The report will contain descriptions of the models, scaling criteria, test procedures, relevant color photographs, and complete descriptions of the test results, including observations, tabular, and graphical data. The report will also provide details (description and drawings) of all modifications and/or additions that were required to correct any hydraulic anomalies or other unsatisfactory flow conditions. The draft report will be submitted in electronic (PDF) format within two (2) weeks of completing the detailed documentation testing. Five (5) bound hardcopies and one electronic copy (PDF) of the final report will be prepared within approximately one (1) week of receiving a consolidated set of review comments.

All photographic and video documentation will be made available at no additional fee following the test program. As an option, a fully narrated, edited summary video can be prepared for the model study for an incremental charge. The video would include footage of the model, a brief explanation of scaling and modeling methods, and selected footage of initial and final design tests. The summary video would be approximately 15 to 20 minutes in length and provided in DVD format.

Long Term Storage Requirement for the Pump Station Model for Final Design

From the preliminary design that is developed using the CFD model initially and then using the physical model to optimize the design the design can change. In order to hydraulically assess the impact of the changes a model is required. There are two options: 1) maintain the physical model indefinitely in case the need arises, or 2) calibrate the CFD model with the final design of the pump station from the physical model and use the CFD model to evaluate any future changes. The physical model would then be demolished. Calibrating the CFD model is much less costly than maintain the physical model and that is what HDR selected.

Most state-of-the-art CFD software packages, like STAR-CCM+, use a second-order turbulence closure to determined eddy viscosity and mixing, and do not contain arbitrary parameters, except for the roughness height (of walls). The coefficients in the turbulence model are considered global⁴ and cannot be changed arbitrarily to match field data. Therefore, mesh refinement, adjustment of the roughness height, and switching of turbulence model will be part of the model calibration process. During model calibration step, velocities computed by the CFD model will be compared against data from the physical model. If match between the CFD model and data is not acceptable, roughness height, mesh resolution, and turbulence model will be reviewed and adjusted appropriately. Once an acceptable agreement is obtained, the CFD model will be run for a significantly different operating scenario without any changes, except the boundary conditions. An agreement between the computed results and the second data set will provide a calibrated and validated CFD model. Otherwise, the calibration and validation steps of the will be repeated. It should be noted that accurate and reliable data from the physical model will be very important for this step of the CFD model study. We have assumed that that up to three runs with different mesh refinements, roughness height, and switching turbulence models will be required. A short technical memorandum will be submitted.

The calibrated CFD model will be kept through final design of the pump station. If minor changes are made to the design and CFD modeling is required, a level of effort will be provided to undertake the work. If major changes to the design during final design then the physical model may have to be rebuilt and tested.

⁴ Pope, S.P. (2000). *Turbulent Flows*. Cambridge University Press, Cambridge, U.K.

TASK 10.0 – VALUE ENGINEERING

Task 10.2 – Value Engineering Workshop

NHC will address any questions and comments related to the hydraulic aspects of the designs. We have assumed that no additional numerical or physical modeling is required. The level of effort is shown in the detailed cost breakdown table.

TASK 14.0 – PRELIMINARY ENGINEERING REPORT

Task 14.1 – Preliminary Engineering Report

NHC will provide technical memorandums/reports for inclusion in the Preliminary Engineering Report. These reports are discussed within the appropriate sections related to CFD, hydraulic transient modeling, physical modeling, and design. NHC will support HDR by reviewing the draft and final Preliminary Engineering Report.

3.0 PROJECT COST AND SCHEDULE

3.1 PROJECT COST

Based on information provided by HDR, the lump sum costs for the above defined work, is summarized in Table 1. The cost for additional work beyond the scope as defined in this proposal will be based on NHC’s standard fee rates, daily test rates, or negotiated lump sums per test item.

Optional Tasks	
Task	Additional Budget
<ul style="list-style-type: none"> • Edited summary video for physical model study • Replacing vertical turbine pumps with 10 submersible pumps 	\$6,800 \$20,000

Laboratory space and equipment rental has been included up to issuance of the final technical report for each physical model study. This estimate is valid for a period of sixty (60) days from the proposal submittal date. The lease rate for the CFD model has been included up to issuance of the final technical report for each CFD model study. There is no charge for the transient analysis software. The cost for additional work beyond the scope as defined in this proposal could be based on NHC’s standard fee rates, daily test rates, or negotiated lump sums per test item.

NHC will invoice on a monthly basis for work completed during the previous month. Payments are due at the address appearing on the invoice within 15 days of HDR receiving payment. Invoices not paid within 15 days are subject to interest from the 16th day at the rate of 1.0 percent per month (12 percent per annum) but not to exceed the maximum interest allowed by law.

Space and equipment charges will be assessed when the project is delayed for reasons beyond NHC’s control. Laboratory space and equipment rental will be charged at \$2,500 per month. Rental has been included up to the issuance of the final physical modeling report. NHC reserves the right to increase facility rental rates if the model study is delayed more than one month due to reasons beyond NHC’s control, or if the model is required after issuance of the final report.

Costs have been estimated with the assumption that HDR will provide NHC with all information required for model design. HDR will be responsible for the accuracy and completeness of required information. The owner retains responsibility for integrating NHC’s design modifications and design data into the final design; NHC is not responsible for structural design, implementation, or operation.

3.2 SCHEDULE

This schedule assumes all pertinent information is received with the notice to proceed and timely reviews are conducted of model design drawings and data. We will work with you on developing a mutually agreeable schedule.

Task	Weeks to Complete*
Task 5.0 – Intake and Site 4 Maintenance Facilities	
Task 5.3.1.3 – Preliminary intake Layouts – Workshop	1 week
Task 5.3.1.3 – Preliminary intake Layouts – CFD Modeling	8 weeks
Task 5.3.4 – Intake Technical Memorandum	3 weeks
Task 7.0 – Pump Station	
Task 7.2 - Preliminary Pump Station Layouts	
Task 7.2 - Workshop	1 week
Task 7.2 – Develop Three Concepts	2 weeks
Task 7.2.2 – CFD Evaluation of Three Concepts	9 weeks
Task 7.2.4 – Pump Station Alternatives TM	2 weeks
Task 7.3 – Hydraulic Analysis	
Task 7.3.4 – System Pressure Surge Analysis	
Task 7.3.4.1 – 30% Design Surge Analysis	8 weeks
Task 7.3.5 – Physical Hydraulic Model Study	16 weeks to submittal of draft report
Task 7.3.5 – Developing CFD model for Final Design	3 weeks
Task 10.0 – Value Engineering	
Task 10.2 – Value Engineering Workshop	Whenever required
Task 14.0 – Preliminary Engineering Report	
Task 14.1 – Preliminary Engineering Report	3 weeks

- After receipt of written notice to proceed and signed task order.

4.0 KEY PERSONNEL

Our senior staff have over 30 years of physical modeling and hydraulic engineering experience at NHC, supported by a further 10 to 15 years in other consulting firms, universities and modeling laboratories. These include the University of Alberta, the U.S. Army Corps of Engineers, Washington State University, the University of Minnesota, Colorado State University, and the University of California at Davis.

For the present study, NHC proposes to assemble a strong team of experts in CFD, hydraulic transient analysis, and physical modeling. The following paragraphs present a brief description of NHC staff members' qualifications and responsibilities proposed for the study. Resumes for key personnel are included in Appendix A.

Principal Investigator and Project Manager – Mr. Tom Demlow, P.E.

Mr. Demlow has over 40 years of professional experience designing pump intake structures, analyzing pump station performance and correcting pump performance problems related to intake structure design. He has conducted approximately 250 physical hydraulic model studies of pump intake structures. Over the years, Mr. Demlow has gained experience on a wide range of pump station projects in North America and internationally. Mr. Demlow was a member of the Hydraulic Institute Committee on Pump Intake Design that developed the 1998 and 2012 intake design standards. He presently represents NHC as the Standards Partner to the Hydraulic Institute.

Mr. Demlow will be responsible for the overall direction of the project, ensuring all objectives of the study are achieved in a timely manner, and maintaining close contact with HDR. He will oversee both the CFD and physical modeling, participate in the testing and the development of refinements to the proposed designs, participate in the model demonstrations, and reviews of the reports.

CFD Modeling Lead – Mr. Liaqat Khan, Ph.D., P.E.

Dr. Khan will be the technical lead of the CFD model investigations and will be supported by experienced CFD modeling engineers. Dr. Khan has over 30 years of experience in hydraulic engineering, specializing in numerical modeling, and development and application of 3-D CFD and hydrodynamic models of flow and transport. He has applied CFD models to investigate, design and optimize: a) various components (pump stations, clearwells, grit chambers, diversion structures, storage reservoirs, intake screens, outfalls, diffusers) of water and wastewater treatment plants, b) adult and juvenile fish passage systems in the Pacific Northwest, and c) intakes and outfalls of dams, power generating and municipal facilities.

Dr. Khan will be responsible for the day-to-day CFD modeling activities, including model development, testing, developing modifications, and reporting. He will work closely with the Project Manager to ensure all study objectives are met.

Hydraulic Transient Analysis Lead – Mr. David Axworthy, Ph.D., P.E.

Dr. Axworthy will be the technical lead for hydraulic transient analysis and will be supported by experienced project engineers. He is a Principal at NHC and has over 23 years of experience as well as a record of successfully completing hundreds of hydraulic transient analyses of pump station and pipeline systems. He is a registered professional engineer in Texas, California and Nevada, a member of the ASCE Task Committee on Hydraulic Transient Analysis, and co-author of the TransAM hydraulic transient analysis software and many conference and journal papers on hydraulic transient analysis.

Dr. Axworthy will be responsible for the day-to-day hydraulic transient modeling activities, including model development, testing, developing modifications, and reporting. He will work closely with the Project Manager to ensure all study objectives are met.

Physical Modeling Lead – Mr. Ken Christison, P.E.

Mr. Christison has 17 years of experience and has developed a strong technical background in hydraulic engineering with emphasis on both physical and numerical modeling applications. Physical modeling experience includes intake and pump station design, hydraulic conveyance, drop shaft analyses, river processes and sediment transport investigations, hydroelectric development, and comprehensive river engineering applications. He is a registered professional engineer in Texas, British Columbia, and Alberta.

Mr. Christison will be responsible for the day-to-day physical modeling activities, including model development, testing, developing modifications, and reporting. He will work closely with the Project Manager to ensure all study objectives are met.

Project Engineers – Mr. Darren Hinton, Ph.D., P.E., Ms. Kirsten Blezy, P.Eng., Mr. Stephen Kwan, Ph.D., and Ms. Nami Tanaka, P.E.

Dr. Hinton has experience in hydraulic design and in physical and numerical modeling. Since joining NHC he has been involved in physical modeling of pump stations and stormwater structures as well as pump rating tests. He has experience in hydraulic model design, hydraulic model testing, data acquisition and processing, and report preparation.

Ms. Blezy has experience physically modeling wastewater, water supply and stormwater pump stations. She is experienced in physical modeling of trench type self-cleaning wet wells, screen channels, and diversion structures. She will oversee model construction, testing, and reporting.

Dr. Kwan is a CFD Engineer with NHC and has over 12 years of consulting and research experience in engineering projects in Europe, Asia, and the Americas. Dr. Kwan is an expert in applying a wide range of CFD software packages (FLUENT, STAR CCM+, FLOW3D, and PHOENICS) to solve real-world flow problems including free surface flows, closed conduits, moving boundaries, cavitation, and sediment particle tracking.

Ms. Tanaka, is a registered civil engineer in California and will work closely with Dr. Axworthy throughout the transient analysis. Ms. Tanaka has extensive experience analyzing pressure surges

created by pump stations with discharges up to 1485 cfs (Baker 3 Pump Station in Dallas, Texas) and transmission pipelines with diameters up to 10 ft. She also has extensive experience analyzing wastewater force mains (e.g., the South Bayside System Authority Conveyance System) and hydro-electric facilities, including the Log Creek and Kookipi Creek Hydro-Electric Projects and the LADWP RSC Headworks Hydro-Electric Plant. As part of these analyses, Ms. Tanaka has performed simulations for pump power failure, pump startup, flow control valve open/close operations, and hydro-electric power plant load rejection and load acceptance.

These project engineers will be responsible for the day-to-day operation of the CFD and physical modeling activities and transient analyses, including model design/development, construction supervision and instrumentation (physical modeling), conducting all of the testing and data processing for the study. The Project Engineers will work closely with the technical leads and Project Manager to ensure that all of the study objectives are met, and will be supported by an in-house team of professional and technical support staff for the duration of the project.

Professional and Technical Support Staff

NHC maintains a full complement of experienced professional and technical support staff to assist in the design, construction and testing of the proposed physical models as well as the performance of both CFD modeling and hydraulic transient analyses. Professional support staff includes senior to junior engineers experienced in physical and CFD modeling applications and hydraulic transient analyses. Our senior technicians have over 20 years of experience in construction and testing of physical hydraulic models. In addition, technicians are available to assist with the drafting and data processing requirements of the study. All technicians will work under the direct supervision of Project Engineer for the study.