



City of Colleyville City Council Agenda

City Hall
100 Main Street
Colleyville, Texas 76034
817. 503.1000
www.colleyville.com

Tuesday, September 17, 2013

City Council Chambers

5:00 P.M. - BOARD, COMMISSION, AND COMMITTEE APPLICANT INTERVIEWS

PRE COUNCIL MEETING EXECUTIVE SESSION 5:30 P.M. EXECUTIVE CONFERENCE ROOM THIRD FLOOR

CALL TO ORDER

PC-1 Discussion of a community band

PC-2 Presentation and update on the landscaping branding manual and the proposed landscaping plans for various locations throughout the City

PC-3 Presentation of the Monthly Financial Report - August 2013

PC-4 Discussion of the September 17, 2013, City Council regular agenda items

1. EXECUTIVE SESSION - In accordance with Texas Government Code Chapter 551, Subchapter D

Section 551.071 - Legal - Consultation with attorney on legal issues raised by public hearing or action items on the agenda

Section 551.071 - Legal - Consultation with attorney regarding solicitor ordinance

Section 551.072 - Real Estate - Deliberate the purchase, exchange, lease, or value of real property for City facilities

Section 551.087 - Economic Development - Discuss or deliberate regarding commercial or financial information that the City has received from business prospects that the City seeks to have locate, stay, or expand in the City and with which the City is conducting economic development negotiations; deliberate the offer of a financial or other incentive to a business prospect

**RESUME REGULAR MEETING
7:30 P.M.
CITY COUNCIL CHAMBERS**

INVOCATION: Pastor Ricky Texada, Colleyville Covenant Church

PLEDGE OF ALLEGIANCE: City Attorney Matthew Boyle

2. EXECUTIVE SESSION: CONSIDER AND TAKE ANY ACTION(S) NECESSARY RELATIVE TO ITEMS DISCUSSED IN EXECUTIVE SESSION - Resolution R-13-3664

3. ANNOUNCEMENTS, PROCLAMATIONS AND PRESENTATIONS

Announcements of civic and charitable events

Presentation of calendar events and updates

Announcements of awards and recognition

Proclamation in recognition of the Colleyville Public Library 2013 Summer Chess Club Team and staff

In recognition of Colleyville's featured business - Life Time Fitness, 1221 Church Street; William Leschber, Manager - Mayor David Kelly and Economic Development Director Marty Wieder

Recognition of employees' years of service

Recognition of employee achievements

4. CONSENT: READING AND PUBLIC HEARING - Resolution R-13-3665

4a Approval of the minutes of the regular City Council meeting of September 3, 2013

4b Approval of an Interlocal Agreement with Tarrant County for the purchase of liquid asphalt from the Tarrant County Precinct Three Maintenance Department, at the County's contract price, and authorize the city manager to execute the agreement

4c Approval of an Interlocal Agreement with the City of Southlake to share the cost of repairs to the Pleasant Run Road/South White Chapel Road bridge over Big Bear Creek, and authorize the city manager to execute the agreement

- 4d** Approval to award a janitorial services contract to Oriental Building Services, Inc., acting as a primary vendor through the City of Arlington Interlocal Agreement, in an amount not to exceed \$128,000, and authorize the city manager to execute same, subject to the approval of funding in the Fiscal Year 2014 (FY 2014) budget
- 4e** Approval to renew the Grounds Maintenance Mowing Contract with Whitmore and Sons, Inc., in an amount not to exceed \$141,340.29, and authorize the city manager to execute same, and any associated change orders, in an amount not to exceed \$25,000, subject to the approval of funding in the Fiscal Year 2014 (FY 2014) budget
- 4f** Approval of a contract renewal for the Horticultural Grounds Maintenance Contract to the Lawn Firm, in an amount not to exceed \$145,734, and authorizing the city manager to execute same, and any associated change orders, in an amount not to exceed \$25,000, subject to the approval of funding in the Fiscal Year 2014 (FY 2014) budget
- 4g** Approval of an Interlocal Agreement for participation in Fort Worth's Environmental Collection Center Household Hazardous Waste program, and authorize the city manager to execute the agreement
- 4h** Approval of Broker/Dealer firms for investment purchases
- 4i** Approval of the use of the Voluntary Library Fund in Fiscal Year 2014 (FY 2014), for the purchase of library materials, collection processing supplies, and library programs, in an amount not to exceed \$145,000
- 4j** Approval of the disposal of surplus, damaged, worn and outdated library books, audiovisual items, DVDs, CDs, and non-book materials, learning games, and puzzles
- 4k** Approval of the disposal of obsolete and non-serviceable equipment and vehicles

5. ORDINANCE(S): SECOND READING AND PUBLIC HEARING

5a Ordinance O-13-1881

Request for approval of a Special Use Permit for alcoholic beverage sales for off-premises consumption on Lot 7A, Block 2, Village Park Addition located at 4801 Colleyville Boulevard. Approval of a Special Use Permit for alcoholic beverage sales for on-premises consumption on Lots 1R1, 4, 5A, 6A, 7A, and 9R, Block 2, Village Park Addition located at 4701, 4709, 4717, 4725, 4801, and 4843 Colleyville Boulevard, Case ZC13-009

5b Ordinance O-13-1882

Adoption of the proposed Fiscal Year 2014 (FY 2014) budget

5c Ordinance O-13-1883

Adoption of the Ad Valorem Tax Rate for Fiscal Year 2014 (FY 2014)

5d Ordinance O-13-1884

Adoption of the Colleyville Economic Development Corporation Fiscal Year 2014 (FY 2014) Budget

5e Ordinance O-13-1885

Request for approval to amend Part II, Chapter 2- Administration, Article II- Finance, Division 1, Sec. 2-26 of the Colleyville, Texas, Code of Ordinances, which sets fees and charges for City services

5f Ordinance O-13-1886

Amending Ordinance O-12-1850 relating to the Fiscal Year 2013 budget

6. RESOLUTION(S): READING AND PUBLIC HEARING**6a Resolution R-13-3666**

Adoption of the Fiscal Year 2014 - Fiscal Year 2018 Capital Improvement Program (CIP)

6b Resolution R-13-3667

Consideration of a Right-of-Way Encroachment and Joint Use Agreement on Lot 9R, Block 1, of the Blackberry Farm Addition, located at 6504 Westcoat Drive, Case GC13-017

6c Resolution R-13-3668

Consideration of appointments to the Colleyville Economic Development Corporation

6d Resolution R-13-3669

Consideration of appointments to the Historical Preservation Committee

6e Resolution R-13-3670

Consideration of appointments to the Library Board

6f Resolution R-13-3671

Consideration of appointments to the Metroport Teen Court Advisory Board

6g Consideration of appointments to the Planning and Zoning Commission

6h Resolution R-13-3673

Consideration of appointments to the Senior Center Advisory Committee

6i Resolution R-13-3674

Consideration of appointments to the Zoning Board of Adjustment

7. CITIZEN COMMENTS/PRESENTATIONS REGARDING ITEMS NOT ON THE AGENDA**8. REPORTS**

Sign Board of Appeals Meeting Minutes - August 14, 2013

Zoning Board of Adjustment Meeting Minutes - August 14, 2013

Planning and Zoning Commission Meeting Minutes - August 26, 2013

9. ACTION/RESOLUTION: DISCUSSION AND CONSIDERATION OF A RESOLUTION RATIFYING COUNCIL AGENDA ACTION FOR SEPTEMBER 17, 2013 - Reading and Public Hearing - Resolution R-13-3675**10. ADJOURNMENT**

I hereby certify this agenda was posted on City Hall bulletin boards Friday, September 13, 2013, by 5:00 p.m.

Amy Shelley, TRMC
City Secretary

Any matter on this agenda may, at the discretion of the governing body, be opened for public comment and discussion.

If you plan to attend this public meeting and have a disability that requires special accommodations, please advise the City Secretary at least 48 hours in advance at 817.503.1133, and reasonable accommodations will be made to assist you.



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number PC-1

Agenda Date 09/17/2013

Type Pre Council

Department City Secretary

Title

Discussion of a community band

Explanation

At the request of Councilmember Stan Hall, this item provides for a presentation and discussion regarding a community band proposal.

Ms. Lola Brown, Irving Symphonic Band President, will be present to discuss a proposal for a Colleyville community band.

Attachments

1. Symphonic Band Proposal

June 2013



Symphonic Band

Our mission is to provide the citizens of the community with quality music through our concerts and provide an outlet for area musicians to use their music skills and talents.

Lola Brown

Symphonic Band President

3333 N. MacArthur Blvd. #300

Irving , TX 75062

(972) 689-3879

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Section 1: Band Summary

◇ **Symphonic Band History**

In 1988 the symphonic band was born through the vision of the Irving Parks and Recreation Department. The band continued to grow and under the direction of Robert J. Brule registered as a 501(c)3 organization in 1990. Through the years, distinguished guests such as David Holsinger, Francis McBeth, Dr. Alfred Green, and Captain Lewis J. Buckley have shared their talents with the band and the community of Irving. Jay L. Bach now leads the band and continues to inspire ISB members and community patrons with music for all seasons!

◇ **ISB Mission**

Our mission is to provide the citizens with quality music through our concerts and provide a musical outlet for our members.

◇ **ISB Personnel**

Our band is comprised of people with diverse musical backgrounds. Many of our members are full time band directors and musicians. However, the majority of our members work in professions not related to music but have a desire to continue playing challenging music. Our members are adults who have either continued to play their instrument since college or high school or have become "reacquainted" with their instrument over the past few years. No matter where we work during the day, the same desire to create great music brings us together on Thursday evenings.



Section 2: Band Requirements

◇ Rehearsals

- ⇒ The band will need a place rehearse. At present we rehearse at the Irving Arts Center. We have the use of chairs, stands, and percussion equipment. The band would need something comparable to the same situation.
- ⇒ In addition to equipment, the band also has storage space for a substantial library.

◇ Concerts

- ⇒ To perform concerts, the band will need a venue from which we would not be displaced. Chairs, stands and sound system.

◇ Support

- ⇒ The band will need monetary support to perform concerts, pay our director and purchase new music. Funding also goes to programs, association fees and licensing, insurance, and advertising.

Section 3: Specific Band Needs

◇ Equipment

- ⇒ Chairs—Approximately 50 chairs for members. The band currently has approximately 30 to 35 people. The 50 chairs would allow for growth in the band.
- ⇒ Stands—Approximately 50 stands to accommodate the band members.
- ⇒ Podium for director.
- ⇒ Space that will encompass six large file cabinets. At present the band owns 5 file cabinets that have reached capacity and would need to expand with an additional file cabinet.
- ⇒ Percussion equipment needed—30 inch timpani, 28 inch timpani, 26 inch Timpani, bass drum, snare drum, chimes, symbols, xylophone, orchestra bells.
- ⇒ Sound system for our outside and microphones.

Section 3: Benefits to the Community

◇ City Functions

- ⇒ The band would participate in city throughout the year for a nominal fee: Christmas celebrations/Tree Lighting, Fourth of July, or other civic events.
- ⇒ The band would participate in city events throughout the year for a nominal fee; Christmas celebrations/Tree Lighting, Fourth of July, or other civic events.

◇ Education

- ⇒ The band would offer exposure to the youth in the community through possible educational ventures with the community.

◇ Musicianship

- ⇒ The band offers membership to individuals who would like to sharpen their skills and wish to perform.

◇ Entertainment

- ⇒ The band offers entertainment to audiences all ages. We hope to attract a fun atmosphere in outdoor concerts and a more classical pieces for our indoor concerts and doing this provide a variety of music for all ages.

Section 4: Non-Profit Status

The Symphonic Band is a non-profit 501-(c)(3) organization dedicated to the advancement of quality band music in our great city. Although members are volunteers, funds are needed to pay our director and purchase music. The band takes donations and corporate sponsorship.

Section 5: Director



Jay L. Bach

Artistic Director/Conductor

Since January of 2004 Jay L. Bach has been the conductor and artistic director for the Irving Symphonic Band.

Prior to accepting this position he served as a euphonium and trombone player in the band. In 1997 he also began duties as assistant director. In addition to his work with the ISB Mr. Bach is director of bands for the Carroll Independent School District and Secondary Fine Arts Department Chair at Carroll Senior and Carroll High School.

Mr. Bach received a Bachelor of Music Degree from Fort Hays State University, Hays Kansas; Master of Music Performance from East Texas State University, Commerce, Texas; a Master of Education from the University of North Texas.

Section 6: Board Leadership

◇ President	Lola Brown
◇ Vice President	Brody Mulligan
◇ Secretary/Treasurer	Meredith McEwen
◇ Librarians	Donna Brule/Tam Miller
◇ Equipment Manager	Bill Garrison
◇ Historian	Sandye Hill
◇ Member-at-Large	Phil Silvernail

IRVING SYMPHONIC BAND

Recurring (Monthly) Expenses

	<u>Per Occurrence</u>	<u>Avg Amt Per month</u>	
Rehearsal Venue	\$33.40	\$100	
Liability Insurance	\$60	\$60	
Director Expense	\$300	\$300	
Website	\$20	\$20	
		\$480	Average monthly expenses
		\$4,550	Annual Total

General Expenses

	<u>Per Occurrence</u>	<u>Avg # Occurrences Per Year</u>	
Concert (venue rental & tickets)	\$1,300	2	
Recording / CD Production	\$300	2	
Assoc. Concert Bands Membership	\$275	1	
Music	\$100	1-2	
			\$4,000 Annual General Expenses Total

TOTAL EXPENSES: \$8,550

General Revenue

City Grant (incl city performance revenue)	\$3,700
Member Donations	\$2,000
Membership Dues (\$50 annually)	\$2,000
CD Sales	\$500
Ticket Sales	<u>\$350</u>

TOTAL REVENUE: \$8,550



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
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Agenda Number PC-2

Agenda Date 09/17/2013

Type Pre Council

Department Public Works

Title

Presentation and update on the landscaping branding manual and the proposed landscaping plans for various locations throughout the City

Explanation

The purpose of this item is to provide an opportunity for the design consultant, Michael Black from La Terra Studio, to present the final draft of the City of Colleyville Landscape Branding Manual, as well as the design concepts for various locations throughout Colleyville. City Council has held previous discussions about landscaping and provided input to the consultant to assist in the development of this document.

If the City Council is receptive to the City of Colleyville Landscape Branding Manual as presented, it will be placed on a future agenda for adoption by resolution. If the City Council is receptive to the roundabout design concept, staff will work with the design consultant to proceed with the preparation of the construction documents and the installation of the proposed landscaping at both the John McCain and Pleasant Run Roads roundabout and the Jackson and Cheek-Sparger Roads roundabout.

Attachments

1. Landscape Branding Presentation
2. Proposed Landscape Branding Manual
3. Jackson - Cheek-Sparger Roads Landscaping Schematic



Landscape Branding

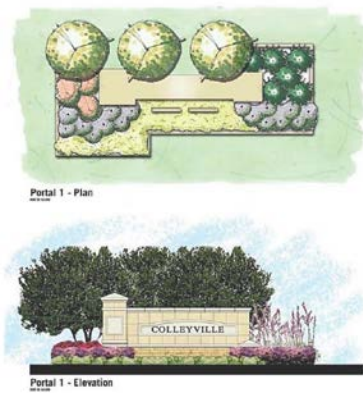
City of Colleyville

Assist the City of Colleyville with developing a brand of landscape enhancements that defines a theme for future improvements in public rights-of-way and public properties.

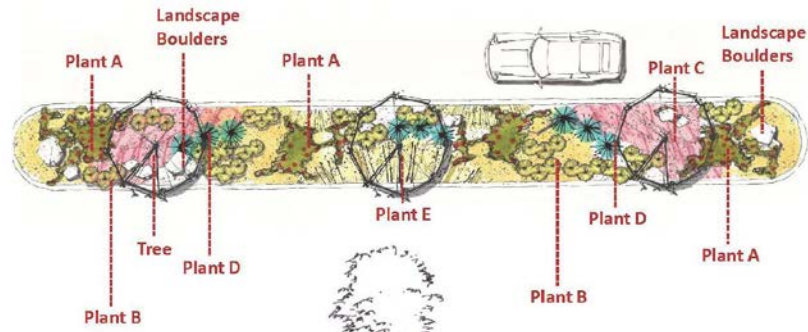
Colleyville.

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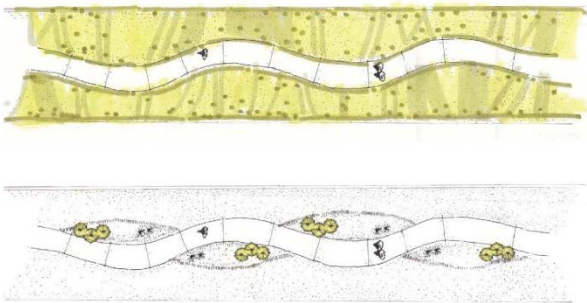
Entryway Markers



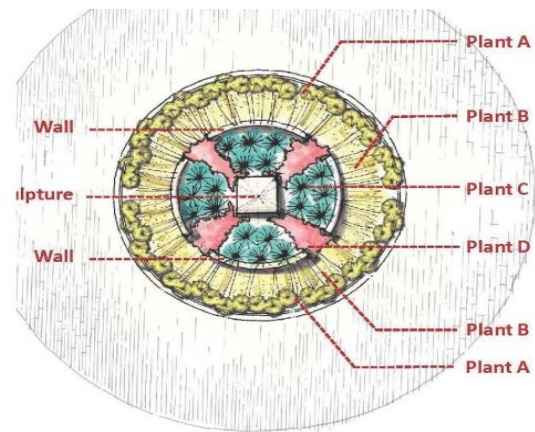
Medians



Rights-of-way



Roundabouts



Public Buildings



Recommended Plant Materials



hesperaloe parviflora 'yellow'
Yellow Yucca



Rosa 'Radrazz'
Knock Out Rose 'Yellow'
(or 'red')



scutellaria suffrutescens
Purple Skullcap



ilex cornuta 'Carissa'
Carissa Holly



Rosa 'Coral Drift'
Coral Drift Rose

Hardscape Elements

Stone



Rough cut lueders limestone
w/ cast stone



Smooth cut lueders limestone
w/ cast stone



lueders block stone

Site Furniture



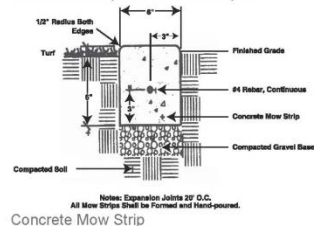
Black metal bench



Black metal trash receptacle

Construction specifications

Construction Specification Examples



The following is a recommendation for planting soil amendments and should be revised for specific site applications by a registered landscape architect on all new installations.

- Remove first 6" of existing topsoil
- Install approved planting medium
- Till in existing topsoil to a depth of 12"
- Contractor to Submit a producer's specification and a one (1) quart sample of each soil amendment proposed to be used for approval prior to installation.

Planting medium specifications



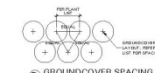
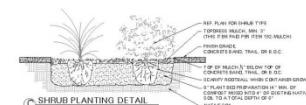
THE FOLLOWING IS A RECOMMENDATION FOR PLANTING SOIL AMENDMENTS AND SHOULD BE REVISED FOR SPECIFIC SITE APPLICATIONS BY A REGISTERED LANDSCAPE ARCHITECT ON ALL NEW INSTALLATIONS.

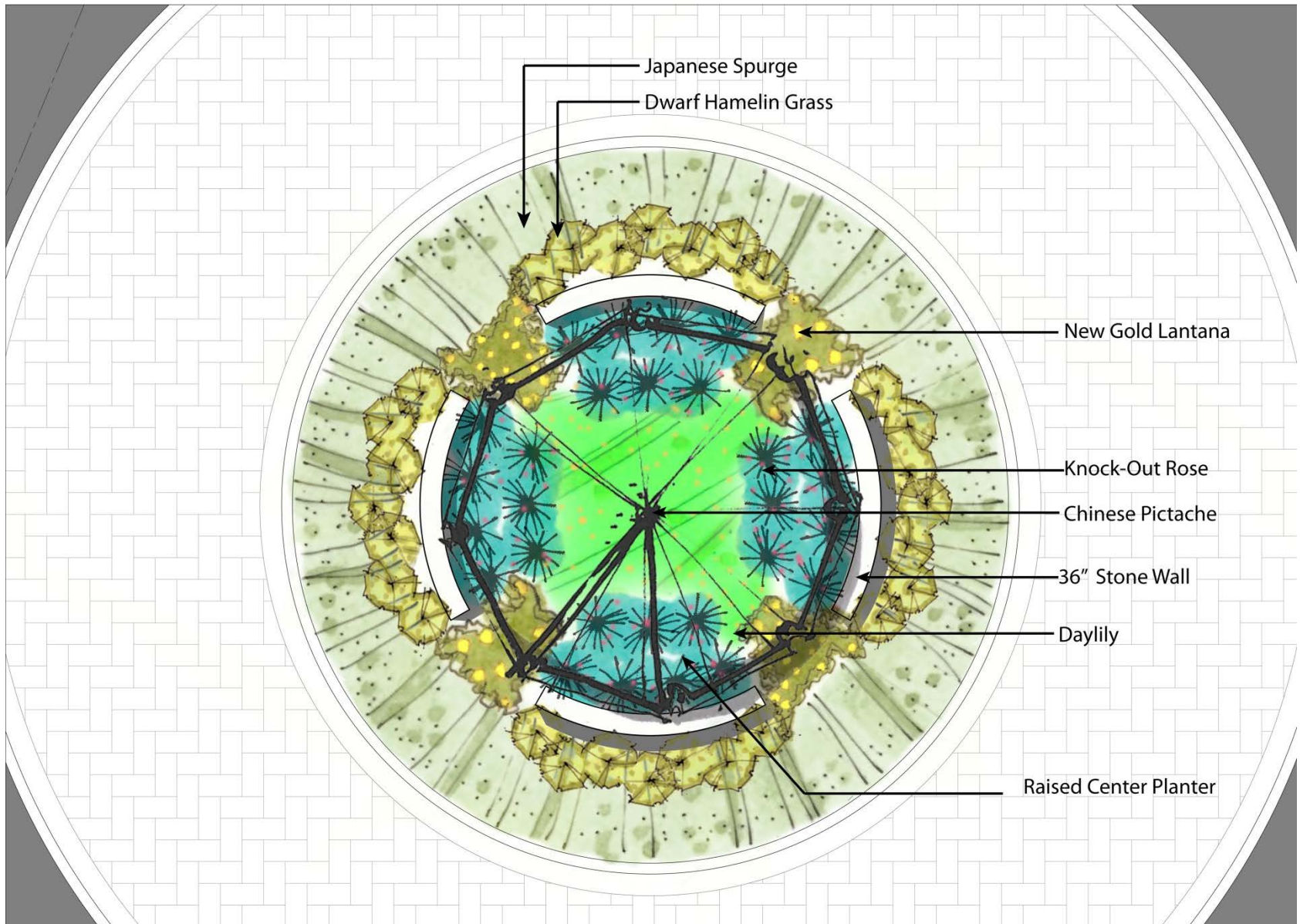
1. REMOVE FIRST 6" OF EXISTING TOPSOIL

2. INSTALL APPROVED PLANTING MEDIUM

3. TILL IN EXISTING TOPSOIL TO A DEPTH OF 12"

4. CONTRACTOR TO SUBMIT A PRODUCER'S SPECIFICATION AND A ONE (1) QUART SAMPLE OF EACH SOIL AMENDMENT PROPOSED TO BE USED FOR APPROVAL PRIOR TO INSTALLATION.





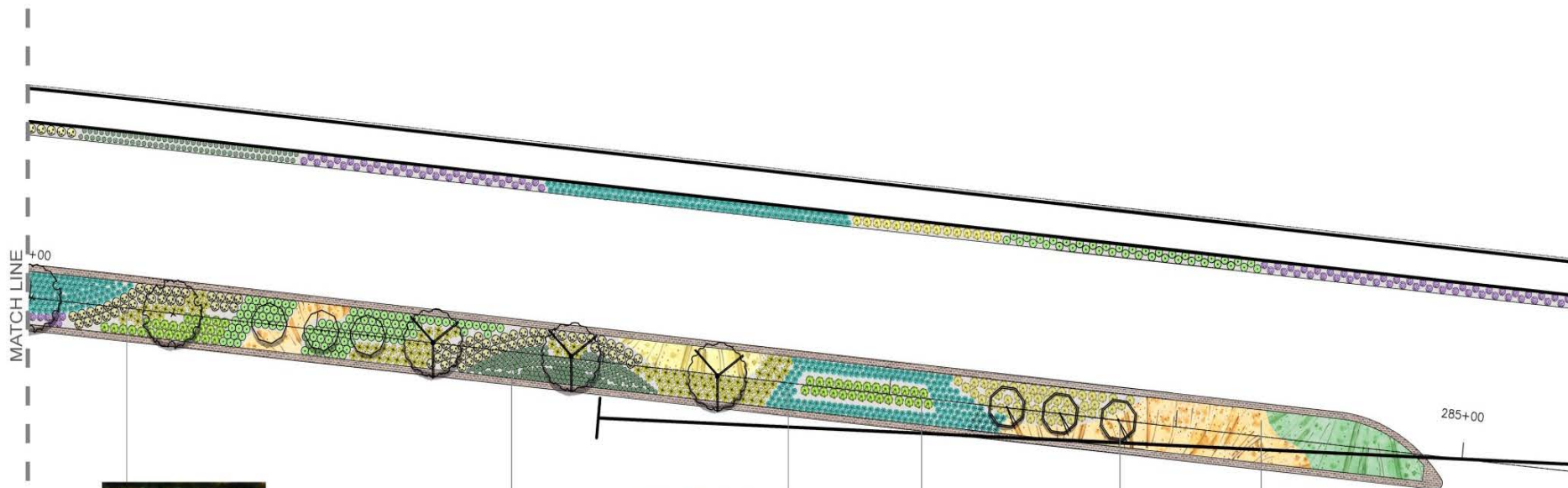
John McCain and Pleasant Run Roundabout



John McCain and Pleasant Run Roundabout



John McCain and Pleasant Run Roundabout



POPCORN DRIFT ROSE
Rosa 'NOVAROSPOP'



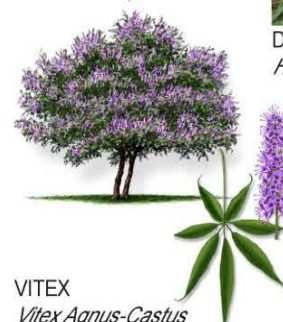
WEeping LOVEGRASS
Eragrostis Curvula



MEXICAN FEATHER GRASS
Stipa Teniossima



CARISSA HOLLY
Ilex Cornuta 'CARISSA'

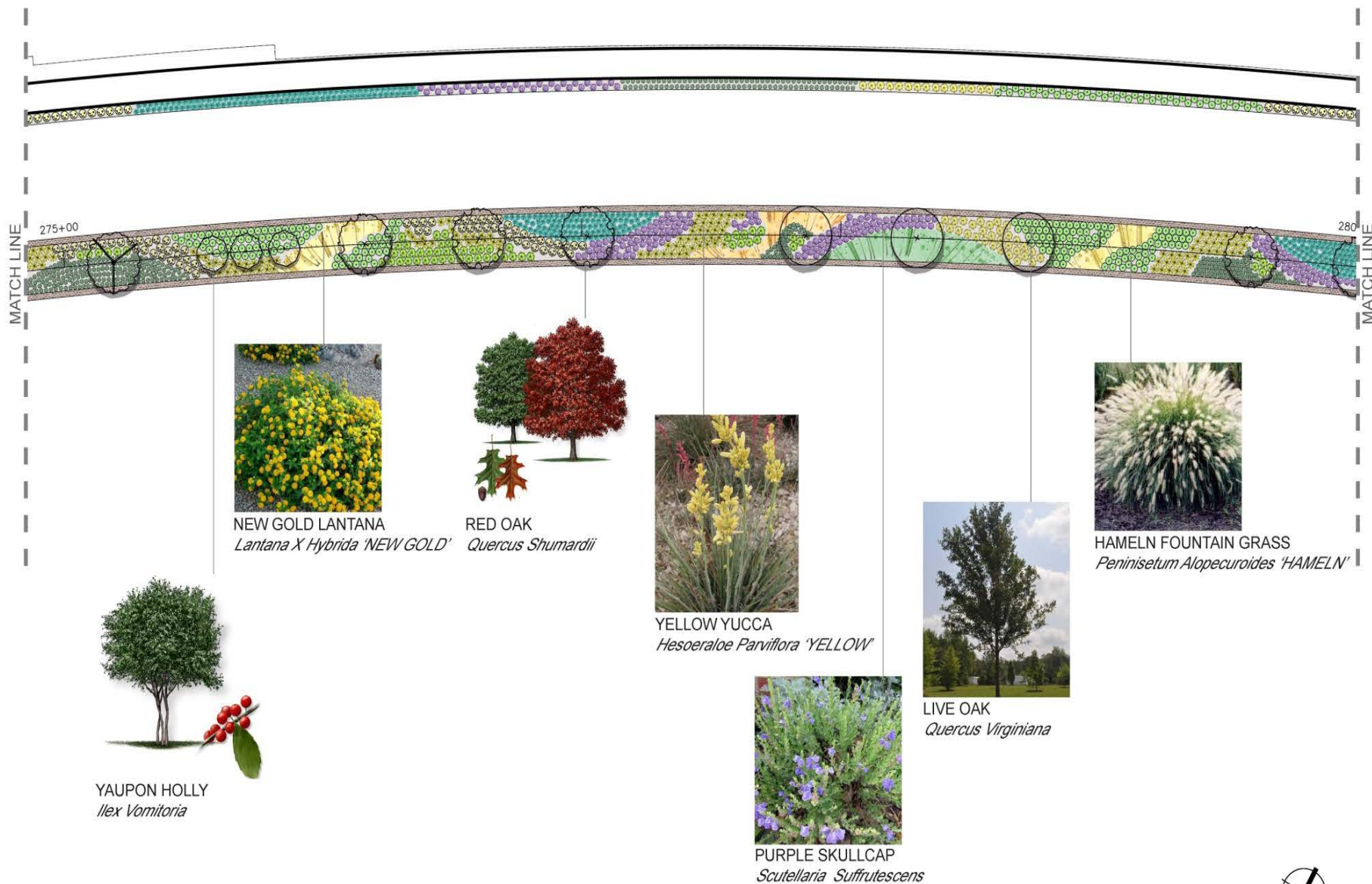


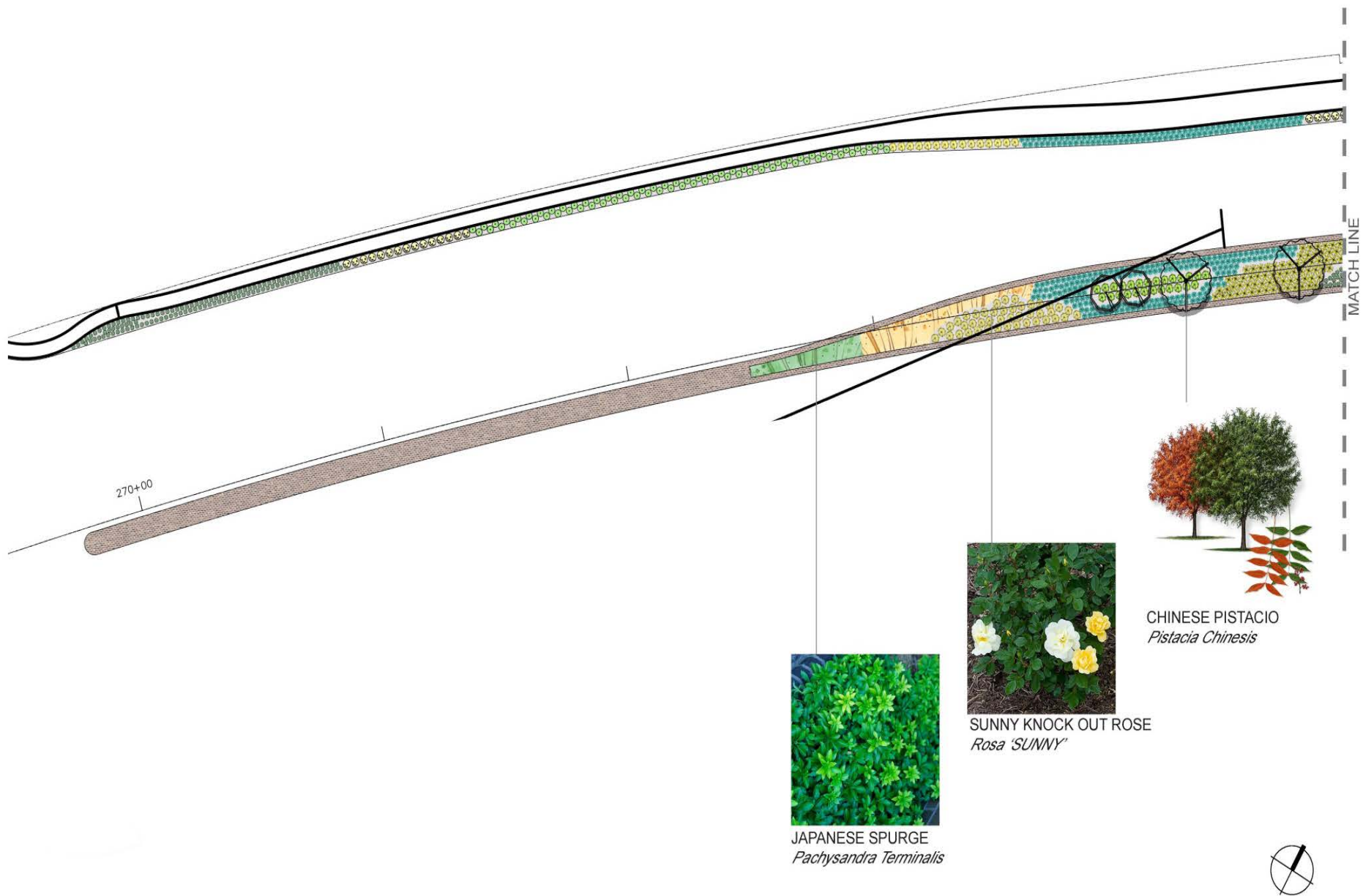
VITEX
Vitex Agnus-Castus



DAYLILY
Hemerocallis 'STELLA D'PRRO'









SH26 Median



- Gain support for branding document and apply concepts to future projects.
- Move forward with designs and implementation of the John McCain and Pleasant Run Road roundabout.
- Explore concepts for entry area at City Hall, and how public buildings can support the brand.
- Closely follow TxDOT implementation of SH26 Median plans.

Colleyville.

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Landscape Branding

City of Colleyville

DRAFT.09.17.13



la terra studio

2109 Commerce Street Dallas, Texas, 75201

COLLEYVILLE LANDSCAPE BRANDING

City of Colleyville

This document assists the City of Colleyville with developing a brand of landscaping enhancements that defines a theme for future improvements in public rights-of-way and City-owned properties.

Contact:

La terra Studio
2109 Commerce Street
Dallas, Texas, 75201
P 214.749.0333
moreinfo@laterrastudio.com

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In early 2013 several meetings were held to discuss the City's long term goals with heavy emphasis on city image. It was determined that along with many other initiatives, a city wide landscape brand should be developed.

The landscape brand should enhance the quality of existing and future identity elements while creating a unifying experience in public areas throughout Colleyville.

A primary theme was developed and is encouraged to be adhered to throughout the city as public spaces are developed and enhanced. Minor variations to this main theme, such as scale and number of design elements utilized, are encouraged to create unique design responses to each specific site.

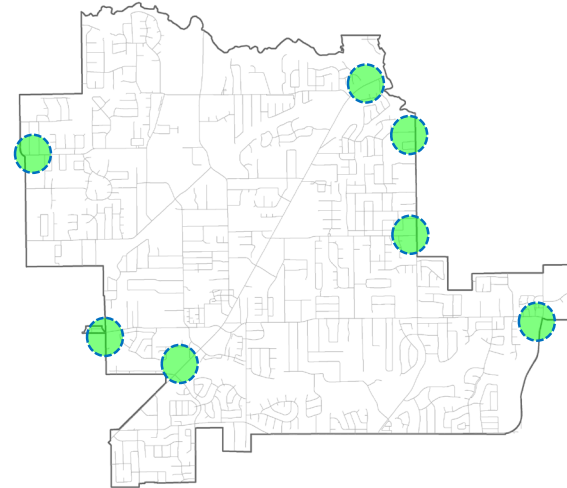
The following report presents the concepts developed for several types of municipal property that will contribute to enhancing the city image.

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Entryway Markers



Entryway markers and the surrounding landscape provide an opportunity to express the identity and image of the city. These spaces are often the first recognizable feature as one travels into or out of a place.

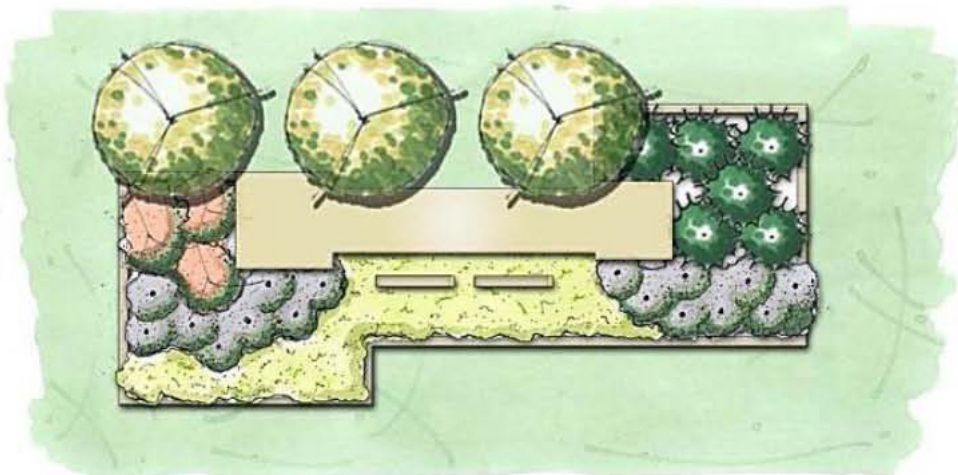
The City of Colleyville began implementing iconic entry signs in 2008. These signs differ in size and scale depending on the type of intersections where they are installed. The signs range from 10 to 25 feet wide and 8 to 10 feet tall. Constructed of high quality materials of lime stone, cast concrete, and mounted City name, these signs make a statement on their own.

Over the years, different landscape installations have been tested at these signs, with few having lasting success. Most of the planting installed was very small and was implemented into poor existing soil conditions.

In order to create a consistent look throughout the community, management of these areas should be executed by the City rather than volunteer organizations that may come and go.

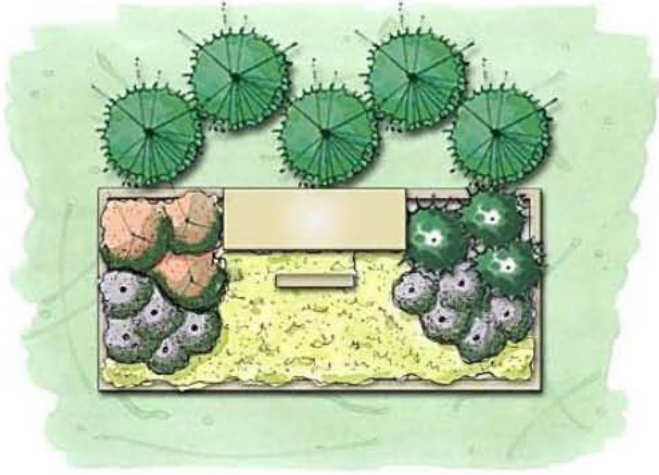
The location and size of landscape materials must be carefully controlled, as most entry points are situated at street intersections. Maintaining safe sight distance visibility for motorists and pedestrians must remain a priority.

Entryway Markers



Portal 1 - Plan

not to scale



Portal 2 - Plan

not to scale



Portal 1 - Elevation

not to scale



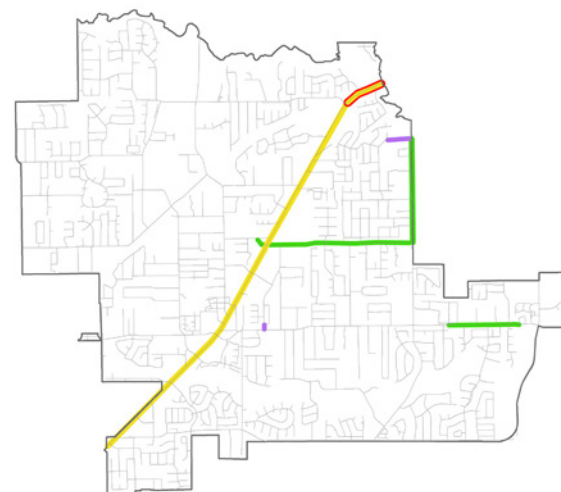
Portal 2 - Elevation

not to scale

Recommendations:

- Create a lasting permanent landscape around all entry signs.
- Install large, healthy plant material for enhanced impact and increased survivability.
- Create background scale and framing with large evergreen or ornamental trees behind signs. Plant material should be 3' to 5' higher than top of sign at installation.
- Separation from landscape areas and turf should be clearly defined by 6" wide concrete mow strip.
- Light fixtures should provide subtle lighting for signs and should be hidden from view as much as possible.

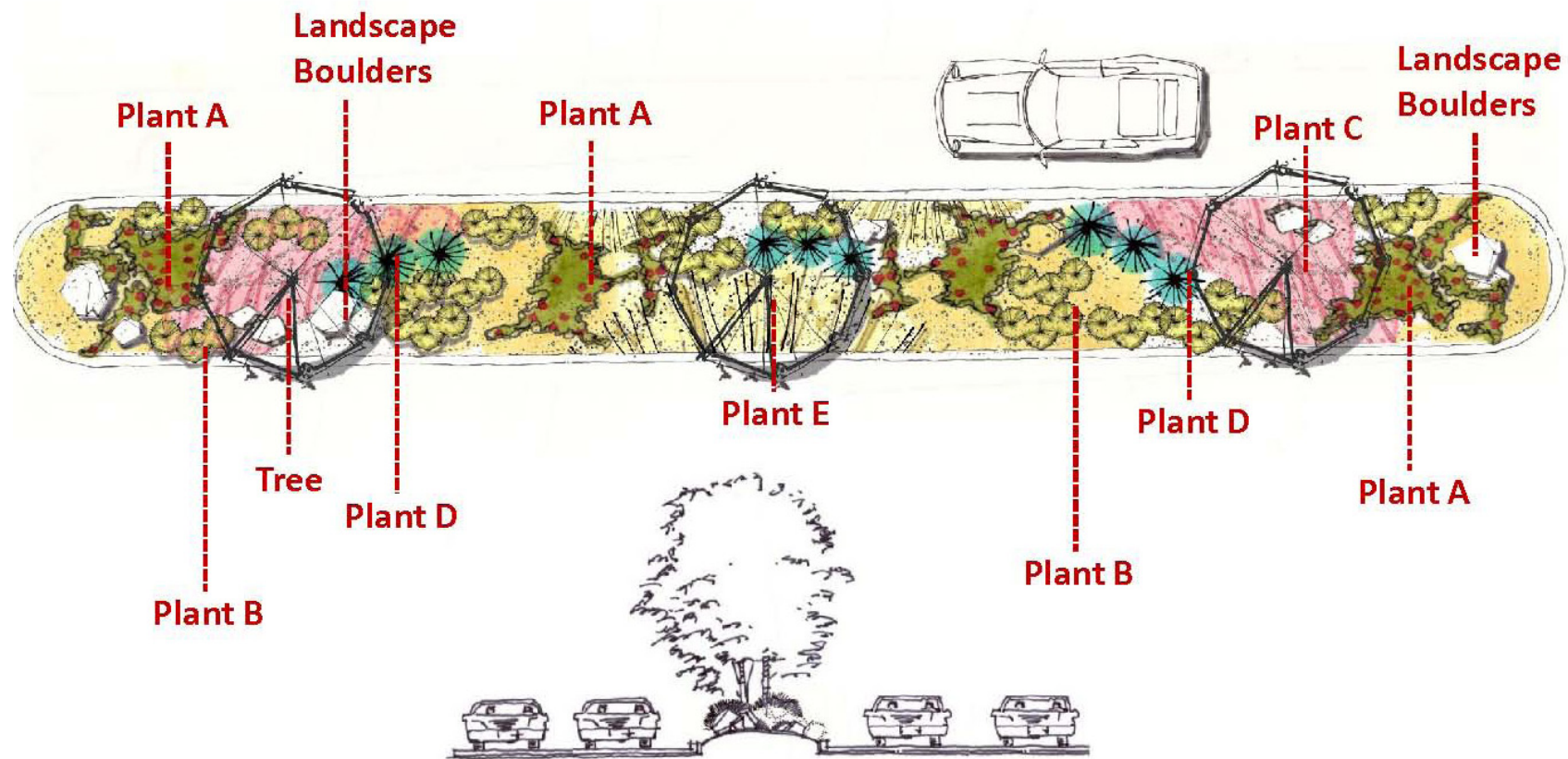




Medians offer several benefits such as safety and stormwater management, as well as improving aesthetics throughout Colleyville.

For planting, it is important to carefully choose plants and trees for medians that are well-adapted to the urban environment. Through evaluation of many existing medians throughout the city, it has been determined that the aesthetics of the medians along Glade Road set an example for future improvements within medians in the city. The design is symmetrical, yet casual in its appearance and variations are recommended.

Many different road classifications exist within Colleyville including state highways controlled by the Texas Department of Transportation. It is recommended to work with all entities to ensure a consistent landscape brand, while still complying with all jurisdictional requirements.

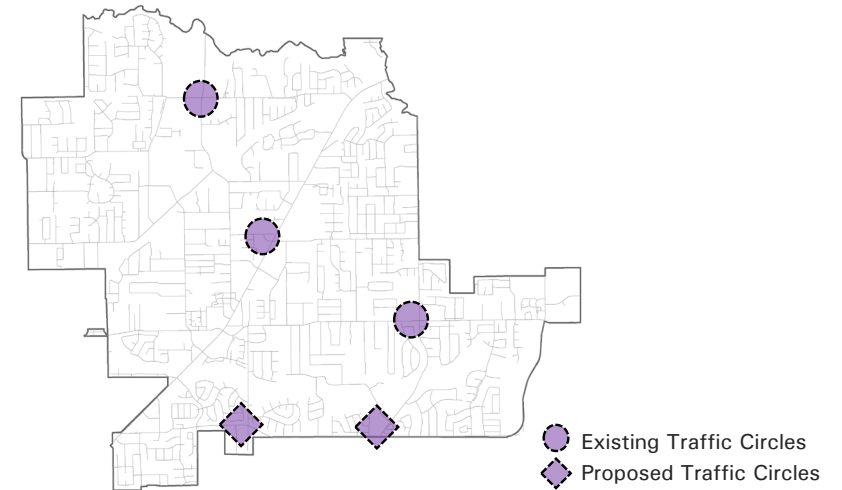


Recommendations:

- Implement a casually formal design similar to existing Glade Road medians. Design intent is to create a symmetrical design similar to the design on page 14. Plant materials may be interchanged and unique, however branded design is encouraged for different corridors throughout the city.
- Install large, healthy plant material for enhanced impact and increased survivability.
- Raise center of median to create mounding effect and promote the landscaping as well as screen oncoming traffic views.
- Separation from landscape areas and turf should be clearly defined by 6" wide concrete mow strip.
- Jurisdictional regulations for TxDOT roadways must be taken into consideration along SH26.



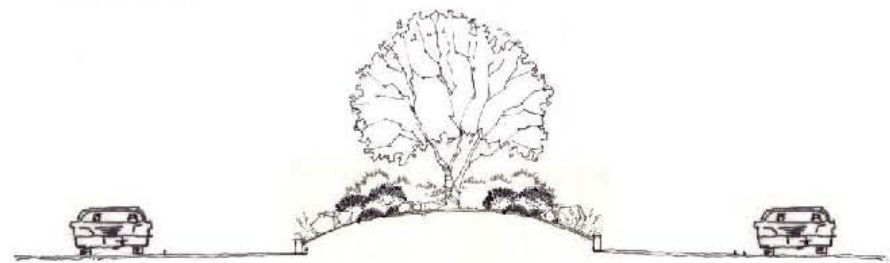
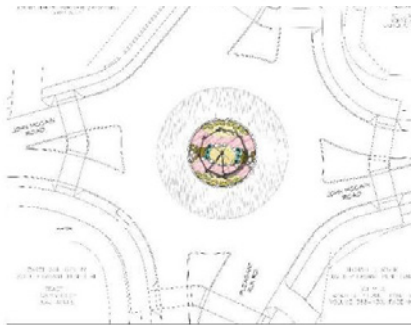
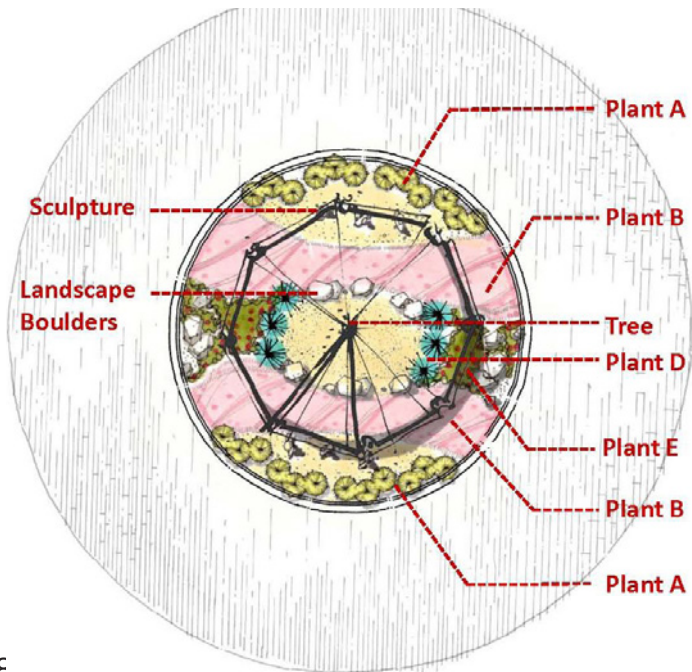
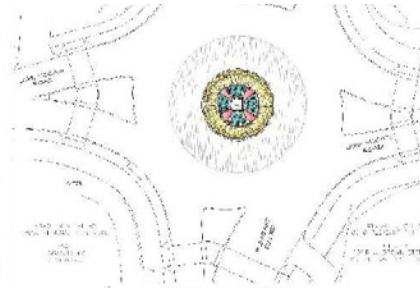
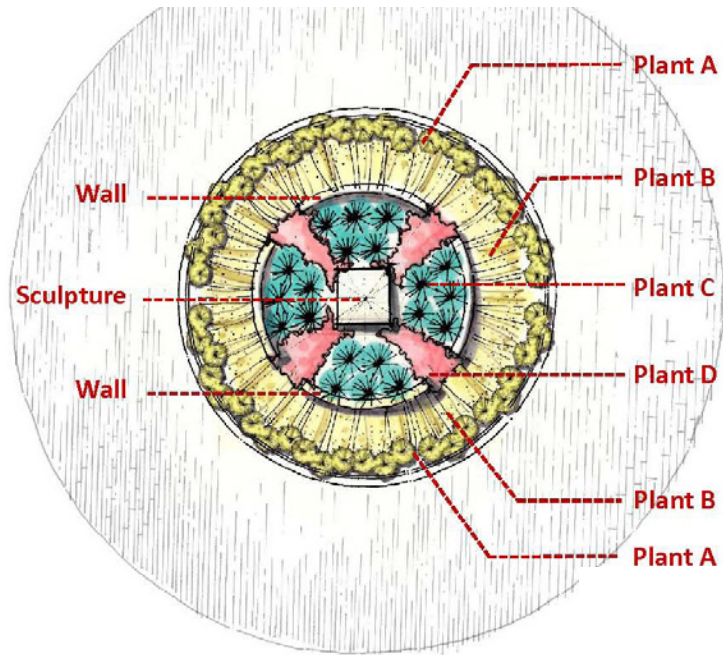
Roundabouts



Landscaping is one of the distinguishing features that gives roundabouts an aesthetic advantage over traditional intersections. Landscaping in the central island, in splitter islands (where appropriate), and along the approaches can benefit both public safety and community enhancement.

The central island landscaping can enhance the safety of the intersection by making the intersection a focal point and by lowering speeds. Plant material should be selected so that sight distance is maintained, including consideration of future maintenance requirements to ensure adequate sight distance for the life of the project.

Pedestrians are not encouraged to cross the circulatory roadway. Street furniture that may attract pedestrian traffic to the central island, such as benches or monuments with small text, must be avoided. If fountains or monuments are being considered for the central island, they must be designed in a way that will enable proper viewing from the perimeter of the roundabout. In addition, they must be located and designed to minimize the possibility of impact from an errant vehicle.

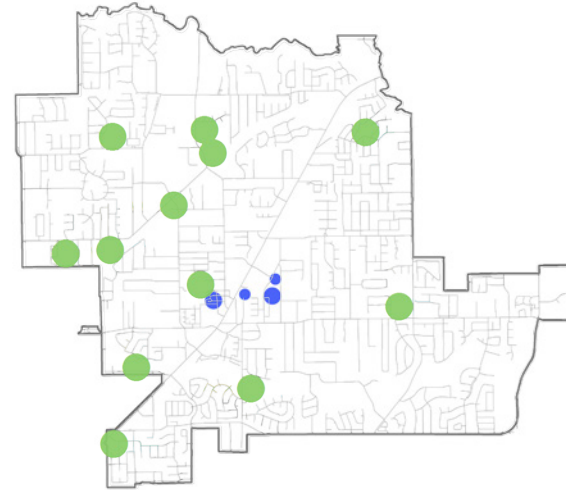


Recommendations:

- Implement design concepts defined in this branding manual. Design intent is to create a symmetrical design similar to the concepts shown here. Plant materials may be interchanged and unique, however branded design is encouraged to tie all city roundabouts together.
- Raise center of roundabout to create mounding effect and promote the landscaping as well as screen oncoming traffic views.
- Install large, healthy plant material for enhanced impact and increased survivability.
- Reduce prominence of directional signage while still providing a safe roundabout that meets recommendations by the city, state, national transportation boards.



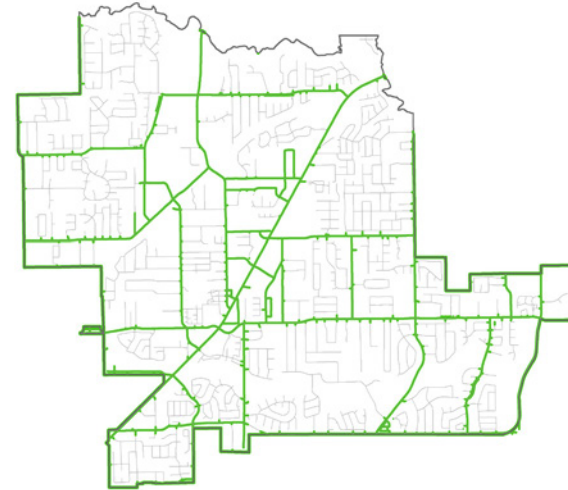
Public Buildings, Parks, and Open Space



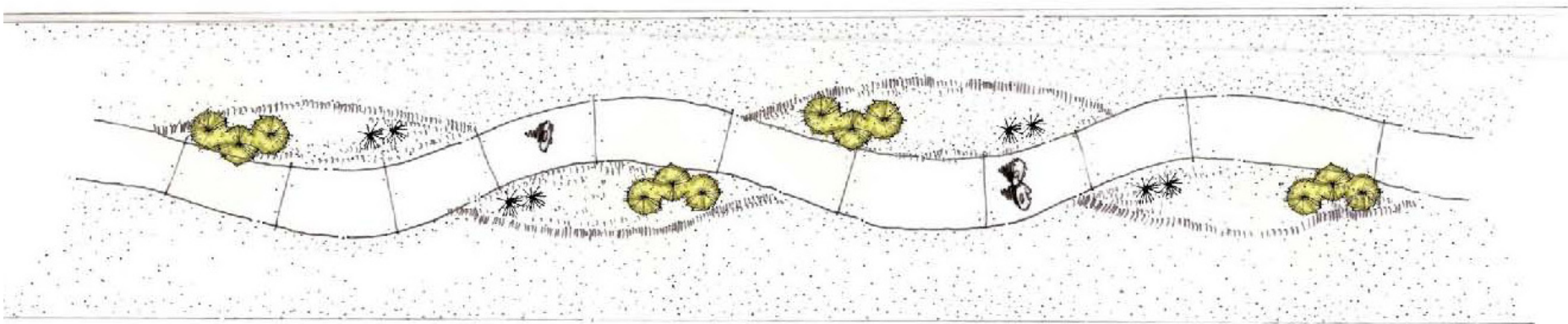
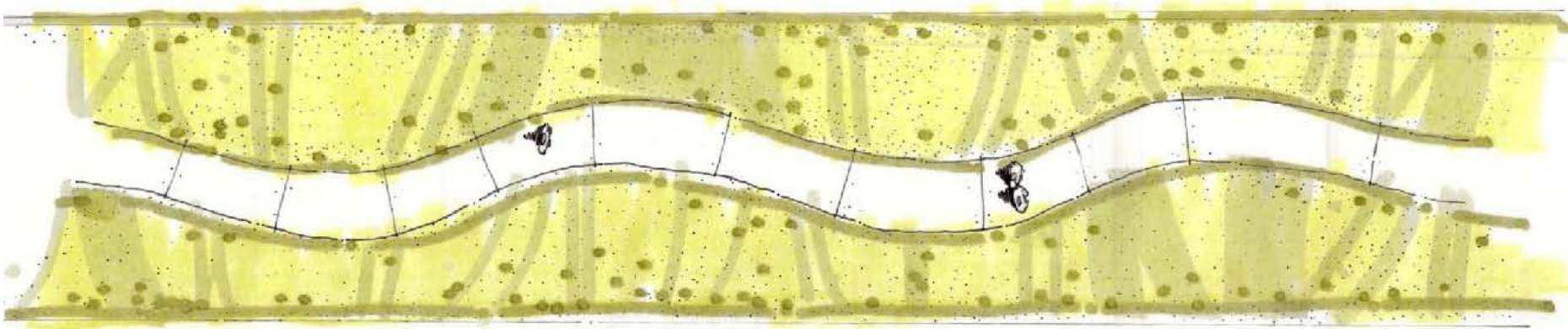
Civic institutions, such as parks, libraries, city halls, and cultural facilities, are the foundations of a civil society and the cornerstones of democracy. At their best, they nurture and define a community's identity by instilling a greater sense of pride, foster frequent and meaningful contact between citizens, provide comfort in their public spaces, and encourage an increasingly diverse population to use them. When public facilities are kept to a high standard of appearance, it tends to trickle out into the community and take place in private developments, neighborhoods, and employment centers as well.

These spaces can be unified by many design elements, with landscaping being one of the most noticeable and dynamic. The Colleyville landscape branding manual recommends implementing the common brand at all new and renovated public facilities to begin to reiterate the brand of Colleyville as the gold standard. This can be achieved with the attention and dedication to good design. Unique site specific design response with similar plant material is encouraged.





Maintaining a safe and aesthetically-pleasing landscape in the right-of-way is an important part of continuing the landscape brand throughout the city. Areas such as linear parks, trail heads, and corridors, and private subdivision entry features also provide the opportunity to expand on the Colleyville landscape brand. The appropriate landscaping improves the appearance and safety of the rights-of-way, as well as the appearance of adjacent properties.



Recommendations:

- Enhance areas along trails as they approach intersections.
- Create areas of landscaping adjacent to seating areas along trails to provide shade.
- Work with private developers during design review of proposed entry features. Encourage consistency and quality design responses in every submittal.



Many elements make up the recommended landscape brand for the City of Colleyville. Plant material, hardscape elements, and specific construction techniques and standards all work together to create the brand.

The plant materials on the following pages have been chosen for their natural or adaptable qualities, their function in the landscape, and their availability in the commercial nursery trade. A variety of plant materials will be utilized to provide the landscape brand for Colleyville. New enhancements are not limited to these suggested species, however, several should be used to enhance a consistent community theme. Several of the plants recommended contain yellow blooms, fall color, or foliage, creating the common unique theme of the gold standard.

Hardscape elements may include stone walls, public art, enhanced paving, pathways, and site furniture. Common use of materials within the public realm will help strengthen the landscape brand. Examples of the recommended elements are shown in this section.

Just as important as high quality materials, construction techniques and specifications ensure the investments are implemented correctly and will stand the test of time. Specific recommendations for soil conditioning, concrete applications, and plant installation are all integral parts of the landscape brand.

Plant Material

Shade Trees



pistia chinensis
Chinese Pistache



quercus virginiana
Live Oak 'highrise'



quercus shumardii
Red Oak

Ornamental Trees



vitex agnus castus
Vitex



chilopsis linearis
Desert Willow



ilex vomitoria
Yaupon Holly

Shrubs



ilex cornuta 'Carissa'
Carissa Holly



Rosa 'Coral Drift'
Coral Drift Rose



Rosa 'popcorn'
Popcorn Drift Rose



hesperaloe parviflora 'yellow'
Yellow Yucca



Rosa 'Radrazz'
Knock Out Rose 'Yellow'
(or 'red')



scutellaria suffrutescens
Purple Skullcap

Ornamental Grasses



pennisetum alopecuroides
'Hamelin'
Hamelin Fountain Grass



stipa tenioides
Mexican Feather Grass



Eragrostis curvula
Weeping Love Grass

Ground Cover



hemerocallis 'stella d'orro'
Daylily



pachysandra terminalis
Japanese Spurge



lantana x hybrida 'new gold'
New Gold Lantana

Hardscape Elements

Stone



Rough cut lueders limestone
w/ cast stone



Smooth cut lueders limestone
w/ cast stone



lueders block stone

Site Furniture

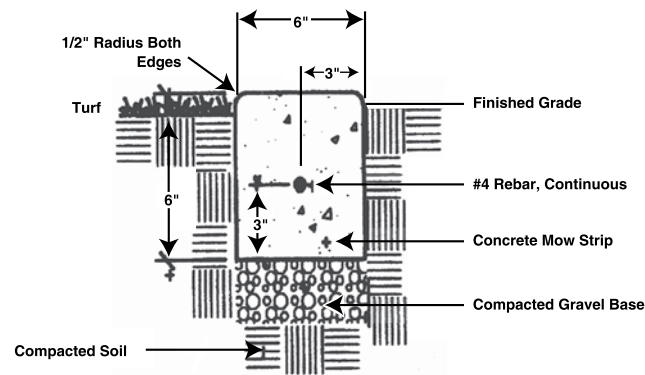


Black metal bench



Black metal trash receptacle

Construction Specification Examples



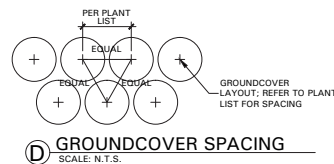
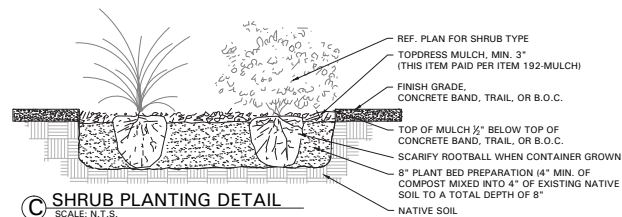
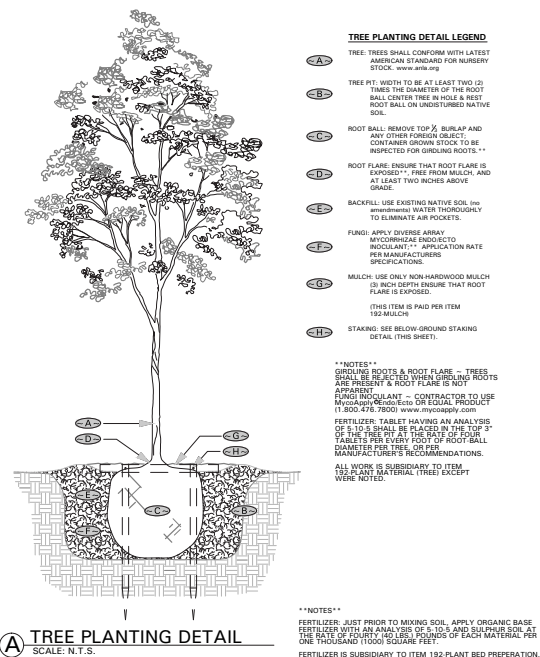
**Notes: Expansion Joints 20' O.C.
All Mow Strips Shall be Formed and Hand-poured.**

Concrete Mow Strip

The following is a recommendation for planting soil amendments and should be revised for specific site applications by a registered landscape architect on all new installations.

- Remove first 6" of existing topsoil
- Install approved planting medium
- Till in existing topsoil to a depth of 12"
- Contractor to submit a producer's specification and a one (1) quart sample of each soil amendment proposed to be used for approval prior to installation.

Planting medium specifications

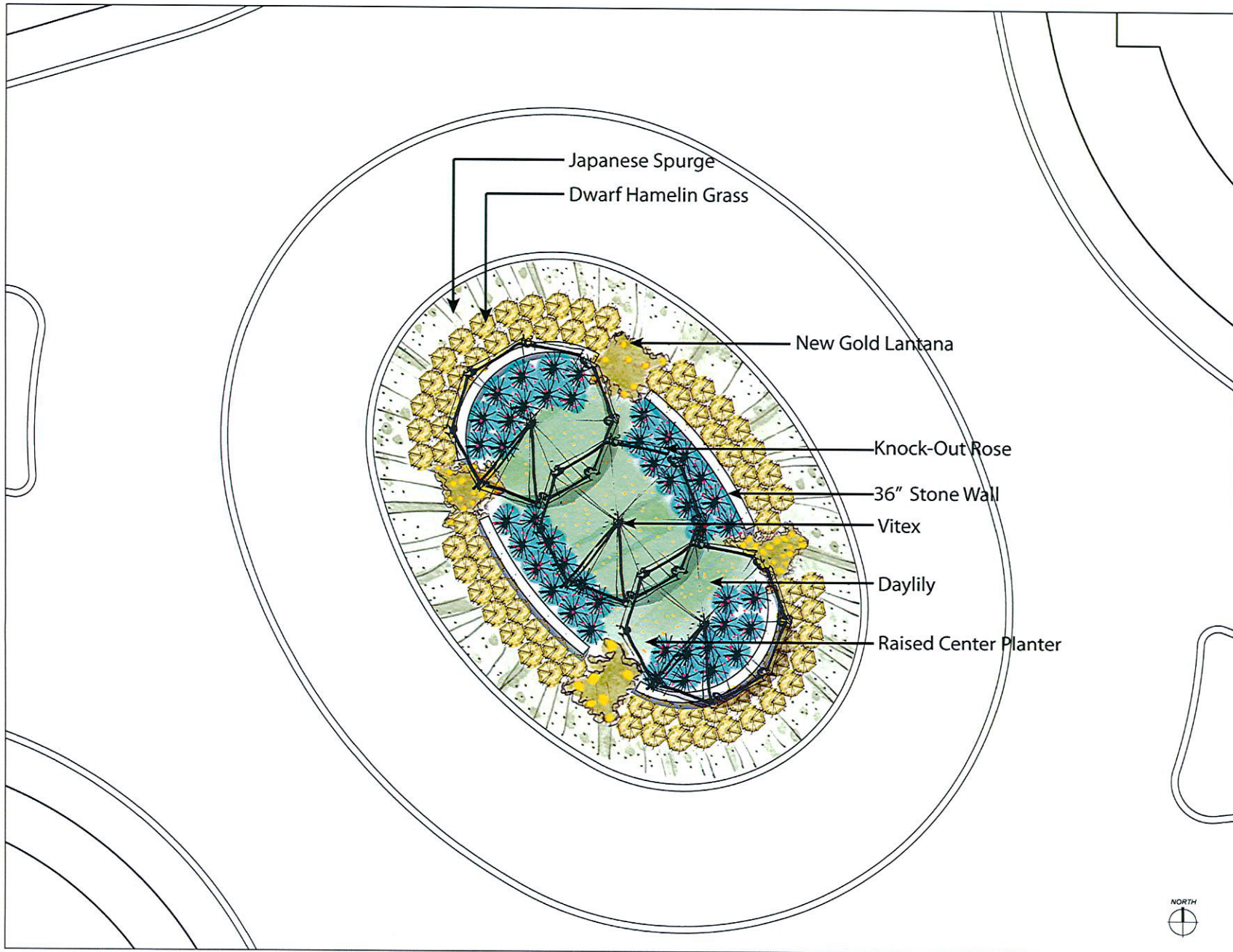


Planting Details

Colleyville.

the gold standard...

Jackson - Cheek-Sparger Roads Landscaping Schematic





City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number PC-3

Agenda Date 09/17/2013

Type Pre Council

Department Finance

Title

Presentation of the Monthly Financial Report - August 2013

Explanation

General Fund

The percentage of current year taxes collected through the end of August is 99.16%, which is ahead of that collected as of August 2012. Sales tax revenue received in August increased \$19,327 or 6.41% from the amount received in August 2012. For Fiscal Year 2013, General Fund sales tax revenue is up 9.16% or \$191,928. This is the sixth month of increased sales tax revenues as compared to the prior year, and is the highest August allocation ever reported. Seven new residential building permits were issued this month compared to 22 in August 2012. Revenues received from fines are down 3.19% compared to budgeted projections. Ambulance collections exceed budgeted projections by \$27,682. Colleyville Center revenues exceed budgeted projections by \$19,327. The average amount expended by the General Fund departments at the end of August is 83.00% of the total appropriation versus 83.48%, which was projected to be spent.

Utility Fund

Water usage has decreased when compared to the amount sold through August 2012. The average amount expended by the Utility Fund departments at the end of August 2012 is 80.26% of the total appropriation versus 83.25%, which was projected to be spent.

Attachments

1. August 2013 Monthly Financial Report

MONTHLY FINANCIAL REPORT - AUGUST 2013

GENERAL FUND		RECEIVED	PROJECTED	RECEIPT VS	RECEIVED	PERCENT
REVENUE SOURCE	FY 2013	AS OF	AS OF	PROJECTED	AS OF	CHANGE OVER
	BUDGET	8/31/2013	8/31/2013	INCR (DECR)	8/31/2012	PRIOR YEAR
Current Taxes	\$10,825,606	\$10,839,902	\$10,825,606	0.13%	\$10,605,594	2.21%
Delinquent Taxes	72,000	67,841	61,200	10.85%	102,053	-33.52%
Penalty & Interest	63,000	72,473	63,000	15.04%	78,427	-7.59%
TOTAL AD VALOREM TAXES	\$10,960,606	\$10,980,216	\$10,949,806	0.28%	\$10,786,074	1.80%
Oncor Electric	\$840,000	\$891,771	\$840,000	6.16%	\$1,024,876	-12.99%
Tri-County Electric	115,000	100,229	115,000	-12.84%	118,281	-15.26%
Atmos Gas	335,000	289,708	335,000	-13.52%	333,098	-13.03%
AT&T	85,000	83,482	85,000	-1.79%	86,852	-3.88%
Verizon/Others	75,000	85,565	68,750	24.46%	82,206	4.09%
Refuse/Recycling	145,800	147,751	133,650	10.55%	123,284	19.85%
Cable TV	378,000	467,498	378,000	23.68%	415,963	12.39%
TOTAL FRANCHISE TAXES	\$1,973,800	\$2,066,002	\$1,955,400	5.66%	\$2,184,559	-5.43%
Sales Tax	\$2,675,000	\$2,286,207	\$2,187,183	4.53%	\$2,094,279	9.16%
Mixed Beverage Tax	67,000	68,592	67,000	2.38%	65,808	4.23%
TOTAL SALES TAX	\$2,742,000	\$2,354,799	\$2,254,183	4.46%	\$2,160,087	9.01%
Building	\$485,768	\$473,612	\$445,287	6.36%	\$679,909	-30.34%
Plumbing	48,680	53,648	44,623	20.22%	73,527	-27.04%
Mechanical	28,868	37,643	26,462	42.25%	44,211	-14.86%
Electrical	37,568	46,383	34,437	34.69%	64,870	-28.50%
City License	37,372	37,785	34,258	10.30%	43,490	-13.12%
Building Plan Review Fee	55,207	94,046	50,606	85.84%	115,944	-18.89%
New Business	3,372	5,029	3,091	62.70%	4,937	1.87%
Sign Permit	5,463	6,125	5,008	22.31%	5,899	3.83%
Fence Permit	3,500	4,325	3,208	34.81%	4,725	-8.47%
Fire Permits	6,500	5,700	5,958	-4.34%	8,575	-33.53%
Irrigation Permit	13,660	13,571	12,522	8.38%	16,932	-19.85%
TOTAL LICENSES & PERMITS	\$725,958	\$777,867	\$665,462	16.89%	\$1,063,590	-26.86%
Fines	\$795,000	\$702,108	\$728,750	-3.66%	\$817,952	-14.16%
Alarm Fees	52,000	43,889	47,667	-7.93%	44,703	-1.82%
Library Fines	20,969	24,232	19,222	26.07%	22,895	5.84%
TOTAL FINES	\$867,969	\$770,229	\$795,638	-3.19%	\$885,549	-13.02%

MONTHLY FINANCIAL REPORT - AUGUST 2013

REVENUE SOURCE	FY 2013 BUDGET	RECEIVED AS OF 8/31/2013	PROJECTED AS OF 8/31/2013	RECEIPT VS PROJECTED INCR (DECR)	RECEIVED AS OF 8/31/2012	PERCENT CHANGE OVER PRIOR YEAR
Re-zoning	\$7,500	\$7,510	\$6,875	9.24%	\$11,460	-34.47%
Plat Fee/Site Plan	4,000	11,455	3,667	212.41%	6,873	-66.68%
Board of Adjustment	1,250	2,000	1,146	74.55%	2,875	-30.43%
Sale of Material	100	93	92	1.35%	105	-11.10%
Weed Mowing	6,500	6,257	5,958	5.01%	7,675	-18.48%
Ambulance	275,000	279,765	252,083	10.98%	298,769	-6.36%
Recreation Program	145,000	138,870	132,917	4.48%	177,866	-21.92%
Non-Resident Fee Parks	36,570	35,838	36,570	-2.00%	36,644	-2.20%
Field Use Charge	22,500	20,575	22,500	-8.56%	22,110	-6.94%
Engineering & Inspection	0	48,453	0	100.00%	12,424	289.99%
Colleyville Center Rental	230,000	230,160	210,833	9.17%	213,590	7.76%
Lot Drainage Insp Fee	16,875	12,125	15,469	-21.62%	19,375	-37.42%
TOTAL CHARGES FOR SERVICE	\$745,295	\$793,099	\$688,110	15.26%	\$810,990	-2.21%
SRO Officer Reimb	\$89,792	\$94,282	\$89,792	5.00%	\$89,793	5.00%
Keller Court	\$216,980	\$216,980	\$216,980	0.00%	\$0	100.00%
TOTAL INTERGOVERNMENTAL	\$306,772	\$311,262	\$306,772	1.46%	\$89,793	246.64%
Sale of Surplus Property	\$10,000	\$0	\$0	0.00%	\$12,969	-100.00%
Interest Income	35,000	32,832	26,250	25.07%	41,249	-20.41%
Miscellaneous	54,000	86,841	77,310	12.33%	64,425	34.79%
Use of Available Cash	1,000,000	0	0	0.00%	0	0.00%
Antenna Lease	70,040	66,036	61,165	7.96%	65,603	0.66%
TOTAL MISCELLANEOUS	\$1,169,040	\$185,709	\$164,726	12.74%	\$184,246	0.79%
Transfer from Utility Fd	\$956,469	\$0	\$0	0.00%	\$0	0.00%
TOTAL TRANSFERS	\$956,469	\$0	\$0	0.00%	\$0	0.00%
TOTAL GENERAL FUND REVENUES	\$20,447,909	\$18,239,182	\$17,780,096	2.58%	\$18,164,888	0.41%

MONTHLY FINANCIAL REPORT - AUGUST 2013

	FY 2013 BUDGET	THROUGH 8/31/2013	THROUGH 8/31/2012	TOTAL INCREASE (DECREASE)	PERCENT INCREASE (DECREASE)
% OF CURRENT TAX ROLL COLLECTED	99.0%	99.16%	99.30%	-0.14%	-0.14%
RESIDENTIAL BLDG PERMITS	132	95	150	(55)	-36.67%
COMMERCIAL BLDG PERMITS	7	6	7	(1)	-14.29%
CITATIONS ISSUED	11,750	10,853	11,092	(239)	-2.15%

GENERAL FUND EXPENSES

	FY 2013 BUDGET	EXPENDED THROUGH 8/31/2013	YEAR-TO-DATE PROJECTED EXPENDITURES	% OF BUDGET EXPENDED	BUDGET REMAINING
City Council	\$203,306	\$181,783	\$201,616	89.41%	\$21,523
City Manager	600,530	510,575	513,504	85.02%	89,955
City Secretary	319,696	272,989	282,697	85.39%	46,707
Finance	434,896	388,125	388,476	89.25%	46,771
Legal	130,460	132,285	132,285	101.40%	(1,825)
Engineering	393,139	381,019	381,792	96.92%	12,120
Economic Development	379,692	262,341	268,984	69.09%	117,351
Building Inspection	307,617	253,885	258,724	82.53%	53,732
Community Development	238,064	180,035	181,737	75.62%	58,029
Fire	4,113,285	3,777,890	3,788,081	91.85%	335,395
Police	4,197,317	3,851,154	3,851,506	91.75%	346,163
Parks	1,388,218	1,016,019	1,023,517	73.19%	372,199
Recreation	309,175	220,304	221,670	71.26%	88,871
Senior Center	51,328	20,745	21,155	40.42%	30,583
Street Maintenance	3,340,996	2,389,640	2,404,920	71.52%	951,356
Library	717,534	585,196	586,919	81.56%	132,338
Communications	142,676	123,435	123,896	86.51%	19,241
Colleyville Center	382,537	335,172	335,350	87.62%	47,365
Human Resources	237,510	196,608	198,501	82.78%	40,902
Municipal Court	411,805	344,389	347,040	83.63%	67,416
Fleet Maintenance	227,322	190,288	191,230	83.71%	37,034
Building Services	325,559	242,389	246,871	74.45%	83,170
Information Services	757,927	682,043	685,228	89.99%	75,884
Capital Equipment Reserve	231,000	231,000	231,000	100.00%	0
Strategic Initiatives Fund Transfer	200,000	200,000	200,000	100.00%	0
Performance Pay	402,751	-	-	0.00%	402,751
TOTAL EXPENSES	\$20,444,340	\$16,969,309	\$17,066,700	83.00%	\$3,475,031

MONTHLY FINANCIAL REPORT - AUGUST 2013

UTILITY FUND						
REVENUE SOURCE	FY 2013 BUDGET	RECEIVED AS OF 8/31/2013	PROJECTED AS OF 8/31/2013	RECEIPT VS PROJECTED INCR (DECR)	RECEIVED AS OF 8/31/2012	PERCENT CHANGE OVER PRIOR YEAR
Water Sales	\$9,361,814	\$9,155,797	\$10,253,745	-10.71%	\$8,758,225	4.54%
Sewer Sales	2,884,565	2,952,434	2,644,185	11.66%	2,733,521	8.01%
Sewer Installation	7,000	9,500	6,417	48.05%	14,300	-33.57%
Water Installation	21,000	22,690	19,250	17.87%	29,500	-23.08%
Sewer Tie-on Charges	5,000	0	0	0.00%	1,500	0.00%
Engineering Charges	5,000	24,565	4,583	435.96%	7,793	215.23%
Penalties	183,696	170,107	168,388	1.02%	187,483	-9.27%
Miscellaneous	13,000	15,917	11,917	33.57%	15,915	0.01%
TOTAL OPERATING INCOME	\$12,481,075	\$12,351,008	\$13,108,484	-5.78%	\$11,748,236	5.13%
Interest Income	\$20,300	\$12,694	\$15,225	-16.63%	\$28,222	-55.02%
TOTAL NON-OPERATING INCOME	\$20,300	\$12,694	\$15,225	-16.63%	\$28,222	-55.02%
TOTAL INCOME	\$12,501,375	\$12,363,702	\$13,123,709	-5.79%	\$11,776,459	4.99%

	THROUGH 8/31/2013	THROUGH 8/31/2012	TOTAL INCREASE (DECREASE)	PERCENT INCREASE (DECREASE)
GALLONS OF WATER SOLD	2,137,942,460	2,263,797,000	(125,854,540)	-5.56%
NUMBER OF WATER CUSTOMERS	9,369	9,264	105	1.13%

UTILITY FUND EXPENSES					
	FY 2013 BUDGET	EXPENDED THROUGH 8/31/2013	YEAR-TO-DATE PROJECTED EXPENSES	% OF BUDGET EXPENDED	BUDGET REMAINING
Billing	382,501	307,483	\$311,907	80.39%	75,018
Operations	9,414,733	7,946,834	8,325,442	84.41%	1,467,899
Utility Support	661,488	775,866	760,209	117.29%	(114,378)
Debt Service	827,824	810,574	810,574	97.92%	17,250
Performance Pay	28,470	0	0	0.00%	28,470
Interfund loan repayment	44,286	44,286	44,286	100.00%	0
Transfer to General Fund	956,469	\$0	0	0.00%	956,469
TOTAL EXPENSES	\$12,315,771	\$9,885,042	\$10,252,418	80.26%	\$2,430,729



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number PC-4

Agenda Date 09/17/2013

Type Pre Council

Department City Secretary

Title

Discussion of the September 17, 2013, City Council regular agenda items



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 1

Agenda Date 09/17/2013

Type Executive Session

Department City Secretary

Title

Section 551.071 - Legal - Consultation with attorney on legal issues raised by public hearing or action items on the agenda

Section 551.071 - Legal - Consultation with attorney regarding solicitor ordinance

Section 551.072 - Real Estate - Deliberate the purchase, exchange, lease, or value of real property for City facilities

Section 551.087 - Economic Development - Discuss or deliberate regarding commercial or financial information that the City has received from business prospects that the City seeks to have locate, stay, or expand in the City and with which the City is conducting economic development negotiations; deliberate the offer of a financial or other incentive to a business prospect

Attachments

RESOLUTION R-13-3664

**A RESOLUTION APPROVING CITY COUNCIL ACTION
REGARDING EXECUTIVE SESSION ITEMS AT THE REGULAR
CITY COUNCIL MEETING OF SEPTEMBER 17, 2013**

WHEREAS, following discussion in Executive Session, and in full accordance with the requirements of the Open Meetings Act, the City Council determines that the following action is in the best interests of the health, safety, and welfare of the public.

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

Sec. 1. THAT the following actions of the City Council are hereby adopted and approved:

a. THAT

AND IT IS SO RESOLVED.

APPROVED BY A VOTE OF ____ AYES, ____ NAYS, AND ____ ABSTENTIONS
ON THIS THE 17TH DAY OF SEPTEMBER 2013.

ATTEST:

CITY OF COLLEYVILLE

Amy Shelley, TRMC
City Secretary

David Kelly
Mayor



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 3

Agenda Date 09/17/2013

Type Announcements, Proclamations and Presentations

Department City Secretary

Title

Proclamation in recognition of the Colleyville Public Library 2013 Summer Chess Club Team and staff

In recognition of Colleyville's featured business - Life Time Fitness, 1221 Church Street; William Leschber, Manager - Mayor David Kelly and Economic Development Director Marty Wieder

Recognition of employees' years of service

Recognition of employee achievements

Attachments

1. Proclamation in recognition of the Colleyville Public Library 2013 Summer Chess Club Team and staff
2. Employee Years of Service - Fourth Quarter Fiscal Year 2013
3. Employee Achievements - Fourth Quarter Fiscal Year 2013

Proclamation

CITY OF

Colleyville,
Texas

WHEREAS: the Colleyville Public Library provides programs for education, adventure, and relaxation for all age groups; and

WHEREAS, the Colleyville Public Library inaugurated the first organized youth Chess program in North Texas Public Libraries in the summer of 2004 and has supported a year-round Chess program since 2005, which has allowed area youth to discover and enjoy the ancient and noble game of Chess; and

WHEREAS, Colleyville and North Richland Hills libraries participated in the 2013 Northeast Tarrant County Libraries Chess Tournament; and

WHEREAS, Colleyville Public Library staff member Cindy Appleby and volunteer Kay Newton coached the Colleyville Public Library Team composed of: Azeem Ahmed, Dania Ahmed, Quinn Arnett, Benjamin Arnold, David Arnold, Kaab Ashqeen, Gavin Casey, Eduardo Burciaga-Ichikawa, Gerardo Burciaga-Ichikawa, Gabby Debrei, Katie Debrei, Matthew Debrei, Nick Debrei, Eric He, Atharwa Mankame, Alicia Martinez, Ian Miller, Tess Miller, Colton Neuville, Cole Reid, Samuel Rose, Jonathan Saada, and Dhiraj Veerappan; and

WHEREAS, the Colleyville Public Library team earned First Place in the 2013 Northeast Tarrant County Libraries Chess Tournament.

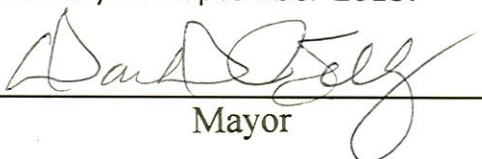
NOW, THEREFORE, I, DAVID KELLY, MAYOR OF THE CITY OF COLLEYVILLE, TEXAS, on behalf of the City Council and citizens of Colleyville, do hereby recognize and congratulate the

**COLLEYVILLE PUBLIC LIBRARY
2013 SUMMER CHESS CLUB TEAM AND STAFF**

and encourage the citizens of Colleyville to show support for this outstanding achievement.

IN WITNESS WHEREOF, I do hereby set my hand and seal of the City of Colleyville, Texas, affixed this 17th day of September 2013.




Mayor



**City of Colleyville Employee Recognition
Fiscal Year 2013 – Fourth Quarter
Years of Service – July to September**

1 YEAR

Anthony Acosta
Parks and Recreation

Cody Ashton
Parks and Recreation

Paul Brown
Finance

Sandra Scott
Police

Wesley Shipman
Police

10 YEARS

Brian Alford
Public Works

Greg Prewitt
Police

15 YEARS

Homer Cruse
Public Works

25 YEARS

David Martz
Police

City of Colleyville
Fiscal Year 2013 – Fourth Quarter
Recognition of Employee Achievements

Texas Municipal Clerks Certification Program
Texas Registered Municipal Clerk Certification

AMY SHELLEY
City Secretary's Office

RESOLUTION R-13-3665

A RESOLUTION APPROVING CITY COUNCIL ACTION UNDER CONSENT ITEMS AT THE REGULAR CITY COUNCIL MEETING OF SEPTEMBER 17, 2013

WHEREAS, City Council has taken action on certain items on the agenda under Consent Items.

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

- Sec. 1. THAT the agenda decisions approved by City Council action under Consent Items as follows are hereby adopted:
- a. Approval of the minutes of the regular City Council meeting of September 3, 2013
 - b. Approval of an Interlocal Agreement with Tarrant County for the purchase of liquid asphalt from the Tarrant County Precinct Three Maintenance Department, at the County's contract price, and authorize the city manager to execute the agreement
 - c. Approval of an Interlocal Agreement with the City of Southlake to share the cost of repairs to the Pleasant Run Road/South White Chapel Road bridge over Big Bear Creek, and authorize the city manager to execute the agreement
 - d. Approval to award a janitorial services contract to Oriental Building Services, Inc., acting as a primary vendor through the City of Arlington Interlocal Agreement, in an amount not to exceed \$128,000, and authorize the city manager to execute same, subject to the approval of funding in the Fiscal Year 2014 (FY 2014) budget
 - e. Approval to renew the Grounds Maintenance Mowing Contract with Whitmore and Sons, Inc., in an amount not to exceed \$141,340.29, and authorize the city manager to execute same, and any associated change orders, in an amount not to exceed \$25,000, subject to the approval of funding in the Fiscal Year 2014 (FY 2014) budget

- f. Approval of a contract renewal for the Horticultural Grounds Maintenance Contract to the Lawn Firm, in an amount not to exceed \$145,734, and authorizing the city manager to execute same, and any associated change orders, in an amount not to exceed \$25,000, subject to the approval of funding in the Fiscal Year 2014 (FY 2014) budget
- g. Approval of an Interlocal Agreement for participation in Fort Worth's Environmental Collection Center Household Hazardous Waste program, and authorize the city manager to execute the agreement
- h. Approval of Broker/Dealer firms for investment purchases
- i. Approval of the use of the Voluntary Library Fund in Fiscal Year 2014 (FY 2014), for the purchase of library materials, collection processing supplies, and library programs, in an amount not to exceed \$145,000
- j. Approval of the disposal of surplus, damaged, worn and outdated library books, audiovisual items, DVDs, CDs, and non-book materials, learning games, and puzzles
- k. Approval of the disposal of obsolete and non-serviceable equipment and vehicles

AND IT IS SO RESOLVED.

APPROVED BY A VOTE OF ____ AYES, ____ NAYS, AND ____ ABSTENTIONS
ON THIS THE 17TH DAY OF SEPTEMBER 2013.

ATTEST:

CITY OF COLLEYVILLE

Amy Shelley, TRMC
City Secretary

David Kelly
Mayor



City of Colleyville City Council Minutes - Draft

City Hall
100 Main Street
Colleyville, Texas 76034
817. 503.1000
www.colleyville.com

Tuesday, September 3, 2013

City Council Chambers

Mayor David Kelly called the Pre Council meeting of the Colleyville City Council to order on September 3, 2013 at 5:32 p.m.

ROLL CALL: Mayor David Kelly, Mayor Pro Tem Mike Taylor and Councilmembers Carol Wollin, Chuck Mogged, Stan Hall, Jody Short, and Tom Hart.

City Manager Jennifer Fadden, Assistant City Manager and Chief Financial Officer Terry Leake, Police Chief Mike Holder, Captain Robert Hinton, Economic Development Director Marty Wieder, Parks and Recreation and Library Director Mary Rodne, Human Resources Director Michelle Reyes, Public Works Director Bob Lowry, City Engineer Jeremy Hutt, Finance Manager Karen Hines, Community Development Director Ron Ruthven, Strategic Services Manager Adrienne Lothery, Information Systems Manager Chris Pena, City Attorney Matthew Butler, and City Secretary Amy Shelley.

PC-1 Discussion of Entryway Marker Designs

City Manager Jennifer Fadden presented this item and briefing for the City Council. City Council stated they preferred sign option B, with the lettering to align in a straight line, rather than to be staggered.

PC-2 Discussion of a worksession regarding sidewalks

City Council decided that Tuesday, November 12, 2013 at 6:00 p.m. would be ideal for the worksession to discuss sidewalks.

PC-3 Discussion of construction and maintenance standards for fences and screening walls in the Land Development Code

Community Development Director Ron Ruthven presented this item and briefing for the City Council.

Councilmember Wollin questioned staff regarding if the notification days would be 10 calendar days or 10 business days. Director Ruthven replied 10 calendar days.

Councilmember Short questioned staff regarding the types of fences being considered. Director Ruthven replied all fences everywhere.

Councilmember Hall questioned staff regarding if there are a lot of complaints regarding fences in disrepair. Director Ruthven replied just a few complaints, not many.

Councilmember Hart questioned staff regarding how complaints regarding fences are enforced. Director Ruthven replied those complaints would be handled by code enforcement, who in return would decide what is to be considered in disrepair.

Councilmember Hall questioned staff regarding if the fencing standards would be retroactive to current fences in disrepair. Director Ruthven replied there is a clause, included in the code, for retroactivity.

Mayor Pro Tem Taylor questioned staff regarding commercial fencing, would the fence be inspected upon the new certificate of occupancy. Director Ruthven replied yes.

Mayor Kelly stated this would apply to subdivision fences that are failing.

Councilmember Short questioned staff regarding how the fence would be tested for the wind load for which it is designed. Director Ruthven stated staff will get an expert opinion, if it becomes an issue.

Councilmember Mogged questioned staff regarding the value for limiting the building materials for fencing. Director Ruthven replied City Council may want to make exceptions to materials, as long as the structural integrity of the fence remains in place.

Mayor Kelly stated if the maintenance standards are in place, then the homeowner can replace and make repairs as necessary.

Mayor Pro Tem Taylor stated he would like to leave in the option for pressure treated wood.

Mayor Kelly questioned staff regarding if there will be any inspection issues. Director Ruthven replied he would like the permit applicant to sign an acknowledgement form which indicates the fencing will meet the requirements of the code, to ensure it is constructed correctly.

Mayor Kelly questioned staff regarding if this should require an ordinance rather than a recommendation. Director Ruthven replied he would prefer it being codified as an ordinance.

Councilmember Short questioned staff regarding what happens when the final inspection is completed and passed and then the fencing fails. Mayor Kelly stated there is typically a warranty period with the builder. Director Ruthven replied the

signed acknowledgement form should take care of any issues outside of the builder's construction.

Mayor Kelly stated he did not want to be too onerous with fencing standards such that homeowners or builders do not apply for a permit.

Mayor Pro Tem Taylor stated not having an issue for wood being for residential uses; however, he stated he would like to have different standards for commercial, such as steel being used as the recommended standard for fence posts.

Mayor Kelly questioned staff regarding if there is anything missing for the engineering side. Public Works Director Bob Lowry replied he did not have any issues on the engineering side.

Mayor Pro Tem Taylor stated he did not know how the measurement in the ground will be taken, since there are no pre-inspections done.

Councilmember Hart stated most work being done is going to have to be done using the honor system, but that these proposed amendments are the only logical way to enforce this.

Councilmember Mogged questioned staff regarding if a sealed plan will be required for masonry fences. Director Ruthven replied yes, but only an engineered seal, rather than an architect.

Councilmember Mogged questioned staff regarding the cost for having those plans sealed by an engineer. Director Ruthven replied approximately \$500. City Manager Jennifer Fadden added a reputable builder will have those plans engineered.

PC-4 Discussion of proposed amendments to Chapter 8-Plat Review Procedures in the Land Development Code

Community Development Director Ron Ruthven presented this item and briefing for the City Council.

Councilmember Hart questioned staff regarding who is "staff" in the approval process. Director Ruthven replied the Community Development Director. City Manager Jennifer Fadden added the plat would go through a multi-level review by a number of staff members such as the Development Review Committee.

Councilmember Short questioned staff regarding if there are any current issues with the approval process. Director Ruthven explained the developers currently do not like the waiting period between the preliminary and final plat approval.

Councilmember Short questioned staff regarding if there will be an appeal process. Director Ruthven replied yes.

Councilmember Mogged stated he liked the proposed changes, especially since it will help the developer proceed forward.

Mayor Kelly stated if there are any issues, the developer can take it to the Planning and Zoning Commission and then further to City Council, if necessary.

Councilmember Hart stated the efficiencies from this will let the development community know that the City is ready for development.

Councilmember Wollin questioned staff regarding the timeline for the appeal process. Director Ruthven stated the provision is listed on page 8-4 for the specific appeal procedures. City Manager Jennifer Fadden explained that F(2) outlines the deadline of 10 days, outlined on the bottom of page 8-4.

Councilmember Wollin questioned staff regarding if notification is given to the residents of the proposed plat. Director Ruthven replied no.

Mayor Pro Tem Taylor stated his concern is citizen perception about something being done without them knowing about it. He questioned staff regarding how this problem will be alleviated. Director Ruthven replied if the Planning and Zoning Commission approves the plat, then the action is final; however, if the Planning and Zoning Commission denies the plat, the applicant has the option to appeal to City Council.

Mayor Kelly stated this will eliminate the need for the plat to be placed on an agenda if the plat has to be approved because it meets the code.

Mayor Pro Tem Taylor stated there has been great debate in the formulation of a plat with citizen input.

Mayor Pro Tem Taylor questioned staff regarding if a plat for a PUD-Planned Unit Development is an exception. Director Ruthven stated the plat must meet the requirements of the PUD ordinance before it could be approved.

Mayor Pro Tem Taylor questioned staff regarding if the PUD requirements are finalized through City Council. Director Ruthven replied yes.

Mayor Kelly stated this will eliminate one additional step for the plat approval, since the PUD requirements are met.

Director Ruthven stated if the City Council would like to see this information, the Planning and Zoning Commission briefing can be listed in the Reports section of the City Council agenda.

Mayor Pro Tem Taylor stated he likes the proposed changes, and stated if it does not work, the standards can be changed, again.

Mayor Kelly questioned staff regarding if the PUD conditions are outlined on the actual plat. Director Ruthven replied no.

Mayor Pro Tem Taylor questioned staff regarding if the plat itself outlines easements, setbacks, right-of-way, and such. Director Ruthven replied yes.

Mayor Kelly stated even though the conditions are not outlined on the plat, those conditions must still be met.

Mayor Pro Tem Taylor questioned the city manager regarding if she is good with the proposed changes. City Manager Jennifer Fadden replied yes.

Councilmember Hart questioned City Attorney Matthew Butler regarding if he is good with the proposed changes. City Attorney Matthew Butler replied yes.

PC-5 Presentation of the Colleyville Economic Development Corporation Annual Activity Report

No discussion was needed for this item.

PC-6 Presentation of the Quarterly Investment Report for June 30, 2013

No discussion was needed for this item.

PC-7 Discussion of the September 3, 2013, City Council regular agenda items

Mayor Kelly adjourned the Pre Council meeting at 6:29 p.m.

The regular meeting of the Colleyville City Council was called to order by Mayor Kelly at 7:32 p.m.

ROLL CALL: Mayor David Kelly, Mayor Pro Tem Mike Taylor and Councilmembers Carol Wollin, Stan Hall, Chuck Mogged, Jody Short, and Tom Hart.

City Manager Jennifer Fadden, Assistant City Manager and Chief Financial Officer Terry Leake, Police Chief Mike Holder, Captain Robert Hinton, Fire Chief Brian Riley, Economic Development Director Marty Wieder, Human Resources Director Michelle Reyes, Finance Manager Karen Hines, Parks and Recreation and Library Director Mary Rodne, Public Works Director Bob Lowry, City Engineer Jeremy Hutt, Community Development Director Ron Ruthven, Strategic Services Manager Adrienne Lothery, Information Systems Manager Chris Pena, City Attorney Matthew Butler, and City Secretary Amy Shelley.

1. EXECUTIVE SESSION - In accordance with Texas Government Code Chapter 551, Subchapter D

Section 551.071 - Legal - Consultation with attorney on legal issues raised by public hearing or action items on the agenda

Section 551.072 - Real Estate - Deliberate the purchase, exchange, lease, or value of real property for City facilities

Section 551.087 – Economic Development - Discuss or deliberate regarding commercial or financial information that the City has received from business prospects that the City seeks to have locate, stay, or expand in the City and with which the City is conducting economic development negotiations; deliberate the offer of a financial or other incentive to a business prospect

Mayor Kelly explained the Executive Session had been called in accordance with the Texas Government Code, Chapter 551, Subchapter D, Section 551.071, Legal, Section 551.072, Real Estate, and Section 551.087, Economic Development. He further explained there would be no decisions made or action taken during this time. The meeting was recessed at 6:29 p.m. and reconvened at 6:30 p.m.

7:00 P.M. - RECEPTION - BRIAN RILEY - FIRE CHIEF

INVOCATION: Pastor Jeff Strickland, Colleyville Assembly of God

PLEDGE OF ALLEGIANCE: Colleyville Fire Department Honor Guard

2. EXECUTIVE SESSION: CONSIDER AND TAKE ANY ACTION(S) NECESSARY RELATIVE TO ITEMS DISCUSSED IN EXECUTIVE SESSION - Resolution R-13-3661

Mayor Kelly read Resolution R-13-3661 in its entirety.

Mayor Kelly opened the public hearing at 7:37 p.m.

There was no one present wishing to speak concerning this item and Mayor Kelly closed the public hearing at 7:37 p.m.

Mayor Pro Tem Taylor moved to approve Resolution R-13-3661. Councilmember Wollin seconded the motion.

The motion to approve carried by the following vote:

Aye: 7 - Mayor David Kelly, Mayor Pro Tem Mike Taylor, and Councilmembers Carol Wollin, Chuck Mogged, Stan Hall, Jody Short, and Tom Hart

3. OATH OF OFFICE

3a Administration of the Oath of Office to Fire Chief Brian Riley

City Secretary Amy Shelley administered the Oath of Office to Fire Chief Brian Riley.

4. ANNOUNCEMENTS, PROCLAMATIONS AND PRESENTATIONS

Announcements of civic and charitable events

Presentation of calendar events and updates

Announcements of awards and recognition

There were no announcements, proclamations, or presentations.

5. CONSENT: READING AND PUBLIC HEARING - Resolution R-13-3662

5a Approval of the minutes of the City Council Worksession of August 13, 2013

5b Approval of the minutes of the regular City Council meeting of August 20, 2013

5c Adopting the Economic Development Capital Improvement Program (EDCIP) for the Fiscal Years 2014-2018 (FY 2014-2018) of the Colleyville Economic Development Corporation

5d Approval to extend an ongoing annual agreement with Autobahn Motor Cars to sponsor the loan of a vehicle to the Colleyville Police Department for the expressed use of the Colleyville Heritage High School Resource Officer

5e Approval of the annual review of the City of Colleyville Investment Policy

5f Approval of the Colleyville Economic Development Corporation Bylaws

Mayor Kelly read Resolution R-13-3662 in its entirety.

Mayor Kelly opened the public hearing at 7:41 p.m.

There was no one present wishing to speak concerning this item and Mayor Kelly closed the public hearing at 7:41 p.m.

Councilmember Hall moved to approve Resolution R-13-3662. Councilmember Hart seconded the motion.

The motion to approve carried by the following vote:

Aye: 7 - Mayor David Kelly, Mayor Pro Tem Mike Taylor, and Councilmembers Carol Wollin, Chuck Mogged, Stan Hall, Jody Short, and Tom Hart

Mayor Kelly thanked Autobahn Motor Cars for their sponsorship of the school resource vehicle for the last nine years.

**6. ORDINANCE(S):
FIRST READING AND PUBLIC HEARING**

6a Ordinance O-13-1881

Request for approval of a Special Use Permit for alcoholic beverage sales for off-premises consumption on Lot 7A, Block 2, Village Park Addition located at 4801 Colleyville Boulevard. Approval of a Special Use Permit for alcoholic beverage sales for on-premises consumption on Lots 1R1, 4, 5A, 6A, 7A, and 9R, Block 2, Village Park Addition located at 4701, 4709, 4717, 4725, 4801, and 4843 Colleyville Boulevard, Case ZC13-009

Mayor Kelly read the caption of Ordinance O-13-1881.

Community Development Director Ron Ruthven presented the item and briefed the City Council.

Mayor Kelly opened the public hearing at 7:50 p.m.

Scott Woodruff, Senior Vice President – Asset Management Centennial Real Estate Company, LLC, came forward to present the agenda item and brief City Council.

There were no others present wishing to speak and Mayor Kelly closed the public hearing at 7:52 p.m.

Councilmember Hall questioned staff regarding Goody Goody and its Special Use Permit (SUP). Director Ruthven explained this request would not affect Goody Goody's SUP. He further added that the existing landmark sign would be changed based on this request.

Mayor Kelly stated having concerns for the restaurant overlay district in terms of it not having a timeframe and blanket approvals. He stated over time, with blanket approvals, there may be some facilities that are not appropriate for Colleyville.

Mayor Kelly questioned Mr. Woodruff regarding if there could be consideration given to an expiration for the blanket approval of the SUP. Mr. Woodruff stated having concerns with an expiration of the SUP, since each applicant, such as a restaurant, would have to then ask for additional approvals. He stated if future uses such as a church are put in place, then the shopping center is limited by its uses.

Mayor Kelly stated if the shopping center did not stay within the ownership of Mr. Woodruff, then there may be issues. Mr. Woodruff stated he cannot guarantee that, but he assured City Council that he is restricted from certain tenants with the Whole Foods lease. He added that the SUP expiration could be linked to the Whole Foods certificate of occupancy.

Councilmember Hart concurred with Mayor Kelly's reservations of the control over the future tenants and with the blanket SUP request, especially if the shopping center owner changes.

Councilmember Hall stated if the SUP is connected to the Whole Foods lease, then that may eliminate those concerns.

Mayor Pro Tem Taylor questioned Mr. Woodruff regarding how much of a restraint is held by Whole Foods. Mr. Woodruff stated the document is lengthy, but that this shopping center is restricted to be operated as a Class A center. Mayor Pro Tem Taylor concurred with the expiration of the SUP being linked to the certificate of occupancy for Whole Foods.

Councilmember Wollin questioned Mr. Woodruff regarding the electrical charging station. Mr. Woodruff stated they are 18 inches wide and three feet tall and that Whole Foods will actually install the devices. Councilmember Wollin stated she would like for the stations to blend in with the actual design of the building.

6b Ordinance O-13-1882

Adoption of the proposed Fiscal Year 2014 (FY 2014) budget

Mayor Kelly read the caption of Ordinance O-13-1882.

Strategic Services Manager Adrienne Lothery presented the item and briefed the City Council.

Mayor Kelly opened the public hearing at 8:08 p.m.

There was no one present wishing to speak and Mayor Kelly closed the public hearing at 8:08 p.m.

Mayor Kelly questioned staff regarding the overall development of the budget. Manager Lothery explained the process of the strategic budget.

Mayor Kelly explained that citizen input is necessary for the planning of the budget.

Councilmember Wollin questioned staff regarding the Charter requirements of the fund balance. Manager Lothery replied that a 90 day reserve is required; however the fund balance of the General Fund is currently at 102 days over the 90 day minimum, in the proposed budget. City Manager Jennifer Fadden clarified this reserve requirement is outlined in the City's Investment Policy, rather than the City's Charter.

Councilmember Wollin stated the City's retirement system is fully funded, and therefore does not have any unfunded liability.

Mayor Kelly thanked staff for the many hours dedicated in putting together the budget.

Councilmember Mogged stated the budget really addresses the infrastructure needs for the long term planning and goals to improve the 43½ miles of unimproved streets.

Councilmember Hart concurred with Mayor Kelly, and thanked staff regarding the hours worked on the budget. He added City Council worked diligently on the human resources component of this budget to ensure the City is properly staffed.

6c Ordinance O-13-1883

Adoption of the Ad Valorem Tax Rate for Fiscal Year 2014 (FY 2014)

Mayor Kelly read the caption of Ordinance O-13-1883.

Assistant City Manager and Chief Financial Officer Terry Leake presented the item and briefed the City Council.

Mayor Kelly opened the public hearing at 8:17 p.m.

There was no one present wishing to speak and Mayor Kelly closed the public hearing at 8:17 p.m.

Mayor Kelly questioned staff regarding the average property value versus that from last year, and how does that compare to services received by the residents. Assistant City Manager and Chief Financial Officer Terry Leake explained those values and services received by the residents of Colleyville. Mayor Kelly added the services received far outweigh the property taxes received.

6d Ordinance O-13-1884

Adoption of the Colleyville Economic Development Corporation Fiscal Year 2014 (FY 2014) Budget

Mayor Kelly read the caption of Ordinance O-13-1884.

Assistant City Manager and Chief Financial Officer Terry Leake presented the item and briefed the City Council.

Mayor Kelly opened the public hearing at 8:25 p.m.

There was no one present wishing to speak and Mayor Kelly closed the public hearing at 8:25 p.m.

Mayor Kelly questioned staff regarding how much has been saved by using the Colleyville Tomorrow Fund versus a separate loan. Assistant City Manager and Chief Financial Officer Terry Leake replied approximately \$50,000.

Councilmember Wollin stated the Senior Center survey is available online and she stressed that it is important to have citizen input.

Councilmember Mogged questioned staff regarding how long the survey will be available online. Assistant City Manager and Chief Financial Officer Terry Leake replied until midnight on September 16, 2013.

Councilmember Wollin stated the survey is easy to take.

6e Ordinance O-13-1885

Request for approval to amend Part II, Chapter 2- Administration, Article II- Finance, Division 1, Sec. 2-26 of the Colleyville, Texas, Code of Ordinances, which sets fees and charges for City services

Mayor Kelly read the caption of Ordinance O-13-1885.

Strategic Services Manager Adrienne Lothery presented the item and briefed the City Council.

Mayor Kelly opened the public hearing at 8:29 p.m.

There was no one present wishing to speak and Mayor Kelly closed the public hearing at 8:29 p.m.

Mayor Kelly questioned staff regarding if some of these fees are being updated to properly account for staff services. Manager Lothery replied yes.

6f Ordinance O-13-1886

Amending Ordinance O-12-1850 relating to the Fiscal Year 2013 budget

Mayor Kelly read the caption of Ordinance O-13-1886.

Strategic Services Manager Adrienne Lothery presented the item and briefed the City Council.

Mayor Kelly opened the public hearing at 8:32 p.m.

There was no one present wishing to speak and Mayor Kelly closed the public hearing at 8:32 p.m.

Councilmember Hall questioned staff regarding if the left over funds may be moved to wherever it is deemed appropriate. Mayor Kelly explained the remaining funds are placed into the general surplus reserve, which will then be re-appropriated, sometime later in the year, rather than adjusting multiple department budgets.

7. CITIZEN COMMENTS/PRESENTATIONS REGARDING ITEMS NOT ON THE AGENDA

There was no one present wishing to speak.

8. REPORTS

Zoning Board of Adjustment Meeting Minutes - May 15, 2013

Sign Board of Appeals Meeting Minutes - July 9, 2013

Planning and Zoning Commission Meeting Minutes - July 22, 2013

Councilmember Wollin stated the Zoning Board of Adjustment Meeting minutes for the May 15, 2013 meeting are missing the motion made on the last page. Community Development Director Ron Ruthven stated he would check with staff and review the minutes.

9. ACTION/RESOLUTION: DISCUSSION AND CONSIDERATION OF A RESOLUTION RATIFYING COUNCIL AGENDA ACTION FOR SEPTEMBER 3, 2013 - Reading and Public Hearing - Resolution R-13-3663

This resolution was not needed.

10. ADJOURNMENT

There being no further business before the City Council, Councilmember Mogged moved to adjourn, and Councilmember Hart seconded the motion.

The motion to adjourn carried by the following vote:

Aye: 7 - Mayor David Kelly, Mayor Pro Tem Mike Taylor, and Councilmembers Carol Wollin, Stan Hall, Chuck Mogged, Jody Short, and Tom Hart

Mayor Kelly adjourned the City Council meeting at 8:35 p.m.

APPROVED BY A VOTE OF _____ AYES, _____ NAYS, AND _____
ABSTENTIONS ON THIS THE _____ DAY OF _____.

Minutes taken and prepared by:

*Amy Shelley, TRMC
City Secretary*



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 4b

Agenda Date 09/17/2013

Number Resolution R-13-3665

Type Resolution

Department Public Works

Title

Approval of an Interlocal Agreement with Tarrant County for the purchase of liquid asphalt from the Tarrant County Precinct Three Maintenance Department, at the County's contract price, and authorize the city manager to execute the agreement

Explanation

Reading and Public Hearing

Liquid asphalt is used to prime the surface of an existing asphalt road prior to the placement of an asphalt patch. The asphalt patch truck currently holds approximately 150 gallons of liquid asphalt and the truck has to be refilled at least twice a year. The City currently purchases this product from Heartland Asphalt Materials in Saginaw, Texas. This is the same location and vendor where Tarrant County purchases their material, but their product is purchased in bulk and stored at the Tarrant County Precinct Three Maintenance Department facility. The City currently purchases the material at the Tarrant County rate, but drives the asphalt patch truck to Saginaw to pick up the material.

By utilizing the attached Interlocal Agreement with Tarrant County, the liquid asphalt can be picked up at the Tarrant County Precinct Three Maintenance Department facility at the intersection of Precinct Line Road and West Glade Road. It will also allow the City to purchase liquid asphalt from the Tarrant County Precinct Three Maintenance Department at the County's contract price and the City will be invoiced at the current rate for the material used.

The Tarrant County Commissioner's Court will take action on this item after Colleyville executes the agreement and forwards it to the County.

Financial Impact

There is no direct fiscal impact as the contract price will remain the same, but there are soft cost savings associated with the reduction in distance needed to be traveled to pick up the liquid asphalt.

Recommendation

Approve

Attachments

1. Interlocal Agreement with Tarrant County

THE STATE OF TEXAS

INTERLOCAL AGREEMENT

COUNTY OF TARRANT

BACKGROUND

This Interlocal Agreement is between County of Tarrant ("COUNTY"), and the City of Colleyville ("CITY");

Sections 791.001 - 791.029 of the Texas Government Code provide legal authority for this Agreement;

During the performance of the governmental functions and the payment for the performance of those governmental functions the parties will make the performance and payment from current revenues legally available to that party; and

The Commissioners Court of the COUNTY and the City Council of the CITY each find:

- a. This Agreement serves the common interest of both parties;
- b. This Agreement will benefit the public;
- c. The division of costs fairly compensates both parties to this Agreement; and
- d. The CITY and COUNTY have authorized their representative to sign this Agreement.

The Parties therefore agree as follows:

TERMS AND CONDITIONS

1. COUNTY RESPONSIBILITY

COUNTY agrees to allow the CITY to purchase liquid asphalt from the Tarrant County Precinct Three Maintenance Department at the COUNTY's contract price. The COUNTY will invoice the CITY for the liquid asphalt supplied.

2. CITY RESPONSIBILITY

- 2.1 CITY will pick up the liquid asphalt at the Tarrant County Precinct Three Maintenance Facility.
- 2.2 CITY agrees to accept the liquid asphalt as delivered.
- 2.3 CITY will pay the COUNTY as invoiced.

3. NO WAIVER OF IMMUNITY

This Agreement does not waive COUNTY rights under a legal theory of sovereign immunity. This Agreement does not waive CITY rights under a legal theory of sovereign immunity.

4. TIME PERIOD FOR COMPLETION

CITY will request the liquid asphalt on an "as needed basis" and the COUNTY will make the asphalt available at an agreed upon time. However, COUNTY is under no duty to deliver liquid asphalt.

5. THIRD PARTY

The parties do not enter into this contract to protect any specific third party. The intent of this contract excludes the idea of a suit by a third party beneficiary. The parties to this Agreement do not consent to the waiver of sovereign immunity under Texas law to the extent any party may have immunity under Texas law.

6. JOINT VENTURE & AGENCY

The relationship between the parties to this contract does not create a partnership or joint venture between the parties. This Agreement does not appoint any party as agent for the other party.

7. EFFECTIVE DATE

This Agreement becomes effective when signed by the last party whose signing makes the Agreement fully executed.

CITY OF COLLEYVILLE

COUNTY OF TARRANT

Date: _____

B. Glen Whitley, County Judge

Date: _____

Gary Fickes, Commissioner Pct 3

Date: _____

Attest:

Attest:

APPROVED AS TO FORM

APPROVED AS TO FORM

CITY ATTORNEY

ASSISTANT DISTRICT ATTORNEY

*By law the District Attorney's Office may only advise or approve contracts or legal documents on behalf of its clients. It may not advise or approve a contract or legal document on behalf of other parties. Our review of this document was conducted solely from the legal perspective of our client. Our approval of this document was offered solely for the benefit of our client. Other parties should not rely on this approval, and should seek review and approval by their own respective attorney(s).



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 4c

Agenda Date 09/17/2013

Number Resolution R-13-3665

Type Resolution

Department Public Works

Title

Approval of an Interlocal Agreement with the City of Southlake to share the cost of repairs to the Pleasant Run Road/South White Chapel Road bridge over Big Bear Creek, and authorize the city manager to execute the agreement

Explanation

Reading and Public Hearing

The Federal Highway Administrations requires that all roadway bridges greater than 20 feet in length be inspected bi-annually to determine structural sufficiency. In December 2011, TxDOT inspected the Pleasant Run Road/South White Chapel Road bridge over Big Bear Creek as part of its bi-annual off-system bridge inspection program. A letter documenting the inspection results is included in the Scour Study for South White Chapel Road at Big Bear Creek, and it concluded that unstable conditions and exposure of the columns holding up the bridge were a public safety situation that needed to be addressed.

In March 2012, Colleyville and Southlake jointly funded an engineering services agreement with Halff Associates, Inc. to study the problem, and recommend countermeasures to mitigate the scouring at the base of the bridge columns, and slow down future erosion. The study was finalized in May of 2013, and provided to Colleyville and Southlake. The recommended mitigation measures are detailed in the attached study, and the associated costs (\$44,350 for design and \$121,000 for construction) are detailed in the attached interlocal agreement, which provides for each city to pay for 50 percent of the cost of the project. It is anticipated that the design will take approximately 90 days, and construction will take four to six months.

As the study was being conducted, Southlake staff had discussions with TxDOT about replacing the bridge as part of TxDOT's bridge replacement program. This program provides federal funding of 80 percent, and State funding of 10 percent for selected projects, thus requiring a 10 percent local match. If this project were selected by TxDOT, to be included in the bridge replacement program, Colleyville's share of the cost to replace it would be five percent. The 2015 Capital Improvement Program includes \$150,000 to cover this local match, in the event the project is selected.

Because of the severity of the existing scouring, the need to take immediate action to mitigate it, and the uncertainty of having this project selected for replacement by TxDOT, staff believes participation with Southlake to address this situation is in the

best interest of both cities. This interlocal agreement is scheduled to be considered by Southlake's City Council on September 17, 2013.

Financial Impact

Funding for Colleyville's share of this project, estimated to be \$82,675, is available in the Street Capital Improvement Fund.

Recommendation

Approve

Attachments

1. Scour Study for South White Chapel Road at Big Bear Creek
2. Interlocal Agreement with Southlake

Scour Study for South White Chapel Road at Big Bear Creek



Prepared For:

The City of Southlake, TX and
The City of Colleyville, TX



Prepared By:

Halff Associates, Inc.

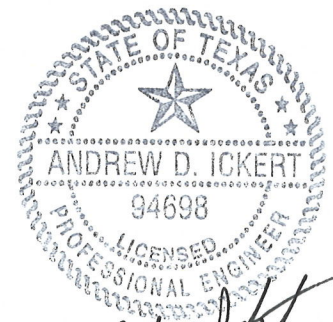
4000 Fossil Creek Boulevard

Fort Worth, TX 76137

Texas Firm Registration No. F-312



May 2013
AVO: 28736



Andrew Ickert
05/03/2013

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Attachments

Attachment A – Texas Department of Transportation

- December 2011 Inspection Letter
- December 2011 Inspection Report

Attachment B – Tarrant County

- 1971 Bridge plans

Attachment C – CMJ Geotechnical Report

Attachment D – A-E-I Non-Destructive Subsurface Investigation

Attachment E – Hydraulics and Scour Analysis

Attachment F – Cost Estimate

I. Introduction/Background

A. Scope of Work

The City of Southlake and Colleyville authorized Halff Associates in March 2012 to assess the scour and erosion in the immediate vicinity of South White Chapel Road over Big Bear Creek. Big Bear Creek forms the city boundary between Southlake and Colleyville at South White Chapel Road. The scope of work includes the collection and analysis of available data related to the bridge structure and Big Bear Creek, as well as a scour/hydraulic analysis of the structure based on existing hydraulic models of Big Bear Creek. Scour countermeasure alternatives are presented with associated costs and recommendations based on the findings of the study.

B. Watershed Description

The total drainage area of the Big Bear Creek watershed at the South White Chapel Road Bridge is approximately 23.6 square miles. The watershed extends from Colleyville and Southlake upstream through portions of Keller and Fort Worth. There are large areas of parks/open spaces and undeveloped areas in the upper reaches of the watershed, but this area is developing rapidly. The majority of the developed areas within the watershed are single family residential. The soil makeup of the watershed is predominately from Group D hydrologic soils which are defined as clayey with slow infiltration rates and a high potential for runoff. Figure 1 shows the Big Bear Creek watershed.

C. South White Chapel Road Bridge over Big Bear Creek

The existing bridge consists of 3-25.0' spans for a total length of approximately 75 feet. The two bents each consist of 2-24" diameter piers with a total bridge width of approximately 25 feet. The roadway deck is at approximately elevation 592.5 (NAVD 88). The existing channel flowline is nearly 25 feet below the bridge deck. It is not known when the existing structure was constructed. The 1956 Colleyville USGS Quadrangle Panel shows a bridge structure over Big Bear Creek in this location. Figure 2 shows the existing structure today (January 2012) taken from the downstream left overbank.

Scour Study for South White Chapel Road at Big Bear Creek

Figure 1 -
Big Bear Creek
Watershed

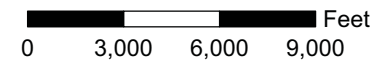
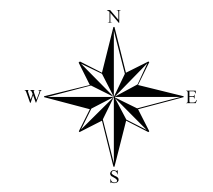
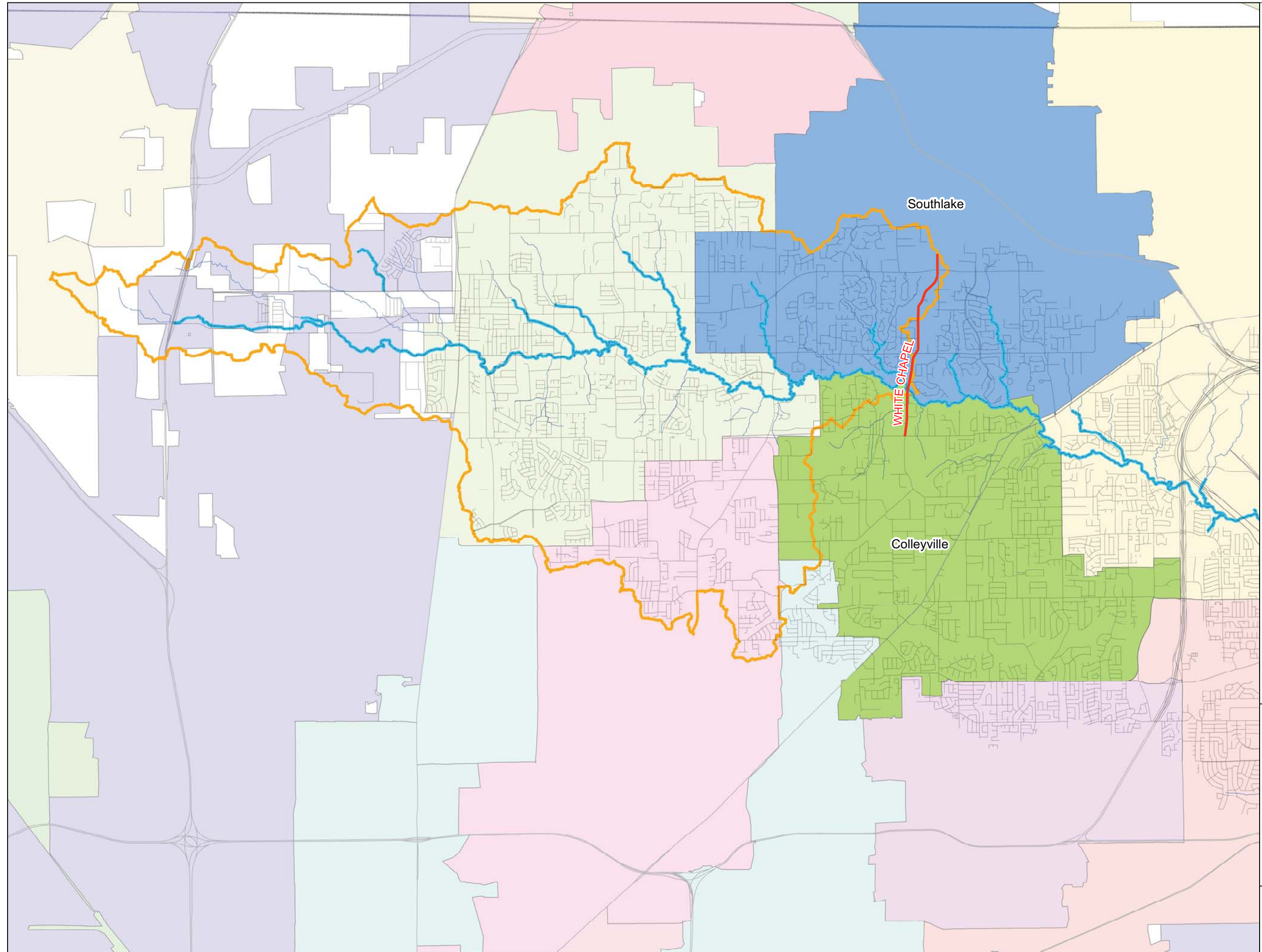




Figure 2 Existing Bridge and Channel (January 2012)

II. Data Collection

A. Overview

In order to analyze the existing scour and potential for future scour and erosion at the bridge structure, data were collected and analyzed from various sources including: the Texas Department of Transportation (TxDOT), Tarrant County, United States Army Corps of Engineers (USACE) Flood Insurance Study (FIS), existing Big Bear Creek studies, geotechnical borings, ground penetrating radar and field surveys.

B. TxDOT Data

In December 2011, TxDOT inspected the South White Chapel Road Bridge (NBI Number 02-220-LL00-20-001) over Big Bear Creek as part of its routine off-system bridge inspection program. A letter documenting the TxDOT findings (dated 15 December 2011) was provided to the City of Southlake (Attachment A). The letter concluded that the unknown foundation depth, the erodible nature of the sandy channel material, the general hydraulic characteristics of the stream (including channel velocity during flood conditions), and the increase in the length of the exposed column/drilled shaft over the last several years leads to concerns over public safety. The letter recommended that the column/drilled shaft portion of the substructure needs scour countermeasures in order to help stabilize the channel bottom and help prevent further erosion.

TxDOT was subsequently contacted and provided channel-cross section measurements from routine field inspections taken in 1991, 1993, 2008, and 2011 (Attachment A). TxDOT did not have plans for the bridge structure or know the depths of the

columns/drilled shafts. The TxDOT inspection reports indicate an average channel degradation rate of 0.15 feet/year for the north interior bent and 0.25 feet/year for the south interior bent over the 20 year period (1991-2011). Table 1 provides the results of the cross-section measure downs from the top-of-deck elevation.

Table 1. TxDOT Inspection Report Measurements

North Interior Bent			
Date	Measure Down (ft)	Ground Elevation*	Degradation Rate
October 1991	16	576.5	-
December 1993	18	574.5	1 ft/year
July 2008	18	574.5	0 ft/year
December 2011	19	573.5	0.3 ft/year
South Interior Bent			
Date	Measure Down (ft)	Ground Elevation*	Degradation Rate
October 1991	19	573.5	-
December 1993	20	572.5	1 ft/year
July 2008	24	568.5	0.3 ft/year
December 2011	24	568.5	0 ft/year

*Assumes top of deck = 592.5' (baseline for measurements)

C. Tarrant County Data

The Tarrant County Transportation Department was contacted and provided 1971 plans (Attachment B) for South White Chapel Road Bridge over Big Bear Creek. The plans showed 24" diameter piers with 60" diameter bell footings. The bottoms of the pier bells are called out as elevation 568.5 (24 feet below the top of deck elevation of 592.5). The plans also show a north bent ground elevation of 578.5 and a south bent ground elevation of 572.5. There are handwritten notes on the plans stating "No Bells" and calculations near each of the four columns showing bottom of pier elevations ranging from 539.8 to 548.9.

D. 1970 USACE FIS

The HEC-2 backwater model for Big Bear Creek was obtained from the USACE. The comments in the model indicate that the South White Chapel Road Bridge (Pleasant Run Road) was field surveyed in 1970. The HEC-2 data indicates that in 1970, the top of road elevation was 592.5 with a low chord elevation of 591.5. The ground elevation at the north pier was 579.2 and the ground elevation at the south pier was 573.3.

E. Big Bear Creek Hydrologic and Hydraulic Study

In 2005, Halff Associates completed a hydrologic and hydraulic study of the Big Bear Creek watershed for the Federal Emergency Management Agency Tarrant County FIS. As part of this study, the South White Chapel Road Bridge was field surveyed in May 2004. The May 2004 survey showed the top of road elevation of approximately 592.5 and a low chord elevation of 591.4. The ground elevation at the south pier was 569.2.

In 2007, the baseline existing conditions models from 2005 were updated for the North Central Texas Council of Governments (NCTCOG) to develop fully urbanized conditions in the Big Bear Creek watershed.

F. 2012 Field Survey and Subsurface Investigation

As part of the current scour study, Halff Associates completed a field survey of the Big Bear Creek channel in the vicinity of South White Chapel Road over Big Bear Creek in April 2012. This 2012 survey shows a ground elevation near the north bent of approximately 574.0 and a ground elevation at the south bent of approximately 569.0 to 570.0. In addition to field surveys, geotechnical and non-destructive subsurface investigations were completed.

CMJ Engineering drilled a boring to a depth of 40 feet below the existing ground elevation (586.7) in the downstream left overbank near the bridge structure to elevation 546.7. The boring indicates that the strata below the existing Big Bear Creek channel bottom is composed primarily of sand and will be subject to future erosion and degradation. The South White Chapel Road Bridge is located in Quaternary Alluvium within the Woodbine Formation. A copy of the geotechnical report is in Attachment C.

A-E-I Environmental & Engineering Consultants completed a non-destructive subsurface investigation to determine the depth of the existing concrete piers supporting the bridge. A 4-inch bore hole was completed to a depth of 30 feet below the existing grade from a shelf in the left overbank under the bridge structure. The ground penetrating radar (GPR) scan determined the piers were continuous through the depth of the bore hole. No definitive conclusion could be determined on the exact depth of the piers. An additional bore hole was completed to refusal in the same location. A rock layer of refusal was encountered at a depth of 31-foot 3-inches (or approximately elevation 548.0). No additional GPR readings were taken due to the close proximity of the two boreholes. A copy of the report is in Attachment D.

G. Comparison of Ground Elevations and Data (1970-2012)

Although the measurements and survey were taken with different methods, there have been numerous sources of elevation data related to the Big Bear Creek channel in the vicinity of South White Chapel Road covering a period from 1970-2012. Figure 3 shows the approximate ground elevation of the channel in the vicinity of the South White Chapel Road Bridge over the last 42 years based on the various data sources. Based on these data, the following assessments can be made:

1. The channel material is sandy and prone to further degradation. There are no indications from the boring that a layer of rock or less erodible material is present above elevation 548.0. It does appear from the data collected that the degradation near the south pier has slowed over the last four years even though the watershed has experienced a couple of high flow events (September 2010 and January 2012) during this period.

2. The watershed has experienced rapid development and urbanization over the last 42 years which has increased discharges and velocities in the vicinity of South White Chapel Road Bridge. Urbanization is expected to continue in the upper reaches of the watershed that are not currently developed.
3. The bells on the piers as noted in the 1971 bridge plans appear to have not been constructed, as they would be visible today, and the south pier would be near complete undermining based on the 1971 plan elevations (not the handwritten notes). This is further supported by the GPR scan. The GPR scan also indicates a rock layer around elevation 548.0 which is in agreement with the hand written notes on the 1971 plans indicating constructed bottom of pier elevations near this level. These are simply assumptions based on available data as the true bottom of the piers could not be determined by the GPR.
4. At the south pier (in the main channel), the channel has degraded approximately 5 feet over the last 42 years (0.12 feet/year).
5. At the north pier, the channel has degraded approximately 5.5 feet over the last 42 years (0.13 feet/year).

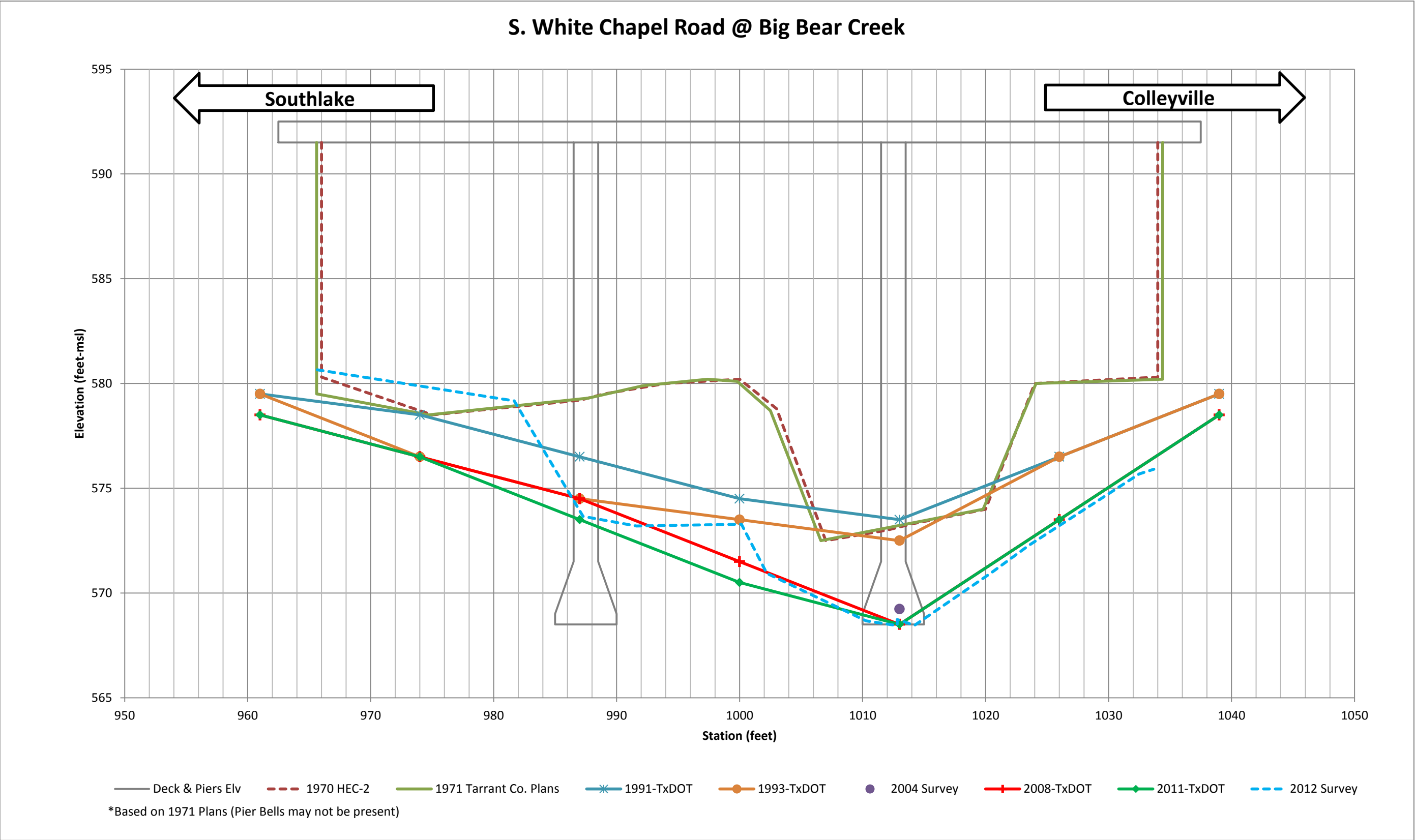


Figure 3. South White Chapel Road Bridge Historic Degradation

III. Hydraulic and Scour Analysis

A. Hydrology/Hydraulics

In 2005 as part of the Tarrant County FEMA re-mapping project, Halff Associates developed new hydrologic (HEC-HMS) and hydraulic (HEC-RAS) models of the Big Bear Creek watershed. As part of this study, new frequency water surface elevations were computed at the South White Chapel Road Bridge over Big Bear Creek. The hydraulic model was obtained and reviewed as part of the current scour countermeasure assessment and the bridge section at South White Chapel Road was updated based on the April 2012 survey data. Boundary shear stress (tractive force) is a measure of the water's force against the soil particles. At a critical level, the water begins tearing loose the soil particle from the channel walls and erosion begins. HEC-RAS computes shear stress as a function of the hydraulic radius of flow and slope of the energy grade line. Table 2 provides the depth of flow, maximum computed velocity, and maximum shear stress in the Big Bear Creek channel under South White Chapel Road Bridge as computed by HEC-RAS for existing conditions. The maximum velocity was computed with the flow distribution option in HEC-RAS. These parameters impact the design of countermeasure alternatives.

Table 2. Hydraulic Model Results

Frequency	Depth (ft)	MaxVelocity (ft/s)	Max Shear Stress (psf)
10% ACE (10-Year)	20.0	9.1	5.23
2% ACE (50-Year)	22.8	6.6	N/A*
1% ACE (100-Year)	23.6	7.3	N/A*
0.2% ACE (500-Year)	24.3	6.8	N/A*

*Roadway is overtopped. Shear stress is not computed.

Based on the geotechnical analysis and field inspections, the soil in the vicinity of South White Chapel Road is primarily composed of sand. According to Open Channel Hydraulics (Chow, 1959), the maximum permissible velocity and boundary shear stress to not cause erosion for this type of soil is approximately 2.50 ft/s and 0.075 psf. As shown in Table 2, these critical values are exceeded indicating the erosive forces of flow at this location.

B. Scour Analysis

A bridge scour analysis of the South White Chapel Road Bridge at Big Bear Creek was completed using the HEC-RAS (Version 4.1) Bridge Scour Routine. This routine is based on HEC-18, *Evaluating Scour at Bridges, 2001*. The bridge scour analysis was made in accordance with the TxDOT Hydraulic Design Manual.

The basic mechanism causing local scour at bridge piers is the formation of vortices (known as the horseshoe vortex) at their base. The horseshoe vortex results from the pileup of water on the upstream surface of the obstruction and subsequent acceleration of flow around the nose of the pier. The action of the vortex removes bed material from

around the base of the obstruction. The transport rate of sediment away from the base region is greater than the transport rate into the region, and, consequently, a scour hole develops. If debris is caught on the face of the pier during a flood, this can increase the turbulence and force of the vortices further accelerating the scour rates.

Contraction scour is caused when the flow area of a stream at flood stage decreases due to a natural constriction or bridge structure. Based on continuity, a decrease in flow area results in an increase in average velocity and bed shear stress through the contraction, thus increasing erosive forces and removing more bed material from the contracted reach. Expected contraction scour is important to quantify in order to determine the appropriate thickness/depth of a scour countermeasure at a bridge to offset the potential degradation related to the contraction scour phenomenon.

The total scour at a bridge is a combination of the following factors: contraction scour, pier scour, and abutment scour. The impacts of long-term aggradation and degradation (natural scour) should also be considered.

For the contraction scour computations, the D_{50} (mean size fraction of the bed material) and the K1 factor (exponent for the live-bed contraction scour equation that accounts for the mode of bed material transport) were determined. The D_{50} and D_{90} particle sizes of the sandy material in the existing channel were determined by CMJ Engineering as part of the geotechnical analysis of the boring drilled in 2012 near the bridge. The D_{50} was found to be 0.11 mm and the D_{90} was 0.33 mm based on a sample near the South White Chapel Road Bridge site at Big Bear Creek. The boring log indicates a layer of sand extending over 20 feet below the existing channel bottom to the maximum depth of the boring.

The K1 factor was computed by using a water temperature of 65° F and a D_{50} particle size of 0.11 mm and resulted in a K1 factor of 0.69. However, the critical velocity was less than the actual velocity, so live bed contraction scour was assumed.

Pier scour associated with the two channel bents consisting of 2-24" diameter piers was computed by determining four correction factors. The pier nose shape factor (K1) of the bridge was set to 1.0 based on a circular cylinder shape. The angle of attack of the flow relative to the piers was assumed to be 0 degrees (K2=1.0). The bed condition factor (K3) was set to 1.1. The D_{95} grain size was obtained from the soil testing report, and an average value of 36 mm was used by the program to compute a factor for bed material armoring (K4) of 1.0.

Abutment scour was calculated for the left and right abutment. The abutments are vertical-wall abutments so the K1 factor for the abutment scour is assumed to be 1.00. The proposed toes of the abutments are approximately at elevation 530.0.

Results of Bridge Scour Analysis

Computations for bridge scour are based on the maximum scour velocity and the depth of the 10-, 50-, 100- and 500-year storms. Tables 3 through 6 show the results of the

contraction, pier, and abutment scour analysis for the 10-, 50-, 100- and 500-year events, respectively. Contraction scour was computed using the live-bed scour equation. The pier scour was computed using the CSU scour equation, and the abutment scour was based on the Froehlich equation for the left abutment and the HIRE equation for the right abutment. Please note that the TxDOT Hydraulic Design Manual does not recommend any abutment scour equations as they tend to compute “inordinately high estimates”.

Table 3. 10-Year Computed Bridge Scour at South White Chapel Road

Contraction Scour (ft)	Left OB= 4.75'	Channel= 2.91'	Right OB= 0.00'
Pier Scour (ft)	4.80'		
Abutment Scour (ft)	Left Abutment = 20.79'		Right Abutment = 64.91'
Total Scour (ft)	Left Abutment = 25.54'		Right Abutment = 67.82'
Total Scour (ft)	Piers = 7.71'		

Table 4. 50-Year Computed Bridge Scour at South White Chapel Road

Contraction Scour (ft)	Left OB= 0.00'	Channel= 0.00'	Right OB= 1.57'
Pier Scour (ft)	4.80'		
Abutment Scour (ft)	Left Abutment = 26.16'		Right Abutment = 76.34'
Total Scour (ft)	Left Abutment = 26.16'		Right Abutment = 76.34'
Total Scour (ft)	Piers = 4.80'		

Table 5. 100-Year Computed Bridge Scour at South White Chapel Road

Contraction Scour (ft)	Left OB= 0.50'	Channel= 0.00'	Right OB= 1.51'
Pier Scour (ft)	4.95'		
Abutment Scour (ft)	Left Abutment = 28.32'		Right Abutment = 73.89'
Total Scour (ft)	Left Abutment = 28.82'		Right Abutment = 73.89'
Total Scour (ft)	Piers = 4.95'		

Table 6. 500-Year Computed Bridge Scour at South White Chapel Road

Contraction Scour (ft)	Left OB= 0.36'	Channel= 0.00'	Right OB= 1.70'
Pier Scour (ft)	4.80'		
Abutment Scour (ft)	Left Abutment = 34.46'		Right Abutment = 83.14'
Total Scour (ft)	Left Abutment = 34.82'		Right Abutment = 83.14'
Total Scour (ft)	Piers = 4.80'		

Total scour depth around the piers of the South White Chapel Road bridge at Big Bear Creek during a 10-year flood is estimated to be 7.71 feet. Although the abutment scour estimates appear to be inordinately high (as stated in the TxDOT Hydraulic Design Manual), abutment scour impacts should be taken into consideration when determining the best mitigation plan for the site. Based on the boring log data near the bridge, a layer of sand is located just below the existing channel bottom elevation. Once the sand is exposed, the scour rate will be increased.

IV. Structural Analysis

Scour countermeasure alternatives will require excavation in the vicinity of the piers during installation. The existing stability of the bridge piers needs to be assessed given the current state of channel degradation. A structural analysis was completed for the bridge piers at the South White Chapel Road Bridge over Big Bear Creek to determine the effect that the scouring in the channel has had on the structural stability of the bridge. Based on data received using GPR (Attachment D) and the 1971 plans (Attachment B) for South White Chapel Road Bridge over Big Bear Creek, the drilled shafts for the bridge were assumed to be straight shafts with the bottom of the shaft at an elevation of approximately 548.0. The ground surface was assumed to be at elevation 568.5 as shown in the most recent TxDOT data and Halff survey data. The primary analysis was performed on the columns at the bents based on vertical and lateral loads. Vertical loads included the dead load of all structural components of the bridge as well as the live load from vehicular traffic on the bridge. Lateral loads include stream flow loads caused by various storm events.

A. Structural Analysis Findings

Based on the structural analysis completed for this study, the bridge appears capable of supporting standard traffic loads with marginal risk to the stability of the columns given the current degradation of the stream channel. However, there is high risk that lateral loads caused by heavy stream flow would exceed the capacity of the columns in their current state and lead to factor of safety concerns in terms of the stability of the bridge. Future channel degradation will only aggravate the existing situation. This structural analysis finding indicates that traditional scour countermeasures alone will not address the existing stability of the bridge. Excavation in the vicinity of the bridge piers to install the scour countermeasures is not recommended without addressing the overall stability of the structure.

B. Structural Stability Alternatives

Although replacement of the entire bridge structure to meet all loading requirements and construction of appropriate channel scour countermeasures at that time would address both the current stability issues and the concerns of future degradation, alternatives to address the issues in the interim were investigated. Since stability issues are a concern under existing channel conditions, the first alternative analyzed is intended to address the structural stability of the bridge.

For this particular application at South White Chapel Road, there are several criteria/factors that must be met for any structural stability alternative considered. These include:

1. ***Constructability*** - A selected alternative should be constructible by contractors in the DFW area to minimize overall project costs. The channel under the bridge is accessible from the downstream left overbank (NE corner of the bridge). Some clearing of vegetation and small trees will be required along the bank in this area to

provide access for construction equipment and materials to the channel. This same general area could also be utilized as a staging area. There is a Trinity River Authority (TRA) sanitary sewer line and easement in this area, so coordination with TRA will be required during detailed design and construction.

2. **Cost Effective** – The existing bridge structure is over forty years old (portions most likely older) and there is a high volume of daily traffic on the two-lane bridge. At some point in the future, the entire bridge structure needs to be replaced. Alternatives to be considered should be cost effective given that the entire structure needs to be replaced in the near future.

3. **Minimum Hydraulic Impacts** – The existing 1% ACE floodplain overtops South White Chapel Road. There are also numerous homes, subdivisions, and properties along Big Bear Creek in the vicinity of the study area. Any alternative selected should not cause adverse impacts to flood elevations, discharges, and velocities in the vicinity of the bridge. In addition, any scour countermeasure alternative should not increase the potential for scour/erosion in other nearby locations.

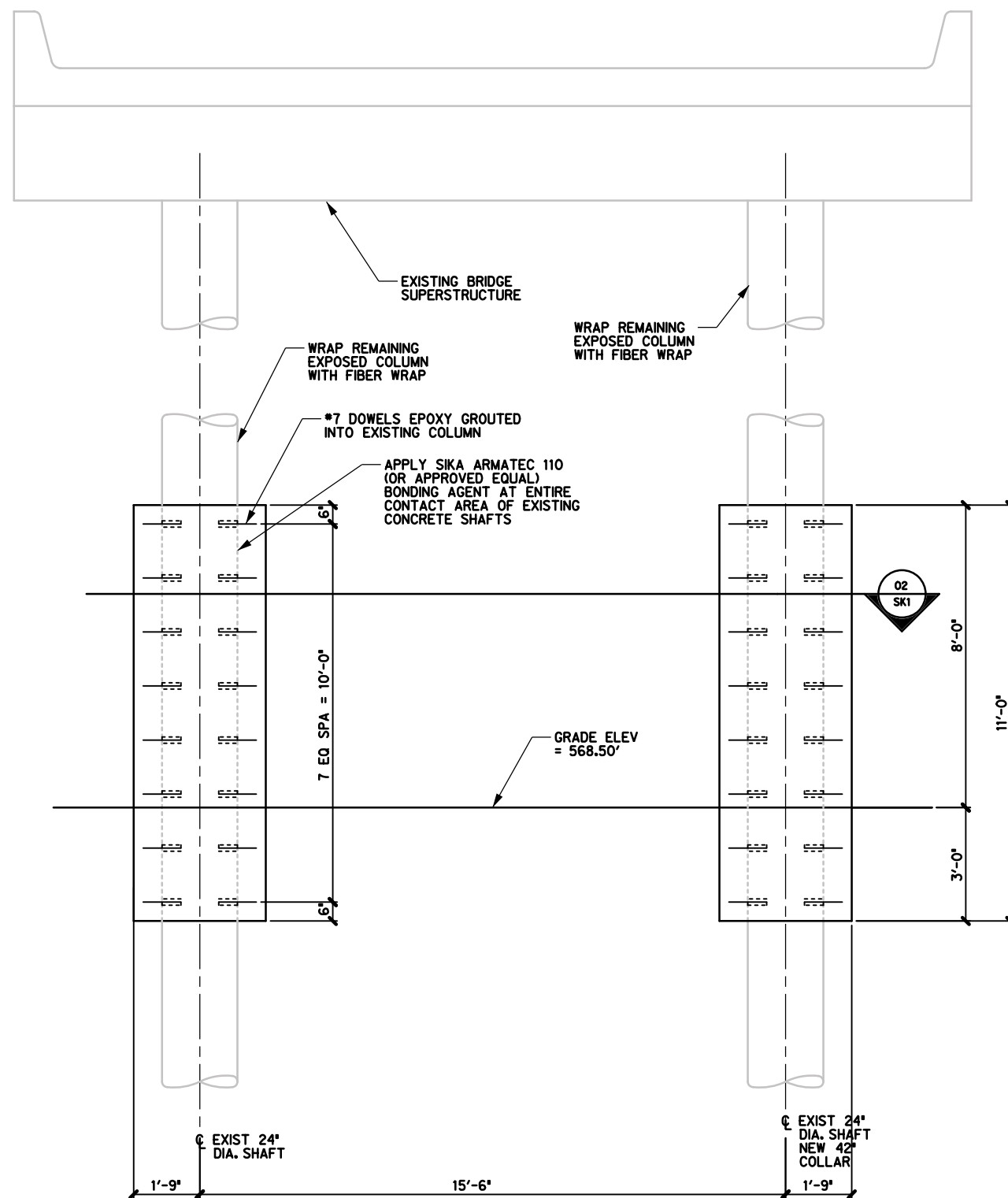
4. **Integral** – The structural stability alternative selected should be capable of being integrated with a traditional proposed scour countermeasure alternative.

Based on these initial screening criteria, two potential structural stability alternatives were identified, including individual concrete collars and collars with structural web walls. A web wall alternative would provide hydraulic benefits but was eliminated due to additional cost considerations.

Structural Stability Alternative Recommendations

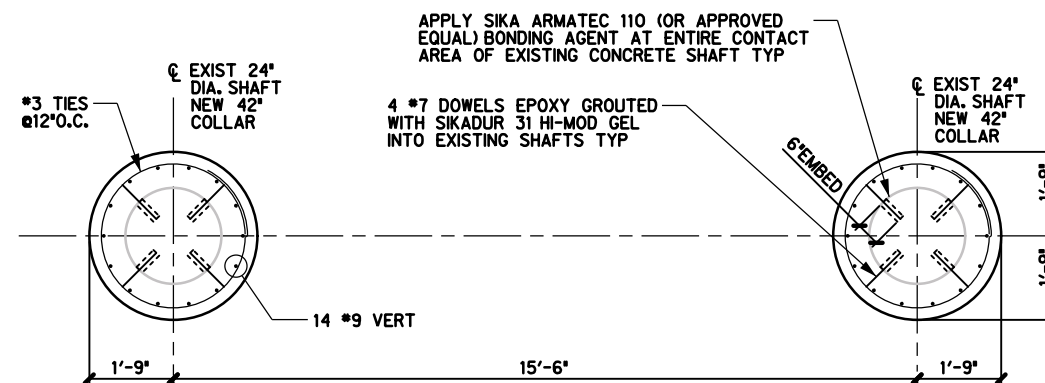
It is recommended that a reinforced concrete collar be placed around the columns at each bent to improve stability in dealing with lateral loads, and that the remaining exposed column be wrapped in fiber wrap or other similar material to provide additional stability improvements. In order to determine the size of the collars necessary for the columns, it was necessary to determine the acceptable height of the existing columns as well as how large the remaining exposed column needed to be in order to sustain the expected loads. A new lateral analysis was performed with the collar size being increased iteratively until it provided sufficient strength. It was also determined to match the collars at each bent to help eliminate construction problems or errors.

The recommended structural section for the reinforced concrete collars has a 1-foot 9-inch radius from the existing columns' center with #3 ties 12-inches on center throughout the 11-foot height of the column. The proposed collars shall be doveled into the existing columns with #7 epoxy grouted dowels. The collars shall be founded to a minimum 3-foot depth below existing grade and protected with proposed scour countermeasures to that depth. Engineering Sketch 1 shows the proposed reinforced concrete collar design.



NOTE: COLLARS SHALL BE PLACED AT EACH BENT.

01
SK1 CONCRETE COLLAR ELEVATION
SCALE = 1/2" = 1'-0"



NOTE: CONSTRUCTION SHALL LOCATE EXISTING DRILLED SHAFT REINFORCING PRIOR TO INSTALLING *7 DOWELS. EXISTING DRILLED SHAFT REINFORCING SHALL NOT BE DAMAGED.

02
SK1 CONCRETE COLLAR SECTION
SCALE = 1/2" = 1'-0"

NOT FOR CONSTRUCTION

WHITE CHAPEL BLVD BRIDGE SOUTHLAKE, TEXAS	
AVO: 28736	DATE: 11/29/12
	4000 FOSSIL CREEK BLVD FORT WORTH, TEXAS 76137-2797 TEL (817) 847-1422 FAX (817) 232-9784 TBPE FIRM #F-312

SK1

Hydraulic Impacts of Structural Countermeasures

The HEC-RAS hydraulic model (Section III.A) South White Chapel Road bridge geometry was revised to reflect the proposed structural collars and executed to evaluate the hydraulic impacts. Figure 4 shows the proposed South White Chapel Road Bridge with the proposed collars.

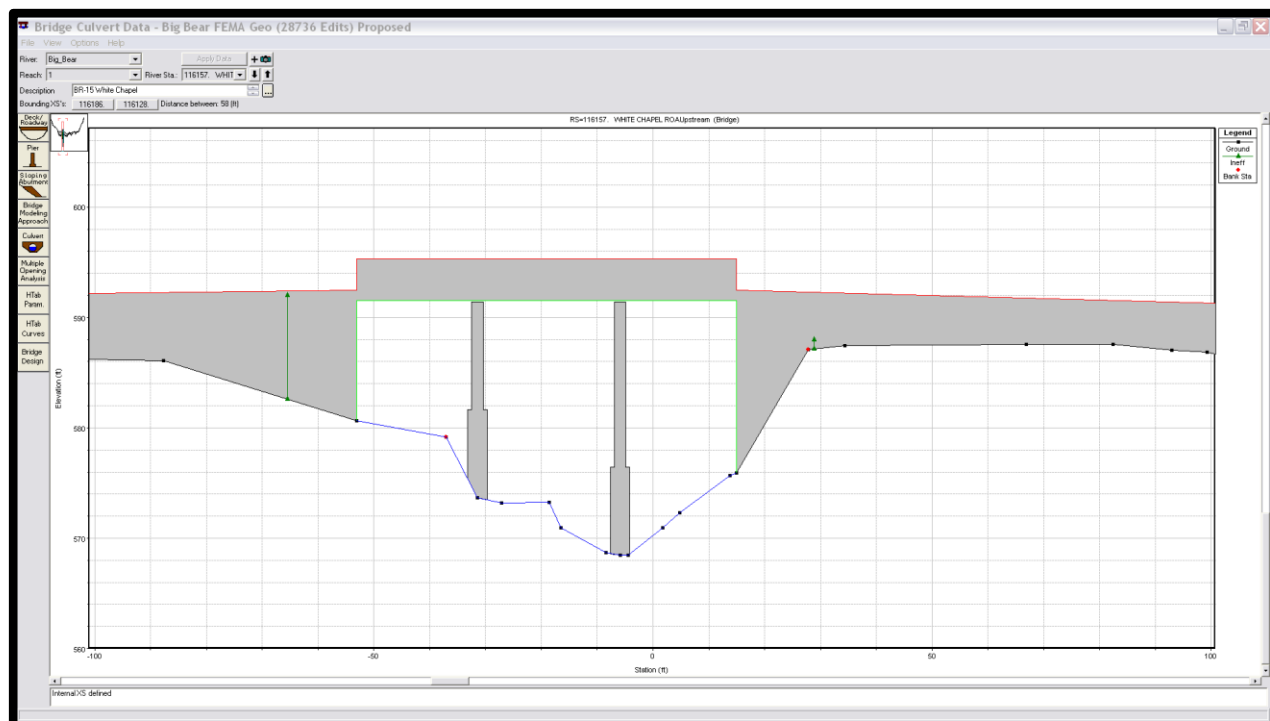


Figure 4. South White Chapel Road with Proposed Collars

Table 7 presents the hydraulic impacts of the collars on the 1% ACE flood profile upstream of South White Chapel Road.

Table 7. 1% ACE WSELs Upstream of South White Chapel Road

River Station	Existing WSEL ¹	Revised WSEL ²	Proposed WSEL ³
116186	592.54	592.34	592.35
116737 X	593.37	593.10	593.11
119599 Y	599.46	599.53	599.52
120295	601.06	601.09	601.09
121319 Z	601.84	601.86	601.86

¹ Current Effective FEMA Model HEC-RAS 4.0.1 imported

² Revised Effective FEMA Model HEC-RAS 4.0.1, with 2012 channel surveys

³ Proposed Model HEC-RAS 4.0.1, with proposed bridge modifications

The proposed concrete collar alternatives will cause a 0.01-foot rise for the 1% ACE (100-year) flood profile upstream to river station 120295. Since Big Bear Creek is a FEMA Zone AE stream with floodway, any proposed improvements within the floodway must show a 0.00' rise in the 1% ACE water surface elevation. The 0.01-foot rise can be mitigated during final design of the collars and may simply be a function of modeling accuracy.

The anticipated costs of the concrete collar construction for all four piers at the South White Chapel Road Bridge is estimated to be approximately \$24,500 as detailed with the cost estimate summary in Attachment F. Cost of excavation and backfill around the piers are excluded from this estimate and will be addressed in the selected scour countermeasure cost estimate. Depending on means and methods of the installation of the reinforced concrete collars, temporary shoring may be required. These details can be addressed during construction plan preparation which is beyond the scope of the current study.

V. Scour Countermeasure Alternatives

The proposed collars discussed in Section IV will address existing stability issues, but the collars and piers should be protected from future degradation as well. Historical data and analyses of existing and future conditions indicate that the Big Bear Creek channel in the vicinity of South White Chapel Road is actively degrading/scouring near the piers and will continue if not checked in the future. Given the age of the bridge structure, and limited available construction plans, scour countermeasure alternatives were investigated. The proposed countermeasures are only intended to mitigate the potential for future degradation in the vicinity of the bridge piers, not to re-establish channel grades and conditions that existed in the past.

Several sources were utilized to develop and size appropriate pier scour countermeasures for the application at South White Chapel Road. The *Bridge Scour and Stream Instability Countermeasures: Experience, Selection, and Design Guidance – 3rd Edition, Hydraulic Engineering Circular No. 23* was published by the Federal Highway Administration in September 2009 (Publication No. FHWA-NHI-09-112), and was used extensively in the analysis and conceptual sizing process. In addition, several other guidelines, streambank stabilization manuals, and past Halff experience were utilized.

For this particular application at South White Chapel Road, there are several criteria/factors that must be met for any alternative considered. These include:

1. **Provide a Countermeasure to Future Pier Scour and Degradation** – The alternative selected should provide protection against future pier scour and degradation at the project area. There are numerous scour countermeasure alternatives available, but only a select number will be applicable to this location along Big Bear Creek.
2. **Flexible Revetment** - Given the relatively small localized area under consideration for armoring/protection and the variable and degrading channel, a

flexible revetment is recommended rather than a rigid option such as concrete riprap. Flexible revetments allow for adjustments to distortions and local displacement of materials without complete failure of the installation. Rigid systems are more prone to undermining and subsequent failure, and are therefore less suitable for use at bridge piers. If a rigid system such as concrete riprap is used, the entire channel under the bridge should be lined and appropriate transitions and materials used upstream and downstream of the bridge to transition back to the natural channel in order to minimize erosion and undermining of the concrete.

3. **End/Toe Treatment** - The extents and treatment of the ends/toes of any selected alternative will need to be designed and constructed considering the contraction scour and long term expected degradation of the channel under South White Chapel Road Bridge. If the ends/toes of the alternative are not founded to an adequate depth, they will be undermined and result in partial or complete failure of the pier scour countermeasure.

4. **Ease of Maintenance/Inspection** – Any countermeasure alternative will need to be maintained and inspected periodically by City staff. An alternative that is relatively easy to inspect and maintain should be considered.

5. **Minimum Hydraulic Impacts** – The existing 1% ACE floodplain overtops South White Chapel Road. There are also numerous homes, subdivisions, and properties along Big Bear Creek in the vicinity of the study area. Any alternative selected should not cause adverse impacts to flood elevations, discharges, and velocities in the vicinity of the bridge. In addition, any scour countermeasure alternative should not increase the potential for scour/erosion in other nearby locations.

6. **Minimize Environmental Permitting Requirements** – Big Bear Creek is a jurisdictional water of the United States and subject to the U.S. Army Corps of Engineers Section 404 regulatory permitting process. Impacts below the ordinary highwater mark should be minimized to the extent possible. It appears that *Nationwide Permit 13 – Streambank Stabilization* and *Nationwide Permit 14 – Linear Transportation Projects* would be applicable to this project. The limits, thresholds, and general conditions of these nationwide permits should be reviewed and met (if possible) to avoid a much more comprehensive Individual Permit.

7. **Constructability** - A selected alternative should be constructible by contractors in the DFW area to minimize overall project costs. The channel under the bridge is accessible from the downstream left overbank (NE corner of the bridge). Some clearing of vegetation and small trees will be required along the bank in this area to provide access for construction equipment and materials to the channel. This same general area could also be utilized as a staging area. There is a Trinity River Authority (TRA) sanitary sewer line and easement in this area, so coordination with TRA will be required during detailed design and construction.

8. **Cost Effective** – The existing bridge structure is over forty years old (portions most likely older) and there is a high volume of daily traffic on the two-lane bridge.

At some point in the future, the entire bridge structure will most likely need to be replaced. Alternatives to be considered should be cost effective given that the entire structure may be replaced in the near future.

Based on these initial screening criteria, five potential alternatives were identified, including: rock riprap, gabion mattress (or baskets), articulated blocks, concrete riprap lining, and partially grouted riprap.

Interlocking Articulated Concrete Blocks

Articulated blocks were eliminated as the blocks typically need to be hand-placed individually to provide erosion-control capabilities and resist being dislocated and transported by the flowing water, especially with the local velocities in the vicinity of the piers. This option will tend to be more expensive than some of the other alternatives. Also, one advantage of the articulated blocks is the porous characteristics that allow for grasses and other plants to grow through the openings. The installation for this application would be under the bridge deck and not in direct sunlight, so the establishment of vegetation within the blocks may be difficult.

Concrete Riprap Lining

Given the relatively small area involved, and steep existing slopes, concrete riprap could be considered for this application. The riprap could extend from abutment toe to abutment toe and provide protection of the channel under the bridge as well as the piers. An adequate toe wall and rock riprap transition would be needed at the upstream and downstream limits of the concrete riprap to prevent undermining and connection back to the existing channel. This alternative would have no adverse impacts to the hydraulics. Concrete riprap lining could provide a long-term serviceable solution. Given the high local velocities, concrete riprap could be considered, but would need to line the entire channel section under the bridge and provide adequate toe protection and drainage to prevent undermining, settlement, and buckling. This option will be much more expensive and is most likely not practical for the remaining life span of the bridge structure.

Partially Grouted Rock Riprap

Partially grouted riprap was eliminated from consideration due to a tendency to break apart after a few years due to the forces of rushing water and the expansive soils which are common in northeast Tarrant County.

Gabion Mattress & Rock Riprap

Rock riprap and gabion mattress applications are widely used for local scour and erosion control in streams across north Texas. Both alternatives have proven and reliable track records in the local area.

Gabion mattresses are containers (wire baskets) constructed of wire mesh and filled with rocks. The containers are typically filled with four to nine inch angular rock and bound together with wire. The wire mesh allows the gabions to deform and adapt to changes in the subgrade while maintaining stability. Additionally, compared to rock riprap, less excavation of the bed is required and smaller, more economical stone can be used. The disadvantage of gabions is that maintenance is necessary to preserve the integrity of the structure. Trees and branches carried by turbulent floodwaters can damage the wire baskets by either lodging themselves in the mattress, or by pulling the wire and deforming the box configuration. The durability of the wire mesh under long term exposure to flow conditions at bridge piers is critical. It is recommended that a polyvinyl chloride (PVC) coating be used on the wire for an application at South White Chapel Road as well as the double loop tying method (not welded wire).

In designing a gabion mattress for local pier scour protection, a target factor of safety must first be determined. Figure 10.3 from HEC No. 23 (which is based on the Harris County Flood Control District methodology) was used to determine a target factor of safety of 3.3 for this project considering the type of application (bridge pier has higher factor of safety than channel bed or bank), consequence of failure, and modeling methods used to determine critical velocities and shear stress. The permissible shear stress (function of D_{50} rock size) divided by the design shear stress must equal or exceed the 3.3 target factor of safety. Based on these calculations, a D_{50} rock size of 10.5 inches is recommended for a gabion mattress application at the South White Chapel Road Bridge piers. This rock size exceeds the standard stone size used with gabion mattresses. A series of gabion baskets (3'x3'x3') could be considered in lieu of a mattress, but once again the required D_{50} rock size is larger than the standard stone size for gabion baskets. Rocks this large would need to be hand placed in the baskets to prevent damage to the wire mesh, and this will greatly increase the costs compared to standard gabion basket construction.

Based on these findings and the concern with debris and damage to the wire mesh for this application, the gabion mattress (and baskets) is not recommended as a practical alternative at South White Chapel Road Bridge.

Rock riprap is an excellent channel liner and is effective in areas of high velocity and boundary shear stress such as the Big Bear Creek channel at South White Chapel Road Bridge. The rock riprap needs to be sized to resist the tractive forces that may be encountered and needs to be well graded for optimum results. A filter/geotextile material is recommended under the rock riprap. The riprap should be buried near bridge piers and should extend up to the bed elevation so that the top of the riprap is visible to an inspector after floods. Test results have indicated that the best performance is achieved when the riprap is extended at least two times the width of the pier. The minimum riprap thickness should be three times the D_{50} rock size or the depth of contraction scour and long-term degradation, whichever is greatest.

For the South White Chapel Road Bridge, the Isbash equation from FHWA HEC No. 23 based on design channel velocities were used to determine the D_{50} rock size. In addition, the Gregory Method as published in iSWM was also used to determine the D_{50} rock size

based on the tractive forces in the channel. The velocity distribution option in HEC-RAS indicated that the highest anticipated local velocity in the vicinity of the piers is approximately 8.9 feet per second (10% ACE event) as shown in Figure 5.

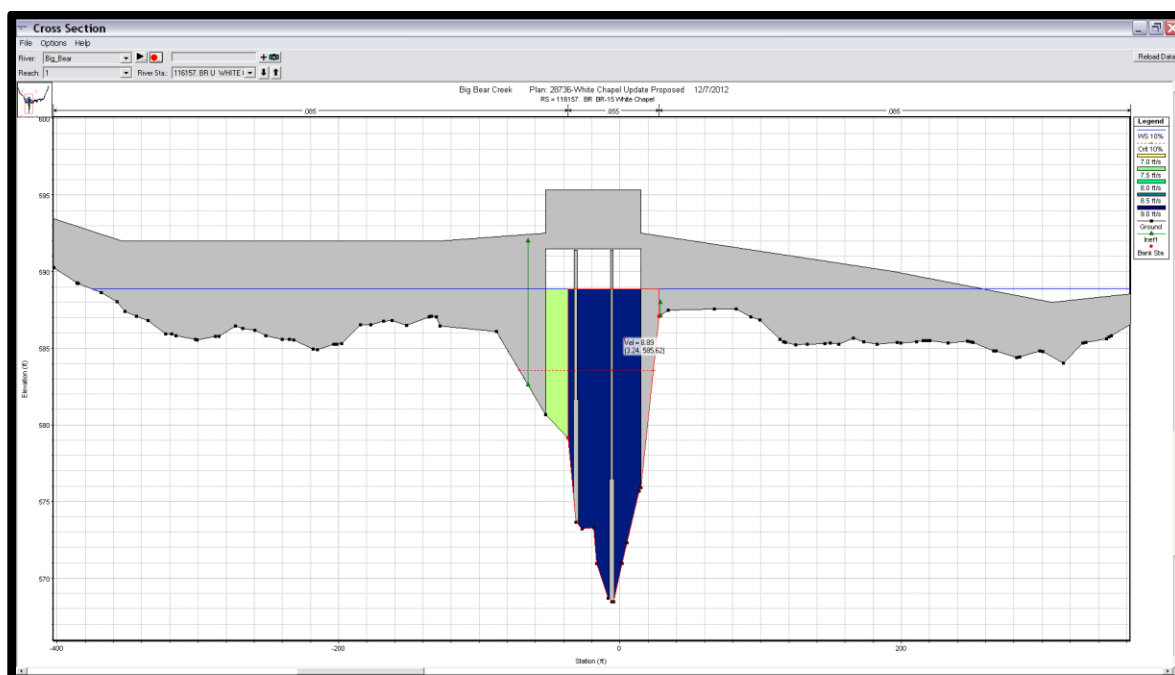


Figure 5. Big Bear Creek Channel Velocity Distribution at South White Chapel Road Bridge

FHWA HEC No. 23 recommends that the design velocity consider the shape of the pier. A factor of 1.5 (round-nose piers) was applied to the maximum local velocity to compute the design velocity of 13.4 feet per second. Using the Isbash equation, the D_{50} rock size is computed to be 13.9 inches. The Gregory method generates a D_{50} rock size of 15.3 inches. The Gregory method is based on tractive force in the channel, and not necessarily the local turbulence and shear stress at a pier. Therefore, the Isbash equation (specifically applicable to local pier scour) was selected for the final design. A unit weight of 165 pcf was assumed for the rock riprap. A D_{50} rock size of 18 inches is recommended for the design with 9 inch thick bedding. Proper gradation of both the riprap and bedding material is required for optimum results as shown in Attachment E. The riprap should be 5 feet thick and extend in a four foot radius around each pier. A geotextile filter fabric should extend from the pier to 2.67 feet from the pier. Engineering Sketch 2 shows typical details of this proposed rock riprap protection around the piers.

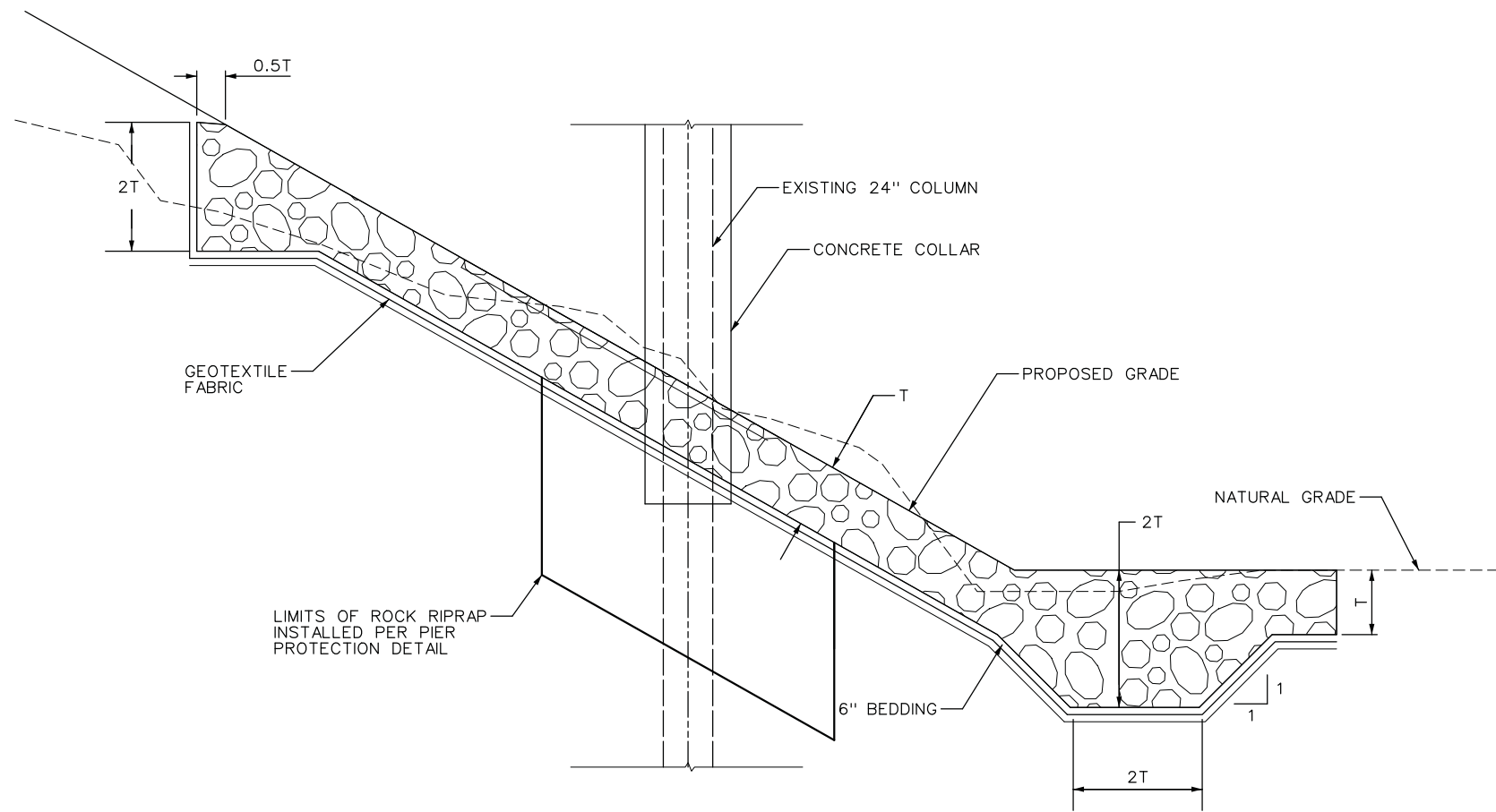
One of the concerns with the rock riprap for this application is the installation and excavation that will be required around each pier (especially the south bent piers with lower existing ground elevations). Given the pier depths and overall structural stability, an excavation of five feet with temporary shoring of the structure will most likely be required during construction of this alternative. Raising the existing channel bottom in the vicinity of the piers to limit excavation is not feasible given the tie-ins to existing grades upstream and impacts to the hydraulics.

Scour Countermeasures Recommendations

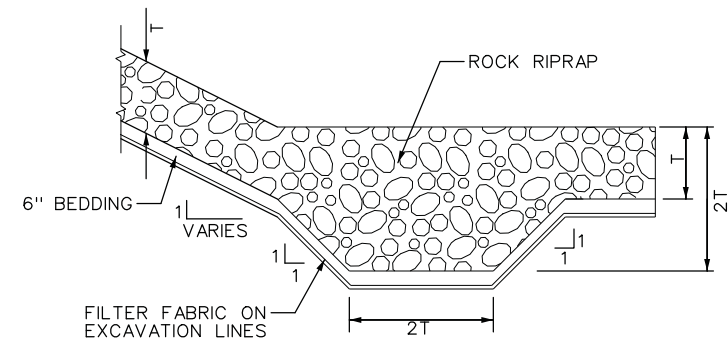
Based on the hydraulic analysis, site specific factors, and review of potential pier scour countermeasures, rock riprap (D_{50} equal to 18 inches) is recommended at the South White Chapel Road Bridge over Big Bear Creek. The rock riprap meets the general design criteria for South White Chapel Road Bridge and is a proven pier scour countermeasure in north Texas creeks and rivers.

1. The rock riprap will provide a countermeasure to future pier scour and degradation.
2. The rock riprap is a flexible revetment that can adjust to distortions and local displacement of materials without compromising the integrity of the countermeasure.
3. The rock riprap will be installed to a depth of 5 feet around the piers which exceeds the estimated contraction scour and long term degradation.
4. The rock riprap will require little maintenance and can be easily inspected after flood events.
5. The top of the rock riprap will be installed even with the existing channel bottom, so it will not have any hydraulic impacts compared to existing conditions.
6. The extents of the rock riprap under the ordinary highwater mark will remain below the threshold limits of Nationwide Permits 13 and 14. No pre-construction notification is anticipated as long as the general conditions and terms of the permits are satisfied.
7. The rock riprap countermeasure is easily constructible and rock is available from nearby quarries. Most general contractors should be able to construct the countermeasure as it does not require any specialized equipment or labor.
8. Rock riprap is the most cost effective option compared to other alternatives investigated.

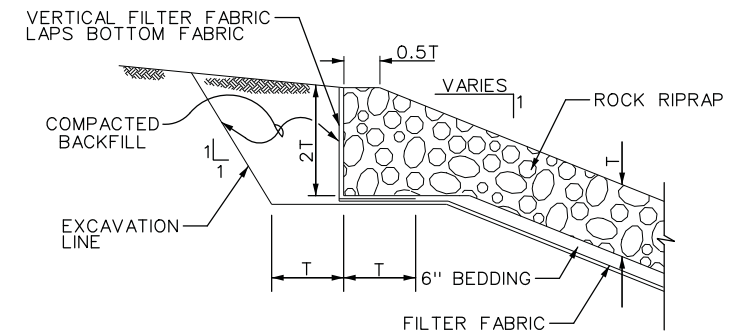
12/13/2012 4:11:40 PM ah2029 AEC_v40 I:\27000s\27400\CADD\Sheets\ENGSK2.dgn Sheet PDF_2D_MON_FW_300.plt



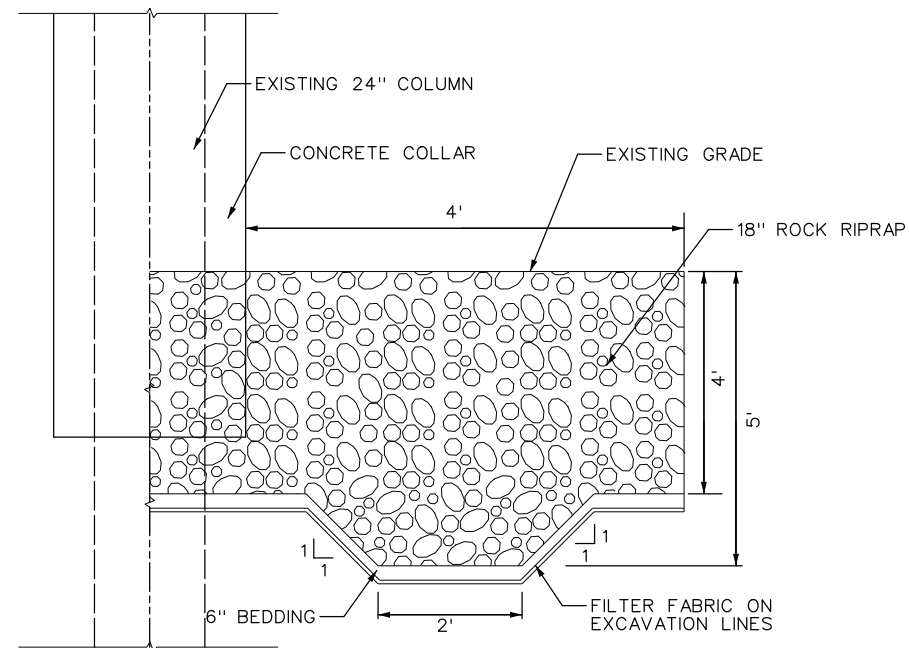
TYPICAL ROCK RIPRAP SLOPE PROTECTION SECTION
N.T.S



ROCK RIPRAP TOE OF SLOPE DETAIL
N.T.S



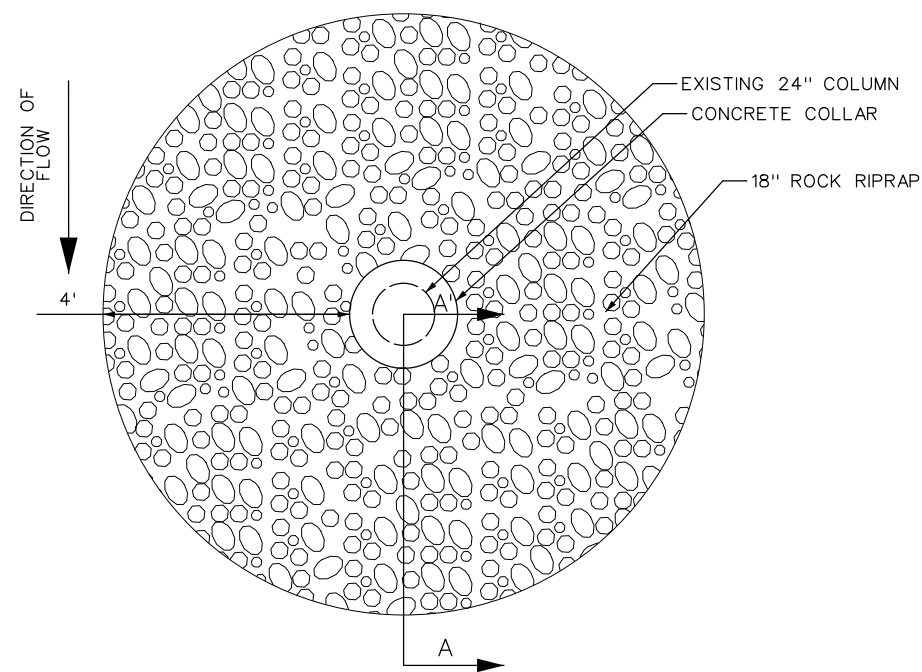
ROCK RIPRAP TOP OF BANK DETAIL
N.T.S



A-A'

ROCK RIPRAP PIER PROTECTION DETAIL

N.T.S



GENERAL NOTES:

DESIGN ALTERNATIVE A - ROCK RIPRAP PIER PROTECTION AT EACH PIER
DESIGN ALTERNATIVE B - ROCK RIPRAP PIER PROTECTION AT EACH PIER
AND TYPICAL ROCK RIPRAP SLOPE PROTECTION ON NORTH BANK

SCOUR PROTECTION DETAILS	
ALTER A & ALTER B	
WHITE CHAPEL ROAD BRIDGE	
DATE: 12/12/2012	AVO: 28736
HALFF	SK2

NOT FOR CONSTRUCTION

Alternative A

Alternative A includes the installation of D₅₀ 18" rock riprap around each of the four piers extending four feet from the edge of the proposed concrete collars and to a depth of five feet with a geotextile filter fabric as shown in Engineering Sketch 2. The anticipated cost of Alternative A rock riprap placement around all four piers at the South White Chapel Road Bridge is estimated to be approximately \$22,940 as detailed with the cost estimate summary in Attachment F.

Alternative B

Based on field surveys and a site visit, there is a sharp drop (1:1 H:V) along the north bank slope down to the channel bottom within five feet from the edge of the north piers. The local rock rip-rap protection proposed (Alternative A) will be exposed as the steep slope continues to degrade. An alternative to simply providing rock riprap protection at the north piers, would be to add some fill with rock rip-rap protection on the north bank to establish a 2:1 H:V slope from approximately elevation 575.0 to 570.0 feet. This rock rip-rap protection could then be extended across the channel bottom and connected to the south pier rock rip-rap protection. The anticipated cost of Alternative B at the South White Chapel Road Bridge is estimated to be approximately \$26,600 as detailed with the cost estimate summary in Attachment F.

VI. Conclusions and Recommendations

Based on the findings of the structural analysis completed for this study, the ultimate recommendation of this report is to replace the South White Chapel bridge due to the high risk lateral loads posed by heavy stream flows. It is beyond the scope of this report to develop a detailed engineering estimate of the replacement cost of the South White Chapel Road bridge, but it could be assumed that the replacement cost would range from \$90 to \$125 per square foot. The approximate cost range of replacement is estimated to be between \$450,000 and \$625,000.

The following recommendations are for the interim time period to remediate the stability and channel degradation issues associated with the existing structure until the bridge can be replaced. Our recommendation is to install concrete collars with rock riprap (Alternative A) as a minimum protection, or Alternative B which offers additional protection to the north stream bank.

The engineering estimate to develop plans, specifications, and construct the structural countermeasures with scour protection Alternative A is \$117,000 as shown in Attachment F. The engineering estimate to develop plans, specifications, and construct the structural countermeasures with scour protection Alternative B is \$121,000 as shown in Attachment F.

The alternatives and cost estimates provided in this report are based on conceptual level plans and are subject to change during the detailed design and construction phase of the project.

References

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- Federal Emergency Management Agency. September 2009. Flood Insurance Study for Tarrant County and Incorporated Areas, Texas.
- Federal Highway Administration. March 2001. Hydraulic Engineering Circular No. 20. Stream Stability at Highway Structures – 3rd Edition. Publication No. FHWA-NHI-01-002.
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- Halff Associates, Inc. 2005. Tarrant County FIS Re-Study: Big Bear Creek. Fort Worth, Texas.
- Halff Associates, Inc. September 2007. Bear Creek Future Urbanized Conditions. Fort Worth, Texas.
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- Halff Associates, Inc. June 1998. Streambank Stabilization Manual for the Cities of Plano, Garland, McKinney, and Allen. Dallas, Texas.
- North Central Texas Council of Governments. March 2006. Integrated Storm Water Management (iSWM) Design Manual.
- Texas Department of Transportation. March 2009. Hydraulic Design Manual, Austin, Texas.
- U.S. Army Corps of Engineers, Hydrologic Engineering Center. HEC-RAS River Analysis System, Davis, California.
- U.S. Army Engineer Research and Development Center. 2000. Gabions for Streambank Erosion Control – EMRR Technical Notes Collection (ERCD TN-EMRRP-SR-22). Vicksburg, Mississippi.

Attachment A



Channel Cross-Section Measurements Record

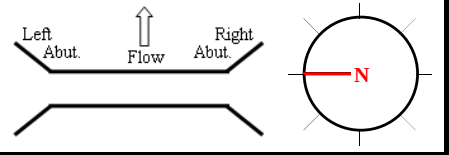
District: 02 County: 220 Cont-Sec: LL00 -20 Structure: 001 Route: South Whites Chapel Road

Feature Crossed: Big Bear Creek

If measurements were taken with any device other than drop line or tape measure, please describe method in comment section.

Reference Features:

- | | | | |
|-------------------|-------------------|------------------|-------------------|
| A. Top of Railing | B. Top of Deck | C. Top of Curb | D. Top of Parapet |
| E. Sidewalk | F. Top of Cap | G. Water Surface | H. Channel |
| I. Rigid Rip-Rap | J. Rubble Rip-Rap | K. | L. |



Bent #	Notes (Item 44)	Total Horiz. Dist.	TxDOT				TxDOT				TxDOT				TxDOT			
			Company Name				Company Name				Company Name				Company Name			
			Date: 10/14/1991				Date: 12/9/1993				Date: 7/25/2008				Date: 12/9/2011			
			☒ Upstream ☐ Downstream				☒ Upstream ☐ Downstream				☒ Upstream ☐ Downstream				☒ Upstream ☐ Downstream			
			Distance from Last Bent	Top Ref	Bot. Ref	Vertical Distance	Distance from Last Bent	Top Ref	Bot. Ref	Vertical Distance	Distance from Last Bent	Top Ref	Bot. Ref	Vertical Distance	Distance from Last Bent	Top Ref	Bot. Ref	Vertical Distance
1	North Abutment	0	0	D	H	13	0	D	H	13	0	D	H	14	0	D	H	14
		13	13	D	H	14	13	D	H	16	13	D	H	16	13	D	H	16
2	1st Interior Bent	26	26	D	H	16	26	D	H	18	26	D	H	18	26	D	H	19
		39	13	D	H	18	13	D	H	19	13	D	H	21	13	D	H	22
3	2ndIntBtN-ClCh	52	26	D	H	19	26	D	H	20	26	D	H	24	26	D	H	24
		65	13	D	H	16	13	D	H	16	13	D	H	19	13	D	H	19
4	South Abutment	78	26	D	H	13	26	D	H	13	26	D	H	14	26	D	H	14

Company Name: TxDOT Signature: _____ Date: 10/14/1991

Comments:
Channel material appears to be erodible.

Company Name: TxDOT Signature: _____ Date: 12/9/1993

Comments:
Channel material appears to be erodible.

Some debris in channel.

Company Name: TxDOT Signature: _____ Date: 7/25/2008

Comments:
Channel material appears to be erodible.

Two large trees and debris in channel.

Unknown foundation depth and founding material.

Company Name: TxDOT Signature: _____ Date: 12/9/2011

Comments:

Channel material appears to be erodible.

Unknown foundation depth and founding material.

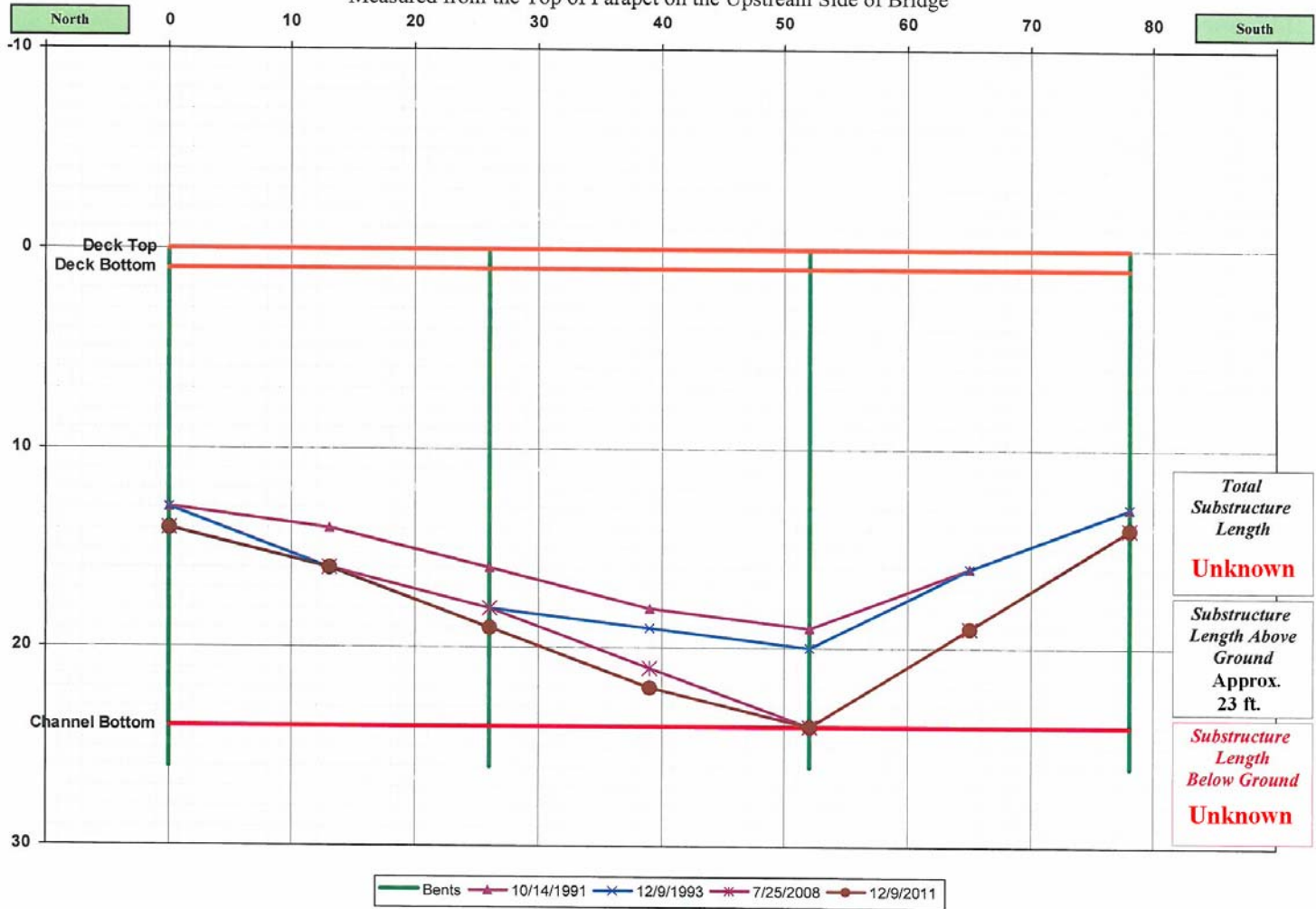
Channel scour and erosion have exposed approximately 5 feet of drilled shaft.



Channel Cross-Section Sketch

District 02 County 220 Cont-Sec LL00-20 Structure 001 Route South Whites Chapel Road
Feature Xed: Big Bear Creek

Measured from the Top of Parapet on the Upstream Side of Bridge





Texas Department of Transportation

P.O. BOX 6868 • FORT WORTH, TEXAS 76115-0868 • (817) 370-6500

December 15, 2011

CONTACT: Bridge Inspection

Bridge Structure at South Whites Chapel Road over Big Bear Creek
NBI Number: 02-220-LL00-20-001

Mr. Bob Price, P.E.
Director of Public Works
City of Southlake
1400 Main Street / Suite 320
Southlake, Texas 76092

CERTIFIED MAIL

9171 9690 0935 00081282 39

Dear Mr. Price:

This letter is in follow-up of our telephone conversation December 9, 2011 and of your meeting with TxDOT bridge inspectors Mark Burwell and Eddie Armendariz at the bridge site on December 15, 2011 concerning the channel degradation over the last several years. It appears that there has been an increase in the length of exposed column/drilled shafts, at the 1st interior bent from the South, of approximately 4 feet since circa 1991. The unknown foundation depth, the erodible nature of the sandy channel material, the general hydraulic characteristics of the stream (including channel velocity during flood conditions), and the increase in the length of exposed column/drilled shaft over the last several years, leads me to conclude that this condition constitutes a public safety situation. It is my opinion that the column/drilled shaft portion of the substructure needs scour countermeasures (i.e. rock riprap, etc.) in order to help stabilize the channel bottom and help prevent further erosion.

The lack of sufficient countermeasures being put in place could lead to a recommendation that the structure be closed to traffic if the situation worsens. In the interest of public safety, I recommend that scour mitigation measures be put in place in an expeditious manner.

If you have any questions, please contact me at 817-370-6766.

Sincerely,


Taylor Buckner, P.E.
Bridge Inspection Engineer
Fort Worth District

City of Southlake

DEC 19 2011

Dept. of Public Works

THE TEXAS PLAN

REDUCE CONGESTION • ENHANCE SAFETY • EXPAND ECONOMIC OPPORTUNITY • IMPROVE AIR QUALITY
PRESERVE THE VALUE OF TRANSPORTATION ASSETS

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Attachment B

PROJECT Nº	SHEET Nº	TOTAL SHEETS
3016	1	3

No Scale

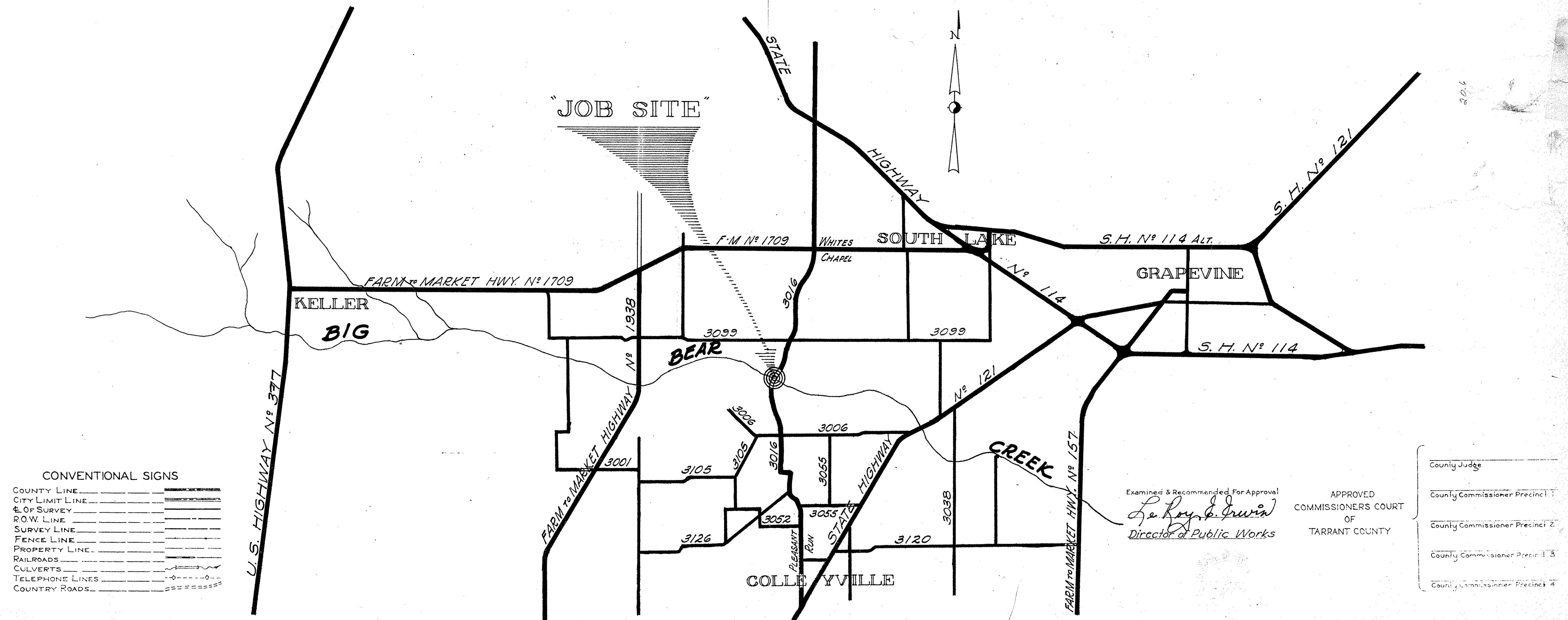
INDEX OF SHEETS

Nº	
1	TITLE SHEET
2	LAYOUT SHEET
3	F.S.-8-24-25-STANDARD

TARRANT COUNTY HIGHWAY DEPARTMENT

PLANS FOR PROPOSED BRIDGE OVER BIG BEAR CREEK ON PLEASANT RUN WHITE CHAPEL ROAD CO.PROJECT NO.3016

Designed	1971	HLP
Traced	1971	HLP
Checked	1971	HLP

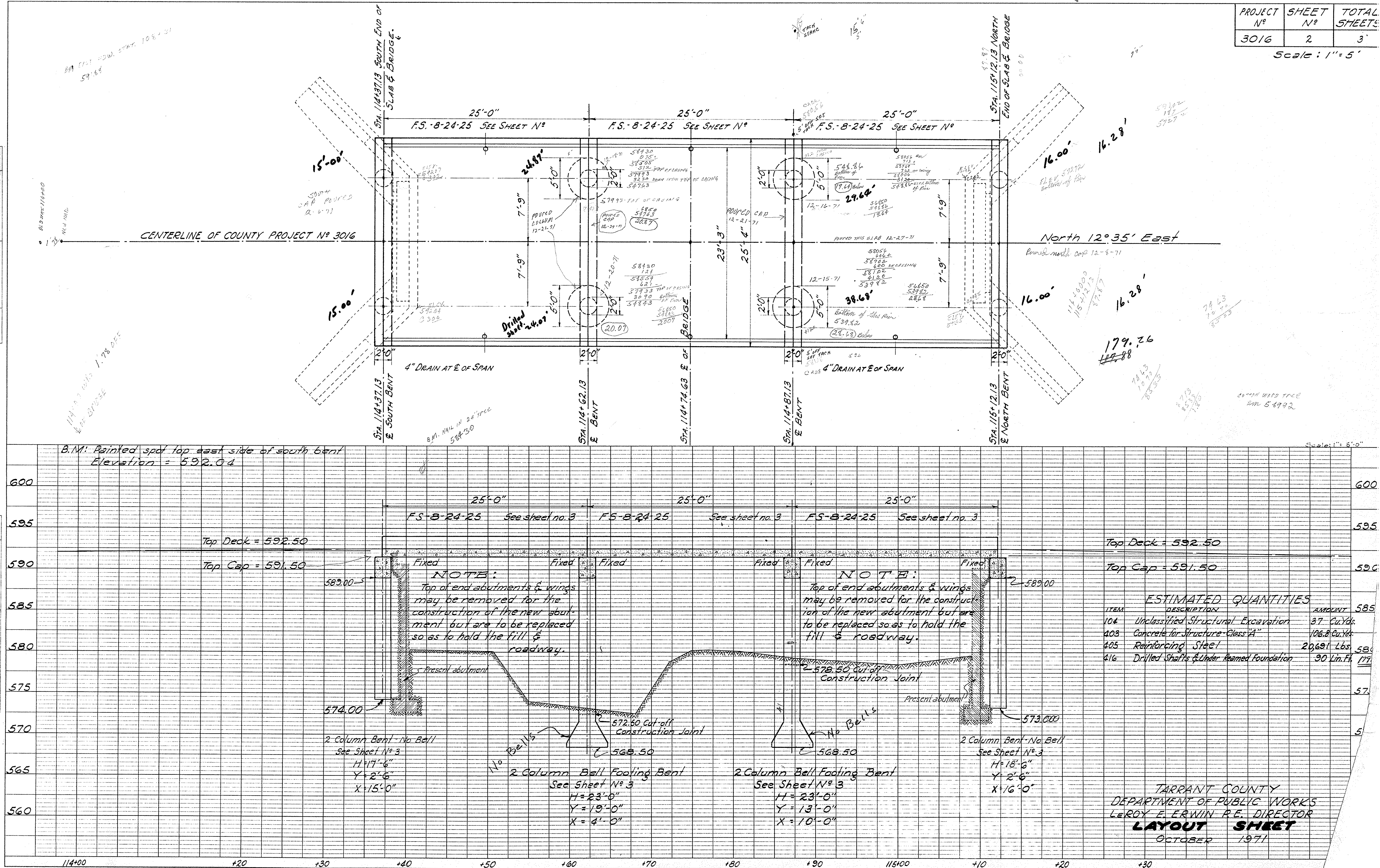


PROJECT Nº	SHEET Nº	TOTAL SHEETS
3016	2	3

Scale: 1" = 5'

DATE	9-71
BY	MARIN
SURVEYED	ALIGNED CHECKED
NOTE BOOK	RT. OF WAY CHECKED
PLAN	NO

DATE	9-71
BY	MARIN
SURVEYED	GRADED CHECKED
NOTE BOOK	RT. OF WAY CHECKED
PROFILE	NO



PROJECT Nº	SHEET Nº	TOTAL SHEETS
3016	3	3

ESTIMATED QUANTITIES ONE SLAB		
Item	Unit	Quantity
Class A Concrete	Cu. Yd.	25.8 ^{ok}
Reinforcing Steel	Lbs.	5227

ESTIMATED QUANTITIES ONE ~ 3 OR 4 PILE BENT CAP		
Item	Unit	Quantity
Class A Concrete	Cu.Yd.	4.8 [±]
Reinforcing Steel	Lbs.	746

ESTIMATED QUANTITIES						
ONE SPREAD FOOTING BENT			ONE BELL FOOTING BENT			
H	Class A Concrete Cu. Yd.	Reinf. Steel Lbs.	Y	Class A Concrete Cu. Yd.	Reinf. Steel Lbs.	Bell Footings Cu. Yd.
14'	10.7	1613	5'	5.4	1166	2.0
15'	10.9	1634	6'	5.6	1187	
16'	11.2	1655	7'	5.8	1208	
17'	11.4	1676	8'	6.1	1229	
18'	11.6	1697	9'	6.3	1250	
19'	11.9	1718	10'	6.5	1271	
20'	12.1	1739	11'	6.8	1292	
21'	12.3	1760	12'	7.0	1313	
22'	12.6	1781	13'	7.2	1334	
23'	12.8	1802	14'	7.5	1355	
24'	13.0	1824	15'	7.7	1376	
25'	13.3	1845	19'	8.6	1460	

NOTE: For dimensions "H" (Bent Height) and "X" (Drilled Shafts) and "Y" see Bridge Layout sheets.
"Drilled Shafts" shall be paid for by the linear foot complete in place. "Bell Footings" shall be paid for by the cubic yard complete in place.

GENERAL NOTES:-

Design: 2 lanes, H15-44 loading according to A.A.S.H.O. Specifications and T.H.D. Supplement #1 except moment distributed according to U. of Illinois experiment Station Bulletin # 340.

Dimensions relating to reinforcing steel are to centers of bars.

Average pile loads for 3 pile bents:

$$\text{Abutment Bent} = 20.8 \text{ T/pile}$$

Interior Bent = 29.5 T/pile

Average footing pressures:

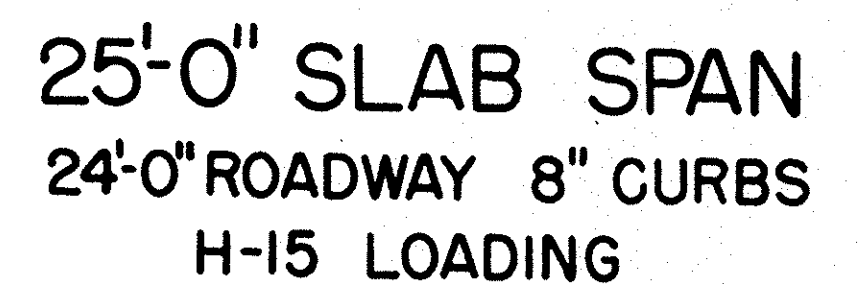
Spread Footing = 2.1 T/m^2

Bell Footing = 2.6 T/D'

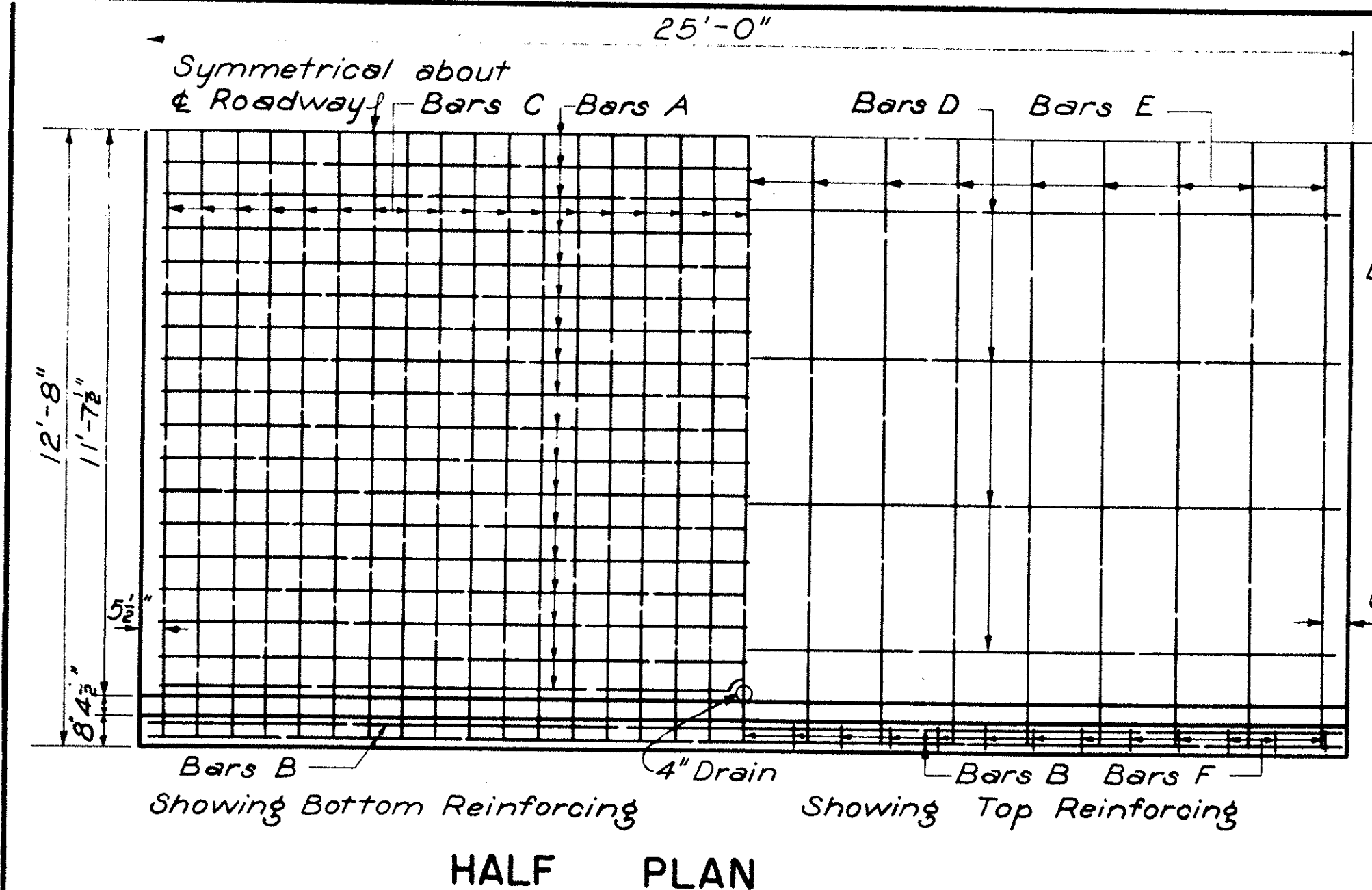
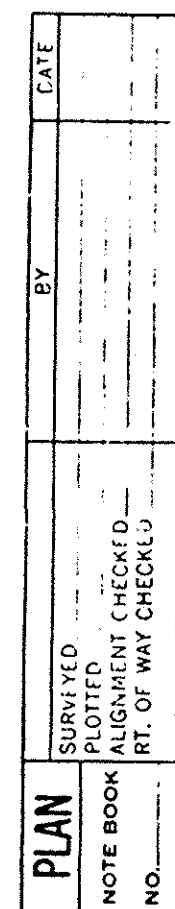
Average Pile Loads for 4 Pile Bents (Timber)

Abutment Bent = 15.5 Tons.

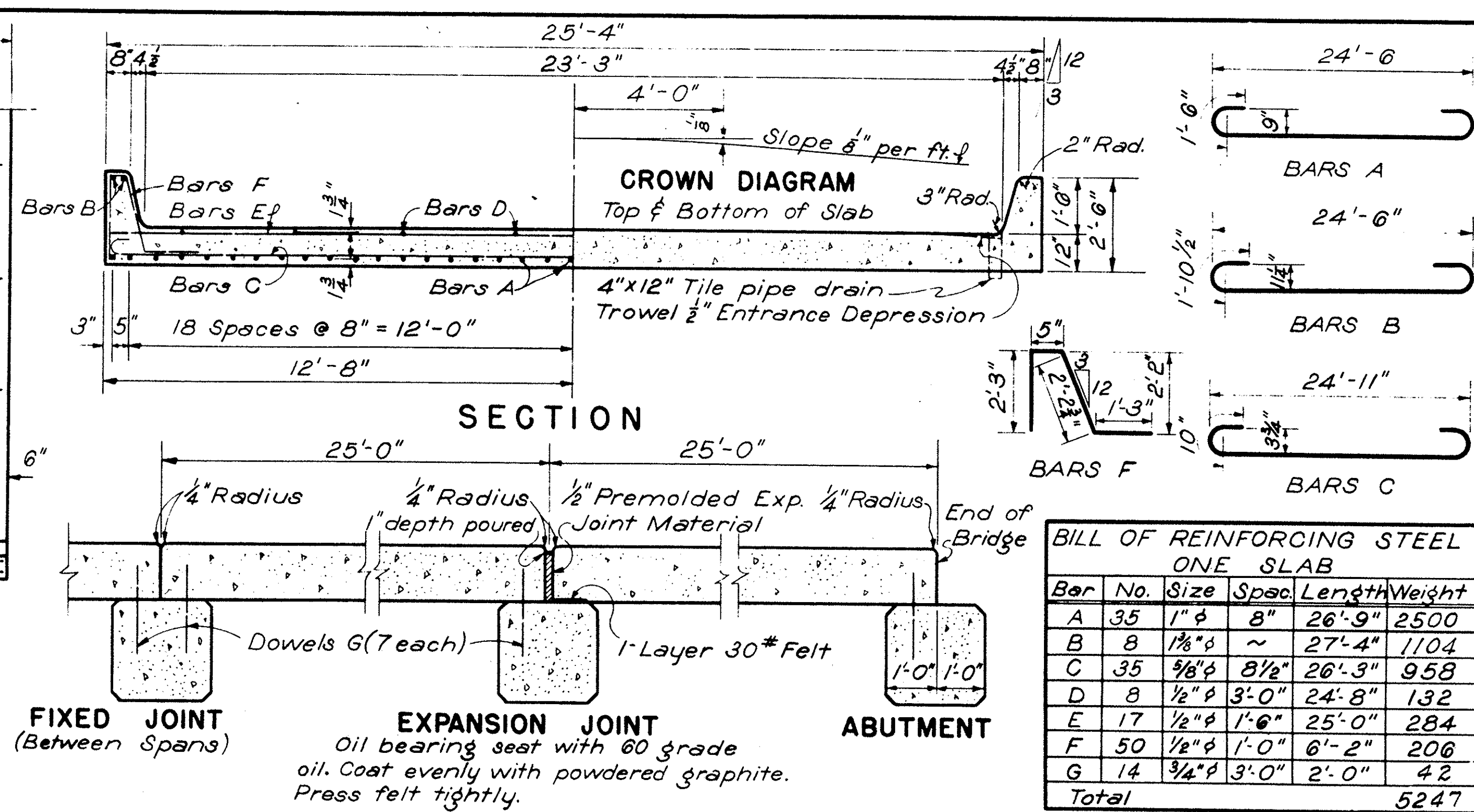
Interior Bent = 22.0 Tons.



FS-8-24-25



HALF PLAN



SECTION

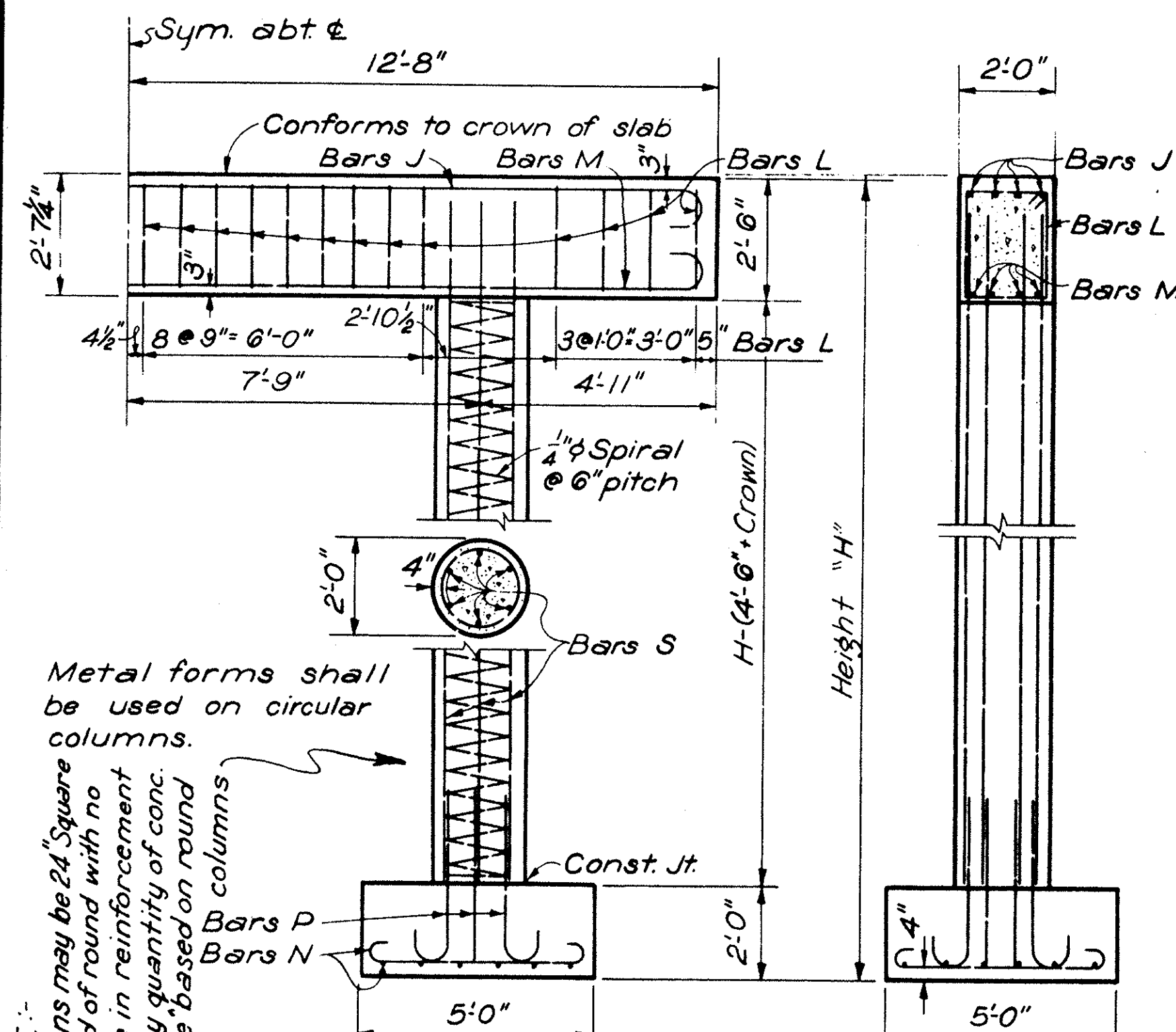
FIXED JOINT
(Between Spans)

EXPANSION JOINT

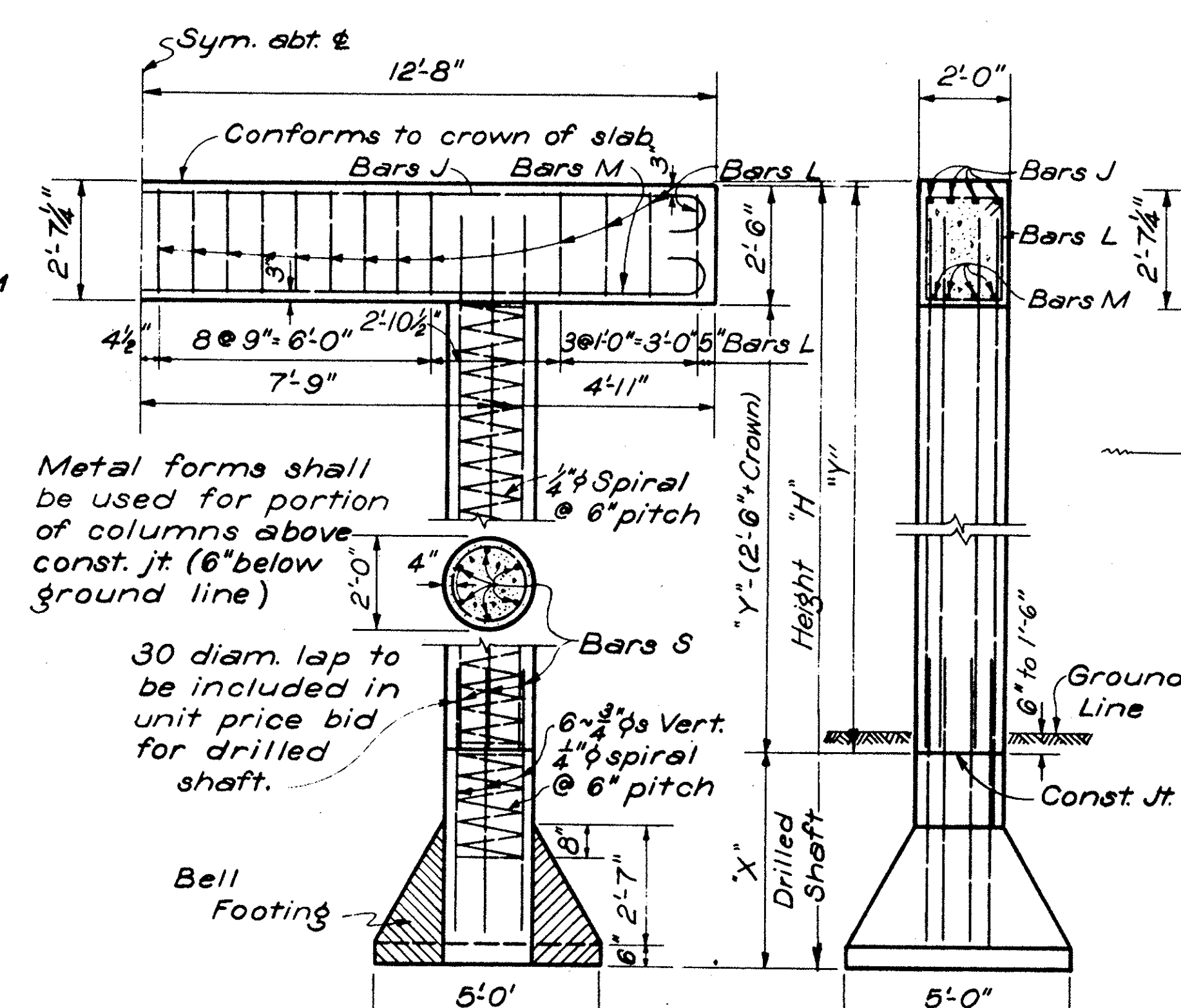
Oil bearing seat with 60 grade oil. Coat evenly with powdered graphite. Press felt tightly.

ABUTMENT

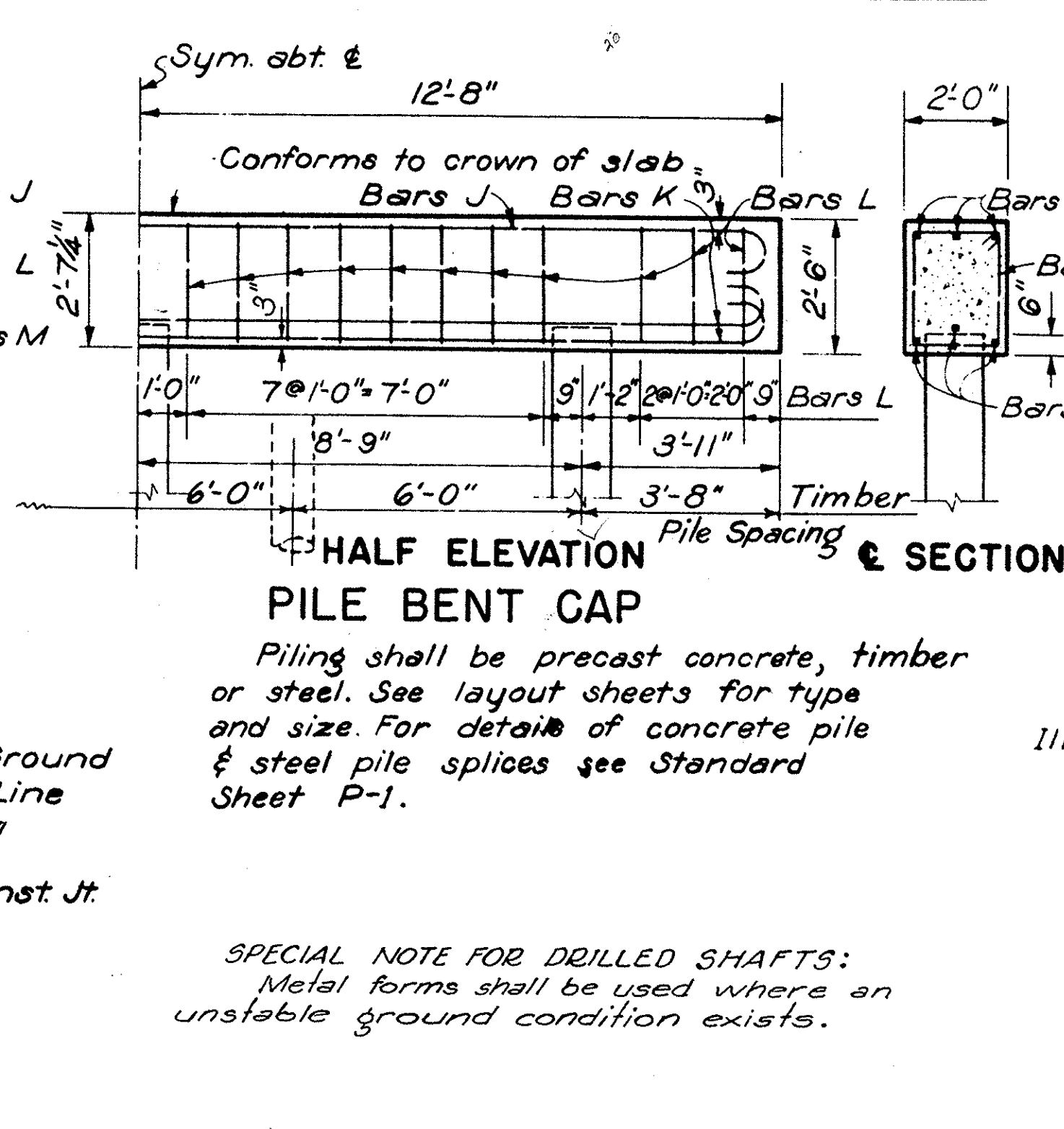
BILL OF REINFORCING STEEL					
ONE SLAB					
Bar	No.	Size	Spac.	Length	Weight
A	35	1" ϕ	8"	26'-9"	2500
B	8	1 1/8" ϕ	~	27'-4"	1104
C	35	9/8" ϕ	8 1/2"	26'-3"	958
D	8	1 1/2" ϕ	3'-0"	24'-8"	132
E	17	1/2" ϕ	1'-6"	25'-0"	284
F	50	1/2" ϕ	1'-0"	6'-2"	206
G	14	3/4" ϕ	3'-0"	2'-0"	42
Total					5247



HALF ELEVATION
SPREAD FOOTING BENT



BELL FOOTING BENT



HALF ELEVATION *Pile Spacing* SECTION
PILE BENT CAP

Piling shall be precast concrete, timber or steel. See layout sheets for type and size. For details of concrete pile & steel pile splices see Standard Sheet P-1.

SPECIAL NOTE FOR DRILLED SHAFTS:
Metal forms shall be used where an
unstable ground condition exists.

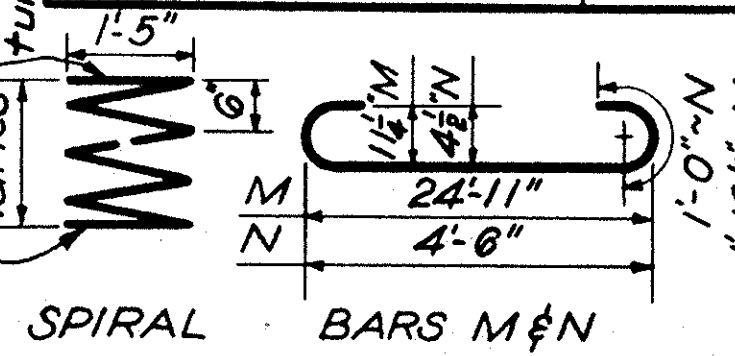
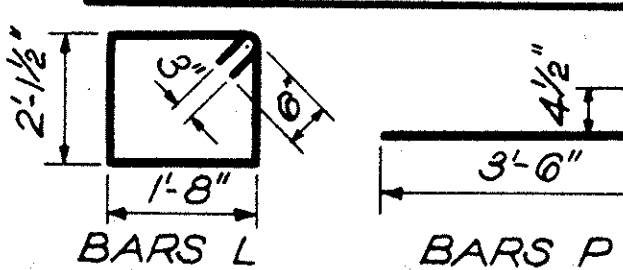
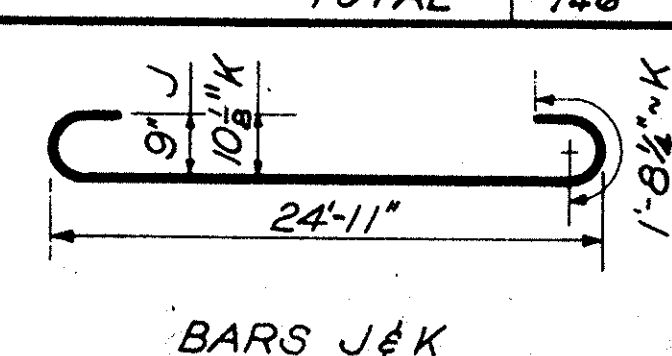
CONSTANT REINF. STEEL					
Bar	No.	Size	Spa.	Length	Weight
J	4	1 $\frac{1}{8}$ " ϕ	6"	27'-2"	368
M	4	1 $\frac{3}{8}$ " ϕ	6"	27'-9"	561
L	26	$\frac{1}{2}$ " ϕ	9' $\frac{11}{2}$ "	8'-7"	149
N	24	$\frac{3}{4}$ " ϕ	9"	6'-2"	222
P	12	$\frac{3}{4}$ " ϕ	~	4'-4"	78
TOTAL					1378

H	REINFORCING		STEEL		Total Weight
	2 [#] 3/4" Bars S	Length Weight	2 [#] 4" Spirals	Length Weight	
14	11' 4"	204	9'	31	235
15	12' 4"	222	10' 3"	34	256
16	13' 4"	240	11'	37	277
17	14' 4"	258	12'	40	298
18	15' 4"	276	13'	43	319
19	16' 4"	294	13 9/16'	46	340
20	17' 4"	312	14 8/16'	49	361
21	18' 4"	330	15'	52	382
22	19' 4"	348	16 8/16'	55	403
23	20' 4"	366	17' 5/16'	58	424
24	21' 4"	385	18'	61	446
25	22' 4"	403	19 3/16'	64	467

CONSTANT REINF. STEEL				
Bar No.	Size	Sps.	Length	Weight
J 4	1 $\frac{1}{8}$ " ϕ	6"	27'-2"	368
M 4	1 $\frac{3}{8}$ " ϕ	"	27'-9"	561
L 20	$\frac{1}{2}$ " ϕ	9" ϕ 12"	8'-7"	149
TOTAL				1078

VARIABLE REINFORCING STEEL					
Y	12- $\frac{3}{4}$ " Bars S		2- $\frac{1}{2}$ " Spirals		Total Weight
	Length	Weight	Length	Weight	
5'	4'-4"	78	31'	10	88
6'	5'-4"	96	40'	13	109
7'	6'-4"	114	49'	16	130
8'	7'-4"	132	58'	19	151
9'	8'-4"	150	67'	22	172
10'	9'-4"	168	76'	25	193
11'	10'-4"	186	85'	28	214
12'	11'-4"	204	94'	31	235
13'	12'-4"	222	103'	34	256
14'	13'-4"	240	112'	37	277
15'	14'-4"	258	121'	40	298
15'	18'-4"	330	157'	52	382

PILE BENT CAP					
REINFORCING STEEL					
Bar	No.	Size	Spac.	Length	Weight
J	3	1 1/8"φ	9"	27'-2"	276
K	3	1 1/8"φ	~	27'-5"	344
L	22	1/2"φ	12"	8'-7"	126
TOTAL					746



Varies! One complete

Attachment C

April 19, 2012

Halff Associates, Inc.
4000 Fossil Creek Boulevard
Fort Worth, Texas 76137

Attn: Mr. Andrew Ickert, P.E., CFM

**RE: REPORT 117-12-151 (Revised)
BRIDGE EVALUATION
WHITE CHAPEL BOULEVARD AT BIG BEAR CREEK
SOUTHLAKE, TEXAS**

Dear Mr. Ickert:

Introduction

CMJ Engineering, Inc. is pleased to present herein the results of a geotechnical field investigation for the above referenced project. This study was performed in general accordance with our Proposal No. 12-3715 (Revised) dated March 23, 2012. The geotechnical services were authorized on March 26, 2012 by Mr. Andrew Ickert, P.E., CFM of Halff Associates, Inc.

The project, as currently planned, consists of investigating soil/rock conditions at an existing bridge structure. The structure is at least 40 years old. Geotechnical comments concerning subsurface conditions have been requested to assist the project civil engineer only.

Subsurface materials at the bridge site were explored by one vertical soil boring drilled to a depth of 40 feet. The boring was drilled using continuous flight augers at the approximate location shown on the Plan of Boring, Plate A.1. The boring log is included on Plate A.4 and keys to classifications and symbols used on the logs are provided on Plates A.2 and A.3. Particle size analysis test results are provided on Plates A.5 and A.6. Detailed descriptions of the field and laboratory procedures are on file and available upon request.

Subsurface Conditions

Specific types and depths of subsurface strata encountered at the boring location are shown on the attached boring log. The generalized subsurface stratigraphy encountered in the boring are discussed below. Note that depths on the boring refer to the depth from the existing grade or ground surface present at the time of the investigation, and the boundaries between the various soil types are approximate.

Fill materials consisting of reddish brown and brown clayey sands and sandy clays with occasional gravel are present at the surface and extend to a depth of 7 feet. Natural soils encountered consist of dark reddish brown, reddish brown, and gray sandy clays, clayey sands, clayey silty sands, and sands. Iron stains are noted below 13 feet. These soils generally classify as SC, SM and SP according to the USCS classification system. Select reaches classify as CL.

Tested liquid limit and plasticity indices were 29 to 32 and 16 to 18, respectively. Unconfined compressive strength values of the soils varied from 1,500 to 1,930 pounds per square foot (psf). These values likely reflect more granular materials, indicating higher in-situ strengths than the tested values. Moisture contents varied from 9 to 23 percent and insitu dry density of the soils varied from 95 to 111 pounds per cubic foot (pcf).

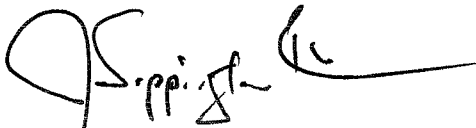
The boring was advanced using continuous flight augers to observe the possibility of ground water during drilling. Ground-water seepage was noted at a depth of 13 feet during drilling. A water level reading of 13 feet was observed at drilling completion. While it is not possible to accurately predict the magnitude of subsurface water fluctuation that might occur based upon these short-term observations, it should be recognized that ground water conditions will vary with fluctuations in rainfall. Seepage levels near the observed levels should be anticipated throughout the year. Fluctuations of the ground water level can occur due to seasonal variations in the amount of rainfall; site topography and runoff; hydraulic conductivity of soil strata; and other factors not evident at the time the boring was performed.

Closure

CMJ Engineering, Inc. appreciates the opportunity to perform this investigation for Halff Associates, Inc. Should questions arise on information contained herein, please contact us. The following plates are attached and complete this letter.

- Plate A.1 – Plan of Boring
- Plate A.2 – Unified Soil Classification System
- Plate A.3 – Key to Classification and Symbols
- Plate A.4 – Log of Boring
- Plates A.5 - A.6 – Particle Size Distribution Reports

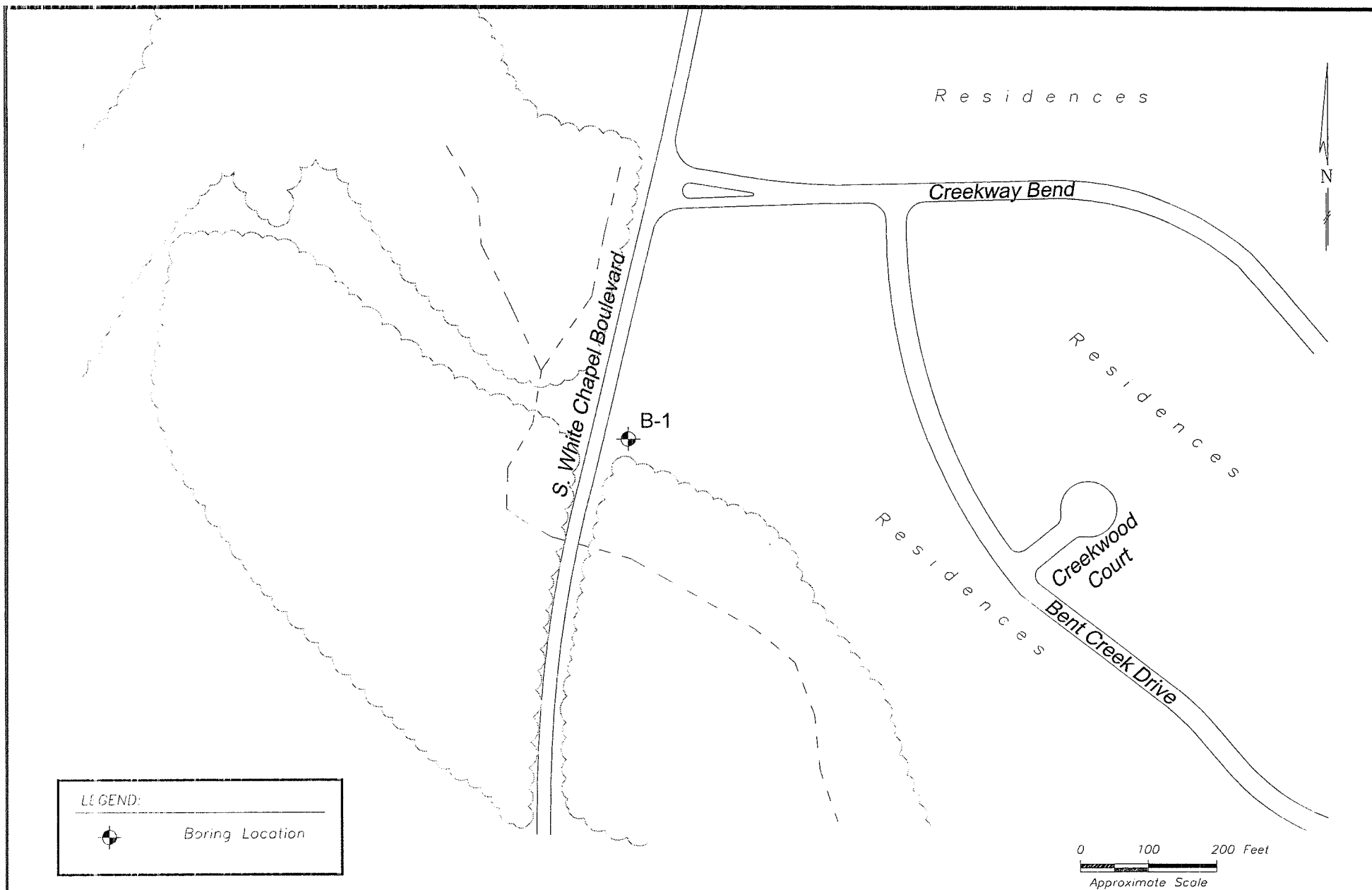
Respectfully submitted,
CMJ ENGINEERING, INC.
TEXAS FIRM REGISTRATION NO. F-9177



James P. Sappington, IV, P.E.
Project Engineer

copies submitted

- (3) Mr. Andrew Ickert, P.E., CFM; Halff Associates, Inc. (mail)
- (1) Mr. Andrew Ickert, P.E., CFM; Halff Associates, Inc. (email)



PLAN OF BORING

BRIDGE EVALUATION
WHITE CHAPEL BOULEVARD AT BIG BEAR CREEK
SOUTHLAKE, TEXAS



CMJ PROJECT NO. 117-12-151

PLATE
A.1

Major Divisions			Grp Sym.	Typical Names	Laboratory Classification Criteria		
Coarse-grained soils (more than half of the material is larger than No. 200 sieve size)					Determine percentages of sand and gravel from grain size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows: Less than 5 percent.....GW, GP, SW, SP More than 12 percent.....GM, GC, SM, SC 5 to 12 percent.....Borderline cases requiring dual symbols		
					$C_u = \frac{D_{60}}{D_{10}}$ greater than 4: $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and 3		
					Not meeting all gradation requirements for GW		
					Liquid and Plastic limits below "A" line or P.I. greater than 4		Liquid and plastic limits plotting in hatched zone between 4 and 7 are borderline cases requiring use of dual symbols
					Liquid and Plastic limits above "A" line with P.I. greater than 7		
					$C_u = \frac{D_{60}}{D_{10}}$ greater than 6: $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and 3		
					Not meeting all gradation requirements for SW		
					Liquid and Plastic limits below "A" line or P.I. less than 4		Liquid and plastic limits plotting between 4 and 7 are borderline cases requiring use of dual symbols
					Liquid and Plastic limits above "A" line with P.I. greater than 7		
					Fine-grained soils (More than half of material is smaller than No. 200 sieve)		
Gravels (More than half of coarse fraction is larger than No. 4 sieve size)			Clean gravels (Little or no fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines		
				GP	Poorly graded gravels, gravel-sand mixtures, little or no fines		
Sands (More than half of coarse fraction is smaller than No. 4 sieve size)			Gravels with fines (Appreciable amount of fines)	GM	Silty gravels, gravel-sand-silt mixtures		
				GC	Clayey gravels, gravel-sand-clay mixtures		
			Clean sands (Little or no fines)	SW	Well-graded sands, gravelly sands, little or no fines		
				SP	Poorly graded sands; gravelly sands, little or no fines		
			Sands with fines (Appreciable amount of fines)	SM	Silty sands, sand-silt mixtures		
				SC	Clayey sands, sand-clay mixtures		
Sils and clays (Liquid limit less than 50)			ML	CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, and lean clays		
				OL	Organic silts and organic silty clays of low plasticity		
				MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts		
			Sils and clays (Liquid limit greater than 50)	CH	Inorganic clays of high plasticity, fat clays		
OH	Organic clays of medium to high plasticity, organic silts						
Highly Organic soils			Pt	Peat and other highly organic soils			

UNIFIED SOIL CLASSIFICATION SYSTEM

PLATE A.2

	GRAVEL		LEAN CLAY		LIMESTONE	 Shelby Tube	 Auger	 Split Spoon	 Rock Core	 Cone Pen	 No Recovery
	SAND		SANDY		SHALE						
	SILT		SILTY		SANDSTONE						
	CLAYEY		HIGHLY PLASTIC CLAY		CONGLOMERATE						

Descriptive Item	Penetrometer Reading, (tsf)
Soft	0.0 to 1.0
Firm	1.0 to 1.5
Stiff	1.5 to 3.0
Very Stiff	3.0 to 4.5
Hard	4.5+

Penetration Resistance (blows/foot)	Descriptive Item	Relative Density
0 to 4	Very Loose	0 to 20%
4 to 10	Loose	20 to 40%
10 to 30	Medium Dense	40 to 70%
30 to 50	Dense	70 to 90%
Over 50	Very Dense	90 to 100%

Calcareous	Contains appreciable deposits of calcium carbonate; generally nodular
Slickensided	Having inclined planes of weakness that are slick and glossy in appearance
Laminated	Composed of thin layers of varying color or texture
Fissured	Containing cracks, sometimes filled with fine sand or silt
Interbedded	Composed of alternate layers of different soil types, usually in approximately equal proportions

Very Soft or Plastic	Can be remolded in hand; corresponds in consistency up to very stiff in soils
Soft	Can be scratched with fingernail
Moderately Hard	Can be scratched easily with knife; cannot be scratched with fingernail
Hard	Difficult to scratch with knife
Very Hard	Cannot be scratched with knife
Poorly Cemented or Friable	Easily crumbled
Cemented	Bound together by chemically precipitated material; Quartz, calcite, dolomite, siderite, and iron oxide are common cementing materials.

Unweathered	Rock in its natural state before being exposed to atmospheric agents
Slightly Weathered	Noted predominantly by color change with no disintegrated zones
Weathered	Complete color change with zones of slightly decomposed rock
Extremely Weathered	Complete color change with consistency, texture, and general appearance approaching soil

PERCENT FINER

GRAIN SIZE - mm.

Sieve Size	Grain Size (mm)	Percent Finer (%)
6 in.	150	100
3 in.	75	100
2 in.	50	100
1½ in.	37.5	100
1 in.	25	100
¾ in.	18.75	100
½ in.	12.5	100
3/8 in.	9.5	100
#4	4.75	98
#10	2.0	96
#20	0.85	95
#30	0.6	94
#40	0.425	94
#60	0.25	75
#100	0.15	65
#140	0.106	50
#200	0.075	46
	0.06	40
	0.0425	36
	0.03	30
	0.025	26
	0.02	25
	0.015	23
	0.0125	21
	0.0106	20
	0.0085	19
	0.0075	18
	0.006	18
	0.00425	18

Material Description	USCS	AASHTO
o Clayey Silty Sand, dark reddish brown		

Fort Worth, Texas

PLATE A.5

The graph illustrates the grain size distribution of a material. The y-axis represents the percentage of material finer than a given grain size, ranging from 0 to 100. The x-axis represents the grain size in millimeters on a logarithmic scale, ranging from 100 mm down to 0.001 mm. The curve shows that 100% of the material is finer than 40 mm, and approximately 19% is finer than 0.075 mm.

Grain Size (mm)	Percent Finer (%)
100	100
75	100
60	100
40	100
30	100
20	100
10	100
7.5	100
6	100
4.75	100
3.75	100
3.0	100
2.5	100
2.0	100
1.5	100
1.18	100
0.85	100
0.75	100
0.60	100
0.425	100
0.30	100
0.25	100
0.20	100
0.15	100
0.106	100
0.075	100
0.060	100
0.050	100
0.0425	100
0.0375	100
0.030	100
0.025	100
0.020	100
0.015	100
0.0106	100
0.0075	100
0.0060	100
0.0050	100
0.00425	100
0.00375	100
0.0030	100
0.0025	100
0.0020	100
0.0015	100
0.00106	100
0.00075	100
0.00060	100
0.00050	100
0.000425	100
0.000375	100
0.00030	100
0.00025	100
0.00020	100
0.00015	100
0.000106	100
0.000075	100
0.000060	100
0.000050	100
0.0000425	100
0.0000375	100
0.000030	100
0.000025	100
0.000020	100
0.000015	100
0.0000106	100
0.0000075	100
0.0000060	100
0.0000050	100
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0.000000000020	100
0.000000000015	100
0.0000000000106	100
0.0000000000075	

Material Description	USCS	AASHTO
○ Clayey Silty Sand, light brown		

 $\phi D90 = 0.3335 \text{ mm}$

Attachment D

NON-DESTRUCTIVE SUBSURFACE INVESTIGATION

FOR

Structural Investigation

CONDUCTED AT:

**SOUTH WHITE CHAPEL BRIDGE
SOUTHLAKE, TEXAS**

FOR

HALFF ASSOCIATES INC.

JULY/OCTOBER 2012

Project #12068

A-E-I

*Environmental & Engineering
Consultants, Inc.*

TBPE # F-003024

1103 Arwine Court, Suite 301
Eules, Texas 76040
817-268-1381
Fax 817-268-1921
www.a-e-i.net



11/12/2012
Rev 11/19/2012

A-E-I

**Environmental & Engineering
Consultants, Inc.**

1103 Arwine Court * Suite 301 * Euless, Texas 76040 * 817-268-1381 * FAX 817-268-1921 * www.a-e-i.net

Disclaimer

This non-destructive subsurface investigation was conducted in accordance with accepted practices utilizing methods and procedures used by A-E-I for other projects. The focus of this summary report is limited to the scope defined in the Scope of Services section of this report. No sampling was performed and the product report is limited to best effort made by the technicians and data reviewed from SIR System-2.

A-E-I uses the most effective equipment and methods available, and every effort is made to provide our clients with the most accurate information possible. However, since the results of geophysical and engineering surveys are dependent on the synthesis and interpretation of many variable geological, structural and electromagnetic phenomena; neither A-E-I, nor any of its employees, make any warranty, express or implied, or assumes any legal responsibility or liability for the accuracy, completeness or usefulness of any information, apparatus, product or process disclosed. In no event shall A-E-I, its officers, directors, employees, or agents be liable for the negligence or willful misconduct of a client. Client agrees to defend, indemnify and hold harmless, all at its cost and expense, A-E-I, its officers, directors, employees or agents from and against all claims, demands, and losses by, and liability to whomsoever under any and all laws of the State of Texas and the United States of America occasioned by or attributable to the actual, alleged or threatened discharge, dispersal, release or escape of any waste or hazard not detected or found.

TABLE OF CONTENTS

- I. Executive Summary
- II. Purpose
- III. Scope of Services
- IV. Site Description
- V. Investigation
- VI. Results
- VII. Limitations

APPENDICES:

Appendix A – Site Location

Appendix B – Images

Appendix C – Photographs

Appendix D – Equipment and Qualifications

I. Executive Summary

Halff Associates Inc. contacted A-E-I and requested nondestructive subsurface investigation using borehole ground penetrating radar to a depth of 30 feet to determine the depth of existing concrete piers supporting the bridge over Big Bear Creek on South White Chapel Boulevard in Southlake, Texas.

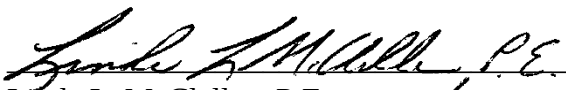
Sunbelt Industrial was contacted to drill a 4 inch diameter hole to a depth of 30 feet.

On July 17, 2012, Linda McClellen and Tommy Smith performed the subsurface investigation on the above site. Equipment used on this project was a GSSI Ground Penetrating Radar using a SIR 3000 with a borehole radar antenna. The hole was drilled to a depth of 30 feet and the antenna was inserted in the borehole. No change was noted in the scan indicating that the pier continued at least to the depth of the hole. No definite conclusion could be drawn on the depth of the pier.

A-E-I was requested to return and drill to a maximum depth of 50 feet, or to refusal. On October 25, 2012, a second borehole was drilled to a depth of 31'-3" where a solid rock layer was encountered which prevented further drilling of the borehole. No further GPR readings were taken due to the close proximity in depth of the two boreholes. A very small piece of hard black rock was noted in the trailings.

See Appendix A for the Site Location, Appendix B for Images and Appendix C for Photographs.

The data was downloaded onto an office computer and reviewed for accuracy and details.



Linda L. McClellen, P.E.

President

II. Purpose

In conjunction with the scour study of the Big Bear Creek Bridge, Halff Associates Inc. contacted A-E-I and requested a nondestructive subsurface investigation using ground penetrating radar to determine the depth of the reinforcing steel in an existing pier supporting the bridge.

III. Scope of Services

A-E-I was contracted to perform a nondestructive subsurface investigation using borehole ground penetrating radar to determine the depth of the concrete piers at the Big Bear Creek Bridge on South White Chapel Boulevard in Southlake, Texas.

The scope of services includes:

- Drill a 30' deep borehole as close as is practicable to the pier.
- Scan the borehole with a borehole radar antenna to determine the depth of the pier.
- The initial scan line will be evaluated to assess the need for filter and gain adjustments.
- Data will be reviewed on site.
- A field log will be kept to record all scans and noting limitations and obstructions on the site.
- Data will be downloaded and reviewed at the conclusion of the field work.
- A final report will be prepared and submitted.

IV. Site Description

The site was located at the Big Bear Creek Bridge on South White Chapel Boulevard in Southlake, Texas. The surface was sandy, uneven terrain. The weather was hot and clear with no standing water on the site.

V. Investigation

On July 17, 2012, Linda McClellen and Tommy Smith performed the subsurface investigation on the above site. Equipment used on this project was a GSSI Ground Penetrating Radar using a 120 megahertz borehole radar antenna.

On October 25, 2012 a second borehole was drilled to depth of 31'- 3" where a solid rock layer was encountered. No further GPR readings were taken due to the close proximity of the depths of the two boreholes.

The following are site specific investigation details:

- The borehole was approximately 10' from the north-east pier on the bridge.
- The borehole was 4" in diameter and was 30' deep.
- The antenna was placed in the borehole and scanned to the bottom of the borehole.
- The information gathered was reviewed in the field.
- The information was noted in the field log.
- Data was downloaded into an office computer and reviewed for accuracy and detail.

See Appendix A for the Site Location, Appendix B for Images and Appendix C for Photographs.

VI. Results

The ground penetrating radar borehole antenna is a multidirectional antennal. No change was detected to the bottom of the hole indicating that the piers went at least 30 feet deep.

VII. Limitations

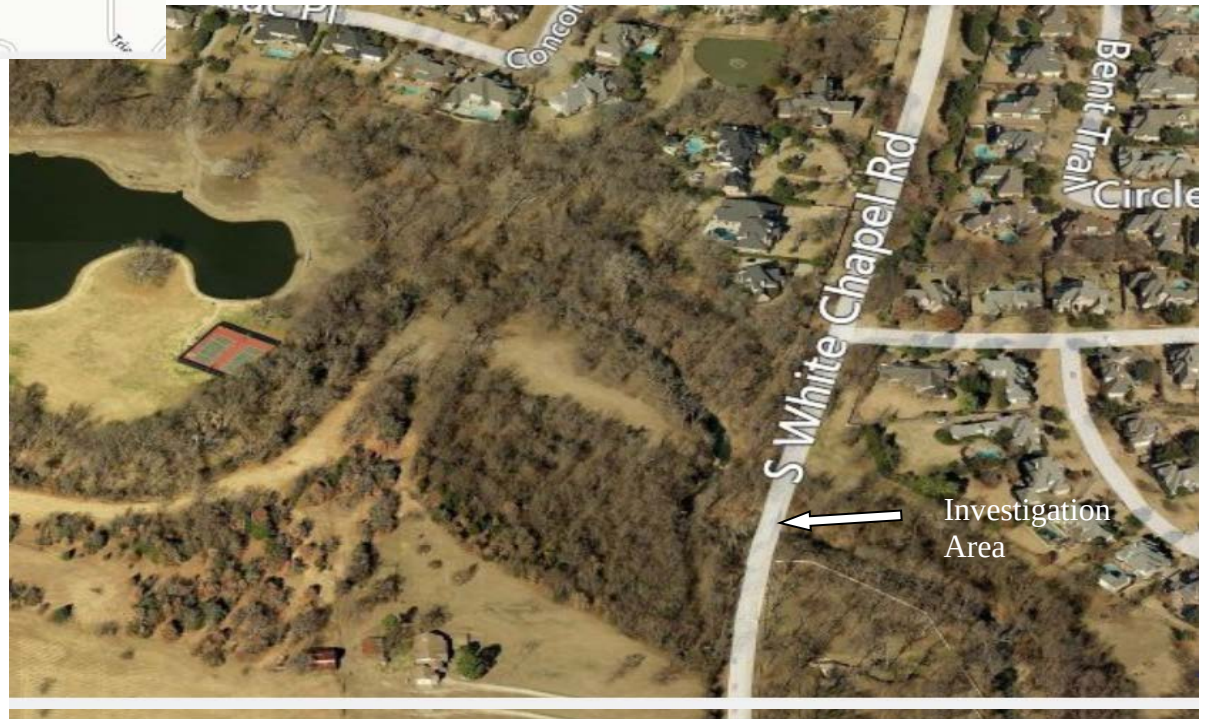
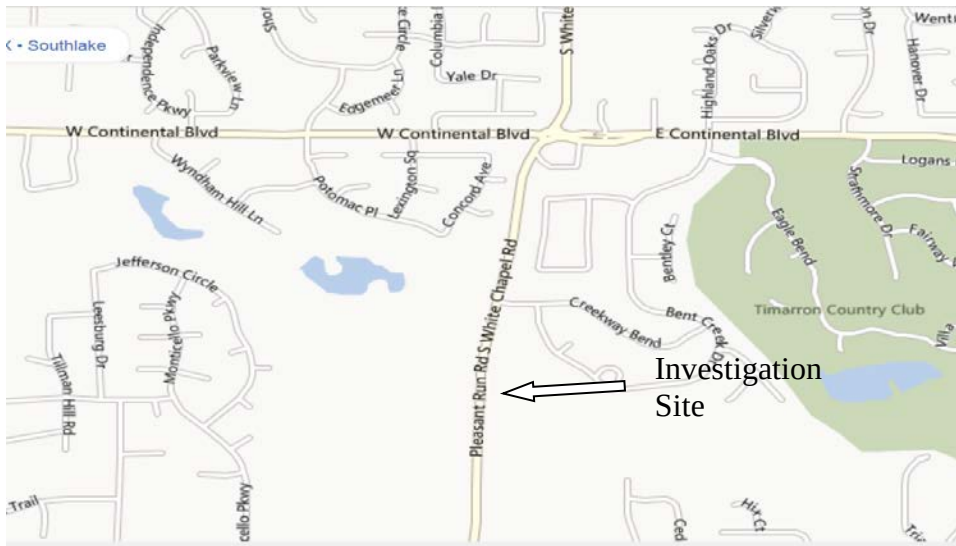
- There was only one in which the drilling equipment could access due to the uneven and brushy terrain around the bridge.
- On the second trip the drill could not penetrate past 31'-3".

APPENDICES

APPENDIX A
SITE LOCATION

A-E-I

**GROUND PENETRATING RADAR STRUCTURAL INVESTIGATION
BIG BEAR CREEK BRIDGE
SOUTH WHITE CHAPEL BOULEVARD, SOUTHLAKE, TEXAS**

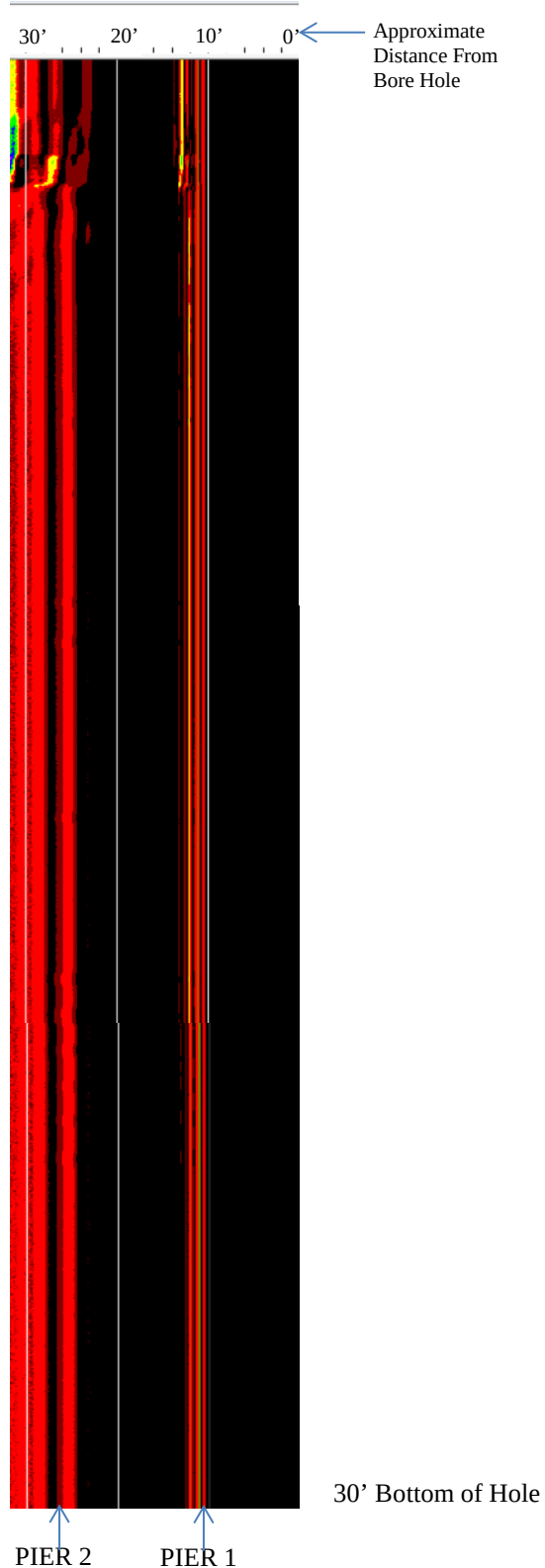


APPENDIX B

IMAGES

**NONDESTRUCTIVE SUBSURFACE STRUCTURAL INVESTIGATION
BIG BEAR CREEK BRIDGE, SOUTH WHITE CHAPEL BOULEVARD, SOUTHLAKE, TEXAS
SAMPLE SCANS – Horizontal Distance is Measured in Nanoseconds (nS) and
Converted to Feet**

Depth Was Measured By Calibration Marks on Cable
120 MEGAHERTZ (MHz) BOREHOLE ANTENNA - ABOUT 35 FEET HORIZONTAL DISTANCE
FROM BORE HOLE



APPENDIX C

PHOTOS

**GROUND PENETRATING RADAR STRUCTURAL INVESTIGATION
BIG BEAR CREEK BRIDGE
SOUTH WHITE CHAPEL BOULEVARD, SOUTHLAKE, TEXAS**



**Boring Machine Drilling the First Hole to
a Depth 30 feet**



**PVC Piping Being Inserted into the First
Hole**



Borehole Radar Antenna



**Tape Measure Showing a Depth of 31
Feet and 3 Inches on the Second Hole**

APPENDIX D
EQUIPMENT & QUALIFICATIONS

A-E-I Environmental & Engineering Consultants, Inc.

www.A-E-I.net

NON-DESTRUCTIVE SUBSURFACE INVESTIGATION

Three-dimensional Mapping

A-E-I offers over 20 years experience in non-destructive subsurface investigation and subsurface utility engineering (SUE). We offer experience in technologies including ground-penetrating radar (GPR), thermal imaging, electromagnetic (EM) testing, resistivity testing, magnetometer testing, and camera investigations. There are specific projects that may require a combination of these technologies. A-E-I will evaluate your project and determine the most accurate and cost-effective equipment for the site. In many instances we recommend the GPR due to its versatility and multiple capabilities. A-E-I has factory trained staff to perform the subsurface investigations.

GROUND PENETRATING RADAR (GPR)

Ground penetrating radar system can be pulled across a surface either by hand or by vehicle. The data is transferred from the antenna to an on site color monitor and data interpretation can often be made immediately. In some cases where small objects or minor changes in ground characteristics are being examined, A-E-I can post-process the data to enhance data and improve interpretation of subsurface conditions.

The system operates by transmitting electromagnetic impulse energy into the ground via an antenna that also receives reflections from subsurface targets. The data is based on the variation in the dielectric properties of the soil types and objects or contamination in the ground. The larger the differences in dielectric properties in the target material and the surrounding soil, the more effective the system works. The GPR does not require that the materials be metallic in order to identify them.



Applications:

Utility location: GPR mapping can significantly reduce the potential for digging or drilling into underground piping and power lines.

Structural Evaluation: Locates reinforcing steel, tensioning cables, air voids and faults in concrete. The equipment is safe for use around personnel and computers.

Underground drums and storage tanks: GPR can precisely locate buried drums, underground storage tanks, burial trenches, and boundaries of abandoned landfills.

Locating sites for monitoring wells: GPR can map hazardous waste disposal sites, making it possible to perform accurate site evaluations and allow for optimal placement of monitoring wells.

Site evaluations: GPR can be used to assure that a site is free of subsurface contamination or locate specific contaminated areas.

Geological applications: Changes in the soil, faults and other irregularities can be located without digging or drilling.

Archeological: GPR can be used to help pinpoint location and depth of artifacts, allowing recovery to proceed quickly with lower risk of damage.

A-E-I

Advantages:

Non-destructive - profiles objects and natural conditions below ground or embedded in concrete and other manmade materials, without breaking the surface.

Fast - from one to thirteen acres can be evaluated in one day.

Accurate - pinpoints exact locations.

Complete presentation of data - uses full color video display which can be printed through a computer.

Versatile - finds metallic and nonmetallic materials.

Reliable - uses most advanced digital technology.



Limitations:

Skilled operators are required - experience and training are required to interpret data. (A-E-I offers the solution to this limitation.)

Soil conditions - High conductivity overburden will limit exploration depth. The system will work up to three feet in depth for virtually any soil type.

Changes in Soil conditions – Undetected changes in soil conditions can affect the accuracy of depth readings.

*Information based on training material furnished by Geophysical Survey Systems, Inc., field experience, and an article in **POLLUTION ENGINEERING**, October 1992, Peering Beneath the Surface, by Sam Heald, applications engineer with Geophysical Systems, Inc.

Attachment E

HEC-RAS Plan: Multiple River: Big_Bear Reach: 1

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan	
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)	
1	234	14100.00	400.00	425.65	415.27	425.85	0.000900	4.38	4563.90	551.88	0.19	0.80	
1	234	23750.00	400.00	430.30	417.65	430.55	0.000900	5.15	7374.04	640.42	0.20	1.03	
1	234	28910.00	400.00	432.15	418.72	432.42	0.000901	5.45	8570.55	647.19	0.20	1.12	
1	234	39210.00	400.00	435.25	420.55	435.57	0.000901	5.93	10579.81	647.19	0.20	1.27	
1	523	14100.00	400.00	425.84		426.28	0.001740	6.04	3347.73	372.89	0.27	1.53	
1	523	23750.00	400.00	430.49		430.95	0.001539	6.73	7091.33	1044.18	0.26	1.75	
1	523	28910.00	400.00	432.39		432.76	0.001246	6.42	9070.74	1044.18	0.24	1.55	
1	523	39210.00	400.00	435.53		435.84	0.000993	6.25	12352.31	1044.18	0.22	1.40	
1	964	14100.00	402.00	426.56		427.02	0.001629	5.42	2764.22	453.69	0.26	1.28	
1	964	23750.00	402.00	431.13		431.51	0.001137	5.51	7527.72	1379.57	0.23	1.20	
1	964	28910.00	402.00	432.89		433.22	0.000956	5.38	9993.94	1412.23	0.21	1.11	
1	964	39210.00	402.00	435.94		436.20	0.000739	5.20	14295.49	1412.23	0.19	0.99	
1	1897	14100.00	404.00	428.25	418.57	428.81	0.002263	6.10	3038.86	1537.78	0.30	1.66	
1	1897	23750.00	404.00	432.16	422.60	432.46	0.001216	5.36	8512.49	1905.74	0.23	1.17	
1	1897	28910.00	404.00	433.71	424.50	433.98	0.001030	5.24	10693.59	1905.74	0.22	1.09	
1	1897	39210.00	404.00	436.52	428.00	436.65	0.000547	4.21	18707.40	1905.74	0.16	0.67	
1	2094	14100.00	404.50	428.34	419.93	429.58	0.003880	9.30	1997.68	1767.12	0.39	3.58	
1	2094	23750.00	404.50	432.21	426.47	432.90	0.002361	8.29	5418.53	2163.21	0.32	2.67	
1	2094	28910.00	404.50	433.76	430.46	434.34	0.001990	7.98	6832.00	2163.21	0.29	2.41	
1	2094	39210.00	404.50	436.65	431.65	436.75	0.000467	4.19	20120.94	2163.21	0.15	0.64	
1	2237	14100.00	405.00	429.82	412.84	429.96	0.000106	3.04	5407.23	2171.68	0.12	0.12	
1	2237	23750.00	405.00	432.88	415.77	433.09	0.000148	3.97	7303.19	2303.94	0.15	0.20	
1	2237	28910.00	405.00	434.25	417.11	434.49	0.000164	4.35	8150.66	2303.94	0.16	0.23	
1	2237	39210.00	405.00	436.66	419.47	436.78	0.000100	3.62	24029.14	2303.94	0.13	0.16	
1	2327	MACARTHUR BOULEVBR D	14100.00	405.00	429.83	413.10	429.97	0.000180	3.10	5146.33	560.32	0.13	0.14
1	2327	MACARTHUR BOULEVBR D	23750.00	405.00	432.89	416.08	433.11	0.000260	4.02	6880.00	572.56	0.15	0.23
1	2327	MACARTHUR BOULEVBR D	28910.00	405.00	434.26	417.45	434.51	0.000293	4.40	7666.77	578.03	0.16	0.27
1	2327	MACARTHUR BOULEVBR D	39210.00	405.00	436.58	419.87	436.89	0.000352	4.93	9016.79	585.00	0.17	0.35
1	2327	MACARTHUR BOULEVBR U	14100.00	405.00	429.89	413.10	429.99	0.000141	2.80	5933.63	560.54	0.11	0.12
1	2327	MACARTHUR BOULEVBR U	23750.00	405.00	432.97	416.09	433.14	0.000205	3.63	7683.75	572.90	0.13	0.19
1	2327	MACARTHUR BOULEVBR U	28910.00	405.00	434.35	417.45	434.55	0.000233	3.98	8476.40	578.41	0.14	0.22
1	2327	MACARTHUR BOULEVBR U	39210.00	405.00	436.68	419.86	436.94	0.000286	4.49	9833.18	585.00	0.15	0.29
1	2454		14100.00	405.00	429.90	412.84	430.00	0.000081	2.74	6415.94	2265.59	0.11	0.10
1	2454		23750.00	405.00	433.00	415.77	433.16	0.000113	3.57	8335.52	2306.47	0.13	0.16
1	2454		28910.00	405.00	434.38	417.11	434.57	0.000126	3.93	9191.87	2306.47	0.14	0.19
1	2454		39210.00	405.00	436.92	419.47	437.00	0.000071	3.16	29682.70	2306.47	0.11	0.12
1	2994		14100.00	408.00	429.95	422.90	430.11	0.000826	4.61	8021.15	2272.08	0.19	0.85
1	2994		23750.00	408.00	433.10	426.69	433.25	0.000792	5.02	11843.30	2458.54	0.19	0.96
1	2994		28910.00	408.00	434.52	427.42	434.68	0.000792	5.24	13593.64	2508.27	0.19	1.02
1	2994		39210.00	408.00	437.00	428.55	437.05	0.000280	3.34	29587.39	2508.27	0.12	0.40
1	4381		14280.00	408.50	430.63	423.37	430.67	0.000335	2.61	12789.42	2252.91	0.12	0.29
1	4381		23900.00	408.50	433.72	424.63	433.76	0.000315	2.87	18464.30	2307.93	0.12	0.33
1	4381		29080.00	408.50	435.13	425.18	435.17	0.000307	2.98	21086.44	2315.39	0.12	0.34
1	4381		39300.00	408.50	437.24	426.56	437.28	0.000224	2.72	30416.31	2789.13	0.10	0.28
1	5800		14280.00	412.00	430.95	424.48	430.99	0.000421	2.88	13396.08	2525.37	0.13	0.36
1	5800		23900.00	412.00	433.99	426.53	434.02	0.000332	2.91	20449.01	2802.54	0.12	0.34
1	5800		29080.00	412.00	435.38	426.91	435.42	0.000305	2.93	24064.96	2928.15	0.12	0.34
1	5800		39300.00	412.00	437.43	428.20	437.47	0.000274	2.97	32944.07	3257.48	0.11	0.33
1	9315		14280.00	414.00	431.28		431.28	0.000103	1.23	24707.02	3370.05	0.06	0.07
1	9315		23900.00	414.00	434.28		434.29	0.000100	1.41	34825.35	3379.02	0.07	0.08
1	9315		29080.00	414.00	435.66		435.66	0.000099	1.49	39501.38	3411.72	0.07	0.09
1	9315		39300.00	414.00	437.70		437.71	0.000106	1.67	46516.34	3539.72	0.07	0.11
1	11449		14280.00	418.00	431.34		431.35	0.000065	0.81	30597.39	3650.17	0.05	0.03
1	11449		23900.00	418.00	434.35		434.35	0.000074	1.05	41691.45	3721.51	0.05	0.05
1	11449		29080.00	418.00	435.73		435.73	0.000076	1.15	46850.69	3752.05	0.06	0.06
1	11449		39300.00	418.00	437.78		437.79	0.000087	1.35	54782.59	4272.07	0.06	0.08
1	13489		14280.00	418.00	431.39		431.40	0.000164	1.31	22561.63	3118.25	0.08	0.09
1	13489		23900.00	418.00	434.40		434.41	0.000153	1.54	32072.46	3207.24	0.08	0.11
1	13489		29080.00	418.00	435.79		435.80	0.000151	1.65	36557.71	3271.03	0.08	0.12
1	13489		39300.00	418.00	437.86		437.87	0.000192	2.05	43689.48	3791.16	0.09	0.17
1	15486		14280.00	418.60	431.84	428.14	431.93	0.002942	4.44	7382.38	2137.05	0.33	0.97
1	15486		23900.00	418.60	434.77	429.11	434.83	0.001375	4.00	14268.47	2398.29	0.24	0.69
1	15486		29080.00	418.60	436.12	429.62	436.18	0.001093	3.94	17547.95	2445.56	0.22	0.63
1	15486		39300.00	418.60	438.24	430.47	438.30	0.000884	4.03	23038.65	2826.46	0.20	0.62
1	16665		14280.00	419.00	433.43	430.94	433.53	0.001290	4.57	10252.25	2705.31	0.24	0.82
1	16665		23900.00	419.00	435.70	431.84	435.78	0.000939	4.41	17012.71	2887.82	0.21	0.72
1	16665		29080.00	419.00	436.90	432.18	436.97	0.000812	4.34	20538.84	3039.69	0.20	0.68
1	16665		39300.00	419.00	438.87	432.68	438.94	0.000668	4.29	26539.26	3049.74	0.19	0.64
1	17068		14280.00	419.14	433.87	431.16	433.93	0.000733	3.87	9837.00	3218.11	0.20	0.48
1	17068		23900.00	419.14	436.00	431.85	436.04	0.000434	3.32	18925.70	3563.51	0.16	0.34
1	17068		29080.00	419.14	437.15	432.27	437.18	0.000344	3.12	23025.17	3568.49	0.14	0.29
1	17068		39300.00	419.14	439.07	432.75	439.10	0.000270	3.00	29898.93	3576.87	0.13	0.26
1	17118.5	HUNTER FERRELL RBR D	14280.00	419.14	433.98	433.17	433.98	0.050924	0.00	690.62	75.23	0.00	18.90
1	17118.5	HUNTER FERRELL RBR D	23900.00	419.14	436.02	433.80	436.08	0.001958	3.33	12144.53	3429.24	0.09	0.49
1	17118.5	HUNTER FERRELL RBR D	29080.00	419.14	437.16	434.00	437.21	0.001207	2.25	16207.48	3568.56	0.08	0.24
1	17118.5	HUNTER FERRELL RBR D	39300.00	419.14	439.08	434.00	439.13	0.000696	1.88	23064.77	3576.91	0.07	0.16
1	17118.5	HUNTER FERRELL RBR U	14280.00	419.14	433.98	432.88	433.98	0.060078	0.00	651.80	70.74	0.00	19.56
1	17118.5	HUNTER FERRELL RBR U	23900										

HEC-RAS Plan: Multiple River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	18996	29080.00	421.60	437.49		437.51	0.000230	2.13	27005.27	3990.18	0.11	0.15
1	18996	39300.00	421.60	439.34		439.36	0.000190	2.13	34380.76	3998.31	0.10	0.14
1	21103	14830.00	424.50	435.14	431.74	435.17	0.000900	3.08	10894.76	3692.32	0.21	0.36
1	21103	24590.00	424.50	436.96	432.56	437.00	0.000618	2.98	16689.39	3805.32	0.18	0.31
1	21103	29850.00	424.50	437.93	432.81	437.97	0.000522	2.94	19776.71	3873.32	0.17	0.29
1	21103	39730.00	424.50	439.69	433.24	439.73	0.000406	2.90	25399.91	4006.95	0.15	0.27
1	22418	14830.00	425.00	435.72	432.94	435.75	0.000492	2.40	12237.11	4057.68	0.16	0.21
1	22418	24590.00	425.00	437.41	433.54	437.44	0.000398	2.37	17909.79	4208.61	0.15	0.20
1	22418	29850.00	425.00	438.32	433.77	438.35	0.000351	2.34	21329.18	4923.28	0.14	0.19
1	22418	39730.00	425.00	440.01	434.16	440.04	0.000302	2.44	28642.30	5297.69	0.13	0.19
1	23775	14830.00	426.00	436.92	435.85	437.10	0.002908	5.88	6083.68	2910.97	0.38	1.28
1	23775	24590.00	426.00	438.30	436.67	438.42	0.001714	4.87	10783.53	4307.74	0.30	0.84
1	23775	29850.00	426.00	439.07	436.89	439.18	0.001318	4.47	14059.03	4549.35	0.26	0.69
1	23775	39730.00	426.00	440.58	437.14	440.66	0.000760	3.71	20542.83	5787.81	0.20	0.46
1	25050	14900.00	427.00	439.63	438.42	439.78	0.001582	4.96	6700.45	4402.66	0.29	0.85
1	25050	24770.00	427.00	440.55	439.00	440.74	0.001878	5.77	8942.23	6430.02	0.33	1.11
1	25050	30070.00	427.00	441.03	439.25	441.23	0.001904	6.00	10098.79	6569.30	0.33	1.18
1	25050	39820.00	427.00	441.93	439.67	442.15	0.001798	6.17	12314.97	6687.47	0.33	1.22
1	27683	14900.00	429.60	437.44	437.44	439.73	0.017401	12.82	1279.18	1112.50	0.92	6.42
1	27683	24770.00	429.60	442.63	439.46	442.78	0.001335	4.70	12789.99	5716.18	0.27	0.75
1	27683	30070.00	429.60	443.12	440.33	443.27	0.001428	4.95	14938.92	6830.87	0.28	0.83
1	27683	39820.00	429.60	443.90	441.71	444.06	0.001488	5.22	18497.08	7035.72	0.29	0.90
1	27773 BELTLINE ROAD BR D	14900.00	429.60	439.23	437.55	440.45	0.009960	9.27	1699.05	284.83	0.61	3.44
1	27773 BELTLINE ROAD BR D	24770.00	429.60	442.08	439.58	443.50	0.009039	9.91	2611.56	696.48	0.59	3.71
1	27773 BELTLINE ROAD BR D	30070.00	429.60	442.39	440.48	444.20	0.011911	11.50	2834.22	756.37	0.68	4.96
1	27773 BELTLINE ROAD BR D	39820.00	429.60	442.98	442.98	445.45	0.016626	13.90	3301.46	815.68	0.80	7.17
1	27773 BELTLINE ROAD BR U	14900.00	429.60	440.67	437.55	441.44	0.005468	7.30	2130.19	309.71	0.46	2.07
1	27773 BELTLINE ROAD BR U	24770.00	429.60	443.71	439.56	444.46	0.004934	7.75	3727.09	831.14	0.44	2.20
1	27773 BELTLINE ROAD BR U	30070.00	429.60	444.76	440.49	445.38	0.004587	7.68	5827.49	2483.33	0.42	2.14
1	27773 BELTLINE ROAD BR U	39820.00	429.60	446.43	442.90	446.86	0.003609	7.12	11122.80	3844.23	0.23	1.80
1	27863	14900.00	429.60	440.95	437.44	441.60	0.003287	6.83	2326.95	3457.82	0.42	1.65
1	27863	24770.00	429.60	444.15	439.42	444.64	0.002354	6.62	4887.35	6172.70	0.37	1.45
1	27863	30070.00	429.60	445.52	440.36	445.58	0.000528	3.30	21371.44	6945.24	0.18	0.35
1	27863	39820.00	429.60	446.97	442.13	447.00	0.000261	2.43	38700.88	7226.22	0.13	0.19
1	27983	14900.00	430.10	442.25	438.78	442.29	0.000640	2.53	11172.75	6026.38	0.18	0.25
1	27983	24770.00	430.10	444.97	439.31	444.98	0.000169	1.54	33279.44	6532.42	0.09	0.08
1	27983	30070.00	430.10	445.74	439.53	445.75	0.000169	1.60	37518.84	6552.89	0.10	0.09
1	27983	39820.00	430.10	447.09	439.92	447.10	0.000124	1.46	52717.86	6618.85	0.08	0.07
1	29138	15290.00	430.50	442.51	438.83	442.53	0.000408	2.15	14981.66	5288.67	0.14	0.17
1	29138	25080.00	430.50	445.06	439.31	445.08	0.000302	2.27	23343.21	6158.86	0.13	0.17
1	29138	30370.00	430.50	445.83	439.51	445.85	0.000316	2.45	26043.01	6214.76	0.13	0.20
1	29138	39720.00	430.50	447.16	439.82	447.19	0.000323	2.68	30926.42	6371.49	0.14	0.23
1	29533	15290.00	430.80	443.41		443.70	0.002769	6.47	4853.74	6753.24	0.39	1.46
1	29533	25080.00	430.80	445.75		445.91	0.001527	5.64	12416.91	7308.18	0.30	1.02
1	29533	30370.00	430.80	446.56		446.72	0.001598	6.04	16169.28	8123.65	0.31	1.14
1	29533	39720.00	430.80	447.86		447.97	0.001085	5.34	22661.57	8205.04	0.26	0.86
1	29723	15290.00	430.88	444.74	443.32	445.52	0.005149	9.33	3974.72	4694.12	0.53	2.94
1	29723	25080.00	430.88	446.71		447.16	0.003333	8.50	9288.65	5707.13	0.44	2.30
1	29723	30370.00	430.88	447.55		447.88	0.002550	7.79	12163.95	5925.73	0.39	1.88
1	29723	39720.00	430.88	448.65		448.93	0.002335	7.89	16479.56	6671.18	0.38	1.88
1	29907	15290.00	430.95	446.46		446.82	0.002181	6.58	5419.95	1815.22	0.36	1.41
1	29907	25080.00	430.95	448.06		448.47	0.002474	7.70	9255.83	3226.78	0.39	1.84
1	29907	30370.00	430.95	448.73		449.17	0.002643	8.24	11480.99	3405.50	0.40	2.07
1	29907	39720.00	430.95	449.78		450.13	0.002201	7.93	15096.49	3430.70	0.37	1.86
1	30273	15290.00	431.10	447.36		447.80	0.002228	6.35	5510.67	2345.98	0.36	1.34
1	30273	25080.00	431.10	449.12		449.47	0.001850	6.46	9945.08	2638.84	0.33	1.31
1	30273	30370.00	431.10	449.86		450.18	0.001735	6.52	11903.68	2681.13	0.33	1.31
1	30273	39720.00	431.10	450.77		451.11	0.001872	7.10	14491.05	2962.82	0.34	1.52
1	30837	15290.00	431.40	448.49		448.88	0.001748	7.16	6444.46	2076.80	0.33	1.51
1	30837	25080.00	431.40	450.10		450.47	0.001849	7.89	9923.92	2283.92	0.35	1.77
1	30837	30370.00	431.40	450.79		451.15	0.001883	8.19	11551.28	2351.54	0.35	1.88
1	30837	39720.00	431.40	451.76		452.12	0.001927	8.61	13838.37	2359.51	0.36	2.04
1	31092	15280.00	431.42	449.00		449.47	0.001702	7.00	3780.14	736.47	0.33	1.45
1	31092	25060.00	431.42	450.60		451.37	0.002763	9.58	5925.68	2133.12	0.43	2.62
1	31092	30310.00	431.42	451.34		452.07	0.002716	9.79	7582.05	2229.15	0.43	2.70
1	31092	39670.00	431.42	452.40		452.99	0.002366	9.53	9955.84	2273.86	0.40	2.50
1	31289	15280.00	431.43	449.23		450.03	0.002641	8.81	2744.93	446.02	0.41	2.28
1	31289	25060.00	431.43	450.91	446.55	452.39	0.004594	12.50	3915.69	1306.07	0.55	4.43
1	31289	30310.00	431.43	451.59	447.56	453.19	0.005013	13.43	4956.20	1771.46	0.58	5.04
1	31289	39670.00	431.43	452.51	448.00	454.18	0.005472	14.53	6753.08	2030.86	0.61	5.81
1	31556	15280.00	431.65	450.25	443.00	450.55	0.000780	5.17	3621.52	414.26	0.23	0.76
1	31556	25060.00	431.65	452.83	445.19	453.25	0.001027	6.54	5615.87	1549.15	0.27	1.15
1	31556	30310.00	431.65	453.66	446.04	454.13	0.001164	7.17	6863.10	1732.58	0.29	1.37
1	31556	39670.00	431.65	454.65	447.39	455.23	0.001428	8.21	8440.73	1788.94	0.32	1.76
1	31646 TRINITY BOULEVARBR D	15280.00	431.65	450.25	443.14	450.61	0.001431	5.42	3279.25	322.26	0.24	0.95
1	31646 TRINITY BOULEVARBR D	25060.00	431.65	452.84	445.27	453.32	0.002136	6.38	4143.47	297.35	0.21	1.57
1	31646 TRINITY BOULEVARBR D	30310.00	431.65	453.66	446.26	454.13		6.75	6583.31	1020.91	0.22	
1	31646 TRINITY BOULEVARBR D	39670.00	431.65	454.65	447.77	455.23		7.35	7861.08	1089.92	0.25	
1	31646 TRINITY BOULEVARBR U	15280.00	431.65	450.53	442.78	450.78	0.000991					

HEC-RAS Plan: Multiple River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	32935	15280.00	432.15	451.60		451.78	0.000493	4.16	5488.55	513.59	0.20	0.42
1	32935	25060.00	432.15	454.87		455.28	0.000865	6.35	7936.94	1227.04	0.27	0.90
1	32935	30310.00	432.15	455.88		456.31	0.000906	6.76	9221.31	1331.28	0.28	1.00
1	32935	39670.00	432.15	457.22		457.71	0.001005	7.46	11064.46	1405.18	0.30	1.19
1	33452	15280.00	432.36	451.74		452.27	0.001317	7.76	3499.85	335.25	0.33	1.35
1	33452	25060.00	432.36	455.03		456.18	0.002323	11.58	4788.44	650.05	0.45	2.84
1	33452	30310.00	432.36	456.00		457.30	0.002600	12.63	5442.64	710.04	0.48	3.33
1	33452	39670.00	432.36	457.30		458.86	0.003082	14.30	6409.36	776.60	0.53	4.19
1	33841	15280.00	432.52	452.31		452.61	0.000598	5.24	4386.84	389.41	0.23	0.62
1	33841	25060.00	432.52	456.24		456.71	0.000722	6.63	6144.34	788.02	0.26	0.92
1	33841	30310.00	432.52	457.29		457.91	0.000906	7.67	7014.50	843.29	0.29	1.21
1	33841	39670.00	432.52	458.80		459.60	0.001125	8.94	8318.63	884.00	0.33	1.61
1	34182	15280.00	432.63	452.48	445.67	452.97	0.001050	6.94	3504.98	309.53	0.29	1.08
1	34182	25060.00	432.63	456.44	448.01	457.13	0.001186	8.46	4769.12	490.53	0.32	1.50
1	34182	30310.00	432.63	457.53	449.06	458.46	0.001514	9.88	5416.04	627.17	0.37	2.02
1	34182	39670.00	432.63	459.12	450.75	460.24	0.001799	11.27	7308.51	1479.37	0.41	2.57
1	34252.5 SHADY GROVE ROADBR D	15280.00	432.63	452.54	445.84	453.08	0.001998	7.22	3153.86	278.37	0.31	1.35
1	34252.5 SHADY GROVE ROADBR D	25060.00	432.63	456.49	448.21	457.28	0.002485	8.84	4298.65	301.30	0.34	1.93
1	34252.5 SHADY GROVE ROADBR D	30310.00	432.63	457.63	449.29	458.61	0.003020	9.97	4649.61	326.38	0.28	2.43
1	34252.5 SHADY GROVE ROADBR D	39670.00	432.63	459.21	451.06	460.46	0.003863	11.61	5739.26	883.45	0.31	3.25
1	34252.5 SHADY GROVE ROADBR U	15280.00	432.68	452.66	445.92	453.16	0.001901	6.51	3299.33	301.46	0.30	1.14
1	34252.5 SHADY GROVE ROADBR U	25060.00	432.68	456.67	448.16	457.37	0.002254	7.87	4556.10	323.51	0.32	1.58
1	34252.5 SHADY GROVE ROADBR U	30310.00	432.68	457.87	449.19	458.74	0.002677	8.80	4944.89	327.10	0.35	1.95
1	34252.5 SHADY GROVE ROADBR U	39670.00	432.68	459.45	450.89	460.60	0.003496	10.36	6149.67	898.74	0.29	2.67
1	34323	15280.00	432.68	452.85	445.71	453.25	0.000960	5.99	4210.60	1200.21	0.28	0.85
1	34323	25060.00	432.68	457.05	447.86	457.51	0.000864	6.72	6266.05	1530.55	0.27	0.98
1	34323	30310.00	432.68	457.92	448.91	458.51	0.001044	7.62	6702.81	1568.37	0.30	1.24
1	34323	39670.00	432.68	459.87	451.00	460.78	0.001414	9.44	9399.95	1685.91	0.36	1.85
1	34434	15280.00	432.70	453.00	446.01	453.38	0.001292	6.78	4423.59	1176.96	0.29	1.29
1	34434	25060.00	432.70	457.25	447.99	457.64	0.001119	7.33	6926.58	1444.36	0.28	1.40
1	34434	30310.00	432.70	458.18	448.84	458.66	0.001334	8.24	7528.32	1594.35	0.31	1.74
1	34434	39670.00	432.70	460.39	450.00	461.03	0.001586	9.58	10518.10	1648.14	0.34	2.28
1	34959	15470.00	432.90	453.58		454.13	0.001365	7.27	4016.47	994.01	0.30	1.45
1	34959	25260.00	432.90	457.75		458.29	0.001192	7.82	6547.67	1293.72	0.29	1.57
1	34959	30300.00	432.90	458.78		459.41	0.001355	8.60	7263.76	1352.52	0.32	1.86
1	34959	39670.00	432.90	461.12		461.89	0.001562	9.85	10210.15	1411.09	0.35	2.37
1	35464	15470.00	433.06	454.36		454.78	0.001149	6.63	4694.89	1338.14	0.28	1.21
1	35464	25260.00	433.06	458.46		458.86	0.001002	7.10	7742.97	1790.64	0.27	1.30
1	35464	30300.00	433.06	459.61		460.04	0.001051	7.52	8717.19	1814.19	0.28	1.43
1	35464	39670.00	433.06	462.10		462.62	0.001201	8.61	13051.17	1906.18	0.30	1.81
1	35924	15470.00	433.21	454.83		455.57	0.002054	8.62	3480.19	1307.41	0.36	2.08
1	35924	25260.00	433.21	458.84		459.58	0.001879	9.44	5953.67	1732.48	0.36	2.33
1	35924	30300.00	433.21	460.01		460.80	0.001974	10.01	6842.30	1821.45	0.37	2.57
1	35924	39670.00	433.21	462.63		463.36	0.001825	10.34	11393.12	1883.67	0.36	2.65
1	36575	15470.00	433.43	456.24		456.56	0.001046	6.07	4983.43	984.96	0.24	1.04
1	36575	25260.00	433.43	460.16		460.44	0.000837	6.14	8466.86	1581.41	0.22	1.00
1	36575	30300.00	433.43	461.39		461.67	0.000825	6.31	9686.60	1747.94	0.22	1.03
1	36575	39670.00	433.43	463.95		464.22	0.000872	6.93	14136.99	1960.37	0.24	1.21
1	36898	15470.00	433.50	456.48		457.11	0.001718	7.91	3715.87	719.61	0.33	1.75
1	36898	25260.00	433.50	460.36		460.88	0.001434	8.25	7146.59	1675.66	0.31	1.78
1	36898	30300.00	433.50	461.60		462.09	0.001327	8.23	8462.37	1705.47	0.30	1.74
1	36898	39670.00	433.50	464.17		464.64	0.001275	8.67	12743.40	2023.92	0.30	1.86
1	37389	15470.00	433.70	457.41	449.93	457.70	0.000794	5.84	6318.44	2060.14	0.23	0.91
1	37389	25260.00	433.70	461.14	452.00	461.33	0.000552	5.44	10927.34	2374.17	0.19	0.75
1	37389	30300.00	433.70	462.32	453.97	462.52	0.000547	5.59	12446.22	2425.51	0.20	0.78
1	37389	39670.00	433.70	464.87	457.10	465.05	0.000517	5.79	16775.80	2617.72	0.19	0.81
1	37736	15470.00	434.20	457.71	447.44	457.91	0.000476	4.65	6874.89	2202.96	0.18	0.57
1	37736	25260.00	434.20	461.30	451.15	461.50	0.000432	4.94	10586.54	2533.97	0.18	0.61
1	37736	30300.00	434.20	462.48	452.00	462.69	0.000453	5.22	11831.45	2581.48	0.18	0.67
1	37736	39670.00	434.20	465.00	455.49	465.23	0.000460	5.61	15160.06	2814.08	0.19	0.75
1	38272	15470.00	435.00	457.98	452.00	458.34	0.001180	6.53	4529.77	2042.62	0.27	1.19
1	38272	25260.00	435.00	461.53	455.39	461.90	0.001089	7.08	6865.40	2387.69	0.27	1.32
1	38272	30300.00	435.00	462.71	456.15	463.11	0.001152	7.55	7678.24	2473.48	0.28	1.47
1	38272	39670.00	435.00	465.23	457.35	465.64	0.001076	7.83	9548.32	2582.04	0.28	1.53
1	38706	15470.00	435.61	458.26	449.56	458.94	0.000870	6.65	2433.91	1404.89	0.33	0.66
1	38706	25260.00	435.61	461.65	452.98	462.69	0.000998	8.33	3369.43	1819.76	0.36	0.96
1	38706	30300.00	435.61	462.77	454.56	464.04	0.001126	9.25	3679.27	2026.68	0.39	1.16
1	38706	39670.00	435.61	465.13	457.09	466.73	0.001212	10.45	4331.10	2303.45	0.42	1.42
1	38806 ROCK ISLAND BR D	15470.00	439.40	457.86	452.46	459.59	0.003717	10.56	1464.73	119.02	0.43	1.91
1	38806 ROCK ISLAND BR D	25260.00	439.40	460.87	456.52	463.79	0.005995	13.70	1844.05	132.69	0.52	3.18
1	38806 ROCK ISLAND BR D	30300.00	439.40	461.74	458.25	465.45	0.007517	15.45	1961.15	136.63	0.58	4.04
1	38806 ROCK ISLAND BR D	39670.00	439.40	471.42	461.06	471.55		14.77	2827.90	2044.90	0.46	
1	38806 ROCK ISLAND BR U	15470.00	439.50	458.12	452.85	459.74	0.003739	10.21	1515.76	124.43	0.42	1.82
1	38806 ROCK ISLAND BR U	25260.00	439.50	461.47	456.57	464.06	0.005539	12.93	1954.08	137.75	0.49	2.86
1	38806 ROCK ISLAND BR U	30300.00	439.50	462.65	458.20	465.82	0.006587	14.29	2119.86	142.46	0.52	3.47
1	38806 ROCK ISLAND BR U	39670.00	439.50	471.72	460.90	472.82		14.56	2734.79	2073.67	0.45	
1	38877	15470.00	438.43	459.42	452.07	460.12	0.000912	6.70	2344.07	1186.17	0.34	0.68
1	38877	25260.00	438.43	463.64	455.48	464.65	0.000893	8.08	3187.91	1689.45	0.35	0.90
1	38877	30300.00	438.43	465.36	456.56	466.54	0.000920	8.76	3530.92	1875.75	0.36	1.02
1	38877	39670.00	438.43	471.72	458.40	472.82	0.000573	8.45	4804.44	2311.18	0.30	0.86
1	38907	15470.00	438.53	459.38	452.35	460.19	0.000309	8.12	2167.84	559.27	0.31	0.30
1	38907	25260.00	438.53	463.53	455.24	464.79	0.000356	9.84	2824.01	1506.56	0.35	0.41
1	38907	30300.00	438.53	465.21	456.46	466.72	0.000384	10.67	3089.16	1662.33	0.36	0.48
1	38907	39670.00	438.53	471.55	458.52	473.02	0.000264	10.22	4091.00	2242.55	0.31	0.41
1	38972 TRINITY RAILWAY BR D	15470.00	439.51	458.80	453.56	460.83	0.000901	13.13	1443.14	96.00	0.53	0.80
1	38972 TRINITY RAILWAY BR D	25260.00	439.51	462.42	457.16	465.97	0.001277	17.58	1790.17	96.00	0.65	1.36
1	38972 TRINITY RAILWAY BR D	30300.00	439.51	463.76	458.86	468.25	0.001500	19.80	1			

HEC-RAS Plan: Multiple River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	38972 TRINITY RAILWAY BR U	25260.00	439.51	462.50	457.83	466.01	0.001779	15.14	1705.02	96.00	0.59	1.18
1	38972 TRINITY RAILWAY BR U	30300.00	439.51	464.06	459.45	468.33	0.002018	16.57	1854.65	96.00	0.62	1.39
1	38972 TRINITY RAILWAY BR U	39670.00	439.51	474.32	462.30	478.40	0.001897	14.50	2843.74		0.42	1.12
1	39117	15470.00	438.63	461.32	451.08	461.48	0.000059	3.65	4854.25	363.38	0.14	0.06
1	39117	25260.00	438.63	466.81	452.76	467.02	0.000052	4.02	6912.66	456.31	0.14	0.07
1	39117	30300.00	438.63	469.33	453.50	469.56	0.000049	4.18	7901.00	582.52	0.14	0.07
1	39117	39670.00	438.63	478.36	454.85	478.40	0.000012	2.53	37994.98	2547.23	0.07	0.02
1	39217	15470.00	438.80	461.33	452.28	461.50	0.000497	4.53	5795.94	532.03	0.18	0.56
1	39217	25260.00	438.80	466.87	454.15	467.04	0.000375	4.67	8881.95	660.17	0.17	0.54
1	39217	30300.00	438.80	469.41	454.88	469.59	0.000338	4.74	10333.24	699.66	0.16	0.54
1	39217	39670.00	438.80	478.39	456.01	478.41	0.000036	1.88	42033.25	2706.54	0.06	0.08
1	40106	15660.00	440.47	461.68	451.11	461.75	0.000194	2.67	8468.31	666.74	0.12	0.20
1	40106	25480.00	440.47	467.17	452.27	467.25	0.000176	3.07	12340.08	754.17	0.11	0.24
1	40106	31070.00	440.47	469.69	452.86	469.78	0.000170	3.24	14286.38	783.35	0.11	0.26
1	40106	45100.00	440.47	478.42	454.17	478.44	0.000029	1.64	58098.19	3912.80	0.05	0.06
1	40864	15660.00	441.90	461.83	451.20	461.90	0.000213	2.80	8395.22	805.63	0.12	0.22
1	40864	25480.00	441.90	467.29	452.45	467.37	0.000158	2.92	13185.17	1275.16	0.11	0.21
1	40864	31070.00	441.90	469.82	453.07	469.90	0.000143	2.98	15463.89	1295.27	0.11	0.22
1	40864	45100.00	441.90	478.44	454.45	478.46	0.000023	1.47	61953.30	3954.80	0.04	0.05
1	41594	15660.00	441.91	461.99	452.02	462.07	0.000242	3.01	7660.32	618.15	0.13	0.25
1	41594	25480.00	441.91	467.41	453.26	467.51	0.000206	3.35	11122.15	658.02	0.12	0.28
1	41594	31070.00	441.91	469.92	453.87	470.03	0.000201	3.55	12797.74	678.23	0.13	0.31
1	41594	45100.00	441.91	478.46	455.25	478.48	0.000030	1.66	57396.23	4127.62	0.05	0.06
1	42233	15660.00	442.76	462.14	452.32	462.23	0.000252	3.00	7541.72	606.02	0.13	0.25
1	42233	25480.00	442.76	467.54	453.63	467.65	0.000217	3.38	10922.69	646.26	0.13	0.29
1	42233	31070.00	442.76	470.05	454.27	470.17	0.000213	3.60	12565.86	666.63	0.13	0.32
1	42233	45100.00	442.76	478.47	455.70	478.51	0.000074	2.60	36544.38	3353.65	0.08	0.15
1	43485	15660.00	444.20	462.46	452.38	462.63	0.000368	3.57	5446.18	632.38	0.16	0.36
1	43485	25480.00	444.20	467.79	454.12	467.89	0.000180	3.01	11229.53	689.24	0.12	0.23
1	43485	31070.00	444.20	470.29	454.95	470.41	0.000175	3.20	12985.64	715.54	0.12	0.25
1	43485	45100.00	444.20	478.55	456.83	478.62	0.000088	2.78	30565.38	2214.58	0.09	0.17
1	43922	15660.00	444.73	462.54	455.17	462.94	0.001073	6.19	3798.00	652.31	0.27	1.08
1	43922	25480.00	444.73	467.88	457.30	467.98	0.000248	3.59	10993.28	760.05	0.14	0.33
1	43922	31070.00	444.73	470.38	458.34	470.49	0.000229	3.71	13052.72	914.79	0.13	0.34
1	43922	45100.00	444.73	478.61	460.75	478.66	0.000105	3.05	31158.89	2174.10	0.09	0.21
1	44270	15660.00	445.10	463.04	454.68	463.22	0.000551	3.99	5239.02	872.39	0.19	0.47
1	44270	25480.00	445.10	467.98	456.19	468.06	0.000189	2.87	13033.88	974.50	0.12	0.22
1	44270	31070.00	445.10	470.48	456.95	470.56	0.000178	3.02	15538.69	1051.48	0.12	0.23
1	44270	45100.00	445.10	478.64	458.65	478.69	0.000085	2.60	32525.50	2124.54	0.08	0.16
1	44981	15570.00	445.45	463.45	456.11	463.54	0.000336	3.35	7087.95	734.19	0.15	0.32
1	44981	25350.00	445.45	468.12	457.78	468.23	0.000257	3.49	10600.54	773.89	0.14	0.32
1	44981	31170.00	445.45	470.61	458.33	470.72	0.000231	3.58	12527.31	839.66	0.13	0.32
1	44981	46630.00	445.45	478.70	459.59	478.78	0.000134	3.34	24665.79	1944.27	0.11	0.25
1	45656	15570.00	445.60	463.57	456.87	464.16	0.001140	6.76	2892.15	263.41	0.31	1.06
1	45656	25350.00	445.60	468.10	459.39	468.85	0.001077	7.83	4120.91	287.50	0.31	1.30
1	45656	31170.00	445.60	470.53	460.60	471.36	0.001038	8.30	4797.52	364.91	0.31	1.41
1	45656	46630.00	445.60	478.70	463.41	479.06	0.000407	6.41	15915.73	2390.59	0.21	0.76
1	45757.5 BR D	15570.00	445.60	463.59	457.08	464.28	0.002214	7.18	2526.91	222.55	0.28	1.37
1	45757.5 BR D	25350.00	445.60	468.11	459.73	469.00	0.002393	8.31	3569.39	239.93	0.28	1.74
1	45757.5 BR D	31170.00	445.60	470.52	461.04	471.51	0.002440	8.77	4162.68	251.17	0.28	1.90
1	45757.5 BR D	46630.00	445.60	478.65	464.05	479.17	0.003375	6.40	6219.41	65.56	0.18	2.05
1	45757.5 BR U	15570.00	445.70	463.73	458.28	464.55	0.002490	8.13	2426.36	234.41	0.37	1.70
1	45757.5 BR U	25350.00	445.70	468.25	460.85	469.27	0.002488	9.28	3525.91	252.50	0.37	2.08
1	45757.5 BR U	31170.00	445.70	470.67	462.07	471.78	0.002465	9.77	4148.87	262.30	0.30	2.24
1	45757.5 BR U	46630.00	445.70	478.79	465.12	479.35	0.003453	7.04	6247.20	45.27	0.18	2.38
1	45859	15570.00	445.70	463.98	458.30	464.71	0.001581	7.73	2619.03	251.88	0.35	1.41
1	45859	25350.00	445.70	468.52	460.85	469.43	0.001460	8.86	3826.35	281.44	0.35	1.70
1	45859	31170.00	445.70	470.93	461.96	471.94	0.001414	9.43	4565.62	432.00	0.35	1.85
1	45859	46630.00	445.70	478.77	465.02	479.53	0.000826	8.83	12102.33	2715.39	0.29	1.46
1	46139	15570.00	445.80	464.39	458.41	465.17	0.001499	8.14	2608.34	244.14	0.35	1.50
1	46139	25350.00	445.80	468.90	461.18	469.88	0.001456	9.40	3779.79	274.99	0.36	1.85
1	46139	31170.00	445.80	471.27	462.57	472.42	0.001507	10.27	4503.84	351.39	0.37	2.13
1	46139	46630.00	445.80	479.02	465.54	479.76	0.000825	9.18	12514.67	2474.72	0.29	1.55
1	46416	15570.00	446.00	465.11	457.66	465.50	0.000817	5.77	3564.18	326.25	0.26	0.77
1	46416	25350.00	446.00	469.69	459.95	470.22	0.000807	6.81	5146.23	384.98	0.27	0.99
1	46416	31170.00	446.00	472.17	461.09	472.78	0.000826	7.44	6230.06	503.35	0.28	1.13
1	46416	46630.00	446.00	479.60	463.69	479.96	0.000439	6.55	15187.38	2537.12	0.21	0.80
1	47116	15520.00	446.02	465.66	454.07	465.81	0.000247	3.20	5018.20	351.00	0.14	0.24
1	47116	25280.00	446.02	470.31	455.85	470.54	0.000265	3.94	7265.53	654.28	0.15	0.33
1	47116	31060.00	446.02	472.85	456.79	473.11	0.000258	4.21	9193.92	861.56	0.16	0.36
1	47116	46410.00	446.02	479.96	458.91	480.15	0.000156	3.92	22846.36	2873.59	0.13	0.29
1	47446	15520.00	446.50	465.58	455.84	466.03	0.000709	5.40	2964.67	213.57	0.24	0.67
1	47446	25280.00	446.50	470.15	458.45	470.81	0.000757	6.63	4400.40	516.24	0.26	0.93
1	47446	31060.00	446.50	472.65	459.72	473.38	0.000733	7.06	5708.12	864.98	0.26	1.02
1	47446	46410.00	446.50	479.90	462.68	480.28	0.000348	5.86	17963.46	2811.78	0.19	0.64
1	47559	15520.00	446.60	465.53	456.40	466.18	0.000832	6.77	2951.52	284.56	0.29	0.83
1	47559	25280.00	446.60	470.10	460.24	470.96	0.000853	8.06	4444.24	603.62	0.31	1.08
1	47559	31060.00	446.60	472.56	462.13	473.55	0.000859	8.70	5577.61	832.69	0.31	1.21
1	47559	46410.00	4									

HEC-RAS Plan: Multiple River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	47610	46410.00	451.50	479.86	467.83	480.41	0.000559	7.81	17001.41	2809.14	0.26	0.93
1	47669	15520.00	451.54	465.58	461.34	466.48	0.001713	8.22	2438.43	280.27	0.41	1.32
1	47669	25280.00	451.54	470.21	463.76	471.22	0.001343	8.97	3783.05	352.45	0.38	1.42
1	47669	31060.00	451.54	472.73	464.94	473.80	0.001222	9.37	4589.10	1259.57	0.37	1.48
1	47669	46410.00	451.54	480.26	467.63	480.52	0.000317	5.92	19676.47	2857.31	0.20	0.53
1	47726 BR D	15520.00	451.54	465.63	461.59	466.54	0.002880	8.30	2351.88	269.83	0.41	1.53
1	47726 BR D	25280.00	451.54	470.29	463.96	471.28	0.002478	8.89	3655.24	289.45	0.38	1.63
1	47726 BR D	31060.00	451.54	472.85	465.11	473.87	0.002317	9.11	4410.92	301.77	0.31	1.66
1	47726 BR D	46410.00	451.54	480.26	467.77	480.58		6.34	10673.27	1741.63	0.22	
1	47726 BR U	15520.00	451.54	465.82	461.56	466.72	0.002814	8.26	2406.59	272.36	0.41	1.51
1	47726 BR U	25280.00	451.54	470.44	463.98	471.45	0.002508	8.98	3711.44	291.76	0.38	1.66
1	47726 BR U	31060.00	451.54	472.98	465.17	474.03	0.002369	9.24	4467.06	302.29	0.31	1.71
1	47726 BR U	46410.00	451.54	480.43	467.89	480.80		6.51	10289.23	1714.36	0.23	
1	47783	15520.00	451.54	465.92	461.31	466.79	0.001582	8.04	2545.85	285.91	0.39	1.25
1	47783	25280.00	451.54	470.48	463.79	471.49	0.001305	8.93	3903.93	309.01	0.38	1.40
1	47783	31060.00	451.54	473.02	464.98	474.08	0.001176	9.28	4702.66	595.46	0.37	1.44
1	47783	46410.00	451.54	480.43	467.73	480.80	0.000405	6.72	17621.91	2790.96	0.23	0.68
1	48015	15520.00	451.90	466.54	461.46	467.24	0.001937	7.31	2710.23	315.43	0.35	1.60
1	48015	25280.00	451.90	471.08	463.79	471.89	0.001617	8.10	4132.51	400.15	0.34	1.78
1	48015	31060.00	451.90	473.62	464.91	474.45	0.001443	8.36	5112.86	1210.22	0.33	1.82
1	48015	46410.00	451.90	480.73	467.51	480.94	0.000391	5.31	19143.95	2799.19	0.18	0.66
1	48529	15520.00	452.70	468.04	465.33	471.12	0.011200	14.15	1135.31	97.33	0.69	8.77
1	48529	25280.00	452.70	472.10	469.29	476.54	0.011556	17.21	1673.73	260.20	0.73	11.85
1	48529	31060.00	452.70	475.80	475.80	478.19	0.005862	13.96	4045.07	1222.05	0.54	7.31
1	48529	46410.00	452.70	481.00	477.54	481.59	0.001774	8.91	11582.13	1529.59	0.31	2.76
1	49116. A	15520.00	455.70	473.96	468.86	475.33	0.004650	9.76	1775.12	180.72	0.46	4.04
1	49116. A	25280.00	455.70	478.92	471.99	480.32	0.003614	10.50	3486.95	757.92	0.42	4.23
1	49116. A	31060.00	455.70	479.46	473.61	481.29	0.004665	12.15	3748.44	775.32	0.48	5.61
1	49116. A	46410.00	455.70	481.74	477.64	483.56	0.004790	13.24	6321.81	1211.07	0.50	6.42
1	49533.	15480.00	456.80	475.82	470.19	476.56	0.001984	7.61	2617.95	252.11	0.36	1.71
1	49533.	25210.00	456.80	480.45	472.61	481.36	0.001775	8.69	3866.48	660.03	0.35	2.03
1	49533.	30970.00	456.80	481.40	473.86	482.60	0.002216	10.03	4143.68	896.06	0.40	2.66
1	49533.	46240.00	456.80	483.60	476.47	484.94	0.002562	11.57	7413.72	1212.85	0.44	3.41
1	49719	15480.00	457.88	476.14	472.09	477.03	0.002747	9.52	2383.95	258.90	0.42	2.59
1	49719	25210.00	457.88	480.79	474.45	481.73	0.002200	10.11	3728.73	640.39	0.39	2.68
1	49719	30970.00	457.88	481.87	475.55	483.04	0.002607	11.39	4068.75	908.86	0.43	3.35
1	49719	46240.00	457.88	484.51	478.66	485.44	0.002392	11.78	7811.86	1228.87	0.42	3.45
1	49730	Inl Struct										
1	49741	15480.00	458.20	476.43	471.74	477.24	0.002241	8.59	2477.05	255.88	0.39	2.11
1	49741	25210.00	458.20	481.06	474.00	481.99	0.001919	9.47	3790.54	541.13	0.37	2.35
1	49741	30970.00	458.20	482.07	474.88	483.24	0.002320	10.75	4106.65	895.19	0.41	2.98
1	49741	46240.00	458.20	484.56	477.76	485.62	0.002322	11.59	7558.95	1233.25	0.42	3.34
1	49800.	15500.00	458.38	476.84	469.61	477.45	0.001312	6.78	2740.83	252.91	0.30	1.30
1	49800.	25270.00	458.38	481.33	472.45	482.15	0.001324	8.03	3856.59	311.23	0.31	1.67
1	49800.	31080.00	458.38	482.36	473.76	483.44	0.001645	9.24	4138.13	939.87	0.35	2.18
1	49800.	46330.00	458.38	484.67	476.65	485.88	0.001951	10.77	7384.68	1308.59	0.39	2.86
1	49870. AIRPORT FREEWAY BR D	15500.00	458.38	476.95	469.98	477.54	0.002252	6.67	2625.17	220.20	0.25	1.45
1	49870. AIRPORT FREEWAY BR D	25270.00	458.38	481.46	472.60	482.26	0.002490	7.73	3684.17	255.76	0.26	1.85
1	49870. AIRPORT FREEWAY BR D	31080.00	458.38	483.71	473.88	483.72	0.004933	8.44	4271.45		0.27	2.50
1	49870. AIRPORT FREEWAY BR D	46330.00	458.38	484.67	476.73	485.88		9.62	7358.78	816.47	0.32	
1	49870. AIRPORT FREEWAY BR U	15500.00	458.78	477.10	469.83	477.64	0.001965	6.76	2796.29	270.12	0.24	1.43
1	49870. AIRPORT FREEWAY BR U	25270.00	458.78	481.74	472.32	482.39	0.001978	7.55	4151.41	302.54	0.24	1.68
1	49870. AIRPORT FREEWAY BR U	31080.00	458.78	483.71	473.56	484.50	0.004225	8.35	4744.29		0.25	2.37
1	49870. AIRPORT FREEWAY BR U	46330.00	458.78	485.98	476.59	486.33		9.51	7172.65	857.88	0.27	
1	49934.	15500.00	458.78	477.14	469.88	477.72	0.001334	7.16	2906.17	533.11	0.30	1.41
1	49934.	25270.00	458.78	481.77	472.38	482.48	0.001284	8.22	4356.26	1095.03	0.31	1.72
1	49934.	31080.00	458.78	483.71	473.67	484.50	0.001288	8.71	4995.88	1519.84	0.31	1.88
1	49934.	46330.00	458.78	485.98	476.55	486.33	0.000792	7.26	13123.45	1649.20	0.25	1.26
1	49953.	15500.00	458.88	477.15	469.38	477.77	0.001417	7.35	2757.76	235.49	0.31	1.49
1	49953.	25270.00	458.88	481.73	472.36	482.58	0.001502	8.85	4034.63	867.90	0.33	2.00
1	49953.	31080.00	458.88	483.89	473.70	484.56	0.001252	8.61	6942.15	1481.76	0.31	1.83
1	49953.	46330.00	458.88	485.69	476.94	486.68	0.001865	11.03	9756.24	1659.06	0.38	2.93
1	49988. STATE HIGHWAY 18BR D	15500.00	458.88	477.14	469.52	477.83	0.001969	7.73	2659.78	228.44	0.33	1.75
1	49988. STATE HIGHWAY 18BR D	25270.00	458.88	481.75	472.64	482.62	0.002053	8.95	3884.07	301.36	0.28	2.20
1	49988. STATE HIGHWAY 18BR D	31080.00	458.88	483.80	474.02	484.70	0.002122	9.17	4539.31	349.88	0.27	2.43
1	49988. STATE HIGHWAY 18BR D	46330.00	458.88	485.72	477.48	486.71	0.002536	10.82	7949.97	1486.49	0.27	3.08
1	49988. STATE HIGHWAY 18BR U	15500.00	459.38	477.21	470.93	477.95	0.002700	7.82	2400.46	204.61	0.34	1.92
1	49988. STATE HIGHWAY 18BR U	25270.00	459.38	481.86	473.57	482.72	0.002658	8.66	3780.27	348.51	0.28	2.23
1	49988. STATE HIGHWAY 18BR U	31080.00	459.38	483.98	474.87	484.80	0.002653	8.66	4550.15	388.08	0.26	2.36
1	49988. STATE HIGHWAY 18BR U	46330.00	459.38	485.68	478.13	487.01	0.004026	11.41	6156.80	1174.27	0.32	3.74
1	50074.	15500.00	459.38	477.33	470.83	478.10	0.001715	7.99	2522.26	215.40	0.34	1.77
1	50074.	25270.00	459.38	481.93	473.55	482.93	0.001784	9.56	3986.97	941.46	0.36	2.34
1	50074.	31080.00	459.38	484.53	474.87	485.00	0.000967	7.59	8479.59	1053.77	0.27	1.42
1	50074.	46330.00	459.38	486.59	477.87	487.26	0.001326	9.39	11310.02	1772.42	0.32	2.12
1	50162.	15500.00	459.88	477.61	471.08	478.28	0.001604	7.66	2917.59	555.60	0.33	1.63
1	50162.	25270.00	459.88	482.52	473.62	483.17	0.001269	8.09	4825.08	1132.72	0.31	1.67
1	50162.	31080.00	459.88	484.80	473.91	485.12	0.000736	6.58	10144.41	1241.91	0.24	1.07
1	50162.	46330.00	459.88	487.00	478.74	487.43	0.000935	7.87	13199.30	1810.16	0.27	1.49

HEC-RAS Plan: Multiple River: Big_Bear Reach: 1 (Continued)

[illegible]

HEC-RAS Plan: Multiple River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	54250.	42490.00	465.53	494.51		495.90	0.002193	11.04	6147.00	536.07	0.38	3.53
1	54695.	14540.00	467.10	485.33		485.90	0.001283	6.59	2749.17	243.54	0.29	1.23
1	54695.	24890.00	467.10	489.90		490.74	0.001413	8.20	3925.05	271.75	0.32	1.75
1	54695.	28800.00	467.10	492.29		493.13	0.001230	8.24	4594.60	286.77	0.30	1.71
1	54695.	42470.00	467.10	495.46		496.74	0.001619	10.31	5532.92	308.16	0.36	2.56
1	55211.	14540.00	467.55	486.10		486.68	0.001795	6.92	2691.78	248.32	0.29	1.90
1	55211.	24890.00	467.55	490.81		491.58	0.001833	8.20	3923.77	274.22	0.31	2.46
1	55211.	28800.00	467.55	493.10		493.86	0.001605	8.19	4569.94	288.46	0.29	2.38
1	55211.	42470.00	467.55	496.60		497.67	0.001961	9.90	5610.20	307.69	0.33	3.32
1	55550.	14540.00	468.30	486.69		487.19	0.001285	6.79	2947.35	257.48	0.29	1.29
1	55550.	24890.00	468.30	491.41		492.12	0.001377	8.23	4227.72	284.98	0.31	1.75
1	55550.	28800.00	468.30	493.63		494.34	0.001241	8.33	4873.50	298.46	0.30	1.74
1	55550.	42470.00	468.30	497.24		498.26	0.001519	10.10	5990.09	319.06	0.34	2.44
1	55975.	14290.00	468.60	487.20		487.89	0.001798	7.46	2521.09	248.83	0.33	1.62
1	55975.	24390.00	468.60	491.82		492.99	0.002252	9.91	4681.59	1166.54	0.39	2.62
1	55975.	28140.00	468.60	494.27		494.88	0.001278	8.05	8534.15	1863.93	0.30	1.66
1	55975.	41440.00	468.60	498.48		498.71	0.000558	5.96	17142.13	2164.92	0.20	0.86
1	56541.	14290.00	469.10	488.30		488.96	0.001971	7.14	2522.05	238.97	0.32	1.79
1	56541.	24390.00	469.10	493.27		494.26	0.002195	9.07	4569.29	786.47	0.35	2.63
1	56541.	28140.00	469.10	494.95		495.83	0.001898	8.89	6080.94	1053.26	0.33	2.46
1	56541.	41440.00	469.10	498.70		499.26	0.001274	8.08	10878.29	1347.17	0.28	1.93
1	57177.	14290.00	469.60	489.59	482.71	490.21	0.002075	7.02	2551.15	334.99	0.31	2.01
1	57177.	24390.00	469.60	494.75	486.42	495.65	0.002247	8.78	4227.63	725.39	0.33	2.87
1	57177.	28140.00	469.60	496.21	487.24	497.06	0.002054	8.76	5041.71	817.53	0.32	2.80
1	57177.	41440.00	469.60	499.54	489.75	500.11	0.001494	8.18	9743.55	1374.01	0.28	2.33
1	57811.	14290.00	469.49	490.73		491.29	0.001424	6.79	2942.65	272.76	0.28	1.53
1	57811.	24390.00	469.49	496.05		496.79	0.001439	8.10	4604.46	401.43	0.29	2.00
1	57811.	28140.00	469.49	497.33		498.22	0.001628	8.93	5291.26	626.74	0.32	2.38
1	57811.	41440.00	469.49	500.23		501.31	0.001902	10.38	7363.72	779.11	0.35	3.11
1	58125.	14290.00	471.50	491.23		491.98	0.003021	7.37	2322.95	247.47	0.36	2.37
1	58125.	24390.00	471.50	496.47		497.47	0.002668	8.66	3859.25	462.74	0.36	2.93
1	58125.	28140.00	471.50	497.87		498.89	0.002590	8.96	4627.12	608.72	0.36	3.06
1	58125.	41440.00	471.50	500.89		502.03	0.002662	9.99	6739.49	845.49	0.37	3.63
1	58461.	14290.00	472.60	492.07		492.95	0.002548	7.87	2192.39	248.21	0.36	2.20
1	58461.	24390.00	472.60	497.35		498.24	0.001959	8.48	4577.23	593.98	0.34	2.31
1	58461.	28140.00	472.60	498.75		499.65	0.001888	8.71	5453.22	662.92	0.33	2.38
1	58461.	41440.00	472.60	501.80		502.81	0.002005	9.82	7734.35	869.84	0.35	2.89
1	58698.	14290.00	471.52	492.75		493.60	0.002957	7.40	1932.19	161.55	0.38	2.09
1	58698.	24390.00	471.52	497.87		498.72	0.002078	7.83	4036.35	540.16	0.33	2.08
1	58698.	28140.00	471.52	499.27		500.10	0.001912	7.92	4824.97	590.96	0.32	2.07
1	58698.	41440.00	471.52	502.31		503.28	0.001996	8.95	6884.24	767.90	0.34	2.52
1	58849.	14260.00	471.20	492.90		494.19	0.003114	9.12	1603.80	204.64	0.42	2.51
1	58849.	24460.00	471.20	497.90		499.21	0.002629	9.88	3505.56	527.55	0.41	2.71
1	58849.	28140.00	471.20	499.31		500.53	0.002351	9.81	4274.09	556.72	0.39	2.61
1	58849.	41300.00	471.20	502.38		503.73	0.002399	10.91	6197.27	691.16	0.40	3.07
1	58903.	14260.00	471.69	493.06		494.43	0.004491	9.46	1623.99	235.43	0.50	2.90
1	58903.	24460.00	471.69	498.32		499.42	0.002587	9.15	3617.53	518.37	0.40	2.40
1	58903.	28140.00	471.69	499.70		500.72	0.002279	9.07	4350.84	554.70	0.38	2.30
1	58903.	41300.00	471.69	502.81		503.92	0.002198	9.94	6309.49	688.64	0.39	2.62
1	58921. GOLF COURSE BR D	14260.00	471.69	493.15	486.70	494.49	0.004538	9.37	1644.00	240.32	0.35	2.87
1	58921. GOLF COURSE BR D	24460.00	471.69	498.84	492.76	499.57	0.005380	7.59	3846.23	506.26	0.23	2.18
1	58921. GOLF COURSE BR D	28140.00	471.69	499.70	494.18	500.72		6.53	4949.53	554.50	0.23	
1	58921. GOLF COURSE BR D	41300.00	471.69	502.81	497.99	503.92		6.80	7128.40	688.64	0.21	
1	58921. GOLF COURSE BR U	14260.00	473.15	493.17	486.49	494.55	0.004031	9.44	1548.01	191.07	0.48	2.82
1	58921. GOLF COURSE BR U	24460.00	473.15	498.97	491.23	499.64	0.005313	7.33	3958.87	508.22	0.23	2.06
1	58921. GOLF COURSE BR U	28140.00	473.15	499.88	493.16	500.83		6.40	4982.00	553.55	0.22	
1	58921. GOLF COURSE BR U	41300.00	473.15	503.01	498.06	504.06		6.63	7163.37	703.54	0.21	
1	58938.	14260.00	473.15	493.25	486.47	494.61	0.003971	9.38	1562.87	197.04	0.48	2.78
1	58938.	24460.00	473.15	498.89	491.12	499.81	0.002205	8.48	3958.65	530.37	0.37	2.06
1	58938.	28140.00	473.15	499.88	493.27	500.83	0.002176	8.77	4494.74	553.55	0.37	2.16
1	58938.	41300.00	473.15	503.01	497.62	504.06	0.002096	9.63	6467.73	703.54	0.38	2.46
1	59031.	14260.00	472.29	493.72		494.95	0.002679	8.93	1708.68	245.08	0.40	2.34
1	59031.	24460.00	472.29	499.00		500.09	0.001939	9.24	3821.68	514.11	0.36	2.27
1	59031.	28140.00	472.29	499.97		501.12	0.001992	9.66	4338.87	546.62	0.37	2.45
1	59031.	41300.00	472.29	503.13		504.31	0.001950	10.47	6218.14	635.05	0.37	2.74
1	59366. D	14260.00	474.40	495.13		495.51	0.000880	6.15	3742.23	466.48	0.24	1.01
1	59366. D	24460.00	474.40	500.17		500.53	0.000705	6.41	6240.53	532.71	0.23	1.02
1	59366. D	28140.00	474.40	501.19		501.58	0.000750	6.79	6788.97	546.21	0.24	1.13
1	59366. D	41300.00	474.40	504.29		504.81	0.000922	8.12	8591.19	631.56	0.27	1.55
1	59463.	14260.00	472.60	495.13		495.64	0.000974	6.29	3087.89	443.04	0.28	0.92
1	59463.	24460.00	472.60	500.16		500.63	0.000722	6.52	5488.47	509.56	0.25	0.90
1	59463.	28140.00	472.60	501.17		501.69	0.000782	7.00	6017.72	553.16	0.26	1.02
1	59463.	41300.00	472.60	504.28		504.94	0.000879	8.12	7806.04	606.76	0.29	1.31
1	59554.	14260.00	472.32	495.07		495.82	0.001490	6.99	2172.22	293.60	0.33	1.19
1	59554.	24460.00	472.32	500.08		500.77	0.001066	7.28	4467.59	521.88	0.30	1.17
1	59554.	28140.00	472.32	501.11		501.83	0.001076	7.57	5010.17	534.37	0.30	1.24
1	59554.	41300.00	472.32	504.24		505.08	0.001109	8.48	6845.80	616.99	0.31	1.48
1	59619.	14260.00	471.62	495.42		495.91	0.000805	6.12	3025.53	425.80	0.26	0.84
1	59619.	24460.00	471.62	500.37		500.85	0.000670	6.58	5483.62	545.25	0.24	0.89
1	59619.	28140.00	471.62	501.41		501.91	0.000688	6.86	6052.35	553.91	0.25	0.96
1	59619.	41300.00	471.62	504.51		505.16	0.000809	8.08	7845.46	657.07	0.27	1.27
1	59690.	14260.00	471									

HEC-RAS Plan: Multiple River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	60305.	14260.00	472.40	496.40		496.78	0.000597	4.96	3148.91	483.19	0.22	0.57
1	60305.	24460.00	472.40	501.00		501.41	0.000543	5.59	6058.87	715.29	0.22	0.66
1	60305.	28140.00	472.40	502.02		502.46	0.000562	5.87	6809.79	755.31	0.22	0.72
1	60305.	41300.00	472.40	505.21		505.71	0.000589	6.59	9390.50	852.24	0.23	0.87
1	60457.	14260.00	472.40	496.41		496.93	0.000883	5.89	2675.07	401.30	0.26	0.81
1	60457.	24460.00	472.40	500.98		501.56	0.000791	6.62	4823.57	553.60	0.26	0.94
1	60457.	28140.00	472.40	501.99		502.62	0.000818	6.96	5411.66	621.83	0.27	1.02
1	60457.	41300.00	472.40	505.18		505.87	0.000835	7.73	7697.93	790.13	0.28	1.20
1	60498.	14260.00	472.60	496.41		497.01	0.001170	6.35	2582.75	439.98	0.30	0.97
1	60498.	24460.00	472.60	501.04		501.60	0.000887	6.67	4985.27	642.65	0.27	0.98
1	60498.	28140.00	472.60	502.08		502.66	0.000882	6.90	5675.95	677.25	0.27	1.03
1	60498.	41300.00	472.60	505.29		505.92	0.000874	7.59	8045.48	821.79	0.28	1.18
1	60514. GOLF COURSE BR D	14260.00	472.60	496.43	486.60	497.02	0.001338	6.33	2585.45	437.84	0.22	1.00
1	60514. GOLF COURSE BR D	24460.00	472.60	501.23	490.68	501.65	0.001673	5.85	5075.85	641.74	0.17	0.94
1	60514. GOLF COURSE BR D	28140.00	472.60	502.35	491.88	502.73	0.002072	5.40	5799.49	660.22	0.16	0.88
1	60514. GOLF COURSE BR D	41300.00	472.60	505.29	497.83	505.92		5.08	8641.69	821.79	0.16	
1	60514. GOLF COURSE BR U	14260.00	472.60	496.33	486.90	497.14	0.001584	7.29	2149.04	365.68	0.34	1.29
1	60514. GOLF COURSE BR U	24460.00	472.60	501.17	491.22	501.74	0.002183	6.76	4394.22	553.06	0.20	1.25
1	60514. GOLF COURSE BR U	28140.00	472.60	502.31	492.49	502.82	0.002806	6.22	5050.87	615.12	0.19	1.17
1	60514. GOLF COURSE BR U	41300.00	472.60	505.31	499.09	506.08		5.63	7859.27	797.18	0.18	
1	60531.	14260.00	472.60	496.36	486.88	497.17	0.001574	7.27	2158.70	369.59	0.34	1.28
1	60531.	24460.00	472.60	501.12	491.21	501.84	0.001164	7.49	4392.23	558.04	0.31	1.25
1	60531.	28140.00	472.60	502.23	492.48	502.95	0.001139	7.70	5046.63	638.29	0.31	1.29
1	60531.	41300.00	472.60	505.31	498.67	506.08	0.001108	8.37	7288.01	797.18	0.31	1.45
1	60571.	14260.00	472.50	496.25		497.42	0.002122	9.13	2002.24	425.71	0.40	1.95
1	60571.	24460.00	472.50	501.24		501.90	0.001130	8.00	5049.70	697.39	0.31	1.36
1	60571.	28140.00	472.50	502.42		503.03	0.001033	7.93	5887.95	726.10	0.30	1.32
1	60571.	41300.00	472.50	505.59		506.18	0.000930	8.23	8314.50	803.76	0.29	1.36
1	60660.	14260.00	472.60	497.01		497.62	0.001142	7.14	3046.90	590.13	0.30	1.15
1	60660.	24460.00	472.60	501.61		502.01	0.000705	6.57	6242.02	746.00	0.25	0.90
1	60660.	28140.00	472.60	502.74		503.13	0.000665	6.60	7097.30	763.48	0.24	0.90
1	60660.	41300.00	472.60	505.85		506.26	0.000634	7.01	9524.60	798.68	0.24	0.97
1	60854.	14260.00	472.80	497.00		497.99	0.001579	8.64	2426.28	524.69	0.36	1.67
1	60854.	24460.00	472.80	501.60		502.23	0.000999	7.98	5111.35	621.77	0.29	1.32
1	60854.	28140.00	472.80	502.73		503.34	0.000954	8.05	5824.02	640.10	0.29	1.32
1	60854.	41300.00	472.80	505.83		506.47	0.000934	8.64	7895.94	695.31	0.29	1.46
1	60953.	14260.00	472.90	497.17		498.16	0.001840	8.35	2198.69	443.71	0.37	1.64
1	60953.	24460.00	472.90	501.64		502.37	0.001261	8.16	4741.78	680.00	0.32	1.45
1	60953.	28140.00	472.90	502.78		503.47	0.001157	8.11	5534.27	700.85	0.31	1.40
1	60953.	41300.00	472.90	505.92		506.58	0.001037	8.41	7867.71	774.53	0.30	1.44
1	61052.	14260.00	473.00	497.35		498.36	0.002206	8.59	2150.88	419.40	0.40	1.80
1	61052.	24460.00	473.00	501.73		502.53	0.001523	8.54	4540.80	701.63	0.35	1.62
1	61052.	28140.00	473.00	502.87		503.60	0.001365	8.42	5356.32	727.62	0.33	1.54
1	61052.	41300.00	473.00	506.01		506.68	0.001147	8.52	7767.21	800.70	0.31	1.51
1	61112.	14260.00	473.30	497.96		498.57	0.001044	6.63	2787.67	508.63	0.27	1.01
1	61112.	24460.00	473.30	502.13		502.67	0.000893	7.03	5703.29	874.42	0.26	1.06
1	61112.	28140.00	473.30	503.23		503.73	0.000832	7.00	6684.89	912.91	0.25	1.04
1	61112.	41300.00	473.30	506.35		506.80	0.000722	7.08	9659.65	985.46	0.24	1.02
1	61113. GOLF COURSE BR D	14260.00	473.30	498.03	485.54	498.59	0.001537	6.43	2813.09	500.70	0.21	1.06
1	61113. GOLF COURSE BR D	24460.00	473.30	502.47	490.36	502.76	0.001782	5.11	5946.52	884.86	0.14	0.78
1	61113. GOLF COURSE BR D	28140.00	473.30	503.54	491.85	503.81	0.001546	4.91	6914.47	923.05	0.14	0.71
1	61113. GOLF COURSE BR D	41300.00	473.30	506.58	499.70	506.86	0.001163	4.62	9837.44	991.00	0.13	0.60
1	61113. GOLF COURSE BR U	14260.00	473.30	498.03	485.54	498.63	0.001603	6.56	2636.37	405.74	0.22	1.11
1	61113. GOLF COURSE BR U	24460.00	473.30	502.44	490.36	502.83	0.002352	5.86	5223.44	831.05	0.16	1.03
1	61113. GOLF COURSE BR U	28140.00	473.30	503.51	491.85	503.87	0.002034	5.63	6144.67	881.53	0.15	0.93
1	61113. GOLF COURSE BR U	41300.00	473.30	506.57	499.70	506.90	0.001491	5.23	8971.43	952.02	0.14	0.77
1	61139.	14260.00	473.30	498.02	485.50	498.66	0.001059	6.69	2646.74	419.57	0.28	1.03
1	61139.	24460.00	473.30	502.33	490.33	502.96	0.000973	7.38	5191.53	816.78	0.27	1.17
1	61139.	28140.00	473.30	503.40	491.83	504.01	0.000946	7.50	6098.99	875.20	0.27	1.19
1	61139.	41300.00	473.30	506.47	499.17	507.02	0.000840	7.67	8933.99	950.71	0.26	1.19
1	61183.	14260.00	473.42	498.23		498.74	0.000904	6.01	2982.58	466.64	0.26	0.84
1	61183.	24460.00	473.42	502.56		503.05	0.000759	6.45	5727.05	779.95	0.25	0.89
1	61183.	28140.00	473.42	503.60		504.09	0.000755	6.65	6568.00	856.18	0.25	0.93
1	61183.	41300.00	473.42	506.58		507.07	0.000724	7.10	9246.49	931.65	0.25	1.02
1	61262.	14260.00	473.62	498.17		498.90	0.001646	7.24	2529.54	483.80	0.35	1.29
1	61262.	24460.00	473.62	502.61		503.12	0.001026	6.90	5431.50	833.06	0.29	1.07
1	61262.	28140.00	473.62	503.64		504.16	0.001007	7.09	6316.00	880.00	0.29	1.11
1	61262.	41300.00	473.62	506.65		507.13	0.000855	7.20	9042.34	932.60	0.27	1.09
1	61326.	14260.00	473.82	498.37		498.99	0.001186	6.60	2621.10	472.47	0.30	1.04
1	61326.	24460.00	473.82	502.66		503.18	0.000871	6.70	5602.21	841.84	0.27	0.98
1	61326.	28140.00	473.82	503.72		504.22	0.000820	6.73	6516.10	874.65	0.26	0.97
1	61326.	41300.00	473.82	506.70		507.18	0.000745	7.03	9188.45	923.39	0.26	1.01
1	61379.	14260.00	473.82	498.65		499.07	0.000796	5.35	3130.71	501.88	0.25	0.68
1	61379.	24460.00	473.82	502.83		503.24	0.000653	5.74	5963.07	782.07	0.23	0.72
1	61379.	28140.00	473.82	503.84		504.27	0.000678	6.05	6782.79	846.34	0.24	0.79
1	61379.	41300.00	473.82	506.75		507.22	0.000683	6.66	9348.22	951.33	0.25	0.91
1	61425.	14260.00	474.32	498.75		499.11	0.000668	5.00	3474.34	525.66	0.23	0.59
1	61425.	24460.00	474.32	502.89		503.27	0.000596	5.55	6256.07	791.30	0.22	0.67
1	61425.	28140.00	474.32	503.93		504.31	0.000589	5.72	7086.28	812.76	0.22	0.70
1	61425.	41300.00	474.32	506.83		507.26	0.000603	6.32	9516.36	861.73	0.23	0.82
1	61472.	14260.00	475.02	498.59		499.24	0.001180	6.53	2430.70	407		

HEC-RAS Plan: Multiple River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	61639.	28140.00	476.80	503.76		504.72	0.001705	9.11	4957.37	741.69	0.37	1.84
1	61639.	41300.00	476.80	506.70		507.62	0.001522	9.50	7270.66	819.88	0.36	1.90
1	61739.	14260.00	477.83	498.59		499.94	0.002689	9.56	1927.27	522.08	0.44	2.22
1	61739.	24460.00	477.83	503.07		503.89	0.001565	8.73	4822.53	733.16	0.35	1.69
1	61739.	28140.00	477.83	504.13		504.90	0.001458	8.73	5615.75	759.11	0.34	1.66
1	61739.	41300.00	477.83	507.01		507.78	0.001369	9.26	7900.45	839.08	0.34	1.78
1	61836.	14260.00	477.59	499.00		500.21	0.002610	8.94	1850.74	513.86	0.43	1.99
1	61836.	24460.00	477.59	503.25		504.04	0.001558	8.32	4631.76	706.90	0.35	1.57
1	61836.	28140.00	477.59	504.28		505.04	0.001468	8.39	5387.72	744.69	0.34	1.56
1	61836.	41300.00	477.59	507.15		507.91	0.001352	8.86	7656.99	831.36	0.34	1.66
1	61940.	14260.00	477.86	499.62		500.48	0.002059	7.69	2261.54	471.00	0.39	1.49
1	61940.	24460.00	477.86	503.43		504.19	0.001535	7.95	4493.25	654.06	0.35	1.46
1	61940.	28140.00	477.86	504.42		505.19	0.001482	8.13	5164.96	696.40	0.35	1.50
1	61940.	41300.00	477.86	507.26		508.06	0.001390	8.72	7230.43	762.98	0.34	1.64
1	62100.	14260.00	477.98	500.08		500.74	0.001176	7.59	2893.21	490.23	0.31	1.27
1	62100.	24460.00	477.98	503.77		504.41	0.001089	8.24	5156.06	682.91	0.31	1.41
1	62100.	28140.00	477.98	504.77		505.40	0.001059	8.37	5853.03	707.42	0.31	1.44
1	62100.	41300.00	477.98	507.56		508.26	0.001103	9.21	8041.12	882.00	0.32	1.68
1	62207.	14260.00	477.66	499.73		501.46	0.002941	10.75	1431.82	114.80	0.46	2.70
1	62207.	24460.00	477.66	502.82	498.13	505.77	0.004270	14.50	2255.92	486.08	0.57	4.64
1	62207.	28140.00	477.66	503.77	499.45	506.80	0.004340	15.07	2753.68	563.38	0.58	4.94
1	62207.	41300.00	477.66	506.88	506.66	509.34	0.003624	15.12	5133.66	931.23	0.54	4.75
1	62220. GOLF COURSE MAINBR D	14260.00	477.66	499.77	493.65	501.54	0.007808	10.91	1388.56	111.91	0.47	3.52
1	62220. GOLF COURSE MAINBR D	24460.00	477.66	503.82	498.69	505.77		11.92	3365.56	370.99	0.43	
1	62220. GOLF COURSE MAINBR D	28140.00	477.66	504.56	500.21	506.80		11.73	4275.07	448.16	0.43	
1	62220. GOLF COURSE MAINBR D	41300.00	477.66	506.89	506.53	509.34		10.55	6845.36	932.87	0.34	
1	62220. GOLF COURSE MAINBR U	14260.00	477.66	500.07	493.75	501.66	0.006676	10.49	1496.20	156.44	0.44	3.19
1	62220. GOLF COURSE MAINBR U	24460.00	477.66	504.41	498.64	505.79		11.80	3538.06	486.83	0.37	
1	62220. GOLF COURSE MAINBR U	28140.00	477.66	505.63	501.76	506.82		11.63	4396.37	791.72	0.31	
1	62220. GOLF COURSE MAINBR U	41300.00	477.66	508.33	506.26	509.41		10.50	6793.10	940.13	0.24	
1	62239.	14260.00	477.66	500.29	493.38	501.74	0.002423	10.05	1768.14	375.50	0.42	2.32
1	62239.	24460.00	477.66	504.41	498.09	505.80	0.002177	10.96	3898.04	718.65	0.41	2.58
1	62239.	28140.00	477.66	505.63	501.83	506.83	0.001913	10.66	4830.32	791.72	0.39	2.39
1	62239.	41300.00	477.66	508.33	505.33	509.41	0.001766	11.03	7163.46	940.13	0.38	2.47
1	62323.	14260.00	480.04	501.78		502.17	0.000793	5.51	3778.88	717.45	0.25	0.71
1	62323.	24460.00	480.04	505.86		506.19	0.000595	5.59	7010.92	863.97	0.22	0.68
1	62323.	28140.00	480.04	506.82		507.16	0.000600	5.80	7857.12	906.83	0.23	0.72
1	62323.	41300.00	480.04	509.28		509.69	0.000676	6.65	10212.60	1015.94	0.25	0.91
1	62380. E	14260.00	480.09	501.97		502.22	0.000480	4.70	4764.85	735.45	0.20	0.50
1	62380. E	24460.00	480.09	505.98		506.23	0.000421	5.06	8110.87	913.70	0.19	0.54
1	62380. E	28140.00	480.09	506.94		507.20	0.000429	5.26	8999.86	941.40	0.20	0.57
1	62380. E	41300.00	480.09	509.41		509.74	0.000506	6.13	11427.90	1026.02	0.22	0.75
1	62745.	14260.00	480.79	502.26		502.37	0.000317	3.59	6664.97	1009.21	0.16	0.30
1	62745.	24460.00	480.79	506.25		506.35	0.000233	3.57	10859.35	1096.16	0.14	0.27
1	62745.	28140.00	480.79	507.22		507.33	0.000235	3.71	11932.97	1122.48	0.14	0.29
1	62745.	41300.00	480.79	509.74		509.89	0.000280	4.37	14875.89	1231.03	0.16	0.39
1	63103.	9950.00	481.81	502.37	499.14	502.55	0.000797	4.50	3964.04	944.73	0.23	0.53
1	63103.	16970.00	481.81	506.35	500.83	506.45	0.000376	3.74	7549.78	1237.53	0.17	0.33
1	63103.	20220.00	481.81	507.31	501.23	507.43	0.000382	3.92	8460.26	1260.25	0.17	0.36
1	63103.	30310.00	481.81	509.85	502.22	510.00	0.000408	4.45	10939.61	1333.29	0.18	0.44
1	63368.	9950.00	481.46	502.55	494.34	502.77	0.000846	4.91	3684.68	822.36	0.21	0.72
1	63368.	16970.00	481.46	506.43	500.87	506.57	0.000474	4.22	6876.01	1035.47	0.16	0.49
1	63368.	20220.00	481.46	507.40	501.41	507.55	0.000488	4.41	7724.02	1087.27	0.17	0.53
1	63368.	30310.00	481.46	509.95	502.60	510.12	0.000514	4.87	10058.81	1216.07	0.17	0.62
1	63593.	9950.00	483.05	502.50	498.53	503.18	0.001942	7.85	2115.43	527.07	0.37	1.52
1	63593.	16970.00	483.05	506.42	502.60	506.77	0.000952	6.50	4579.78	792.66	0.27	0.96
1	63593.	20220.00	483.05	507.40	503.10	507.75	0.000930	6.66	5302.06	833.51	0.27	0.99
1	63593.	30310.00	483.05	509.95	504.68	510.33	0.000881	7.06	7369.83	982.18	0.27	1.06
1	64080.	9950.00	482.68	503.47		503.95	0.001277	6.35	2585.26	638.76	0.30	1.00
1	64080.	16970.00	482.68	506.88		507.21	0.000844	5.99	4985.97	747.88	0.25	0.82
1	64080.	20220.00	482.68	507.84		508.18	0.000839	6.19	5715.88	766.32	0.26	0.86
1	64080.	30310.00	482.68	510.37		510.75	0.000841	6.76	7719.66	818.88	0.26	0.98
1	64705.	9950.00	484.90	504.39		504.60	0.000823	4.81	3134.11	512.76	0.23	0.59
1	64705.	16970.00	484.90	507.46		507.70	0.000723	5.17	4871.80	649.56	0.22	0.63
1	64705.	20200.00	484.90	508.41		508.67	0.000740	5.43	5501.98	674.97	0.23	0.69
1	64705.	30280.00	484.90	510.92		511.24	0.000776	6.08	7285.41	757.17	0.24	0.82
1	65384. F	9950.00	486.40	504.88		505.55	0.001880	7.40	1880.57	375.30	0.37	1.38
1	65384. F	16970.00	486.40	507.88		508.52	0.001601	7.88	3294.11	593.16	0.35	1.46
1	65384. F	20200.00	486.40	508.84		509.51	0.001634	8.28	3894.17	647.85	0.36	1.58
1	65384. F	30280.00	486.40	511.38		512.08	0.001577	8.95	5665.32	748.70	0.36	1.76
1	65620.	9950.00	487.08	505.57		506.05	0.002074	7.18	2458.67	569.96	0.37	1.35
1	65620.	16970.00	487.08	508.53		508.93	0.001500	7.09	4268.51	648.94	0.33	1.22
1	65620.	20200.00	487.08	509.52		509.92	0.001451	7.28	4918.80	678.04	0.32	1.26
1	65620.	30280.00	487.08	512.03		512.48	0.001411	7.92	6794.44	817.39	0.33	1.42
1	65692.	9950.00	488.88	505.84	497.93	506.16	0.000774	5.14	2868.70	477.30	0.24	0.64
1	65692.	16970.00	488.88	508.61	501.70	509.02	0.000877	6.17	4305.52	569.77	0.27	0.87
1	65692.	20200.00	488.88	509.56	502.34	510.03	0.000951	6.67	4880.30	646.86	0.28	1.00
1	65692.	30280.00	488.88	512.04	505.76	512.60	0.001053	7.67	6592.45	736.17	0.30	1.26
1	65721.	9950.00	488.62	505.74	501.75	506.32	0.002307	6.98	2276.72	434.72	0.36	1.56
1	65721.	16970.00	488.62	508.51	504.81	509.19	0.002324	8.06	3606.71	525.49	0.37	1.94
1	65721.	20200.00	488.62	509.46	505.49	510.21	0.002421	8.58	4128.08			

HEC-RAS Plan: Multiple River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	65874.	20200.00	492.19	509.85	506.08	510.56	0.003052	9.58	4287.08	618.05	0.43	2.69
1	65874.	30280.00	492.19	512.38	507.65	513.12	0.002850	10.25	5922.40	674.81	0.43	2.92
1	66091.	9950.00	492.24	507.11	502.91	507.40	0.001971	5.55	3018.15	566.15	0.30	1.23
1	66091.	16970.00	492.24	509.66	504.80	510.02	0.001937	6.38	4562.05	638.80	0.31	1.50
1	66091.	20200.00	492.24	510.72	504.80	511.09	0.001866	6.60	5252.72	665.61	0.31	1.57
1	66091.	30280.00	492.24	513.19	507.21	513.64	0.001935	7.50	6977.35	736.05	0.33	1.91
1	66350. CONFLUENCE OF TR	9950.00	491.44	507.50		507.85	0.001456	5.74	3241.80	713.84	0.29	1.03
1	66350. CONFLUENCE OF TR	16970.00	491.44	510.07		510.44	0.001388	6.37	5164.61	785.41	0.29	1.20
1	66350. CONFLUENCE OF TR	20200.00	491.44	511.13		511.50	0.001360	6.61	6020.99	838.93	0.29	1.26
1	66350. CONFLUENCE OF TR	30280.00	491.44	513.65		514.05	0.001341	7.24	8228.83	903.83	0.30	1.44
1	66867.	9850.00	491.75	508.35		508.82	0.002311	6.69	2757.87	638.00	0.35	1.46
1	66867.	16740.00	491.75	510.87		511.32	0.002026	7.17	4396.81	670.54	0.34	1.57
1	66867.	19920.00	491.75	511.90		512.35	0.001937	7.36	5104.55	702.59	0.34	1.61
1	66867.	29800.00	491.75	514.39		514.89	0.001869	8.02	6892.23	731.85	0.34	1.82
1	67141.	9850.00	492.00	509.01		509.15	0.000669	3.72	4621.20	824.76	0.20	0.44
1	67141.	16740.00	492.00	511.46		511.63	0.000708	4.36	6683.99	853.28	0.21	0.57
1	67141.	19920.00	492.00	512.47		512.66	0.000709	4.58	7553.74	865.70	0.21	0.62
1	67141.	29800.00	492.00	514.97		515.20	0.000765	5.29	9782.48	909.59	0.23	0.78
1	67952.	9850.00	492.09	509.60		509.72	0.000845	3.68	4922.74	963.96	0.20	0.53
1	67952.	16740.00	492.09	512.06		512.19	0.000779	4.05	7340.50	1002.09	0.20	0.61
1	67952.	19920.00	492.09	513.07		513.21	0.000764	4.22	8370.29	1035.94	0.20	0.64
1	67952.	29800.00	492.09	515.61		515.77	0.000748	4.65	11030.48	1068.88	0.20	0.74
1	68576.	9830.00	493.14	510.09		510.20	0.000815	3.85	6164.68	1507.82	0.19	0.57
1	68576.	16700.00	493.14	512.51		512.60	0.000650	3.88	9969.30	1637.23	0.18	0.54
1	68576.	19860.00	493.14	513.51		513.60	0.000600	3.90	11636.53	1685.33	0.17	0.54
1	68576.	29680.00	493.14	516.04		516.13	0.000525	4.03	15957.31	1730.53	0.17	0.55
1	69053.	9830.00	492.98	510.56		510.67	0.001310	4.28	5680.25	1489.09	0.23	0.75
1	69053.	16700.00	492.98	512.87		512.96	0.000947	4.14	9194.87	1574.05	0.20	0.66
1	69053.	19860.00	492.98	513.84		513.92	0.000844	4.10	10738.97	1606.67	0.19	0.63
1	69053.	29680.00	492.98	516.32		516.41	0.000717	4.21	14805.02	1680.89	0.18	0.63
1	69831.	9830.00	495.03	511.74		511.87	0.001910	4.75	5104.40	1530.34	0.26	1.09
1	69831.	16700.00	495.03	513.72		513.83	0.001399	4.56	8254.33	1641.64	0.23	0.96
1	69831.	19860.00	495.03	514.60		514.70	0.001236	4.49	9704.20	1675.17	0.22	0.90
1	69831.	29680.00	495.03	516.94		517.04	0.000979	4.45	13699.84	1751.65	0.20	0.84
1	70243. G	9830.00	495.91	512.40		512.57	0.001534	4.60	4882.20	1375.52	0.24	0.99
1	70243. G	16700.00	495.91	514.25		514.41	0.001423	4.90	7499.06	1452.22	0.24	1.07
1	70243. G	19860.00	495.91	515.07		515.22	0.001319	4.91	8694.49	1472.67	0.23	1.05
1	70243. G	29680.00	495.91	517.33		517.48	0.001153	5.08	12198.74	1610.12	0.22	1.07
1	70815.	9830.00	495.38	513.43		513.70	0.002551	6.12	3921.12	1105.15	0.29	1.73
1	70815.	16700.00	495.38	515.22		515.47	0.002411	6.47	5928.71	1154.08	0.29	1.85
1	70815.	19860.00	495.38	515.99		516.25	0.002454	6.75	6870.86	1267.31	0.30	1.98
1	70815.	29680.00	495.38	518.13		518.36	0.002100	6.79	9690.36	1370.48	0.28	1.92
1	71071.	9830.00	497.14	514.07		514.24	0.001653	4.48	4586.11	1233.31	0.25	0.97
1	71071.	16700.00	497.14	515.81		515.99	0.001664	5.00	6822.06	1328.03	0.26	1.14
1	71071.	19860.00	497.14	516.58		516.76	0.001592	5.11	7861.68	1358.71	0.26	1.17
1	71071.	29680.00	497.14	518.63		518.82	0.001461	5.42	10721.75	1426.07	0.25	1.25
1	72110. CONFLUENCE OF TR	9830.00	498.70	516.19		516.51	0.003047	6.72	3637.26	1080.32	0.35	1.82
1	72110. CONFLUENCE OF TR	16700.00	498.70	517.91		518.21	0.002941	7.25	5570.62	1164.86	0.35	2.02
1	72110. CONFLUENCE OF TR	19860.00	498.70	518.60		518.90	0.002856	7.40	6389.55	1199.46	0.35	2.07
1	72110. CONFLUENCE OF TR	29680.00	498.70	520.50		520.81	0.002720	7.87	8814.23	1349.37	0.35	2.24
1	72818.	9830.00	499.83	517.84		518.05	0.001675	5.32	4502.66	1158.19	0.27	1.10
1	72818.	16700.00	499.83	519.56		519.79	0.001801	6.05	6571.15	1255.32	0.29	1.36
1	72818.	19860.00	499.83	520.23		520.47	0.001821	6.28	7417.96	1277.96	0.30	1.45
1	72818.	29680.00	499.83	522.09		522.34	0.001818	6.82	9816.27	1324.91	0.30	1.63
1	73209.	9870.00	499.38	518.52		518.74	0.001798	5.22	4261.15	1125.53	0.28	1.09
1	73209.	16620.00	499.38	520.28		520.51	0.001816	5.81	6296.25	1175.43	0.29	1.29
1	73209.	19700.00	499.38	520.95		521.19	0.001820	6.03	7092.91	1185.24	0.29	1.36
1	73209.	29330.00	499.38	522.81		523.08	0.001872	6.69	9346.05	1256.35	0.31	1.60
1	73575.	9870.00	500.19	519.16	516.71	519.79	0.003431	8.47	2906.02	1094.16	0.39	2.65
1	73575.	16620.00	500.19	520.97	519.39	521.55	0.003600	9.38	5242.43	1391.15	0.41	3.13
1	73575.	19700.00	500.19	521.65	519.38	522.15	0.003277	9.20	6197.38	1403.16	0.39	2.97
1	73575.	29330.00	500.19	523.52	521.32	523.92	0.002759	9.04	8893.49	1487.10	0.37	2.77
1	73596. GLADE ROAD BR D	9870.00	500.19	518.22	517.15	520.84	0.021805	14.11	903.55	349.58	0.54	9.05
1	73596. GLADE ROAD BR D	16620.00	500.19	521.59	521.59	522.56	0.024074	11.40	2970.69	1210.47	0.30	6.74
1	73596. GLADE ROAD BR D	19700.00	500.19	522.26	522.26	522.85	0.021909	9.02	3832.79	1400.65	0.23	4.63
1	73596. GLADE ROAD BR D	29330.00	500.19	523.52	522.40	524.02	0.016542	8.32	5644.00	1474.10	0.21	3.82
1	73596. GLADE ROAD BR U	9870.00	500.19	521.46	517.15	521.85	0.009443	7.14	2794.86	1121.47	0.19	2.64
1	73596. GLADE ROAD BR U	16620.00	500.19	522.86	521.59	523.13	0.009395	6.08	4505.58	1315.31	0.15	2.08
1	73596. GLADE ROAD BR U	19700.00	500.19	522.97	521.87	523.32	0.012131	6.94	4641.19	1320.35	0.18	2.70
1	73596. GLADE ROAD BR U	29330.00	500.19	523.98	522.39	524.40	0.012773	7.46	6004.00	1380.60	0.19	3.05
1	73618.	9870.00	500.19	521.88	518.17	521.96	0.000591	3.94	6847.98	1321.05	0.17	0.54
1	73618.	16620.00	500.19	523.05	519.63	523.19	0.000965	5.26	8444.75	1391.63	0.22	0.95
1	73618.	19700.00	500.19	523.22	519.63	523.40	0.001260	6.05	8669.67	1397.97	0.25	1.25
1	73618.	29330.00	500.19	524.22	520.78	524.49	0.001823	7.53	10099.38	1444.13	0.30	1.90
1	73781.	9870.00	501.85	521.99		522.06	0.000514	3.05	6536.81	1036.37	0.15	0.41
1	73781.	16620.00	501.85	523.23		523.35	0.000894	4.27	7863.75	1126.75	0.19	0.77
1	73781.	19700.00	501.85	523.44		523.60	0.001171	4.93	8102.81	1132.18	0.22	1.03
1	73781.	29330.00	501.85	524.53		524.78	0.001739	6.29	9353.31	1170.81	0.28	1.63
1	73996.	9870.00	503.70	522.09		522.19	0.000701	3.47	5776.55	935.10	0.17	0.53
1	73996.	16620.00	503.70	523.40		523.57	0.001166	4.77	7021.78	974.38	0.22	0.98
1	73996.	19700.00	503.70									

HEC-RAS Plan: Multiple River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	75269.	9870.00	502.48	523.25		523.37	0.000671	3.91	5762.73	953.99	0.18	0.55
1	75269.	16620.00	502.48	525.17		525.34	0.000902	4.91	7665.42	1027.53	0.21	0.84
1	75269.	19700.00	502.48	525.80		525.99	0.001014	5.33	8315.16	1046.82	0.22	0.98
1	75269.	29330.00	502.48	527.73		527.99	0.001250	6.35	10395.45	1099.16	0.25	1.34
1	76025.	9870.00	504.12	523.72		523.82	0.000554	3.63	6668.74	1257.61	0.17	0.47
1	76025.	16620.00	504.12	525.79		525.92	0.000657	4.32	9371.49	1339.22	0.18	0.64
1	76025.	19700.00	504.12	526.49		526.63	0.000709	4.60	10312.90	1359.23	0.19	0.72
1	76025.	29330.00	504.12	528.58		528.74	0.000817	5.33	13269.39	1459.17	0.21	0.92
1	76885. H	9870.00	505.84	524.29		524.40	0.000861	4.00	6067.82	1335.64	0.20	0.61
1	76885. H	16620.00	505.84	526.43		526.55	0.000857	4.43	9059.56	1454.99	0.20	0.71
1	76885. H	19700.00	505.84	527.17		527.29	0.000889	4.66	10150.12	1489.67	0.21	0.77
1	76885. H	29330.00	505.84	529.33		529.47	0.000906	5.13	13515.73	1642.11	0.22	0.90
1	77780.	9870.00	507.47	525.16	522.87	525.28	0.001162	4.50	6111.44	1558.03	0.23	0.78
1	77780.	16620.00	507.47	527.26	523.73	527.36	0.001007	4.65	9386.89	1714.70	0.22	0.79
1	77780.	19700.00	507.47	528.02	523.99	528.13	0.001010	4.82	10625.09	1782.33	0.22	0.84
1	77780.	29330.00	507.47	530.16	524.86	530.27	0.000927	5.04	14907.57	1930.62	0.21	0.88
1	78876. I	9870.00	508.57	526.52		526.83	0.001669	5.28	3809.57	1049.62	0.28	1.09
1	78876. I	16620.00	508.57	528.51		528.84	0.001775	6.08	6056.39	1181.43	0.30	1.37
1	78876. I	19700.00	508.57	529.26		529.60	0.001754	6.27	6951.26	1188.21	0.30	1.43
1	78876. I	29330.00	508.57	531.32		531.67	0.001741	6.86	9433.64	1242.08	0.30	1.63
1	79644. CONFLUENCE OF TR	9870.00	512.81	527.94		528.13	0.001762	5.28	4465.77	1150.30	0.28	1.11
1	79644. CONFLUENCE OF TR	16620.00	512.81	529.93		530.11	0.001567	5.56	6890.68	1264.04	0.27	1.16
1	79644. CONFLUENCE OF TR	19670.00	512.81	530.66		530.84	0.001528	5.70	7821.89	1287.48	0.27	1.20
1	79644. CONFLUENCE OF TR	29320.00	512.81	532.68		532.87	0.001439	6.06	10481.61	1335.94	0.27	1.29
1	80429.	9870.00	511.50	529.09	522.77	529.27	0.001283	4.72	4192.07	814.11	0.24	0.86
1	80429.	16620.00	511.50	531.05	525.84	531.28	0.001474	5.61	5827.09	860.68	0.27	1.16
1	80429.	19670.00	511.50	531.77	525.84	532.03	0.001541	5.94	6453.97	896.26	0.28	1.27
1	80429.	29320.00	511.50	533.82	528.68	534.15	0.001845	7.09	8496.34	1052.22	0.31	1.74
1	80901.	9870.00	512.00	529.82	528.30	530.33	0.003591	7.39	2637.02	624.51	0.39	2.19
1	80901.	16610.00	512.00	531.86	529.56	532.42	0.003573	8.27	3963.30	767.90	0.41	2.58
1	80901.	19660.00	512.00	532.62	529.93	533.22	0.003718	8.76	4484.77	889.82	0.42	2.85
1	80901.	29280.00	512.00	534.82	531.21	535.43	0.003659	9.60	6863.56	1102.37	0.42	3.25
1	81320.	9870.00	511.72	530.96		531.23	0.001355	5.04	3388.48	644.38	0.26	0.97
1	81320.	16610.00	511.72	533.05		533.40	0.001598	6.09	4763.67	673.00	0.29	1.34
1	81320.	19660.00	511.72	533.86		534.25	0.001678	6.48	5326.14	717.70	0.29	1.48
1	81320.	29280.00	511.72	536.04		536.55	0.001970	7.68	7036.99	929.14	0.33	2.00
1	81788.	9870.00	511.87	531.64		532.06	0.002199	6.68	3048.78	676.33	0.32	1.66
1	81788.	16610.00	511.87	533.86		534.31	0.002308	7.56	4642.92	771.71	0.33	2.03
1	81788.	19660.00	511.87	534.71		535.18	0.002319	7.85	5321.25	814.20	0.34	2.15
1	81788.	29280.00	511.87	537.05		537.56	0.002420	8.75	7737.28	1164.88	0.35	2.55
1	82195. DALLAS/FORT WORT	9840.00	511.04	532.22	522.75	532.55	0.000725	4.86	3052.15	1097.94	0.22	0.68
1	82195. DALLAS/FORT WORT	16550.00	511.04	534.41	525.40	534.89	0.001016	6.28	4512.40	1366.20	0.26	1.08
1	82195. DALLAS/FORT WORT	19580.00	511.04	535.27	526.45	535.80	0.001103	6.76	5167.19	1539.99	0.28	1.23
1	82195. DALLAS/FORT WORT	29160.00	511.04	537.82	529.48	538.05	0.000610	5.39	12678.54	1812.83	0.21	0.76
1	82275. EULESS GRAPEVINEBR D	9840.00	511.04	532.23	522.65	532.67	0.001387	5.36	1877.46	177.60	0.20	1.03
1	82275. EULESS GRAPEVINEBR D	16550.00	511.04	534.38	525.49	535.18	0.004889	7.68	2936.42	406.95	0.26	2.17
1	82275. EULESS GRAPEVINEBR D	19580.00	511.04	535.27	526.60	535.94		5.98	3738.47	538.77	0.28	
1	82275. EULESS GRAPEVINEBR D	29160.00	511.04	537.82	529.89	538.05		4.30	6536.80	1306.13	0.23	
1	82275. EULESS GRAPEVINEBR U	9840.00	511.48	532.46	524.27	532.76	0.001536	4.65	2166.99	177.60	0.17	0.98
1	82275. EULESS GRAPEVINEBR U	16550.00	511.48	535.03	526.94	535.49	0.004425	6.22	3682.82	594.63	0.20	1.78
1	82275. EULESS GRAPEVINEBR U	19580.00	511.48	535.51	527.82	535.94		5.33	4123.84	633.00	0.22	
1	82275. EULESS GRAPEVINEBR U	29160.00	511.48	538.01	530.20	538.18		3.92	7453.28	1357.43	0.17	
1	82343.	9840.00	511.48	532.51	524.24	532.80	0.000933	4.73	3101.88	1327.62	0.22	0.80
1	82343.	16550.00	511.48	535.26	527.00	535.59	0.000982	5.45	5184.64	1534.60	0.23	1.00
1	82343.	19580.00	511.48	535.51	527.85	535.93	0.001261	6.24	5381.12	1556.89	0.27	1.31
1	82343.	29160.00	511.48	538.01	530.16	538.18	0.000629	4.82	13087.17	1738.41	0.19	0.75
1	82416. J	9840.00	512.30	532.40	529.43	533.18	0.004155	8.08	1831.71	770.34	0.42	2.59
1	82416. J	16550.00	512.30	535.13	532.08	536.01	0.004018	9.18	2954.11	1054.89	0.43	3.11
1	82416. J	19580.00	512.30	535.34	532.77	536.48	0.005170	10.51	3075.89	1085.20	0.49	4.06
1	82416. J	29160.00	512.30	538.01	535.05	538.33	0.001780	6.92	9182.78	1566.74	0.30	1.66
1	83019.	9840.00	514.08	533.86	524.68	534.10	0.000744	4.76	3970.84	782.57	0.21	0.66
1	83019.	16550.00	514.08	536.68	528.90	536.93	0.000750	5.34	6526.51	990.24	0.22	0.79
1	83019.	19580.00	514.08	537.28	531.12	537.57	0.000842	5.78	7128.46	1037.52	0.23	0.91
1	83019.	29160.00	514.08	538.79	533.63	539.19	0.001148	7.10	8722.63	1389.46	0.28	1.34
1	83480.	9840.00	515.11	534.21	528.58	534.68	0.001846	6.41	2333.05	601.04	0.32	1.30
1	83480.	16550.00	515.11	537.04	533.75	537.41	0.001298	6.17	4133.43	818.84	0.28	1.12
1	83480.	19580.00	515.11	537.69	534.23	538.10	0.001412	6.62	4634.29	1030.25	0.29	1.27
1	83480.	29160.00	515.11	539.33	535.50	539.84	0.001588	7.50	6499.27	1489.15	0.32	1.58
1	83695.	9830.00	515.35	534.66	527.12	535.02	0.001128	4.91	2148.07	527.09	0.26	0.77
1	83695.	16540.00	515.35	537.22	529.56	537.82	0.001467	6.42	2824.25	690.40	0.30	1.23
1	83695.	19550.00	515.35	537.85	530.48	538.60	0.001729	7.17	2991.04	725.92	0.33	1.51
1	83695.	29100.00	515.35	539.38	533.54	540.65	0.002619	9.44	3392.17	1086.30	0.42	2.53
1	83794. STATE HIGHWAY 36BR D	9830.00	515.35	534.77	527.17	535.15	0.001550	4.98	2085.30	238.63	0.20	0.85
1	83794. STATE HIGHWAY 36BR D	16540.00	515.35	537.37	529.69	537.99	0.002138	6.50	2705.87	238.63	0.24	1.37
1	83794. STATE HIGHWAY 36BR D	19550.00	515.35	537.85	530.62	538.60	0.002655	7.37	2820.50	238.63	0.27	1.75
1	83794. STATE HIGHWAY 36BR D	29100.00	515.35	538.78	533.73	540.65	0.010050	10.31	3041.27		0.36	4.04
1	83794. STATE HIGHWAY 36BR U	9830.00	514.15	534.91	525.94	535.22	0.000927	4.52	2291.66	238.63	0.17	0.55
1	83794. STATE HIGHWAY 36BR U	16540.00	514.15	537.54	528.39	538.09	0.001387	6.08	2920.89	238.63	0.22	0.95
1	83794. STATE HIGHWAY 36BR U	19550.00	514.15	538.78	529.39	539.91	0.003087	6.61	3216.15		0.23	1.32
1	83794. STATE HIGHWAY 36BR U	29100.00	514.15	538.78	532.10	541.60	0.006839	9.84	3216.15		0.34	2.92
1	83874.	9830.00	514.15	534.97	525.90	535.25	0.000619	4.36	2420.82	541.69	0.21	0.47
1	83874.	16540.00	514.15	537.65	528.28	538.15	0.000864	5.84	3127.27	730.88	0.26	0.80
1	83874.	19550.00	514.15	539.37	529.24	539.91	0.000812	6.08	3582.81	961.99	0.26	0.83
1	83874.	29100.00	514.15	540.60	531.92	541.60	0.001390	8.32	3906.43	1739.09	0.34	1.53
1	84028.	9830.00	516.08	535.07	528.51	535.38	0.000891	4.70	2521.79	653.21	0.25	0.58
1	84028.	16540.00	516.08	537.90	530.91	538.31	0.000943	5.64	3742.06	1053.01	0.27	0.77
1	84028.	19550.00	516.08	539.69	531.79	540.08	0.0					

HEC-RAS Plan: Multiple River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	84127.	16540.00	515.19	537.91	530.25	538.50	0.001130	6.35	2862.97	1007.75	0.30	0.96
1	84127.	19550.00	515.19	539.66	531.20	540.28	0.001032	6.55	3288.76	1128.34	0.29	0.99
1	84127.	29100.00	515.19	541.83	533.82	542.09	0.000548	5.20	9860.72	1281.14	0.22	0.60
1	84216. STATE HIGHWAY 36BR D	9830.00	515.19	535.20	527.90	535.59	0.001367	5.05	2063.51	218.71	0.20	0.72
1	84216. STATE HIGHWAY 36BR D	16540.00	515.19	537.99	530.46	538.64	0.001881	6.64	2673.22	218.68	0.24	1.17
1	84216. STATE HIGHWAY 36BR D	19550.00	515.19	539.73	531.36	540.42	0.001807	6.89	3052.45	218.66	0.24	1.23
1	84216. STATE HIGHWAY 36BR D	29100.00	515.19	542.93	534.02	543.29		8.37	4278.66	786.85	0.28	
1	84216. STATE HIGHWAY 36BR U	9830.00	516.61	535.25	528.99	535.67	0.001563	6.03	2264.51	218.71	0.21	1.14
1	84216. STATE HIGHWAY 36BR U	16540.00	516.61	538.06	531.51	538.76	0.002311	7.90	2878.91	218.68	0.25	1.88
1	84216. STATE HIGHWAY 36BR U	19550.00	516.61	539.79	532.32	540.53	0.002301	8.19	3257.79	218.66	0.25	1.98
1	84216. STATE HIGHWAY 36BR U	29100.00	516.61	543.17	534.53	543.29		10.07	4558.99	874.38	0.29	
1	84303.	9830.00	516.61	535.40	528.95	535.76	0.001021	5.65	2497.57	865.68	0.25	0.92
1	84303.	16540.00	516.61	538.31	531.38	538.89	0.001367	7.34	3205.50	1123.70	0.30	1.47
1	84303.	19550.00	516.61	540.05	532.15	540.66	0.001304	7.62	3629.16	1202.02	0.30	1.54
1	84303.	29100.00	516.61	543.17	534.21	543.30	0.000391	4.60	13920.97	1475.21	0.17	0.53
1	84840. K	9830.00	515.99	536.04		536.43	0.001525	5.96	3096.61	868.49	0.29	1.11
1	84840. K	16540.00	515.99	539.35		539.57	0.000874	5.27	6108.94	949.38	0.23	0.80
1	84840. K	19550.00	515.99	541.10		541.27	0.000627	4.78	7799.92	1003.30	0.20	0.64
1	84840. K	29100.00	515.99	543.41		543.63	0.000772	5.75	10392.81	1295.62	0.23	0.89
1	85214.	9810.00	516.41	536.54	529.98	537.04	0.001532	6.46	2625.11	640.85	0.30	1.25
1	85214.	16520.00	516.41	539.61	533.79	540.02	0.001215	6.57	4701.51	725.87	0.28	1.21
1	85214.	19530.00	516.41	541.28	536.25	541.61	0.000960	6.21	5953.75	848.22	0.25	1.05
1	85214.	29060.00	516.41	543.64	537.89	544.04	0.001080	7.13	8247.74	1012.26	0.27	1.33
1	85787.	9780.00	517.86	537.32	531.27	537.93	0.001456	7.30	2542.64	619.14	0.33	1.27
1	85787.	16460.00	517.86	540.24	536.05	540.77	0.001270	7.66	4631.14	841.44	0.32	1.32
1	85787.	19450.00	517.86	541.78	536.81	542.20	0.001001	7.18	5932.55	945.25	0.29	1.13
1	85787.	28930.00	517.86	544.22	539.36	544.64	0.001009	7.80	8569.19	1133.54	0.29	1.28
1	85857.	9780.00	516.57	537.48	532.47	538.06	0.001826	7.30	2353.47	523.03	0.34	1.34
1	85857.	16460.00	516.57	540.33	536.52	540.89	0.001693	7.95	4248.56	801.77	0.34	1.50
1	85857.	19450.00	516.57	541.85	537.22	542.30	0.001360	7.55	5527.98	945.53	0.31	1.31
1	85857.	28930.00	516.57	544.30	539.49	544.73	0.001264	7.91	8162.07	1156.04	0.31	1.38
1	85872. WALKBRIDGE BR D	9780.00	516.57	537.77	534.77	538.15	0.004782	6.03	2268.80	560.98	0.19	1.28
1	85872. WALKBRIDGE BR D	16460.00	516.57	540.73	537.01	541.01	0.003111	5.45	4329.51	844.97	0.15	0.99
1	85872. WALKBRIDGE BR D	19450.00	516.57	542.17	537.53	542.39	0.002307	4.97	5583.08	991.60	0.13	0.80
1	85872. WALKBRIDGE BR D	28930.00	516.57	544.60	538.99	544.81	0.002001	5.04	8264.15	1167.48	0.12	0.79
1	85872. WALKBRIDGE BR U	9780.00	516.91	537.94	531.36	538.22	0.003857	5.29	2608.62	609.55	0.16	1.17
1	85872. WALKBRIDGE BR U	16460.00	516.91	540.81	537.05	541.04	0.002614	4.88	4579.04	788.93	0.14	0.94
1	85872. WALKBRIDGE BR U	19450.00	516.91	542.22	537.51	542.42	0.001980	4.46	5714.49	877.07	0.13	0.77
1	85872. WALKBRIDGE BR U	28930.00	516.91	544.61	538.41	544.83	0.002066	4.92	8115.70	1112.97	0.12	0.90
1	85887.	9780.00	516.91	537.88	531.29	538.33	0.001503	6.62	2762.07	602.68	0.29	1.29
1	85887.	16460.00	516.91	540.74	536.53	541.15	0.001365	7.02	4716.44	785.45	0.28	1.38
1	85887.	19450.00	516.91	542.16	537.40	542.50	0.001136	6.72	5858.20	874.12	0.26	1.23
1	85887.	28930.00	516.91	544.54	539.07	544.93	0.001295	7.71	8224.39	1107.64	0.28	1.57
1	86022.	9780.00	515.92	538.06	533.71	538.52	0.001598	6.61	2590.48	479.07	0.30	1.31
1	86022.	16460.00	515.92	540.87	536.82	541.36	0.001587	7.38	4078.36	588.66	0.31	1.54
1	86022.	19450.00	515.92	542.26	537.38	542.70	0.001398	7.28	4892.94	645.38	0.29	1.46
1	86022.	28930.00	515.92	544.63	539.09	545.19	0.001673	8.60	6633.57	787.87	0.33	1.97
1	86374. L	9780.00	519.00	538.54	532.03	539.19	0.001921	6.94	2042.57	459.84	0.33	1.47
1	86374. L	16470.00	519.00	541.34	535.73	542.02	0.001871	7.77	3480.36	537.69	0.34	1.74
1	86374. L	19450.00	519.00	542.66	538.22	543.29	0.001655	7.70	4198.74	578.22	0.32	1.66
1	86374. L	28940.00	519.00	545.11	540.55	545.85	0.001816	8.80	5735.43	685.05	0.35	2.08
1	86548.	9780.00	519.00	539.07		539.48	0.001250	5.29	2247.78	524.31	0.27	0.88
1	86548.	16470.00	519.00	541.84		542.31	0.001311	6.07	3995.28	663.92	0.28	1.10
1	86548.	19450.00	519.00	543.11		543.55	0.001180	6.09	4839.55	674.86	0.27	1.07
1	86548.	28940.00	519.00	545.60		546.14	0.001276	6.99	6710.12	810.91	0.29	1.35
1	86898. CONFLUENCE OF TR	9670.00	520.00	539.52		539.96	0.001472	6.43	2977.78	660.78	0.29	1.23
1	86898. CONFLUENCE OF TR	16270.00	520.00	542.33		542.80	0.001526	7.33	5058.22	784.53	0.30	1.51
1	86898. CONFLUENCE OF TR	19400.00	520.00	543.56		543.99	0.001396	7.33	6029.33	802.30	0.29	1.48
1	86898. CONFLUENCE OF TR	28930.00	520.00	546.14		546.61	0.001453	8.13	8275.97	911.29	0.31	1.74
1	87195.	9670.00	521.00	540.00		540.37	0.001318	6.23	3329.10	658.51	0.27	1.14
1	87195.	16270.00	521.00	542.84		543.24	0.001375	7.07	5341.41	753.17	0.28	1.39
1	87195.	19400.00	521.00	544.01		544.40	0.001333	7.24	6238.71	787.66	0.28	1.43
1	87195.	28930.00	521.00	546.59		547.05	0.001501	8.31	8446.35	950.08	0.30	1.82
1	87489.	9670.00	522.00	540.35		540.90	0.002232	7.50	2661.95	625.24	0.32	1.72
1	87489.	16270.00	522.00	543.26		543.68	0.001835	7.56	4975.15	862.17	0.30	1.66
1	87489.	19400.00	522.00	544.44		544.80	0.001606	7.34	6008.14	890.80	0.28	1.54
1	87489.	28930.00	522.00	547.12		547.46	0.001475	7.62	8543.89	1019.55	0.28	1.59
1	88058.	9670.00	523.80	541.44		541.94	0.001542	6.35	2442.74	426.52	0.30	1.22
1	88058.	16270.00	523.80	544.11		544.78	0.001858	7.84	3747.58	619.05	0.34	1.76
1	88058.	19400.00	523.80	545.17		545.87	0.001894	8.25	4498.96	851.62	0.35	1.90
1	88058.	28930.00	523.80	547.78		548.49	0.001857	8.96	7203.92	1217.60	0.35	2.15
1	88500.	9680.00	520.50	542.22	536.29	542.39	0.000646	4.54	3869.18	504.48	0.20	0.59
1	88500.	16290.00	520.50	545.09	538.44	545.31	0.000729	5.37	5425.57	690.21	0.22	0.79
1	88500.	19410.00	520.50	546.18	539.20	546.45	0.000865	6.07	6105.05	891.40	0.24	0.99
1	88500.	28980.00	520.50	548.76	540.69	549.10	0.000968	6.95	7857.69	1374.58	0.26	1.25
1	88915.	9680.00	524.83	542.44	535.78	542.76	0.000985	5.37	2785.08	477.04	0.25	0.85
1	88915.	16290.00	524.83	545.32	537.95	545.74	0.001135	6.51	4214.40	527.87	0.28	1.18
1	88915.	19410.00	524.83	546.47	538.69	546.92	0.001177	6.92	4843.55	634.87	0.28	1.30
1	88915.	28980.00	524.83	549.06	540.78	549.67	0.001446	8.38	6604.65	1601.65	0.32	1.82

HEC-RAS Plan: Multiple River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	89252. WILLIAM D. TATE BR D	28900.00	525.28	550.22	544.07	551.04		8.88	3728.53	2098.26	0.37	
1	89252. WILLIAM D. TATE BR U	9690.00	525.28	543.02	537.19	543.57	0.001876	6.04	1671.82	172.93	0.25	1.02
1	89252. WILLIAM D. TATE BR U	16350.00	525.28	546.91	539.57	547.48		8.06	2328.51	261.99	0.31	
1	89252. WILLIAM D. TATE BR U	19410.00	525.28	548.21	540.52	548.82		8.43	2856.07	567.97	0.32	
1	89252. WILLIAM D. TATE BR U	28900.00	525.28	550.22	543.01	551.04		6.35	5445.22	1111.43	0.30	
1	89291.	9690.00	525.28	543.10	537.18	543.62	0.001354	5.84	1745.65	246.69	0.31	0.89
1	89291.	16350.00	525.28	546.91	539.46	547.47	0.001120	6.49	3318.34	514.10	0.30	0.99
1	89291.	19410.00	525.28	548.21	540.41	548.81	0.001109	6.83	4026.10	765.59	0.30	1.07
1	89291.	28900.00	525.28	550.22	542.88	551.03	0.001364	8.19	5334.84	1111.43	0.34	1.48
1	89326.	9690.00	525.28	543.20	537.19	543.68	0.001468	5.55	1745.10	182.26	0.32	0.84
1	89326.	16350.00	525.28	546.90	539.53	547.59	0.001541	6.65	2475.94	270.06	0.34	1.12
1	89326.	19410.00	525.28	548.17	540.42	548.95	0.001566	7.08	2866.19	357.72	0.34	1.23
1	89326.	28900.00	525.28	550.08	542.82	551.29	0.002097	8.97	3539.50	375.27	0.41	1.89
1	89426. STATE HIGHWAY 12BR D	9690.00	525.28	543.25	537.43	543.77	0.002213	5.74	1687.96	177.63	0.33	0.98
1	89426. STATE HIGHWAY 12BR D	16350.00	525.28	546.95	539.79	547.68	0.002496	6.89	2391.92	261.09	0.35	1.33
1	89426. STATE HIGHWAY 12BR D	19410.00	525.28	548.22	540.69	549.05	0.002639	7.32	2772.38	339.30	0.35	1.48
1	89426. STATE HIGHWAY 12BR D	28900.00	525.28	550.16	543.12	551.42	0.003710	9.18	3432.04	347.70	0.41	2.26
1	89426. STATE HIGHWAY 12BR U	9690.00	525.28	543.61	538.36	544.15	0.002659	6.00	1704.58	238.07	0.35	1.10
1	89426. STATE HIGHWAY 12BR U	16350.00	525.28	547.46	540.88	548.09	0.002330	6.62	2758.38	345.14	0.32	1.23
1	89426. STATE HIGHWAY 12BR U	19410.00	525.28	548.82	541.86	549.47	0.002251	6.81	3232.27	351.09	0.32	1.27
1	89426. STATE HIGHWAY 12BR U	28900.00	525.28	551.10	544.38	552.02	0.002843	8.18	4043.23	359.91	0.35	1.78
1	89527.	9690.00	525.28	543.70	538.13	544.19	0.001568	5.69	1804.40	246.46	0.33	0.89
1	89527.	16350.00	525.28	547.50	540.61	548.11	0.001309	6.46	2896.01	455.01	0.32	1.03
1	89527.	19410.00	525.28	548.85	541.51	549.49	0.001244	6.73	3395.01	482.21	0.31	1.08
1	89527.	28900.00	525.28	551.12	544.00	552.04	0.001522	8.20	4253.35	500.34	0.35	1.53
1	89587.	9690.00	527.00	543.61	537.55	544.50	0.002133	7.60	1275.54	171.96	0.39	1.48
1	89587.	16350.00	527.00	547.46	540.48	548.33	0.001878	7.82	2720.47	630.40	0.38	1.50
1	89587.	19410.00	527.00	548.84	541.67	549.67	0.001672	7.88	3870.40	1025.34	0.36	1.47
1	89587.	28900.00	527.00	551.64	546.21	552.22	0.001198	7.48	7426.49	1465.14	0.31	1.25
1	89646. WILLIAM D. TATE BR D	9690.00	527.00	543.56	538.13	544.77	0.005386	8.84	1096.61	92.23	0.38	2.34
1	89646. WILLIAM D. TATE BR D	16350.00	527.00	548.07	541.42	548.73		8.21	3174.86	665.91	0.34	
1	89646. WILLIAM D. TATE BR D	19410.00	527.00	548.85	542.72	549.67		6.64	4183.74	888.44	0.32	
1	89646. WILLIAM D. TATE BR D	28900.00	527.00	551.64	549.57	552.22		4.74	7276.64	1465.14	0.17	
1	89646. WILLIAM D. TATE BR U	9690.00	528.14	544.35	538.48	545.12	0.004331	7.20	1403.71	117.11	0.31	1.91
1	89646. WILLIAM D. TATE BR U	16350.00	528.14	549.11	541.09	549.26		7.89	2983.56	866.69	0.30	
1	89646. WILLIAM D. TATE BR U	19410.00	528.14	549.98	542.14	550.14		6.53	3957.40	1188.57	0.24	
1	89646. WILLIAM D. TATE BR U	28900.00	528.14	552.12	545.00	552.31		4.92	6731.54	1424.63	0.18	
1	89704.	9690.00	528.14	544.69	538.20	545.27	0.001515	6.38	1714.55	899.48	0.31	1.23
1	89704.	16350.00	528.14	549.11	540.58	549.27	0.000479	4.35	8298.33	1221.20	0.18	0.52
1	89704.	19410.00	528.14	549.98	541.54	550.15	0.000504	4.61	9395.90	1304.07	0.19	0.57
1	89704.	28900.00	528.14	552.12	544.20	552.31	0.000568	5.26	12295.46	1424.63	0.20	0.72
1	89814. M	9690.00	527.41	545.22	536.72	545.48	0.000765	4.21	2776.28	1111.66	0.21	0.55
1	89814. M	16350.00	527.41	549.21	539.07	549.32	0.000335	3.37	9008.26	1261.41	0.15	0.32
1	89814. M	19410.00	527.41	550.08	540.00	550.20	0.000351	3.58	10120.83	1298.81	0.15	0.36
1	89814. M	28900.00	527.41	552.21	543.36	552.37	0.000430	4.29	13122.16	1488.03	0.17	0.49
1	91637. N	9660.00	527.50	547.21	541.67	547.48	0.001791	5.29	3660.18	1205.34	0.28	1.11
1	91637. N	16310.00	527.50	550.12	546.56	550.28	0.001024	4.68	6856.42	1400.21	0.22	0.81
1	91637. N	19360.00	527.50	551.00	546.89	551.17	0.000977	4.77	7875.95	1438.63	0.22	0.82
1	91637. N	28820.00	527.50	553.27	547.82	553.45	0.000969	5.23	10559.16	1621.41	0.22	0.94
1	93031. O	9590.00	530.13	549.90		550.50	0.002594	7.18	2593.37	816.62	0.37	1.67
1	93031. O	16170.00	530.13	551.90		552.48	0.002539	7.91	4412.18	1004.54	0.38	1.92
1	93031. O	19180.00	530.13	552.72		553.28	0.002469	8.11	5270.71	1126.12	0.38	1.98
1	93031. O	28530.00	530.13	554.92		555.41	0.002129	8.29	8241.53	1480.82	0.36	1.98
1	93757.	9610.00	528.40	550.95		551.11	0.000375	3.57	4990.78	1590.09	0.17	0.31
1	93757.	16190.00	528.40	552.97		553.14	0.000419	4.13	8351.16	1722.47	0.18	0.39
1	93757.	19160.00	528.40	553.76		553.93	0.000416	4.24	9725.73	1736.08	0.18	0.41
1	93757.	28620.00	528.40	555.86		556.03	0.000424	4.62	13451.23	1834.70	0.19	0.47
1	94374.	9610.00	531.30	551.16		551.20	0.000057	1.69	7463.52	1223.69	0.07	0.06
1	94374.	16190.00	531.30	553.18		553.25	0.000096	2.35	10040.37	1312.48	0.09	0.12
1	94374.	19160.00	531.30	553.97		554.05	0.000110	2.58	11091.06	1360.46	0.10	0.14
1	94374.	28620.00	531.30	556.06		556.18	0.000150	3.21	14221.23	1664.15	0.12	0.21
1	94755.	9610.00	532.10	551.17		551.24	0.000155	2.16	5040.58	1007.15	0.11	0.12
1	94755.	16190.00	532.10	553.20		553.32	0.000225	2.89	7187.39	1098.87	0.13	0.20
1	94755.	19160.00	532.10	553.99		554.13	0.000246	3.13	8070.96	1126.31	0.14	0.23
1	94755.	28620.00	532.10	556.09		556.27	0.000296	3.74	10566.99	1249.77	0.16	0.31
1	94950.	9610.00	533.41	551.17		551.31	0.000432	2.96	3340.83	533.29	0.17	0.24
1	94950.	16190.00	533.41	553.19		553.42	0.000623	3.95	4569.82	676.48	0.21	0.41
1	94950.	19160.00	533.41	553.97		554.24	0.000679	4.29	5109.40	699.89	0.23	0.47
1	94950.	28620.00	533.41	556.04		556.42	0.000812	5.19	6681.00	850.55	0.25	0.66
1	95284. CONFLUENCE OF TR	9540.00	532.50	551.32		551.43	0.000326	3.12	4065.45	446.73	0.16	0.24
1	95284. CONFLUENCE OF TR	16160.00	532.50	553.39		553.62	0.000550	4.40	5019.66	466.45	0.21	0.46
1	95284. CONFLUENCE OF TR	18650.00	532.50	554.20		554.46	0.000596	4.71	5398.29	471.77	0.22	0.53
1	95284. CONFLUENCE OF TR	28620.00	532.50	556.29		556.70	0.000847	6.09	6511.53	627.50	0.26	0.84
1	96073.	9540.00	534.50	551.70		551.86	0.001020	3.81	3185.39	481.28	0.25	0.44
1	96073.	16160.00	534.50	553.99		554.24	0.001209	4.83	4510.11	654.24	0.28	0.65
1	96073.	18650.00	534.50	554.83		555.10	0.001191	5.07	5094.82	728.62	0.28	0.70
1	96073.	28620.00	534.50	557.17		557.51	0.001268	6.01	7343.50	1136.74	0.30	0.92
1	96548.	9540.00	534.60	550.26	550.26	554.35	0.018465	16.24	587.61	72.70	1.01	7.93
1	96548.	16160.00	534.60	555.38	555.38	557.10	0.006254	12.07	2346.48	790.37	0.63	3.88
1	9											

HEC-RAS Plan: Multiple River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	97515.	9750.00	537.94	557.40		557.51	0.000411	3.58	5255.63	992.98	0.16	0.37
1	97515.	16080.00	537.94	559.47		559.59	0.000459	4.11	7384.50	1083.65	0.17	0.47
1	97515.	18530.00	537.94	560.08		560.21	0.000492	4.35	8071.98	1152.31	0.18	0.52
1	97515.	28480.00	537.94	561.92		562.10	0.000591	5.09	10238.40	1199.33	0.20	0.69
1	97536. LOW WATER CROSSI	Culvert										
1	97556.	9750.00	538.14	557.38	552.81	557.53	0.000862	4.70	4624.31	978.20	0.21	0.78
1	97556.	16080.00	538.14	559.47	554.24	559.63	0.000870	5.12	6768.51	1098.53	0.21	0.88
1	97556.	18530.00	538.14	560.04	555.78	560.21	0.000902	5.32	7401.88	1124.04	0.22	0.95
1	97556.	28480.00	538.14	561.98	556.86	562.18	0.000998	5.98	9636.25	1180.32	0.23	1.16
1	97855.	9750.00	538.10	557.65		557.86	0.000930	4.54	3600.32	807.77	0.23	0.65
1	97855.	16080.00	538.10	559.74		559.99	0.000992	5.23	5375.98	880.18	0.25	0.82
1	97855.	18530.00	538.10	560.32		560.59	0.001046	5.52	5890.01	896.65	0.26	0.90
1	97855.	28480.00	538.10	562.28		562.63	0.001213	6.47	7690.61	932.29	0.28	1.18
1	98519.	9750.00	540.50	558.24	553.05	558.32	0.000646	3.10	5121.81	1002.88	0.17	0.39
1	98519.	16080.00	540.50	560.36	554.31	560.46	0.000650	3.52	7303.12	1072.13	0.18	0.47
1	98519.	18530.00	540.50	560.97	554.75	561.08	0.000675	3.70	7948.74	1095.92	0.18	0.51
1	98519.	28480.00	540.50	563.04	555.96	563.19	0.000771	4.36	10191.80	1257.07	0.20	0.68
1	98957.	9750.00	541.60	558.53	553.99	558.79	0.001580	4.74	3020.59	655.19	0.27	0.92
1	98957.	16080.00	541.60	560.63	556.61	560.94	0.001590	5.43	4451.15	750.34	0.28	1.12
1	98957.	18530.00	541.60	561.25	557.06	561.58	0.001636	5.70	4889.91	772.08	0.29	1.22
1	98957.	28480.00	541.60	563.33	558.49	563.77	0.001811	6.65	6461.69	906.45	0.31	1.57
1	99115.	9750.00	542.30	558.66		559.27	0.004146	8.12	2328.32	573.08	0.42	2.61
1	99115.	16080.00	542.30	560.80		561.38	0.003656	8.53	3598.28	609.07	0.40	2.72
1	99115.	18530.00	542.30	561.43		562.02	0.003673	8.81	3981.69	617.60	0.41	2.86
1	99115.	28480.00	542.30	563.53		564.25	0.003960	10.02	5367.06	700.04	0.43	3.54
1	99484.	9750.00	544.00	560.19		560.69	0.003612	6.71	2142.77	407.68	0.43	1.64
1	99484.	16080.00	544.00	562.11		562.79	0.003981	8.03	2958.23	433.51	0.46	2.20
1	99484.	18530.00	544.00	562.72		563.47	0.004108	8.50	3224.19	439.84	0.48	2.42
1	99484.	28480.00	544.00	564.83		565.91	0.004671	10.31	4192.26	487.75	0.52	3.34
1	99650.	9750.00	542.80	560.84		561.19	0.002466	5.71	2483.81	444.15	0.35	1.17
1	99650.	16080.00	542.80	562.84		563.35	0.002753	6.99	3401.26	470.89	0.39	1.63
1	99650.	18530.00	542.80	563.49		564.05	0.002853	7.42	3708.98	478.99	0.40	1.80
1	99650.	28480.00	542.80	565.76		566.58	0.003289	9.06	4862.87	543.28	0.44	2.51
1	99868.	9750.00	544.10	561.30		561.46	0.000673	3.58	3594.79	504.00	0.20	0.42
1	99868.	16080.00	544.10	563.42		563.68	0.000885	4.65	4720.29	551.95	0.23	0.67
1	99868.	18530.00	544.10	564.11		564.41	0.000951	5.00	5104.60	563.85	0.24	0.76
1	99868.	28480.00	544.10	566.57		567.00	0.001149	6.16	6534.56	601.04	0.28	1.09
1	100187.	9750.00	542.80	561.50	556.91	561.87	0.002045	5.79	2381.59	646.15	0.32	1.14
1	100187.	16080.00	542.80	563.68	558.85	564.16	0.002117	6.73	3452.83	671.82	0.34	1.44
1	100187.	18530.00	542.80	564.39	559.63	564.91	0.002152	7.05	3805.89	680.33	0.35	1.55
1	100187.	28480.00	542.80	566.90	561.99	567.56	0.002235	8.09	5078.99	729.83	0.36	1.93
1	100441.	9750.00	543.57	561.96	557.57	562.40	0.001978	5.78	1994.24	628.54	0.32	1.13
1	100441.	16080.00	543.57	564.14	559.23	564.83	0.002429	7.30	2688.86	761.12	0.37	1.69
1	100441.	18530.00	543.57	564.85	559.82	565.62	0.002573	7.80	2913.20	783.17	0.38	1.89
1	100441.	28480.00	543.57	567.31	562.02	568.44	0.003022	9.49	3699.33	811.27	0.43	2.64
1	100518. POOL ROAD BR D	9750.00	543.57	562.13	557.67	562.61	0.002388	5.98	1922.33	291.75	0.23	1.24
1	100518. POOL ROAD BR D	16080.00	543.57	564.35	559.43	565.10	0.003082	7.59	2569.24	291.75	0.27	1.90
1	100518. POOL ROAD BR D	18530.00	543.57	565.06	560.08	565.91	0.003318	8.12	2777.53	291.75	0.28	2.14
1	100518. POOL ROAD BR D	28480.00	543.57	567.31	562.45	568.44	0.004372	10.15	3432.43	291.75	0.33	3.20
1	100518. POOL ROAD BR U	9750.00	543.57	562.30	556.94	562.89	0.004138	6.20	1620.88	248.31	0.37	1.74
1	100518. POOL ROAD BR U	16080.00	543.57	564.57	559.76	565.45	0.005027	7.69	2197.18	260.84	0.41	2.52
1	100518. POOL ROAD BR U	18530.00	543.57	565.30	560.61	566.29	0.005315	8.16	2389.28	265.43	0.42	2.80
1	100518. POOL ROAD BR U	28480.00	543.57	568.24	563.36	570.56	0.012005	9.60	3200.19		0.33	4.38
1	100671. Q	9750.00	543.57	562.64	556.94	563.15	0.002841	5.78	1752.82	621.34	0.34	1.43
1	100671. Q	16080.00	543.57	565.00	559.71	565.76	0.003153	7.14	2400.14	945.13	0.38	2.01
1	100671. Q	18530.00	543.57	565.76	560.55	566.61	0.003258	7.59	2617.27	1026.06	0.39	2.22
1	100671. Q	28480.00	543.57	569.61	563.26	570.56	0.002582	8.15	3827.80	1264.52	0.36	2.33
1	101032.	9750.00	545.70	563.88	563.37	565.24	0.010293	10.13	1214.68	751.26	0.64	4.57
1	101032.	16080.00	545.70	566.24	564.92	567.55	0.007617	10.41	2022.83	914.11	0.58	4.41
1	101032.	18530.00	545.70	567.01	565.41	568.34	0.007123	10.57	2298.27	934.66	0.56	4.44
1	101032.	28480.00	545.70	570.53	567.09	571.75	0.004660	10.30	3640.29	1086.41	0.48	3.84
1	101304. CONFLUENCE OF FE	9750.00	546.00	566.05	562.97	566.33	0.001813	5.00	2758.97	826.34	0.28	1.03
1	101304. CONFLUENCE OF FE	16080.00	546.00	568.17	564.82	568.48	0.001650	5.43	4048.07	861.38	0.27	1.13
1	101304. CONFLUENCE OF FE	18530.00	546.00	568.91	565.15	569.23	0.001593	5.55	4507.16	875.12	0.27	1.16
1	101304. CONFLUENCE OF FE	28480.00	546.00	572.08	566.28	572.42	0.001229	5.64	6518.91	1022.21	0.25	1.12
1	102523.	9720.00	546.40	567.59		567.79	0.000906	4.50	3585.84	804.45	0.23	0.64
1	102523.	16020.00	546.40	569.65		569.87	0.000900	4.98	5317.90	876.55	0.23	0.74
1	102523.	18440.00	546.40	570.36		570.59	0.000890	5.11	5959.22	911.79	0.23	0.77
1	102523.	28340.00	546.40	573.27		573.50	0.000728	5.21	8758.81	1005.68	0.22	0.75
1	103113.	9720.00	548.60	568.01		568.86	0.002898	7.69	1520.83	284.65	0.41	1.91
1	103113.	16020.00	548.60	569.90	566.50	571.11	0.003711	9.66	2462.78	815.66	0.47	2.86
1	103113.	18440.00	548.60	570.56	567.84	571.86	0.003851	10.18	3058.42	969.92	0.49	3.12
1	103113.	28340.00	548.60	573.64		574.28	0.001991	8.38	6425.52	1185.27	0.36	1.98
1	104030.	9740.00	550.60	570.35	567.85	570.53	0.001185	4.35	3587.26	1135.46	0.25	0.65
1	104030.	16030.00	550.60	572.57	568.90	572.74	0.000955	4.51	5430.46	1177.69	0.23	0.65
1	104030.	18450.00	550.60	573.29	569.18	573.47	0.000916	4.60	6040.08	1195.99	0.23	0.66
1	104030.	28450.00	550.60	575.14	570.15	575.29	0.000663	4.30	10246.08	1239.97	0.20	0.55
1	104286. R	9740.00	553.13	570.58	565.60	571.08	0.002031	5.71	1709.87	553.70	0.33	1.12
1	104286. R	16030.00	553.13	572.71	567.49	573.26	0.001937	6.42	3259.97	1355.84	0.34	1.31
1	104286. R	18450.00	553.13	573.43	568.18	573.97	0.					

HEC-RAS Plan: Multiple River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	104405.	9740.00	553.13	571.18	565.33	571.65	0.001786	5.46	1783.84	1777.97	0.31	1.01
1	104405.	16030.00	553.13	574.34	567.80	574.45	0.000519	3.55	8037.29	2748.99	0.18	0.39
1	104405.	18450.00	553.13	574.52	568.43	574.66	0.000614	3.90	8393.31	2758.67	0.19	0.47
1	104405.	28450.00	553.13	575.93	570.68	575.99	0.000295	2.84	16898.73	2869.54	0.14	0.24
1	104420.	9740.00	553.90	571.22	564.45	571.67	0.001289	5.54	1898.85	1316.00	0.28	0.95
1	104420.	16030.00	553.90	574.30	566.63	574.51	0.000659	4.61	7048.83	2676.95	0.21	0.61
1	104420.	18450.00	553.90	574.47	567.41	574.72	0.000789	5.08	7380.29	2701.17	0.23	0.74
1	104420.	28450.00	553.90	575.90	572.12	576.03	0.000510	4.33	14404.30	2827.76	0.19	0.52
1	104446. DART RAILROAD BR D	9740.00	553.90	571.22	564.74	571.67	0.005909	5.91	1705.50	161.00	0.25	1.53
1	104446. DART RAILROAD BR D	16030.00	553.90	575.04	567.06	575.45		6.94	3050.33	1507.09	0.27	
1	104446. DART RAILROAD BR D	18450.00	553.90	575.31	567.94	575.77		7.35	4552.42	1686.11	0.29	
1	104446. DART RAILROAD BR D	28450.00	553.90	575.90	570.69	576.60		5.98	6500.90	2082.29	0.27	
1	104446. DART RAILROAD BR U	9740.00	553.90	571.80	564.76	572.21	0.009040	5.47	1824.63		0.23	1.76
1	104446. DART RAILROAD BR U	16030.00	553.90	575.43	567.19	575.49		6.66	3075.58	1767.02	0.23	
1	104446. DART RAILROAD BR U	18450.00	553.90	575.76	567.94	575.83		7.05	3521.47	1988.27	0.23	
1	104446. DART RAILROAD BR U	28450.00	553.90	576.65	570.47	576.71		5.71	6526.14	2347.98	0.18	
1	104471.	9740.00	553.90	571.84	564.47	572.21	0.001244	4.98	2061.50	2010.39	0.25	0.93
1	104471.	16030.00	553.90	575.43	566.72	575.49	0.000274	2.77	10610.05	2644.25	0.12	0.26
1	104471.	18450.00	553.90	575.76	567.52	575.83	0.000313	3.00	11260.73	2743.44	0.13	0.31
1	104471.	28450.00	553.90	576.65	570.14	576.71	0.000302	3.06	17649.44	2821.69	0.13	0.31
1	104750.	9590.00	553.30	572.46	568.54	572.54	0.000643	3.19	4697.63	1220.71	0.17	0.40
1	104750.	15650.00	553.30	575.53	569.64	575.58	0.000276	2.48	10168.29	1504.61	0.12	0.22
1	104750.	18430.00	553.30	575.88	569.95	575.93	0.000331	2.76	10687.49	1527.73	0.13	0.28
1	104750.	27760.00	553.30	576.74	570.84	576.85	0.000550	3.71	12048.62	1591.19	0.17	0.49
1	105649.	9590.00	554.30	573.05		573.25	0.001048	4.60	3367.65	901.11	0.24	0.68
1	105649.	15650.00	554.30	575.79		575.92	0.000597	4.01	6139.59	1101.52	0.19	0.48
1	105649.	18430.00	554.30	576.18		576.34	0.000702	4.43	6575.57	1123.53	0.21	0.59
1	105649.	27850.00	554.30	577.22		577.47	0.000992	5.52	7769.03	1164.97	0.25	0.89
1	106674.	9590.00	555.60	574.26		574.54	0.001496	4.98	2647.09	640.72	0.27	0.97
1	106674.	15650.00	555.60	576.53		576.79	0.001190	5.05	4322.16	787.44	0.25	0.94
1	106674.	18430.00	555.60	577.04		577.33	0.001318	5.45	4731.12	848.74	0.26	1.08
1	106674.	27850.00	555.60	578.43		578.87	0.001848	6.89	6094.10	1085.51	0.31	1.67
1	107067. S	9600.00	556.30	574.80		574.96	0.000803	4.08	3550.62	729.23	0.20	0.62
1	107067. S	15630.00	556.30	576.98		577.15	0.000768	4.43	5280.41	856.14	0.20	0.69
1	107067. S	18410.00	556.30	577.53		577.73	0.000830	4.71	5759.01	868.25	0.21	0.77
1	107067. S	27840.00	556.30	579.11		579.38	0.001014	5.55	7154.77	911.37	0.23	1.04
1	107429. CONFLUENCE OF TR	9600.00	557.00	575.11		575.18	0.000517	2.90	5131.88	1073.18	0.16	0.33
1	107429. CONFLUENCE OF TR	15630.00	557.00	577.27		577.35	0.000439	3.02	7495.02	1111.95	0.15	0.34
1	107429. CONFLUENCE OF TR	18410.00	557.00	577.85		577.94	0.000473	3.22	8142.72	1121.16	0.15	0.38
1	107429. CONFLUENCE OF TR	27840.00	557.00	579.50		579.64	0.000574	3.84	10019.63	1152.69	0.17	0.52
1	107917.	9400.00	558.20	575.29	572.14	575.69	0.001949	6.45	2777.38	642.61	0.33	1.33
1	107917.	15140.00	558.20	577.40	574.31	577.80	0.001777	6.89	4179.02	672.54	0.33	1.43
1	107917.	17820.00	558.20	577.99	574.80	578.42	0.001916	7.35	4574.80	701.94	0.34	1.61
1	107917.	26900.00	558.20	579.65	576.24	580.23	0.002325	8.71	5718.37	754.69	0.38	2.17
1	108168.	9400.00	558.90	575.86	572.19	576.11	0.001444	5.20	3045.72	543.15	0.28	0.89
1	108168.	15140.00	558.90	577.88	573.62	578.20	0.001573	6.11	4173.47	614.51	0.31	1.16
1	108168.	17820.00	558.90	578.49	574.08	578.86	0.001733	6.63	4524.00	628.89	0.32	1.34
1	108168.	26900.00	558.90	580.23	575.38	580.77	0.002241	8.19	5555.40	685.18	0.38	1.96
1	108445.	9400.00	559.20	576.22	570.53	576.33	0.000489	3.45	3888.47	674.74	0.17	0.37
1	108445.	15140.00	559.20	578.30	572.20	578.45	0.000536	3.99	5305.18	775.85	0.18	0.47
1	108445.	17820.00	559.20	578.96	572.70	579.14	0.000583	4.29	5777.04	794.90	0.19	0.53
1	108445.	26900.00	559.20	580.87	574.32	581.12	0.000712	5.12	7165.16	891.51	0.22	0.73
1	108863. T	9400.00	559.50	576.46	572.43	576.55	0.000461	3.10	4320.44	726.52	0.16	0.31
1	108863. T	15140.00	559.50	578.57	573.11	578.68	0.000459	3.47	5864.68	742.40	0.17	0.36
1	108863. T	17820.00	559.50	579.25	573.68	579.38	0.000489	3.70	6376.47	747.56	0.17	0.41
1	108863. T	26900.00	559.50	581.23	574.55	581.42	0.000576	4.38	7868.82	970.25	0.19	0.55
1	109228.	9380.00	558.90	576.65		576.91	0.001715	4.75	2381.57	448.24	0.30	0.81
1	109228.	15060.00	558.90	578.71		579.05	0.001632	5.40	3354.09	495.21	0.30	0.97
1	109228.	17720.00	558.90	579.40		579.78	0.001710	5.78	3698.92	512.41	0.31	1.09
1	109228.	26760.00	558.90	581.36		581.89	0.001949	6.90	4759.54	568.75	0.34	1.47
1	109553.	9380.00	558.60	577.16		577.41	0.001559	5.16	2590.14	571.57	0.28	0.90
1	109553.	15060.00	558.60	579.24		579.52	0.001415	5.54	3840.80	633.92	0.27	0.97
1	109553.	17720.00	558.60	579.96		580.27	0.001444	5.80	4309.13	662.08	0.28	1.05
1	109553.	26760.00	558.60	582.05		582.43	0.001504	6.53	5765.79	719.89	0.29	1.26
1	109946. U	9380.00	559.60	577.66		578.51	0.004104	8.50	1736.33	552.75	0.47	2.42
1	109946. U	15060.00	559.60	579.74		580.38	0.002954	8.15	2931.08	592.68	0.41	2.09
1	109946. U	17720.00	559.60	580.47		581.11	0.002781	8.22	3369.37	598.48	0.40	2.09
1	109946. U	26760.00	559.60	582.56		583.25	0.002520	8.64	4637.80	615.75	0.39	2.19
1	110189.	9380.00	560.50	578.67		579.46	0.003814	7.83	1657.95	583.75	0.42	2.42
1	110189.	15060.00	560.50	580.47		581.09	0.003019	7.71	2903.32	770.06	0.38	2.23
1	110189.	17720.00	560.50	581.19		581.75	0.002646	7.49	3476.86	808.67	0.36	2.07
1	110189.	26760.00	560.50	583.28		583.77	0.001911	7.01	5264.78	890.18	0.31	1.73
1	110568.	9380.00	561.50	580.13		580.29	0.001436	4.40	3396.94	757.32	0.25	0.80
1	110568.	15060.00	561.50	581.63		581.84	0.001507	4.95	4552.46	784.68	0.26	0.97
1	110568.	17720.00	561.50	582.22		582.46	0.001534	5.17	5022.50	794.93	0.26	1.03
1	110568.	26760.00	561.50	584.05		584.37	0.001543	5.71	6510.61	826.64	0.27	1.20
1	110835.	9380.00	562.90	580.42		580.77	0.001992	5.93	2505.50	491.94	0.30	1.35
1	110835.	15060.00	562.90	581.91		582.39	0.002449	7.11	3272.74	570.46	0.34	1.87
1	110835.	17720.00	562.90	582.50		583.03	0.002587	7.52	3625.53	616.49	0.36	2.07
1	110835.	26760.00	562.90	584.34		584.97	0.002908	8.66	4887.21	729.59	0.38	2.63

HEC-RAS Plan: Multiple River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	111744.	17470.00	565.60	584.35		584.49	0.000651	3.84	6116.13	847.51	0.18	0.53
1	111744.	26360.00	565.60	586.32		586.50	0.000702	4.35	7838.75	916.89	0.19	0.66
1	112258.	9300.00	565.50	582.16		582.24	0.000322	2.20	4213.65	769.63	0.12	0.19
1	112258.	14870.00	565.50	583.92		584.04	0.000366	2.61	5610.23	812.95	0.13	0.26
1	112258.	17470.00	565.50	584.60		584.74	0.000383	2.77	6165.76	826.24	0.14	0.29
1	112258.	26360.00	565.50	586.59		586.78	0.000428	3.23	7844.25	861.06	0.15	0.37
1	113009. V	9300.00	565.50	582.43		582.92	0.003564	7.35	2627.63	776.28	0.40	2.17
1	113009. V	14870.00	565.50	584.30		584.70	0.002833	7.31	4110.57	811.88	0.37	2.03
1	113009. V	17470.00	565.50	585.01		585.40	0.002713	7.42	4687.74	825.30	0.36	2.05
1	113009. V	26360.00	565.50	587.05		587.46	0.002515	7.88	6416.14	864.22	0.36	2.20
1	113618.	9310.00	568.30	584.19		584.39	0.001744	5.38	3197.92	947.22	0.28	1.13
1	113618.	14820.00	568.30	585.71		585.91	0.001465	5.36	4667.14	992.26	0.26	1.08
1	113618.	17410.00	568.30	586.34		586.54	0.001382	5.37	5299.60	1009.80	0.26	1.07
1	113618.	26280.00	568.30	588.25		588.48	0.001187	5.44	7265.08	1042.45	0.24	1.05
1	114290.	9310.00	569.50	585.68		586.32	0.004863	7.78	2072.33	666.40	0.46	2.55
1	114290.	14820.00	569.50	586.98		587.68	0.005099	8.73	2966.30	703.60	0.48	3.06
1	114290.	17410.00	569.50	587.54		588.25	0.005049	8.99	3360.20	714.02	0.48	3.20
1	114290.	26280.00	569.50	589.26		590.02	0.004808	9.68	4617.79	754.03	0.48	3.53
1	115217. W	9290.00	571.40	588.26		588.37	0.001211	4.06	4308.22	1151.58	0.22	0.68
1	115217. W	14760.00	571.40	589.61		589.74	0.001186	4.37	5875.63	1168.24	0.22	0.75
1	115217. W	17340.00	571.40	590.19		590.32	0.001198	4.53	6556.01	1205.74	0.23	0.80
1	115217. W	26160.00	571.40	591.88		592.04	0.001177	4.89	8633.51	1251.00	0.23	0.89
1	115764.	9290.00	570.70	588.68		588.75	0.000567	2.90	5471.81	1407.97	0.16	0.34
1	115764.	14760.00	570.70	590.04		590.12	0.000604	3.26	7429.11	1465.09	0.17	0.41
1	115764.	17340.00	570.70	590.62		590.71	0.000607	3.38	8281.10	1483.88	0.17	0.43
1	115764.	26160.00	570.70	592.31		592.42	0.000616	3.72	10834.04	1524.43	0.18	0.50
1	116128.	9160.00	570.09	588.77	588.23	589.65	0.004884	8.98	1890.46	1029.31	0.45	3.16
1	116128.	14410.00	570.09	590.26	589.47	590.91	0.004033	8.79	3299.63	1324.97	0.41	2.92
1	116128.	16910.00	570.09	590.87	589.79	591.44	0.003652	8.61	3994.42	1433.64	0.40	2.76
1	116128.	25480.00	570.09	592.64	590.87	592.92	0.002026	6.91	7436.27	1579.81	0.30	1.71
1	116157. WHITE CHAPEL ROABR D	9160.00	570.10	588.61	587.14	590.01	0.025472	9.80	702.02	71.02	0.39	8.96
1	116157. WHITE CHAPEL ROABR D	14410.00	570.10	591.56	591.51	592.42		7.02	3135.74	897.53	0.31	
1	116157. WHITE CHAPEL ROABR D	16910.00	570.10	591.90	591.90	592.69		7.82	3526.65	1021.52	0.31	
1	116157. WHITE CHAPEL ROABR D	25480.00	570.10	592.90	592.90	593.65		6.57	5218.71	1538.44	0.26	
1	116157. WHITE CHAPEL ROABR U	9160.00	570.22	588.83	590.13	590.49	0.032255	10.81	665.01	71.02	0.42	11.01
1	116157. WHITE CHAPEL ROABR U	14410.00	570.22	592.29	591.60	592.42		7.90	3030.51	1386.37	0.26	
1	116157. WHITE CHAPEL ROABR U	16910.00	570.22	592.54	592.45	592.69		8.80	3432.18	1480.03	0.26	
1	116157. WHITE CHAPEL ROABR U	25480.00	570.22	593.58	592.91	593.78		7.34	5172.94	1637.47	0.21	
1	116186. CONFLUENCE OF TR	9160.00	570.09	590.78	587.21	590.99	0.001494	5.28	3867.92	1293.84	0.25	1.06
1	116186. CONFLUENCE OF TR	14410.00	570.09	592.29	589.19	592.42	0.001093	4.84	7546.04	1632.71	0.22	0.86
1	116186. CONFLUENCE OF TR	16910.00	570.09	592.54	589.58	592.69	0.001307	5.35	7953.68	1647.87	0.24	1.05
1	116186. CONFLUENCE OF TR	25480.00	570.09	593.58	590.60	593.78	0.001718	6.41	9693.82	1695.68	0.28	1.47
1	116737. X	9160.00	573.50	591.64		591.85	0.001804	4.86	3317.94	711.07	0.28	0.98
1	116737. X	14410.00	573.50	592.99		593.28	0.002240	5.92	4317.52	774.05	0.32	1.39
1	116737. X	16910.00	573.50	593.37		593.71	0.002590	6.51	4609.42	790.21	0.34	1.67
1	116737. X	25480.00	573.50	594.63		595.13	0.003350	7.95	5635.44	830.16	0.40	2.40
1	119599. Y	8640.00	578.90	596.56		596.89	0.001803	6.02	2655.72	478.65	0.29	1.35
1	119599. Y	13420.00	578.90	598.62		599.00	0.001888	6.79	3695.14	532.57	0.31	1.64
1	119599. Y	15770.00	578.90	599.46		599.86	0.001910	7.08	4152.06	547.07	0.31	1.75
1	119599. Y	23780.00	578.90	601.79		602.26	0.002036	8.00	5467.37	579.87	0.33	2.14
1	120595.	8640.00	582.60	598.12		598.24	0.001215	3.90	3554.28	562.56	0.23	0.64
1	120595.	13420.00	582.60	600.20		600.35	0.001193	4.42	4743.02	580.91	0.23	0.77
1	120595.	15770.00	582.60	601.06		601.23	0.001205	4.67	5243.54	587.65	0.24	0.83
1	120595.	23780.00	582.60	603.48		603.71	0.001283	5.43	6698.84	614.74	0.25	1.07
1	121319. Z	8670.00	583.63	598.92		599.11	0.001178	4.30	3460.97	717.86	0.24	0.73
1	121319. Z	13380.00	583.63	600.98		601.19	0.001134	4.77	5097.33	881.72	0.24	0.85
1	121319. Z	15720.00	583.63	601.84		602.05	0.001095	4.90	5873.52	926.56	0.24	0.88
1	121319. Z	23740.00	583.63	604.28		604.50	0.000998	5.25	8241.20	1011.07	0.23	0.95
1	122075.	8670.00	584.00	599.65		599.75	0.000652	3.26	4340.91	1007.31	0.19	0.36
1	122075.	13380.00	584.00	601.66		601.76	0.000534	3.38	6494.58	1123.49	0.18	0.36
1	122075.	15720.00	584.00	602.48		602.59	0.000502	3.43	7435.03	1146.41	0.18	0.37
1	122075.	23740.00	584.00	604.89		605.00	0.000468	3.75	10291.67	1268.23	0.17	0.41
1	122995. AA	8670.00	584.10	600.36		600.46	0.001045	4.14	4555.59	1206.18	0.23	0.58
1	122995. AA	13380.00	584.10	602.21		602.29	0.000746	3.93	6840.13	1250.24	0.20	0.50
1	122995. AA	15720.00	584.10	603.00		603.08	0.000680	3.92	7832.63	1264.47	0.20	0.48
1	122995. AA	23740.00	584.10	605.35		605.44	0.000569	4.02	10853.11	1307.81	0.18	0.48
1	124420. AB	8590.00	586.00	602.60		603.20	0.004573	8.04	1953.85	517.17	0.43	2.64
1	124420. AB	13170.00	586.00	603.87		604.57	0.005107	9.15	2644.70	566.68	0.47	3.29
1	124420. AB	15450.00	586.00	604.51		605.21	0.005041	9.41	3011.63	589.38	0.47	3.42
1	124420. AB	24430.00	586.00	606.59		607.35	0.004848	10.22	4305.92	650.31	0.47	3.83
1	126767. AC	8620.00	591.20	608.04		608.29	0.001451	5.24	3032.11	509.98	0.26	1.04
1	126767. AC	13160.00	591.20	609.89		610.21	0.001627	6.09	4006.51	539.37	0.29	1.34
1	126767. AC	15420.00	591.20	610.63		610.98	0.001714	6.47	4409.69	546.83	0.30	1.49
1	126767. AC	24450.00	591.20	613.07		613.55	0.002019	7.77	5774.39	571.41	0.33	2.04
1	130321. AD	8240.00	597.20	611.03		611.13	0.000600	3.80	4563.02	763.40	0.19	0.45
1	130321. AD	12620.00	597.20	613.08		613.19	0.000622	4.28	6215.19	850.82	0.20	0.54
1	130321. AD	14860.00	597.20	613.99		614.12	0.000657	4.58	7038.29	941.97	0.21	0.61
1	130321. AD	22730.00	597.20	616.67		616.81	0.000631	5.00	9645.10	1012.87	0.21	0.68
1	131289. CONFLUENCE OF TR	8170.00	598.50	611.74	607.42	612.23	0.002353	5.64	1520.21	306.75	0.35	1.14
1	131289. CONFLUENCE OF TR	12480.00	598.50	613.73	609.01	614.36	0.002411	6.53	2315.57	553.45	0.37	1.42
1	131289. CONFLUENCE OF TR	14700.00										

HEC-RAS Plan: Multiple River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	131514. FM 1938 BR U	8170.00	598.62	612.74	608.19	613.73	0.008394	5.86	1394.15		0.27	1.91
1	131514. FM 1938 BR U	12480.00	598.62	612.74	609.84	616.05	0.019585	8.95	1394.15		0.42	4.45
1	131514. FM 1938 BR U	14700.00	598.62	617.53	610.59	617.70		10.49	1456.48	186.28	0.43	
1	131514. FM 1938 BR U	22520.00	598.62	619.94	619.43	620.11		9.36	3573.07	1199.93	0.27	
1	131592. AE	8170.00	598.62	613.32	608.13	613.73	0.002269	5.14	1589.07	603.75	0.32	1.13
1	131592. AE	12480.00	598.62	615.45	609.70	616.05	0.002454	6.24	2003.09	902.06	0.34	1.54
1	131592. AE	14700.00	598.62	617.53	610.43	617.69	0.000777	3.91	5425.48	988.56	0.20	0.57
1	131592. AE	22520.00	598.62	619.94	612.58	620.12	0.000681	4.13	8107.52	1250.31	0.19	0.60
1	131836.	8170.00	599.00	614.04	611.23	614.19	0.001154	4.11	3028.15	908.72	0.23	0.68
1	131836.	12480.00	599.00	616.37	612.03	616.51	0.000823	3.99	4422.94	998.75	0.20	0.60
1	131836.	14700.00	599.00	617.79	612.33	617.87	0.000441	3.15	7354.17	1060.40	0.15	0.36
1	131836.	22520.00	599.00	620.18	613.23	620.27	0.000424	3.44	9999.34	1156.67	0.15	0.41
1	132852.	8090.00	599.10	615.48		615.71	0.001982	5.35	2620.73	685.84	0.29	1.16
1	132852.	12370.00	599.10	617.40		617.59	0.001411	5.03	3979.10	755.90	0.25	0.97
1	132852.	14550.00	599.10	618.40		618.59	0.001206	4.89	4751.40	782.26	0.23	0.89
1	132852.	22250.00	599.10	620.73		620.93	0.001054	5.07	6639.02	825.11	0.22	0.91
1	133156.	8090.00	599.10	616.03		616.40	0.002576	6.74	2178.74	534.15	0.32	1.75
1	133156.	12370.00	599.10	617.80		618.13	0.002206	6.75	3153.41	572.43	0.30	1.69
1	133156.	14550.00	599.10	618.74		619.05	0.001941	6.58	3703.26	592.38	0.28	1.57
1	133156.	22250.00	599.10	621.02		621.37	0.001844	6.98	5131.26	658.90	0.28	1.70
1	133430. AF	8090.00	599.10	616.55		616.71	0.000610	3.41	2920.66	532.65	0.17	0.44
1	133430. AF	12370.00	599.10	618.24		618.45	0.000717	4.04	3846.27	561.60	0.19	0.59
1	133430. AF	14550.00	599.10	619.14		619.35	0.000712	4.19	4352.47	570.48	0.19	0.62
1	133430. AF	22250.00	599.10	621.39		621.68	0.000794	4.87	5666.21	594.01	0.21	0.80
1	133922.	8090.00	600.00	616.86		617.20	0.002199	6.20	2116.09	552.54	0.30	1.49
1	133922.	12370.00	600.00	618.59		618.90	0.001869	6.22	3159.17	652.51	0.29	1.43
1	133922.	14550.00	600.00	619.47		619.76	0.001571	5.93	3750.20	686.95	0.27	1.28
1	133922.	22250.00	600.00	621.74		622.03	0.001258	5.81	5323.79	701.43	0.24	1.17
1	134131.	8090.00	605.05	617.57		617.72	0.001330	3.74	2699.38	603.03	0.24	0.61
1	134131.	12370.00	605.05	619.18		619.36	0.001171	3.98	3700.86	637.06	0.23	0.65
1	134131.	14550.00	605.05	619.98		620.17	0.001088	4.05	4212.53	653.76	0.22	0.66
1	134131.	22250.00	605.05	622.15		622.39	0.001019	4.46	5679.11	691.94	0.22	0.75
1	135809.	8090.00	606.10	620.24	618.77	620.47	0.002181	4.77	2479.47	971.49	0.28	1.14
1	135809.	12370.00	606.10	621.52	619.53	621.75	0.001890	4.85	3502.47	1007.85	0.27	1.13
1	135809.	14550.00	606.10	622.14	619.79	622.38	0.001749	4.85	4001.94	1023.69	0.26	1.11
1	135809.	22250.00	606.10	624.08	620.53	624.34	0.001448	4.92	5590.09	1182.69	0.24	1.08
1	136244.	7910.00	606.45	620.78	614.34	620.96	0.000720	3.48	2355.39	715.97	0.20	0.41
1	136244.	12060.00	606.45	622.05	615.55	622.37	0.001065	4.61	2716.53	731.70	0.25	0.69
1	136244.	14240.00	606.45	622.65	616.12	623.04	0.001220	5.12	2888.63	739.20	0.27	0.83
1	136244.	21840.00	606.45	624.51	618.04	625.16	0.001668	6.62	3417.40	786.62	0.32	1.33
1	136354. BEAR CREEK PARKWBR D	7910.00	606.45	620.83	614.41	621.09	0.001519	4.09	1958.48	219.46	0.19	0.63
1	136354. BEAR CREEK PARKWBR D	12060.00	606.45	622.12	615.70	622.58	0.002479	5.46	2245.51	227.52	0.24	1.10
1	136354. BEAR CREEK PARKWBR D	14240.00	606.45	622.73	616.32	623.29	0.002957	6.07	2385.34	231.34	0.26	1.35
1	136354. BEAR CREEK PARKWBR D	21840.00	606.45	624.59	618.27	625.54	0.004480	7.87	2827.93	243.04	0.32	2.20
1	136354. BEAR CREEK PARKWBR U	7910.00	606.45	621.05	614.23	621.26	0.001311	3.72	2125.67	220.80	0.17	0.53
1	136354. BEAR CREEK PARKWBR U	12060.00	606.45	622.48	615.40	622.85	0.002091	4.93	2447.51	229.76	0.22	0.90
1	136354. BEAR CREEK PARKWBR U	14240.00	606.45	623.16	615.97	623.62	0.002467	5.47	2606.08	234.04	0.24	1.10
1	136354. BEAR CREEK PARKWBR U	21840.00	606.45	625.27	617.73	626.04	0.003619	7.01	3115.09	247.31	0.28	1.76
1	136466. AG	7910.00	606.45	621.16	614.15	621.30	0.000538	3.05	2616.38	1038.94	0.17	0.31
1	136466. AG	12060.00	606.45	622.67	615.33	622.92	0.000756	3.99	3048.07	1170.60	0.21	0.51
1	136466. AG	14240.00	606.45	623.40	615.87	623.70	0.000848	4.41	3255.92	1182.53	0.23	0.61
1	136466. AG	21840.00	606.45	625.67	617.49	626.16	0.001097	5.64	3902.08	1222.80	0.27	0.94
1	136749.	7910.00	610.00	621.20	617.49	621.88	0.003774	6.94	1275.66	566.83	0.41	2.01
1	136749.	12060.00	610.00	622.79	619.59	623.57	0.003645	7.60	1796.51	640.59	0.41	2.29
1	136749.	14240.00	610.00	623.56	621.31	624.35	0.003443	7.74	2082.54	676.91	0.40	2.32
1	136749.	21840.00	610.00	625.94	622.90	626.74	0.002680	7.75	3165.55	889.90	0.37	2.18
1	137197.	7910.00	608.70	622.50	617.38	622.88	0.001577	5.25	1686.30	469.12	0.30	0.92
1	137197.	12060.00	608.70	624.09	620.09	624.59	0.001815	6.22	2235.45	561.09	0.32	1.23
1	137197.	14240.00	608.70	624.80	620.79	625.34	0.001834	6.51	2521.30	590.26	0.33	1.33
1	137197.	21840.00	608.70	626.91	622.67	627.57	0.001788	7.16	3432.92	635.11	0.33	1.52
1	137763.	7910.00	616.00	623.50		623.73	0.001473	4.21	2161.00	582.63	0.28	0.65
1	137763.	12060.00	616.00	625.16		625.39	0.001161	4.30	3227.25	707.98	0.25	0.63
1	137763.	14240.00	616.00	625.87		626.11	0.001053	4.31	3738.94	740.37	0.25	0.62
1	137763.	21840.00	616.00	627.99		628.25	0.000851	4.43	5409.26	843.08	0.23	0.61
1	138002.	7910.00	616.00	623.83		624.04	0.001161	3.82	2295.75	581.26	0.25	0.53
1	138002.	12060.00	616.00	625.43		625.66	0.001045	4.13	3303.34	679.70	0.24	0.58
1	138002.	14240.00	616.00	626.11		626.35	0.001017	4.28	3786.40	734.91	0.24	0.61
1	138002.	21840.00	616.00	628.19		628.45	0.000868	4.50	5403.07	825.20	0.23	0.63
1	138382.	7910.00	610.20	623.94	623.02	625.29	0.007366	10.04	1044.33	347.23	0.57	4.14
1	138382.	12060.00	610.20	625.55		626.77	0.006379	10.36	1733.37	491.13	0.55	4.19
1	138382.	14240.00	610.20	626.28		627.39	0.005750	10.26	2106.94	541.55	0.52	4.02
1	138382.	21840.00	610.20	628.41		629.27	0.004175	9.75	3511.44	778.46	0.46	3.44
1	138892.	7910.00	610.80	626.90	625.50	627.38	0.002517	6.80	1620.35	580.17	0.34	1.76
1	138892.	12060.00	610.80	628.13	626.71	628.59	0.002276	6.88	2440.19	743.55	0.33	1.75
1	138892.	14240.00	610.80	628.63		629.09	0.002216	6.95	2827.00	802.19	0.32	1.77
1	138892.	21840.00	610.80	630.16		630.63	0.002003	7.08	4175.22	942.64	0.31	1.77
1	139185. AH	7910.00	611.20	627.59		628.22	0.003267	7.15	1278.79	281.78	0.37	2.03
1	139185. AH	12060.00	611.20	628.63		629.56	0.004166	8.55	1594.69	328.59	0.42	2.82
1	139185. AH	14240.00	611.20	629.04		630.13	0.004647	9.23	1738.92	371.72	0.45	3.25
1	139185. AH	21840.00	611.20	630.36	629.19							

HEC-RAS Plan: Multiple River: Big Bear Reach: 1 (Continued)

Reach	River Sta	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	Shear Chan (lb/sq ft)
1	141052. AI	9770.00	621.00	631.52		631.83	0.001343	4.52	2218.22	383.91	0.25	0.82
1	141052. AI	11470.00	621.00	632.13		632.48	0.001400	4.81	2461.18	416.95	0.26	0.91
1	141052. AI	17120.00	621.00	633.77		634.21	0.001522	5.52	3293.00	563.72	0.28	1.14
1	141449.	6290.00	621.00	630.51		630.61	0.000533	2.55	2466.61	307.88	0.16	0.28
1	141449.	9770.00	621.00	632.06		632.23	0.000720	3.32	2994.23	410.87	0.19	0.44
1	141449.	11470.00	621.00	632.70		632.90	0.000786	3.62	3269.72	436.03	0.20	0.51
1	141449.	17120.00	621.00	634.41		634.71	0.000970	4.45	4059.20	484.53	0.22	0.74
1	142204.	6290.00	616.30	630.53		632.01	0.006718	9.80	672.16	139.85	0.58	3.38
1	142204.	9770.00	616.30	632.01	631.24	634.14	0.008875	12.13	949.57	224.95	0.68	5.00
1	142204.	11470.00	616.30	632.75	632.51	634.91	0.008807	12.50	1140.35	283.22	0.68	5.22
1	142204.	17120.00	616.30	634.84	634.20	636.86	0.008006	12.97	1891.10	461.34	0.67	5.39
1	142398. AJ	6290.00	618.00	632.24		632.59	0.001252	4.86	1526.42	418.06	0.27	0.78
1	142398. AJ	9770.00	618.00	634.44		634.78	0.001076	5.13	2666.56	590.52	0.26	0.81
1	142398. AJ	11470.00	618.00	635.21		635.54	0.001038	5.25	3128.90	616.72	0.25	0.83
1	142398. AJ	17120.00	618.00	637.11		637.47	0.001054	5.78	4415.79	728.49	0.26	0.97
1	143195.	6230.00	622.00	633.56		634.21	0.003319	6.62	1069.20	283.48	0.39	1.82
1	143195.	9660.00	622.00	635.54		636.20	0.002928	7.11	1782.00	429.02	0.38	1.96
1	143195.	11320.00	622.00	636.26		636.91	0.002805	7.26	2099.88	464.31	0.37	2.00
1	143195.	16870.00	622.00	638.16		638.79	0.002560	7.67	3171.85	607.46	0.37	2.12
1	143440.	6230.00	622.00	634.58		635.03	0.003268	5.75	1345.76	417.72	0.37	1.47
1	143440.	9660.00	622.00	636.50		636.87	0.002452	5.56	2290.76	566.58	0.33	1.30
1	143440.	11320.00	622.00	637.17		637.55	0.002375	5.75	2696.54	661.36	0.33	1.35
1	143440.	16870.00	622.00	638.99		639.34	0.001896	5.77	3944.45	720.41	0.30	1.29
1	143749.	6160.00	619.40	635.46		635.97	0.002769	6.63	1374.54	508.22	0.35	1.74
1	143749.	9540.00	619.40	637.18		637.53	0.001951	6.13	2438.27	700.74	0.30	1.42
1	143749.	11170.00	619.40	637.84		638.17	0.001761	6.02	2915.33	725.62	0.29	1.35
1	143749.	16520.00	619.40	639.54		639.83	0.001401	5.81	4200.92	817.22	0.26	1.21
1	144218.	6160.00	619.40	636.63		636.94	0.001535	5.33	1610.97	389.81	0.27	1.08
1	144218.	9540.00	619.40	638.05		638.43	0.001836	6.26	2291.17	547.57	0.30	1.44
1	144218.	11170.00	619.40	638.66		639.08	0.002022	6.76	2637.04	573.17	0.31	1.66
1	144218.	16520.00	619.40	640.21		640.66	0.001988	7.17	3548.49	604.20	0.31	1.80
1	144540.	6160.00	621.10	637.12		637.51	0.002038	5.88	1545.99	469.39	0.30	1.35
1	144540.	9540.00	621.10	638.62		639.02	0.001989	6.30	2285.30	500.94	0.31	1.48
1	144540.	11170.00	621.10	639.30		639.68	0.001882	6.34	2627.06	511.16	0.30	1.48
1	144540.	16520.00	621.10	640.81		641.26	0.001981	6.97	3431.71	553.26	0.31	1.73
1	144982.	6160.00	622.00	637.98		638.50	0.002522	6.26	1220.29	293.54	0.33	1.56
1	144982.	9540.00	622.00	639.42		640.07	0.002903	7.29	1708.90	382.54	0.36	2.03
1	144982.	11170.00	622.00	640.04		640.73	0.003028	7.69	1966.27	447.68	0.37	2.22
1	144982.	16520.00	622.00	641.58		642.36	0.003269	8.60	2740.32	549.63	0.40	2.68
1	145947.	6100.00	624.20	638.98	628.76	639.05	0.000218	2.09	2989.47	313.75	0.11	0.16
1	145947.	9440.00	624.20	640.69	629.86	640.81	0.000321	2.77	3557.81	394.08	0.13	0.27
1	145947.	11040.00	624.20	641.41	630.34	641.54	0.000362	3.04	3829.07	434.98	0.14	0.33
1	145947.	16230.00	624.20	643.16	631.70	643.37	0.000489	3.82	4612.02	570.69	0.17	0.49
1	146161.	6100.00	624.60	639.03	634.36	639.13	0.000534	2.65	2615.37	562.06	0.16	0.29
1	146161.	9440.00	624.60	640.77	635.50	640.90	0.000494	2.87	3648.78	656.33	0.15	0.32
1	146161.	11040.00	624.60	641.50	635.96	641.64	0.000481	2.96	4103.63	684.34	0.15	0.33
1	146161.	16230.00	624.60	643.30	637.12	643.48	0.000507	3.35	5293.77	777.62	0.16	0.41
1	146210.	6100.00	624.80	638.93	633.31	639.23	0.001430	4.77	1659.61	494.26	0.26	0.90
1	146210.	9440.00	624.80	640.68	635.27	640.99	0.001338	5.12	2618.20	594.93	0.26	0.99
1	146210.	11040.00	624.80	641.42	636.00	641.72	0.001253	5.15	3068.40	631.63	0.25	0.98
1	146210.	16230.00	624.80	643.24	639.05	643.56	0.001192	5.49	4294.56	747.03	0.25	1.06
1	146902. AK	6100.00	626.30	640.49	640.49	642.09	0.010710	10.76	671.85	454.73	0.63	5.05
1	146902. AK	9440.00	626.30	641.99	641.51	642.65	0.004966	8.02	1636.33	553.37	0.43	2.68
1	146902. AK	11040.00	626.30	642.61	641.70	643.18	0.004050	7.52	1997.64	604.53	0.40	2.31
1	146902. AK	16230.00	626.30	644.26	642.41	644.77	0.002783	6.83	3062.61	688.55	0.34	1.82
1	147052.	6100.00	627.51	641.42	639.24	643.97	0.008312	13.09	539.46	102.71	0.68	5.51
1	147052.	9440.00	627.51	644.01	644.01	645.53	0.005138	11.79	1563.65	614.93	0.55	4.18
1	147052.	11040.00	627.51	644.54	644.54	645.93	0.004930	11.84	1918.77	719.17	0.55	4.16
1	147052.	16230.00	627.51	645.49	645.49	646.94	0.005556	13.11	2671.63	855.65	0.59	4.99
1	147067. KELLER SMITHFIELBR D	6100.00	627.51	640.99	639.78	644.54	0.046789	15.39	424.72		0.73	10.82
1	147067. KELLER SMITHFIELBR D	9440.00	627.51	645.70	644.12	645.93	0.004300	4.39	2570.36	880.07	0.16	0.91
1	147067. KELLER SMITHFIELBR D	11040.00	627.51	646.02	644.34	646.29	0.004364	4.50	2865.99	917.36	0.17	0.95
1	147067. KELLER SMITHFIELBR D	16230.00	627.51	646.95	644.95	647.29	0.004516	4.80	3779.53	1075.63	0.19	1.05
1	147067. KELLER SMITHFIELBR U	6100.00	627.51	645.55	639.78	645.86	0.006781	5.48	1562.80	660.01	0.19	1.42
1	147067. KELLER SMITHFIELBR U	9440.00	627.51	645.66	645.22	646.33	0.014593	8.08	1634.17	673.35	0.27	3.08
1	147067. KELLER SMITHFIELBR U	11040.00	627.51	645.99	645.49	646.69	0.014475	8.19	1865.29	727.89	0.27	3.14
1	147067. KELLER SMITHFIELBR U	16230.00	627.51	646.94	646.19	647.66	0.014270	8.54	2672.19	969.48	0.27	3.32
1	147087.	6100.00	627.51	645.56	639.54	645.88	0.001074	5.81	2208.41	661.22	0.26	0.98
1	147087.	9440.00	627.51	645.67	640.65	646.38	0.002422	8.76	2281.56	674.87	0.39	2.22
1	147087.	11040.00	627.51	645.96	643.03	646.78	0.002824	9.58	2484.66	722.90	0.42	2.63
1	147087.	16230.00	627.51	646.76	643.55	647.94	0.004219	12.08	3132.71	928.89	0.52	4.13
1	147197.	6100.00	627.51	645.95	637.37	646.00	0.000237	2.26	4397.44	811.72	0.12	0.16
1	147197.	9440.00	627.51	646.55	639.29	646.66	0.000430	3.16	4891.89	826.33	0.16	0.31
1	147197.	11040.00	627.51	646.97	640.06	647.09	0.000491	3.45	5242.36	838.66	0.17	0.37
1	147197.	16230.00	627.51	648.22	642.31	648.39	0.000649	4.23	6364.37	985.46	0.20	0.54
1	148670. CONFLUENCE OF TR	5520.00	631.00	646.37	640.67	646.42	0.000428	2.57	4406.17	1023.53	0.15	0.23
1	148670. CONFLUENCE OF TR	8570.00	631.00	647.25	641.71	647.32	0.000601	3.24	5319.08	1053.63	0.18	0.35
1	148670. CONFLUENCE OF TR	10020.00	631.00	647.75	642.20	647.83	0.000625	3.42	5837.44	1095.94	0.19	0.39
1	148670. CONFLUENCE OF TR	14020.00	631.00	649.14	643.63	649.24	0.000624	3.72	7329.72	1182.45	0.19	0.44
1	150203. AL	5600.00	633.90	647.01		647.05	0.000449	1.75	3413.37	799.51	0.13	

HEC-RAS Plan: Multiple River: Big Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	152554.	13740.00	640.50	656.88	655.66	658.04	0.004795	9.91	1804.08	510.97	0.53	3.16
1	152735. AM	4690.00	640.75	655.47	647.98	655.62	0.000445	3.12	1568.46	295.12	0.17	0.26
1	152735. AM	7320.00	640.75	656.73	649.43	656.98	0.000664	4.13	2059.67	350.21	0.22	0.44
1	152735. AM	8580.00	640.75	657.22	650.01	657.51	0.000762	4.55	2234.47	367.43	0.23	0.53
1	152735. AM	12430.00	640.75	658.15	651.48	658.63	0.001147	5.88	2591.39	529.87	0.29	0.86
1	152814. RUFESNOW BR D	4690.00	640.75	655.49	648.07	655.66	0.000771	3.35	1440.35	170.83	0.15	0.34
1	152814. RUFESNOW BR D	7320.00	640.75	656.13	649.51	656.98	0.003114	4.88	1550.43		0.22	0.84
1	152814. RUFESNOW BR D	8580.00	640.75	656.13	650.08	657.51	0.004278	5.72	1550.43		0.25	1.15
1	152814. RUFESNOW BR D	12430.00	640.75	656.13	651.63	658.63	0.008979	8.28	1550.43		0.37	2.41
1	152814. RUFESNOW BR U	4690.00	640.75	655.59	647.22	655.70	0.000646	2.76	1699.81	170.82	0.13	0.28
1	152814. RUFESNOW BR U	7320.00	640.75	656.13	648.49	657.27	0.002704	4.08	1792.81		0.18	0.72
1	152814. RUFESNOW BR U	8580.00	640.75	656.13	649.00	657.96	0.003715	4.79	1792.81		0.22	1.00
1	152814. RUFESNOW BR U	12430.00	640.75	656.13	650.46	659.71	0.007796	6.93	1792.81		0.31	2.09
1	152870.	4690.00	640.75	655.66	646.95	655.73	0.000231	2.22	2122.00	520.79	0.12	0.16
1	152870.	7320.00	640.75	657.12	647.95	657.27	0.000370	3.06	2407.91	714.79	0.15	0.29
1	152870.	8580.00	640.75	657.78	648.37	657.96	0.000429	3.41	2535.34	920.95	0.17	0.35
1	152870.	12430.00	640.75	659.41	649.58	659.71	0.000609	4.39	2852.98	1397.06	0.20	0.56
1	152953.	4690.00	641.20	655.66	650.07	655.79	0.000715	3.25	1847.23	751.13	0.20	0.37
1	152953.	7320.00	641.20	657.15	651.69	657.33	0.000778	3.78	2490.08	832.52	0.21	0.47
1	152953.	8580.00	641.20	657.82	653.07	658.01	0.000781	3.96	2777.46	951.67	0.21	0.51
1	152953.	12430.00	641.20	659.55	654.37	659.78	0.000806	4.45	3521.88	1420.46	0.22	0.61
1	153133.	4690.00	641.50	655.81	652.08	655.94	0.000978	3.42	1881.89	740.63	0.22	0.43
1	153133.	7320.00	641.50	657.33	653.90	657.47	0.000833	3.59	2914.02	902.43	0.21	0.44
1	153133.	8580.00	641.50	658.01	654.42	658.15	0.000763	3.60	3428.25	950.80	0.21	0.44
1	153133.	12430.00	641.50	659.78	655.15	659.92	0.000654	3.74	5139.68	1367.85	0.20	0.45
1	153207.	4690.00	641.95	655.88	649.54	656.01	0.000782	3.26	2027.86	654.68	0.19	0.44
1	153207.	7320.00	641.95	657.41	651.25	657.53	0.000704	3.43	3204.94	890.91	0.18	0.46
1	153207.	8580.00	641.95	658.09	651.95	658.21	0.000638	3.40	3842.84	1009.47	0.18	0.44
1	153207.	12430.00	641.95	659.87	655.02	659.98	0.000514	3.36	6080.92	1484.21	0.16	0.41
1	153220. TRAILBRIDGE BR D	4690.00	641.95	655.98	649.54	656.04	0.001491	1.82	1128.25	105.53	0.09	0.76
1	153220. TRAILBRIDGE BR D	7320.00	641.95	657.57	651.25	657.57	0.004635	0.00	1239.56	34.55	0.00	1.71
1	153220. TRAILBRIDGE BR D	8580.00	641.95	658.25	651.95	658.25	0.007363	0.00	1252.69	4.53	0.00	2.39
1	153220. TRAILBRIDGE BR D	12430.00	641.95	659.90	655.17	659.99	0.000925	2.13	5935.56	1488.25	0.10	0.24
1	153220. TRAILBRIDGE BR U	4690.00	641.95	655.99	649.54	656.04	0.001494	1.82	1126.35	105.43	0.09	0.76
1	153220. TRAILBRIDGE BR U	7320.00	641.95	657.57	651.25	657.57	0.004643	0.00	1237.41	34.55	0.00	1.71
1	153220. TRAILBRIDGE BR U	8580.00	641.95	658.25	651.95	658.25	0.007376	0.00	1250.54	4.53	0.00	2.40
1	153220. TRAILBRIDGE BR U	12430.00	641.95	659.92	655.07	660.00	0.001200	2.43	5859.66	1564.04	0.09	0.31
1	153234.	4690.00	641.95	655.94	649.54	656.10	0.000884	3.48	1926.22	647.69	0.20	0.50
1	153234.	7320.00	641.95	657.50	651.25	657.65	0.000821	3.72	3119.16	851.91	0.20	0.54
1	153234.	8580.00	641.95	658.18	651.95	658.32	0.000756	3.72	3739.78	976.26	0.19	0.53
1	153234.	12430.00	641.95	659.91	655.03	660.03	0.000631	3.73	5975.03	1562.23	0.18	0.51
1	153278.	4690.00	643.00	655.97		656.16	0.001356	3.82	1743.26	602.18	0.24	0.64
1	153278.	7320.00	643.00	657.54		657.69	0.001046	3.79	3132.35	1125.47	0.22	0.59
1	153278.	8580.00	643.00	658.23		658.36	0.000890	3.67	3943.55	1232.92	0.21	0.54
1	153278.	12430.00	643.00	659.97		660.06	0.000626	3.43	6342.14	1480.21	0.18	0.45
1	153650.	4690.00	644.87	656.62		656.88	0.002900	5.15	1605.48	749.89	0.34	1.20
1	153650.	7320.00	644.87	658.02		658.19	0.001870	4.67	2745.67	872.85	0.28	0.93
1	153650.	8580.00	644.87	658.63		658.79	0.001592	4.51	3295.01	924.56	0.26	0.85
1	153650.	12430.00	644.87	660.24		660.37	0.001143	4.27	4968.08	1214.95	0.23	0.72
1	154117.	4690.00	645.52	657.77		658.30	0.003000	6.25	1081.67	618.97	0.40	1.41
1	154117.	7320.00	645.52	658.82		659.35	0.003019	6.83	1828.25	810.47	0.40	1.61
1	154117.	8580.00	645.52	659.32		659.79	0.002729	6.73	2242.21	843.12	0.39	1.54
1	154117.	12430.00	645.52	660.74		661.10	0.002044	6.40	3535.64	984.75	0.34	1.33
1	155095. AN	4690.00	648.00	660.79		661.40	0.003460	6.74	919.96	269.12	0.42	1.63
1	155095. AN	7320.00	648.00	661.94		662.78	0.004314	8.24	1248.42	304.25	0.48	2.34
1	155095. AN	8580.00	648.00	662.28		663.30	0.005012	9.11	1357.84	332.83	0.53	2.82
1	155095. AN	12430.00	648.00	663.05	661.90	664.67	0.007418	11.69	1666.47	466.12	0.65	4.52
1	155538.	4360.00	649.00	662.28		662.90	0.003280	6.88	1019.29	420.30	0.41	1.66
1	155538.	6850.00	649.00	663.81		664.39	0.002980	7.32	1725.11	489.78	0.41	1.78
1	155538.	8070.00	649.00	664.43		665.00	0.002870	7.47	2038.25	514.59	0.40	1.82
1	155538.	11410.00	649.00	666.10		666.67	0.002711	8.00	3258.70	931.82	0.40	1.99
1	155660.	4360.00	650.15	662.93	657.67	663.24	0.001403	4.85	1332.10	476.16	0.28	0.80
1	155660.	6850.00	650.15	664.32	659.54	664.70	0.001667	5.79	2135.68	693.11	0.31	1.08
1	155660.	8070.00	650.15	664.91	660.93	665.31	0.001668	6.00	2562.65	732.67	0.31	1.14
1	155660.	11410.00	650.15	666.63	663.10	666.96	0.001388	6.01	4107.78	1068.35	0.29	1.09
1	155676. TRAILBRIDGE BR D	4360.00	650.15	663.05	657.67	663.29	0.005256	4.44	1265.50	508.79	0.19	0.97
1	155676. TRAILBRIDGE BR D	6850.00	650.15	664.58	659.51	664.79	0.004331	4.47	2195.13	713.94	0.17	0.93
1	155676. TRAILBRIDGE BR D	8070.00	650.15	665.21	660.26	665.40	0.003684	4.29	2656.41	750.86	0.16	0.84
1	155676. TRAILBRIDGE BR D	11410.00	650.15	666.89	663.35	667.04	0.002584	3.94	4271.70	1124.04	0.14	0.68
1	155676. TRAILBRIDGE BR U	4360.00	650.15	663.04	657.93	663.40	0.007008	5.43	1105.51	395.50	0.23	1.41
1	155676. TRAILBRIDGE BR U	6850.00	650.15	664.58	660.05	664.87	0.005810	5.44	2030.98	762.62	0.20	1.35
1	155676. TRAILBRIDGE BR U	8070.00	650.15	665.22	662.93	665.46	0.005079	5.27	2527.72	809.90	0.18	1.24
1	155676. TRAILBRIDGE BR U	11410.00	650.15	666.91	663.90	667.07	0.003246	4.60	4034.39	1037.71	0.14	0.91
1	155692.	4360.00	650.15	663.04	657.93	663.47	0.001784	5.76	1211.43	394.31	0.31	1.09
1	155692.	6850.00	650.15	664.51	661.04	665.01	0.002066	6.75	2081.26	754.21	0.34	1.44
1	155692.	8070.00	650.15	665.12	662.22	665.62	0.002086	7.01	2556.29	803.35	0.35	1.53
1	155692.	11410.00	650.15	666.82	663.97	667.21	0.001683	6.85	4050.60	1014.43	0.32	1.40
1	155743.	4360.00	651.01	663.45	656.77	663.60	0.000550	3.36	1998.15	564.36	0.18	0.36
1	155743.	6850.00	651.01									

HEC-RAS Plan: Multiple River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	156019.	11410.00	652.86	667.20		667.75	0.003007	7.36	2592.58	618.23	0.41	1.80
1	156465. AO	4360.00	653.38	664.77		665.28	0.002600	6.32	1078.95	335.04	0.38	1.38
1	156465. AO	6850.00	653.38	666.32		666.88	0.002653	7.11	1636.08	384.42	0.39	1.66
1	156465. AO	8070.00	653.38	666.92		667.51	0.002702	7.46	1873.35	402.77	0.40	1.79
1	156465. AO	11410.00	653.38	668.35		669.00	0.002784	8.22	2483.25	449.24	0.41	2.09
1	156678.	4360.00	654.80	665.39		665.67	0.001383	4.64	1481.00	490.91	0.30	0.63
1	156678.	6850.00	654.80	666.95		667.24	0.001299	5.11	2287.05	539.90	0.30	0.72
1	156678.	8070.00	654.80	667.57		667.87	0.001287	5.31	2625.52	554.18	0.30	0.76
1	156678.	11410.00	654.80	669.03		669.36	0.001279	5.82	3456.53	594.30	0.31	0.87
1	156755.	4360.00	654.52	665.47	660.45	665.77	0.001092	4.90	1500.64	427.85	0.27	0.65
1	156755.	6850.00	654.52	667.01	662.76	667.36	0.001226	5.72	2206.87	490.70	0.30	0.84
1	156755.	8070.00	654.52	667.62	663.29	668.00	0.001279	6.05	2514.31	515.28	0.31	0.93
1	156755.	11410.00	654.52	669.07	665.53	669.49	0.001340	6.68	3304.47	583.95	0.32	1.09
1	156791. BEAR CREEK PARKW	Culvert										
1	156827.	4360.00	654.52	665.52	660.66	665.82	0.001086	4.90	1498.17	426.39	0.27	0.65
1	156827.	6850.00	654.52	667.08	662.56	667.44	0.001216	5.72	2216.72	495.56	0.30	0.84
1	156827.	8070.00	654.52	667.68	664.29	668.06	0.001278	6.06	2522.17	521.93	0.31	0.93
1	156827.	11410.00	654.52	669.10	665.56	669.56	0.001425	6.90	3370.61	693.02	0.33	1.16
1	156869.	4360.00	654.39	665.45	662.57	666.02	0.002526	6.86	1171.00	429.37	0.40	1.33
1	156869.	6850.00	654.39	667.06	665.38	667.59	0.002291	7.28	1930.52	510.31	0.39	1.42
1	156869.	8070.00	654.39	667.68	665.76	668.20	0.002241	7.48	2254.25	547.90	0.39	1.46
1	156869.	11410.00	654.39	669.14	666.79	669.66	0.002159	7.96	3149.76	683.60	0.39	1.59
1	156890. PARK BRIDGE BR D	4360.00	654.39	665.57	665.35	666.14	0.019818	7.94	863.69	433.70	0.32	2.76
1	156890. PARK BRIDGE BR D	6850.00	654.39	667.47	665.89	667.74	0.006544	5.71	1784.35	525.66	0.20	1.28
1	156890. PARK BRIDGE BR D	8070.00	654.39	668.08	666.18	668.35	0.005840	5.72	2124.91	581.75	0.20	1.24
1	156890. PARK BRIDGE BR D	11410.00	654.39	669.56	666.76	669.81	0.004167	5.46	3088.09	723.63	0.18	1.07
1	156890. PARK BRIDGE BR U	4360.00	654.39	665.99	665.32	666.36	0.009451	6.54	1092.88	462.96	0.25	1.44
1	156890. PARK BRIDGE BR U	6850.00	654.39	667.54	665.91	667.81	0.005317	5.83	1883.10	544.95	0.20	1.05
1	156890. PARK BRIDGE BR U	8070.00	654.39	668.15	666.15	668.41	0.004597	5.75	2222.14	568.02	0.19	0.99
1	156890. PARK BRIDGE BR U	11410.00	654.39	669.60	666.67	669.85	0.003627	5.75	3134.71	720.55	0.18	0.93
1	156910.	4360.00	654.39	665.99	662.96	666.42	0.001472	6.12	1425.27	462.00	0.35	0.82
1	156910.	6850.00	654.39	667.47	665.40	667.93	0.001547	6.90	2177.06	542.10	0.36	0.99
1	156910.	8070.00	654.39	668.07	665.85	668.54	0.001559	7.18	2508.49	564.27	0.37	1.05
1	156910.	11410.00	654.39	669.50	666.93	669.99	0.001578	7.80	3397.19	703.73	0.38	1.20
1	157025.	4360.00	655.00	666.10		666.80	0.003002	7.46	1028.89	409.41	0.48	1.32
1	157025.	6850.00	655.00	667.63		668.27	0.002594	7.86	1681.96	463.17	0.46	1.37
1	157025.	8070.00	655.00	668.24		668.86	0.002448	7.98	1968.73	473.45	0.45	1.38
1	157025.	11410.00	655.00	669.69		670.30	0.002249	8.40	2682.76	529.83	0.45	1.46
1	157593.	4360.00	656.00	667.73		668.33	0.002411	6.69	867.50	330.80	0.43	1.06
1	157593.	6850.00	656.00	669.05		669.67	0.002330	7.34	1358.13	413.26	0.44	1.20
1	157593.	8070.00	656.00	669.58		670.20	0.002261	7.52	1584.58	438.09	0.44	1.24
1	157593.	11410.00	656.00	670.92		671.57	0.002160	8.04	2242.43	574.72	0.44	1.36
1	157757.	4360.00	654.28	668.31	663.30	668.67	0.001295	5.52	1183.83	362.29	0.30	0.81
1	157757.	6850.00	654.28	669.55	666.89	670.01	0.001622	6.64	1716.00	526.51	0.34	1.13
1	157757.	8070.00	654.28	670.08	667.65	670.54	0.001608	6.81	2011.00	570.66	0.34	1.17
1	157757.	11410.00	654.28	671.50	668.87	671.90	0.001380	6.77	2881.97	656.50	0.32	1.12
1	157765. PARK BRIDGE BR D	4360.00	654.28	668.51	662.89	668.73	0.003148	4.24	1213.83	375.53	0.17	0.68
1	157765. PARK BRIDGE BR D	6850.00	654.28	669.87	667.17	670.09	0.002927	4.44	1845.39	558.36	0.17	0.72
1	157765. PARK BRIDGE BR D	8070.00	654.28	670.39	667.59	670.62	0.002662	4.36	2145.38	588.96	0.17	0.68
1	157765. PARK BRIDGE BR D	11410.00	654.28	671.73	668.52	671.95	0.002130	4.18	2988.34	689.35	0.16	0.60
1	157765. PARK BRIDGE BR U	4360.00	654.28	668.53	662.89	668.75	0.002559	4.30	1254.77	396.81	0.17	0.55
1	157765. PARK BRIDGE BR U	6850.00	654.28	669.90	667.12	670.12	0.002355	4.49	1907.96	553.03	0.17	0.58
1	157765. PARK BRIDGE BR U	8070.00	654.28	670.41	667.58	670.64	0.002213	4.48	2204.06	588.50	0.17	0.57
1	157765. PARK BRIDGE BR U	11410.00	654.28	671.74	668.46	671.97	0.001862	4.40	3040.70	689.80	0.16	0.53
1	157774.	4360.00	654.28	668.48	663.30	668.82	0.000949	5.37	1276.69	390.97	0.29	0.60
1	157774.	6850.00	654.28	669.81	666.80	670.22	0.001116	6.29	1905.58	546.14	0.32	0.79
1	157774.	8070.00	654.28	670.33	667.53	670.74	0.001140	6.53	2197.52	583.46	0.32	0.85
1	157774.	11410.00	654.28	671.67	668.89	672.06	0.001098	6.85	3030.68	678.08	0.32	0.90
1	157844.	4360.00	654.78	668.56		668.91	0.001713	5.37	1178.73	406.79	0.29	0.98
1	157844.	6850.00	654.78	669.99		670.33	0.001677	5.79	1822.22	505.14	0.30	1.09
1	157844.	8070.00	654.78	670.50		670.85	0.001722	6.03	2091.11	551.87	0.30	1.16
1	157844.	11410.00	654.78	671.82		672.17	0.001634	6.29	2900.07	675.84	0.30	1.22
1	158406.	4360.00	658.00	669.69		670.36	0.003709	7.22	949.90	480.72	0.44	1.84
1	158406.	6850.00	658.00	671.07		671.59	0.003011	7.19	1691.92	597.61	0.40	1.74
1	158406.	8070.00	658.00	671.60		672.09	0.002832	7.22	2017.18	641.56	0.39	1.73
1	158406.	11410.00	658.00	672.85		673.30	0.002555	7.40	2934.51	829.78	0.38	1.74
1	158664. AP	4360.00	658.73	670.74	664.39	670.90	0.000829	3.41	1554.04	483.08	0.21	0.41
1	158664. AP	6850.00	658.73	671.88	665.86	672.11	0.001067	4.22	2252.31	700.95	0.24	0.60
1	158664. AP	8070.00	658.73	672.34	666.95	672.59	0.001119	4.46	2585.68	738.52	0.25	0.66
1	158664. AP	11410.00	658.73	673.51	668.42	673.78	0.001156	4.89	3523.63	891.61	0.26	0.77
1	158686. SHADY DAM	Culvert										
1	158708.	4360.00	662.00	670.86	666.20	671.08	0.001314	3.91	1349.39	530.05	0.26	0.57
1	158708.	6850.00	662.00	671.98	667.79	672.27	0.001573	4.72	2047.53	695.76	0.29	0.79
1	158708.	8070.00	662.00	672.37	668.28	672.69	0.001687	5.04	2324.36	722.46	0.30	0.88
1	158708.	11410.00	662.00	673.53	669.89	673.86	0.001674	5.45	3233.68	879.48	0.31	0.99
1	158956.	4360.00	663.20	671.21		671.35	0.000758	3.20	1769.46	566.26	0.20	0.37
1	158956.	6850.00	663.20	672.41		672.60	0.000900	3.84	2513.89	666.29	0.23	0.50
1	158956.	8070.00	663.20	672.83		673.04	0.000987	4.15	2800.85	701.67	0.24	0.58
1	158956.	11410.00	663.20	673.98		674.23	0.001106	4.74	3681.63	859.62	0.26	0.72
1	159323.	4360.00										

HEC-RAS Plan: Multiple River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	160637.	6870.00	663.42	675.62	674.88	676.05	0.003256	6.66	1834.08	1138.26	0.41	1.58
1	160637.	8100.00	663.42	676.01	675.11	676.37	0.002792	6.37	2303.49	1205.47	0.39	1.42
1	160637.	11460.00	663.42	676.80	675.97	677.10	0.002363	6.22	3271.45	1254.86	0.36	1.32
1	160668. BEAR CREEK PARKW	Culvert										
1	160698.	4370.00	663.42	674.59	672.23	675.24	0.005005	6.67	776.14	347.00	0.49	1.77
1	160698.	6870.00	663.42	674.81	674.49	676.20	0.010458	9.89	853.90	374.45	0.71	3.83
1	160698.	8100.00	663.42	675.37	675.37	676.67	0.009270	9.88	1107.02	618.54	0.68	3.71
1	160698.	11460.00	663.42	676.50	676.50	677.41	0.006588	9.26	2160.07	1061.79	0.59	3.09
1	160706.	4370.00	665.76	674.32	673.67	675.61	0.007944	9.51	538.63	197.84	0.68	2.88
1	160706.	6870.00	665.76	676.00	676.00	676.85	0.004908	8.75	1418.40	904.58	0.56	2.25
1	160706.	8100.00	665.76	676.29	676.29	677.16	0.005128	9.17	1694.06	1021.21	0.58	2.44
1	160706.	11460.00	665.76	676.87	676.87	677.73	0.005365	9.84	2315.79	1099.81	0.60	2.75
1	161050.	4370.00	665.00	676.64		676.92	0.002029	4.53	1267.21	584.06	0.34	0.67
1	161050.	6870.00	665.00	677.63		677.94	0.002262	5.07	1947.34	778.84	0.37	0.82
1	161050.	8100.00	665.00	677.95		678.28	0.002343	5.34	2202.68	825.05	0.38	0.89
1	161050.	11460.00	665.00	678.53		678.95	0.002799	6.19	2725.21	955.31	0.42	1.17
1	161291. AR	4370.00	666.00	677.09		677.41	0.002029	4.62	1042.88	405.68	0.35	0.69
1	161291. AR	6870.00	666.00	678.10		678.51	0.002521	5.53	1674.39	740.58	0.39	0.96
1	161291. AR	8100.00	666.00	678.42		678.87	0.002630	5.84	1927.63	810.59	0.40	1.05
1	161291. AR	11460.00	666.00	679.08		679.64	0.003167	6.84	2502.85	949.18	0.45	1.40
1	161493.	3870.00	667.19	677.50	672.74	677.72	0.000951	3.89	1342.50	804.00	0.27	0.37
1	161493.	6130.00	667.19	678.68	674.63	678.85	0.000775	3.93	2470.11	1054.13	0.25	0.36
1	161493.	7270.00	667.19	679.04	675.36	679.22	0.000781	4.07	2861.97	1099.85	0.26	0.38
1	161493.	10330.00	667.19	679.86	677.94	680.04	0.000800	4.40	3805.60	1205.64	0.26	0.43
1	161526. WHITLEY ROAD	Culvert										
1	161559.	3870.00	667.65	677.90	672.88	678.08	0.000776	3.64	1583.44	718.98	0.25	0.32
1	161559.	6130.00	667.65	678.64	674.44	678.93	0.001153	4.75	2214.20	993.25	0.31	0.53
1	161559.	7270.00	667.65	678.98	675.15	679.30	0.001249	5.10	2561.47	1046.24	0.32	0.60
1	161559.	10330.00	667.65	679.74	677.73	680.11	0.001447	5.84	3409.35	1182.01	0.35	0.76
1	161717.	3870.00	668.30	678.05	672.23	678.19	0.000477	3.05	1270.55	221.95	0.20	0.22
1	161717.	6130.00	668.30	678.80	673.40	679.10	0.000894	4.38	1400.35	288.30	0.27	0.44
1	161717.	7270.00	668.30	679.14	673.94	679.52	0.001109	4.98	1459.90	390.02	0.31	0.56
1	161717.	10330.00	668.30	679.86	675.09	680.51	0.001740	6.51	1587.81	796.57	0.39	0.93
1	161833.	3870.00	668.70	678.09	673.13	678.27	0.000664	3.36	1152.78	171.49	0.23	0.27
1	161833.	6130.00	668.70	678.88	674.21	679.23	0.001200	4.75	1290.90	187.76	0.31	0.53
1	161833.	7270.00	668.70	679.24	674.69	679.69	0.001466	5.36	1355.58	195.23	0.35	0.67
1	161833.	10330.00	668.70	680.03	675.92	680.76	0.002208	6.89	1500.06	365.93	0.43	1.08
1	161947.	3870.00	668.57	678.19	672.41	678.33	0.000471	2.99	1293.52	176.89	0.19	0.21
1	161947.	6130.00	668.57	679.08	673.54	679.35	0.000845	4.22	1452.68	183.77	0.26	0.41
1	161947.	7270.00	668.57	679.49	674.03	679.84	0.001027	4.76	1528.54	191.01	0.29	0.51
1	161947.	10330.00	668.57	680.42	675.21	680.99	0.001503	6.06	1705.68	331.64	0.36	0.81
1	162070.	3870.00	669.05	678.22	673.70	678.43	0.000840	3.64	1063.97	167.65	0.25	0.33
1	162070.	6130.00	669.05	679.13	674.81	679.52	0.001418	5.03	1218.92	175.00	0.34	0.60
1	162070.	7270.00	669.05	679.55	675.34	680.04	0.001682	5.62	1293.08	178.42	0.37	0.74
1	162070.	10330.00	669.05	680.51	676.59	681.27	0.002357	7.04	1467.81	197.24	0.44	1.13
1	162213. AS	3870.00	670.26	678.28	675.18	678.74	0.002214	5.47	707.26	122.48	0.40	0.77
1	162213. AS	6130.00	670.26	679.20	676.50	680.06	0.003605	7.44	823.70	129.72	0.52	1.37
1	162213. AS	7270.00	670.26	679.62	677.13	680.69	0.004217	8.27	879.31	134.31	0.57	1.67
1	162213. AS	10330.00	670.26	680.58	678.58	682.20	0.005767	10.23	1009.99	161.30	0.67	2.49
1	162291. U.S. ROUTE 377 BR D	3870.00	670.26	678.44	675.33	678.93	0.003008	5.60	691.63	119.16	0.41	0.85
1	162291. U.S. ROUTE 377 BR D	6130.00	670.26	679.20	676.71	680.06	0.005299	7.83	783.27	122.42	0.46	1.63
1	162291. U.S. ROUTE 377 BR D	7270.00	670.26	679.62	677.34	680.69	0.008358	8.73	833.10	84.86	0.50	2.15
1	162291. U.S. ROUTE 377 BR D	10330.00	670.26	682.15	678.82	683.06		10.39			0.62	
1	162291. U.S. ROUTE 377 BR U	3870.00	670.26	678.79	675.32	679.22	0.002550	5.28	732.95	120.69	0.32	0.75
1	162291. U.S. ROUTE 377 BR U	6130.00	670.26	679.92	676.71	681.39	0.009082	7.25	845.88		0.41	1.66
1	162291. U.S. ROUTE 377 BR U	7270.00	670.26	679.92	677.35	682.08	0.012774	8.59	845.88		0.49	2.34
1	162291. U.S. ROUTE 377 BR U	10330.00	670.26	682.15	678.82	683.23		10.43			0.62	
1	162391.	3870.00	670.26	678.88	675.18	679.26	0.001665	4.95	781.92	127.17	0.35	0.61
1	162391.	6130.00	670.26	680.87	676.51	681.39	0.001819	5.84	1050.45	142.75	0.38	0.80
1	162391.	7270.00	670.26	681.45	677.13	682.08	0.002051	6.41	1134.81	196.36	0.41	0.95
1	162391.	10330.00	670.26	682.15	678.59	683.24	0.003163	8.33	1241.04	268.99	0.51	1.57
1	162465.	3870.00	671.30	679.00	675.70	679.39	0.001837	4.98	777.89	137.52	0.37	0.63
1	162465.	6130.00	671.30	681.03	677.00	681.54	0.001796	5.72	1071.34	337.26	0.38	0.78
1	162465.	7270.00	671.30	681.64	677.57	682.24	0.001967	6.24	1164.39	462.06	0.40	0.91
1	162465.	10330.00	671.30	682.51	678.94	683.49	0.002910	7.94	1300.75	986.38	0.49	1.43
1	162570.	3870.00	672.50	678.78	678.14	680.03	0.009931	8.98	431.14	111.47	0.80	2.34
1	162570.	6130.00	672.50	680.84	679.54	682.09	0.006818	8.95	684.65	134.01	0.70	2.12
1	162570.	7270.00	672.50	681.43	680.15	682.83	0.006868	9.51	764.65	137.40	0.71	2.33
1	162570.	10330.00	672.50	682.16	681.47	684.37	0.009537	11.93	866.23	141.59	0.85	3.55
1	162663.	2230.00	672.50	680.42	676.73	680.68	0.001407	4.09	549.90	259.58	0.31	0.44
1	162663.	3620.00	672.50	682.28	678.17	682.64	0.001343	4.88	750.06	661.50	0.32	0.57
1	162663.	4370.00	672.50	682.99	678.83	683.43	0.001421	5.35	826.67	966.32	0.34	0.66
1	162663.	6210.00	672.50	684.61	680.01	685.21	0.001524	6.27	1001.50	1692.74	0.36	0.86
1	162709. UNION PACIFIC RABR D	2230.00	672.50	680.45	676.96	680.79	0.003791	4.65	479.12	82.00	0.29	0.69
1	162709. UNION PACIFIC RABR D	3620.00	672.50	682.27	678.35	682.79	0.004772	5.76	628.51	82.00	0.32	1.00
1	162709. UNION PACIFIC RABR D	4370.00	672.50	682.97	679.06	683.60	0.005520	6.38	685.46	82.00	0.35	1.21
1	162709. UNION PACIFIC RABR D	6210.00	672.50	684.61	680.25	685.21	0.006979	7.58	819.66	82.00	0.38	1.66
1	162709. UNION PACIFIC RABR U	2230.00	672.50	680.59	676.68	680.84	0.002386	4.03	553.58	82.00	0.25	0.49
1	162709. UNION PACIFIC RABR U	3620.00	672.50	682.45	677.77	682.86	0.003300	5.13	706.18	82.00	0	

HEC-RAS Plan: Multiple River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	163228.	2230.00	674.32	682.28	678.58	682.54	0.001068	4.27	713.30	374.09	0.29	0.44
1	163228.	3620.00	674.32	683.36	679.93	683.66	0.001200	4.99	1229.52	518.70	0.32	0.57
1	163228.	4370.00	674.32	684.13	680.62	684.38	0.000961	4.76	1656.20	575.43	0.29	0.50
1	163228.	6210.00	674.32	686.69	682.99	686.79	0.000372	3.53	3870.88	1446.06	0.19	0.25
1	163276. CHISHOLM	Culvert										
1	163323.	2230.00	674.32	682.56	678.70	682.82	0.001528	4.21	597.95	149.80	0.28	0.66
1	163323.	3620.00	674.32	683.43	679.90	683.93	0.002560	5.88	779.83	298.47	0.37	1.24
1	163323.	4370.00	674.32	684.02	680.52	684.54	0.002566	6.18	991.03	429.47	0.37	1.33
1	163323.	6210.00	674.32	686.65	682.17	686.85	0.000930	4.46	2507.81	840.45	0.24	0.63
1	163618.	2230.00	678.09	683.28	683.28	684.79	0.025436	9.87	225.93	74.28	1.00	4.77
1	163618.	3620.00	678.09	684.85	684.85	686.03	0.014513	9.15	467.98	209.64	0.79	3.70
1	163618.	4370.00	678.09	685.25	685.25	686.48	0.014318	9.53	556.41	228.31	0.80	3.92
1	163618.	6210.00	678.09	686.94	686.04	687.70	0.006540	7.90	1001.42	301.57	0.57	2.43
1	164471. AU	2040.00	682.94	689.71		689.84	0.002321	2.86	712.38	251.30	0.30	0.41
1	164471. AU	3290.00	682.94	690.62		690.80	0.002702	3.44	955.69	286.63	0.33	0.56
1	164471. AU	3990.00	682.94	691.04		691.25	0.002715	3.70	1085.65	350.43	0.34	0.63
1	164471. AU	5690.00	682.94	691.52		691.85	0.003615	4.61	1284.14	456.89	0.40	0.94
1	165167.	2040.00	685.47	691.32		691.49	0.002404	3.53	664.15	312.22	0.38	0.40
1	165167.	3290.00	685.47	692.28		692.48	0.002168	3.80	989.68	383.53	0.37	0.44
1	165167.	3990.00	685.47	692.68		692.89	0.002086	4.02	1161.23	495.09	0.37	0.47
1	165167.	5690.00	685.47	693.42		693.68	0.001997	4.45	1607.93	670.52	0.37	0.55
1	166259.	2040.00	691.60	695.86	695.86	696.35	0.007576	7.11	535.31	503.12	0.69	1.54
1	166259.	3290.00	691.60	696.27	696.22	696.90	0.009562	8.63	766.69	702.16	0.79	2.19
1	166259.	3990.00	691.60	696.54	696.54	697.09	0.008523	8.53	960.53	782.00	0.76	2.09
1	166259.	5690.00	691.60	697.00	696.87	697.51	0.007597	8.67	1354.63	897.33	0.73	2.08
1	167796. AV	1910.00	696.81	701.42		701.55	0.001974	3.82	856.15	558.28	0.36	0.43
1	167796. AV	3090.00	696.81	702.13		702.27	0.001857	4.19	1286.27	648.66	0.36	0.49
1	167796. AV	3730.00	696.81	702.44		702.60	0.002047	4.61	1507.05	773.56	0.38	0.58
1	167796. AV	5310.00	696.81	702.98		703.17	0.002304	5.26	1953.63	947.46	0.41	0.73
1	169721.	1910.00	703.50	706.70		706.94	0.005572	4.54	558.82	409.94	0.51	0.87
1	169721.	3090.00	703.50	707.29		707.58	0.006190	5.50	870.07	654.31	0.55	1.19
1	169721.	3730.00	703.50	707.66	706.79	707.93	0.005408	5.55	1156.64	936.55	0.53	1.17
1	169721.	5310.00	703.50	708.19	707.42	708.44	0.004560	5.61	1728.02	1163.04	0.49	1.14
1	171043.	1910.00	709.21	712.49		712.59	0.003540	3.07	847.99	742.03	0.42	0.36
1	171043.	3090.00	709.21	712.97		713.09	0.003150	3.44	1211.79	778.34	0.42	0.42
1	171043.	3730.00	709.21	713.14		713.29	0.003314	3.72	1352.15	797.19	0.43	0.47
1	171043.	5310.00	709.21	713.55		713.74	0.003791	4.43	1699.57	959.33	0.48	0.64
1	171959. AW	1310.00	712.69	715.74		715.89	0.003880	3.67	479.28	365.63	0.46	0.48
1	171959. AW	2080.00	712.69	716.16		716.38	0.004653	4.57	650.93	489.11	0.52	0.70
1	171959. AW	2460.00	712.69	716.45		716.69	0.004638	4.91	814.49	661.45	0.53	0.78
1	171959. AW	3490.00	712.69	716.92		717.15	0.003833	4.97	1141.23	716.18	0.49	0.76
1	172618.	1310.00	714.15	718.38	717.23	718.42	0.001188	2.38	928.18	947.96	0.26	0.19
1	172618.	2080.00	714.15	718.45	717.78	718.54	0.002596	3.58	976.46	956.54	0.39	0.42
1	172618.	2460.00	714.15	718.68	718.02	718.73	0.001284	2.49	1551.30	991.23	0.27	0.21
1	172618.	3490.00	714.15	718.83	718.22	718.91	0.002099	3.31	1703.28	1024.57	0.35	0.36
1	172649. GOLDEN TRIANGLE	Culvert										
1	172679.	1310.00	713.12	719.36	716.14	719.46	0.000583	2.69	558.55	915.23	0.20	0.19
1	172679.	2080.00	713.12	719.73	716.76	719.78	0.000441	2.44	1613.10	963.94	0.18	0.15
1	172679.	2460.00	713.12	719.98	717.04	720.03	0.000459	2.57	1795.81	1019.94	0.18	0.17
1	172679.	3490.00	713.12	720.44	717.46	720.50	0.000569	3.00	2134.35	1120.58	0.21	0.22
1	172970.	1310.00	714.40	719.75	719.75	720.28	0.006467	6.64	330.18	333.92	0.64	1.34
1	172970.	2080.00	714.40	720.15	720.15	720.78	0.007716	7.81	468.06	354.13	0.71	1.79
1	172970.	2460.00	714.40	720.33	720.33	720.99	0.007958	8.19	532.95	364.03	0.73	1.93
1	172970.	3490.00	714.40	720.74	720.74	721.49	0.008678	9.13	688.77	396.63	0.77	2.32
1	173159.	1310.00	715.50	721.03		721.14	0.002726	3.48	585.14	384.31	0.33	0.57
1	173159.	2080.00	715.50	721.64		721.77	0.002872	3.98	856.62	531.16	0.35	0.71
1	173159.	2460.00	715.50	721.85		721.98	0.002889	4.13	970.60	553.62	0.35	0.75
1	173159.	3490.00	715.50	722.37		722.51	0.002836	4.41	1270.05	607.88	0.36	0.82
1	173457.	1310.00	715.80	721.82		721.98	0.004053	4.35	521.49	431.42	0.40	0.88
1	173457.	2080.00	715.80	722.41		722.56	0.003547	4.50	798.32	520.03	0.39	0.90
1	173457.	2460.00	715.80	722.61		722.77	0.003524	4.62	905.34	538.54	0.39	0.93
1	173457.	3490.00	715.80	723.12		723.30	0.003715	5.11	1206.82	667.76	0.41	1.10
1	173534.	1310.00	715.77	722.10	722.10	722.69	0.004835	6.82	338.14	388.49	0.56	1.30
1	173534.	2080.00	715.77	722.64	722.64	723.19	0.004951	7.44	569.82	463.34	0.58	1.48
1	173534.	2460.00	715.77	722.77	722.77	723.39	0.005540	8.01	635.34	479.17	0.62	1.70
1	173534.	3490.00	715.77	723.30	723.16	723.86	0.005227	8.30	915.24	577.99	0.61	1.77
1	173558. ALTA VISTA ROAD	Culvert										
1	173582.	1310.00	715.77	722.68	721.19	723.28	0.003852	6.60	317.82	381.43	0.51	1.16
1	173582.	2080.00	715.77	723.24	723.24	723.85	0.004294	7.46	559.53	473.04	0.55	1.44
1	173582.	2460.00	715.77	723.44	723.44	724.07	0.004477	7.80	662.83	537.03	0.57	1.55
1	173582.	3490.00	715.77	723.68	723.68	724.57	0.006544	9.69	802.60	624.92	0.69	2.36
1	173663.	1310.00	718.10	723.14	722.53	723.70	0.006725	6.21	268.76	252.20	0.63	1.22
1	173663.	2080.00	718.10	723.74	723.74	724.34	0.006666	6.98	475.90	437.90	0.65	1.45
1	173663.	2460.00	718.10	723.92	723.92	724.55	0.006900	7.34	558.52	474.99	0.67	1.58
1	173663.	3490.00	718.10	724.81		725.12	0.003437	5.97	1184.57	839.36	0.49	0.97
1	174096.	1310.00	719.56	724.99		725.11	0.001839	2.86	489.11	313.52	0.32	0.28
1	174096.	2080.00	719.56	725.64		725.80	0.001942	3.35	726.37	422.07	0.34	0.35
1	174096.	2460.00	719.56	725.88		726.06	0.002019	3.57	861.98	703.28	0.36	0.39
1	174096.	3490.00	719.56	726.17		726.42	0.002677	4.36	1076.44	782.76	0.42	0.57
1	174881. AX	1310.00	725.30	727.74		727.97	0.010618	4.41	355.17	339.38	0.70	0.82
1	174881. AX	2080.00	725.30	728.24		728.50	0.007963	4.79	536.51	384.11	0.64	0.86
1	174881. AX	2460.00	725.30	728.47		728.74	0.007191	4.93	626.19	412.64	0.62	0.88
1	174881. AX	3490.00	725.30	729.04		729.33	0.005704	5.20	881.31	481.90	0.57	0.90
1	176010.	1310.00	730.00	732.88		732.93	0.002459	2.73	806.38	806.22	0.35	0.28
1	176010.	2080.00	730.00	733.24		733.30	0.002725	3.23	1109.06	859.24	0.38	0.37
1	176010.	2460.00	730.00	733.37		733.44	0.002810	3.41	1221.48	869.46	0.39	0.40
1	176010.	3490.00	730.00	733.68		733.77	0.002998	3.83	1494.83	893.87	0.41	0.48

HEC-RAS Plan: Multiple River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	176659.	1310.00	731.10	736.41	736.41	736.56	0.005858	5.12	542.67	615.15	0.55	0.88
1	176659.	2080.00	731.10	736.43	736.43	736.79	0.013699	7.85	558.97	624.18	0.85	2.08
1	176659.	2460.00	731.10	736.57	736.49	736.92	0.013757	8.00	647.57	695.18	0.85	2.14
1	176659.	3490.00	731.10	736.91	736.80	737.23	0.011946	7.84	901.00	770.42	0.80	2.00
1	176763.	1310.00	732.00	737.09	736.86	737.22	0.006570	4.46	532.13	693.86	0.57	0.74
1	176763.	2080.00	732.00	737.53	737.09	737.64	0.005022	3.86	857.95	781.24	0.50	0.56
1	176763.	2460.00	732.00	737.66	737.18	737.78	0.005086	4.07	960.63	805.28	0.51	0.60
1	176763.	3490.00	732.00	737.93	737.36	738.08	0.005598	4.65	1187.95	862.31	0.55	0.76
1	176847.	1310.00	733.20	737.52	737.04	737.61	0.003370	3.67	626.74	590.28	0.43	0.47
1	176847.	2080.00	733.20	737.91	737.33	738.01	0.003934	3.54	888.27	788.70	0.45	0.46
1	176847.	2460.00	733.20	738.06	737.50	738.16	0.004054	3.59	1005.22	837.31	0.46	0.47
1	176847.	3490.00	733.20	738.38	737.67	738.50	0.004320	4.02	1286.26	905.43	0.48	0.57
1	176872. KEL WEST DRIVE	Culvert										
1	176898.	1310.00	733.20	738.52	738.27	738.75	0.003428	5.22	510.28	651.86	0.47	0.80
1	176898.	2080.00	733.20	739.02	738.59	739.18	0.002713	5.03	1014.90	895.49	0.43	0.71
1	176898.	2460.00	733.20	739.04	738.68	739.25	0.003642	5.85	1031.01	904.54	0.49	0.96
1	176898.	3490.00	733.20	739.41	739.05	739.61	0.003437	6.00	1396.94	1042.02	0.49	0.98
1	176954.	1310.00	734.00	738.90		738.96	0.002419	3.14	760.92	703.16	0.36	0.34
1	176954.	2080.00	734.00	739.27		739.35	0.002728	3.68	1064.14	878.88	0.40	0.45
1	176954.	2460.00	734.00	739.37		739.47	0.003000	3.96	1157.69	906.61	0.42	0.51
1	176954.	3490.00	734.00	739.71		739.82	0.003356	4.52	1484.37	1036.44	0.45	0.64
1	177018.	1310.00	734.26	738.99	738.85	739.26	0.004021	5.47	506.82	542.03	0.51	0.89
1	177018.	2080.00	734.26	739.39	739.16	739.68	0.004646	6.30	760.30	711.16	0.55	1.14
1	177018.	2460.00	734.26	739.51	739.36	739.82	0.005027	6.69	849.58	758.42	0.58	1.27
1	177018.	3490.00	734.26	739.87	739.65	740.20	0.005388	7.32	1149.37	912.15	0.61	1.48
1	177035. PRIVATE DRIVE	Culvert										
1	177055.	1310.00	734.26	739.34	738.87	739.53	0.002595	4.68	616.60	650.88	0.41	0.63
1	177055.	2080.00	734.26	739.54	739.22	739.84	0.004381	6.27	745.99	694.18	0.54	1.11
1	177055.	2460.00	734.26	739.52	739.52	739.96	0.006321	7.52	735.80	690.40	0.65	1.60
1	177055.	3490.00	734.26	739.80	739.80	740.29	0.007236	8.40	945.37	824.76	0.70	1.96
1	177155.	1060.00	736.25	739.64	739.36	740.01	0.007197	5.16	293.18	445.17	0.63	0.94
1	177155.	1690.00	736.25	740.04	739.97	740.41	0.006903	5.67	522.22	647.43	0.63	1.07
1	177155.	1990.00	736.25	740.30		740.59	0.005237	5.28	700.76	714.32	0.56	0.90
1	177155.	2830.00	736.25	740.68		740.95	0.004774	5.49	990.68	825.56	0.55	0.93
1	177404.	1060.00	737.00	740.81		740.97	0.002364	3.36	379.44	321.95	0.37	0.37
1	177404.	1690.00	737.00	741.25		741.48	0.002954	4.17	545.28	413.19	0.43	0.55
1	177404.	1990.00	737.00	741.35		741.63	0.003503	4.64	585.91	420.55	0.47	0.67
1	177404.	2830.00	737.00	741.70		742.06	0.004189	5.45	738.39	449.35	0.52	0.89
1	177599.	1060.00	737.20	741.33		741.54	0.003551	3.94	350.37	323.05	0.45	0.53
1	177599.	1690.00	737.20	741.87		742.10	0.003468	4.41	542.16	388.73	0.46	0.62
1	177599.	1990.00	737.20	742.06		742.31	0.003492	4.63	618.83	406.26	0.47	0.67
1	177599.	2830.00	737.20	742.53		742.82	0.003518	5.10	816.92	438.06	0.48	0.77
1	177647.	1060.00	737.48	741.36	740.93	742.06	0.010314	6.68	161.05	77.41	0.76	1.52
1	177647.	1690.00	737.48	741.79	741.79	743.02	0.014982	8.97	198.44	100.91	0.94	2.59
1	177647.	1990.00	737.48	742.41	742.41	743.39	0.009608	8.20	313.40	263.75	0.78	2.03
1	177647.	2830.00	737.48	743.15	743.15	743.91	0.006824	7.88	618.06	521.52	0.68	1.75
1	177652. GOLD RUSH DRIVE	Culvert										
1	177706.	1060.00	737.48	742.99	740.89	743.18	0.001518	3.62	414.06	297.73	0.32	0.38
1	177706.	1690.00	737.48	743.29	741.68	743.65	0.002768	5.13	534.84	479.03	0.44	0.74
1	177706.	1990.00	737.48	743.39	742.02	743.83	0.003393	5.77	585.77	552.43	0.48	0.92
1	177706.	2830.00	737.48	743.44	743.44	744.28	0.006453	8.01	612.53	566.23	0.67	1.77
1	177746.	1060.00	738.00	743.03		743.29	0.002396	4.51	385.79	266.61	0.40	0.58
1	177746.	1690.00	738.00	743.37		743.84	0.004102	6.24	491.49	364.74	0.53	1.09
1	177746.	1990.00	738.00	743.46	743.01	744.09	0.005319	7.21	532.28	467.75	0.61	1.44
1	177746.	2830.00	738.00	743.97	743.97	744.63	0.005536	7.91	822.93	665.01	0.63	1.67
1	177910. AY	1060.00	738.98	743.46	742.21	743.67	0.002240	4.20	421.94	298.55	0.38	0.52
1	177910. AY	1690.00	738.98	744.10	742.82	744.39	0.002663	5.10	653.90	429.42	0.43	0.72
1	177910. AY	1990.00	738.98	744.43	743.37	744.70	0.002485	5.17	798.73	521.61	0.42	0.72
1	177910. AY	2830.00	738.98	744.97	743.99	745.27	0.002566	5.65	1079.28	682.85	0.44	0.83
1	178014.	1060.00	739.10	743.75	742.88	743.92	0.002496	4.39	518.31	384.59	0.40	0.57
1	178014.	1690.00	739.10	744.49	743.38	744.66	0.002211	4.67	833.96	456.94	0.39	0.60
1	178014.	1990.00	739.10	744.79	743.54	744.96	0.002151	4.81	978.70	508.02	0.39	0.63
1	178014.	2830.00	739.10	745.34	744.19	745.53	0.002341	5.41	1292.28	671.96	0.42	0.76
1	178132.	1060.00	739.50	744.14	742.77	744.36	0.005614	3.78	300.44	155.31	0.39	1.02
1	178132.	1690.00	739.50	744.80	743.43	745.11	0.006418	4.63	411.08	342.11	0.43	1.43
1	178132.	1990.00	739.50	745.07	743.71	745.42	0.006627	4.94	456.98	421.66	0.44	1.59
1	178132.	2830.00	739.50	745.60	744.52	746.08	0.007984	5.90	546.31	473.51	0.50	2.17
1	178160.	1060.00	739.64	744.25	741.91	744.44	0.001295	3.51	320.21	108.64	0.30	0.34
1	178160.	1690.00	739.64	744.88	742.63	745.23	0.002057	4.84	372.09	115.91	0.38	0.63
1	178160.	1990.00	739.64	745.14	742.93	745.57	0.002393	5.40	393.34	119.55	0.42	0.77
1	178160.	2830.00	739.64	745.62	743.69	746.35	0.003548	6.98	433.71	181.80	0.52	1.24
1	178189. RANCHO DRIVE	Culvert										
1	178218.	1060.00	739.64	744.48	741.88	744.63	0.001091	3.13	339.18	116.14	0.27	0.28
1	178218.	1690.00	739.64	745.36	742.58	745.62	0.001456	4.11	411.53	133.85	0.32	0.45
1	178218.	1990.00	739.64	745.76	742.86	746.07	0.001553	4.47	445.25	139.24	0.34	0.52
1	178218.	2830.00	739.64	746.77	743.68	747.21	0.001777	5.36	528.19	189.94	0.37	0.70
1	178252.	1060.00	740.30	744.56	742.34	744.68	0.000998	2.84	417.37	153.56	0.26	0.23
1	178252.	1690.00	740.30	745.51	742.96	745.69	0.001103	3.47	567.77	187.82	0.28	0.32
1	178252.	1990.00	740.30	745.96	743.21	746.15	0.001094	3.67	641.28	205.20	0.28	0.35
1	178252.	2830.00	740.30	747.09	743.85	747.32	0.001053	4.10	832.61	261.72	0.29	0.41
1	178404.	1060.00	740.96	744.79		745.02						

HEC-RAS Plan: Multiple River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	178654.	1060.00	745.00	747.92	746.94	748.13	0.008629	4.08	325.73	235.38	0.49	1.12
1	178654.	1690.00	745.00	748.56	747.79	748.77	0.010356	5.29	512.21	339.77	0.56	1.72
1	178654.	1990.00	745.00	748.72		748.95	0.010632	5.56	565.26	343.03	0.58	1.87
1	178654.	2830.00	745.00	749.19		749.46	0.009853	5.92	729.63	353.88	0.57	2.02
1	178837.	1060.00	745.00	748.94		749.02	0.003175	2.69	511.78	357.32	0.31	0.46
1	178837.	1690.00	745.00	749.62		749.71	0.002995	3.09	771.40	399.42	0.31	0.56
1	178837.	1990.00	745.00	749.82		749.93	0.003110	3.28	853.41	408.84	0.32	0.62
1	178837.	2830.00	745.00	750.32		750.46	0.003345	3.75	1063.53	432.13	0.34	0.78
1	179077.	1060.00	746.00	749.60		749.66	0.002469	2.43	592.15	329.56	0.27	0.38
1	179077.	1690.00	746.00	750.24		750.32	0.002401	2.80	808.96	347.29	0.28	0.46
1	179077.	1990.00	746.00	750.47		750.56	0.002500	3.00	888.42	353.74	0.29	0.52
1	179077.	2830.00	746.00	751.03		751.15	0.002816	3.53	1093.53	402.22	0.32	0.68
1	179180.	1060.00	746.00	749.94		750.06	0.005508	3.74	456.36	351.56	0.41	0.88
1	179180.	1690.00	746.00	750.56		750.68	0.004561	3.93	686.11	390.73	0.39	0.90
1	179180.	1990.00	746.00	750.80		750.92	0.004456	4.07	779.42	407.82	0.39	0.94
1	179180.	2830.00	746.00	751.38		751.52	0.004109	4.33	1028.93	438.33	0.38	1.02
1	179344.	1060.00	747.00	750.84		751.09	0.006908	4.58	338.77	265.39	0.47	1.26
1	179344.	1690.00	747.00	751.36		751.65	0.007492	5.31	489.96	303.58	0.50	1.60
1	179344.	1990.00	747.00	751.57		751.88	0.007480	5.53	556.53	314.91	0.51	1.70
1	179344.	2830.00	747.00	752.10		752.45	0.007588	6.09	738.17	363.68	0.52	1.97
1	179671.	1060.00	748.00	752.48		752.63	0.003810	3.65	381.78	259.25	0.36	0.77
1	179671.	1690.00	748.00	753.10		753.28	0.004051	4.22	570.83	367.81	0.38	0.97
1	179671.	1990.00	748.00	753.32		753.51	0.004100	4.40	653.87	403.49	0.38	1.04
1	179671.	2830.00	748.00	753.88		754.09	0.004095	4.79	914.25	499.83	0.39	1.18
1	180001.	1060.00	749.00	753.68		753.84	0.003553	3.24	359.69	224.06	0.34	0.63
1	180001.	1690.00	749.00	754.36		754.55	0.003678	3.79	542.17	322.73	0.36	0.81
1	180001.	1990.00	749.00	754.59		754.81	0.003787	4.02	623.89	367.34	0.36	0.89
1	180001.	2830.00	749.00	755.16		755.40	0.003867	4.45	878.45	500.97	0.38	1.04
1	180355.	1060.00	750.00	754.78		754.93	0.002719	3.60	380.38	175.83	0.31	0.69
1	180355.	1690.00	750.00	755.53		755.73	0.003099	4.30	524.66	207.47	0.34	0.93
1	180355.	1990.00	750.00	755.82		756.04	0.003274	4.59	585.05	223.01	0.35	1.04
1	180355.	2830.00	750.00	756.45		756.74	0.003708	5.27	742.81	300.53	0.38	1.33
1	180740. AZ	650.00	752.00	757.39	757.39	757.76	0.014044	5.38	178.11	267.95	0.63	1.91
1	180740. AZ	1000.00	752.00	757.70	757.70	758.07	0.014189	5.89	270.59	326.13	0.65	2.19
1	180740. AZ	1170.00	752.00	757.75	757.75	758.20	0.016967	6.52	287.38	333.58	0.71	2.67
1	180740. AZ	1610.00	752.00	758.33		758.56	0.008199	5.17	504.42	412.33	0.51	1.57
1	181450.	650.00	756.00	760.74		760.81	0.002060	2.65	341.95	242.93	0.30	0.30
1	181450.	1000.00	756.00	761.19		761.29	0.002212	3.07	457.22	263.81	0.32	0.38
1	181450.	1170.00	756.00	761.42		761.52	0.002157	3.19	517.59	274.30	0.32	0.40
1	181450.	1610.00	756.00	761.65		761.79	0.002966	3.92	581.50	284.34	0.38	0.60
1	182036.	650.00	758.00	762.85	762.85	763.81	0.016885	8.00	91.00	67.23	0.84	2.69
1	182036.	1000.00	758.00	763.77	763.77	764.49	0.010331	7.57	195.62	157.09	0.69	2.18
1	182036.	1170.00	758.00	763.99	763.99	764.71	0.010066	7.77	233.46	177.49	0.69	2.26
1	182036.	1610.00	758.00	764.42	764.42	765.17	0.010257	8.39	315.64	212.08	0.71	2.55
1	182244.	650.00	758.03	765.06	763.07	765.47	0.003934	5.28	132.07	51.36	0.41	1.00
1	182244.	1000.00	758.03	765.48	764.03	766.27	0.007003	7.41	144.51	104.76	0.55	1.92
1	182244.	1170.00	758.03	765.73	764.41	766.71	0.008137	8.23	152.14	157.76	0.60	2.33
1	182244.	1610.00	758.03	766.26	766.26	767.10	0.007769	8.52	312.14	190.18	0.59	2.43
1	182274. OLD DENTON ROAD	Culvert										
1	182304.	650.00	758.48	767.21	762.93	767.26	0.000377	2.02	494.56	275.97	0.14	0.13
1	182304.	1000.00	758.48	767.92	763.77	767.97	0.000367	2.04	841.23	410.37	0.14	0.13
1	182304.	1170.00	758.48	768.08	764.15	768.13	0.000430	2.24	906.25	428.12	0.16	0.16
1	182304.	1610.00	758.48	768.37	765.01	768.45	0.000627	2.79	1046.34	541.71	0.19	0.24
1	182552. BA	650.00	763.50	767.39		767.53	0.004525	3.37	248.58	191.31	0.43	0.53
1	182552. BA	1000.00	763.50	768.08		768.21	0.003133	3.45	413.13	308.14	0.38	0.50
1	182552. BA	1170.00	763.50	768.26		768.40	0.003234	3.67	470.76	341.02	0.39	0.55
1	182552. BA	1610.00	763.50	768.62		768.80	0.003410	4.10	607.24	394.09	0.41	0.66
1	183803.	650.00	769.03	772.12		772.24	0.003435	2.77	234.77	137.03	0.37	0.37
1	183803.	1000.00	769.03	772.55		772.72	0.004654	3.35	298.57	166.58	0.44	0.53
1	183803.	1170.00	769.03	772.74		772.93	0.004537	3.53	338.28	228.79	0.44	0.57
1	183803.	1610.00	769.03	773.14		773.37	0.004427	3.94	447.87	326.71	0.45	0.66
1	185338. LIMIT OF DETAILE	650.00	775.03	777.98		778.12	0.004293	3.02	215.50	130.76	0.41	0.44
1	185338. LIMIT OF DETAILE	1000.00	775.03	778.72		778.86	0.003476	3.08	324.44	162.66	0.38	0.43
1	185338. LIMIT OF DETAILE	1170.00	775.03	778.91		779.08	0.003564	3.28	357.02	166.33	0.39	0.48
1	185338. LIMIT OF DETAILE	1610.00	775.03	779.38		779.59	0.003716	3.68	442.48	215.86	0.41	0.57

PROPOSED – RAS PROFILE OUTPUT TABLE

HEC-RAS Plan: WC-Edit-Prop River: Big_Bear Reach: 1

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan	
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)	
1	234	14100.00	400.00	425.65	415.27	425.85	0.000900	4.38	4563.90	551.88	0.19	0.80	
1	234	23750.00	400.00	430.30	417.65	430.55	0.000900	5.15	7374.04	640.42	0.20	1.03	
1	234	28910.00	400.00	432.15	418.72	432.42	0.000901	5.45	8570.55	647.19	0.20	1.12	
1	234	39210.00	400.00	435.25	420.55	435.57	0.000901	5.93	10579.81	647.19	0.20	1.27	
1	523	14100.00	400.00	425.84		426.28	0.001740	6.04	3347.73	372.89	0.27	1.53	
1	523	23750.00	400.00	430.49		430.95	0.001539	6.73	7091.33	1044.18	0.26	1.75	
1	523	28910.00	400.00	432.39		432.76	0.001246	6.42	9070.74	1044.18	0.24	1.55	
1	523	39210.00	400.00	435.53		435.84	0.000993	6.25	12352.31	1044.18	0.22	1.40	
1	964	14100.00	402.00	426.56		427.02	0.001629	5.42	2764.22	453.69	0.26	1.28	
1	964	23750.00	402.00	431.13		431.51	0.001137	5.51	7527.72	1379.57	0.23	1.20	
1	964	28910.00	402.00	432.89		433.22	0.000956	5.38	9993.94	1412.23	0.21	1.11	
1	964	39210.00	402.00	435.94		436.20	0.000739	5.20	14295.49	1412.23	0.19	0.99	
1	1897	14100.00	404.00	428.25	418.57	428.81	0.002263	6.10	3038.86	1537.78	0.30	1.66	
1	1897	23750.00	404.00	432.16	422.60	432.46	0.001216	5.36	8512.49	1905.74	0.23	1.17	
1	1897	28910.00	404.00	433.71	424.50	433.98	0.001030	5.24	10693.59	1905.74	0.22	1.09	
1	1897	39210.00	404.00	436.52	428.00	436.65	0.000547	4.21	18707.40	1905.74	0.16	0.67	
1	2094	14100.00	404.50	428.34	419.93	429.58	0.003880	9.30	1997.68	1767.12	0.39	3.58	
1	2094	23750.00	404.50	432.21	426.47	432.90	0.002361	8.29	5418.53	2163.21	0.32	2.67	
1	2094	28910.00	404.50	433.76	430.46	434.34	0.001990	7.98	6832.00	2163.21	0.29	2.41	
1	2094	39210.00	404.50	436.65	431.65	436.75	0.000467	4.19	20120.94	2163.21	0.15	0.64	
1	2237	14100.00	405.00	429.82	412.84	429.96	0.000106	3.04	5407.23	2171.68	0.12	0.12	
1	2237	23750.00	405.00	432.88	415.77	433.09	0.000148	3.97	7303.19	2303.94	0.15	0.20	
1	2237	28910.00	405.00	434.25	417.11	434.49	0.000164	4.35	8150.66	2303.94	0.16	0.23	
1	2237	39210.00	405.00	436.66	419.47	436.78	0.000100	3.62	24029.14	2303.94	0.13	0.16	
1	2327	MACARTHUR BOULEVBR D	14100.00	405.00	429.83	413.10	429.97	0.000180	3.10	5146.33	560.32	0.13	0.14
1	2327	MACARTHUR BOULEVBR D	23750.00	405.00	432.89	416.08	433.11	0.000260	4.02	6880.00	572.56	0.15	0.23
1	2327	MACARTHUR BOULEVBR D	28910.00	405.00	434.26	417.45	434.51	0.000293	4.40	7666.77	578.03	0.16	0.27
1	2327	MACARTHUR BOULEVBR D	39210.00	405.00	436.58	419.87	436.89	0.000352	4.93	9016.79	585.00	0.17	0.35
1	2327	MACARTHUR BOULEVBR U	14100.00	405.00	429.89	413.10	429.99	0.000141	2.80	5933.63	560.54	0.11	0.12
1	2327	MACARTHUR BOULEVBR U	23750.00	405.00	432.97	416.09	433.14	0.000205	3.63	7683.75	572.90	0.13	0.19
1	2327	MACARTHUR BOULEVBR U	28910.00	405.00	434.35	417.45	434.55	0.000233	3.98	8476.40	578.41	0.14	0.22
1	2327	MACARTHUR BOULEVBR U	39210.00	405.00	436.68	419.86	436.94	0.000286	4.49	9833.18	585.00	0.15	0.29
1	2454		14100.00	405.00	429.90	412.84	430.00	0.000081	2.74	6415.94	2265.59	0.11	0.10
1	2454		23750.00	405.00	433.00	415.77	433.16	0.000113	3.57	8335.52	2306.47	0.13	0.16
1	2454		28910.00	405.00	434.38	417.11	434.57	0.000126	3.93	9191.87	2306.47	0.14	0.19
1	2454		39210.00	405.00	436.92	419.47	437.00	0.000071	3.16	29682.70	2306.47	0.11	0.12
1	2994		14100.00	408.00	429.95	422.90	430.11	0.000826	4.61	8021.15	2272.08	0.19	0.85
1	2994		23750.00	408.00	433.10	426.69	433.25	0.000792	5.02	11843.30	2458.54	0.19	0.96
1	2994		28910.00	408.00	434.52	427.42	434.68	0.000792	5.24	13593.64	2508.27	0.19	1.02
1	2994		39210.00	408.00	437.00	428.55	437.05	0.000280	3.34	29587.39	2508.27	0.12	0.40
1	4381		14280.00	408.50	430.63	423.37	430.67	0.000335	2.61	12789.42	2252.91	0.12	0.29
1	4381		23900.00	408.50	433.72	424.63	433.76	0.000315	2.87	18464.30	2307.93	0.12	0.33
1	4381		29080.00	408.50	435.13	425.18	435.17	0.000307	2.98	21086.44	2315.39	0.12	0.34
1	4381		39300.00	408.50	437.24	426.56	437.28	0.000224	2.72	30416.31	2789.13	0.10	0.28
1	5800		14280.00	412.00	430.95	424.48	430.99	0.000421	2.88	13396.08	2525.37	0.13	0.36
1	5800		23900.00	412.00	433.99	426.53	434.02	0.000332	2.91	20449.01	2802.54	0.12	0.34
1	5800		29080.00	412.00	435.38	426.91	435.42	0.000305	2.93	24064.96	2928.15	0.12	0.34
1	5800		39300.00	412.00	437.43	428.20	437.47	0.000274	2.97	32944.07	3257.48	0.11	0.33
1	9315		14280.00	414.00	431.28		431.28	0.000103	1.23	24707.02	3370.05	0.06	0.07
1	9315		23900.00	414.00	434.28		434.29	0.000100	1.41	34825.35	3379.02	0.07	0.08
1	9315		29080.00	414.00	435.66		435.66	0.000099	1.49	39501.38	3411.72	0.07	0.09
1	9315		39300.00	414.00	437.70		437.71	0.000106	1.67	46516.34	3539.72	0.07	0.11
1	11449		14280.00	418.00	431.34		431.35	0.000065	0.81	30597.39	3650.17	0.05	0.03
1	11449		23900.00	418.00	434.35		434.35	0.000074	1.05	41691.45	3721.51	0.05	0.05
1	11449		29080.00	418.00	435.73		435.73	0.000076	1.15	46850.69	3752.05	0.06	0.06
1	11449		39300.00	418.00	437.78		437.79	0.000087	1.35	54782.59	4272.07	0.06	0.08
1	13489		14280.00	418.00	431.39		431.40	0.000164	1.31	22561.63	3118.25	0.08	0.09
1	13489		23900.00	418.00	434.40		434.41	0.000153	1.54	32072.46	3207.24	0.08	0.11
1	13489		29080.00	418.00	435.79		435.80	0.000151	1.65	36557.71	3271.03	0.08	0.12
1	13489		39300.00	418.00	437.86		437.87	0.000192	2.05	43689.48	3791.16	0.09	0.17
1	15486		14280.00	418.60	431.84	428.14	431.93	0.002942	4.44	7382.38	2137.05	0.33	0.97
1	15486		23900.00	418.60	434.77	429.11	434.83	0.001375	4.00	14268.47	2398.29	0.24	0.69
1	15486		29080.00	418.60	436.12	429.62	436.18	0.001093	3.94	17547.95	2445.56	0.22	0.63
1	15486		39300.00	418.60	438.24	430.47	438.30	0.000884	4.03	23038.65	2826.46	0.20	0.62
1	16665		14280.00	419.00	433.43	430.94	433.53	0.001290	4.57	10252.25	2705.31	0.24	0.82
1	16665		23900.00	419.00	435.70	431.84	435.78	0.000939	4.41	17012.71	2887.82	0.21	0.72
1	16665		29080.00	419.00	436.90	432.18	436.97	0.000812	4.34	20538.84	3039.69	0.20	0.68
1	16665		39300.00	419.00	438.87	432.68	438.94	0.000668	4.29	26539.26	3049.74	0.19	0.64
1	17068		14280.00	419.14	433.87	431.16	433.93	0.000733	3.87	9837.00	3218.11	0.20	0.48
1	17068		23900.00	419.14	436.00	431.85	436.04	0.000434	3.32	18925.70	3563.51	0.16	0.34
1	17068		29080.00	419.14	437.15	432.27	437.18	0.000344	3.12	23025.17	3568.49	0.14	0.29
1	17068		39300.00	419.14	439.07	432.75	439.10	0.000270	3.00	29898.93	3576.87	0.13	0.26
1	17118.5	HUNTER FERRELL RBR D	14280.00	419.14	433.98	433.17	433.98	0.050924	0.00	690.62	75.23	0.00	18.90
1	17118.5	HUNTER FERRELL RBR D	23900.00	419.14	436.02	433.80	436.08	0.001958	3.33	12144.53	3429.24	0.09	0.49
1	17118.5	HUNTER FERRELL RBR D	29080.00	419.14	437.16	434.00	437.21	0.001207	2.25	16207.48	3568.56	0.08	0.24
1	17118.5	HUNTER FERRELL RBR D	39300.00	419.14	439.08	434.00	439.13	0.000696	1.88	23064.77	3576.91	0.07	0.16
1	17118.5	HUNTER FERRELL RBR U	14280.00	419.14	433.98	432.88	433.98	0.060078	0.00	651.80	70.74	0.00	19.56
1	17118.5	HUNTER FERRELL RBR U	2										

HEC-RAS Plan: WC-Edit-Prop River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	18996	29080.00	421.60	437.49		437.51	0.000230	2.13	27005.27	3990.18	0.11	0.15
1	18996	39300.00	421.60	439.34		439.36	0.000190	2.13	34380.76	3998.31	0.10	0.14
1	21103	14830.00	424.50	435.14	431.74	435.17	0.000900	3.08	10894.76	3692.32	0.21	0.36
1	21103	24590.00	424.50	436.96	432.56	437.00	0.000618	2.98	16689.39	3805.32	0.18	0.31
1	21103	29850.00	424.50	437.93	432.81	437.97	0.000522	2.94	19776.71	3873.32	0.17	0.29
1	21103	39730.00	424.50	439.69	433.24	439.73	0.000406	2.90	25399.91	4006.95	0.15	0.27
1	22418	14830.00	425.00	435.72	432.94	435.75	0.000492	2.40	12237.11	4057.68	0.16	0.21
1	22418	24590.00	425.00	437.41	433.54	437.44	0.000398	2.37	17909.79	4208.61	0.15	0.20
1	22418	29850.00	425.00	438.32	433.77	438.35	0.000351	2.34	21329.18	4923.28	0.14	0.19
1	22418	39730.00	425.00	440.01	434.16	440.04	0.000302	2.44	28642.30	5297.69	0.13	0.19
1	23775	14830.00	426.00	436.92	435.85	437.10	0.002908	5.88	6083.68	2910.97	0.38	1.28
1	23775	24590.00	426.00	438.30	436.67	438.42	0.001714	4.87	10783.53	4307.74	0.30	0.84
1	23775	29850.00	426.00	439.07	436.89	439.18	0.001318	4.47	14059.03	4549.35	0.26	0.69
1	23775	39730.00	426.00	440.58	437.14	440.66	0.000760	3.71	20542.83	5787.81	0.20	0.46
1	25050	14900.00	427.00	439.63	438.42	439.78	0.001582	4.96	6700.45	4402.66	0.29	0.85
1	25050	24770.00	427.00	440.55	439.00	440.74	0.001878	5.77	8942.23	6430.02	0.33	1.11
1	25050	30070.00	427.00	441.03	439.25	441.23	0.001904	6.00	10098.79	6569.30	0.33	1.18
1	25050	39820.00	427.00	441.93	439.67	442.15	0.001798	6.17	12314.97	6687.47	0.33	1.22
1	27683	14900.00	429.60	437.44	437.44	439.73	0.017401	12.82	1279.18	1112.50	0.92	6.42
1	27683	24770.00	429.60	442.63	439.46	442.78	0.001335	4.70	12789.99	5716.18	0.27	0.75
1	27683	30070.00	429.60	443.12	440.33	443.27	0.001428	4.95	14938.92	6830.87	0.28	0.83
1	27683	39820.00	429.60	443.90	441.71	444.06	0.001488	5.22	18497.08	7035.72	0.29	0.90
1	27773 BELTLINE ROAD BR D	14900.00	429.60	439.23	437.55	440.45	0.009960	9.27	1699.05	284.83	0.61	3.44
1	27773 BELTLINE ROAD BR D	24770.00	429.60	442.08	439.58	443.50	0.009039	9.91	2611.56	696.48	0.59	3.71
1	27773 BELTLINE ROAD BR D	30070.00	429.60	442.39	440.48	444.20	0.011911	11.50	2834.22	756.37	0.68	4.96
1	27773 BELTLINE ROAD BR D	39820.00	429.60	442.98	442.98	445.45	0.016626	13.90	3301.46	815.68	0.80	7.17
1	27773 BELTLINE ROAD BR U	14900.00	429.60	440.67	437.55	441.44	0.005468	7.30	2130.19	309.71	0.46	2.07
1	27773 BELTLINE ROAD BR U	24770.00	429.60	443.71	439.56	444.46	0.004934	7.75	3727.09	831.14	0.44	2.20
1	27773 BELTLINE ROAD BR U	30070.00	429.60	444.76	440.49	445.38	0.004587	7.68	5827.49	2483.33	0.42	2.14
1	27773 BELTLINE ROAD BR U	39820.00	429.60	446.43	442.90	446.86	0.003609	7.12	11122.80	3844.23	0.23	1.80
1	27863	14900.00	429.60	440.95	437.44	441.60	0.003287	6.83	2326.95	3457.82	0.42	1.65
1	27863	24770.00	429.60	444.15	439.42	444.64	0.002354	6.62	4887.35	6172.70	0.37	1.45
1	27863	30070.00	429.60	445.52	440.36	445.58	0.000528	3.30	21371.44	6945.24	0.18	0.35
1	27863	39820.00	429.60	446.97	442.13	447.00	0.000261	2.43	38700.88	7226.22	0.13	0.19
1	27983	14900.00	430.10	442.25	438.78	442.29	0.000640	2.53	11172.75	6026.38	0.18	0.25
1	27983	24770.00	430.10	444.97	439.31	444.98	0.000169	1.54	33279.44	6532.42	0.09	0.08
1	27983	30070.00	430.10	445.74	439.53	445.75	0.000169	1.60	37518.84	6552.89	0.10	0.09
1	27983	39820.00	430.10	447.09	439.92	447.10	0.000124	1.46	52717.86	6618.85	0.08	0.07
1	29138	15290.00	430.50	442.51	438.83	442.53	0.000408	2.15	14981.66	5288.67	0.14	0.17
1	29138	25080.00	430.50	445.06	439.31	445.08	0.000302	2.27	23343.21	6158.86	0.13	0.17
1	29138	30370.00	430.50	445.83	439.51	445.85	0.000316	2.45	26043.01	6214.76	0.13	0.20
1	29138	39720.00	430.50	447.16	439.82	447.19	0.000323	2.68	30926.42	6371.49	0.14	0.23
1	29533	15290.00	430.80	443.41		443.70	0.002769	6.47	4853.74	6753.24	0.39	1.46
1	29533	25080.00	430.80	445.75		445.91	0.001527	5.64	12416.91	7308.18	0.30	1.02
1	29533	30370.00	430.80	446.56		446.72	0.001598	6.04	16169.28	8123.65	0.31	1.14
1	29533	39720.00	430.80	447.86		447.97	0.001085	5.34	22661.57	8205.04	0.26	0.86
1	29723	15290.00	430.88	444.74	443.32	445.52	0.005149	9.33	3974.72	4694.12	0.53	2.94
1	29723	25080.00	430.88	446.71		447.16	0.003333	8.50	9288.65	5707.13	0.44	2.30
1	29723	30370.00	430.88	447.55		447.88	0.002550	7.79	12163.95	5925.73	0.39	1.88
1	29723	39720.00	430.88	448.65		448.93	0.002335	7.89	16479.56	6671.18	0.38	1.88
1	29907	15290.00	430.95	446.46		446.82	0.002181	6.58	5419.95	1815.22	0.36	1.41
1	29907	25080.00	430.95	448.06		448.47	0.002474	7.70	9255.83	3226.78	0.39	1.84
1	29907	30370.00	430.95	448.73		449.17	0.002643	8.24	11480.99	3405.50	0.40	2.07
1	29907	39720.00	430.95	449.78		450.13	0.002201	7.93	15096.49	3430.70	0.37	1.86
1	30273	15290.00	431.10	447.36		447.80	0.002228	6.35	5510.67	2345.98	0.36	1.34
1	30273	25080.00	431.10	449.12		449.47	0.001850	6.46	9945.08	2638.84	0.33	1.31
1	30273	30370.00	431.10	449.86		450.18	0.001735	6.52	11903.68	2681.13	0.33	1.31
1	30273	39720.00	431.10	450.77		451.11	0.001872	7.10	14491.05	2962.82	0.34	1.52
1	30837	15290.00	431.40	448.49		448.88	0.001748	7.16	6444.46	2076.80	0.33	1.51
1	30837	25080.00	431.40	450.10		450.47	0.001849	7.89	9923.92	2283.92	0.35	1.77
1	30837	30370.00	431.40	450.79		451.15	0.001883	8.19	11551.28	2351.54	0.35	1.88
1	30837	39720.00	431.40	451.76		452.12	0.001927	8.61	13838.37	2359.51	0.36	2.04
1	31092	15280.00	431.42	449.00		449.47	0.001702	7.00	3780.14	736.47	0.33	1.45
1	31092	25060.00	431.42	450.60		451.37	0.002763	9.58	5925.68	2133.12	0.43	2.62
1	31092	30310.00	431.42	451.34		452.07	0.002716	9.79	7582.05	2229.15	0.43	2.70
1	31092	39670.00	431.42	452.40		452.99	0.002366	9.53	9955.84	2273.86	0.40	2.50
1	31289	15280.00	431.43	449.23		450.03	0.002641	8.81	2744.93	446.02	0.41	2.28
1	31289	25060.00	431.43	450.91	446.55	452.39	0.004594	12.50	3915.69	1306.07	0.55	4.43
1	31289	30310.00	431.43	451.59	447.56	453.19	0.005013	13.43	4956.20	1771.46	0.58	5.04
1	31289	39670.00	431.43	452.51	448.00	454.18	0.005472	14.53	6753.08	2030.86	0.61	5.81
1	31556	15280.00	431.65	450.25	443.00	450.55	0.000780	5.17	3621.52	414.26	0.23	0.76
1	31556	25060.00	431.65	452.83	445.19	453.25	0.001027	6.54	5615.87	1549.15	0.27	1.15
1	31556	30310.00	431.65	453.66	446.04	454.13	0.001164	7.17	6863.10	1732.58	0.29	1.37
1	31556	39670.00	431.65	454.65	447.39	455.23	0.001428	8.21	8440.73	1788.94	0.32	1.76
1	31646 TRINITY BOULEVARBR D	15280.00	431.65	450.25	443.14	450.61	0.001431	5.42	3279.25	322.26	0.24	0.95
1	31646 TRINITY BOULEVARBR D	25060.00	431.65	452.84	445.27	453.32	0.002136	6.38	4143.47	297.35	0.21	1.57
1	31646 TRINITY BOULEVARBR D	30310.00	431.65	453.66	446.26	454.13		6.75	6583.31	1020.91	0.22	
1	31646 TRINITY BOULEVARBR D	39670.00	431.65	454.65	447.77	455.23		7.35	7861.08	1089.92	0.25	
1	31646 TRINITY BOULEVARBR U	15280.00	431.65	450.53	442.78	450.78	0.00099					

HEC-RAS Plan: WC-Edit-Prop River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	32935	15280.00	432.15	451.60		451.78	0.000493	4.16	5488.55	513.59	0.20	0.42
1	32935	25060.00	432.15	454.87		455.28	0.000865	6.35	7936.94	1227.04	0.27	0.90
1	32935	30310.00	432.15	455.88		456.31	0.000906	6.76	9221.31	1331.28	0.28	1.00
1	32935	39670.00	432.15	457.22		457.71	0.001005	7.46	11064.46	1405.18	0.30	1.19
1	33452	15280.00	432.36	451.74		452.27	0.001317	7.76	3499.85	335.25	0.33	1.35
1	33452	25060.00	432.36	455.03		456.18	0.002323	11.58	4788.44	650.05	0.45	2.84
1	33452	30310.00	432.36	456.00		457.30	0.002600	12.63	5442.64	710.04	0.48	3.33
1	33452	39670.00	432.36	457.30		458.86	0.003082	14.30	6409.36	776.60	0.53	4.19
1	33841	15280.00	432.52	452.31		452.61	0.000598	5.24	4386.84	389.41	0.23	0.62
1	33841	25060.00	432.52	456.24		456.71	0.000722	6.63	6144.34	788.02	0.26	0.92
1	33841	30310.00	432.52	457.29		457.91	0.000906	7.67	7014.50	843.29	0.29	1.21
1	33841	39670.00	432.52	458.80		459.60	0.001125	8.94	8318.63	884.00	0.33	1.61
1	34182	15280.00	432.63	452.48	445.67	452.97	0.001050	6.94	3504.98	309.53	0.29	1.08
1	34182	25060.00	432.63	456.44	448.01	457.13	0.001186	8.46	4769.12	490.53	0.32	1.50
1	34182	30310.00	432.63	457.53	449.06	458.46	0.001514	9.88	5416.04	627.17	0.37	2.02
1	34182	39670.00	432.63	459.12	450.75	460.24	0.001799	11.27	7308.51	1479.37	0.41	2.57
1	34252.5 SHADY GROVE ROADBR D	15280.00	432.63	452.54	445.84	453.08	0.001998	7.22	3153.86	278.37	0.31	1.35
1	34252.5 SHADY GROVE ROADBR D	25060.00	432.63	456.49	448.21	457.28	0.002485	8.84	4298.65	301.30	0.34	1.93
1	34252.5 SHADY GROVE ROADBR D	30310.00	432.63	457.63	449.29	458.61	0.003020	9.97	4649.61	326.38	0.28	2.43
1	34252.5 SHADY GROVE ROADBR D	39670.00	432.63	459.21	451.06	460.46	0.003863	11.61	5739.26	883.45	0.31	3.25
1	34252.5 SHADY GROVE ROADBR U	15280.00	432.68	452.66	445.92	453.16	0.001901	6.51	3299.33	301.46	0.30	1.14
1	34252.5 SHADY GROVE ROADBR U	25060.00	432.68	456.67	448.16	457.37	0.002254	7.87	4556.10	323.51	0.32	1.58
1	34252.5 SHADY GROVE ROADBR U	30310.00	432.68	457.87	449.19	458.74	0.002677	8.80	4944.89	327.10	0.35	1.95
1	34252.5 SHADY GROVE ROADBR U	39670.00	432.68	459.45	450.89	460.60	0.003496	10.36	6149.67	898.74	0.29	2.67
1	34323	15280.00	432.68	452.85	445.71	453.25	0.000960	5.99	4210.60	1200.21	0.28	0.85
1	34323	25060.00	432.68	457.05	447.86	457.51	0.000864	6.72	6266.05	1530.55	0.27	0.98
1	34323	30310.00	432.68	457.92	448.91	458.51	0.001044	7.62	6702.81	1568.37	0.30	1.24
1	34323	39670.00	432.68	459.87	451.00	460.78	0.001414	9.44	9399.95	1685.91	0.36	1.85
1	34434	15280.00	432.70	453.00	446.01	453.38	0.001292	6.78	4423.59	1176.96	0.29	1.29
1	34434	25060.00	432.70	457.25	447.99	457.64	0.001119	7.33	6926.58	1444.36	0.28	1.40
1	34434	30310.00	432.70	458.18	448.84	458.66	0.001334	8.24	7528.32	1594.35	0.31	1.74
1	34434	39670.00	432.70	460.39	450.00	461.03	0.001586	9.58	10518.10	1648.14	0.34	2.28
1	34959	15470.00	432.90	453.58		454.13	0.001365	7.27	4016.47	994.01	0.30	1.45
1	34959	25260.00	432.90	457.75		458.29	0.001192	7.82	6547.67	1293.72	0.29	1.57
1	34959	30300.00	432.90	458.78		459.41	0.001355	8.60	7263.76	1352.52	0.32	1.86
1	34959	39670.00	432.90	461.12		461.89	0.001562	9.85	10210.15	1411.09	0.35	2.37
1	35464	15470.00	433.06	454.36		454.78	0.001149	6.63	4694.89	1338.14	0.28	1.21
1	35464	25260.00	433.06	458.46		458.86	0.001002	7.10	7742.97	1790.64	0.27	1.30
1	35464	30300.00	433.06	459.61		460.04	0.001051	7.52	8717.19	1814.19	0.28	1.43
1	35464	39670.00	433.06	462.10		462.62	0.001201	8.61	13051.17	1906.18	0.30	1.81
1	35924	15470.00	433.21	454.83		455.57	0.002054	8.62	3480.19	1307.41	0.36	2.08
1	35924	25260.00	433.21	458.84		459.58	0.001879	9.44	5953.67	1732.48	0.36	2.33
1	35924	30300.00	433.21	460.01		460.80	0.001974	10.01	6842.30	1821.45	0.37	2.57
1	35924	39670.00	433.21	462.63		463.36	0.001825	10.34	11393.12	1883.67	0.36	2.65
1	36575	15470.00	433.43	456.24		456.56	0.001046	6.07	4983.43	984.96	0.24	1.04
1	36575	25260.00	433.43	460.16		460.44	0.000837	6.14	8466.86	1581.41	0.22	1.00
1	36575	30300.00	433.43	461.39		461.67	0.000825	6.31	9686.60	1747.94	0.22	1.03
1	36575	39670.00	433.43	463.95		464.22	0.000872	6.93	14136.99	1960.37	0.24	1.21
1	36898	15470.00	433.50	456.48		457.11	0.001718	7.91	3715.87	719.61	0.33	1.75
1	36898	25260.00	433.50	460.36		460.88	0.001434	8.25	7146.59	1675.66	0.31	1.78
1	36898	30300.00	433.50	461.60		462.09	0.001327	8.23	8462.37	1705.47	0.30	1.74
1	36898	39670.00	433.50	464.17		464.64	0.001275	8.67	12743.40	2023.92	0.30	1.86
1	37389	15470.00	433.70	457.41	449.93	457.70	0.000794	5.84	6318.44	2060.14	0.23	0.91
1	37389	25260.00	433.70	461.14	452.00	461.33	0.000552	5.44	10927.34	2374.17	0.19	0.75
1	37389	30300.00	433.70	462.32	453.97	462.52	0.000547	5.59	12446.22	2425.51	0.20	0.78
1	37389	39670.00	433.70	464.87	457.10	465.05	0.000517	5.79	16775.80	2617.72	0.19	0.81
1	37736	15470.00	434.20	457.71	447.44	457.91	0.000476	4.65	6874.89	2202.96	0.18	0.57
1	37736	25260.00	434.20	461.30	451.15	461.50	0.000432	4.94	10586.54	2533.97	0.18	0.61
1	37736	30300.00	434.20	462.48	452.00	462.69	0.000453	5.22	11831.45	2581.48	0.18	0.67
1	37736	39670.00	434.20	465.00	455.49	465.23	0.000460	5.61	15160.06	2814.08	0.19	0.75
1	38272	15470.00	435.00	457.98	452.00	458.34	0.001180	6.53	4529.77	2042.62	0.27	1.19
1	38272	25260.00	435.00	461.53	455.39	461.90	0.001089	7.08	6865.40	2387.69	0.27	1.32
1	38272	30300.00	435.00	462.71	456.15	463.11	0.001152	7.55	7678.24	2473.48	0.28	1.47
1	38272	39670.00	435.00	465.23	457.35	465.64	0.001076	7.83	9548.32	2582.04	0.28	1.53
1	38706	15470.00	435.61	458.26	449.56	458.94	0.000870	6.65	2433.91	1404.89	0.33	0.66
1	38706	25260.00	435.61	461.65	452.98	462.69	0.000998	8.33	3369.43	1819.76	0.36	0.96
1	38706	30300.00	435.61	462.77	454.56	464.04	0.001126	9.25	3679.27	2026.68	0.39	1.16
1	38706	39670.00	435.61	465.13	457.09	466.73	0.001212	10.45	4331.10	2303.45	0.42	1.42
1	38806 ROCK ISLAND BR D	15470.00	439.40	457.86	452.46	459.59	0.003717	10.56	1464.73	119.02	0.43	1.91
1	38806 ROCK ISLAND BR D	25260.00	439.40	460.87	456.52	463.79	0.005995	13.70	1844.05	132.69	0.52	3.18
1	38806 ROCK ISLAND BR D	30300.00	439.40	461.74	458.25	465.45	0.007517	15.45	1961.15	136.63	0.58	4.04
1	38806 ROCK ISLAND BR D	39670.00	439.40	471.42	461.06	471.55		14.77	2827.90	2044.90	0.46	
1	38806 ROCK ISLAND BR U	15470.00	439.50	458.12	452.85	459.74	0.003739	10.21	1515.76	124.43	0.42	1.82
1	38806 ROCK ISLAND BR U	25260.00	439.50	461.47	456.57	464.06	0.005539	12.93	1954.08	137.75	0.49	2.86
1	38806 ROCK ISLAND BR U	30300.00	439.50	462.65	458.20	465.82	0.006587	14.29	2119.86	142.46	0.52	3.47
1	38806 ROCK ISLAND BR U	39670.00	439.50	471.72	460.90	472.82		14.56	2734.79	2073.67	0.45	
1	38877	15470.00	438.43	459.42	452.07	460.12	0.000912	6.70	2344.07	1186.17	0.34	0.68
1	38877	25260.00	438.43	463.64	455.48	464.65	0.000893	8.08	3187.91	1689.45	0.35	0.90
1	38877	30300.00	438.43	465.36	456.56	466.54	0.000920	8.76	3530.92	1875.75	0.36	1.02
1	38877	39670.00	438.43	471.72	458.40	472.82	0.000573	8.45	4804.44	2311.18	0.30	0.86
1	38907	15470.00	438.53	459.38	452.35	460.19	0.000309	8.12	2167.84	559.27	0.31	0.30
1	38907	25260.00	438.53	463.53	455.24	464.79	0.000356	9.84	2824.01	1506.56	0.35	0.41
1	38907	30300.00	438.53	465.21	456.46	466.72	0.000384	10.67	3089.16	1662.33	0.36	0.48
1	38907	39670.00	438.53	471.55	458.52	473.02	0.000264	10.22	4091.00	2242.55	0.31	0.41
1	38972 TRINITY RAILWAY BR D	15470.00	439.51	458.80	453.56	460.83	0.000901	13.13	1443.14	96.00	0.53	0.80
1	38972 TRINITY RAILWAY BR D	25260.00	439.51	462.42	457.16	465.97	0.001277	17.58	1790.17	96.00	0.65	1.36
1	38972 TRINITY RAILWAY BR D	30300.00	439.51	463.76	458.86	468.25	0.001500	19.80				

HEC-RAS Plan: WC-Edit-Prop River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	38972 TRINITY RAILWAY BR U	25260.00	439.51	462.50	457.83	466.01	0.001779	15.14	1705.02	96.00	0.59	1.18
1	38972 TRINITY RAILWAY BR U	30300.00	439.51	464.06	459.45	468.33	0.002018	16.57	1854.65	96.00	0.62	1.39
1	38972 TRINITY RAILWAY BR U	39670.00	439.51	474.32	462.30	478.40	0.001897	14.50	2843.74		0.42	1.12
1	39117	15470.00	438.63	461.32	451.08	461.48	0.000059	3.65	4854.25	363.38	0.14	0.06
1	39117	25260.00	438.63	466.81	452.76	467.02	0.000052	4.02	6912.66	456.31	0.14	0.07
1	39117	30300.00	438.63	469.33	453.50	469.56	0.000049	4.18	7901.00	582.52	0.14	0.07
1	39117	39670.00	438.63	478.36	454.85	478.40	0.000012	2.53	37994.98	2547.23	0.07	0.02
1	39217	15470.00	438.80	461.33	452.28	461.50	0.000497	4.53	5795.94	532.03	0.18	0.56
1	39217	25260.00	438.80	466.87	454.15	467.04	0.000375	4.67	8881.95	660.17	0.17	0.54
1	39217	30300.00	438.80	469.41	454.88	469.59	0.000338	4.74	10333.24	699.66	0.16	0.54
1	39217	39670.00	438.80	478.39	456.01	478.41	0.000036	1.88	42033.25	2706.54	0.06	0.08
1	40106	15660.00	440.47	461.68	451.11	461.75	0.000194	2.67	8468.31	666.74	0.12	0.20
1	40106	25480.00	440.47	467.17	452.27	467.25	0.000176	3.07	12340.08	754.17	0.11	0.24
1	40106	31070.00	440.47	469.69	452.86	469.78	0.000170	3.24	14286.38	783.35	0.11	0.26
1	40106	45100.00	440.47	478.42	454.17	478.44	0.000029	1.64	58098.19	3912.80	0.05	0.06
1	40864	15660.00	441.90	461.83	451.20	461.90	0.000213	2.80	8395.22	805.63	0.12	0.22
1	40864	25480.00	441.90	467.29	452.45	467.37	0.000158	2.92	13185.17	1275.16	0.11	0.21
1	40864	31070.00	441.90	469.82	453.07	469.90	0.000143	2.98	15463.89	1295.27	0.11	0.22
1	40864	45100.00	441.90	478.44	454.45	478.46	0.000023	1.47	61953.30	3954.80	0.04	0.05
1	41594	15660.00	441.91	461.99	452.02	462.07	0.000242	3.01	7660.32	618.15	0.13	0.25
1	41594	25480.00	441.91	467.41	453.26	467.51	0.000206	3.35	11122.15	658.02	0.12	0.28
1	41594	31070.00	441.91	469.92	453.87	470.03	0.000201	3.55	12797.74	678.23	0.13	0.31
1	41594	45100.00	441.91	478.46	455.25	478.48	0.000030	1.66	57396.23	4127.62	0.05	0.06
1	42233	15660.00	442.76	462.14	452.32	462.23	0.000252	3.00	7541.72	606.02	0.13	0.25
1	42233	25480.00	442.76	467.54	453.63	467.65	0.000217	3.38	10922.69	646.26	0.13	0.29
1	42233	31070.00	442.76	470.05	454.27	470.17	0.000213	3.60	12565.86	666.63	0.13	0.32
1	42233	45100.00	442.76	478.47	455.70	478.51	0.000074	2.60	36544.38	3353.65	0.08	0.15
1	43485	15660.00	444.20	462.46	452.38	462.63	0.000368	3.57	5446.18	632.38	0.16	0.36
1	43485	25480.00	444.20	467.79	454.12	467.89	0.000180	3.01	11229.53	689.24	0.12	0.23
1	43485	31070.00	444.20	470.29	454.95	470.41	0.000175	3.20	12985.64	715.54	0.12	0.25
1	43485	45100.00	444.20	478.55	456.83	478.62	0.000088	2.78	30565.38	2214.58	0.09	0.17
1	43922	15660.00	444.73	462.54	455.17	462.94	0.001073	6.19	3798.00	652.31	0.27	1.08
1	43922	25480.00	444.73	467.88	457.30	467.98	0.000248	3.59	10993.28	760.05	0.14	0.33
1	43922	31070.00	444.73	470.38	458.34	470.49	0.000229	3.71	13052.72	914.79	0.13	0.34
1	43922	45100.00	444.73	478.61	460.75	478.66	0.000105	3.05	31158.89	2174.10	0.09	0.21
1	44270	15660.00	445.10	463.04	454.68	463.22	0.000551	3.99	5239.02	872.39	0.19	0.47
1	44270	25480.00	445.10	467.98	456.19	468.06	0.000189	2.87	13033.88	974.50	0.12	0.22
1	44270	31070.00	445.10	470.48	456.95	470.56	0.000178	3.02	15538.69	1051.48	0.12	0.23
1	44270	45100.00	445.10	478.64	458.65	478.69	0.000085	2.60	32525.50	2124.54	0.08	0.16
1	44981	15570.00	445.45	463.45	456.11	463.54	0.000336	3.35	7087.95	734.19	0.15	0.32
1	44981	25350.00	445.45	468.12	457.78	468.23	0.000257	3.49	10600.54	773.89	0.14	0.32
1	44981	31170.00	445.45	470.61	458.33	470.72	0.000231	3.58	12527.31	839.66	0.13	0.32
1	44981	46630.00	445.45	478.70	459.59	478.78	0.000134	3.34	24665.79	1944.27	0.11	0.25
1	45656	15570.00	445.60	463.57	456.87	464.16	0.001140	6.76	2892.15	263.41	0.31	1.06
1	45656	25350.00	445.60	468.10	459.39	468.85	0.001077	7.83	4120.91	287.50	0.31	1.30
1	45656	31170.00	445.60	470.53	460.60	471.36	0.001038	8.30	4797.52	364.91	0.31	1.41
1	45656	46630.00	445.60	478.70	463.41	479.06	0.000407	6.41	15915.73	2390.59	0.21	0.76
1	45757.5 BR D	15570.00	445.60	463.59	457.08	464.28	0.002214	7.18	2526.91	222.55	0.28	1.37
1	45757.5 BR D	25350.00	445.60	468.11	459.73	469.00	0.002393	8.31	3569.39	239.93	0.28	1.74
1	45757.5 BR D	31170.00	445.60	470.52	461.04	471.51	0.002440	8.77	4162.68	251.17	0.28	1.90
1	45757.5 BR D	46630.00	445.60	478.65	464.05	479.17	0.003375	6.40	6219.41	65.56	0.18	2.05
1	45757.5 BR U	15570.00	445.70	463.73	458.28	464.55	0.002490	8.13	2426.36	234.41	0.37	1.70
1	45757.5 BR U	25350.00	445.70	468.25	460.85	469.27	0.002488	9.28	3525.91	252.50	0.37	2.08
1	45757.5 BR U	31170.00	445.70	470.67	462.07	471.78	0.002465	9.77	4148.87	262.30	0.30	2.24
1	45757.5 BR U	46630.00	445.70	478.79	465.12	479.35	0.003453	7.04	6247.20	45.27	0.18	2.38
1	45859	15570.00	445.70	463.98	458.30	464.71	0.001581	7.73	2619.03	251.88	0.35	1.41
1	45859	25350.00	445.70	468.52	460.85	469.43	0.001460	8.86	3826.35	281.44	0.35	1.70
1	45859	31170.00	445.70	470.93	461.96	471.94	0.001414	9.43	4565.62	432.00	0.35	1.85
1	45859	46630.00	445.70	478.77	465.02	479.53	0.000826	8.83	12102.33	2715.39	0.29	1.46
1	46139	15570.00	445.80	464.39	458.41	465.17	0.001499	8.14	2608.34	244.14	0.35	1.50
1	46139	25350.00	445.80	468.90	461.18	469.88	0.001456	9.40	3779.79	274.99	0.36	1.85
1	46139	31170.00	445.80	471.27	462.57	472.42	0.001507	10.27	4503.84	351.39	0.37	2.13
1	46139	46630.00	445.80	479.02	465.54	479.76	0.000825	9.18	12514.67	2474.72	0.29	1.55
1	46416	15570.00	446.00	465.11	457.66	465.50	0.000817	5.77	3564.18	326.25	0.26	0.77
1	46416	25350.00	446.00	469.69	459.95	470.22	0.000807	6.81	5146.23	384.98	0.27	0.99
1	46416	31170.00	446.00	472.17	461.09	472.78	0.000826	7.44	6230.06	503.35	0.28	1.13
1	46416	46630.00	446.00	479.60	463.69	479.96	0.000439	6.55	15187.38	2537.12	0.21	0.80
1	47116	15520.00	446.02	465.66	454.07	465.81	0.000247	3.20	5018.20	351.00	0.14	0.24
1	47116	25280.00	446.02	470.31	455.85	470.54	0.000265	3.94	7265.53	654.28	0.15	0.33
1	47116	31060.00	446.02	472.85	456.79	473.11	0.000258	4.21	9193.92	861.56	0.16	0.36
1	47116	46410.00	446.02	479.96	458.91	480.15	0.000156	3.92	22846.36	2873.59	0.13	0.29
1	47446	15520.00	446.50	465.58	455.84	466.03	0.000709	5.40	2964.67	213.57	0.24	0.67
1	47446	25280.00	446.50	470.15	458.45	470.81	0.000757	6.63	4400.40	516.24	0.26	0.93
1	47446	31060.00	446.50	472.65	459.72	473.38	0.000733	7.06	5708.12	864.98	0.26	1.02
1	47446	46410.00	446.50	479.90	462.68	480.28	0.000348	5.86	17963.46	2811.78	0.19	0.64
1	47559	15520.00	446.60	465.53	456.40	466.18	0.000832	6.77	2951.52	284.56	0.29	0.83
1	47559	25280.00	446.60	470.10	460.24	470.96	0.000853	8.06	4444.24	603.62	0.31	1.08
1	47559	31060.00	446.60	472.56	462.13	473.55	0.000859	8.70	5577.61	832.69	0.31	1.21
1	47559	46410.00										

HEC-RAS Plan: WC-Edit-Prop River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	47610	46410.00	451.50	479.86	467.83	480.41	0.000559	7.81	17001.41	2809.14	0.26	0.93
1	47669	15520.00	451.54	465.58	461.34	466.48	0.001713	8.22	2438.43	280.27	0.41	1.32
1	47669	25280.00	451.54	470.21	463.76	471.22	0.001343	8.97	3783.05	352.45	0.38	1.42
1	47669	31060.00	451.54	472.73	464.94	473.80	0.001222	9.37	4589.10	1259.57	0.37	1.48
1	47669	46410.00	451.54	480.26	467.63	480.52	0.000317	5.92	19676.47	2857.31	0.20	0.53
1	47726 BR D	15520.00	451.54	465.63	461.59	466.54	0.002880	8.30	2351.88	269.83	0.41	1.53
1	47726 BR D	25280.00	451.54	470.29	463.96	471.28	0.002478	8.89	3655.24	289.45	0.38	1.63
1	47726 BR D	31060.00	451.54	472.85	465.11	473.87	0.002317	9.11	4410.92	301.77	0.31	1.66
1	47726 BR D	46410.00	451.54	480.26	467.77	480.58		6.34	10673.27	1741.63	0.22	
1	47726 BR U	15520.00	451.54	465.82	461.56	466.72	0.002814	8.26	2406.59	272.36	0.41	1.51
1	47726 BR U	25280.00	451.54	470.44	463.98	471.45	0.002508	8.98	3711.44	291.76	0.38	1.66
1	47726 BR U	31060.00	451.54	472.98	465.17	474.03	0.002369	9.24	4467.06	302.29	0.31	1.71
1	47726 BR U	46410.00	451.54	480.43	467.89	480.80		6.51	10289.23	1714.36	0.23	
1	47783	15520.00	451.54	465.92	461.31	466.79	0.001582	8.04	2545.85	285.91	0.39	1.25
1	47783	25280.00	451.54	470.48	463.79	471.49	0.001305	8.93	3903.93	309.01	0.38	1.40
1	47783	31060.00	451.54	473.02	464.98	474.08	0.001176	9.28	4702.66	595.46	0.37	1.44
1	47783	46410.00	451.54	480.43	467.73	480.80	0.000405	6.72	17621.91	2790.96	0.23	0.68
1	48015	15520.00	451.90	466.54	461.46	467.24	0.001937	7.31	2710.23	315.43	0.35	1.60
1	48015	25280.00	451.90	471.08	463.79	471.89	0.001617	8.10	4132.51	400.15	0.34	1.78
1	48015	31060.00	451.90	473.62	464.91	474.45	0.001443	8.36	5112.86	1210.22	0.33	1.82
1	48015	46410.00	451.90	480.73	467.51	480.94	0.000391	5.31	19143.95	2799.19	0.18	0.66
1	48529	15520.00	452.70	468.04	465.33	471.12	0.011200	14.15	1135.31	97.33	0.69	8.77
1	48529	25280.00	452.70	472.10	469.29	476.54	0.011556	17.21	1673.73	260.20	0.73	11.85
1	48529	31060.00	452.70	475.80	475.80	478.19	0.005862	13.96	4045.07	1222.05	0.54	7.31
1	48529	46410.00	452.70	481.00	477.54	481.59	0.001774	8.91	11582.13	1529.59	0.31	2.76
1	49116. A	15520.00	455.70	473.96	468.86	475.33	0.004650	9.76	1775.12	180.72	0.46	4.04
1	49116. A	25280.00	455.70	478.92	471.99	480.32	0.003614	10.50	3486.95	757.92	0.42	4.23
1	49116. A	31060.00	455.70	479.46	473.61	481.29	0.004665	12.15	3748.44	775.32	0.48	5.61
1	49116. A	46410.00	455.70	481.74	477.64	483.56	0.004790	13.24	6321.81	1211.07	0.50	6.42
1	49533.	15480.00	456.80	475.82	470.19	476.56	0.001984	7.61	2617.95	252.11	0.36	1.71
1	49533.	25210.00	456.80	480.45	472.61	481.36	0.001775	8.69	3866.48	660.03	0.35	2.03
1	49533.	30970.00	456.80	481.40	473.86	482.60	0.002216	10.03	4143.68	896.06	0.40	2.66
1	49533.	46240.00	456.80	483.60	476.47	484.94	0.002562	11.57	7413.72	1212.85	0.44	3.41
1	49719	15480.00	457.88	476.14	472.09	477.03	0.002747	9.52	2383.95	258.90	0.42	2.59
1	49719	25210.00	457.88	480.79	474.45	481.73	0.002200	10.11	3728.73	640.39	0.39	2.68
1	49719	30970.00	457.88	481.87	475.55	483.04	0.002607	11.39	4068.75	908.86	0.43	3.35
1	49719	46240.00	457.88	484.51	478.66	485.44	0.002392	11.78	7811.86	1228.87	0.42	3.45
1	49730	Inl Struct										
1	49741	15480.00	458.20	476.43	471.74	477.24	0.002241	8.59	2477.05	255.88	0.39	2.11
1	49741	25210.00	458.20	481.06	474.00	481.99	0.001919	9.47	3790.54	541.13	0.37	2.35
1	49741	30970.00	458.20	482.07	474.88	483.24	0.002320	10.75	4106.65	895.19	0.41	2.98
1	49741	46240.00	458.20	484.56	477.76	485.62	0.002322	11.59	7558.95	1233.25	0.42	3.34
1	49800.	15500.00	458.38	476.84	469.61	477.45	0.001312	6.78	2740.83	252.91	0.30	1.30
1	49800.	25270.00	458.38	481.33	472.45	482.15	0.001324	8.03	3856.59	311.23	0.31	1.67
1	49800.	31080.00	458.38	482.36	473.76	483.44	0.001645	9.24	4138.13	939.87	0.35	2.18
1	49800.	46330.00	458.38	484.67	476.65	485.88	0.001951	10.77	7384.68	1308.59	0.39	2.86
1	49870. AIRPORT FREEWAY BR D	15500.00	458.38	476.95	469.98	477.54	0.002252	6.67	2625.17	220.20	0.25	1.45
1	49870. AIRPORT FREEWAY BR D	25270.00	458.38	481.46	472.60	482.26	0.002490	7.73	3684.17	255.76	0.26	1.85
1	49870. AIRPORT FREEWAY BR D	31080.00	458.38	483.71	473.88	483.72	0.004933	8.44	4271.45		0.27	2.50
1	49870. AIRPORT FREEWAY BR D	46330.00	458.38	484.67	476.73	485.88		9.62	7358.78	816.47	0.32	
1	49870. AIRPORT FREEWAY BR U	15500.00	458.78	477.10	469.83	477.64	0.001965	6.76	2796.29	270.12	0.24	1.43
1	49870. AIRPORT FREEWAY BR U	25270.00	458.78	481.74	472.32	482.39	0.001978	7.55	4151.41	302.54	0.24	1.68
1	49870. AIRPORT FREEWAY BR U	31080.00	458.78	483.71	473.56	484.50	0.004225	8.35	4744.29		0.25	2.37
1	49870. AIRPORT FREEWAY BR U	46330.00	458.78	485.98	476.59	486.33		9.51	7172.65	857.88	0.27	
1	49934.	15500.00	458.78	477.14	469.88	477.72	0.001334	7.16	2906.17	533.11	0.30	1.41
1	49934.	25270.00	458.78	481.77	472.38	482.48	0.001284	8.22	4356.26	1095.03	0.31	1.72
1	49934.	31080.00	458.78	483.71	473.67	484.50	0.001288	8.71	4995.88	1519.84	0.31	1.88
1	49934.	46330.00	458.78	485.98	476.55	486.33	0.000792	7.26	13123.45	1649.20	0.25	1.26
1	49953.	15500.00	458.88	477.15	469.38	477.77	0.001417	7.35	2757.76	235.49	0.31	1.49
1	49953.	25270.00	458.88	481.73	472.36	482.58	0.001502	8.85	4034.63	867.90	0.33	2.00
1	49953.	31080.00	458.88	483.89	473.70	484.56	0.001252	8.61	6942.15	1481.76	0.31	1.83
1	49953.	46330.00	458.88	485.69	476.94	486.68	0.001865	11.03	9756.24	1659.06	0.38	2.93
1	49988. STATE HIGHWAY 18BR D	15500.00	458.88	477.14	469.52	477.83	0.001969	7.73	2659.78	228.44	0.33	1.75
1	49988. STATE HIGHWAY 18BR D	25270.00	458.88	481.75	472.64	482.62	0.002053	8.95	3884.07	301.36	0.28	2.20
1	49988. STATE HIGHWAY 18BR D	31080.00	458.88	483.80	474.02	484.70	0.002122	9.17	4539.31	349.88	0.27	2.43
1	49988. STATE HIGHWAY 18BR D	46330.00	458.88	485.72	477.48	486.71	0.002536	10.82	7949.97	1486.49	0.27	3.08
1	49988. STATE HIGHWAY 18BR U	15500.00	459.38	477.21	470.93	477.95	0.002700	7.82	2400.46	204.61	0.34	1.92
1	49988. STATE HIGHWAY 18BR U	25270.00	459.38	481.86	473.57	482.72	0.002658	8.66	3780.27	348.51	0.28	2.23
1	49988. STATE HIGHWAY 18BR U	31080.00	459.38	483.98	474.87	484.80	0.002653	8.66	4550.15	388.08	0.26	2.36
1	49988. STATE HIGHWAY 18BR U	46330.00	459.38	485.68	478.13	487.01	0.004026	11.41	6156.80	1174.27	0.32	3.74
1	50074.	15500.00	459.38	477.33	470.83	478.10	0.001715	7.99	2522.26	215.40	0.34	1.77
1	50074.	25270.00	459.38	481.93	473.55	482.93	0.001784	9.56	3986.97	941.46	0.36	2.34
1	50074.	31080.00	459.38	484.53	474.87	485.00	0.000967	7.59	8479.59	1053.77	0.27	1.42
1	50074.	46330.00	459.38	486.59	477.87	487.26	0.001326	9.39	11310.02	1772.42	0.32	2.12
1	50162.	15500.00	459.88	477.61	471.08	478.28	0.001604	7.66	2917.59	555.60	0.33	1.63
1	50162.	25270.00	459.88	482.52	473.62	483.17	0.001269	8.09	4825.08	1132.72	0.31	1.67
1	50162.	31080.00	459.88	484.80	473.91	485.12	0.000736	6.58	10144.41	1241.91	0.24	1.07
1	50162.	46330.00	459.88	487.00	478.74	487.43	0.000935	7.87	13199.30	1810.16	0.27	1.49

HEC-RAS Plan: WC-Edit-Prop River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	Shear Chan (lb/sq ft)
1	50402. STATE HIGHWAY 18BR U	46330.00	461.07	488.94	477.98	489.33		11.88	5193.89	505.51	0.33	
1	50532.	15500.00	461.07	478.52	471.87	479.03	0.001290	6.90	3146.26	452.79	0.30	1.32
1	50532.	25270.00	461.07	483.26	474.36	483.83	0.001062	7.39	4629.75	1065.37	0.28	1.40
1	50532.	31080.00	461.07	485.23	475.77	485.88	0.001087	7.92	5243.95	1386.46	0.29	1.56
1	50532.	46330.00	461.07	488.94	478.67	489.32	0.000731	7.16	11809.65	1570.25	0.24	1.21
1	50639. B	15480.00	461.07	478.86	470.87	479.20	0.000842	5.21	4437.53	588.23	0.24	0.78
1	50639. B	25220.00	461.07	483.68	473.44	484.00	0.000631	5.43	7425.91	800.22	0.21	0.77
1	50639. B	31010.00	461.07	485.74	475.67	486.06	0.000588	5.60	8829.51	1019.99	0.21	0.79
1	50639. B	46200.00	461.07	489.01	478.25	489.42	0.000675	6.58	12710.32	1195.59	0.23	1.05
1	50803.	15480.00	462.07	478.87	471.82	479.46	0.001470	6.47	2998.54	419.10	0.30	1.24
1	50803.	25220.00	462.07	483.61	474.51	484.23	0.001158	6.98	5082.05	763.99	0.28	1.31
1	50803.	31010.00	462.07	485.65	476.13	486.30	0.001108	7.31	6165.74	1075.75	0.28	1.39
1	50803.	46200.00	462.07	489.02	479.59	489.61	0.000989	7.63	11195.57	1248.67	0.27	1.44
1	51094.	15480.00	462.20	479.24	473.45	480.05	0.002136	8.15	2793.94	329.33	0.37	1.93
1	51094.	25220.00	462.20	483.88	476.34	484.72	0.001734	8.77	4519.74	482.70	0.35	2.04
1	51094.	31010.00	462.20	485.89	476.75	486.78	0.001684	9.22	5431.41	626.98	0.35	2.19
1	51094.	46200.00	462.20	488.94	481.07	490.28	0.002301	11.76	8152.43	1005.70	0.42	3.40
1	51378.	15470.00	462.40	479.82	473.61	480.61	0.001838	7.81	2739.45	403.55	0.35	1.74
1	51378.	25210.00	462.40	484.41	476.32	485.18	0.001466	8.28	4805.41	670.95	0.32	1.80
1	51378.	31010.00	462.40	486.43	477.59	487.22	0.001398	8.62	5819.62	792.89	0.32	1.88
1	51378.	46180.00	462.40	490.07	479.74	490.82	0.001273	9.10	9712.75	935.00	0.32	2.00
1	51507	15470.00	462.42	480.18		480.87	0.002071	7.53	2956.22	433.30	0.34	1.96
1	51507	25210.00	462.42	484.85		485.38	0.001335	7.19	5411.94	633.56	0.28	1.64
1	51507	31010.00	462.42	486.92		487.41	0.001186	7.24	6822.83	739.43	0.27	1.61
1	51507	46180.00	462.42	490.43		490.98	0.001194	8.00	9555.02	846.31	0.28	1.87
1	51514	Inl Struct										
1	51521	15470.00	462.85	480.38	474.31	481.01	0.002014	7.41	3088.93	449.94	0.33	1.90
1	51521	25210.00	462.85	485.02	476.53	485.50	0.001283	7.05	5594.84	644.64	0.28	1.58
1	51521	31010.00	462.85	487.01	477.63	487.52	0.001283	7.51	6970.23	738.25	0.28	1.73
1	51521	46180.00	462.85	490.60	479.59	491.11	0.001139	7.83	9769.93	863.45	0.27	1.79
1	51554	15470.00	462.90	480.64	473.69	481.12	0.001441	6.29	3142.12	503.86	0.28	1.37
1	51554	25210.00	462.90	485.03	475.98	485.62	0.001332	7.15	4583.09	694.53	0.28	1.62
1	51554	31010.00	462.90	486.99	477.19	487.66	0.001348	7.66	5284.18	832.38	0.29	1.81
1	51554	46180.00	462.90	490.81	480.33	491.21	0.000871	6.86	11324.13	967.22	0.24	1.37
1	51590. STATE HIGHWAY 97BR D	15470.00	462.90	480.79	473.86	481.22	0.001981	5.85	3095.28	305.34	0.26	1.33
1	51590. STATE HIGHWAY 97BR D	25210.00	462.90	485.21	476.13	485.73	0.001993	6.45	4510.86	377.42	0.25	1.54
1	51590. STATE HIGHWAY 97BR D	31010.00	462.90	487.14	477.26	487.76	0.002240	7.07	5107.98	265.61	0.23	1.82
1	51590. STATE HIGHWAY 97BR D	46180.00	462.90	490.85	480.02	491.27	0.005304	5.86	5822.16	109.11	0.17	3.58
1	51590. STATE HIGHWAY 97BR U	15470.00	462.96	480.95	472.64	481.32	0.001359	5.35	3474.59	346.20	0.24	1.05
1	51590. STATE HIGHWAY 97BR U	25210.00	462.96	485.36	475.47	485.83	0.001387	6.17	5185.91	373.83	0.20	1.32
1	51590. STATE HIGHWAY 97BR U	31010.00	462.96	487.27	476.66	487.86	0.001620	7.00	5815.69	285.39	0.22	1.65
1	51590. STATE HIGHWAY 97BR U	46180.00	462.96	491.05	479.28	491.39	0.004117	5.20	6579.56	116.35	0.15	2.81
1	51652.	15470.00	462.96	481.00	472.45	481.37	0.001002	5.30	3587.25	460.93	0.24	0.96
1	51652.	25210.00	462.96	485.44	475.39	485.88	0.000927	6.01	5401.96	828.68	0.24	1.14
1	51652.	31010.00	462.96	487.47	476.61	487.94	0.000905	6.34	6286.98	1033.91	0.24	1.23
1	51652.	46180.00	462.96	491.06	479.21	491.46	0.000769	6.46	12302.32	1307.65	0.22	1.21
1	51988.	15470.00	463.82	481.24	474.51	481.88	0.001530	7.15	3073.80	489.88	0.32	1.46
1	51988.	25210.00	463.82	485.68	476.89	486.27	0.001202	7.47	5563.48	972.79	0.29	1.46
1	51988.	31010.00	463.82	487.72	478.17	488.27	0.001066	7.50	6990.71	1218.36	0.28	1.43
1	51988.	46180.00	463.82	491.33	479.60	491.66	0.000687	6.65	13622.82	1424.87	0.23	1.07
1	52138.	15470.00	463.91	481.47	475.22	482.13	0.001686	7.29	3107.18	587.13	0.33	1.54
1	52138.	25210.00	463.91	485.89	477.78	486.46	0.001243	7.41	5910.76	1162.73	0.29	1.46
1	52138.	31010.00	463.91	487.93	479.09	488.44	0.001068	7.33	7492.93	1307.61	0.28	1.38
1	52138.	46180.00	463.91	491.51	481.33	491.76	0.000571	5.93	14494.28	1346.24	0.21	0.86
1	52597.	15410.00	464.16	482.44	477.23	483.00	0.002149	7.38	3098.54	459.52	0.34	1.92
1	52597.	25100.00	464.16	486.55	479.74	487.14	0.001793	7.96	5086.22	850.09	0.32	2.05
1	52597.	30850.00	464.16	488.56	480.66	488.99	0.001341	7.37	7561.43	964.32	0.29	1.70
1	52597.	45910.00	464.16	491.76	483.36	492.18	0.001196	7.66	10890.66	1130.32	0.28	1.75
1	52748.	15410.00	462.54	482.83	473.62	483.23	0.001005	5.73	3778.80	523.65	0.24	1.09
1	52748.	25100.00	462.54	486.91	476.66	487.34	0.000925	6.31	5997.29	835.90	0.24	1.23
1	52748.	30850.00	462.54	488.77	477.92	489.16	0.000832	6.32	8305.26	993.53	0.23	1.20
1	52748.	45910.00	462.54	491.93	480.38	492.33	0.000817	6.81	11710.83	1144.70	0.23	1.34
1	52904.	15420.00	461.24	482.99	474.86	483.39	0.000837	5.83	3463.21	368.91	0.24	0.92
1	52904.	25120.00	461.24	486.97	477.39	487.63	0.001215	7.97	5870.66	1301.70	0.29	1.62
1	52904.	30900.00	461.24	488.87	478.61	489.36	0.000950	7.43	8763.95	1591.84	0.26	1.37
1	52904.	45950.00	461.24	492.19	481.59	492.49	0.000622	6.54	14409.75	1768.84	0.22	1.02
1	52990. STATE HIGHWAY 97BR D	15420.00	461.24	483.05	475.01	483.44	0.001215	5.72	3343.55	298.36	0.19	0.98
1	52990. STATE HIGHWAY 97BR D	25120.00	461.24	487.14	477.46	487.74	0.002449	7.34	4479.79	109.18	0.22	1.71
1	52990. STATE HIGHWAY 97BR D	30900.00	461.24	489.64	478.65	490.24		8.66	4533.42		0.25	
1	52990. STATE HIGHWAY 97BR D	45950.00	461.24	492.58	481.43	493.38		8.95	7805.69	1212.03	0.27	
1	52990. STATE HIGHWAY 97BR U	15420.00	461.92	483.11	475.26	483.57	0.001497	6.27	3153.36	256.97	0.21	1.19
1	52990. STATE HIGHWAY 97BR U	25120.00	461.92	487.29	477.81	488.04	0.003691	8.13	4109.80	48.94	0.24	2.20
1	52990. STATE HIGHWAY 97BR U	30900.00	461.92	489.64	479.06	490.25		9.86	4137.40		0.28	
1	52990. STATE HIGHWAY 97BR U	45950.00	461.92	493.26	481.90	493.66		10.19	7430.15	1239.86	0.27	
1	53048.	15420.00	461.92	483.13	475.09	483.60	0.001007	6.35	3280.10	284.48	0.26	1.10
1	53048.	25120.00	461.92	487.48	477.68	488.11	0.001064	7.50	4517.92	929.62	0.27	1.43
1	53048.	30900.00	461.92	489.64	478.94	490.24	0.001086	8.04	8082.47	1414.37	0.28	1.60
1	53048.	45950.00	461.92	493.26	482.11	493.65	0.000775	7.43	14225.00	1798.36	0.24	1.30
1	53178. C	15420.00	464.30	483.28	474.49	483.72	0.000930	5.93	3195.44	261.35	0.25	0.97
1	53178. C	25120.00	464.30	487.62	476.90	488.23	0.000996	7.11	4399.89	373.26	0.27	1.30
1	53178. C	30900.00	464.30	489.66	478.16	490.50	0.001270	8.52	5471.35	596.76	0.31	1.81
1	53178. C	45950.00	464.30	493.10	480.97	494.04	0.001359	9.65	9668.75	1507.36	0.33	2.22
1	53638.	14540.00	464.50	483.68		484.30	0.001468	7.11	2639.61	247.40	0.30	1.43
1	53638.	24890.00	464.50	487.99		488.91	0.001755	9.04	3817.31	321.51	0.35	2.14
1	53638.	28800.00	464.50	490.15		491.29	0.001933	10.12	5087.33	893.56	0.37	2.60
1	53638.	42490.00	464.50	493.92		494.67	0.001332	9.28	8745.16	989.54	0.31	2.08
1	54250.	14540.00	465.53	484.61		485.25	0.001630	7.00	2654.33	245.93	0.30	1.65
1	54250.	24890.00	465.53	489.08								

HEC-RAS Plan: WC-Edit-Prop River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	54250.	42490.00	465.53	494.51		495.90	0.002193	11.04	6147.00	536.07	0.38	3.53
1	54695.	14540.00	467.10	485.33		485.90	0.001283	6.59	2749.17	243.54	0.29	1.23
1	54695.	24890.00	467.10	489.90		490.74	0.001413	8.20	3925.05	271.75	0.32	1.75
1	54695.	28800.00	467.10	492.29		493.13	0.001230	8.24	4594.60	286.77	0.30	1.71
1	54695.	42470.00	467.10	495.46		496.74	0.001619	10.31	5532.92	308.16	0.36	2.56
1	55211.	14540.00	467.55	486.10		486.68	0.001795	6.92	2691.78	248.32	0.29	1.90
1	55211.	24890.00	467.55	490.81		491.58	0.001833	8.20	3923.77	274.22	0.31	2.46
1	55211.	28800.00	467.55	493.10		493.86	0.001605	8.19	4569.94	288.46	0.29	2.38
1	55211.	42470.00	467.55	496.60		497.67	0.001961	9.90	5610.20	307.69	0.33	3.32
1	55550.	14540.00	468.30	486.69		487.19	0.001285	6.79	2947.35	257.48	0.29	1.29
1	55550.	24890.00	468.30	491.41		492.12	0.001377	8.23	4227.72	284.98	0.31	1.75
1	55550.	28800.00	468.30	493.63		494.34	0.001241	8.33	4873.50	298.46	0.30	1.74
1	55550.	42470.00	468.30	497.24		498.26	0.001519	10.10	5990.09	319.06	0.34	2.44
1	55975.	14290.00	468.60	487.20		487.89	0.001798	7.46	2521.09	248.83	0.33	1.62
1	55975.	24390.00	468.60	491.82		492.99	0.002252	9.91	4681.59	1166.54	0.39	2.62
1	55975.	28140.00	468.60	494.27		494.88	0.001278	8.05	8534.15	1863.93	0.30	1.66
1	55975.	41440.00	468.60	498.48		498.71	0.000558	5.96	17142.13	2164.92	0.20	0.86
1	56541.	14290.00	469.10	488.30		488.96	0.001971	7.14	2522.05	238.97	0.32	1.79
1	56541.	24390.00	469.10	493.27		494.26	0.002195	9.07	4569.29	786.47	0.35	2.63
1	56541.	28140.00	469.10	494.95		495.83	0.001898	8.89	6080.94	1053.26	0.33	2.46
1	56541.	41440.00	469.10	498.70		499.26	0.001274	8.08	10878.29	1347.17	0.28	1.93
1	57177.	14290.00	469.60	489.59	482.71	490.21	0.002075	7.02	2551.15	334.99	0.31	2.01
1	57177.	24390.00	469.60	494.75	486.42	495.65	0.002247	8.78	4227.63	725.39	0.33	2.87
1	57177.	28140.00	469.60	487.21	487.24	497.06	0.002054	8.76	5041.71	817.53	0.32	2.80
1	57177.	41440.00	469.60	499.54	489.75	500.11	0.001494	8.18	9743.55	1374.01	0.28	2.33
1	57811.	14290.00	469.49	490.73		491.29	0.001424	6.79	2942.65	272.76	0.28	1.53
1	57811.	24390.00	469.49	496.05		496.79	0.001439	8.10	4604.46	401.43	0.29	2.00
1	57811.	28140.00	469.49	497.33		498.22	0.001628	8.93	5291.26	626.74	0.32	2.38
1	57811.	41440.00	469.49	500.23		501.31	0.001902	10.38	7363.72	779.11	0.35	3.11
1	58125.	14290.00	471.50	491.23		491.98	0.003021	7.37	2322.95	247.47	0.36	2.37
1	58125.	24390.00	471.50	496.47		497.47	0.002668	8.66	3859.25	462.74	0.36	2.93
1	58125.	28140.00	471.50	497.87		498.89	0.002590	8.96	4627.12	608.72	0.36	3.06
1	58125.	41440.00	471.50	500.89		502.03	0.002662	9.99	6739.49	845.49	0.37	3.63
1	58461.	14290.00	472.60	492.07		492.95	0.002548	7.87	2192.39	248.21	0.36	2.20
1	58461.	24390.00	472.60	497.35		498.24	0.001959	8.48	4577.23	593.98	0.34	2.31
1	58461.	28140.00	472.60	498.75		499.65	0.001888	8.71	5453.22	662.92	0.33	2.38
1	58461.	41440.00	472.60	501.80		502.81	0.002005	9.82	7734.35	869.84	0.35	2.89
1	58698.	14290.00	471.52	492.75		493.60	0.002957	7.40	1932.19	161.55	0.38	2.09
1	58698.	24390.00	471.52	497.87		498.72	0.002078	7.83	4036.35	540.16	0.33	2.08
1	58698.	28140.00	471.52	499.27		500.10	0.001912	7.92	4824.97	590.96	0.32	2.07
1	58698.	41440.00	471.52	502.31		503.28	0.001996	8.95	6884.24	767.90	0.34	2.52
1	58849.	14260.00	471.20	492.90		494.19	0.003114	9.12	1603.80	204.64	0.42	2.51
1	58849.	24460.00	471.20	497.90		499.21	0.002629	9.88	3505.56	527.55	0.41	2.71
1	58849.	28140.00	471.20	499.31		500.53	0.002351	9.81	4274.09	556.72	0.39	2.61
1	58849.	41300.00	471.20	502.38		503.73	0.002399	10.91	6197.27	691.16	0.40	3.07
1	58903.	14260.00	471.69	493.06		494.43	0.004491	9.46	1623.99	235.43	0.50	2.90
1	58903.	24460.00	471.69	498.32		499.42	0.002587	9.15	3617.53	518.37	0.40	2.40
1	58903.	28140.00	471.69	499.70		500.72	0.002279	9.07	4350.84	554.70	0.38	2.30
1	58903.	41300.00	471.69	502.81		503.92	0.002198	9.94	6309.49	688.64	0.39	2.62
1	58921. GOLF COURSE BR D	14260.00	471.69	493.15	486.70	494.49	0.004538	9.37	1644.00	240.32	0.35	2.87
1	58921. GOLF COURSE BR D	24460.00	471.69	498.84	492.76	499.57	0.005380	7.59	3846.23	506.26	0.23	2.18
1	58921. GOLF COURSE BR D	28140.00	471.69	499.70	494.18	500.72		6.53	4949.53	554.50	0.23	
1	58921. GOLF COURSE BR D	41300.00	471.69	502.81	497.99	503.92		6.80	7128.40	688.64	0.21	
1	58921. GOLF COURSE BR U	14260.00	473.15	493.17	486.49	494.55	0.004031	9.44	1548.01	191.07	0.48	2.82
1	58921. GOLF COURSE BR U	24460.00	473.15	498.97	491.23	499.64	0.005313	7.33	3958.87	508.22	0.23	2.06
1	58921. GOLF COURSE BR U	28140.00	473.15	499.88	493.16	500.83		6.40	4982.00	553.55	0.22	
1	58921. GOLF COURSE BR U	41300.00	473.15	503.01	498.06	504.06		6.63	7163.37	703.54	0.21	
1	58938.	14260.00	473.15	493.25	486.47	494.61	0.003971	9.38	1562.87	197.04	0.48	2.78
1	58938.	24460.00	473.15	498.89	491.12	499.81	0.002205	8.48	3958.65	530.37	0.37	2.06
1	58938.	28140.00	473.15	499.88	493.27	500.83	0.002176	8.77	4494.74	553.55	0.37	2.16
1	58938.	41300.00	473.15	503.01	497.62	504.06	0.002096	9.63	6467.73	703.54	0.38	2.46
1	59031.	14260.00	472.29	493.72		494.95	0.002679	8.93	1708.68	245.08	0.40	2.34
1	59031.	24460.00	472.29	499.00		500.09	0.001939	9.24	3821.68	514.11	0.36	2.27
1	59031.	28140.00	472.29	499.97		501.12	0.001992	9.66	4338.87	546.62	0.37	2.45
1	59031.	41300.00	472.29	503.13		504.31	0.001950	10.47	6218.14	635.05	0.37	2.74
1	59366. D	14260.00	474.40	495.13		495.51	0.000880	6.15	3742.23	466.48	0.24	1.01
1	59366. D	24460.00	474.40	500.17		500.53	0.000705	6.41	6240.53	532.71	0.23	1.02
1	59366. D	28140.00	474.40	501.19		501.58	0.000750	6.79	6788.97	546.21	0.24	1.13
1	59366. D	41300.00	474.40	504.29		504.81	0.000922	8.12	8591.19	631.56	0.27	1.55
1	59463.	14260.00	472.60	495.13		495.64	0.000974	6.29	3087.89	443.04	0.28	0.92
1	59463.	24460.00	472.60	500.16		500.63	0.000722	6.52	5488.47	509.56	0.25	0.90
1	59463.	28140.00	472.60	501.17		501.69	0.000782	7.00	6017.72	553.16	0.26	1.02
1	59463.	41300.00	472.60	504.28		504.94	0.000879	8.12	7806.04	606.76	0.29	1.31
1	59554.	14260.00	472.32	495.07		495.82	0.001490	6.99	2172.22	293.60	0.33	1.19
1	59554.	24460.00	472.32	500.08		500.77	0.001066	7.28	4467.59	521.88	0.30	1.17
1	59554.	28140.00	472.32	501.11		501.83	0.001076	7.57	5010.17	534.37	0.30	1.24
1	59554.	41300.00	472.32	504.24		505.08	0.001109	8.48	6845.80	616.99	0.31	1.48
1	59619.	14260.00	471.62	495.42		495.91	0.000805	6.12	3025.53	425.80	0.26	0.84
1	59619.	24460.00	471.62	500.37		500.85	0.000670	6.58	5483.62	545.25	0.24	0.89
1	59619.	28140.00	471.62	501.41		501.91	0.000688	6.86	6052.35	553.91	0.25	0.96
1	59619.	41300.00	471.62	504.51		505.16	0.000809	8.08	7845.46	657.07	0.27	1.27
1	59690.	14260.00										

HEC-RAS Plan: WC-Edit-Prop River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	60305.	14260.00	472.40	496.40		496.78	0.000597	4.96	3148.91	483.19	0.22	0.57
1	60305.	24460.00	472.40	501.00		501.41	0.000543	5.59	6058.87	715.29	0.22	0.66
1	60305.	28140.00	472.40	502.02		502.46	0.000562	5.87	6809.79	755.31	0.22	0.72
1	60305.	41300.00	472.40	505.21		505.71	0.000589	6.59	9390.50	852.24	0.23	0.87
1	60457.	14260.00	472.40	496.41		496.93	0.000883	5.89	2675.07	401.30	0.26	0.81
1	60457.	24460.00	472.40	500.98		501.56	0.000791	6.62	4823.57	553.60	0.26	0.94
1	60457.	28140.00	472.40	501.99		502.62	0.000818	6.96	5411.66	621.83	0.27	1.02
1	60457.	41300.00	472.40	505.18		505.87	0.000835	7.73	7697.93	790.13	0.28	1.20
1	60498.	14260.00	472.60	496.41		497.01	0.001170	6.35	2582.75	439.98	0.30	0.97
1	60498.	24460.00	472.60	501.04		501.60	0.000887	6.67	4985.27	642.65	0.27	0.98
1	60498.	28140.00	472.60	502.08		502.66	0.000882	6.90	5675.95	677.25	0.27	1.03
1	60498.	41300.00	472.60	505.29		505.92	0.000874	7.59	8045.48	821.79	0.28	1.18
1	60514. GOLF COURSE BR D	14260.00	472.60	496.43	486.60	497.02	0.001338	6.33	2585.45	437.84	0.22	1.00
1	60514. GOLF COURSE BR D	24460.00	472.60	501.23	490.68	501.65	0.001673	5.85	5075.85	641.74	0.17	0.94
1	60514. GOLF COURSE BR D	28140.00	472.60	502.35	491.88	502.73	0.002072	5.40	5799.49	660.22	0.16	0.88
1	60514. GOLF COURSE BR D	41300.00	472.60	505.29	497.83	505.92		5.08	8641.69	821.79	0.16	
1	60514. GOLF COURSE BR U	14260.00	472.60	496.33	486.90	497.14	0.001584	7.29	2149.04	365.68	0.34	1.29
1	60514. GOLF COURSE BR U	24460.00	472.60	501.17	491.22	501.74	0.002183	6.76	4394.22	553.06	0.20	1.25
1	60514. GOLF COURSE BR U	28140.00	472.60	502.31	492.49	502.82	0.002806	6.22	5050.87	615.12	0.19	1.17
1	60514. GOLF COURSE BR U	41300.00	472.60	505.31	499.09	506.08		5.63	7859.27	797.18	0.18	
1	60531.	14260.00	472.60	496.36	486.88	497.17	0.001574	7.27	2158.70	369.59	0.34	1.28
1	60531.	24460.00	472.60	501.12	491.21	501.84	0.001164	7.49	4392.23	558.04	0.31	1.25
1	60531.	28140.00	472.60	502.23	492.48	502.95	0.001139	7.70	5046.63	638.29	0.31	1.29
1	60531.	41300.00	472.60	505.31	498.67	506.08	0.001108	8.37	7288.01	797.18	0.31	1.45
1	60571.	14260.00	472.50	496.25		497.42	0.002122	9.13	2002.24	425.71	0.40	1.95
1	60571.	24460.00	472.50	501.24		501.90	0.001130	8.00	5049.70	697.39	0.31	1.36
1	60571.	28140.00	472.50	502.42		503.03	0.001033	7.93	5887.95	726.10	0.30	1.32
1	60571.	41300.00	472.50	505.59		506.18	0.000930	8.23	8314.50	803.76	0.29	1.36
1	60660.	14260.00	472.60	497.01		497.62	0.001142	7.14	3046.90	590.13	0.30	1.15
1	60660.	24460.00	472.60	501.61		502.01	0.000705	6.57	6242.02	746.00	0.25	0.90
1	60660.	28140.00	472.60	502.74		503.13	0.000665	6.60	7097.30	763.48	0.24	0.90
1	60660.	41300.00	472.60	505.85		506.26	0.000634	7.01	9524.60	798.68	0.24	0.97
1	60854.	14260.00	472.80	497.00		497.99	0.001579	8.64	2426.28	524.69	0.36	1.67
1	60854.	24460.00	472.80	501.60		502.23	0.000999	7.98	5111.35	621.77	0.29	1.32
1	60854.	28140.00	472.80	502.73		503.34	0.000954	8.05	5824.02	640.10	0.29	1.32
1	60854.	41300.00	472.80	505.83		506.47	0.000934	8.64	7895.94	695.31	0.29	1.46
1	60953.	14260.00	472.90	497.17		498.16	0.001840	8.35	2198.69	443.71	0.37	1.64
1	60953.	24460.00	472.90	501.64		502.37	0.001261	8.16	4741.78	680.00	0.32	1.45
1	60953.	28140.00	472.90	502.78		503.47	0.001157	8.11	5534.27	700.85	0.31	1.40
1	60953.	41300.00	472.90	505.92		506.58	0.001037	8.41	7867.71	774.53	0.30	1.44
1	61052.	14260.00	473.00	497.35		498.36	0.002206	8.59	2150.88	419.40	0.40	1.80
1	61052.	24460.00	473.00	501.73		502.53	0.001523	8.54	4540.80	701.63	0.35	1.62
1	61052.	28140.00	473.00	502.87		503.60	0.001365	8.42	5356.32	727.62	0.33	1.54
1	61052.	41300.00	473.00	506.01		506.68	0.001147	8.52	7767.21	800.70	0.31	1.51
1	61112.	14260.00	473.30	497.96		498.57	0.001044	6.63	2787.67	508.63	0.27	1.01
1	61112.	24460.00	473.30	502.13		502.67	0.000893	7.03	5703.29	874.42	0.26	1.06
1	61112.	28140.00	473.30	503.23		503.73	0.000832	7.00	6684.89	912.91	0.25	1.04
1	61112.	41300.00	473.30	506.35		506.80	0.000722	7.08	9659.65	985.46	0.24	1.02
1	61113. GOLF COURSE BR D	14260.00	473.30	498.03	485.54	498.59	0.001537	6.43	2813.09	500.70	0.21	1.06
1	61113. GOLF COURSE BR D	24460.00	473.30	502.47	490.36	502.76	0.001782	5.11	5946.52	884.86	0.14	0.78
1	61113. GOLF COURSE BR D	28140.00	473.30	503.54	491.85	503.81	0.001546	4.91	6914.47	923.05	0.14	0.71
1	61113. GOLF COURSE BR D	41300.00	473.30	506.58	499.70	506.86	0.001163	4.62	9837.44	991.00	0.13	0.60
1	61113. GOLF COURSE BR U	14260.00	473.30	498.03	485.54	498.63	0.001603	6.56	2636.37	405.74	0.22	1.11
1	61113. GOLF COURSE BR U	24460.00	473.30	502.44	490.36	502.83	0.002352	5.86	5223.44	831.05	0.16	1.03
1	61113. GOLF COURSE BR U	28140.00	473.30	503.51	491.85	503.87	0.002034	5.63	6144.67	881.53	0.15	0.93
1	61113. GOLF COURSE BR U	41300.00	473.30	506.57	499.70	506.90	0.001491	5.23	8971.43	952.02	0.14	0.77
1	61139.	14260.00	473.30	498.02	485.50	498.66	0.001059	6.69	2646.74	419.57	0.28	1.03
1	61139.	24460.00	473.30	502.33	490.33	502.96	0.000973	7.38	5191.53	816.78	0.27	1.17
1	61139.	28140.00	473.30	503.40	491.83	504.01	0.000946	7.50	6098.99	875.20	0.27	1.19
1	61139.	41300.00	473.30	506.47	499.17	507.02	0.000840	7.67	8933.99	950.71	0.26	1.19
1	61183.	14260.00	473.42	498.23		498.74	0.000904	6.01	2982.58	466.64	0.26	0.84
1	61183.	24460.00	473.42	502.56		503.05	0.000759	6.45	5727.05	779.95	0.25	0.89
1	61183.	28140.00	473.42	503.60		504.09	0.000755	6.65	6568.00	856.18	0.25	0.93
1	61183.	41300.00	473.42	506.58		507.07	0.000724	7.10	9246.49	931.65	0.25	1.02
1	61262.	14260.00	473.62	498.17		498.90	0.001646	7.24	2529.54	483.80	0.35	1.29
1	61262.	24460.00	473.62	502.61		503.12	0.001026	6.90	5431.50	833.06	0.29	1.07
1	61262.	28140.00	473.62	503.64		504.16	0.001007	7.09	6316.00	880.00	0.29	1.11
1	61262.	41300.00	473.62	506.65		507.13	0.000855	7.20	9042.34	932.60	0.27	1.09
1	61326.	14260.00	473.82	498.37		498.99	0.001186	6.60	2621.10	472.47	0.30	1.04
1	61326.	24460.00	473.82	502.66		503.18	0.000871	6.70	5602.21	841.84	0.27	0.98
1	61326.	28140.00	473.82	503.72		504.22	0.000820	6.73	6516.10	874.65	0.26	0.97
1	61326.	41300.00	473.82	506.70		507.18	0.000745	7.03	9188.45	923.39	0.26	1.01
1	61379.	14260.00	473.82	498.65		499.07	0.000796	5.35	3130.71	501.88	0.25	0.68
1	61379.	24460.00	473.82	502.83		503.24	0.000653	5.74	5963.07	782.07	0.23	0.72
1	61379.	28140.00	473.82	503.84		504.27	0.000678	6.05	6782.79	846.34	0.24	0.79
1	61379.	41300.00	473.82	506.75		507.22	0.000683	6.66	9348.22	951.33	0.25	0.91
1	61425.	14260.00	474.32	498.75		499.11	0.000668	5.00	3474.34	525.66	0.23	0.59
1	61425.	24460.00	474.32	502.89		503.27	0.000596	5.55	6256.07	791.30	0.22	0.67
1	61425.	28140.00	474.32	503.93		504.31	0.000589	5.72	7086.28	812.76	0.22	0.70
1	61425.	41300.00	474.32	506.83		507.26	0.000603	6.32	9516.36	861.73	0.23	0.82
1	61472.	14260.00	475.02	498.59		499.24	0.001180	6.53	2430.70			

HEC-RAS Plan: WC-Edit-Prop River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	61639.	28140.00	476.80	503.76		504.72	0.001705	9.11	4957.37	741.69	0.37	1.84
1	61639.	41300.00	476.80	506.70		507.62	0.001522	9.50	7270.66	819.88	0.36	1.90
1	61739.	14260.00	477.83	498.59		499.94	0.002689	9.56	1927.27	522.08	0.44	2.22
1	61739.	24460.00	477.83	503.07		503.89	0.001565	8.73	4822.53	733.16	0.35	1.69
1	61739.	28140.00	477.83	504.13		504.90	0.001458	8.73	5615.75	759.11	0.34	1.66
1	61739.	41300.00	477.83	507.01		507.78	0.001369	9.26	7900.45	839.08	0.34	1.78
1	61836.	14260.00	477.59	499.00		500.21	0.002610	8.94	1850.74	513.86	0.43	1.99
1	61836.	24460.00	477.59	503.25		504.04	0.001558	8.32	4631.76	706.90	0.35	1.57
1	61836.	28140.00	477.59	504.28		505.04	0.001468	8.39	5387.72	744.69	0.34	1.56
1	61836.	41300.00	477.59	507.15		507.91	0.001352	8.86	7656.99	831.36	0.34	1.66
1	61940.	14260.00	477.86	499.62		500.48	0.002059	7.69	2261.54	471.00	0.39	1.49
1	61940.	24460.00	477.86	503.43		504.19	0.001535	7.95	4493.25	654.06	0.35	1.46
1	61940.	28140.00	477.86	504.42		505.19	0.001482	8.13	5164.96	696.40	0.35	1.50
1	61940.	41300.00	477.86	507.26		508.06	0.001390	8.72	7230.43	762.98	0.34	1.64
1	62100.	14260.00	477.98	500.08		500.74	0.001176	7.59	2893.21	490.23	0.31	1.27
1	62100.	24460.00	477.98	503.77		504.41	0.001089	8.24	5156.06	682.91	0.31	1.41
1	62100.	28140.00	477.98	504.77		505.40	0.001059	8.37	5853.03	707.42	0.31	1.44
1	62100.	41300.00	477.98	507.56		508.26	0.001103	9.21	8041.12	882.00	0.32	1.68
1	62207.	14260.00	477.66	499.73		501.46	0.002941	10.75	1431.82	114.80	0.46	2.70
1	62207.	24460.00	477.66	502.82	498.13	505.77	0.004270	14.50	2255.92	486.08	0.57	4.64
1	62207.	28140.00	477.66	503.77	499.45	506.80	0.004340	15.07	2753.68	563.38	0.58	4.94
1	62207.	41300.00	477.66	506.88	506.66	509.34	0.003624	15.12	5133.66	931.23	0.54	4.75
1	62220. GOLF COURSE MAINBR D	14260.00	477.66	499.77	493.65	501.54	0.007808	10.91	1388.56	111.91	0.47	3.52
1	62220. GOLF COURSE MAINBR D	24460.00	477.66	503.82	498.69	505.77		11.92	3365.56	370.99	0.43	
1	62220. GOLF COURSE MAINBR D	28140.00	477.66	504.56	500.21	506.80		11.73	4275.07	448.16	0.43	
1	62220. GOLF COURSE MAINBR D	41300.00	477.66	506.89	506.53	509.34		10.55	6845.36	932.87	0.34	
1	62220. GOLF COURSE MAINBR U	14260.00	477.66	500.07	493.75	501.66	0.006676	10.49	1496.20	156.44	0.44	3.19
1	62220. GOLF COURSE MAINBR U	24460.00	477.66	504.41	498.64	505.79		11.80	3538.06	486.83	0.37	
1	62220. GOLF COURSE MAINBR U	28140.00	477.66	505.63	501.76	506.82		11.63	4396.37	791.72	0.31	
1	62220. GOLF COURSE MAINBR U	41300.00	477.66	508.33	506.26	509.41		10.50	6793.10	940.13	0.24	
1	62239.	14260.00	477.66	500.29	493.38	501.74	0.002423	10.05	1768.14	375.50	0.42	2.32
1	62239.	24460.00	477.66	504.41	498.09	505.80	0.002177	10.96	3898.04	718.65	0.41	2.58
1	62239.	28140.00	477.66	505.63	501.83	506.83	0.001913	10.66	4830.32	791.72	0.39	2.39
1	62239.	41300.00	477.66	508.33	505.33	509.41	0.001766	11.03	7163.46	940.13	0.38	2.47
1	62323.	14260.00	480.04	501.78		502.17	0.000793	5.51	3778.88	717.45	0.25	0.71
1	62323.	24460.00	480.04	505.86		506.19	0.000595	5.59	7010.92	863.97	0.22	0.68
1	62323.	28140.00	480.04	506.82		507.16	0.000600	5.80	7857.12	906.83	0.23	0.72
1	62323.	41300.00	480.04	509.28		509.69	0.000676	6.65	10212.60	1015.94	0.25	0.91
1	62380. E	14260.00	480.09	501.97		502.22	0.000480	4.70	4764.85	735.45	0.20	0.50
1	62380. E	24460.00	480.09	505.98		506.23	0.000421	5.06	8110.87	913.70	0.19	0.54
1	62380. E	28140.00	480.09	506.94		507.20	0.000429	5.26	8999.86	941.40	0.20	0.57
1	62380. E	41300.00	480.09	509.41		509.74	0.000506	6.13	11427.90	1026.02	0.22	0.75
1	62745.	14260.00	480.79	502.26		502.37	0.000317	3.59	6664.97	1009.21	0.16	0.30
1	62745.	24460.00	480.79	506.25		506.35	0.000233	3.57	10859.35	1096.16	0.14	0.27
1	62745.	28140.00	480.79	507.22		507.33	0.000235	3.71	11932.97	1122.48	0.14	0.29
1	62745.	41300.00	480.79	509.74		509.89	0.000280	4.37	14875.89	1231.03	0.16	0.39
1	63103.	9950.00	481.81	502.37	499.14	502.55	0.000797	4.50	3964.04	944.73	0.23	0.53
1	63103.	16970.00	481.81	506.35	500.83	506.45	0.000376	3.74	7549.78	1237.53	0.17	0.33
1	63103.	20220.00	481.81	507.31	501.23	507.43	0.000382	3.92	8460.26	1260.25	0.17	0.36
1	63103.	30310.00	481.81	509.85	502.22	510.00	0.000408	4.45	10939.61	1333.29	0.18	0.44
1	63368.	9950.00	481.46	502.55	494.34	502.77	0.000846	4.91	3684.68	822.36	0.21	0.72
1	63368.	16970.00	481.46	506.43	500.87	506.57	0.000474	4.22	6876.01	1035.47	0.16	0.49
1	63368.	20220.00	481.46	507.40	501.41	507.55	0.000488	4.41	7724.02	1087.27	0.17	0.53
1	63368.	30310.00	481.46	509.95	502.60	510.12	0.000514	4.87	10058.81	1216.07	0.17	0.62
1	63593.	9950.00	483.05	502.50	498.53	503.18	0.001942	7.85	2115.43	527.07	0.37	1.52
1	63593.	16970.00	483.05	506.42	502.60	506.77	0.000952	6.50	4579.78	792.66	0.27	0.96
1	63593.	20220.00	483.05	507.40	503.10	507.75	0.000930	6.66	5302.06	833.51	0.27	0.99
1	63593.	30310.00	483.05	509.95	504.68	510.33	0.000881	7.06	7369.83	982.18	0.27	1.06
1	64080.	9950.00	482.68	503.47		503.95	0.001277	6.35	2585.26	638.76	0.30	1.00
1	64080.	16970.00	482.68	506.88		507.21	0.000844	5.99	4985.97	747.88	0.25	0.82
1	64080.	20220.00	482.68	507.84		508.18	0.000839	6.19	5715.88	766.32	0.26	0.86
1	64080.	30310.00	482.68	510.37		510.75	0.000841	6.76	7719.66	818.88	0.26	0.98
1	64705.	9950.00	484.90	504.39		504.60	0.000823	4.81	3134.11	512.76	0.23	0.59
1	64705.	16970.00	484.90	507.46		507.70	0.000723	5.17	4871.80	649.56	0.22	0.63
1	64705.	20200.00	484.90	508.41		508.67	0.000740	5.43	5501.98	674.97	0.23	0.69
1	64705.	30280.00	484.90	510.92		511.24	0.000776	6.08	7285.41	757.17	0.24	0.82
1	65384. F	9950.00	486.40	504.88		505.55	0.001880	7.40	1880.57	375.30	0.37	1.38
1	65384. F	16970.00	486.40	507.88		508.52	0.001601	7.88	3294.11	593.16	0.35	1.46
1	65384. F	20200.00	486.40	508.84		509.51	0.001634	8.28	3894.17	647.85	0.36	1.58
1	65384. F	30280.00	486.40	511.38		512.08	0.001577	8.95	5665.32	748.70	0.36	1.76
1	65620.	9950.00	487.08	505.57		506.05	0.002074	7.18	2458.67	569.96	0.37	1.35
1	65620.	16970.00	487.08	508.53		508.93	0.001500	7.09	4268.51	648.94	0.33	1.22
1	65620.	20200.00	487.08	509.52		509.92	0.001451	7.28	4918.80	678.04	0.32	1.26
1	65620.	30280.00	487.08	512.03		512.48	0.001411	7.92	6794.44	817.39	0.33	1.42
1	65692.	9950.00	488.88	505.84	497.93	506.16	0.000774	5.14	2868.70	477.30	0.24	0.64
1	65692.	16970.00	488.88	508.61	501.70	509.02	0.000877	6.17	4305.52	569.77	0.27	0.87
1	65692.	20200.00	488.88	509.56	502.34	510.03	0.000951	6.67	4880.30	646.86	0.28	1.00
1	65692.	30280.00	488.88	512.04	505.76	512.60	0.001053	7.67	6592.45	736.17	0.30	1.26
1	65721.	9950.00	488.62	505.74	501.75	506.32	0.002307	6.98	2276.72	434.72	0.36	1.56
1	65721.	16970.00	488.62	508.51	504.81	509.19	0.002324	8.06	3606.71	525.49	0.37	1.94
1	65721.	20200.00	488.62	509.46	505.49	510.21	0.002421	8.58	412			

HEC-RAS Plan: WC-Edit-Prop River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	65874.	20200.00	492.19	509.85	506.08	510.56	0.003052	9.58	4287.08	618.05	0.43	2.69
1	65874.	30280.00	492.19	512.38	507.65	513.12	0.002850	10.25	5922.40	674.81	0.43	2.92
1	66091.	9950.00	492.24	507.11	502.91	507.40	0.001971	5.55	3018.15	566.15	0.30	1.23
1	66091.	16970.00	492.24	509.66	504.80	510.02	0.001937	6.38	4562.05	638.80	0.31	1.50
1	66091.	20200.00	492.24	510.72	504.80	511.09	0.001866	6.60	5252.72	665.61	0.31	1.57
1	66091.	30280.00	492.24	513.19	507.21	513.64	0.001935	7.50	6977.35	736.05	0.33	1.91
1	66350. CONFLUENCE OF TR	9950.00	491.44	507.50		507.85	0.001456	5.74	3241.80	713.84	0.29	1.03
1	66350. CONFLUENCE OF TR	16970.00	491.44	510.07		510.44	0.001388	6.37	5164.61	785.41	0.29	1.20
1	66350. CONFLUENCE OF TR	20200.00	491.44	511.13		511.50	0.001360	6.61	6020.99	838.93	0.29	1.26
1	66350. CONFLUENCE OF TR	30280.00	491.44	513.65		514.05	0.001341	7.24	8228.83	903.83	0.30	1.44
1	66867.	9850.00	491.75	508.35		508.82	0.002311	6.69	2757.87	638.00	0.35	1.46
1	66867.	16740.00	491.75	510.87		511.32	0.002026	7.17	4396.81	670.54	0.34	1.57
1	66867.	19920.00	491.75	511.90		512.35	0.001937	7.36	5104.55	702.59	0.34	1.61
1	66867.	29800.00	491.75	514.39		514.89	0.001869	8.02	6892.23	731.85	0.34	1.82
1	67141.	9850.00	492.00	509.01		509.15	0.000669	3.72	4621.20	824.76	0.20	0.44
1	67141.	16740.00	492.00	511.46		511.63	0.000708	4.36	6683.99	853.28	0.21	0.57
1	67141.	19920.00	492.00	512.47		512.66	0.000709	4.58	7553.74	865.70	0.21	0.62
1	67141.	29800.00	492.00	514.97		515.20	0.000765	5.29	9782.48	909.59	0.23	0.78
1	67952.	9850.00	492.09	509.60		509.72	0.000845	3.68	4922.74	963.96	0.20	0.53
1	67952.	16740.00	492.09	512.06		512.19	0.000779	4.05	7340.50	1002.09	0.20	0.61
1	67952.	19920.00	492.09	513.07		513.21	0.000764	4.22	8370.29	1035.94	0.20	0.64
1	67952.	29800.00	492.09	515.61		515.77	0.000748	4.65	11030.48	1068.88	0.20	0.74
1	68576.	9830.00	493.14	510.09		510.20	0.000815	3.85	6164.68	1507.82	0.19	0.57
1	68576.	16700.00	493.14	512.51		512.60	0.000650	3.88	9969.30	1637.23	0.18	0.54
1	68576.	19860.00	493.14	513.51		513.60	0.000600	3.90	11636.53	1685.33	0.17	0.54
1	68576.	29680.00	493.14	516.04		516.13	0.000525	4.03	15957.31	1730.53	0.17	0.55
1	69053.	9830.00	492.98	510.56		510.67	0.001310	4.28	5680.25	1489.09	0.23	0.75
1	69053.	16700.00	492.98	512.87		512.96	0.000947	4.14	9194.87	1574.05	0.20	0.66
1	69053.	19860.00	492.98	513.84		513.92	0.000844	4.10	10738.97	1606.67	0.19	0.63
1	69053.	29680.00	492.98	516.32		516.41	0.000717	4.21	14805.02	1680.89	0.18	0.63
1	69831.	9830.00	495.03	511.74		511.87	0.001910	4.75	5104.40	1530.34	0.26	1.09
1	69831.	16700.00	495.03	513.72		513.83	0.001399	4.56	8254.33	1641.64	0.23	0.96
1	69831.	19860.00	495.03	514.60		514.70	0.001236	4.49	9704.20	1675.17	0.22	0.90
1	69831.	29680.00	495.03	516.94		517.04	0.000979	4.45	13699.84	1751.65	0.20	0.84
1	70243. G	9830.00	495.91	512.40		512.57	0.001534	4.60	4882.20	1375.52	0.24	0.99
1	70243. G	16700.00	495.91	514.25		514.41	0.001423	4.90	7499.06	1452.22	0.24	1.07
1	70243. G	19860.00	495.91	515.07		515.22	0.001319	4.91	8694.49	1472.67	0.23	1.05
1	70243. G	29680.00	495.91	517.33		517.48	0.001153	5.08	12198.74	1610.12	0.22	1.07
1	70815.	9830.00	495.38	513.43		513.70	0.002551	6.12	3921.12	1105.15	0.29	1.73
1	70815.	16700.00	495.38	515.22		515.47	0.002411	6.47	5928.71	1154.08	0.29	1.85
1	70815.	19860.00	495.38	515.99		516.25	0.002454	6.75	6870.86	1267.31	0.30	1.98
1	70815.	29680.00	495.38	518.13		518.36	0.002100	6.79	9690.36	1370.48	0.28	1.92
1	71071.	9830.00	497.14	514.07		514.24	0.001653	4.48	4586.11	1233.31	0.25	0.97
1	71071.	16700.00	497.14	515.81		515.99	0.001664	5.00	6822.06	1328.03	0.26	1.14
1	71071.	19860.00	497.14	516.58		516.76	0.001592	5.11	7861.68	1358.71	0.26	1.17
1	71071.	29680.00	497.14	518.63		518.82	0.001461	5.42	10721.75	1426.07	0.25	1.25
1	72110. CONFLUENCE OF TR	9830.00	498.70	516.19		516.51	0.003047	6.72	3637.26	1080.32	0.35	1.82
1	72110. CONFLUENCE OF TR	16700.00	498.70	517.91		518.21	0.002941	7.25	5570.62	1164.86	0.35	2.02
1	72110. CONFLUENCE OF TR	19860.00	498.70	518.60		518.90	0.002856	7.40	6389.55	1199.46	0.35	2.07
1	72110. CONFLUENCE OF TR	29680.00	498.70	520.50		520.81	0.002720	7.87	8814.23	1349.37	0.35	2.24
1	72818.	9830.00	499.83	517.84		518.05	0.001675	5.32	4502.66	1158.19	0.27	1.10
1	72818.	16700.00	499.83	519.56		519.79	0.001801	6.05	6571.15	1255.32	0.29	1.36
1	72818.	19860.00	499.83	520.23		520.47	0.001821	6.28	7417.96	1277.96	0.30	1.45
1	72818.	29680.00	499.83	522.09		522.34	0.001818	6.82	9816.27	1324.91	0.30	1.63
1	73209.	9870.00	499.38	518.52		518.74	0.001798	5.22	4261.15	1125.53	0.28	1.09
1	73209.	16620.00	499.38	520.28		520.51	0.001816	5.81	6296.25	1175.43	0.29	1.29
1	73209.	19700.00	499.38	520.95		521.19	0.001820	6.03	7092.91	1185.24	0.29	1.36
1	73209.	29330.00	499.38	522.81		523.08	0.001872	6.69	9346.05	1256.35	0.31	1.60
1	73575.	9870.00	500.19	519.16	516.71	519.79	0.003431	8.47	2906.02	1094.16	0.39	2.65
1	73575.	16620.00	500.19	520.97	519.39	521.55	0.003600	9.38	5242.43	1391.15	0.41	3.13
1	73575.	19700.00	500.19	521.65	519.38	522.15	0.003277	9.20	6197.38	1403.16	0.39	2.97
1	73575.	29330.00	500.19	523.52	521.32	523.92	0.002759	9.04	8893.49	1487.10	0.37	2.77
1	73596. GLADE ROAD BR D	9870.00	500.19	518.22	517.15	520.84	0.021805	14.11	903.55	349.58	0.54	9.05
1	73596. GLADE ROAD BR D	16620.00	500.19	521.59	521.59	522.56	0.024074	11.40	2970.69	1210.47	0.30	6.74
1	73596. GLADE ROAD BR D	19700.00	500.19	522.26	522.26	522.85	0.021909	9.02	3832.79	1400.65	0.23	4.63
1	73596. GLADE ROAD BR D	29330.00	500.19	523.52	522.40	524.02	0.016542	8.32	5644.00	1474.10	0.21	3.82
1	73596. GLADE ROAD BR U	9870.00	500.19	521.46	517.15	521.85	0.009443	7.14	2794.86	1121.47	0.19	2.64
1	73596. GLADE ROAD BR U	16620.00	500.19	522.86	521.59	523.13	0.009395	6.08	4505.58	1315.31	0.15	2.08
1	73596. GLADE ROAD BR U	19700.00	500.19	522.97	521.87	523.32	0.012131	6.94	4641.19	1320.35	0.18	2.70
1	73596. GLADE ROAD BR U	29330.00	500.19	523.98	522.39	524.40	0.012773	7.46	6004.00	1380.60	0.19	3.05
1	73618.	9870.00	500.19	521.88	518.17	521.96	0.000591	3.94	6847.98	1321.05	0.17	0.54
1	73618.	16620.00	500.19	523.05	519.63	523.19	0.000965	5.26	8444.75	1391.63	0.22	0.95
1	73618.	19700.00	500.19	523.22	519.63	523.40	0.001260	6.05	8669.67	1397.97	0.25	1.25
1	73618.	29330.00	500.19	524.22	520.78	524.49	0.001823	7.53	10099.38	1444.13	0.30	1.90
1	73781.	9870.00	501.85	521.99		522.06	0.000514	3.05	6536.81	1036.37	0.15	0.41
1	73781.	16620.00	501.85	523.23		523.35	0.000894	4.27	7863.75	1126.75	0.19	0.77
1	73781.	19700.00	501.85	523.44		523.60	0.001171	4.93	8102.81	1132.18	0.22	1.03
1	73781.	29330.00	501.85	524.53		524.78	0.001739	6.29	9353.31	1170.81	0.28	1.63
1	73996.	9870.00	503.70	522.09		522.19	0.000701	3.47	5776.55	935.10	0.17	0.53
1	73996.	16620.00	503.70	523.40		523.57	0.001166	4.77	7021.78	974.38	0.22	0.98
1	73996.	19700.00	503.70</									

HEC-RAS Plan: WC-Edit-Prop River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	75269.	9870.00	502.48	523.25		523.37	0.000671	3.91	5762.73	953.99	0.18	0.55
1	75269.	16620.00	502.48	525.17		525.34	0.000902	4.91	7665.42	1027.53	0.21	0.84
1	75269.	19700.00	502.48	525.80		525.99	0.001014	5.33	8315.16	1046.82	0.22	0.98
1	75269.	29330.00	502.48	527.73		527.99	0.001250	6.35	10395.45	1099.16	0.25	1.34
1	76025.	9870.00	504.12	523.72		523.82	0.000554	3.63	6668.74	1257.61	0.17	0.47
1	76025.	16620.00	504.12	525.79		525.92	0.000657	4.32	9371.49	1339.22	0.18	0.64
1	76025.	19700.00	504.12	526.49		526.63	0.000709	4.60	10312.90	1359.23	0.19	0.72
1	76025.	29330.00	504.12	528.58		528.74	0.000817	5.33	13269.39	1459.17	0.21	0.92
1	76885. H	9870.00	505.84	524.29		524.40	0.000861	4.00	6067.82	1335.64	0.20	0.61
1	76885. H	16620.00	505.84	526.43		526.55	0.000857	4.43	9059.56	1454.99	0.20	0.71
1	76885. H	19700.00	505.84	527.17		527.29	0.000889	4.66	10150.12	1489.67	0.21	0.77
1	76885. H	29330.00	505.84	529.33		529.47	0.000906	5.13	13515.73	1642.11	0.22	0.90
1	77780.	9870.00	507.47	525.16	522.87	525.28	0.001162	4.50	6111.44	1558.03	0.23	0.78
1	77780.	16620.00	507.47	527.26	523.73	527.36	0.001007	4.65	9386.89	1714.70	0.22	0.79
1	77780.	19700.00	507.47	528.02	523.99	528.13	0.001010	4.82	10625.09	1782.33	0.22	0.84
1	77780.	29330.00	507.47	530.16	524.86	530.27	0.000927	5.04	14907.57	1930.62	0.21	0.88
1	78876. I	9870.00	508.57	526.52		526.83	0.001669	5.28	3809.57	1049.62	0.28	1.09
1	78876. I	16620.00	508.57	528.51		528.84	0.001775	6.08	6056.39	1181.43	0.30	1.37
1	78876. I	19700.00	508.57	529.26		529.60	0.001754	6.27	6951.26	1188.21	0.30	1.43
1	78876. I	29330.00	508.57	531.32		531.67	0.001741	6.86	9433.64	1242.08	0.30	1.63
1	79644. CONFLUENCE OF TR	9870.00	512.81	527.94		528.13	0.001762	5.28	4465.77	1150.30	0.28	1.11
1	79644. CONFLUENCE OF TR	16620.00	512.81	529.93		530.11	0.001567	5.56	6890.68	1264.04	0.27	1.16
1	79644. CONFLUENCE OF TR	19670.00	512.81	530.66		530.84	0.001528	5.70	7821.89	1287.48	0.27	1.20
1	79644. CONFLUENCE OF TR	29320.00	512.81	532.68		532.87	0.001439	6.06	10481.61	1335.94	0.27	1.29
1	80429.	9870.00	511.50	529.09	522.77	529.27	0.001283	4.72	4192.07	814.11	0.24	0.86
1	80429.	16620.00	511.50	531.05	525.84	531.28	0.001474	5.61	5827.09	860.68	0.27	1.16
1	80429.	19670.00	511.50	531.77	525.84	532.03	0.001541	5.94	6453.97	896.26	0.28	1.27
1	80429.	29320.00	511.50	533.82	528.68	534.15	0.001845	7.09	8496.34	1052.22	0.31	1.74
1	80901.	9870.00	512.00	529.82	528.30	530.33	0.003591	7.39	2637.02	624.51	0.39	2.19
1	80901.	16610.00	512.00	531.86	529.56	532.42	0.003573	8.27	3963.30	767.90	0.41	2.58
1	80901.	19660.00	512.00	532.62	529.93	533.22	0.003718	8.76	4484.77	889.82	0.42	2.85
1	80901.	29280.00	512.00	534.82	531.21	535.43	0.003659	9.60	6863.56	1102.37	0.42	3.25
1	81320.	9870.00	511.72	530.96		531.23	0.001355	5.04	3388.48	644.38	0.26	0.97
1	81320.	16610.00	511.72	533.05		533.40	0.001598	6.09	4763.67	673.00	0.29	1.34
1	81320.	19660.00	511.72	533.86		534.25	0.001678	6.48	5326.14	717.70	0.29	1.48
1	81320.	29280.00	511.72	536.04		536.55	0.001970	7.68	7036.99	929.14	0.33	2.00
1	81788.	9870.00	511.87	531.64		532.06	0.002199	6.68	3048.78	676.33	0.32	1.66
1	81788.	16610.00	511.87	533.86		534.31	0.002308	7.56	4642.92	771.71	0.33	2.03
1	81788.	19660.00	511.87	534.71		535.18	0.002319	7.85	5321.25	814.20	0.34	2.15
1	81788.	29280.00	511.87	537.05		537.56	0.002420	8.75	7737.28	1164.88	0.35	2.55
1	82195. DALLAS/FORT WORT	9840.00	511.04	532.22	522.75	532.55	0.000725	4.86	3052.15	1097.94	0.22	0.68
1	82195. DALLAS/FORT WORT	16550.00	511.04	534.41	525.40	534.89	0.001016	6.28	4512.40	1366.20	0.26	1.08
1	82195. DALLAS/FORT WORT	19580.00	511.04	535.27	526.45	535.80	0.001103	6.76	5167.19	1539.99	0.28	1.23
1	82195. DALLAS/FORT WORT	29160.00	511.04	537.82	529.48	538.05	0.000610	5.39	12678.54	1812.83	0.21	0.76
1	82275. EULESS GRAPEVINEBR D	9840.00	511.04	532.23	522.65	532.67	0.001387	5.36	1877.46	177.60	0.20	1.03
1	82275. EULESS GRAPEVINEBR D	16550.00	511.04	534.38	525.49	535.18	0.004889	7.68	2936.42	406.95	0.26	2.17
1	82275. EULESS GRAPEVINEBR D	19580.00	511.04	535.27	526.60	535.94		5.98	3738.47	538.77	0.28	
1	82275. EULESS GRAPEVINEBR D	29160.00	511.04	537.82	529.89	538.05		4.30	6536.80	1306.13	0.23	
1	82275. EULESS GRAPEVINEBR U	9840.00	511.48	532.46	524.27	532.76	0.001536	4.65	2166.99	177.60	0.17	0.98
1	82275. EULESS GRAPEVINEBR U	16550.00	511.48	535.03	526.94	535.49	0.004425	6.22	3682.82	594.63	0.20	1.78
1	82275. EULESS GRAPEVINEBR U	19580.00	511.48	535.51	527.82	535.94		5.33	4123.84	633.00	0.22	
1	82275. EULESS GRAPEVINEBR U	29160.00	511.48	538.01	530.20	538.18		3.92	7453.28	1357.43	0.17	
1	82343.	9840.00	511.48	532.51	524.24	532.80	0.000933	4.73	3101.88	1327.62	0.22	0.80
1	82343.	16550.00	511.48	535.26	527.00	535.59	0.000982	5.45	5184.64	1534.60	0.23	1.00
1	82343.	19580.00	511.48	535.51	527.85	535.93	0.001261	6.24	5381.12	1556.89	0.27	1.31
1	82343.	29160.00	511.48	538.01	530.16	538.18	0.000629	4.82	13087.17	1738.41	0.19	0.75
1	82416. J	9840.00	512.30	532.40	529.43	533.18	0.004155	8.08	1831.71	770.34	0.42	2.59
1	82416. J	16550.00	512.30	535.13	532.08	536.01	0.004018	9.18	2954.11	1054.89	0.43	3.11
1	82416. J	19580.00	512.30	535.34	532.77	536.48	0.005170	10.51	3075.89	1085.20	0.49	4.06
1	82416. J	29160.00	512.30	538.01	535.05	538.33	0.001780	6.92	9182.78	1566.74	0.30	1.66
1	83019.	9840.00	514.08	533.86	524.68	534.10	0.000744	4.76	3970.84	782.57	0.21	0.66
1	83019.	16550.00	514.08	536.68	528.90	536.93	0.000750	5.34	6526.51	990.24	0.22	0.79
1	83019.	19580.00	514.08	537.28	531.12	537.57	0.000842	5.78	7128.46	1037.52	0.23	0.91
1	83019.	29160.00	514.08	538.79	533.63	539.19	0.001148	7.10	8722.63	1389.46	0.28	1.34
1	83480.	9840.00	515.11	534.21	528.58	534.68	0.001846	6.41	2333.05	601.04	0.32	1.30
1	83480.	16550.00	515.11	537.04	533.75	537.41	0.001298	6.17	4133.43	818.84	0.28	1.12
1	83480.	19580.00	515.11	537.69	534.23	538.10	0.001412	6.62	4634.29	1030.25	0.29	1.27
1	83480.	29160.00	515.11	539.33	535.50	539.84	0.001588	7.50	6499.27	1489.15	0.32	1.58
1	83695.	9830.00	515.35	534.66	527.12	535.02	0.001128	4.91	2148.07	527.09	0.26	0.77
1	83695.	16540.00	515.35	537.22	529.56	537.82	0.001467	6.42	2824.25	690.40	0.30	1.23
1	83695.	19550.00	515.35	537.85	530.48	538.60	0.001729	7.17	2991.04	725.92	0.33	1.51
1	83695.	29100.00	515.35	539.38	533.54	540.65	0.002619	9.44	3392.17	1086.30	0.42	2.53
1	83794. STATE HIGHWAY 36BR D	9830.00	515.35	534.77	527.17	535.15	0.001550	4.98	2085.30	238.63	0.20	0.85
1	83794. STATE HIGHWAY 36BR D	16540.00	515.35	537.37	529.69	537.99	0.002138	6.50	2705.87	238.63	0.24	1.37
1	83794. STATE HIGHWAY 36BR D	19550.00	515.35	537.85	530.62	538.60	0.002655	7.37	2820.50	238.63	0.27	1.75
1	83794. STATE HIGHWAY 36BR D	29100.00	515.35	538.78	533.73	540.65	0.010050	10.31	3041.27		0.36	4.04
1	83794. STATE HIGHWAY 36BR U	9830.00	514.15	534.91	525.94	535.22	0.000927	4.52	2291.66	238.63	0.17	0.55
1	83794. STATE HIGHWAY 36BR U	16540.00	514.15	537.54	528.39	538.09	0.001387	6.08	2920.89	238.63	0.22	0.95
1	83794. STATE HIGHWAY 36BR U	19550.00	514.15	538.78	529.39	539.91	0.003087	6.61	3216.15		0.23	1.3

HEC-RAS Plan: WC-Edit-Prop River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	84127.	16540.00	515.19	537.91	530.25	538.50	0.001130	6.35	2862.97	1007.75	0.30	0.96
1	84127.	19550.00	515.19	539.66	531.20	540.28	0.001032	6.55	3288.76	1128.34	0.29	0.99
1	84127.	29100.00	515.19	541.83	533.82	542.09	0.000548	5.20	9860.72	1281.14	0.22	0.60
1	84216. STATE HIGHWAY 36BR D	9830.00	515.19	535.20	527.90	535.59	0.001367	5.05	2063.51	218.71	0.20	0.72
1	84216. STATE HIGHWAY 36BR D	16540.00	515.19	537.99	530.46	538.64	0.001881	6.64	2673.22	218.68	0.24	1.17
1	84216. STATE HIGHWAY 36BR D	19550.00	515.19	539.73	531.36	540.42	0.001807	6.89	3052.45	218.66	0.24	1.23
1	84216. STATE HIGHWAY 36BR D	29100.00	515.19	542.93	534.02	543.29		8.37	4278.66	786.85	0.28	
1	84216. STATE HIGHWAY 36BR U	9830.00	516.61	535.25	528.99	535.67	0.001563	6.03	2264.51	218.71	0.21	1.14
1	84216. STATE HIGHWAY 36BR U	16540.00	516.61	538.06	531.51	538.76	0.002311	7.90	2878.91	218.68	0.25	1.88
1	84216. STATE HIGHWAY 36BR U	19550.00	516.61	539.79	532.32	540.53	0.002301	8.19	3257.79	218.66	0.25	1.98
1	84216. STATE HIGHWAY 36BR U	29100.00	516.61	543.17	534.53	543.29		10.07	4558.99	874.38	0.29	
1	84303.	9830.00	516.61	535.40	528.95	535.76	0.001021	5.65	2497.57	865.68	0.25	0.92
1	84303.	16540.00	516.61	538.31	531.38	538.89	0.001367	7.34	3205.50	1123.70	0.30	1.47
1	84303.	19550.00	516.61	540.05	532.15	540.66	0.001304	7.62	3629.16	1202.02	0.30	1.54
1	84303.	29100.00	516.61	543.17	534.21	543.30	0.000391	4.60	13920.97	1475.21	0.17	0.53
1	84840. K	9830.00	515.99	536.04		536.43	0.001525	5.96	3096.61	868.49	0.29	1.11
1	84840. K	16540.00	515.99	539.35		539.57	0.000874	5.27	6108.94	949.38	0.23	0.80
1	84840. K	19550.00	515.99	541.10		541.27	0.000627	4.78	7799.92	1003.30	0.20	0.64
1	84840. K	29100.00	515.99	543.41		543.63	0.000772	5.75	10392.81	1295.62	0.23	0.89
1	85214.	9810.00	516.41	536.54	529.98	537.04	0.001532	6.46	2625.11	640.85	0.30	1.25
1	85214.	16520.00	516.41	539.61	533.79	540.02	0.001215	6.57	4701.51	725.87	0.28	1.21
1	85214.	19530.00	516.41	541.28	536.25	541.61	0.000960	6.21	5953.75	848.22	0.25	1.05
1	85214.	29060.00	516.41	543.64	537.89	544.04	0.001080	7.13	8247.74	1012.26	0.27	1.33
1	85787.	9780.00	517.86	537.32	531.27	537.93	0.001456	7.30	2542.64	619.14	0.33	1.27
1	85787.	16460.00	517.86	540.24	536.05	540.77	0.001270	7.66	4631.14	841.44	0.32	1.32
1	85787.	19450.00	517.86	541.78	536.81	542.20	0.001001	7.18	5932.55	945.25	0.29	1.13
1	85787.	28930.00	517.86	544.22	539.36	544.64	0.001009	7.80	8569.19	1133.54	0.29	1.28
1	85857.	9780.00	516.57	537.48	532.47	538.06	0.001826	7.30	2353.47	523.03	0.34	1.34
1	85857.	16460.00	516.57	540.33	536.52	540.89	0.001693	7.95	4248.56	801.77	0.34	1.50
1	85857.	19450.00	516.57	541.85	537.22	542.30	0.001360	7.55	5527.98	945.53	0.31	1.31
1	85857.	28930.00	516.57	544.30	539.49	544.73	0.001264	7.91	8162.07	1156.04	0.31	1.38
1	85872. WALKBRIDGE BR D	9780.00	516.57	537.77	534.77	538.15	0.004782	6.03	2268.80	560.98	0.19	1.28
1	85872. WALKBRIDGE BR D	16460.00	516.57	540.73	537.01	541.01	0.003111	5.45	4329.51	844.97	0.15	0.99
1	85872. WALKBRIDGE BR D	19450.00	516.57	542.17	537.53	542.39	0.002307	4.97	5583.08	991.60	0.13	0.80
1	85872. WALKBRIDGE BR D	28930.00	516.57	544.60	538.99	544.81	0.002001	5.04	8264.15	1167.48	0.12	0.79
1	85872. WALKBRIDGE BR U	9780.00	516.91	537.94	531.36	538.22	0.003857	5.29	2608.62	609.55	0.16	1.17
1	85872. WALKBRIDGE BR U	16460.00	516.91	540.81	537.05	541.04	0.002614	4.88	4579.04	788.93	0.14	0.94
1	85872. WALKBRIDGE BR U	19450.00	516.91	542.22	537.51	542.42	0.001980	4.46	5714.49	877.07	0.13	0.77
1	85872. WALKBRIDGE BR U	28930.00	516.91	544.61	538.41	544.83	0.002066	4.92	8115.70	1112.97	0.12	0.90
1	85887.	9780.00	516.91	537.88	531.29	538.33	0.001503	6.62	2762.07	602.68	0.29	1.29
1	85887.	16460.00	516.91	540.74	536.53	541.15	0.001365	7.02	4716.44	785.45	0.28	1.38
1	85887.	19450.00	516.91	542.16	537.40	542.50	0.001136	6.72	5858.20	874.12	0.26	1.23
1	85887.	28930.00	516.91	544.54	539.07	544.93	0.001295	7.71	8224.39	1107.64	0.28	1.57
1	86022.	9780.00	515.92	538.06	533.71	538.52	0.001598	6.61	2590.48	479.07	0.30	1.31
1	86022.	16460.00	515.92	540.87	536.82	541.36	0.001587	7.38	4078.36	588.66	0.31	1.54
1	86022.	19450.00	515.92	542.26	537.38	542.70	0.001398	7.28	4892.94	645.38	0.29	1.46
1	86022.	28930.00	515.92	544.63	539.09	545.19	0.001673	8.60	6633.57	787.87	0.33	1.97
1	86374. L	9780.00	519.00	538.54	532.03	539.19	0.001921	6.94	2042.57	459.84	0.33	1.47
1	86374. L	16470.00	519.00	541.34	535.73	542.02	0.001871	7.77	3480.36	537.69	0.34	1.74
1	86374. L	19450.00	519.00	542.66	538.22	543.29	0.001655	7.70	4198.74	578.22	0.32	1.66
1	86374. L	28940.00	519.00	545.11	540.55	545.85	0.001816	8.80	5735.43	685.05	0.35	2.08
1	86548.	9780.00	519.00	539.07		539.48	0.001250	5.29	2247.78	524.31	0.27	0.88
1	86548.	16470.00	519.00	541.84		542.31	0.001311	6.07	3995.28	663.92	0.28	1.10
1	86548.	19450.00	519.00	543.11		543.55	0.001180	6.09	4839.55	674.86	0.27	1.07
1	86548.	28940.00	519.00	545.60		546.14	0.001276	6.99	6710.12	810.91	0.29	1.35
1	86898. CONFLUENCE OF TR	9670.00	520.00	539.52		539.96	0.001472	6.43	2977.78	660.78	0.29	1.23
1	86898. CONFLUENCE OF TR	16270.00	520.00	542.33		542.80	0.001526	7.33	5058.22	784.53	0.30	1.51
1	86898. CONFLUENCE OF TR	19400.00	520.00	543.56		543.99	0.001396	7.33	6029.33	802.30	0.29	1.48
1	86898. CONFLUENCE OF TR	28930.00	520.00	546.14		546.61	0.001453	8.13	8275.97	911.29	0.31	1.74
1	87195.	9670.00	521.00	540.00		540.37	0.001318	6.23	3329.10	658.51	0.27	1.14
1	87195.	16270.00	521.00	542.84		543.24	0.001375	7.07	5341.41	753.17	0.28	1.39
1	87195.	19400.00	521.00	544.01		544.40	0.001333	7.24	6238.71	787.66	0.28	1.43
1	87195.	28930.00	521.00	546.59		547.05	0.001501	8.31	8446.35	950.08	0.30	1.82
1	87489.	9670.00	522.00	540.35		540.90	0.002232	7.50	2661.95	625.24	0.32	1.72
1	87489.	16270.00	522.00	543.26		543.68	0.001835	7.56	4975.15	862.17	0.30	1.66
1	87489.	19400.00	522.00	544.44		544.80	0.001606	7.34	6008.14	890.80	0.28	1.54
1	87489.	28930.00	522.00	547.12		547.46	0.001475	7.62	8543.89	1019.55	0.28	1.59
1	88058.	9670.00	523.80	541.44		541.94	0.001542	6.35	2442.74	426.52	0.30	1.22
1	88058.	16270.00	523.80	544.11		544.78	0.001858	7.84	3747.58	619.05	0.34	1.76
1	88058.	19400.00	523.80	545.17		545.87	0.001894	8.25	4498.96	851.62	0.35	1.90
1	88058.	28930.00	523.80	547.78		548.49	0.001857	8.96	7203.92	1217.60	0.35	2.15
1	88500.	9680.00	520.50	542.22	536.29	542.39	0.000646	4.54	3869.18	504.48	0.20	0.59
1	88500.	16290.00	520.50	545.09	538.44	545.31	0.000729	5.37	5425.57	690.21	0.22	0.79
1	88500.	19410.00	520.50	546.18	539.20	546.45	0.000865	6.07	6105.05	891.40	0.24	0.99
1	88500.	28980.00	520.50	548.76	540.69	549.10	0.000968	6.95	7857.69	1374.58	0.26	1.25
1	88915.	9680.00	524.83	542.44	535.78	542.76	0.000985	5.37	2785.08	477.04	0.25	0.85
1	88915.	16290.00	524.83	545.32	537.95	545.74	0.001135	6.51	4214.40	527.87	0.28	1.18
1	88915.	19410.00	524.83	546.47	538.69	546.92	0.001177	6.92	4843.55	634.87	0.28	1.30
1	88915.	28980.00	524.83	549.06	540.78	549.67	0.001446	8.38	6604.65	1601.65	0.32	1.82

HEC-RAS Plan: WC-Edit-Prop River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	89252. WILLIAM D. TATE BR D	28900.00	525.28	550.22	544.07	551.04		8.88	3728.53	2098.26	0.37	
1	89252. WILLIAM D. TATE BR U	9690.00	525.28	543.02	537.19	543.57	0.001876	6.04	1671.82	172.93	0.25	1.02
1	89252. WILLIAM D. TATE BR U	16350.00	525.28	546.91	539.57	547.48		8.06	2328.51	261.99	0.31	
1	89252. WILLIAM D. TATE BR U	19410.00	525.28	548.21	540.52	548.82		8.43	2856.07	567.97	0.32	
1	89252. WILLIAM D. TATE BR U	28900.00	525.28	550.22	543.01	551.04		6.35	5445.22	1111.43	0.30	
1	89291.	9690.00	525.28	543.10	537.18	543.62	0.001354	5.84	1745.65	246.69	0.31	0.89
1	89291.	16350.00	525.28	546.91	539.46	547.47	0.001120	6.49	3318.34	514.10	0.30	0.99
1	89291.	19410.00	525.28	548.21	540.41	548.81	0.001109	6.83	4026.10	765.59	0.30	1.07
1	89291.	28900.00	525.28	550.22	542.88	551.03	0.001364	8.19	5334.84	1111.43	0.34	1.48
1	89326.	9690.00	525.28	543.20	537.19	543.68	0.001468	5.55	1745.10	182.26	0.32	0.84
1	89326.	16350.00	525.28	546.90	539.53	547.59	0.001541	6.65	2475.94	270.06	0.34	1.12
1	89326.	19410.00	525.28	548.17	540.42	548.95	0.001566	7.08	2866.19	357.72	0.34	1.23
1	89326.	28900.00	525.28	550.08	542.82	551.29	0.002097	8.97	3539.50	375.27	0.41	1.89
1	89426. STATE HIGHWAY 12BR D	9690.00	525.28	543.25	537.43	543.77	0.002213	5.74	1687.96	177.63	0.33	0.98
1	89426. STATE HIGHWAY 12BR D	16350.00	525.28	546.95	539.79	547.68	0.002496	6.89	2391.92	261.09	0.35	1.33
1	89426. STATE HIGHWAY 12BR D	19410.00	525.28	548.22	540.69	549.05	0.002639	7.32	2772.38	339.30	0.35	1.48
1	89426. STATE HIGHWAY 12BR D	28900.00	525.28	550.16	543.12	551.42	0.003710	9.18	3432.04	347.70	0.41	2.26
1	89426. STATE HIGHWAY 12BR U	9690.00	525.28	543.61	538.36	544.15	0.002659	6.00	1704.58	238.07	0.35	1.10
1	89426. STATE HIGHWAY 12BR U	16350.00	525.28	547.46	540.88	548.09	0.002330	6.62	2758.38	345.14	0.32	1.23
1	89426. STATE HIGHWAY 12BR U	19410.00	525.28	548.82	541.86	549.47	0.002251	6.81	3232.27	351.09	0.32	1.27
1	89426. STATE HIGHWAY 12BR U	28900.00	525.28	551.10	544.38	552.02	0.002843	8.18	4043.23	359.91	0.35	1.78
1	89527.	9690.00	525.28	543.70	538.13	544.19	0.001568	5.69	1804.40	246.46	0.33	0.89
1	89527.	16350.00	525.28	547.50	540.61	548.11	0.001309	6.46	2896.01	455.01	0.32	1.03
1	89527.	19410.00	525.28	548.85	541.51	549.49	0.001244	6.73	3395.01	482.21	0.31	1.08
1	89527.	28900.00	525.28	551.12	544.00	552.04	0.001522	8.20	4253.35	500.34	0.35	1.53
1	89587.	9690.00	527.00	543.61	537.55	544.50	0.002133	7.60	1275.54	171.96	0.39	1.48
1	89587.	16350.00	527.00	547.46	540.48	548.33	0.001878	7.82	2720.47	630.40	0.38	1.50
1	89587.	19410.00	527.00	548.84	541.67	549.67	0.001672	7.88	3870.40	1025.34	0.36	1.47
1	89587.	28900.00	527.00	551.64	546.21	552.22	0.001198	7.48	7426.49	1465.14	0.31	1.25
1	89646. WILLIAM D. TATE BR D	9690.00	527.00	543.56	538.13	544.77	0.005386	8.84	1096.61	92.23	0.38	2.34
1	89646. WILLIAM D. TATE BR D	16350.00	527.00	548.07	541.42	548.73		8.21	3174.86	665.91	0.34	
1	89646. WILLIAM D. TATE BR D	19410.00	527.00	548.85	542.72	549.67		6.64	4183.74	888.44	0.32	
1	89646. WILLIAM D. TATE BR D	28900.00	527.00	551.64	549.57	552.22		4.74	7276.64	1465.14	0.17	
1	89646. WILLIAM D. TATE BR U	9690.00	528.14	544.35	538.48	545.12	0.004331	7.20	1403.71	117.11	0.31	1.91
1	89646. WILLIAM D. TATE BR U	16350.00	528.14	549.11	541.09	549.26		7.89	2983.56	866.69	0.30	
1	89646. WILLIAM D. TATE BR U	19410.00	528.14	549.98	542.14	550.14		6.53	3957.40	1188.57	0.24	
1	89646. WILLIAM D. TATE BR U	28900.00	528.14	552.12	545.00	552.31		4.92	6731.54	1424.63	0.18	
1	89704.	9690.00	528.14	544.69	538.20	545.27	0.001515	6.38	1714.55	899.48	0.31	1.23
1	89704.	16350.00	528.14	549.11	540.58	549.27	0.000479	4.35	8298.33	1221.20	0.18	0.52
1	89704.	19410.00	528.14	549.98	541.54	550.15	0.000504	4.61	9395.90	1304.07	0.19	0.57
1	89704.	28900.00	528.14	552.12	544.20	552.31	0.000568	5.26	12295.46	1424.63	0.20	0.72
1	89814. M	9690.00	527.41	545.22	536.72	545.48	0.000765	4.21	2776.28	1111.66	0.21	0.55
1	89814. M	16350.00	527.41	549.21	539.07	549.32	0.000335	3.37	9008.26	1261.41	0.15	0.32
1	89814. M	19410.00	527.41	550.08	540.00	550.20	0.000351	3.58	10120.83	1298.81	0.15	0.36
1	89814. M	28900.00	527.41	552.21	543.36	552.37	0.000430	4.29	13122.16	1488.03	0.17	0.49
1	91637. N	9660.00	527.50	547.21	541.67	547.48	0.001791	5.29	3660.18	1205.34	0.28	1.11
1	91637. N	16310.00	527.50	550.12	546.56	550.28	0.001024	4.68	6856.42	1400.21	0.22	0.81
1	91637. N	19360.00	527.50	551.00	546.89	551.17	0.000977	4.77	7875.95	1438.63	0.22	0.82
1	91637. N	28820.00	527.50	553.27	547.82	553.45	0.000969	5.23	10559.16	1621.41	0.22	0.94
1	93031. O	9590.00	530.13	549.90		550.50	0.002594	7.18	2593.37	816.62	0.37	1.67
1	93031. O	16170.00	530.13	551.90		552.48	0.002539	7.91	4412.18	1004.54	0.38	1.92
1	93031. O	19180.00	530.13	552.72		553.28	0.002469	8.11	5270.71	1126.12	0.38	1.98
1	93031. O	28530.00	530.13	554.92		555.41	0.002129	8.29	8241.53	1480.82	0.36	1.98
1	93757.	9610.00	528.40	550.95		551.11	0.000375	3.57	4990.78	1590.09	0.17	0.31
1	93757.	16190.00	528.40	552.97		553.14	0.000419	4.13	8351.16	1722.47	0.18	0.39
1	93757.	19160.00	528.40	553.76		553.93	0.000416	4.24	9725.73	1736.08	0.18	0.41
1	93757.	28620.00	528.40	555.86		556.03	0.000424	4.62	13451.23	1834.70	0.19	0.47
1	94374.	9610.00	531.30	551.16		551.20	0.000057	1.69	7463.52	1223.69	0.07	0.06
1	94374.	16190.00	531.30	553.18		553.25	0.000096	2.35	10040.37	1312.48	0.09	0.12
1	94374.	19160.00	531.30	553.97		554.05	0.000110	2.58	11091.06	1360.46	0.10	0.14
1	94374.	28620.00	531.30	556.06		556.18	0.000150	3.21	14221.23	1664.15	0.12	0.21
1	94755.	9610.00	532.10	551.17		551.24	0.000155	2.16	5040.58	1007.15	0.11	0.12
1	94755.	16190.00	532.10	553.20		553.32	0.000225	2.89	7187.39	1098.87	0.13	0.20
1	94755.	19160.00	532.10	553.99		554.13	0.000246	3.13	8070.96	1126.31	0.14	0.23
1	94755.	28620.00	532.10	556.09		556.27	0.000296	3.74	10566.99	1249.77	0.16	0.31
1	94950.	9610.00	533.41	551.17		551.31	0.000432	2.96	3340.83	533.29	0.17	0.24
1	94950.	16190.00	533.41	553.19		553.42	0.000623	3.95	4569.82	676.48	0.21	0.41
1	94950.	19160.00	533.41	553.97		554.24	0.000679	4.29	5109.40	699.89	0.23	0.47
1	94950.	28620.00	533.41	556.04		556.42	0.000812	5.19	6681.00	850.55	0.25	0.66
1	95284. CONFLUENCE OF TR	9540.00	532.50	551.32		551.43	0.000326	3.12	4065.45	446.73	0.16	0.24
1	95284. CONFLUENCE OF TR	16160.00	532.50	553.39		553.62	0.000550	4.40	5019.66	466.45	0.21	0.46
1	95284. CONFLUENCE OF TR	18650.00	532.50	554.20		554.46	0.000596	4.71	5398.29	471.77	0.22	0.53
1	95284. CONFLUENCE OF TR	28620.00	532.50	556.29		556.70	0.000847	6.09	6511.53	627.50	0.26	0.84
1	96073.	9540.00	534.50	551.70		551.86	0.001020	3.81	3185.39	481.28	0.25	0.44
1	96073.	16160.00	534.50	553.99		554.24	0.001209	4.83	4510.11	654.24	0.28	0.65
1	96073.	18650.00	534.50	554.83		555.10	0.001191	5.07	5094.82	728.62	0.28	0.70
1	96073.	28620.00	534.50	557.17		557.51	0.001268	6.01	7343.50	1136.74	0.30	0.92
1	96548.	9540.00	534.60	550.26	550.26	554.35	0.018465	16.24	587.61	72.70	1.01	7.93
1	96548.	16160.00	534.60	555.38	555.38	557.10	0.006254	12.07	2346.48	790.37	0.63	3.88
1												

HEC-RAS Plan: WC-Edit-Prop River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	97515.	9750.00	537.94	557.40		557.51	0.000411	3.58	5255.63	992.98	0.16	0.37
1	97515.	16080.00	537.94	559.47		559.59	0.000459	4.11	7384.50	1083.65	0.17	0.47
1	97515.	18530.00	537.94	560.08		560.21	0.000492	4.35	8071.98	1152.31	0.18	0.52
1	97515.	28480.00	537.94	561.92		562.10	0.000591	5.09	10238.40	1199.33	0.20	0.69
1	97536. LOW WATER CROSSI	Culvert										
1	97556.	9750.00	538.14	557.38	552.81	557.53	0.000862	4.70	4624.31	978.20	0.21	0.78
1	97556.	16080.00	538.14	559.47	554.24	559.63	0.000870	5.12	6768.51	1098.53	0.21	0.88
1	97556.	18530.00	538.14	560.04	555.78	560.21	0.000902	5.32	7401.88	1124.04	0.22	0.95
1	97556.	28480.00	538.14	561.98	556.86	562.18	0.000998	5.98	9636.25	1180.32	0.23	1.16
1	97855.	9750.00	538.10	557.65		557.86	0.000930	4.54	3600.32	807.77	0.23	0.65
1	97855.	16080.00	538.10	559.74		559.99	0.000992	5.23	5375.98	880.18	0.25	0.82
1	97855.	18530.00	538.10	560.32		560.59	0.001046	5.52	5890.01	896.65	0.26	0.90
1	97855.	28480.00	538.10	562.28		562.63	0.001213	6.47	7690.61	932.29	0.28	1.18
1	98519.	9750.00	540.50	558.24	553.05	558.32	0.000646	3.10	5121.81	1002.88	0.17	0.39
1	98519.	16080.00	540.50	560.36	554.31	560.46	0.000650	3.52	7303.12	1072.13	0.18	0.47
1	98519.	18530.00	540.50	560.97	554.75	561.08	0.000675	3.70	7948.74	1095.92	0.18	0.51
1	98519.	28480.00	540.50	563.04	555.96	563.19	0.000771	4.36	10191.80	1257.07	0.20	0.68
1	98957.	9750.00	541.60	558.53	553.99	558.79	0.001580	4.74	3020.59	655.19	0.27	0.92
1	98957.	16080.00	541.60	560.63	556.61	560.94	0.001590	5.43	4451.15	750.34	0.28	1.12
1	98957.	18530.00	541.60	561.25	557.06	561.58	0.001636	5.70	4889.91	772.08	0.29	1.22
1	98957.	28480.00	541.60	563.33	558.49	563.77	0.001811	6.65	6461.69	906.45	0.31	1.57
1	99115.	9750.00	542.30	558.66		559.27	0.004146	8.12	2328.32	573.08	0.42	2.61
1	99115.	16080.00	542.30	560.80		561.38	0.003656	8.53	3598.28	609.07	0.40	2.72
1	99115.	18530.00	542.30	561.43		562.02	0.003673	8.81	3981.69	617.60	0.41	2.86
1	99115.	28480.00	542.30	563.53		564.25	0.003960	10.02	5367.06	700.04	0.43	3.54
1	99484.	9750.00	544.00	560.19		560.69	0.003612	6.71	2142.77	407.68	0.43	1.64
1	99484.	16080.00	544.00	562.11		562.79	0.003981	8.03	2958.23	433.51	0.46	2.20
1	99484.	18530.00	544.00	562.72		563.47	0.004108	8.50	3224.19	439.84	0.48	2.42
1	99484.	28480.00	544.00	564.83		565.91	0.004671	10.31	4192.26	487.75	0.52	3.34
1	99650.	9750.00	542.80	560.84		561.19	0.002466	5.71	2483.81	444.15	0.35	1.17
1	99650.	16080.00	542.80	562.84		563.35	0.002753	6.99	3401.26	470.89	0.39	1.63
1	99650.	18530.00	542.80	563.49		564.05	0.002853	7.42	3708.98	478.99	0.40	1.80
1	99650.	28480.00	542.80	565.76		566.58	0.003289	9.06	4862.87	543.28	0.44	2.51
1	99868.	9750.00	544.10	561.30		561.46	0.000673	3.58	3594.79	504.00	0.20	0.42
1	99868.	16080.00	544.10	563.42		563.68	0.000885	4.65	4720.29	551.95	0.23	0.67
1	99868.	18530.00	544.10	564.11		564.41	0.000951	5.00	5104.60	563.85	0.24	0.76
1	99868.	28480.00	544.10	566.57		567.00	0.001149	6.16	6534.56	601.04	0.28	1.09
1	100187.	9750.00	542.80	561.50	556.91	561.87	0.002045	5.79	2381.59	646.15	0.32	1.14
1	100187.	16080.00	542.80	563.68	558.85	564.16	0.002117	6.73	3452.83	671.82	0.34	1.44
1	100187.	18530.00	542.80	564.39	559.63	564.91	0.002152	7.05	3805.89	680.33	0.35	1.55
1	100187.	28480.00	542.80	566.90	561.99	567.56	0.002235	8.09	5078.99	729.83	0.36	1.93
1	100441.	9750.00	543.57	561.96	557.57	562.40	0.001978	5.78	1994.24	628.54	0.32	1.13
1	100441.	16080.00	543.57	564.14	559.23	564.83	0.002429	7.30	2688.86	761.12	0.37	1.69
1	100441.	18530.00	543.57	564.85	559.82	565.62	0.002573	7.80	2913.20	783.17	0.38	1.89
1	100441.	28480.00	543.57	567.31	562.02	568.44	0.003022	9.49	3699.33	811.27	0.43	2.64
1	100518. POOL ROAD BR D	9750.00	543.57	562.13	557.67	562.61	0.002388	5.98	1922.33	291.75	0.23	1.24
1	100518. POOL ROAD BR D	16080.00	543.57	564.35	559.43	565.10	0.003082	7.59	2569.24	291.75	0.27	1.90
1	100518. POOL ROAD BR D	18530.00	543.57	565.06	560.08	565.91	0.003318	8.12	2777.53	291.75	0.28	2.14
1	100518. POOL ROAD BR D	28480.00	543.57	567.31	562.45	568.44	0.004372	10.15	3432.43	291.75	0.33	3.20
1	100518. POOL ROAD BR U	9750.00	543.57	562.30	556.94	562.89	0.004138	6.20	1620.88	248.31	0.37	1.74
1	100518. POOL ROAD BR U	16080.00	543.57	564.57	559.76	565.45	0.005027	7.69	2197.18	260.84	0.41	2.52
1	100518. POOL ROAD BR U	18530.00	543.57	565.30	560.61	566.29	0.005315	8.16	2389.28	265.43	0.42	2.80
1	100518. POOL ROAD BR U	28480.00	543.57	568.24	563.36	570.56	0.012005	9.60	3200.19		0.33	4.38
1	100671. Q	9750.00	543.57	562.64	556.94	563.15	0.002841	5.78	1752.82	621.34	0.34	1.43
1	100671. Q	16080.00	543.57	565.00	559.71	565.76	0.003153	7.14	2400.14	945.13	0.38	2.01
1	100671. Q	18530.00	543.57	565.76	560.55	566.61	0.003258	7.59	2617.27	1026.06	0.39	2.22
1	100671. Q	28480.00	543.57	569.61	563.26	570.56	0.002582	8.15	3827.80	1264.52	0.36	2.33
1	101032.	9750.00	545.70	563.88	563.37	565.24	0.010293	10.13	1214.68	751.26	0.64	4.57
1	101032.	16080.00	545.70	566.24	564.92	567.55	0.007617	10.41	2022.83	914.11	0.58	4.41
1	101032.	18530.00	545.70	567.01	565.41	568.34	0.007123	10.57	2298.27	934.66	0.56	4.44
1	101032.	28480.00	545.70	570.53	567.09	571.75	0.004660	10.30	3640.29	1086.41	0.48	3.84
1	101304. CONFLUENCE OF FE	9750.00	546.00	566.05	562.97	566.33	0.001813	5.00	2758.97	826.34	0.28	1.03
1	101304. CONFLUENCE OF FE	16080.00	546.00	568.17	564.82	568.48	0.001650	5.43	4048.07	861.38	0.27	1.13
1	101304. CONFLUENCE OF FE	18530.00	546.00	568.91	565.15	569.23	0.001593	5.55	4507.16	875.12	0.27	1.16
1	101304. CONFLUENCE OF FE	28480.00	546.00	572.08	566.28	572.42	0.001229	5.64	6518.91	1022.21	0.25	1.12
1	102523.	9720.00	546.40	567.59		567.79	0.000906	4.50	3585.84	804.45	0.23	0.64
1	102523.	16020.00	546.40	569.65		569.87	0.000900	4.98	5317.90	876.55	0.23	0.74
1	102523.	18440.00	546.40	570.36		570.59	0.000890	5.11	5959.22	911.79	0.23	0.77
1	102523.	28340.00	546.40	573.27		573.50	0.000728	5.21	8758.81	1005.68	0.22	0.75
1	103113.	9720.00	548.60	568.01		568.86	0.002898	7.69	1520.83	284.65	0.41	1.91
1	103113.	16020.00	548.60	569.90	566.50	571.11	0.003711	9.66	2462.78	815.66	0.47	2.86
1	103113.	18440.00	548.60	570.56	567.84	571.86	0.003851	10.18	3058.42	969.92	0.49	3.12
1	103113.	28340.00	548.60	573.64		574.28	0.001991	8.38	6425.52	1185.27	0.36	1.98
1	104030.	9740.00	550.60	570.35	567.85	570.53	0.001185	4.35	3587.26	1135.46	0.25	0.65
1	104030.	16030.00	550.60	572.57	568.90	572.74	0.000955	4.51	5430.46	1177.69	0.23	0.65
1	104030.	18450.00	550.60	573.29	569.18	573.47	0.000916	4.60	6040.08	1195.99	0.23	0.66
1	104030.	28450.00	550.60	575.14	570.15	575.29	0.000663	4.30	10246.08	1239.97	0.20	0.55
1	104286. R	9740.00	553.13	570.58	565.60	571.08	0.002031	5.71	1709.87	553.70	0.33	1.12
1	104286. R	16030.00	553.13	572.71	567.49	573.26	0.001937	6.42	3259.97	1355.84	0.34	1.31
1	104286. R	18450.00	553.13	573.43	568.18	573.97						

HEC-RAS Plan: WC-Edit-Prop River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	104405.	9740.00	553.13	571.18	565.33	571.65	0.001786	5.46	1783.84	1777.97	0.31	1.01
1	104405.	16030.00	553.13	574.34	567.80	574.45	0.000519	3.55	8037.29	2748.99	0.18	0.39
1	104405.	18450.00	553.13	574.52	568.43	574.66	0.000614	3.90	8393.31	2758.67	0.19	0.47
1	104405.	28450.00	553.13	575.93	570.68	575.99	0.000295	2.84	16898.73	2869.54	0.14	0.24
1	104420.	9740.00	553.90	571.22	564.45	571.67	0.001289	5.54	1898.85	1316.00	0.28	0.95
1	104420.	16030.00	553.90	574.30	566.63	574.51	0.000659	4.61	7048.83	2676.95	0.21	0.61
1	104420.	18450.00	553.90	574.47	567.41	574.72	0.000789	5.08	7380.29	2701.17	0.23	0.74
1	104420.	28450.00	553.90	575.90	572.12	576.03	0.000510	4.33	14404.30	2827.76	0.19	0.52
1	104446. DART RAILROAD BR D	9740.00	553.90	571.22	564.74	571.67	0.005909	5.91	1705.50	161.00	0.25	1.53
1	104446. DART RAILROAD BR D	16030.00	553.90	575.04	567.06	575.45		6.94	3050.33	1507.09	0.27	
1	104446. DART RAILROAD BR D	18450.00	553.90	575.31	567.94	575.77		7.35	4552.42	1686.11	0.29	
1	104446. DART RAILROAD BR D	28450.00	553.90	575.90	570.69	576.60		5.98	6500.90	2082.29	0.27	
1	104446. DART RAILROAD BR U	9740.00	553.90	571.80	564.76	572.21	0.009040	5.47	1824.63		0.23	1.76
1	104446. DART RAILROAD BR U	16030.00	553.90	575.43	567.19	575.49		6.66	3075.58	1767.02	0.23	
1	104446. DART RAILROAD BR U	18450.00	553.90	575.76	567.94	575.83		7.05	3521.47	1988.27	0.23	
1	104446. DART RAILROAD BR U	28450.00	553.90	576.65	570.47	576.71		5.71	6526.14	2347.98	0.18	
1	104471.	9740.00	553.90	571.84	564.47	572.21	0.001244	4.98	2061.50	2010.39	0.25	0.93
1	104471.	16030.00	553.90	575.43	566.72	575.49	0.000274	2.77	10610.05	2644.25	0.12	0.26
1	104471.	18450.00	553.90	575.76	567.52	575.83	0.000313	3.00	11260.73	2743.44	0.13	0.31
1	104471.	28450.00	553.90	576.65	570.14	576.71	0.000302	3.06	17649.44	2821.69	0.13	0.31
1	104750.	9590.00	553.30	572.46	568.54	572.54	0.000643	3.19	4697.63	1220.71	0.17	0.40
1	104750.	15650.00	553.30	575.53	569.64	575.58	0.000276	2.48	10168.29	1504.61	0.12	0.22
1	104750.	18430.00	553.30	575.88	569.95	575.93	0.000331	2.76	10687.49	1527.73	0.13	0.28
1	104750.	27760.00	553.30	576.74	570.84	576.85	0.000550	3.71	12048.62	1591.19	0.17	0.49
1	105649.	9590.00	554.30	573.05		573.25	0.001048	4.60	3367.65	901.11	0.24	0.68
1	105649.	15650.00	554.30	575.79		575.92	0.000597	4.01	6139.59	1101.52	0.19	0.48
1	105649.	18430.00	554.30	576.18		576.34	0.000702	4.43	6575.57	1123.53	0.21	0.59
1	105649.	27850.00	554.30	577.22		577.47	0.000992	5.52	7769.03	1164.97	0.25	0.89
1	106674.	9590.00	555.60	574.26		574.54	0.001496	4.98	2647.09	640.72	0.27	0.97
1	106674.	15650.00	555.60	576.53		576.79	0.001190	5.05	4322.16	787.44	0.25	0.94
1	106674.	18430.00	555.60	577.04		577.33	0.001318	5.45	4731.12	848.74	0.26	1.08
1	106674.	27850.00	555.60	578.43		578.87	0.001848	6.89	6094.10	1085.51	0.31	1.67
1	107067. S	9600.00	556.30	574.80		574.96	0.000803	4.08	3550.62	729.23	0.20	0.62
1	107067. S	15630.00	556.30	576.98		577.15	0.000768	4.43	5280.41	856.14	0.20	0.69
1	107067. S	18410.00	556.30	577.53		577.73	0.000830	4.71	5759.01	868.25	0.21	0.77
1	107067. S	27840.00	556.30	579.11		579.38	0.001014	5.55	7154.77	911.37	0.23	1.04
1	107429. CONFLUENCE OF TR	9600.00	557.00	575.11		575.18	0.000517	2.90	5131.88	1073.18	0.16	0.33
1	107429. CONFLUENCE OF TR	15630.00	557.00	577.27		577.35	0.000439	3.02	7495.02	1111.95	0.15	0.34
1	107429. CONFLUENCE OF TR	18410.00	557.00	577.85		577.94	0.000473	3.22	8142.72	1121.16	0.15	0.38
1	107429. CONFLUENCE OF TR	27840.00	557.00	579.50		579.64	0.000574	3.84	10019.63	1152.69	0.17	0.52
1	107917.	9400.00	558.20	575.29	572.14	575.69	0.001949	6.45	2777.38	642.61	0.33	1.33
1	107917.	15140.00	558.20	577.40	574.31	577.80	0.001777	6.89	4179.02	672.54	0.33	1.43
1	107917.	17820.00	558.20	577.99	574.80	578.42	0.001916	7.35	4574.80	701.94	0.34	1.61
1	107917.	26900.00	558.20	579.65	576.24	580.23	0.002325	8.71	5718.37	754.69	0.38	2.17
1	108168.	9400.00	558.90	575.86	572.19	576.11	0.001444	5.20	3045.72	543.15	0.28	0.89
1	108168.	15140.00	558.90	577.88	573.62	578.20	0.001573	6.11	4173.47	614.51	0.31	1.16
1	108168.	17820.00	558.90	578.49	574.08	578.86	0.001733	6.63	4524.00	628.89	0.32	1.34
1	108168.	26900.00	558.90	580.23	575.38	580.77	0.002241	8.19	5555.40	685.18	0.38	1.96
1	108445.	9400.00	559.20	576.22	570.53	576.33	0.000489	3.45	3888.47	674.74	0.17	0.37
1	108445.	15140.00	559.20	578.30	572.20	578.45	0.000536	3.99	5305.18	775.85	0.18	0.47
1	108445.	17820.00	559.20	578.96	572.70	579.14	0.000583	4.29	5777.04	794.90	0.19	0.53
1	108445.	26900.00	559.20	580.87	574.32	581.12	0.000712	5.12	7165.16	891.51	0.22	0.73
1	108863. T	9400.00	559.50	576.46	572.43	576.55	0.000461	3.10	4320.44	726.52	0.16	0.31
1	108863. T	15140.00	559.50	578.57	573.11	578.68	0.000459	3.47	5864.68	742.40	0.17	0.36
1	108863. T	17820.00	559.50	579.25	573.68	579.38	0.000489	3.70	6376.47	747.56	0.17	0.41
1	108863. T	26900.00	559.50	581.23	574.55	581.42	0.000576	4.38	7868.82	970.25	0.19	0.55
1	109228.	9380.00	558.90	576.65		576.91	0.001715	4.75	2381.57	448.24	0.30	0.81
1	109228.	15060.00	558.90	578.71		579.05	0.001632	5.40	3354.09	495.21	0.30	0.97
1	109228.	17720.00	558.90	579.40		579.78	0.001710	5.78	3698.92	512.41	0.31	1.09
1	109228.	26760.00	558.90	581.36		581.89	0.001949	6.90	4759.54	568.75	0.34	1.47
1	109553.	9380.00	558.60	577.16		577.41	0.001559	5.16	2590.14	571.57	0.28	0.90
1	109553.	15060.00	558.60	579.24		579.52	0.001415	5.54	3840.80	633.92	0.27	0.97
1	109553.	17720.00	558.60	579.96		580.27	0.001444	5.80	4309.13	662.08	0.28	1.05
1	109553.	26760.00	558.60	582.05		582.43	0.001504	6.53	5765.79	719.89	0.29	1.26
1	109946. U	9380.00	559.60	577.66		578.51	0.004104	8.50	1736.33	552.75	0.47	2.42
1	109946. U	15060.00	559.60	579.74		580.38	0.002954	8.15	2931.08	592.68	0.41	2.09
1	109946. U	17720.00	559.60	580.47		581.11	0.002781	8.22	3369.37	598.48	0.40	2.09
1	109946. U	26760.00	559.60	582.56		583.25	0.002520	8.64	4637.80	615.75	0.39	2.19
1	110189.	9380.00	560.50	578.67		579.46	0.003814	7.83	1657.95	583.75	0.42	2.42
1	110189.	15060.00	560.50	580.47		581.09	0.003019	7.71	2903.32	770.06	0.38	2.23
1	110189.	17720.00	560.50	581.19		581.75	0.002646	7.49	3476.86	808.67	0.36	2.07
1	110189.	26760.00	560.50	583.28		583.77	0.001911	7.01	5264.78	890.18	0.31	1.73
1	110568.	9380.00	561.50	580.13		580.29	0.001436	4.40	3396.94	757.32	0.25	0.80
1	110568.	15060.00	561.50	581.63		581.84	0.001507	4.95	4552.46	784.68	0.26	0.97
1	110568.	17720.00	561.50	582.22		582.46	0.001534	5.17	5022.50	794.93	0.26	1.03
1	110568.	26760.00	561.50	584.05		584.37	0.001543	5.71	6510.61	826.64	0.27	1.20
1	110835.	9380.00	562.90	580.42		580.77	0.001992	5.93	2505.50	491.94	0.30	1.35
1	110835.	15060.00	562.90	581.91		582.39	0.002449	7.11	3272.74	570.46	0.34	1.87
1	110835.	17720.00	562.90	582.50		583.03	0.002587	7.52	3625.53	616.49	0.36	2.07
1	110835.	26760.00	562.90	584.34		584.97	0.002908	8.66	4887.21	729.59	0.38	2.63

HEC-RAS Plan: WC-Edit-Prop River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	111744.	17470.00	565.60	584.35		584.49	0.000651	3.84	6116.13	847.51	0.18	0.53
1	111744.	26360.00	565.60	586.32		586.50	0.000702	4.35	7838.75	916.89	0.19	0.66
1	112258.	9300.00	565.50	582.16		582.24	0.000322	2.20	4213.65	769.63	0.12	0.19
1	112258.	14870.00	565.50	583.92		584.04	0.000366	2.61	5610.23	812.95	0.13	0.26
1	112258.	17470.00	565.50	584.60		584.74	0.000383	2.77	6165.76	826.24	0.14	0.29
1	112258.	26360.00	565.50	586.59		586.78	0.000428	3.23	7844.25	861.06	0.15	0.37
1	113009. V	9300.00	565.50	582.43		582.92	0.003564	7.35	2627.63	776.28	0.40	2.17
1	113009. V	14870.00	565.50	584.30		584.70	0.002833	7.31	4110.57	811.88	0.37	2.03
1	113009. V	17470.00	565.50	585.01		585.40	0.002713	7.42	4687.74	825.30	0.36	2.05
1	113009. V	26360.00	565.50	587.05		587.46	0.002515	7.88	6416.14	864.22	0.36	2.20
1	113618.	9310.00	568.30	584.19		584.39	0.001744	5.38	3197.92	947.22	0.28	1.13
1	113618.	14820.00	568.30	585.71		585.91	0.001465	5.36	4667.14	992.26	0.26	1.08
1	113618.	17410.00	568.30	586.34		586.54	0.001382	5.37	5299.60	1009.80	0.26	1.07
1	113618.	26280.00	568.30	588.25		588.48	0.001187	5.44	7265.08	1042.45	0.24	1.05
1	114290.	9310.00	569.50	585.68		586.32	0.004863	7.78	2072.33	666.40	0.46	2.55
1	114290.	14820.00	569.50	586.98		587.68	0.005099	8.73	2966.30	703.60	0.48	3.06
1	114290.	17410.00	569.50	587.54		588.25	0.005049	8.99	3360.20	714.02	0.48	3.20
1	114290.	26280.00	569.50	589.26		590.02	0.004808	9.68	4617.79	754.03	0.48	3.53
1	115217. W	9290.00	571.40	588.26		588.37	0.001211	4.06	4308.22	1151.58	0.22	0.68
1	115217. W	14760.00	571.40	589.61		589.74	0.001186	4.37	5875.63	1168.24	0.22	0.75
1	115217. W	17340.00	571.40	590.19		590.32	0.001198	4.53	6556.01	1205.74	0.23	0.80
1	115217. W	26160.00	571.40	591.88		592.04	0.001177	4.89	8633.51	1251.00	0.23	0.89
1	115764.	9290.00	570.70	588.68		588.75	0.000567	2.90	5471.81	1407.97	0.16	0.34
1	115764.	14760.00	570.70	590.04		590.12	0.000604	3.26	7429.11	1465.09	0.17	0.41
1	115764.	17340.00	570.70	590.62		590.71	0.000607	3.38	8281.10	1483.88	0.17	0.43
1	115764.	26160.00	570.70	592.31		592.42	0.000616	3.72	10834.04	1524.43	0.18	0.50
1	116128.	9160.00	570.00	588.89	584.22	589.35	0.002401	6.77	2435.93	1080.01	0.32	1.74
1	116128.	14410.00	570.00	590.29	588.25	590.75	0.002509	7.37	3586.65	1210.63	0.33	1.99
1	116128.	16910.00	570.00	590.87	589.03	591.34	0.002593	7.68	4118.77	1307.73	0.34	2.14
1	116128.	25480.00	570.00	592.62	590.04	592.85	0.001479	6.21	8244.64	1652.92	0.26	1.35
1	116157. WHITE CHAPEL ROABR D	9160.00	568.60	588.57	583.54	589.79	0.013439	9.10	890.47	64.02	0.35	5.23
1	116157. WHITE CHAPEL ROABR D	14410.00	568.60	591.40	586.63	592.21		6.62	3028.96	850.81	0.36	
1	116157. WHITE CHAPEL ROABR D	16910.00	568.60	592.24	592.24	592.55		7.28	3521.24	1406.06	0.28	
1	116157. WHITE CHAPEL ROABR D	25480.00	568.60	592.91	592.91	593.63		6.77	5183.21	1516.39	0.29	
1	116157. WHITE CHAPEL ROABR U	9160.00	568.60	588.86	583.54	590.04	0.012678	8.89	909.67	64.02	0.34	4.98
1	116157. WHITE CHAPEL ROABR U	14410.00	568.60	592.03	586.63	592.21		6.98	3028.96	1342.38	0.27	
1	116157. WHITE CHAPEL ROABR U	16910.00	568.60	592.35	592.24	592.55		7.28	3521.24	1437.00	0.26	
1	116157. WHITE CHAPEL ROABR U	25480.00	568.60	593.36	592.90	593.63		6.77	5183.21	1551.91	0.23	
1	116186. CONFLUENCE OF TR	9160.00	569.00	590.07	582.47	590.35	0.001216	5.27	3529.59	1190.64	0.24	1.00
1	116186. CONFLUENCE OF TR	14410.00	569.00	592.03	585.82	592.21	0.000885	4.88	7429.15	1610.24	0.21	0.83
1	116186. CONFLUENCE OF TR	16910.00	569.00	592.35	588.41	592.55	0.001042	5.36	7935.86	1636.02	0.23	0.99
1	116186. CONFLUENCE OF TR	25480.00	569.00	593.36	590.25	593.63	0.001457	6.58	9619.95	1687.82	0.27	1.47
1	116737. X	9160.00	573.50	590.99		591.28	0.002684	5.65	2856.60	690.67	0.34	1.36
1	116737. X	14410.00	573.50	592.69		593.02	0.002584	6.24	4087.25	758.63	0.34	1.56
1	116737. X	16910.00	573.50	593.11		593.49	0.002924	6.81	4406.05	779.75	0.36	1.84
1	116737. X	25480.00	573.50	594.37		594.91	0.003745	8.29	5417.83	819.69	0.42	2.63
1	119599. Y	8640.00	578.90	596.77		597.07	0.001643	5.80	2756.51	483.40	0.28	1.25
1	119599. Y	13420.00	578.90	598.68		599.05	0.001845	6.73	3729.97	534.93	0.30	1.61
1	119599. Y	15770.00	578.90	599.52		599.92	0.001869	7.02	4186.05	548.32	0.31	1.72
1	119599. Y	23780.00	578.90	601.86		602.33	0.001991	7.93	5510.22	580.66	0.33	2.10
1	120595.	8640.00	582.60	598.22		598.33	0.001160	3.84	3608.06	563.57	0.22	0.62
1	120595.	13420.00	582.60	600.24		600.39	0.001178	4.40	4763.23	581.19	0.23	0.76
1	120595.	15770.00	582.60	601.09		601.26	0.001190	4.65	5263.39	587.91	0.23	0.83
1	120595.	23780.00	582.60	603.53		603.75	0.001268	5.41	6725.23	615.29	0.25	1.06
1	121319. Z	8670.00	583.63	598.99		599.17	0.001142	4.25	3507.06	722.25	0.23	0.72
1	121319. Z	13380.00	583.63	601.01		601.21	0.001122	4.75	5119.69	883.46	0.24	0.84
1	121319. Z	15720.00	583.63	601.86		602.07	0.001083	4.88	5896.71	927.06	0.24	0.87
1	121319. Z	23740.00	583.63	604.32		604.54	0.000987	5.23	8275.60	1012.17	0.23	0.94
1	122075.	8670.00	584.00	599.69		599.80	0.000635	3.23	4384.74	1009.78	0.19	0.36
1	122075.	13380.00	584.00	601.67		601.78	0.000529	3.36	6515.57	1124.24	0.18	0.36
1	122075.	15720.00	584.00	602.50		602.60	0.000498	3.42	7456.52	1146.94	0.17	0.36
1	122075.	23740.00	584.00	604.91		605.03	0.000464	3.73	10327.00	1270.51	0.17	0.41
1	122995. AA	8670.00	584.10	600.38		600.48	0.001024	4.11	4587.40	1206.83	0.23	0.57
1	122995. AA	13380.00	584.10	602.22		602.31	0.000740	3.91	6857.53	1250.47	0.20	0.49
1	122995. AA	15720.00	584.10	603.01		603.10	0.000676	3.91	7851.15	1264.73	0.20	0.48
1	122995. AA	23740.00	584.10	605.37		605.46	0.000564	4.01	10884.08	1308.26	0.18	0.48
1	124420. AB	8590.00	586.00	602.59		603.19	0.004596	8.06	1949.66	516.84	0.43	2.65
1	124420. AB	13170.00	586.00	603.88		604.57	0.005103	9.15	2645.67	566.75	0.47	3.29
1	124420. AB	15450.00	586.00	604.51		605.21	0.005031	9.40	3013.86	589.49	0.47	3.41
1	124420. AB	24430.00	586.00	606.61		607.36	0.004824	10.20	4313.82	650.63	0.47	3.82
1	126767. AC	8620.00	591.20	608.04		608.30	0.001450	5.24	3032.92	510.02	0.26	1.04
1	126767. AC	13160.00	591.20	609.88		610.21	0.001627	6.09	4006.28	539.36	0.29	1.34
1	126767. AC	15420.00	591.20	610.63		610.98	0.001714	6.47	4409.25	546.82	0.30	1.49
1	126767. AC	24450.00	591.20	613.07		613.54	0.002020	7.77	5773.27	571.39	0.33	2.04
1	130321. AD	8240.00	597.20	611.03		611.13	0.000600	3.80	4563.25	763.41	0.19	0.45
1	130321. AD	12620.00	597.20	613.08		613.19	0.000622	4.28	6215.14	850.82	0.20	0.54
1	130321. AD	14860.00	597.20	613.99		614.12	0.000657	4.58	7038.06	941.96	0.21	0.61
1	130321. AD	22730.00	597.20	616.66		616.81	0.000631	5.00	9644.35	1012.84	0.21	0.68
1	131289. CONFLUENCE OF TR	8170.00	598.50	611.74	607.42	612.23	0.002353	5.64	1520.25	306.77	0.35	1.14
1	131289. CONFLUENCE OF TR	12480.00	598.50	613.73	609.01	614.36	0.002411	6.53	2315.57	553.45	0.37	1.42
1	131289. CONFLUENCE OF TR	14700.										

HEC-RAS Plan: WC-Edit-Prop River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	131514. FM 1938 BR U	8170.00	598.62	612.74	608.19	613.73	0.008394	5.86	1394.15		0.27	1.91
1	131514. FM 1938 BR U	12480.00	598.62	612.74	609.84	616.05	0.019585	8.95	1394.15		0.42	4.45
1	131514. FM 1938 BR U	14700.00	598.62	617.53	610.59	617.70		10.49	1456.46	186.24	0.43	
1	131514. FM 1938 BR U	22520.00	598.62	619.94	619.43	620.11		9.36	3572.32	1199.79	0.27	
1	131592. AE	8170.00	598.62	613.32	608.13	613.73	0.002268	5.14	1589.09	603.80	0.32	1.13
1	131592. AE	12480.00	598.62	615.45	609.70	616.05	0.002454	6.24	2003.09	902.06	0.34	1.54
1	131592. AE	14700.00	598.62	617.53	610.43	617.69	0.000777	3.91	5425.41	988.56	0.20	0.57
1	131592. AE	22520.00	598.62	619.94	612.58	620.12	0.000682	4.13	8106.69	1250.22	0.19	0.60
1	131836.	8170.00	599.00	614.04	611.23	614.19	0.001154	4.11	3028.19	908.72	0.23	0.68
1	131836.	12480.00	599.00	616.37	612.03	616.51	0.000823	3.99	4422.94	998.75	0.20	0.60
1	131836.	14700.00	599.00	617.79	612.33	617.87	0.000441	3.15	7354.11	1060.40	0.15	0.36
1	131836.	22520.00	599.00	620.17	613.23	620.27	0.000424	3.44	9998.64	1156.65	0.15	0.41
1	132852.	8090.00	599.10	615.48		615.71	0.001982	5.35	2620.73	685.84	0.29	1.16
1	132852.	12370.00	599.10	617.40		617.59	0.001411	5.03	3979.10	755.90	0.25	0.97
1	132852.	14550.00	599.10	618.40		618.59	0.001206	4.89	4751.35	782.25	0.23	0.89
1	132852.	22250.00	599.10	620.73		620.93	0.001054	5.07	6638.66	825.11	0.22	0.91
1	133156.	8090.00	599.10	616.03		616.40	0.002576	6.74	2178.74	534.15	0.32	1.75
1	133156.	12370.00	599.10	617.80		618.13	0.002206	6.75	3153.41	572.43	0.30	1.69
1	133156.	14550.00	599.10	618.74		619.05	0.001941	6.58	3703.23	592.38	0.28	1.57
1	133156.	22250.00	599.10	621.02		621.37	0.001845	6.98	5131.02	658.89	0.28	1.70
1	133430. AF	8090.00	599.10	616.55		616.71	0.000610	3.41	2920.66	532.65	0.17	0.44
1	133430. AF	12370.00	599.10	618.24		618.45	0.000717	4.04	3846.27	561.60	0.19	0.59
1	133430. AF	14550.00	599.10	619.14		619.35	0.000712	4.19	4352.44	570.48	0.19	0.62
1	133430. AF	22250.00	599.10	621.39		621.67	0.000794	4.87	5666.07	594.01	0.21	0.80
1	133922.	8090.00	600.00	616.86		617.20	0.002199	6.20	2116.09	552.54	0.30	1.49
1	133922.	12370.00	600.00	618.59		618.90	0.001869	6.22	3159.17	652.51	0.29	1.43
1	133922.	14550.00	600.00	619.47		619.76	0.001571	5.93	3750.16	686.95	0.27	1.28
1	133922.	22250.00	600.00	621.74		622.03	0.001259	5.81	5323.57	701.43	0.24	1.17
1	134131.	8090.00	605.05	617.57		617.72	0.001330	3.74	2699.38	603.03	0.24	0.61
1	134131.	12370.00	605.05	619.18		619.36	0.001171	3.98	3700.86	637.06	0.23	0.65
1	134131.	14550.00	605.05	619.97		620.17	0.001088	4.05	4212.49	653.76	0.22	0.66
1	134131.	22250.00	605.05	622.15		622.39	0.001019	4.46	5678.94	691.94	0.22	0.75
1	135809.	8090.00	606.10	620.24	618.77	620.47	0.002181	4.77	2479.47	971.49	0.28	1.14
1	135809.	12370.00	606.10	621.52	619.53	621.75	0.001890	4.85	3502.47	1007.85	0.27	1.13
1	135809.	14550.00	606.10	622.14	619.79	622.38	0.001749	4.85	4001.89	1023.69	0.26	1.11
1	135809.	22250.00	606.10	624.08	620.53	624.34	0.001448	4.92	5589.99	1182.67	0.24	1.08
1	136244.	7910.00	606.45	620.78	614.34	620.96	0.000720	3.48	2355.39	715.97	0.20	0.41
1	136244.	12060.00	606.45	622.05	615.55	622.37	0.001065	4.61	2716.53	731.70	0.25	0.69
1	136244.	14240.00	606.45	622.65	616.12	623.04	0.001220	5.12	2888.59	739.20	0.27	0.83
1	136244.	21840.00	606.45	624.51	618.04	625.16	0.001668	6.62	3417.36	786.61	0.32	1.33
1	136354. BEAR CREEK PARKWBR D	7910.00	606.45	620.83	614.41	621.09	0.001519	4.09	1958.48	219.46	0.19	0.63
1	136354. BEAR CREEK PARKWBR D	12060.00	606.45	622.12	615.70	622.58	0.002479	5.46	2245.51	227.52	0.24	1.10
1	136354. BEAR CREEK PARKWBR D	14240.00	606.45	622.73	616.32	623.29	0.002957	6.07	2385.33	231.34	0.26	1.35
1	136354. BEAR CREEK PARKWBR D	21840.00	606.45	624.59	618.27	625.54	0.004481	7.87	2827.90	243.04	0.32	2.20
1	136354. BEAR CREEK PARKWBR U	7910.00	606.45	621.05	614.23	621.26	0.001311	3.72	2125.67	220.80	0.17	0.53
1	136354. BEAR CREEK PARKWBR U	12060.00	606.45	622.48	615.40	622.85	0.002091	4.93	2447.51	229.76	0.22	0.90
1	136354. BEAR CREEK PARKWBR U	14240.00	606.45	623.16	615.97	623.62	0.002467	5.47	2606.07	234.04	0.24	1.10
1	136354. BEAR CREEK PARKWBR U	21840.00	606.45	625.27	617.73	626.04	0.003619	7.01	3115.08	247.31	0.28	1.76
1	136466. AG	7910.00	606.45	621.16	614.15	621.30	0.000538	3.05	2616.38	1038.94	0.17	0.31
1	136466. AG	12060.00	606.45	622.67	615.33	622.92	0.000756	3.99	3048.07	1170.60	0.21	0.51
1	136466. AG	14240.00	606.45	623.40	615.87	623.70	0.000848	4.41	3255.90	1182.53	0.23	0.61
1	136466. AG	21840.00	606.45	625.67	617.49	626.16	0.001097	5.64	3902.07	1222.80	0.27	0.94
1	136749.	7910.00	610.00	621.20	617.49	621.88	0.003774	6.94	1275.66	566.83	0.41	2.01
1	136749.	12060.00	610.00	622.79	619.59	623.57	0.003645	7.60	1796.51	640.59	0.41	2.29
1	136749.	14240.00	610.00	623.56	621.31	624.35	0.003443	7.74	2082.49	676.90	0.40	2.32
1	136749.	21840.00	610.00	625.94	622.90	626.74	0.002680	7.75	3165.55	889.90	0.37	2.18
1	137197.	7910.00	608.70	622.50	617.38	622.88	0.001577	5.25	1686.30	469.12	0.30	0.92
1	137197.	12060.00	608.70	624.09	620.09	624.59	0.001815	6.22	2235.45	561.09	0.32	1.23
1	137197.	14240.00	608.70	624.80	620.79	625.34	0.001834	6.51	2521.27	590.26	0.33	1.33
1	137197.	21840.00	608.70	626.91	622.67	627.57	0.001788	7.16	3432.92	635.11	0.33	1.52
1	137763.	7910.00	616.00	623.50		623.73	0.001473	4.21	2161.00	582.63	0.28	0.65
1	137763.	12060.00	616.00	625.16		625.39	0.001161	4.30	3227.25	707.98	0.25	0.63
1	137763.	14240.00	616.00	625.87		626.11	0.001053	4.31	3738.94	740.37	0.25	0.62
1	137763.	21840.00	616.00	627.99		628.25	0.000851	4.43	5409.26	843.08	0.23	0.61
1	138002.	7910.00	616.00	623.83		624.04	0.001161	3.82	2295.75	581.26	0.25	0.53
1	138002.	12060.00	616.00	625.43		625.66	0.001045	4.13	3303.34	679.70	0.24	0.58
1	138002.	14240.00	616.00	626.11		626.35	0.001017	4.28	3786.40	734.91	0.24	0.61
1	138002.	21840.00	616.00	628.19		628.45	0.000868	4.50	5403.07	825.20	0.23	0.63
1	138382.	7910.00	610.20	623.94	623.02	625.29	0.007366	10.04	1044.33	347.23	0.57	4.14
1	138382.	12060.00	610.20	625.55		626.77	0.006379	10.36	1733.37	491.13	0.55	4.19
1	138382.	14240.00	610.20	626.28		627.39	0.005750	10.26	2106.94	541.55	0.52	4.02
1	138382.	21840.00	610.20	628.41		629.27	0.004175	9.75	3511.44	778.46	0.46	3.44
1	138892.	7910.00	610.80	626.90	625.50	627.38	0.002517	6.80	1620.35	580.17	0.34	1.76
1	138892.	12060.00	610.80	628.13	626.71	628.59	0.002276	6.88	2440.19	743.55	0.33	1.75
1	138892.	14240.00	610.80	628.63		629.09	0.002216	6.95	2827.00	802.19	0.32	1.77
1	138892.	21840.00	610.80	630.16		630.63	0.002003	7.08	4175.22	942.64	0.31	1.77
1	139185. AH	7910.00	611.20	627.59		628.22	0.003267	7.15	1278.79	281.78	0.37	2.03
1	139185. AH	12060.00	611.20	628.63		629.56	0.004166	8.55	1594.69	328.59	0.42	2.82
1	139185. AH	14240.00	611.20	629.04		630.13	0.004647	9.23	1738.92	371.72	0.45	3.25
1	139185. AH	21840.00	611.20	630.36	629.19</							

HEC-RAS Plan: WC-Edit-Prop River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	152554.	13740.00	640.50	656.88	655.66	658.04	0.004795	9.91	1804.08	510.97	0.53	3.16
1	152735. AM	4690.00	640.75	655.47	647.98	655.62	0.000445	3.12	1568.46	295.12	0.17	0.26
1	152735. AM	7320.00	640.75	656.73	649.43	656.98	0.000664	4.13	2059.67	350.21	0.22	0.44
1	152735. AM	8580.00	640.75	657.22	650.01	657.51	0.000762	4.55	2234.47	367.43	0.23	0.53
1	152735. AM	12430.00	640.75	658.15	651.48	658.63	0.001147	5.88	2591.39	529.87	0.29	0.86
1	152814. RUFESNOW BR D	4690.00	640.75	655.49	648.07	655.66	0.000771	3.35	1440.35	170.83	0.15	0.34
1	152814. RUFESNOW BR D	7320.00	640.75	656.13	649.51	656.98	0.003114	4.88	1550.43		0.22	0.84
1	152814. RUFESNOW BR D	8580.00	640.75	656.13	650.08	657.51	0.004278	5.72	1550.43		0.25	1.15
1	152814. RUFESNOW BR D	12430.00	640.75	656.13	651.63	658.63	0.008979	8.28	1550.43		0.37	2.41
1	152814. RUFESNOW BR U	4690.00	640.75	655.59	647.22	655.70	0.000646	2.76	1699.81	170.82	0.13	0.28
1	152814. RUFESNOW BR U	7320.00	640.75	656.13	648.49	657.27	0.002704	4.08	1792.81		0.18	0.72
1	152814. RUFESNOW BR U	8580.00	640.75	656.13	649.00	657.96	0.003715	4.79	1792.81		0.22	1.00
1	152814. RUFESNOW BR U	12430.00	640.75	656.13	650.46	659.71	0.007796	6.93	1792.81		0.31	2.09
1	152870.	4690.00	640.75	655.66	646.95	655.73	0.000231	2.22	2122.00	520.79	0.12	0.16
1	152870.	7320.00	640.75	657.12	647.95	657.27	0.000370	3.06	2407.91	714.79	0.15	0.29
1	152870.	8580.00	640.75	657.78	648.37	657.96	0.000429	3.41	2535.34	920.95	0.17	0.35
1	152870.	12430.00	640.75	659.41	649.58	659.71	0.000609	4.39	2852.98	1397.06	0.20	0.56
1	152953.	4690.00	641.20	655.66	650.07	655.79	0.000715	3.25	1847.23	751.13	0.20	0.37
1	152953.	7320.00	641.20	657.15	651.69	657.33	0.000778	3.78	2490.08	832.52	0.21	0.47
1	152953.	8580.00	641.20	657.82	653.07	658.01	0.000781	3.96	2777.46	951.67	0.21	0.51
1	152953.	12430.00	641.20	659.55	654.37	659.78	0.000806	4.45	3521.88	1420.46	0.22	0.61
1	153133.	4690.00	641.50	655.81	652.08	655.94	0.000978	3.42	1881.89	740.63	0.22	0.43
1	153133.	7320.00	641.50	657.33	653.90	657.47	0.000833	3.59	2914.02	902.43	0.21	0.44
1	153133.	8580.00	641.50	658.01	654.42	658.15	0.000763	3.60	3428.25	950.80	0.21	0.44
1	153133.	12430.00	641.50	659.78	655.15	659.92	0.000654	3.74	5139.68	1367.85	0.20	0.45
1	153207.	4690.00	641.95	655.88	649.54	656.01	0.000782	3.26	2027.86	654.68	0.19	0.44
1	153207.	7320.00	641.95	657.41	651.25	657.53	0.000704	3.43	3204.94	890.91	0.18	0.46
1	153207.	8580.00	641.95	658.09	651.95	658.21	0.000638	3.40	3842.84	1009.47	0.18	0.44
1	153207.	12430.00	641.95	659.87	655.02	659.98	0.000514	3.36	6080.92	1484.21	0.16	0.41
1	153220. TRAILBRIDGE BR D	4690.00	641.95	655.98	649.54	656.04	0.001491	1.82	1128.25	105.53	0.09	0.76
1	153220. TRAILBRIDGE BR D	7320.00	641.95	657.57	651.25	657.57	0.004635	0.00	1239.56	34.55	0.00	1.71
1	153220. TRAILBRIDGE BR D	8580.00	641.95	658.25	651.95	658.25	0.007363	0.00	1252.69	4.53	0.00	2.39
1	153220. TRAILBRIDGE BR D	12430.00	641.95	659.90	655.17	659.99	0.000925	2.13	5935.56	1488.25	0.10	0.24
1	153220. TRAILBRIDGE BR U	4690.00	641.95	655.99	649.54	656.04	0.001494	1.82	1126.35	105.43	0.09	0.76
1	153220. TRAILBRIDGE BR U	7320.00	641.95	657.57	651.25	657.57	0.004643	0.00	1237.41	34.55	0.00	1.71
1	153220. TRAILBRIDGE BR U	8580.00	641.95	658.25	651.95	658.25	0.007376	0.00	1250.54	4.53	0.00	2.40
1	153220. TRAILBRIDGE BR U	12430.00	641.95	659.92	655.07	660.00	0.001200	2.43	5859.66	1564.04	0.09	0.31
1	153234.	4690.00	641.95	655.94	649.54	656.10	0.000884	3.48	1926.22	647.69	0.20	0.50
1	153234.	7320.00	641.95	657.50	651.25	657.65	0.000821	3.72	3119.16	851.91	0.20	0.54
1	153234.	8580.00	641.95	658.18	651.95	658.32	0.000756	3.72	3739.78	976.26	0.19	0.53
1	153234.	12430.00	641.95	659.91	655.03	660.03	0.000631	3.73	5975.03	1562.23	0.18	0.51
1	153278.	4690.00	643.00	655.97		656.16	0.001356	3.82	1743.26	602.18	0.24	0.64
1	153278.	7320.00	643.00	657.54		657.69	0.001046	3.79	3132.35	1125.47	0.22	0.59
1	153278.	8580.00	643.00	658.23		658.36	0.000890	3.67	3943.55	1232.92	0.21	0.54
1	153278.	12430.00	643.00	659.97		660.06	0.000626	3.43	6342.14	1480.21	0.18	0.45
1	153650.	4690.00	644.87	656.62		656.88	0.002900	5.15	1605.48	749.89	0.34	1.20
1	153650.	7320.00	644.87	658.02		658.19	0.001870	4.67	2745.67	872.85	0.28	0.93
1	153650.	8580.00	644.87	658.63		658.79	0.001592	4.51	3295.01	924.56	0.26	0.85
1	153650.	12430.00	644.87	660.24		660.37	0.001143	4.27	4968.08	1214.95	0.23	0.72
1	154117.	4690.00	645.52	657.77		658.30	0.003000	6.25	1081.67	618.97	0.40	1.41
1	154117.	7320.00	645.52	658.82		659.35	0.003019	6.83	1828.25	810.47	0.40	1.61
1	154117.	8580.00	645.52	659.32		659.79	0.002729	6.73	2242.21	843.12	0.39	1.54
1	154117.	12430.00	645.52	660.74		661.10	0.002044	6.40	3535.64	984.75	0.34	1.33
1	155095. AN	4690.00	648.00	660.79		661.40	0.003460	6.74	919.96	269.12	0.42	1.63
1	155095. AN	7320.00	648.00	661.94		662.78	0.004314	8.24	1248.42	304.25	0.48	2.34
1	155095. AN	8580.00	648.00	662.28		663.30	0.005012	9.11	1357.84	332.83	0.53	2.82
1	155095. AN	12430.00	648.00	663.05	661.90	664.67	0.007418	11.69	1666.47	466.12	0.65	4.52
1	155538.	4360.00	649.00	662.28		662.90	0.003280	6.88	1019.29	420.30	0.41	1.66
1	155538.	6850.00	649.00	663.81		664.39	0.002980	7.32	1725.11	489.78	0.41	1.78
1	155538.	8070.00	649.00	664.43		665.00	0.002870	7.47	2038.25	514.59	0.40	1.82
1	155538.	11410.00	649.00	666.10		666.67	0.002711	8.00	3258.70	931.82	0.40	1.99
1	155660.	4360.00	650.15	662.93	657.67	663.24	0.001403	4.85	1332.10	476.16	0.28	0.80
1	155660.	6850.00	650.15	664.32	659.54	664.70	0.001667	5.79	2135.68	693.11	0.31	1.08
1	155660.	8070.00	650.15	664.91	660.93	665.31	0.001668	6.00	2562.65	732.67	0.31	1.14
1	155660.	11410.00	650.15	666.63	663.10	666.96	0.001388	6.01	4107.78	1068.35	0.29	1.09
1	155676. TRAILBRIDGE BR D	4360.00	650.15	663.05	657.67	663.29	0.005256	4.44	1265.50	508.79	0.19	0.97
1	155676. TRAILBRIDGE BR D	6850.00	650.15	664.58	659.51	664.79	0.004331	4.47	2195.13	713.94	0.17	0.93
1	155676. TRAILBRIDGE BR D	8070.00	650.15	665.21	660.26	665.40	0.003684	4.29	2656.41	750.86	0.16	0.84
1	155676. TRAILBRIDGE BR D	11410.00	650.15	666.89	663.35	667.04	0.002584	3.94	4271.70	1124.04	0.14	0.68
1	155676. TRAILBRIDGE BR U	4360.00	650.15	663.04	657.93	663.40	0.007008	5.43	1105.51	395.50	0.23	1.41
1	155676. TRAILBRIDGE BR U	6850.00	650.15	664.58	660.05	664.87	0.005810	5.44	2030.98	762.62	0.20	1.35
1	155676. TRAILBRIDGE BR U	8070.00	650.15	665.22	662.93	665.46	0.005079	5.27	2527.72	809.90	0.18	1.24
1	155676. TRAILBRIDGE BR U	11410.00	650.15	666.91	663.90	667.07	0.003246	4.60	4034.39	1037.71	0.14	0.91
1	155692.	4360.00	650.15	663.04	657.93	663.47	0.001784	5.76	1211.43	394.31	0.31	1.09
1	155692.	6850.00	650.15	664.51	661.04	665.01	0.002066	6.75	2081.26	754.21	0.34	1.44
1	155692.	8070.00	650.15	665.12	662.22	665.62	0.002086	7.01	2556.29	803.35	0.35	1.53
1	155692.	11410.00	650.15	666.82	663.97	667.21	0.001683	6.85	4050.60	1014.43	0.32	1.40
1	155743.	4360.00	651.01	663.45	656.77	663.60	0.000550	3.36	1998.15	564.36	0.18	0.36
1	155743.	6850.00	651									

HEC-RAS Plan: WC-Edit-Prop River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	160637.	6870.00	663.42	675.62	674.88	676.05	0.003256	6.66	1834.08	1138.26	0.41	1.58
1	160637.	8100.00	663.42	676.01	675.11	676.37	0.002792	6.37	2303.49	1205.47	0.39	1.42
1	160637.	11460.00	663.42	676.80	675.97	677.10	0.002363	6.22	3271.45	1254.86	0.36	1.32
1	160668. BEAR CREEK PARKW	Culvert										
1	160698.	4370.00	663.42	674.59	672.23	675.24	0.005005	6.67	776.14	347.00	0.49	1.77
1	160698.	6870.00	663.42	674.81	674.49	676.20	0.010458	9.89	853.90	374.45	0.71	3.83
1	160698.	8100.00	663.42	675.37	675.37	676.67	0.009270	9.88	1107.02	618.54	0.68	3.71
1	160698.	11460.00	663.42	676.50	676.50	677.41	0.006588	9.26	2160.07	1061.79	0.59	3.09
1	160706.	4370.00	665.76	674.32	673.67	675.61	0.007944	9.51	538.63	197.84	0.68	2.88
1	160706.	6870.00	665.76	676.00	676.00	676.85	0.004908	8.75	1418.40	904.58	0.56	2.25
1	160706.	8100.00	665.76	676.29	676.29	677.16	0.005128	9.17	1694.06	1021.21	0.58	2.44
1	160706.	11460.00	665.76	676.87	676.87	677.73	0.005365	9.84	2315.79	1099.81	0.60	2.75
1	161050.	4370.00	665.00	676.64		676.92	0.002029	4.53	1267.21	584.06	0.34	0.67
1	161050.	6870.00	665.00	677.63		677.94	0.002262	5.07	1947.34	778.84	0.37	0.82
1	161050.	8100.00	665.00	677.95		678.28	0.002343	5.34	2202.68	825.05	0.38	0.89
1	161050.	11460.00	665.00	678.53		678.95	0.002799	6.19	2725.21	955.31	0.42	1.17
1	161291. AR	4370.00	666.00	677.09		677.41	0.002029	4.62	1042.88	405.68	0.35	0.69
1	161291. AR	6870.00	666.00	678.10		678.51	0.002521	5.53	1674.39	740.58	0.39	0.96
1	161291. AR	8100.00	666.00	678.42		678.87	0.002630	5.84	1927.63	810.59	0.40	1.05
1	161291. AR	11460.00	666.00	679.08		679.64	0.003167	6.84	2502.85	949.18	0.45	1.40
1	161493.	3870.00	667.19	677.50	672.74	677.72	0.000951	3.89	1342.50	804.00	0.27	0.37
1	161493.	6130.00	667.19	678.68	674.63	678.85	0.000775	3.93	2470.11	1054.13	0.25	0.36
1	161493.	7270.00	667.19	679.04	675.36	679.22	0.000781	4.07	2861.97	1099.85	0.26	0.38
1	161493.	10330.00	667.19	679.86	677.94	680.04	0.000800	4.40	3805.60	1205.64	0.26	0.43
1	161526. WHITLEY ROAD	Culvert										
1	161559.	3870.00	667.65	677.90	672.88	678.08	0.000776	3.64	1583.44	718.98	0.25	0.32
1	161559.	6130.00	667.65	678.64	674.44	678.93	0.001153	4.75	2214.20	993.25	0.31	0.53
1	161559.	7270.00	667.65	678.98	675.15	679.30	0.001249	5.10	2561.47	1046.24	0.32	0.60
1	161559.	10330.00	667.65	679.74	677.73	680.11	0.001447	5.84	3409.35	1182.01	0.35	0.76
1	161717.	3870.00	668.30	678.05	672.23	678.19	0.000477	3.05	1270.55	221.95	0.20	0.22
1	161717.	6130.00	668.30	678.80	673.40	679.10	0.000894	4.38	1400.35	288.30	0.27	0.44
1	161717.	7270.00	668.30	679.14	673.94	679.52	0.001109	4.98	1459.90	390.02	0.31	0.56
1	161717.	10330.00	668.30	679.86	675.09	680.51	0.001740	6.51	1587.81	796.57	0.39	0.93
1	161833.	3870.00	668.70	678.09	673.13	678.27	0.000664	3.36	1152.78	171.49	0.23	0.27
1	161833.	6130.00	668.70	678.88	674.21	679.23	0.001200	4.75	1290.90	187.76	0.31	0.53
1	161833.	7270.00	668.70	679.24	674.69	679.69	0.001466	5.36	1355.58	195.23	0.35	0.67
1	161833.	10330.00	668.70	680.03	675.92	680.76	0.002208	6.89	1500.06	365.93	0.43	1.08
1	161947.	3870.00	668.57	678.19	672.41	678.33	0.000471	2.99	1293.52	176.89	0.19	0.21
1	161947.	6130.00	668.57	679.08	673.54	679.35	0.000845	4.22	1452.68	183.77	0.26	0.41
1	161947.	7270.00	668.57	679.49	674.03	679.84	0.001027	4.76	1528.54	191.01	0.29	0.51
1	161947.	10330.00	668.57	680.42	675.21	680.99	0.001503	6.06	1705.68	331.64	0.36	0.81
1	162070.	3870.00	669.05	678.22	673.70	678.43	0.000840	3.64	1063.97	167.65	0.25	0.33
1	162070.	6130.00	669.05	679.13	674.81	679.52	0.001418	5.03	1218.92	175.00	0.34	0.60
1	162070.	7270.00	669.05	679.55	675.34	680.04	0.001682	5.62	1293.08	178.42	0.37	0.74
1	162070.	10330.00	669.05	680.51	676.59	681.27	0.002357	7.04	1467.81	197.24	0.44	1.13
1	162213. AS	3870.00	670.26	678.28	675.18	678.74	0.002214	5.47	707.26	122.48	0.40	0.77
1	162213. AS	6130.00	670.26	679.20	676.50	680.06	0.003605	7.44	823.70	129.72	0.52	1.37
1	162213. AS	7270.00	670.26	679.62	677.13	680.69	0.004217	8.27	879.31	134.31	0.57	1.67
1	162213. AS	10330.00	670.26	680.58	678.58	682.20	0.005767	10.23	1009.99	161.30	0.67	2.49
1	162291. U.S. ROUTE 377 BR D	3870.00	670.26	678.44	675.33	678.93	0.003008	5.60	691.63	119.16	0.41	0.85
1	162291. U.S. ROUTE 377 BR D	6130.00	670.26	679.20	676.71	680.06	0.005299	7.83	783.27	122.42	0.46	1.63
1	162291. U.S. ROUTE 377 BR D	7270.00	670.26	679.62	677.34	680.69	0.008358	8.73	833.10	84.86	0.50	2.15
1	162291. U.S. ROUTE 377 BR D	10330.00	670.26	682.15	678.82	683.06		10.39			0.62	
1	162291. U.S. ROUTE 377 BR U	3870.00	670.26	678.79	675.32	679.22	0.002550	5.28	732.95	120.69	0.32	0.75
1	162291. U.S. ROUTE 377 BR U	6130.00	670.26	679.92	676.71	681.39	0.009082	7.25	845.88		0.41	1.66
1	162291. U.S. ROUTE 377 BR U	7270.00	670.26	679.92	677.35	682.08	0.012774	8.59	845.88		0.49	2.34
1	162291. U.S. ROUTE 377 BR U	10330.00	670.26	682.15	678.82	683.23		10.43			0.62	
1	162391.	3870.00	670.26	678.88	675.18	679.26	0.001665	4.95	781.92	127.17	0.35	0.61
1	162391.	6130.00	670.26	680.87	676.51	681.39	0.001819	5.84	1050.45	142.75	0.38	0.80
1	162391.	7270.00	670.26	681.45	677.13	682.08	0.002051	6.41	1134.81	196.36	0.41	0.95
1	162391.	10330.00	670.26	682.15	678.59	683.24	0.003163	8.33	1241.04	268.99	0.51	1.57
1	162465.	3870.00	671.30	679.00	675.70	679.39	0.001837	4.98	777.89	137.52	0.37	0.63
1	162465.	6130.00	671.30	681.03	677.00	681.54	0.001796	5.72	1071.34	337.26	0.38	0.78
1	162465.	7270.00	671.30	681.64	677.57	682.24	0.001967	6.24	1164.39	462.06	0.40	0.91
1	162465.	10330.00	671.30	682.51	678.94	683.49	0.002910	7.94	1300.75	986.38	0.49	1.43
1	162570.	3870.00	672.50	678.78	678.14	680.03	0.009931	8.98	431.14	111.47	0.80	2.34
1	162570.	6130.00	672.50	680.84	679.54	682.09	0.006818	8.95	684.65	134.01	0.70	2.12
1	162570.	7270.00	672.50	681.43	680.15	682.83	0.006868	9.51	764.65	137.40	0.71	2.33
1	162570.	10330.00	672.50	682.16	681.47	684.37	0.009537	11.93	866.23	141.59	0.85	3.55
1	162663.	2230.00	672.50	680.42	676.73	680.68	0.001407	4.09	549.90	259.58	0.31	0.44
1	162663.	3620.00	672.50	682.28	678.17	682.64	0.001343	4.88	750.06	661.50	0.32	0.57
1	162663.	4370.00	672.50	682.99	678.83	683.43	0.001421	5.35	826.67	966.32	0.34	0.66
1	162663.	6210.00	672.50	684.61	680.01	685.21	0.001524	6.27	1001.50	1692.74	0.36	0.86
1	162709. UNION PACIFIC RABR D	2230.00	672.50	680.45	676.96	680.79	0.003791	4.65	479.12	82.00	0.29	0.69
1	162709. UNION PACIFIC RABR D	3620.00	672.50	682.27	678.35	682.79	0.004772	5.76	628.51	82.00	0.32	1.00
1	162709. UNION PACIFIC RABR D	4370.00	672.50	682.97	679.06	683.60	0.005520	6.38	685.46	82.00	0.35	1.21
1	162709. UNION PACIFIC RABR D	6210.00	672.50	684.61	680.25	685.21	0.006979	7.58	819.66	82.00	0.38	1.66
1	162709. UNION PACIFIC RABR U	2230.00	672.50	680.59	676.68	680.84	0.002386	4.03	553.58	82.00	0.25	0.49
1	162709. UNION PACIFIC RABR U	3620.00	672.50	682.45	677.77	682.86	0.003300	5.13	706.18	82.00		

HEC-RAS Plan: WC-Edit-Prop River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	163228.	2230.00	674.32	682.28	678.58	682.54	0.001068	4.27	713.30	374.09	0.29	0.44
1	163228.	3620.00	674.32	683.36	679.93	683.66	0.001200	4.99	1229.52	518.70	0.32	0.57
1	163228.	4370.00	674.32	684.13	680.62	684.38	0.000961	4.76	1656.20	575.43	0.29	0.50
1	163228.	6210.00	674.32	686.69	682.99	686.79	0.000372	3.53	3870.88	1446.06	0.19	0.25
1	163276. CHISHOLM	Culvert										
1	163323.	2230.00	674.32	682.56	678.70	682.82	0.001528	4.21	597.95	149.80	0.28	0.66
1	163323.	3620.00	674.32	683.43	679.90	683.93	0.002560	5.88	779.83	298.47	0.37	1.24
1	163323.	4370.00	674.32	684.02	680.52	684.54	0.002566	6.18	991.03	429.47	0.37	1.33
1	163323.	6210.00	674.32	686.65	682.17	686.85	0.000930	4.46	2507.81	840.45	0.24	0.63
1	163618.	2230.00	678.09	683.28	683.28	684.79	0.025436	9.87	225.93	74.28	1.00	4.77
1	163618.	3620.00	678.09	684.85	684.85	686.03	0.014513	9.15	467.98	209.64	0.79	3.70
1	163618.	4370.00	678.09	685.25	685.25	686.48	0.014318	9.53	556.41	228.31	0.80	3.92
1	163618.	6210.00	678.09	686.94	686.04	687.70	0.006540	7.90	1001.42	301.57	0.57	2.43
1	164471. AU	2040.00	682.94	689.71		689.84	0.002321	2.86	712.38	251.30	0.30	0.41
1	164471. AU	3290.00	682.94	690.62		690.80	0.002702	3.44	955.69	286.63	0.33	0.56
1	164471. AU	3990.00	682.94	691.04		691.25	0.002715	3.70	1085.65	350.43	0.34	0.63
1	164471. AU	5690.00	682.94	691.52		691.85	0.003615	4.61	1284.14	456.89	0.40	0.94
1	165167.	2040.00	685.47	691.32		691.49	0.002404	3.53	664.15	312.22	0.38	0.40
1	165167.	3290.00	685.47	692.28		692.48	0.002168	3.80	989.68	383.53	0.37	0.44
1	165167.	3990.00	685.47	692.68		692.89	0.002086	4.02	1161.23	495.09	0.37	0.47
1	165167.	5690.00	685.47	693.42		693.68	0.001997	4.45	1607.93	670.52	0.37	0.55
1	166259.	2040.00	691.60	695.86	695.86	696.35	0.007576	7.11	535.31	503.12	0.69	1.54
1	166259.	3290.00	691.60	696.27	696.22	696.90	0.009562	8.63	766.69	702.16	0.79	2.19
1	166259.	3990.00	691.60	696.54	696.54	697.09	0.008523	8.53	960.53	782.00	0.76	2.09
1	166259.	5690.00	691.60	697.00	696.87	697.51	0.007597	8.67	1354.63	897.33	0.73	2.08
1	167796. AV	1910.00	696.81	701.42		701.55	0.001974	3.82	856.15	558.28	0.36	0.43
1	167796. AV	3090.00	696.81	702.13		702.27	0.001857	4.19	1286.27	648.66	0.36	0.49
1	167796. AV	3730.00	696.81	702.44		702.60	0.002047	4.61	1507.05	773.56	0.38	0.58
1	167796. AV	5310.00	696.81	702.98		703.17	0.002304	5.26	1953.63	947.46	0.41	0.73
1	169721.	1910.00	703.50	706.70		706.94	0.005572	4.54	558.82	409.94	0.51	0.87
1	169721.	3090.00	703.50	707.29		707.58	0.006190	5.50	870.07	654.31	0.55	1.19
1	169721.	3730.00	703.50	707.66	706.79	707.93	0.005408	5.55	1156.64	936.55	0.53	1.17
1	169721.	5310.00	703.50	708.19	707.42	708.44	0.004560	5.61	1728.02	1163.04	0.49	1.14
1	171043.	1910.00	709.21	712.49		712.59	0.003540	3.07	847.99	742.03	0.42	0.36
1	171043.	3090.00	709.21	712.97		713.09	0.003150	3.44	1211.79	778.34	0.42	0.42
1	171043.	3730.00	709.21	713.14		713.29	0.003314	3.72	1352.15	797.19	0.43	0.47
1	171043.	5310.00	709.21	713.55		713.74	0.003791	4.43	1699.57	959.33	0.48	0.64
1	171959. AW	1310.00	712.69	715.74		715.89	0.003880	3.67	479.28	365.63	0.46	0.48
1	171959. AW	2080.00	712.69	716.16		716.38	0.004653	4.57	650.93	489.11	0.52	0.70
1	171959. AW	2460.00	712.69	716.45		716.69	0.004638	4.91	814.49	661.45	0.53	0.78
1	171959. AW	3490.00	712.69	716.92		717.15	0.003833	4.97	1141.23	716.18	0.49	0.76
1	172618.	1310.00	714.15	718.38	717.23	718.42	0.001188	2.38	928.18	947.96	0.26	0.19
1	172618.	2080.00	714.15	718.45	717.78	718.54	0.002596	3.58	976.46	956.54	0.39	0.42
1	172618.	2460.00	714.15	718.68	718.02	718.73	0.001284	2.49	1551.30	991.23	0.27	0.21
1	172618.	3490.00	714.15	718.83	718.22	718.91	0.002099	3.31	1703.28	1024.57	0.35	0.36
1	172649. GOLDEN TRIANGLE	Culvert										
1	172679.	1310.00	713.12	719.36	716.14	719.46	0.000583	2.69	558.55	915.23	0.20	0.19
1	172679.	2080.00	713.12	719.73	716.76	719.78	0.000441	2.44	1613.10	963.94	0.18	0.15
1	172679.	2460.00	713.12	719.98	717.04	720.03	0.000459	2.57	1795.81	1019.94	0.18	0.17
1	172679.	3490.00	713.12	720.44	717.46	720.50	0.000569	3.00	2134.35	1120.58	0.21	0.22
1	172970.	1310.00	714.40	719.75	719.75	720.28	0.006467	6.64	330.18	333.92	0.64	1.34
1	172970.	2080.00	714.40	720.15	720.15	720.78	0.007716	7.81	468.06	354.13	0.71	1.79
1	172970.	2460.00	714.40	720.33	720.33	720.99	0.007958	8.19	532.95	364.03	0.73	1.93
1	172970.	3490.00	714.40	720.74	720.74	721.49	0.008678	9.13	688.77	396.63	0.77	2.32
1	173159.	1310.00	715.50	721.03		721.14	0.002726	3.48	585.14	384.31	0.33	0.57
1	173159.	2080.00	715.50	721.64		721.77	0.002872	3.98	856.62	531.16	0.35	0.71
1	173159.	2460.00	715.50	721.85		721.98	0.002889	4.13	970.60	553.62	0.35	0.75
1	173159.	3490.00	715.50	722.37		722.51	0.002836	4.41	1270.05	607.88	0.36	0.82
1	173457.	1310.00	715.80	721.82		721.98	0.004053	4.35	521.49	431.42	0.40	0.88
1	173457.	2080.00	715.80	722.41		722.56	0.003547	4.50	798.32	520.03	0.39	0.90
1	173457.	2460.00	715.80	722.61		722.77	0.003524	4.62	905.34	538.54	0.39	0.93
1	173457.	3490.00	715.80	723.12		723.30	0.003715	5.11	1206.82	667.76	0.41	1.10
1	173534.	1310.00	715.77	722.10	722.10	722.69	0.004835	6.82	338.14	388.49	0.56	1.30
1	173534.	2080.00	715.77	722.64	722.64	723.19	0.004951	7.44	569.82	463.34	0.58	1.48
1	173534.	2460.00	715.77	722.77	722.77	723.39	0.005540	8.01	635.34	479.17	0.62	1.70
1	173534.	3490.00	715.77	723.30	723.16	723.86	0.005227	8.30	915.24	577.99	0.61	1.77
1	173558. ALTA VISTA ROAD	Culvert										
1	173582.	1310.00	715.77	722.68	721.19	723.28	0.003852	6.60	317.82	381.43	0.51	1.16
1	173582.	2080.00	715.77	723.24	723.24	723.85	0.004294	7.46	559.53	473.04	0.55	1.44
1	173582.	2460.00	715.77	723.44	723.44	724.07	0.004477	7.80	662.83	537.03	0.57	1.55
1	173582.	3490.00	715.77	723.68	723.68	724.57	0.006544	9.69	802.60	624.92	0.69	2.36
1	173663.	1310.00	718.10	723.14	722.53	723.70	0.006725	6.21	268.76	252.20	0.63	1.22
1	173663.	2080.00	718.10	723.74	723.74	724.34	0.006666	6.98	475.90	437.90	0.65	1.45
1	173663.	2460.00	718.10	723.92	723.92	724.55	0.006900	7.34	558.52	474.99	0.67	1.58
1	173663.	3490.00	718.10	724.81		725.12	0.003437	5.97	1184.57	839.36	0.49	0.97
1	174096.	1310.00	719.56	724.99		725.11	0.001839	2.86	489.11	313.52	0.32	0.28
1	174096.	2080.00	719.56	725.64		725.80	0.001942	3.35	726.37	422.07	0.34	0.35
1	174096.	2460.00	719.56	725.88		726.06	0.002019	3.57	861.98	703.28	0.36	0.39
1	174096.	3490.00	719.56	726.17		726.42	0.002677	4.36	1076.44	782.76	0.42	0.57
1	174881. AX	1310.00	725.30	727.74		727.97	0.010618	4.41	355.17	339.38	0.70	0.82
1	174881. AX	2080.00	725.30	728.24		728.50	0.007963	4.79	536.51	384.11	0.64	0.86
1	174881. AX	2460.00	725.30	728.47		728.74	0.007191	4.93	626.19	412.64	0.62	0.88
1	174881. AX	3490.00	725.30	729.04		729.33	0.005704	5.20	881.31	481.90	0.57	0.90
1	176010.	1310.00	730.00	732.88		732.93	0.002459	2.73	806.38	806.22	0.35	0.28
1	176010.	2080.00	730.00	733.24		733.30	0.002725	3.23	1109.06	859.24	0.38	0.37
1	176010.	2460.00	730.00	733.37		733.44	0.002810	3.41	1221.48	869.46	0.39	0.40
1	176010.	3490.00	730.00	733.68		733.77	0.002998	3.83	1494.83	893.87	0.41	0.48

HEC-RAS Plan: WC-Edit-Prop River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	176659.	1310.00	731.10	736.41	736.41	736.56	0.005858	5.12	542.67	615.15	0.55	0.88
1	176659.	2080.00	731.10	736.43	736.43	736.79	0.013699	7.85	558.97	624.18	0.85	2.08
1	176659.	2460.00	731.10	736.57	736.49	736.92	0.013757	8.00	647.57	695.18	0.85	2.14
1	176659.	3490.00	731.10	736.91	736.80	737.23	0.011946	7.84	901.00	770.42	0.80	2.00
1	176763.	1310.00	732.00	737.09	736.86	737.22	0.006570	4.46	532.13	693.86	0.57	0.74
1	176763.	2080.00	732.00	737.53	737.09	737.64	0.005022	3.86	857.95	781.24	0.50	0.56
1	176763.	2460.00	732.00	737.66	737.18	737.78	0.005086	4.07	960.63	805.28	0.51	0.60
1	176763.	3490.00	732.00	737.93	737.36	738.08	0.005598	4.65	1187.95	862.31	0.55	0.76
1	176847.	1310.00	733.20	737.52	737.04	737.61	0.003370	3.67	626.74	590.28	0.43	0.47
1	176847.	2080.00	733.20	737.91	737.33	738.01	0.003934	3.54	888.27	788.70	0.45	0.46
1	176847.	2460.00	733.20	738.06	737.50	738.16	0.004054	3.59	1005.22	837.31	0.46	0.47
1	176847.	3490.00	733.20	738.38	737.67	738.50	0.004320	4.02	1286.26	905.43	0.48	0.57
1	176872. KEL WEST DRIVE	Culvert										
1	176898.	1310.00	733.20	738.52	738.27	738.75	0.003428	5.22	510.28	651.86	0.47	0.80
1	176898.	2080.00	733.20	739.02	738.59	739.18	0.002713	5.03	1014.90	895.49	0.43	0.71
1	176898.	2460.00	733.20	739.04	738.68	739.25	0.003642	5.85	1031.01	904.54	0.49	0.96
1	176898.	3490.00	733.20	739.41	739.05	739.61	0.003437	6.00	1396.94	1042.02	0.49	0.98
1	176954.	1310.00	734.00	738.90		738.96	0.002419	3.14	760.92	703.16	0.36	0.34
1	176954.	2080.00	734.00	739.27		739.35	0.002728	3.68	1064.14	878.88	0.40	0.45
1	176954.	2460.00	734.00	739.37		739.47	0.003000	3.96	1157.69	906.61	0.42	0.51
1	176954.	3490.00	734.00	739.71		739.82	0.003356	4.52	1484.37	1036.44	0.45	0.64
1	177018.	1310.00	734.26	738.99	738.85	739.26	0.004021	5.47	506.82	542.03	0.51	0.89
1	177018.	2080.00	734.26	739.39	739.16	739.68	0.004646	6.30	760.30	711.16	0.55	1.14
1	177018.	2460.00	734.26	739.51	739.36	739.82	0.005027	6.69	849.58	758.42	0.58	1.27
1	177018.	3490.00	734.26	739.87	739.65	740.20	0.005388	7.32	1149.37	912.15	0.61	1.48
1	177035. PRIVATE DRIVE	Culvert										
1	177055.	1310.00	734.26	739.34	738.87	739.53	0.002595	4.68	616.60	650.88	0.41	0.63
1	177055.	2080.00	734.26	739.54	739.22	739.84	0.004381	6.27	745.99	694.18	0.54	1.11
1	177055.	2460.00	734.26	739.52	739.52	739.96	0.006321	7.52	735.80	690.40	0.65	1.60
1	177055.	3490.00	734.26	739.80	739.80	740.29	0.007236	8.40	945.37	824.76	0.70	1.96
1	177155.	1060.00	736.25	739.64	739.36	740.01	0.007197	5.16	293.18	445.17	0.63	0.94
1	177155.	1690.00	736.25	740.04	739.97	740.41	0.006903	5.67	522.22	647.43	0.63	1.07
1	177155.	1990.00	736.25	740.30		740.59	0.005237	5.28	700.76	714.32	0.56	0.90
1	177155.	2830.00	736.25	740.68		740.95	0.004774	5.49	990.68	825.56	0.55	0.93
1	177404.	1060.00	737.00	740.81		740.97	0.002364	3.36	379.44	321.95	0.37	0.37
1	177404.	1690.00	737.00	741.25		741.48	0.002954	4.17	545.28	413.19	0.43	0.55
1	177404.	1990.00	737.00	741.35		741.63	0.003503	4.64	585.91	420.55	0.47	0.67
1	177404.	2830.00	737.00	741.70		742.06	0.004189	5.45	738.39	449.35	0.52	0.89
1	177599.	1060.00	737.20	741.33		741.54	0.003551	3.94	350.37	323.05	0.45	0.53
1	177599.	1690.00	737.20	741.87		742.10	0.003468	4.41	542.16	388.73	0.46	0.62
1	177599.	1990.00	737.20	742.06		742.31	0.003492	4.63	618.83	406.26	0.47	0.67
1	177599.	2830.00	737.20	742.53		742.82	0.003518	5.10	816.92	438.06	0.48	0.77
1	177647.	1060.00	737.48	741.36	740.93	742.06	0.010314	6.68	161.05	77.41	0.76	1.52
1	177647.	1690.00	737.48	741.79	741.79	743.02	0.014982	8.97	198.44	100.91	0.94	2.59
1	177647.	1990.00	737.48	742.41	742.41	743.39	0.009608	8.20	313.40	263.75	0.78	2.03
1	177647.	2830.00	737.48	743.15	743.15	743.91	0.006824	7.88	618.06	521.52	0.68	1.75
1	177652. GOLD RUSH DRIVE	Culvert										
1	177706.	1060.00	737.48	742.99	740.89	743.18	0.001518	3.62	414.06	297.73	0.32	0.38
1	177706.	1690.00	737.48	743.29	741.68	743.65	0.002768	5.13	534.84	479.03	0.44	0.74
1	177706.	1990.00	737.48	743.39	742.02	743.83	0.003393	5.77	585.77	552.43	0.48	0.92
1	177706.	2830.00	737.48	743.44	743.44	744.28	0.006453	8.01	612.53	566.23	0.67	1.77
1	177746.	1060.00	738.00	743.03		743.29	0.002396	4.51	385.79	266.61	0.40	0.58
1	177746.	1690.00	738.00	743.37		743.84	0.004102	6.24	491.49	364.74	0.53	1.09
1	177746.	1990.00	738.00	743.46	743.01	744.09	0.005319	7.21	532.28	467.75	0.61	1.44
1	177746.	2830.00	738.00	743.97	743.97	744.63	0.005536	7.91	822.93	665.01	0.63	1.67
1	177910. AY	1060.00	738.98	743.46	742.21	743.67	0.002240	4.20	421.94	298.55	0.38	0.52
1	177910. AY	1690.00	738.98	744.10	742.82	744.39	0.002663	5.10	653.90	429.42	0.43	0.72
1	177910. AY	1990.00	738.98	744.43	743.37	744.70	0.002485	5.17	798.73	521.61	0.42	0.72
1	177910. AY	2830.00	738.98	744.97	743.99	745.27	0.002566	5.65	1079.28	682.85	0.44	0.83
1	178014.	1060.00	739.10	743.75	742.88	743.92	0.002496	4.39	518.31	384.59	0.40	0.57
1	178014.	1690.00	739.10	744.49	743.38	744.66	0.002211	4.67	833.96	456.94	0.39	0.60
1	178014.	1990.00	739.10	744.79	743.54	744.96	0.002151	4.81	978.70	508.02	0.39	0.63
1	178014.	2830.00	739.10	745.34	744.19	745.53	0.002341	5.41	1292.28	671.96	0.42	0.76
1	178132.	1060.00	739.50	744.14	742.77	744.36	0.005614	3.78	300.44	155.31	0.39	1.02
1	178132.	1690.00	739.50	744.80	743.43	745.11	0.006418	4.63	411.08	342.11	0.43	1.43
1	178132.	1990.00	739.50	745.07	743.71	745.42	0.006627	4.94	456.98	421.66	0.44	1.59
1	178132.	2830.00	739.50	745.60	744.52	746.08	0.007984	5.90	546.31	473.51	0.50	2.17
1	178160.	1060.00	739.64	744.25	741.91	744.44	0.001295	3.51	320.21	108.64	0.30	0.34
1	178160.	1690.00	739.64	744.88	742.63	745.23	0.002057	4.84	372.09	115.91	0.38	0.63
1	178160.	1990.00	739.64	745.14	742.93	745.57	0.002393	5.40	393.34	119.55	0.42	0.77
1	178160.	2830.00	739.64	745.62	743.69	746.35	0.003548	6.98	433.71	181.80	0.52	1.24
1	178189. RANCHO DRIVE	Culvert										
1	178218.	1060.00	739.64	744.48	741.88	744.63	0.001091	3.13	339.18	116.14	0.27	0.28
1	178218.	1690.00	739.64	745.36	742.58	745.62	0.001456	4.11	411.53	133.85	0.32	0.45
1	178218.	1990.00	739.64	745.76	742.86	746.07	0.001553	4.47	445.25	139.24	0.34	0.52
1	178218.	2830.00	739.64	746.77	743.68	747.21	0.001777	5.36	528.19	189.94	0.37	0.70
1	178252.	1060.00	740.30	744.56	742.34	744.68	0.000998	2.84	417.37	153.56	0.26	0.23
1	178252.	1690.00	740.30	745.51	742.96	745.69	0.001103	3.47	567.77	187.82	0.28	0.32
1	178252.	1990.00	740.30	745.96	743.21	746.15	0.001094	3.67	641.28	205.20	0.28	0.35
1	178252.	2830.00	740.30	747.09	743.85	747.32	0.001053	4.10	832.61	261.72	0.29	0.41
1	178404.	1060.00	740.96	744.79		745.02						

HEC-RAS Plan: WC-Edit-Prop River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	178654.	1060.00	745.00	747.92	746.94	748.13	0.008629	4.08	325.73	235.38	0.49	1.12
1	178654.	1690.00	745.00	748.56	747.79	748.77	0.010356	5.29	512.21	339.77	0.56	1.72
1	178654.	1990.00	745.00	748.72		748.95	0.010632	5.56	565.26	343.03	0.58	1.87
1	178654.	2830.00	745.00	749.19		749.46	0.009853	5.92	729.63	353.88	0.57	2.02
1	178837.	1060.00	745.00	748.94		749.02	0.003175	2.69	511.78	357.32	0.31	0.46
1	178837.	1690.00	745.00	749.62		749.71	0.002995	3.09	771.40	399.42	0.31	0.56
1	178837.	1990.00	745.00	749.82		749.93	0.003110	3.28	853.41	408.84	0.32	0.62
1	178837.	2830.00	745.00	750.32		750.46	0.003345	3.75	1063.53	432.13	0.34	0.78
1	179077.	1060.00	746.00	749.60		749.66	0.002469	2.43	592.15	329.56	0.27	0.38
1	179077.	1690.00	746.00	750.24		750.32	0.002401	2.80	808.96	347.29	0.28	0.46
1	179077.	1990.00	746.00	750.47		750.56	0.002500	3.00	888.42	353.74	0.29	0.52
1	179077.	2830.00	746.00	751.03		751.15	0.002816	3.53	1093.53	402.22	0.32	0.68
1	179180.	1060.00	746.00	749.94		750.06	0.005508	3.74	456.36	351.56	0.41	0.88
1	179180.	1690.00	746.00	750.56		750.68	0.004561	3.93	686.11	390.73	0.39	0.90
1	179180.	1990.00	746.00	750.80		750.92	0.004456	4.07	779.42	407.82	0.39	0.94
1	179180.	2830.00	746.00	751.38		751.52	0.004109	4.33	1028.93	438.33	0.38	1.02
1	179344.	1060.00	747.00	750.84		751.09	0.006908	4.58	338.77	265.39	0.47	1.26
1	179344.	1690.00	747.00	751.36		751.65	0.007492	5.31	489.96	303.58	0.50	1.60
1	179344.	1990.00	747.00	751.57		751.88	0.007480	5.53	556.53	314.91	0.51	1.70
1	179344.	2830.00	747.00	752.10		752.45	0.007588	6.09	738.17	363.68	0.52	1.97
1	179671.	1060.00	748.00	752.48		752.63	0.003810	3.65	381.78	259.25	0.36	0.77
1	179671.	1690.00	748.00	753.10		753.28	0.004051	4.22	570.83	367.81	0.38	0.97
1	179671.	1990.00	748.00	753.32		753.51	0.004100	4.40	653.87	403.49	0.38	1.04
1	179671.	2830.00	748.00	753.88		754.09	0.004095	4.79	914.25	499.83	0.39	1.18
1	180001.	1060.00	749.00	753.68		753.84	0.003553	3.24	359.69	224.06	0.34	0.63
1	180001.	1690.00	749.00	754.36		754.55	0.003678	3.79	542.17	322.73	0.36	0.81
1	180001.	1990.00	749.00	754.59		754.81	0.003787	4.02	623.89	367.34	0.36	0.89
1	180001.	2830.00	749.00	755.16		755.40	0.003867	4.45	878.45	500.97	0.38	1.04
1	180355.	1060.00	750.00	754.78		754.93	0.002719	3.60	380.38	175.83	0.31	0.69
1	180355.	1690.00	750.00	755.53		755.73	0.003099	4.30	524.66	207.47	0.34	0.93
1	180355.	1990.00	750.00	755.82		756.04	0.003274	4.59	585.05	223.01	0.35	1.04
1	180355.	2830.00	750.00	756.45		756.74	0.003708	5.27	742.81	300.53	0.38	1.33
1	180740. AZ	650.00	752.00	757.39	757.39	757.76	0.014044	5.38	178.11	267.95	0.63	1.91
1	180740. AZ	1000.00	752.00	757.70	757.70	758.07	0.014189	5.89	270.59	326.13	0.65	2.19
1	180740. AZ	1170.00	752.00	757.75	757.75	758.20	0.016967	6.52	287.38	333.58	0.71	2.67
1	180740. AZ	1610.00	752.00	758.33		758.56	0.008199	5.17	504.42	412.33	0.51	1.57
1	181450.	650.00	756.00	760.74		760.81	0.002060	2.65	341.95	242.93	0.30	0.30
1	181450.	1000.00	756.00	761.19		761.29	0.002212	3.07	457.22	263.81	0.32	0.38
1	181450.	1170.00	756.00	761.42		761.52	0.002157	3.19	517.59	274.30	0.32	0.40
1	181450.	1610.00	756.00	761.65		761.79	0.002966	3.92	581.50	284.34	0.38	0.60
1	182036.	650.00	758.00	762.85	762.85	763.81	0.016885	8.00	91.00	67.23	0.84	2.69
1	182036.	1000.00	758.00	763.77	763.77	764.49	0.010331	7.57	195.62	157.09	0.69	2.18
1	182036.	1170.00	758.00	763.99	763.99	764.71	0.010066	7.77	233.46	177.49	0.69	2.26
1	182036.	1610.00	758.00	764.42	764.42	765.17	0.010257	8.39	315.64	212.08	0.71	2.55
1	182244.	650.00	758.03	765.06	763.07	765.47	0.003934	5.28	132.07	51.36	0.41	1.00
1	182244.	1000.00	758.03	765.48	764.03	766.27	0.007003	7.41	144.51	104.76	0.55	1.92
1	182244.	1170.00	758.03	765.73	764.41	766.71	0.008137	8.23	152.14	157.76	0.60	2.33
1	182244.	1610.00	758.03	766.26	766.26	767.10	0.007769	8.52	312.14	190.18	0.59	2.43
1	182274. OLD DENTON ROAD	Culvert										
1	182304.	650.00	758.48	767.21	762.93	767.26	0.000377	2.02	494.56	275.97	0.14	0.13
1	182304.	1000.00	758.48	767.92	763.77	767.97	0.000367	2.04	841.23	410.37	0.14	0.13
1	182304.	1170.00	758.48	768.08	764.15	768.13	0.000430	2.24	906.25	428.12	0.16	0.16
1	182304.	1610.00	758.48	768.37	765.01	768.45	0.000627	2.79	1046.34	541.71	0.19	0.24
1	182552. BA	650.00	763.50	767.39		767.53	0.004525	3.37	248.58	191.31	0.43	0.53
1	182552. BA	1000.00	763.50	768.08		768.21	0.003133	3.45	413.13	308.14	0.38	0.50
1	182552. BA	1170.00	763.50	768.26		768.40	0.003234	3.67	470.76	341.02	0.39	0.55
1	182552. BA	1610.00	763.50	768.62		768.80	0.003410	4.10	607.24	394.09	0.41	0.66
1	183803.	650.00	769.03	772.12		772.24	0.003435	2.77	234.77	137.03	0.37	0.37
1	183803.	1000.00	769.03	772.55		772.72	0.004654	3.35	298.57	166.58	0.44	0.53
1	183803.	1170.00	769.03	772.74		772.93	0.004537	3.53	338.28	228.79	0.44	0.57
1	183803.	1610.00	769.03	773.14		773.37	0.004427	3.94	447.87	326.71	0.45	0.66
1	185338. LIMIT OF DETAILE	650.00	775.03	777.98		778.12	0.004293	3.02	215.50	130.76	0.41	0.44
1	185338. LIMIT OF DETAILE	1000.00	775.03	778.72		778.86	0.003476	3.08	324.44	162.66	0.38	0.43
1	185338. LIMIT OF DETAILE	1170.00	775.03	778.91		779.08	0.003564	3.28	357.02	166.33	0.39	0.48
1	185338. LIMIT OF DETAILE	1610.00	775.03	779.38		779.59	0.003716	3.68	442.48	215.86	0.41	0.57

HEC-RAS Plan: WC-Edit River: Big Bear Reach: 1

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan	
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)	
1	234	14100.00	400.00	425.65	415.27	425.85	0.000900	4.38	4563.90	551.88	0.19	0.80	
1	234	23750.00	400.00	430.30	417.65	430.55	0.000900	5.15	7374.04	640.42	0.20	1.03	
1	234	28910.00	400.00	432.15	418.72	432.42	0.000901	5.45	8570.55	647.19	0.20	1.12	
1	234	30820.00	400.00	432.76	419.06	433.04	0.000900	5.54	8965.57	647.19	0.20	1.15	
1	523	14100.00	400.00	425.84		426.28	0.001740	6.04	3347.73	372.89	0.27	1.53	
1	523	23750.00	400.00	430.49		430.95	0.001539	6.73	7091.33	1044.18	0.26	1.75	
1	523	28910.00	400.00	432.39		432.76	0.001246	6.42	9070.74	1044.18	0.24	1.55	
1	523	30820.00	400.00	433.01		433.36	0.001183	6.37	9717.58	1044.18	0.23	1.51	
1	964	14100.00	402.00	426.56		427.02	0.001629	5.42	2764.22	453.69	0.26	1.28	
1	964	23750.00	402.00	431.13		431.51	0.001137	5.51	7527.72	1379.57	0.23	1.20	
1	964	28910.00	402.00	432.89		433.22	0.000956	5.38	9993.94	1412.23	0.21	1.11	
1	964	30820.00	402.00	433.49		433.80	0.000905	5.33	10832.88	1412.23	0.21	1.08	
1	1897	14100.00	404.00	428.25	418.57	428.81	0.002263	6.10	3038.86	1537.78	0.30	1.66	
1	1897	23750.00	404.00	432.16	422.60	432.46	0.001216	5.36	8512.49	1905.74	0.23	1.17	
1	1897	28910.00	404.00	433.71	424.50	433.98	0.001030	5.24	10693.59	1905.74	0.22	1.09	
1	1897	30820.00	404.00	434.25	425.16	434.51	0.000981	5.22	11446.82	1905.74	0.21	1.07	
1	2094	14100.00	404.50	428.34	419.93	429.58	0.003880	9.30	1997.68	1767.12	0.39	3.58	
1	2094	23750.00	404.50	432.21	426.47	432.90	0.002361	8.29	5418.53	2163.21	0.32	2.67	
1	2094	28910.00	404.50	433.76	430.46	434.34	0.001990	7.98	6832.00	2163.21	0.29	2.41	
1	2094	30820.00	404.50	434.30	430.69	434.85	0.001892	7.90	7318.54	2163.21	0.29	2.35	
1	2237	14100.00	405.00	429.82	412.84	429.96	0.000106	3.04	5407.23	2171.68	0.12	0.12	
1	2237	23750.00	405.00	432.88	415.77	433.09	0.000148	3.97	7303.19	2303.94	0.15	0.20	
1	2237	28910.00	405.00	434.25	417.11	434.49	0.000164	4.35	8150.66	2303.94	0.16	0.23	
1	2237	30820.00	405.00	434.73	417.55	434.99	0.000168	4.47	8452.32	2303.94	0.16	0.24	
1	2327	MACARTHUR BOULEVBR D	14100.00	405.00	429.83	413.10	429.97	0.000180	3.10	5146.33	560.32	0.13	0.14
1	2327	MACARTHUR BOULEVBR D	23750.00	405.00	432.89	416.08	433.11	0.000260	4.02	6880.00	572.56	0.15	0.23
1	2327	MACARTHUR BOULEVBR D	28910.00	405.00	434.26	417.45	434.51	0.000293	4.40	7666.77	578.03	0.16	0.27
1	2327	MACARTHUR BOULEVBR D	30820.00	405.00	434.74	417.92	435.01	0.000303	4.52	7948.57	579.98	0.16	0.29
1	2327	MACARTHUR BOULEVBR U	14100.00	405.00	429.89	413.10	429.99	0.000141	2.80	5933.63	560.54	0.11	0.12
1	2327	MACARTHUR BOULEVBR U	23750.00	405.00	432.97	416.09	433.14	0.000205	3.63	7683.75	572.90	0.13	0.19
1	2327	MACARTHUR BOULEVBR U	28910.00	405.00	434.35	417.45	434.55	0.000233	3.98	8476.40	578.41	0.14	0.22
1	2327	MACARTHUR BOULEVBR U	30820.00	405.00	434.84	417.93	435.05	0.000242	4.10	8759.97	580.36	0.15	0.23
1	2454		14100.00	405.00	429.90	412.84	430.00	0.000081	2.74	6415.94	2265.59	0.11	0.10
1	2454		23750.00	405.00	433.00	415.77	433.16	0.000113	3.57	8335.52	2306.47	0.13	0.16
1	2454		28910.00	405.00	434.38	417.11	434.57	0.000126	3.93	9191.87	2306.47	0.14	0.19
1	2454		30820.00	405.00	434.87	417.55	435.07	0.000130	4.05	9496.42	2306.47	0.14	0.20
1	2994		14100.00	408.00	429.95	422.90	430.11	0.000826	4.61	8021.15	2272.08	0.19	0.85
1	2994		23750.00	408.00	433.10	426.69	433.25	0.000792	5.02	11843.30	2458.54	0.19	0.96
1	2994		28910.00	408.00	434.52	427.42	434.68	0.000792	5.24	13593.64	2508.27	0.19	1.02
1	2994		30820.00	408.00	435.03	427.77	435.18	0.000786	5.30	14220.78	2508.27	0.19	1.03
1	4381		14280.00	408.50	430.63	423.37	430.67	0.000335	2.61	12789.42	2252.91	0.12	0.29
1	4381		23900.00	408.50	433.72	424.63	433.76	0.000315	2.87	18464.30	2307.93	0.12	0.33
1	4381		29080.00	408.50	435.13	425.18	435.17	0.000307	2.98	21086.44	2315.39	0.12	0.34
1	4381		30930.00	408.50	435.62	425.37	435.67	0.000303	3.01	22016.78	2317.94	0.12	0.35
1	5800		14280.00	412.00	430.95	424.48	430.99	0.000421	2.88	13396.08	2525.37	0.13	0.36
1	5800		23900.00	412.00	433.99	426.53	434.02	0.000332	2.91	20449.01	2802.54	0.12	0.34
1	5800		29080.00	412.00	435.38	426.91	435.42	0.000305	2.93	24064.96	2928.15	0.12	0.34
1	5800		30930.00	412.00	435.87	426.91	435.91	0.000295	2.93	25355.26	2940.38	0.12	0.33
1	9315		14280.00	414.00	431.28		431.28	0.000103	1.23	24707.02	3370.05	0.06	0.07
1	9315		23900.00	414.00	434.28		434.29	0.000100	1.41	34825.35	3379.02	0.07	0.08
1	9315		29080.00	414.00	435.66		435.66	0.000099	1.49	39501.38	3411.72	0.07	0.09
1	9315		30930.00	414.00	436.14		436.15	0.000098	1.51	41163.38	3420.13	0.07	0.09
1	11449		14280.00	418.00	431.34		431.35	0.000065	0.81	30597.39	3650.17	0.05	0.03
1	11449		23900.00	418.00	434.35		434.35	0.000074	1.05	41691.45	3721.51	0.05	0.05
1	11449		29080.00	418.00	435.73		435.73	0.000076	1.15	46850.69	3752.05	0.06	0.06
1	11449		30930.00	418.00	436.21		436.22	0.000076	1.18	48679.00	3773.58	0.06	0.06
1	13489		14280.00	418.00	431.39		431.40	0.000164	1.31	22561.63	3118.25	0.08	0.09
1	13489		23900.00	418.00	434.40		434.41	0.000153	1.54	32072.46	3207.24	0.08	0.11
1	13489		29080.00	418.00	435.79		435.80	0.000151	1.65	36557.71	3271.03	0.08	0.12
1	13489		30930.00	418.00	436.27		436.29	0.000149	1.68	38157.57	3307.29	0.08	0.12
1	15486		14280.00	418.60	431.84	428.14	431.93	0.002942	4.44	7382.38	2137.05	0.33	0.97
1	15486		23900.00	418.60	434.77	429.11	434.83	0.001375	4.00	14268.47	2398.29	0.24	0.69
1	15486		29080.00	418.60	436.12	429.62	436.18	0.001093	3.94	17547.95	2445.56	0.22	0.63
1	15486		30930.00	418.60	436.60	429.77	436.66	0.001013	3.91	18729.58	2504.77	0.21	0.61
1	16665		14280.00	419.00	433.43	430.94	433.53	0.001290	4.57	10252.25	2705.31	0.24	0.82
1	16665		23900.00	419.00	435.70	431.84	435.78	0.000939	4.41	17012.71	2887.82	0.21	0.72
1	16665		29080.00	419.00	436.90	432.18	436.97	0.000812	4.34	20538.84	3039.69	0.20	0.68
1	16665		30930.00	419.00	437.33	432.28	437.39	0.000761	4.29	21830.39	3041.86	0.20	0.66
1	17068		14280.00	419.14	433.87	431.16	433.93	0.000733	3.87	9837.00	3218.11	0.20	0.48
1	17068		23900.00	419.14	436.00	431.85	436.04	0.000434	3.32	18925.70	3563.51	0.16	0.34
1	17068		29080.00	419.14	437.15	432.27	437.18	0.000344	3.12	23025.17	3568.49	0.14	0.29
1	17068		30930.00	419.14	437.56	432.36	437.59	0.000319	3.06	24482.74	3570.26	0.14	0.28
1	17118.5	HUNTER FERRELL RBR D	14280.00	419.14	433.98	433.17	433.98	0.050924	0.00	690.62	75.23	0.00	18.90
1	17118.5	HUNTER FERRELL RBR D	23900.00	419.14	436.02	433.80	436.08	0.001958	3.33	12144.53	3429.24	0.09	0.49
1	17118.5	HUNTER FERRELL RBR D	29080.00	419.14	437.16	434.00	437.21	0.001207	2.25	16207.48	3568.56	0.08	0.24
1	17118.5	HUNTER FERRELL RBR D	30930.00	419.14	437.57	434.00	437.62	0.001033	2.13	17659.85	3570.32	0.07	0.21
1	17118.5	HUNTER FERRELL RBR U	14280.00	419.14	433.98	432.88	433.98	0.060078	0.00	651.80	70.74	0.00	19.56
1	17118.5	HUNTER FERRELL RBR U	23900.00</										

HEC-RAS Plan: WC-Edit River: Big Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	18996	29080.00	421.60	437.49		437.51	0.000230	2.13	27005.27	3990.18	0.11	0.15
1	18996	30930.00	421.60	437.87		437.89	0.000218	2.11	28533.58	3991.86	0.11	0.14
1	21103	14830.00	424.50	435.14	431.74	435.17	0.000900	3.08	10894.76	3692.32	0.21	0.36
1	21103	24590.00	424.50	436.96	432.56	437.00	0.000618	2.98	16689.39	3805.32	0.18	0.31
1	21103	29850.00	424.50	437.93	432.81	437.97	0.000522	2.94	19776.71	3873.32	0.17	0.29
1	21103	31200.00	424.50	438.28	432.87	438.32	0.000478	2.88	20900.19	3915.79	0.16	0.28
1	22418	14830.00	425.00	435.72	432.94	435.75	0.000492	2.40	12237.11	4057.68	0.16	0.21
1	22418	24590.00	425.00	437.41	433.54	437.44	0.000398	2.37	17909.79	4208.61	0.15	0.20
1	22418	29850.00	425.00	438.32	433.77	438.35	0.000351	2.34	21329.18	4923.28	0.14	0.19
1	22418	31200.00	425.00	438.64	433.84	438.67	0.000322	2.30	22677.86	5172.93	0.13	0.18
1	23775	14830.00	426.00	436.92	435.85	437.10	0.002908	5.88	6083.68	2910.97	0.38	1.28
1	23775	24590.00	426.00	438.30	436.67	438.42	0.001714	4.87	10783.53	4307.74	0.30	0.84
1	23775	29850.00	426.00	439.07	436.89	439.18	0.001318	4.47	14059.03	4549.35	0.26	0.69
1	23775	31200.00	426.00	439.32	436.93	439.42	0.001164	4.26	15121.65	4603.18	0.25	0.63
1	25050	14900.00	427.00	439.63	438.42	439.78	0.001582	4.96	6700.45	4402.66	0.29	0.85
1	25050	24770.00	427.00	440.55	439.00	440.74	0.001878	5.77	8942.23	6430.02	0.33	1.11
1	25050	30070.00	427.00	441.03	439.25	441.23	0.001904	6.00	10098.79	6569.30	0.33	1.18
1	25050	31190.00	427.00	441.13	439.24	441.34	0.001897	6.03	10351.62	6580.52	0.33	1.19
1	27683	14900.00	429.60	437.44	437.44	439.73	0.017401	12.82	1279.18	1112.50	0.92	6.42
1	27683	24770.00	429.60	442.63	439.46	442.78	0.001335	4.70	12789.99	5716.18	0.27	0.75
1	27683	30070.00	429.60	443.12	440.33	443.27	0.001428	4.95	14938.92	6830.87	0.28	0.83
1	27683	31190.00	429.60	443.21	440.49	443.36	0.001438	4.99	15356.34	6863.91	0.29	0.84
1	27773 BELTLINE ROAD BR D	14900.00	429.60	439.23	437.55	440.45	0.009960	9.27	1699.05	284.83	0.61	3.44
1	27773 BELTLINE ROAD BR D	24770.00	429.60	442.08	439.58	443.50	0.009039	9.91	2611.56	696.48	0.59	3.71
1	27773 BELTLINE ROAD BR D	30070.00	429.60	442.39	440.48	444.20	0.011911	11.50	2834.22	756.37	0.68	4.96
1	27773 BELTLINE ROAD BR D	31190.00	429.60	442.43	440.65	444.34	0.012595	11.84	2869.39	765.58	0.70	5.26
1	27773 BELTLINE ROAD BR U	14900.00	429.60	440.67	437.55	441.44	0.005468	7.30	2130.19	309.71	0.46	2.07
1	27773 BELTLINE ROAD BR U	24770.00	429.60	443.71	439.56	444.46	0.004934	7.75	3727.09	831.14	0.44	2.20
1	27773 BELTLINE ROAD BR U	30070.00	429.60	444.76	440.49	445.38	0.004587	7.68	5827.49	2483.33	0.42	2.14
1	27773 BELTLINE ROAD BR U	31190.00	429.60	444.98	440.67	445.56	0.004440	7.60	6384.39	2688.27	0.41	2.08
1	27863	14900.00	429.60	440.95	437.44	441.60	0.003287	6.83	2326.95	3457.82	0.42	1.65
1	27863	24770.00	429.60	444.15	439.42	444.64	0.002354	6.62	4887.35	6172.70	0.37	1.45
1	27863	30070.00	429.60	445.52	440.36	445.58	0.000528	3.30	21371.44	6945.24	0.18	0.35
1	27863	31190.00	429.60	445.69	440.52	445.76	0.000515	3.27	22168.28	6953.31	0.18	0.34
1	27983	14900.00	430.10	442.25	438.78	442.29	0.000640	2.53	11172.75	6026.38	0.18	0.25
1	27983	24770.00	430.10	444.97	439.31	444.98	0.000169	1.54	33279.44	6532.42	0.09	0.08
1	27983	30070.00	430.10	445.74	439.53	445.75	0.000169	1.60	37518.84	6552.89	0.10	0.09
1	27983	31190.00	430.10	445.91	439.58	445.92	0.000168	1.61	38467.63	6557.43	0.10	0.09
1	29138	15290.00	430.50	442.51	438.83	442.53	0.000408	2.15	14981.66	5288.67	0.14	0.17
1	29138	25080.00	430.50	445.06	439.31	445.08	0.000302	2.27	23343.21	6158.86	0.13	0.17
1	29138	30370.00	430.50	445.83	439.51	445.85	0.000316	2.45	26043.01	6214.76	0.13	0.20
1	29138	30880.00	430.50	445.99	439.51	446.02	0.000304	2.43	26645.37	6226.61	0.13	0.19
1	29533	15290.00	430.80	443.41		443.70	0.002769	6.47	4853.74	6753.24	0.39	1.46
1	29533	25080.00	430.80	445.75		445.91	0.001527	5.64	12416.91	7308.18	0.30	1.02
1	29533	30370.00	430.80	446.56		446.72	0.001598	6.04	16169.28	8123.65	0.31	1.14
1	29533	30880.00	430.80	446.70		446.84	0.001481	5.86	16865.54	8140.34	0.30	1.07
1	29723	15290.00	430.88	444.74	443.32	445.52	0.005149	9.33	3974.72	4694.12	0.53	2.94
1	29723	25080.00	430.88	446.71		447.16	0.003333	8.50	9288.65	5707.13	0.44	2.30
1	29723	30370.00	430.88	447.55		447.88	0.002550	7.79	12163.95	5925.73	0.39	1.88
1	29723	30880.00	430.88	447.64		447.95	0.002476	7.72	12470.65	5945.87	0.39	1.84
1	29907	15290.00	430.95	446.46		446.82	0.002181	6.58	5419.95	1815.22	0.36	1.41
1	29907	25080.00	430.95	448.06		448.47	0.002474	7.70	9255.83	3226.78	0.39	1.84
1	29907	30370.00	430.95	448.73		449.17	0.002643	8.24	11480.99	3405.50	0.40	2.07
1	29907	30880.00	430.95	448.79		449.22	0.002601	8.21	11706.77	3406.79	0.40	2.05
1	30273	15290.00	431.10	447.36		447.80	0.002228	6.35	5510.67	2345.98	0.36	1.34
1	30273	25080.00	431.10	449.12		449.47	0.001850	6.46	9945.08	2638.84	0.33	1.31
1	30273	30370.00	431.10	449.86		450.18	0.001735	6.52	11903.68	2681.13	0.33	1.31
1	30273	30880.00	431.10	449.91		450.23	0.001742	6.55	12042.61	2684.14	0.33	1.32
1	30837	15290.00	431.40	448.49		448.88	0.001748	7.16	6444.46	2076.80	0.33	1.51
1	30837	25080.00	431.40	450.10		450.47	0.001849	7.89	9923.92	2283.92	0.35	1.77
1	30837	30370.00	431.40	450.79		451.15	0.001883	8.19	11551.28	2351.54	0.35	1.88
1	30837	30880.00	431.40	450.85		451.21	0.001887	8.22	11680.82	2352.00	0.35	1.89
1	31092	15280.00	431.42	449.00		449.47	0.001702	7.00	3780.14	736.47	0.33	1.45
1	31092	25060.00	431.42	450.60		451.37	0.002763	9.58	5925.68	2133.12	0.43	2.62
1	31092	30310.00	431.42	451.34		452.07	0.002716	9.79	7582.05	2229.15	0.43	2.70
1	31092	30810.00	431.42	451.41		452.12	0.002687	9.77	7722.15	2230.04	0.42	2.68
1	31289	15280.00	431.43	449.23		450.03	0.002641	8.81	2744.93	446.02	0.41	2.28
1	31289	25060.00	431.43	450.91	446.55	452.39	0.004594	12.50	3915.69	1306.07	0.55	4.43
1	31289	30310.00	431.43	451.59	447.56	453.19	0.005013	13.43	4956.20	1771.46	0.58	5.04
1	31289	30810.00	431.43	451.64	447.66	453.25	0.005051	13.50	5047.04	1814.72	0.58	5.10
1	31556	15280.00	431.65	450.25	443.00	450.55	0.000780	5.17	3621.52	414.26	0.23	0.76
1	31556	25060.00	431.65	452.83	445.19	453.25	0.001027	6.54	5615.87	1549.15	0.27	1.15
1	31556	30310.00	431.65	453.66	446.04	454.13	0.001164	7.17	6863.10	1732.58	0.29	1.37
1	31556	30810.00	431.65	453.72	446.12	454.20	0.001179	7.23	6958.60	1737.91	0.29	1.39
1	31646 TRINITY BOULEVARBR D	15280.00	431.65	450.25	443.14	450.61	0.001431	5.42	3279.25	322.26	0.24	0.95
1	31646 TRINITY BOULEVARBR D	25060.00	431.65	452.84	445.27	453.32	0.002136	6.38	4143.47	297.35	0.21	1.57
1	31646 TRINITY BOULEVARBR D	30310.00	431.65	453.66	446.26	454.13		6.75	6583.31	1020.91	0.22	
1	31646 TRINITY BOULEVARBR D	30810.00	431.65	453.72	446.35	454.20		6.78	6665.91	1026.80	0.23	
1	31646 TRINITY BOULEVARBR U	15280.00	431.65	450.53	442.78	450.78	0.000991					

HEC-RAS Plan: WC-Edit River: Big Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	32935	15280.00	432.15	451.60		451.78	0.000493	4.16	5488.55	513.59	0.20	0.42
1	32935	25060.00	432.15	454.87		455.28	0.000865	6.35	7936.94	1227.04	0.27	0.90
1	32935	30310.00	432.15	455.88		456.31	0.000906	6.76	9221.31	1331.28	0.28	1.00
1	32935	30810.00	432.15	455.96		456.40	0.000911	6.79	9334.12	1339.39	0.28	1.01
1	33452	15280.00	432.36	451.74		452.27	0.001317	7.76	3499.85	335.25	0.33	1.35
1	33452	25060.00	432.36	455.03		456.18	0.002323	11.58	4788.44	650.05	0.45	2.84
1	33452	30310.00	432.36	456.00		457.30	0.002600	12.63	5442.64	710.04	0.48	3.33
1	33452	30810.00	432.36	456.08		457.40	0.002623	12.72	5501.47	714.31	0.48	3.38
1	33841	15280.00	432.52	452.31		452.61	0.000598	5.24	4386.84	389.41	0.23	0.62
1	33841	25060.00	432.52	456.24		456.71	0.000722	6.63	6144.34	788.02	0.26	0.92
1	33841	30310.00	432.52	457.29		457.91	0.000906	7.67	7014.50	843.29	0.29	1.21
1	33841	30810.00	432.52	457.39		458.02	0.000918	7.74	7091.89	846.25	0.29	1.23
1	34182	15280.00	432.63	452.48	445.67	452.97	0.001050	6.94	3504.98	309.53	0.29	1.08
1	34182	25060.00	432.63	456.44	448.01	457.13	0.001186	8.46	4769.12	490.53	0.32	1.50
1	34182	30310.00	432.63	457.53	449.06	458.46	0.001514	9.88	5416.04	627.17	0.37	2.02
1	34182	30810.00	432.63	457.62	449.16	458.57	0.001534	9.97	5474.93	631.73	0.37	2.05
1	34252.5 SHADY GROVE ROADBR D	15280.00	432.63	452.54	445.84	453.08	0.001998	7.22	3153.86	278.37	0.31	1.35
1	34252.5 SHADY GROVE ROADBR D	25060.00	432.63	456.49	448.21	457.28	0.002485	8.84	4298.65	301.30	0.34	1.93
1	34252.5 SHADY GROVE ROADBR D	30310.00	432.63	457.63	449.29	458.61	0.003020	9.97	4649.61	326.38	0.28	2.43
1	34252.5 SHADY GROVE ROADBR D	30810.00	432.63	457.72	449.40	458.73	0.003072	10.08	4680.36	326.67	0.28	2.48
1	34252.5 SHADY GROVE ROADBR U	15280.00	432.68	452.66	445.92	453.16	0.001901	6.51	3299.33	301.46	0.30	1.14
1	34252.5 SHADY GROVE ROADBR U	25060.00	432.68	456.67	448.16	457.37	0.002254	7.87	4556.10	323.51	0.32	1.58
1	34252.5 SHADY GROVE ROADBR U	30310.00	432.68	457.87	449.19	458.74	0.002677	8.80	4944.89	327.10	0.35	1.95
1	34252.5 SHADY GROVE ROADBR U	30810.00	432.68	457.96	449.28	458.85	0.002721	8.89	4977.15	327.39	0.35	1.99
1	34323	15280.00	432.68	452.85	445.71	453.25	0.000960	5.99	4210.60	1200.21	0.28	0.85
1	34323	25060.00	432.68	457.05	447.86	457.51	0.000864	6.72	6266.05	1530.55	0.27	0.98
1	34323	30310.00	432.68	457.92	448.91	458.51	0.001044	7.62	6702.81	1568.37	0.30	1.24
1	34323	30810.00	432.68	458.01	449.01	459.00	0.001525	9.23	6763.10	1660.00	0.37	1.82
1	34434	15280.00	432.70	453.00	446.01	453.38	0.001292	6.78	4423.59	1176.96	0.29	1.29
1	34434	25060.00	432.70	457.25	447.99	457.64	0.001119	7.33	6926.58	1444.36	0.28	1.40
1	34434	30310.00	432.70	458.18	448.84	458.66	0.001334	8.24	7528.32	1594.35	0.31	1.74
1	34434	30810.00	432.70	458.52	448.94	458.99	0.001261	8.10	7758.91	1602.26	0.30	1.67
1	34959	15470.00	432.90	453.58		454.13	0.001365	7.27	4016.47	994.01	0.30	1.45
1	34959	25260.00	432.90	457.75		458.29	0.001192	7.82	6547.67	1293.72	0.29	1.57
1	34959	30300.00	432.90	458.78		459.41	0.001355	8.60	7263.76	1352.52	0.32	1.86
1	34959	30730.00	432.90	459.10		459.69	0.001287	8.46	7483.34	1359.41	0.31	1.80
1	35464	15470.00	433.06	454.36		454.78	0.001149	6.63	4694.89	1338.14	0.28	1.21
1	35464	25260.00	433.06	458.46		458.86	0.001002	7.10	7742.97	1790.64	0.27	1.30
1	35464	30300.00	433.06	459.61		460.04	0.001051	7.52	8717.19	1814.19	0.28	1.43
1	35464	30730.00	433.06	459.88		460.30	0.001007	7.42	8947.97	1819.72	0.27	1.39
1	35924	15470.00	433.21	454.83		455.57	0.002054	8.62	3480.19	1307.41	0.36	2.08
1	35924	25260.00	433.21	458.84		459.58	0.001879	9.44	5953.67	1732.48	0.36	2.33
1	35924	30300.00	433.21	460.01		460.80	0.001974	10.01	6842.30	1821.45	0.37	2.57
1	35924	30730.00	433.21	460.27		461.02	0.001880	9.84	7046.65	1827.39	0.36	2.48
1	36575	15470.00	433.43	456.24		456.56	0.001046	6.07	4983.43	984.96	0.24	1.04
1	36575	25260.00	433.43	460.16		460.44	0.000837	6.14	8466.86	1581.41	0.22	1.00
1	36575	30300.00	433.43	461.39		461.67	0.000825	6.31	9686.60	1747.94	0.22	1.03
1	36575	30730.00	433.43	461.58		461.86	0.000802	6.25	9879.66	1752.62	0.22	1.01
1	36898	15470.00	433.50	456.48		457.11	0.001718	7.91	3715.87	719.61	0.33	1.75
1	36898	25260.00	433.50	460.36		460.88	0.001434	8.25	7146.59	1675.66	0.31	1.78
1	36898	30300.00	433.50	461.60		462.09	0.001327	8.23	8462.37	1705.47	0.30	1.74
1	36898	30730.00	433.50	461.79		462.26	0.001281	8.13	8665.25	1709.75	0.30	1.69
1	37389	15470.00	433.70	457.41	449.93	457.70	0.000794	5.84	6318.44	2060.14	0.23	0.91
1	37389	25260.00	433.70	461.14	452.00	461.33	0.000552	5.44	10927.34	2374.17	0.19	0.75
1	37389	30300.00	433.70	462.32	453.97	462.52	0.000547	5.59	12446.22	2425.51	0.20	0.78
1	37389	30730.00	433.70	462.48	453.97	462.68	0.000535	5.55	12658.35	2429.47	0.19	0.77
1	37736	15470.00	434.20	457.71	447.44	457.91	0.000476	4.65	6874.89	2202.96	0.18	0.57
1	37736	25260.00	434.20	461.30	451.15	461.50	0.000432	4.94	10586.54	2533.97	0.18	0.61
1	37736	30300.00	434.20	462.48	452.00	462.69	0.000453	5.22	11831.45	2581.48	0.18	0.67
1	37736	30730.00	434.20	462.64	452.00	462.85	0.000448	5.21	12002.01	2587.86	0.18	0.67
1	38272	15470.00	435.00	457.98	452.00	458.34	0.001180	6.53	4529.77	2042.62	0.27	1.19
1	38272	25260.00	435.00	461.53	455.39	461.90	0.001089	7.08	6865.40	2387.69	0.27	1.32
1	38272	30300.00	435.00	462.71	456.15	463.11	0.001152	7.55	7678.24	2473.48	0.28	1.47
1	38272	30730.00	435.00	462.86	456.22	463.27	0.001136	7.53	7787.84	2480.91	0.28	1.46
1	38706	15470.00	435.61	458.26	449.56	458.94	0.000870	6.65	2433.91	1404.89	0.33	0.66
1	38706	25260.00	435.61	461.65	452.98	462.69	0.000998	8.33	3369.43	1819.76	0.36	0.96
1	38706	30300.00	435.61	462.77	454.56	464.04	0.001126	9.25	3679.27	2026.68	0.39	1.16
1	38706	30730.00	435.61	462.92	454.68	464.20	0.001123	9.29	3719.56	2056.64	0.39	1.17
1	38806 ROCK ISLAND BR D	15470.00	439.40	457.86	452.46	459.59	0.003717	10.56	1464.73	119.02	0.43	1.91
1	38806 ROCK ISLAND BR D	25260.00	439.40	460.87	456.52	463.79	0.005995	13.70	1844.05	132.69	0.52	3.18
1	38806 ROCK ISLAND BR D	30300.00	439.40	461.74	458.25	465.45	0.007517	15.45	1961.15	136.63	0.58	4.04
1	38806 ROCK ISLAND BR D	30730.00	439.40	462.92	458.37	464.67	0.006456	14.47	2124.35	141.94	0.53	3.52
1	38806 ROCK ISLAND BR U	15470.00	439.50	458.12	452.85	459.74	0.003739	10.21	1515.76	124.43	0.42	1.82
1	38806 ROCK ISLAND BR U	25260.00	439.50	461.47	456.57	464.06	0.005539	12.93	1954.08	137.75	0.49	2.86
1	38806 ROCK ISLAND BR U	30300.00	439.50	462.65	458.20	465.82	0.006587	14.29	2119.86	142.46	0.52	3.47
1	38806 ROCK ISLAND BR U	30730.00	439.50	466.66	458.34	469.91	0.006489	11.33	2712.62		0.38	2.44
1	38877	15470.00	438.43	459.42	452.07	460.12	0.000912	6.70	2344.07	1186.17	0.34	0.68
1	38877	25260.00	438.43	463.64	455.48	464.65	0.000893	8.08	3187.91	1689.45	0.35	0.90
1	38877	30300.00	438.43	465.36	456.56	466.54	0.000920	8.76	3530.92	1875.75	0.36	1.02
1	38877	30730.00	438.43	469.08	456.67	469.91	0.000505	7.35	4275.29	2142.96	0.28	0.67
1	38907	15470.00	438.53	459.38	452.35	460.19	0.000309	8.12	2167.84	559.27	0.31	0.30
1	38907	25260.00	438.53	463.53	455.24	464.79	0.000356	9.84	2824.01	1506.56	0.35	0.41
1	38907	30300.00	438.53	465.21	456.46	466.72	0.000384	10.67	3089.16	1662.33	0.36	0.48
1	38907	30730.00	438.53	468.96	456.57	470.05	0.000224	8.90	3681.70	2078.41	0.28	0.32
1	38972 TRINITY RAILWAY BR D	15470.00	439.51	458.80	453.56	460.83	0.000901	13.13	1443.14	96.00	0.53	0.80
1	38972 TRINITY RAILWAY BR D	25260.00	439.51	462.42	457.16	465.97	0.001277	17.58	1790.17	96.00	0.65	1.36
1	38972 TRINITY RAILWAY BR D	30300.00	439.51	463.76	458.86	468.25	0.001500	19.8				

HEC-RAS Plan: WC-Edit River: Big Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	38972 TRINITY RAILWAY BR U	25260.00	439.51	462.50	457.83	466.01	0.001779	15.14	1705.02	96.00	0.59	1.18
1	38972 TRINITY RAILWAY BR U	30300.00	439.51	464.06	459.45	468.33	0.002018	16.57	1854.65	96.00	0.62	1.39
1	38972 TRINITY RAILWAY BR U	30730.00	439.51	468.25	459.60	471.23	0.001200	13.58	2256.65	96.00	0.47	0.91
1	39117	15470.00	438.63	461.32	451.08	461.48	0.000059	3.65	4854.25	363.38	0.14	0.06
1	39117	25260.00	438.63	466.81	452.76	467.02	0.000052	4.02	6912.66	456.31	0.14	0.07
1	39117	30300.00	438.63	469.33	453.50	469.56	0.000049	4.18	7901.00	582.52	0.14	0.07
1	39117	30730.00	438.63	471.91	453.56	472.09	0.000035	3.72	8958.65	922.80	0.12	0.05
1	39217	15470.00	438.80	461.33	452.28	461.50	0.000497	4.53	5795.94	532.03	0.18	0.56
1	39217	25260.00	438.80	466.87	454.15	467.04	0.000375	4.67	8881.95	660.17	0.17	0.54
1	39217	30300.00	438.80	469.41	454.88	469.59	0.000338	4.74	10333.24	699.66	0.16	0.54
1	39217	30730.00	438.80	471.98	454.96	472.11	0.000230	4.15	11813.88	951.96	0.13	0.40
1	40106	15660.00	440.47	461.68	451.11	461.75	0.000194	2.67	8468.31	666.74	0.12	0.20
1	40106	25480.00	440.47	467.17	452.27	467.25	0.000176	3.07	12340.08	754.17	0.11	0.24
1	40106	31070.00	440.47	469.69	452.86	469.78	0.000170	3.24	14286.38	783.35	0.11	0.26
1	40106	32390.00	440.47	472.19	452.98	472.26	0.000153	3.28	16532.95	1351.72	0.11	0.25
1	40864	15660.00	441.90	461.83	451.20	461.90	0.000213	2.80	8395.22	805.63	0.12	0.22
1	40864	25480.00	441.90	467.29	452.45	467.37	0.000158	2.92	13185.17	1275.16	0.11	0.21
1	40864	31070.00	441.90	469.82	453.07	469.90	0.000143	2.98	15463.89	1295.27	0.11	0.22
1	40864	32390.00	441.90	472.29	453.21	472.36	0.000101	2.68	17722.86	1342.90	0.09	0.17
1	41594	15660.00	441.91	461.99	452.02	462.07	0.000242	3.01	7660.32	618.15	0.13	0.25
1	41594	25480.00	441.91	467.41	453.26	467.51	0.000206	3.35	11122.15	658.02	0.12	0.28
1	41594	31070.00	441.91	469.92	453.87	470.03	0.000201	3.55	12797.74	678.23	0.13	0.31
1	41594	32390.00	441.91	472.36	454.01	472.46	0.000156	3.33	14490.09	855.74	0.11	0.26
1	42233	15660.00	442.76	462.14	452.32	462.23	0.000252	3.00	7541.72	606.02	0.13	0.25
1	42233	25480.00	442.76	467.54	453.63	467.65	0.000217	3.38	10922.69	646.26	0.13	0.29
1	42233	31070.00	442.76	470.05	454.27	470.17	0.000213	3.60	12565.86	666.63	0.13	0.32
1	42233	32390.00	442.76	472.46	454.41	472.56	0.000165	3.39	14213.91	707.88	0.12	0.27
1	43485	15660.00	444.20	462.46	452.38	462.63	0.000368	3.57	5446.18	632.38	0.16	0.36
1	43485	25480.00	444.20	467.79	454.12	467.89	0.000180	3.01	11229.53	689.24	0.12	0.23
1	43485	31070.00	444.20	470.29	454.95	470.41	0.000175	3.20	12985.64	715.54	0.12	0.25
1	43485	32390.00	444.20	472.65	455.16	472.76	0.000152	3.18	14878.66	1006.96	0.11	0.24
1	43922	15660.00	444.73	462.54	455.17	462.94	0.001073	6.19	3798.00	652.31	0.27	1.08
1	43922	25480.00	444.73	467.88	457.30	467.98	0.000248	3.59	10993.28	760.05	0.14	0.33
1	43922	31070.00	444.73	470.38	458.34	470.49	0.000229	3.71	13052.72	914.79	0.13	0.34
1	43922	32390.00	444.73	472.74	458.56	472.84	0.000218	3.85	15554.04	1272.14	0.13	0.35
1	44270	15660.00	445.10	463.04	454.68	463.22	0.000551	3.99	5239.02	872.39	0.19	0.47
1	44270	25480.00	445.10	467.98	456.19	468.06	0.000189	2.87	13033.88	974.50	0.12	0.22
1	44270	31070.00	445.10	470.48	456.95	470.56	0.000178	3.02	15538.69	1051.48	0.12	0.23
1	44270	32390.00	445.10	472.83	457.10	472.90	0.000142	2.89	18234.41	1253.17	0.11	0.21
1	44981	15570.00	445.45	463.45	456.11	463.54	0.000336	3.35	7087.95	734.19	0.15	0.32
1	44981	25350.00	445.45	468.12	457.78	468.23	0.000257	3.49	10600.54	773.89	0.14	0.32
1	44981	31170.00	445.45	470.61	458.33	470.72	0.000231	3.58	12527.31	839.66	0.13	0.32
1	44981	33190.00	445.45	472.93	458.51	473.02	0.000172	3.29	14361.62	896.22	0.12	0.26
1	45656	15570.00	445.60	463.57	456.87	464.16	0.001140	6.76	2892.15	263.41	0.31	1.06
1	45656	25350.00	445.60	468.10	459.39	468.85	0.001077	7.83	4120.91	287.50	0.31	1.30
1	45656	31170.00	445.60	470.53	460.60	471.36	0.001038	8.30	4797.52	364.91	0.31	1.41
1	45656	33190.00	445.60	472.82	461.00	473.55	0.000803	7.79	5452.52	583.61	0.28	1.21
1	45757.5 BR D	15570.00	445.60	463.59	457.08	464.28	0.002214	7.18	2526.91	222.55	0.28	1.37
1	45757.5 BR D	25350.00	445.60	468.11	459.73	469.00	0.002393	8.31	3569.39	239.93	0.28	1.74
1	45757.5 BR D	31170.00	445.60	470.52	461.04	471.51	0.002440	8.77	4162.68	251.17	0.28	1.90
1	45757.5 BR D	33190.00	445.60	472.82	461.46	473.67	0.001975	8.17	4750.39	260.63	0.25	1.62
1	45757.5 BR U	15570.00	445.70	463.73	458.28	464.55	0.002490	8.13	2426.36	234.41	0.37	1.70
1	45757.5 BR U	25350.00	445.70	468.25	460.85	469.27	0.002488	9.28	3525.91	252.50	0.37	2.08
1	45757.5 BR U	31170.00	445.70	470.67	462.07	471.78	0.002465	9.77	4148.87	262.30	0.30	2.24
1	45757.5 BR U	33190.00	445.70	472.93	462.52	473.89	0.001967	9.13	4753.10	271.32	0.26	1.91
1	45859	15570.00	445.70	463.98	458.30	464.71	0.001581	7.73	2619.03	251.88	0.35	1.41
1	45859	25350.00	445.70	468.52	460.85	469.43	0.001460	8.86	3826.35	281.44	0.35	1.70
1	45859	31170.00	445.70	470.93	461.96	471.94	0.001414	9.43	4565.62	432.00	0.35	1.85
1	45859	33190.00	445.70	473.20	462.48	474.03	0.001037	8.62	5282.78	550.33	0.31	1.49
1	46139	15570.00	445.80	464.39	458.41	465.17	0.001499	8.14	2608.34	244.14	0.35	1.50
1	46139	25350.00	445.80	468.90	461.18	469.88	0.001456	9.40	3779.79	274.99	0.36	1.85
1	46139	31170.00	445.80	471.27	462.57	472.42	0.001507	10.27	4503.84	351.39	0.37	2.13
1	46139	33190.00	445.80	473.44	462.97	474.41	0.001181	9.64	5569.27	515.39	0.33	1.83
1	46416	15570.00	446.00	465.11	457.66	465.50	0.000817	5.77	3564.18	326.25	0.26	0.77
1	46416	25350.00	446.00	469.69	459.95	470.22	0.000807	6.81	5146.23	384.98	0.27	0.99
1	46416	31170.00	446.00	472.17	461.09	472.78	0.000826	7.44	6230.06	503.35	0.28	1.13
1	46416	33190.00	446.00	474.19	461.38	474.69	0.000638	6.92	7282.64	535.34	0.25	0.95
1	47116	15520.00	446.02	465.66	454.07	465.81	0.000247	3.20	5018.20	351.00	0.14	0.24
1	47116	25280.00	446.02	470.31	455.85	470.54	0.000265	3.94	7265.53	654.28	0.15	0.33
1	47116	31060.00	446.02	472.85	456.79	473.11	0.000258	4.21	9193.92	861.56	0.16	0.36
1	47116	33070.00	446.02	474.73	457.09	474.96	0.000211	4.01	10867.77	1209.90	0.14	0.32
1	47446	15520.00	446.50	465.58	455.84	466.03	0.000709	5.40	2964.67	213.57	0.24	0.67
1	47446	25280.00	446.50	470.15	458.45	470.81	0.000757	6.63	4400.40	516.24	0.26	0.93
1	47446	31060.00	446.50	472.65	459.72	473.38	0.000733	7.06	5708.12	864.98	0.26	1.02
1	47446	33070.00	446.50	474.57	460.13	475.18	0.000577	6.61	6970.70	1071.24	0.24	0.87
1	47559	15520.00	446.60	465.53	456.40	466.18	0.000832	6.77	2951.52	284.56	0.29	0.83
1	47559	25280.00	446.60	470.10	460.24	470.96	0.000853	8.06	4444.24	603.62	0.31	1.08
1	47559	31060.00	446.60	472.56	462.13	473.55	0.000859	8.70	5577.61	832.69	0.31	1.21
1	47559	33070.00	446.60</									

HEC-RAS Plan: WC-Edit River: Big Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	47610	33070.00	451.50	474.39	465.39	475.41	0.001056	9.23	5659.68	1002.58	0.35	1.39
1	47669	15520.00	451.54	465.58	461.34	466.48	0.001713	8.22	2438.43	280.27	0.41	1.32
1	47669	25280.00	451.54	470.21	463.76	471.22	0.001343	8.97	3783.05	352.45	0.38	1.42
1	47669	31060.00	451.54	472.73	464.94	473.80	0.001222	9.37	4589.10	1259.57	0.37	1.48
1	47669	33070.00	451.54	474.53	465.33	475.49	0.000986	8.92	5220.73	1519.22	0.34	1.30
1	47726 BR D	15520.00	451.54	465.63	461.59	466.54	0.002880	8.30	2351.88	269.83	0.41	1.53
1	47726 BR D	25280.00	451.54	470.29	463.96	471.28	0.002478	8.89	3655.24	289.45	0.38	1.63
1	47726 BR D	31060.00	451.54	472.85	465.11	473.87	0.002317	9.11	4410.92	301.77	0.31	1.66
1	47726 BR D	33070.00	451.54	474.64	465.49	475.55	0.001951	8.66	4957.34	308.91	0.28	1.48
1	47726 BR U	15520.00	451.54	465.82	461.56	466.72	0.002814	8.26	2406.59	272.36	0.41	1.51
1	47726 BR U	25280.00	451.54	470.44	463.98	471.45	0.002508	8.98	3711.44	291.76	0.38	1.66
1	47726 BR U	31060.00	451.54	472.98	465.17	474.03	0.002369	9.24	4467.06	302.29	0.31	1.71
1	47726 BR U	33070.00	451.54	474.75	465.55	475.69	0.002014	8.82	5006.71	309.34	0.29	1.53
1	47783	15520.00	451.54	465.92	461.31	466.79	0.001582	8.04	2545.85	285.91	0.39	1.25
1	47783	25280.00	451.54	470.48	463.79	471.49	0.001305	8.93	3903.93	309.01	0.38	1.40
1	47783	31060.00	451.54	473.02	464.98	474.08	0.001176	9.28	4702.66	595.46	0.37	1.44
1	47783	33070.00	451.54	474.76	465.36	475.75	0.000990	9.00	5285.99	1306.24	0.34	1.32
1	48015	15520.00	451.90	466.54	461.46	467.24	0.001937	7.31	2710.23	315.43	0.35	1.60
1	48015	25280.00	451.90	471.08	463.79	471.89	0.001617	8.10	4132.51	400.15	0.34	1.78
1	48015	31060.00	451.90	473.62	464.91	474.45	0.001443	8.36	5112.86	1210.22	0.33	1.82
1	48015	33070.00	451.90	475.15	465.28	476.05	0.001425	8.72	5986.66	1508.96	0.33	1.93
1	48529	15520.00	452.70	468.04	465.33	471.12	0.011200	14.15	1135.31	97.33	0.69	8.77
1	48529	25280.00	452.70	472.10	469.29	476.54	0.011556	17.21	1673.73	260.20	0.73	11.85
1	48529	31060.00	452.70	475.80	475.80	478.19	0.005862	13.96	4045.07	1222.05	0.54	7.31
1	48529	33070.00	452.70	476.14	476.08	478.49	0.005840	14.09	4357.80	1231.16	0.54	7.40
1	49116. A	15520.00	455.70	473.96	468.86	475.33	0.004650	9.76	1775.12	180.72	0.46	4.04
1	49116. A	25280.00	455.70	478.92	471.99	480.32	0.003614	10.50	3486.95	757.92	0.42	4.23
1	49116. A	31060.00	455.70	479.46	473.61	481.29	0.004665	12.15	3748.44	775.32	0.48	5.61
1	49116. A	33070.00	455.70	479.81	474.05	481.53	0.004489	12.06	4423.64	790.01	0.47	5.49
1	49533.	15480.00	456.80	475.82	470.19	476.56	0.001984	7.61	2617.95	252.11	0.36	1.71
1	49533.	25210.00	456.80	480.45	472.61	481.36	0.001775	8.69	3866.48	660.03	0.35	2.03
1	49533.	30970.00	456.80	481.40	473.86	482.60	0.002216	10.03	4143.68	896.06	0.40	2.66
1	49533.	32980.00	456.80	481.52	474.31	482.86	0.002449	10.59	4182.17	925.50	0.42	2.96
1	49719	15480.00	457.88	476.14	472.09	477.03	0.002747	9.52	2383.95	258.90	0.42	2.59
1	49719	25210.00	457.88	480.79	474.45	481.73	0.002200	10.11	3728.73	640.39	0.39	2.68
1	49719	30970.00	457.88	481.87	475.55	483.04	0.002607	11.39	4068.75	908.86	0.43	3.35
1	49719	32980.00	457.88	482.06	475.96	483.35	0.002833	11.94	4131.52	981.79	0.45	3.67
1	49730	Inl Struct										
1	49741	15480.00	458.20	476.43	471.74	477.24	0.002241	8.59	2477.05	255.88	0.39	2.11
1	49741	25210.00	458.20	481.06	474.00	481.99	0.001919	9.47	3790.54	541.13	0.37	2.35
1	49741	30970.00	458.20	482.07	474.88	483.24	0.002320	10.75	4106.65	895.19	0.41	2.98
1	49741	32980.00	458.20	482.26	475.62	483.55	0.002526	11.29	4168.10	953.77	0.43	3.28
1	49800.	15500.00	458.38	476.84	469.61	477.45	0.001312	6.78	2740.83	252.91	0.30	1.30
1	49800.	25270.00	458.38	481.33	472.45	482.15	0.001324	8.03	3856.59	311.23	0.31	1.67
1	49800.	31080.00	458.38	482.36	473.76	483.44	0.001645	9.24	4138.13	939.87	0.35	2.18
1	49800.	33080.00	458.38	482.58	474.17	483.77	0.001788	9.70	4198.71	1070.83	0.37	2.39
1	49870. AIRPORT FREEWAY BR D	15500.00	458.38	476.95	469.98	477.54	0.002252	6.67	2625.17	220.20	0.25	1.45
1	49870. AIRPORT FREEWAY BR D	25270.00	458.38	481.46	472.60	482.26	0.002490	7.73	3684.17	255.76	0.26	1.85
1	49870. AIRPORT FREEWAY BR D	31080.00	458.38	483.71	473.88	483.72	0.004933	8.44	4271.45		0.27	2.50
1	49870. AIRPORT FREEWAY BR D	33080.00	458.38	482.79	474.29	483.92	0.003365	9.19	4027.05	260.46	0.30	2.59
1	49870. AIRPORT FREEWAY BR U	15500.00	458.78	477.10	469.83	477.64	0.001965	6.76	2796.29	270.12	0.24	1.43
1	49870. AIRPORT FREEWAY BR U	25270.00	458.78	481.74	472.32	482.39	0.001978	7.55	4151.41	302.54	0.24	1.68
1	49870. AIRPORT FREEWAY BR U	31080.00	458.78	483.71	473.56	484.50	0.004225	8.35	4744.29		0.25	2.37
1	49870. AIRPORT FREEWAY BR U	33080.00	458.78	483.20	473.97	484.10	0.002600	8.89	4594.36	302.51	0.27	2.31
1	49934.	15500.00	458.78	477.14	469.88	477.72	0.001334	7.16	2906.17	533.11	0.30	1.41
1	49934.	25270.00	458.78	481.77	472.38	482.48	0.001284	8.22	4356.26	1095.03	0.31	1.72
1	49934.	31080.00	458.78	483.71	473.67	484.50	0.001288	8.71	4995.88	1519.84	0.31	1.88
1	49934.	33080.00	458.78	483.26	473.98	484.21	0.001599	9.59	4846.30	1423.04	0.35	2.29
1	49953.	15500.00	458.88	477.15	469.38	477.77	0.001417	7.35	2757.76	235.49	0.31	1.49
1	49953.	25270.00	458.88	481.73	472.36	482.58	0.001502	8.85	4034.63	867.90	0.33	2.00
1	49953.	31080.00	458.88	483.89	473.70	484.56	0.001252	8.61	6942.15	1481.76	0.31	1.83
1	49953.	33080.00	458.88	483.41	474.08	484.27	0.001610	9.63	6277.91	1284.16	0.35	2.31
1	49988. STATE HIGHWAY 18BR D	15500.00	458.88	477.14	469.52	477.83	0.001969	7.73	2659.78	228.44	0.33	1.75
1	49988. STATE HIGHWAY 18BR D	25270.00	458.88	481.75	472.64	482.62	0.002053	8.95	3884.07	301.36	0.28	2.20
1	49988. STATE HIGHWAY 18BR D	31080.00	458.88	483.80	474.02	484.70	0.002122	9.17	4539.31	349.88	0.27	2.43
1	49988. STATE HIGHWAY 18BR D	33080.00	458.88	483.31	474.49	484.43	0.002626	10.22	4372.46	325.38	0.30	2.96
1	49988. STATE HIGHWAY 18BR U	15500.00	459.38	477.21	470.93	477.95	0.002700	7.82	2400.46	204.61	0.34	1.92
1	49988. STATE HIGHWAY 18BR U	25270.00	459.38	481.86	473.57	482.72	0.002658	8.66	3780.27	348.51	0.28	2.23
1	49988. STATE HIGHWAY 18BR U	31080.00	459.38	483.98	474.87	484.80	0.002653	8.66	4550.15	388.08	0.26	2.36
1	49988. STATE HIGHWAY 18BR U	33080.00	459.38	483.53	475.29	484.57	0.003274	9.67	4378.22	375.19	0.29	2.88
1	50074.	15500.00	459.38	477.33	470.83	478.10	0.001715	7.99	2522.26	215.40	0.34	1.77
1	50074.	25270.00	459.38	481.93	473.55	482.93	0.001784	9.56	3986.97	941.46	0.36	2.34
1	50074.	31080.00	459.38	484.53	474.87	485.00	0.000967	7.59	8479.59	1053.77	0.27	1.42
1	50074.	33080.00	459.38	484.23	475.24	484.82	0.001188	8.35	8172.71	1040.67	0.30	1.73
1	50162.	15500.00	459.88	477.61	471.08	478.28	0.001604	7.66	2917.59	555.60	0.33	1.63
1	50162.	25270.00	459.88	482.52	473.62	483.17	0.001269	8.09	4825.08	1132.72	0.31	1.67
1	50162.	31080.00	459.88	484.80	473.91	485.12	0.000736	6.58	10144.41	1241.91	0.24	1.07
1	50162.	33080.00	459.88	484.58	475.90	484.96	0.000893	7.21	9868.29	1232.56</		

HEC-RAS Plan: WC-Edit River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	Shear Chan (lb/sq ft)
1	50402. STATE HIGHWAY 18BR U	33080.00	461.07	484.79	475.71	486.33	0.004799	8.64	4721.73		0.27	2.58
1	50532.	15500.00	461.07	478.52	471.87	479.03	0.001290	6.90	3146.26	452.79	0.30	1.32
1	50532.	25270.00	461.07	483.26	474.36	483.83	0.001062	7.39	4629.75	1065.37	0.28	1.40
1	50532.	31080.00	461.07	485.23	475.77	485.88	0.001087	7.92	5243.95	1386.46	0.29	1.56
1	50532.	33080.00	461.07	485.63	476.03	486.33	0.001142	8.22	5370.90	1404.24	0.30	1.67
1	50639. B	15480.00	461.07	478.86	470.87	479.20	0.000842	5.21	4437.53	588.23	0.24	0.78
1	50639. B	25220.00	461.07	483.68	473.44	484.00	0.000631	5.43	7425.91	800.22	0.21	0.77
1	50639. B	31010.00	461.07	485.74	475.67	486.06	0.000588	5.60	8829.51	1019.99	0.21	0.79
1	50639. B	33000.00	461.07	486.19	476.32	486.53	0.000604	5.75	9137.70	1048.34	0.21	0.83
1	50803.	15480.00	462.07	478.87	471.82	479.46	0.001470	6.47	2998.54	419.10	0.30	1.24
1	50803.	25220.00	462.07	483.61	474.51	484.23	0.001158	6.98	5082.05	763.99	0.28	1.31
1	50803.	31010.00	462.07	485.65	476.13	486.30	0.001108	7.31	6165.74	1075.75	0.28	1.39
1	50803.	33000.00	462.07	486.09	476.60	486.77	0.001139	7.52	6411.96	1105.94	0.29	1.46
1	51094.	15480.00	462.20	479.24	473.45	480.05	0.002136	8.15	2793.94	329.33	0.37	1.93
1	51094.	25220.00	462.20	483.88	476.34	484.72	0.001734	8.77	4519.74	482.70	0.35	2.04
1	51094.	31010.00	462.20	485.89	476.75	486.78	0.001684	9.22	5431.41	626.98	0.35	2.19
1	51094.	33000.00	462.20	486.34	476.75	487.27	0.001732	9.48	5648.90	671.44	0.35	2.29
1	51378.	15470.00	462.40	479.82	473.61	480.61	0.001838	7.81	2739.45	403.55	0.35	1.74
1	51378.	25210.00	462.40	484.41	476.32	485.18	0.001466	8.28	4805.41	670.95	0.32	1.80
1	51378.	31010.00	462.40	486.43	477.59	487.22	0.001398	8.62	5819.62	792.89	0.32	1.88
1	51378.	32990.00	462.40	486.91	478.14	487.73	0.001428	8.83	6072.19	838.19	0.33	1.97
1	51507	15470.00	462.42	480.18		480.87	0.002071	7.53	2956.22	433.30	0.34	1.96
1	51507	25210.00	462.42	484.85		485.38	0.001335	7.19	5411.94	633.56	0.28	1.64
1	51507	31010.00	462.42	486.92		487.41	0.001186	7.24	6822.83	739.43	0.27	1.61
1	51507	32990.00	462.42	487.36		487.92	0.001314	7.71	7156.15	747.87	0.28	1.81
1	51514	Inl Struct										
1	51521	15470.00	462.85	480.38	474.31	481.01	0.002014	7.41	3088.93	449.94	0.33	1.90
1	51521	25210.00	462.85	485.02	476.53	485.50	0.001283	7.05	5594.84	644.64	0.28	1.58
1	51521	31010.00	462.85	487.01	477.63	487.52	0.001283	7.51	6970.23	738.25	0.28	1.73
1	51521	32990.00	462.85	487.53	478.01	488.04	0.001252	7.54	7359.02	741.50	0.28	1.73
1	51554	15470.00	462.90	480.64	473.69	481.12	0.001441	6.29	3142.12	503.86	0.28	1.37
1	51554	25210.00	462.90	485.03	475.98	485.62	0.001332	7.15	4583.09	694.53	0.28	1.62
1	51554	31010.00	462.90	486.99	477.19	487.66	0.001348	7.66	5284.18	832.38	0.29	1.81
1	51554	32990.00	462.90	487.49	477.40	488.19	0.001381	7.87	5464.41	838.19	0.29	1.89
1	51590. STATE HIGHWAY 97BR D	15470.00	462.90	480.79	473.86	481.22	0.001981	5.85	3095.28	305.34	0.26	1.33
1	51590. STATE HIGHWAY 97BR D	25210.00	462.90	485.21	476.13	485.73	0.001993	6.45	4510.86	377.42	0.25	1.54
1	51590. STATE HIGHWAY 97BR D	31010.00	462.90	487.14	477.26	487.76	0.002240	7.07	5107.98	265.61	0.23	1.82
1	51590. STATE HIGHWAY 97BR D	32990.00	462.90	487.62	477.57	488.29	0.002468	7.47	5229.05	247.96	0.23	2.02
1	51590. STATE HIGHWAY 97BR U	15470.00	462.96	480.95	472.64	481.32	0.001359	5.35	3474.59	346.20	0.24	1.05
1	51590. STATE HIGHWAY 97BR U	25210.00	462.96	485.36	475.47	485.83	0.001387	6.17	5185.91	373.83	0.20	1.32
1	51590. STATE HIGHWAY 97BR U	31010.00	462.96	487.27	476.66	487.86	0.001620	7.00	5815.69	285.39	0.22	1.65
1	51590. STATE HIGHWAY 97BR U	32990.00	462.96	487.74	477.05	488.40	0.001772	7.40	5944.77	266.84	0.23	1.84
1	51652.	15470.00	462.96	481.00	472.45	481.37	0.001002	5.30	3587.25	460.93	0.24	0.96
1	51652.	25210.00	462.96	485.44	475.39	485.88	0.000927	6.01	5401.96	828.68	0.24	1.14
1	51652.	31010.00	462.96	487.47	476.61	487.94	0.000905	6.34	6286.98	1033.91	0.24	1.23
1	51652.	32990.00	462.96	488.00	477.00	488.50	0.000920	6.49	6519.61	1050.00	0.24	1.28
1	51988.	15470.00	463.82	481.24	474.51	481.88	0.001530	7.15	3073.80	489.88	0.32	1.46
1	51988.	25210.00	463.82	485.68	476.89	486.27	0.001202	7.47	5563.48	972.79	0.29	1.46
1	51988.	31010.00	463.82	487.72	478.17	488.27	0.001066	7.50	6990.71	1218.36	0.28	1.43
1	51988.	32990.00	463.82	488.40	478.56	488.78	0.000804	6.64	9600.25	1283.35	0.24	1.11
1	52138.	15470.00	463.91	481.47	475.22	482.13	0.001686	7.29	3107.18	587.13	0.33	1.54
1	52138.	25210.00	463.91	485.89	477.78	486.46	0.001243	7.41	5910.76	1162.73	0.29	1.46
1	52138.	31010.00	463.91	487.93	479.09	488.44	0.001068	7.33	7492.93	1307.61	0.28	1.38
1	52138.	32990.00	463.91	488.45	479.22	488.96	0.001046	7.37	7917.77	1311.42	0.27	1.39
1	52597.	15410.00	464.16	482.44	477.23	483.00	0.002149	7.38	3098.54	459.52	0.34	1.92
1	52597.	25100.00	464.16	486.55	479.74	487.14	0.001793	7.96	5086.22	850.09	0.32	2.05
1	52597.	30850.00	464.16	488.56	480.66	488.99	0.001341	7.37	7561.43	964.32	0.29	1.70
1	52597.	32820.00	464.16	489.07	481.32	489.49	0.001284	7.33	8055.13	977.40	0.28	1.67
1	52748.	15410.00	462.54	482.83	473.62	483.23	0.001005	5.73	3778.80	523.65	0.24	1.09
1	52748.	25100.00	462.54	486.91	476.66	487.34	0.000925	6.31	5997.29	835.90	0.24	1.23
1	52748.	30850.00	462.54	488.77	477.92	489.16	0.000832	6.32	8305.26	993.53	0.23	1.20
1	52748.	32820.00	462.54	489.26	478.39	489.65	0.000830	6.40	8802.59	1046.39	0.23	1.22
1	52904.	15420.00	461.24	482.99	474.86	483.39	0.000837	5.83	3463.21	368.91	0.24	0.92
1	52904.	25120.00	461.24	486.97	477.39	487.63	0.001215	7.97	5870.66	1301.70	0.29	1.62
1	52904.	30900.00	461.24	488.87	478.61	489.36	0.000950	7.43	8763.95	1591.84	0.26	1.37
1	52904.	32860.00	461.24	489.38	478.99	489.82	0.000872	7.22	9577.11	1599.25	0.25	1.28
1	52990. STATE HIGHWAY 97BR D	15420.00	461.24	483.05	475.01	483.44	0.001215	5.72	3343.55	298.36	0.19	0.98
1	52990. STATE HIGHWAY 97BR D	25120.00	461.24	487.14	477.46	487.74	0.002449	7.34	4479.79	109.18	0.22	1.71
1	52990. STATE HIGHWAY 97BR D	30900.00	461.24	489.64	478.65	490.24		8.66	4533.42		0.25	
1	52990. STATE HIGHWAY 97BR D	32860.00	461.24	490.35	479.06	490.83		9.09	4772.55	221.19	0.26	
1	52990. STATE HIGHWAY 97BR U	15420.00	461.92	483.11	475.26	483.57	0.001497	6.27	3153.36	256.97	0.21	1.19
1	52990. STATE HIGHWAY 97BR U	25120.00	461.92	487.29	477.81	488.04	0.003691	8.13	4109.80	48.94	0.24	2.20
1	52990. STATE HIGHWAY 97BR U	30900.00	461.92	489.64	479.06	490.25		9.86	4137.40		0.28	
1	52990. STATE HIGHWAY 97BR U	32860.00	461.92	490.35	479.45	490.90		10.35	4380.45	227.20	0.30	
1	53048.	15420.00	461.92	483.13	475.09	483.60	0.001007	6.35	3280.10	284.48	0.26	1.10
1	53048.	25120.00	461.92	487.48	477.68	488.11	0.001064	7.50	4517.92	929.62	0.27	1.43
1	53048.	30900.00	461.92	489.64	478.94	490.24	0.001086	8.04	8082.47	1414.37	0.28	1.60
1	53048.	32860.00	461.92	490.35	479.34	490.89	0.000999	7.85	9131.19	1562.90	0.27	1.51
1	53178. C	15420.00	464.30	483.28	474.49	483.72	0.000930	5.93	3195.44	261.35	0.25	0.97
1	53178. C	25120.00	464.30</									

HEC-RAS Plan: WC-Edit River: Big Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	54250.	30670.00	465.53	492.00		493.08	0.001843	9.48	4913.08	471.12	0.34	2.69
1	54695.	14540.00	467.10	485.33		485.90	0.001283	6.59	2749.17	243.54	0.29	1.23
1	54695.	24890.00	467.10	489.90		490.74	0.001413	8.20	3925.05	271.75	0.32	1.75
1	54695.	28800.00	467.10	492.29		493.13	0.001230	8.24	4594.60	286.77	0.30	1.71
1	54695.	30670.00	467.10	492.89		493.77	0.001259	8.48	4767.27	289.99	0.31	1.79
1	55211.	14540.00	467.55	486.10		486.68	0.001795	6.92	2691.78	248.32	0.29	1.90
1	55211.	24890.00	467.55	490.81		491.58	0.001833	8.20	3923.77	274.22	0.31	2.46
1	55211.	28800.00	467.55	493.10		493.86	0.001605	8.19	4569.94	288.46	0.29	2.38
1	55211.	30670.00	467.55	493.73		494.52	0.001631	8.40	4751.48	292.05	0.30	2.48
1	55550.	14540.00	468.30	486.69		487.19	0.001285	6.79	2947.35	257.48	0.29	1.29
1	55550.	24890.00	468.30	491.41		492.12	0.001377	8.23	4227.72	284.98	0.31	1.75
1	55550.	28800.00	468.30	493.63		494.34	0.001241	8.33	4873.50	298.46	0.30	1.74
1	55550.	30670.00	468.30	494.26		495.00	0.001266	8.55	5064.03	302.54	0.30	1.82
1	55975.	14290.00	468.60	487.20		487.89	0.001798	7.46	2521.09	248.83	0.33	1.62
1	55975.	24390.00	468.60	491.82		492.99	0.002252	9.91	4681.59	1166.54	0.39	2.62
1	55975.	28140.00	468.60	494.27		494.88	0.001278	8.05	8534.15	1863.93	0.30	1.66
1	55975.	29980.00	468.60	495.04		495.52	0.001062	7.50	10005.46	1975.88	0.27	1.43
1	56541.	14290.00	469.10	488.30		488.96	0.001971	7.14	2522.05	238.97	0.32	1.79
1	56541.	24390.00	469.10	493.27		494.26	0.002195	9.07	4569.29	786.47	0.35	2.63
1	56541.	28140.00	469.10	494.95		495.83	0.001898	8.89	6080.94	1053.26	0.33	2.46
1	56541.	29980.00	469.10	495.55		496.42	0.001867	8.97	6774.34	1235.52	0.33	2.48
1	57177.	14290.00	469.60	489.59	482.71	490.21	0.002075	7.02	2551.15	334.99	0.31	2.01
1	57177.	24390.00	469.60	494.75	486.42	495.65	0.002247	8.78	4227.63	725.39	0.33	2.87
1	57177.	28140.00	469.60	496.21	487.24	497.06	0.002054	8.76	5041.71	817.53	0.32	2.80
1	57177.	29980.00	469.60	496.78	487.63	497.62	0.002013	8.82	5373.50	858.07	0.32	2.81
1	57811.	14290.00	469.49	490.73		491.29	0.001424	6.79	2942.65	272.76	0.28	1.53
1	57811.	24390.00	469.49	496.05		496.79	0.001439	8.10	4604.46	401.43	0.29	2.00
1	57811.	28140.00	469.49	497.33		498.22	0.001628	8.93	5291.26	626.74	0.32	2.38
1	57811.	29980.00	469.49	497.87		498.78	0.001649	9.11	5645.30	670.93	0.32	2.46
1	58125.	14290.00	471.50	491.23		491.98	0.003021	7.37	2322.95	247.47	0.36	2.37
1	58125.	24390.00	471.50	496.47		497.47	0.002668	8.66	3859.25	462.74	0.36	2.93
1	58125.	28140.00	471.50	497.87		498.89	0.002590	8.96	4627.12	608.72	0.36	3.06
1	58125.	29980.00	471.50	498.43		499.45	0.002537	9.04	4980.98	641.21	0.35	3.09
1	58461.	14290.00	472.60	492.07		492.95	0.002548	7.87	2192.39	248.21	0.36	2.20
1	58461.	24390.00	472.60	497.35		498.24	0.001959	8.48	4577.23	593.98	0.34	2.31
1	58461.	28140.00	472.60	498.75		499.65	0.001888	8.71	5453.22	662.92	0.33	2.38
1	58461.	29980.00	472.60	499.28		500.20	0.001904	8.89	5814.06	696.43	0.34	2.46
1	58698.	14290.00	471.52	492.75		493.60	0.002957	7.40	1932.19	161.55	0.38	2.09
1	58698.	24390.00	471.52	497.87		498.72	0.002078	7.83	4036.35	540.16	0.33	2.08
1	58698.	28140.00	471.52	499.27		500.10	0.001912	7.92	4824.97	590.96	0.32	2.07
1	58698.	29980.00	471.52	499.81		500.65	0.001895	8.03	5151.48	617.14	0.32	2.11
1	58849.	14260.00	471.20	492.90		494.19	0.003114	9.12	1603.80	204.64	0.42	2.51
1	58849.	24460.00	471.20	497.90		499.21	0.002629	9.88	3505.56	527.55	0.41	2.71
1	58849.	28140.00	471.20	499.31		500.53	0.002351	9.81	4274.09	556.72	0.39	2.61
1	58849.	29930.00	471.20	499.86		501.08	0.002309	9.90	4581.58	573.98	0.39	2.63
1	58903.	14260.00	471.69	493.06		494.43	0.004491	9.46	1623.99	235.43	0.50	2.90
1	58903.	24460.00	471.69	498.32		499.42	0.002587	9.15	3617.53	518.37	0.40	2.40
1	58903.	28140.00	471.69	499.70		500.72	0.002279	9.07	4350.84	554.70	0.38	2.30
1	58903.	29930.00	471.69	500.22		501.26	0.002251	9.19	4649.23	578.40	0.38	2.34
1	58921. GOLF COURSE BR D	14260.00	471.69	493.15	486.70	494.49	0.004538	9.37	1644.00	240.32	0.35	2.87
1	58921. GOLF COURSE BR D	24460.00	471.69	498.84	492.76	499.57	0.005380	7.59	3846.23	506.26	0.23	2.18
1	58921. GOLF COURSE BR D	28140.00	471.69	499.70	494.18	500.72		6.53	4949.53	554.50	0.23	
1	58921. GOLF COURSE BR D	29930.00	471.69	500.22	494.69	501.26		6.56	5287.14	578.40	0.22	
1	58921. GOLF COURSE BR U	14260.00	473.15	493.17	486.49	494.55	0.004031	9.44	1548.01	191.07	0.48	2.82
1	58921. GOLF COURSE BR U	24460.00	473.15	498.97	491.23	499.64	0.005313	7.33	3958.87	508.22	0.23	2.06
1	58921. GOLF COURSE BR U	28140.00	473.15	499.88	493.16	500.83		6.40	4982.00	553.55	0.22	
1	58921. GOLF COURSE BR U	29930.00	473.15	500.42	495.74	501.37		6.42	5309.35	573.08	0.22	
1	58938.	14260.00	473.15	493.25	486.47	494.61	0.003971	9.38	1562.87	197.04	0.48	2.78
1	58938.	24460.00	473.15	498.89	491.12	499.81	0.002205	8.48	3958.65	530.37	0.37	2.06
1	58938.	28140.00	473.15	499.88	493.27	500.83	0.002176	8.77	4494.74	553.55	0.37	2.16
1	58938.	29930.00	473.15	500.42	495.34	501.37	0.002106	8.81	4802.16	573.08	0.37	2.16
1	59031.	14260.00	472.29	493.72		494.95	0.002679	8.93	1708.68	245.08	0.40	2.34
1	59031.	24460.00	472.29	499.00		500.09	0.001939	9.24	3821.68	514.11	0.36	2.27
1	59031.	28140.00	472.29	499.97		501.12	0.001992	9.66	4338.87	546.62	0.37	2.45
1	59031.	29930.00	472.29	500.52		501.66	0.001966	9.76	4638.85	565.11	0.37	2.47
1	59366. D	14260.00	474.40	495.13		495.51	0.000880	6.15	3742.23	466.48	0.24	1.01
1	59366. D	24460.00	474.40	500.17		500.53	0.000705	6.41	6240.53	532.71	0.23	1.02
1	59366. D	28140.00	474.40	501.19		501.58	0.000750	6.79	6788.97	546.21	0.24	1.13
1	59366. D	29930.00	474.40	501.71		502.12	0.000770	6.97	7078.86	563.27	0.24	1.18
1	59463.	14260.00	472.60	495.13		495.64	0.000974	6.29	3087.89	443.04	0.28	0.92
1	59463.	24460.00	472.60	500.16		500.63	0.000722	6.52	5488.47	509.56	0.25	0.90
1	59463.	28140.00	472.60	501.17		501.69	0.000782	7.00	6017.72	553.16	0.26	1.02
1	59463.	29930.00	472.60	501.70		502.23	0.000783	7.12	6312.35	558.32	0.27	1.05
1	59554.	14260.00	472.32	495.07		495.82	0.001490	6.99	2172.22	293.60	0.33	1.19
1	59554.	24460.00	472.32	500.08		500.77	0.001066	7.28	4467.59	521.88	0.30	1.17
1	59554.	28140.00	472.32	501.11		501.83	0.001076	7.57	5010.17	534.37	0.30	1.24
1	59554.	29930.00	472.32	501.63		502.38	0.001087	7.75	5298.58	569.97	0.30	1.29
1	59619.	14260.00	471.62	495.42		495.91	0.000805	6.12	3025.53	425.80	0.26	0.84
1	59619.	24460.00	471.62	500.37		500.85	0.000670	6.58	5483.62	545.25	0.24	0.89
1	59619.	28140.00	471.62	501.41		501.91	0.000688	6.86	6052.35	553.91	0.25	0.96
1	59619.	29930.00	471.62	501.95		502.46	0.000685	6.96	6352.96	558.97	0.25	0.98
1	59690.	14260.00	471.32									

HEC-RAS Plan: WC-Edit River: Big Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	60305.	14260.00	472.40	496.40		496.78	0.000597	4.96	3148.91	483.19	0.22	0.57
1	60305.	24460.00	472.40	501.00		501.41	0.000543	5.59	6058.87	715.29	0.22	0.66
1	60305.	28140.00	472.40	502.02		502.46	0.000562	5.87	6809.79	755.31	0.22	0.72
1	60305.	29930.00	472.40	502.55		502.99	0.000565	5.98	7212.68	785.03	0.22	0.74
1	60457.	14260.00	472.40	496.41		496.93	0.000883	5.89	2675.07	401.30	0.26	0.81
1	60457.	24460.00	472.40	500.98		501.56	0.000791	6.62	4823.57	553.60	0.26	0.94
1	60457.	28140.00	472.40	501.99		502.62	0.000818	6.96	5411.66	621.83	0.27	1.02
1	60457.	29930.00	472.40	502.52		503.15	0.000816	7.07	5747.11	660.17	0.27	1.04
1	60498.	14260.00	472.60	496.41		497.01	0.001170	6.35	2582.75	439.98	0.30	0.97
1	60498.	24460.00	472.60	501.04		501.60	0.000887	6.67	4985.27	642.65	0.27	0.98
1	60498.	28140.00	472.60	502.08		502.66	0.000882	6.90	5675.95	677.25	0.27	1.03
1	60498.	29930.00	472.60	502.62		503.20	0.000864	6.95	6044.42	692.79	0.27	1.03
1	60514. GOLF COURSE BR D	14260.00	472.60	496.43	486.60	497.02	0.001338	6.33	2585.45	437.84	0.22	1.00
1	60514. GOLF COURSE BR D	24460.00	472.60	501.23	490.68	501.65	0.001673	5.85	5075.85	641.74	0.17	0.94
1	60514. GOLF COURSE BR D	28140.00	472.60	502.35	491.88	502.73	0.002072	5.40	5799.49	660.22	0.16	0.88
1	60514. GOLF COURSE BR D	29930.00	472.60	502.62	492.47	503.20		4.86	6498.33	687.31	0.16	
1	60514. GOLF COURSE BR U	14260.00	472.60	496.33	486.90	497.14	0.001584	7.29	2149.04	365.68	0.34	1.29
1	60514. GOLF COURSE BR U	24460.00	472.60	501.17	491.22	501.74	0.002183	6.76	4394.22	553.06	0.20	1.25
1	60514. GOLF COURSE BR U	28140.00	472.60	502.31	492.49	502.82	0.002806	6.22	5050.87	615.12	0.19	1.17
1	60514. GOLF COURSE BR U	29930.00	472.60	502.60	493.11	503.35		5.39	5753.16	657.99	0.19	
1	60531.	14260.00	472.60	496.36	486.88	497.17	0.001574	7.27	2158.70	369.59	0.34	1.28
1	60531.	24460.00	472.60	501.12	491.21	501.84	0.001164	7.49	4392.23	558.04	0.31	1.25
1	60531.	28140.00	472.60	502.23	492.48	502.95	0.001139	7.70	5046.63	638.29	0.31	1.29
1	60531.	29930.00	472.60	502.60	493.10	503.35	0.001165	7.88	5290.42	665.02	0.31	1.35
1	60571.	14260.00	472.50	496.25		497.42	0.002122	9.13	2002.24	425.71	0.40	1.95
1	60571.	24460.00	472.50	501.24		501.90	0.001130	8.00	5049.70	697.39	0.31	1.36
1	60571.	28140.00	472.50	502.42		503.03	0.001033	7.93	5887.95	726.10	0.30	1.32
1	60571.	29930.00	472.50	502.82		503.44	0.001037	8.04	6180.23	735.48	0.30	1.35
1	60660.	14260.00	472.60	497.01		497.62	0.001142	7.14	3046.90	590.13	0.30	1.15
1	60660.	24460.00	472.60	501.61		502.01	0.000705	6.57	6242.02	746.00	0.25	0.90
1	60660.	28140.00	472.60	502.74		503.13	0.000665	6.60	7097.30	763.48	0.24	0.90
1	60660.	29930.00	472.60	503.14		503.53	0.000670	6.70	7403.05	766.53	0.24	0.92
1	60854.	14260.00	472.80	497.00		497.99	0.001579	8.64	2426.28	524.69	0.36	1.67
1	60854.	24460.00	472.80	501.60		502.23	0.000999	7.98	5111.35	621.77	0.29	1.32
1	60854.	28140.00	472.80	502.73		503.34	0.000954	8.05	5824.02	640.10	0.29	1.32
1	60854.	29930.00	472.80	503.13		503.75	0.000967	8.19	6079.33	646.69	0.29	1.36
1	60953.	14260.00	472.90	497.17		498.16	0.001840	8.35	2198.69	443.71	0.37	1.64
1	60953.	24460.00	472.90	501.64		502.37	0.001261	8.16	4741.78	680.00	0.32	1.45
1	60953.	28140.00	472.90	502.78		503.47	0.001157	8.11	5534.27	700.85	0.31	1.40
1	60953.	29930.00	472.90	503.18		503.88	0.001158	8.21	5818.15	709.03	0.31	1.43
1	61052.	14260.00	473.00	497.35		498.36	0.002206	8.59	2150.88	419.40	0.40	1.80
1	61052.	24460.00	473.00	501.73		502.53	0.001523	8.54	4540.80	701.63	0.35	1.62
1	61052.	28140.00	473.00	502.87		503.60	0.001365	8.42	5356.32	727.62	0.33	1.54
1	61052.	29930.00	473.00	503.28		504.01	0.001354	8.50	5653.89	737.94	0.33	1.56
1	61112.	14260.00	473.30	497.96		498.57	0.001044	6.63	2787.67	508.63	0.27	1.01
1	61112.	24460.00	473.30	502.13		502.67	0.000893	7.03	5703.29	874.42	0.26	1.06
1	61112.	28140.00	473.30	503.23		503.73	0.000832	7.00	6684.89	912.91	0.25	1.04
1	61112.	29930.00	473.30	503.63		504.14	0.000829	7.07	7060.04	925.42	0.25	1.05
1	61113. GOLF COURSE BR D	14260.00	473.30	498.03	485.54	498.59	0.001537	6.43	2813.09	500.70	0.21	1.06
1	61113. GOLF COURSE BR D	24460.00	473.30	502.47	490.36	502.76	0.001782	5.11	5946.52	884.86	0.14	0.78
1	61113. GOLF COURSE BR D	28140.00	473.30	503.54	491.85	503.81	0.001546	4.91	6914.47	923.05	0.14	0.71
1	61113. GOLF COURSE BR D	29930.00	473.30	503.94	492.54	504.22	0.001504	4.90	7289.66	936.36	0.13	0.70
1	61113. GOLF COURSE BR U	14260.00	473.30	498.03	485.54	498.63	0.001603	6.56	2636.37	405.74	0.22	1.11
1	61113. GOLF COURSE BR U	24460.00	473.30	502.44	490.36	502.83	0.002352	5.86	5223.44	831.05	0.16	1.03
1	61113. GOLF COURSE BR U	28140.00	473.30	503.51	491.85	503.87	0.002034	5.63	6144.67	881.53	0.15	0.93
1	61113. GOLF COURSE BR U	29930.00	473.30	503.91	492.54	504.28	0.002023	5.68	6503.97	899.80	0.15	0.94
1	61139.	14260.00	473.30	498.02	485.50	498.66	0.001059	6.69	2646.74	419.57	0.28	1.03
1	61139.	24460.00	473.30	502.33	490.33	502.96	0.000973	7.38	5191.53	816.78	0.27	1.17
1	61139.	28140.00	473.30	503.40	491.83	504.01	0.000946	7.50	6098.99	875.20	0.27	1.19
1	61139.	29930.00	473.30	503.79	492.44	504.42	0.000966	7.67	6450.86	897.55	0.27	1.23
1	61183.	14260.00	473.42	498.23		498.74	0.000904	6.01	2982.58	466.64	0.26	0.84
1	61183.	24460.00	473.42	502.56		503.05	0.000759	6.45	5727.05	779.95	0.25	0.89
1	61183.	28140.00	473.42	503.60		504.09	0.000755	6.65	6568.00	856.18	0.25	0.93
1	61183.	29930.00	473.42	504.00		504.50	0.000761	6.76	6920.51	874.94	0.25	0.96
1	61262.	14260.00	473.62	498.17		498.90	0.001646	7.24	2529.54	483.80	0.35	1.29
1	61262.	24460.00	473.62	502.61		503.12	0.001026	6.90	5431.50	833.06	0.29	1.07
1	61262.	28140.00	473.62	503.64		504.16	0.001007	7.09	6316.00	880.00	0.29	1.11
1	61262.	29930.00	473.62	504.05		504.57	0.000993	7.14	6682.37	886.53	0.28	1.12
1	61326.	14260.00	473.82	498.37		498.99	0.001186	6.60	2621.10	472.47	0.30	1.04
1	61326.	24460.00	473.82	502.66		503.18	0.000871	6.70	5602.21	841.84	0.27	0.98
1	61326.	28140.00	473.82	503.72		504.22	0.000820	6.73	6516.10	874.65	0.26	0.97
1	61326.	29930.00	473.82	504.14		504.63	0.000814	6.80	6876.56	879.81	0.26	0.99
1	61379.	14260.00	473.82	498.65		499.07	0.000796	5.35	3130.71	501.88	0.25	0.68
1	61379.	24460.00	473.82	502.83		503.24	0.000653	5.74	5963.07	782.07	0.23	0.72
1	61379.	28140.00	473.82	503.84		504.27	0.000678	6.05	6782.79	846.34	0.24	0.79
1	61379.	29930.00	473.82	504.24		504.68	0.000683	6.16	7118.79	852.83	0.24	0.81
1	61425.	14260.00	474.32	498.75		499.11	0.000668	5.00	3474.34	525.66	0.23	0.59
1	61425.	24460.00	474.32	502.89		503.27	0.000596	5.55	6256.07	791.30	0.22	0.67
1	61425.	28140.00	474.32	503.93		504.31	0.000589	5.72	7086.28	812.76	0.22	0.70
1	61425.	29930.00	474.32	504.32		504.71	0.000598	5.84	7406.86	819.08	0.23	0.73
1	61472.	14260.00	475.02	498.59		499.24	0.001180	6.53	2430.70	40		

HEC-RAS Plan: WC-Edit River: Big Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	61639.	28140.00	476.80	503.76		504.72	0.001705	9.11	4957.37	741.69	0.37	1.84
1	61639.	29930.00	476.80	504.15		505.12	0.001701	9.23	5253.66	754.35	0.37	1.87
1	61739.	14260.00	477.83	498.59		499.94	0.002689	9.56	1927.27	522.08	0.44	2.22
1	61739.	24460.00	477.83	503.07		503.89	0.001565	8.73	4822.53	733.16	0.35	1.69
1	61739.	28140.00	477.83	504.13		504.90	0.001458	8.73	5615.75	759.11	0.34	1.66
1	61739.	29930.00	477.83	504.53		505.30	0.001452	8.83	5920.57	767.24	0.34	1.69
1	61836.	14260.00	477.59	499.00		500.21	0.002610	8.94	1850.74	513.86	0.43	1.99
1	61836.	24460.00	477.59	503.25		504.04	0.001558	8.32	4631.76	706.90	0.35	1.57
1	61836.	28140.00	477.59	504.28		505.04	0.001468	8.39	5387.72	744.69	0.34	1.56
1	61836.	29930.00	477.59	504.68		505.44	0.001457	8.48	5685.88	751.33	0.34	1.59
1	61940.	14260.00	477.86	499.62		500.48	0.002059	7.69	2261.54	471.00	0.39	1.49
1	61940.	24460.00	477.86	503.43		504.19	0.001535	7.95	4493.25	654.06	0.35	1.46
1	61940.	28140.00	477.86	504.42		505.19	0.001482	8.13	5164.96	696.40	0.35	1.50
1	61940.	29930.00	477.86	504.82		505.59	0.001484	8.26	5438.16	702.33	0.35	1.53
1	62100.	14260.00	477.98	500.08		500.74	0.001176	7.59	2893.21	490.23	0.31	1.27
1	62100.	24460.00	477.98	503.77		504.41	0.001089	8.24	5156.06	682.91	0.31	1.41
1	62100.	28140.00	477.98	504.77		505.40	0.001059	8.37	5853.03	707.42	0.31	1.44
1	62100.	29930.00	477.98	505.17		505.80	0.001060	8.47	6136.20	712.23	0.31	1.46
1	62207.	14260.00	477.66	499.73		501.46	0.002941	10.75	1431.82	114.80	0.46	2.70
1	62207.	24460.00	477.66	502.82	498.13	505.77	0.004270	14.50	2255.92	486.08	0.57	4.64
1	62207.	28140.00	477.66	503.77	499.45	506.80	0.004340	15.07	2753.68	563.38	0.58	4.94
1	62207.	29930.00	477.66	504.14	500.01	507.23	0.004409	15.38	2971.95	601.22	0.59	5.11
1	62220. GOLF COURSE MAINBR D	14260.00	477.66	499.77	493.65	501.54	0.007808	10.91	1388.56	111.91	0.47	3.52
1	62220. GOLF COURSE MAINBR D	24460.00	477.66	503.82	498.69	505.77		11.92	3365.56	370.99	0.43	
1	62220. GOLF COURSE MAINBR D	28140.00	477.66	504.56	500.21	506.80		11.73	4275.07	448.16	0.43	
1	62220. GOLF COURSE MAINBR D	29930.00	477.66	505.60	505.60	507.26		11.75	4691.53	810.39	0.35	
1	62220. GOLF COURSE MAINBR U	14260.00	477.66	500.07	493.75	501.66	0.006676	10.49	1496.20	156.44	0.44	3.19
1	62220. GOLF COURSE MAINBR U	24460.00	477.66	504.41	498.64	505.79		11.80	3538.06	486.83	0.37	
1	62220. GOLF COURSE MAINBR U	28140.00	477.66	505.63	501.76	506.82		11.63	4396.37	791.72	0.31	
1	62220. GOLF COURSE MAINBR U	29930.00	477.66	506.14	505.67	507.26		11.65	4777.96	814.76	0.28	
1	62239.	14260.00	477.66	500.29	493.38	501.74	0.002423	10.05	1768.14	375.50	0.42	2.32
1	62239.	24460.00	477.66	504.41	498.09	505.80	0.002177	10.96	3898.04	718.65	0.41	2.58
1	62239.	28140.00	477.66	505.63	501.83	506.83	0.001913	10.66	4830.32	791.72	0.39	2.39
1	62239.	29930.00	477.66	506.14	502.24	507.27	0.001816	10.54	5240.58	814.76	0.38	2.32
1	62323.	14260.00	480.04	501.78		502.17	0.000793	5.51	3778.88	717.45	0.25	0.71
1	62323.	24460.00	480.04	505.86		506.19	0.000595	5.59	7010.92	863.97	0.22	0.68
1	62323.	28140.00	480.04	506.82		507.16	0.000600	5.80	7857.12	906.83	0.23	0.72
1	62323.	29930.00	480.04	507.23		507.58	0.000611	5.94	8230.41	928.43	0.23	0.75
1	62380. E	14260.00	480.09	501.97		502.22	0.000480	4.70	4764.85	735.45	0.20	0.50
1	62380. E	24460.00	480.09	505.98		506.23	0.000421	5.06	8110.87	913.70	0.19	0.54
1	62380. E	28140.00	480.09	506.94		507.20	0.000429	5.26	8999.86	941.40	0.20	0.57
1	62380. E	29930.00	480.09	507.35		507.62	0.000437	5.38	9388.29	955.90	0.20	0.59
1	62745.	14260.00	480.79	502.26		502.37	0.000317	3.59	6664.97	1009.21	0.16	0.30
1	62745.	24460.00	480.79	506.25		506.35	0.000233	3.57	10859.35	1096.16	0.14	0.27
1	62745.	28140.00	480.79	507.22		507.33	0.000235	3.71	11932.97	1122.48	0.14	0.29
1	62745.	29930.00	480.79	507.63		507.75	0.000240	3.79	12403.03	1141.23	0.15	0.30
1	63103.	9950.00	481.81	502.37	499.14	502.55	0.000797	4.50	3964.04	944.73	0.23	0.53
1	63103.	16970.00	481.81	506.35	500.83	506.45	0.000376	3.74	7549.78	1237.53	0.17	0.33
1	63103.	20220.00	481.81	507.31	501.23	507.43	0.000382	3.92	8460.26	1260.25	0.17	0.36
1	63103.	21330.00	481.81	507.73	501.35	507.85	0.000372	3.93	8859.32	1271.33	0.17	0.36
1	63368.	9950.00	481.46	502.55	494.34	502.77	0.000846	4.91	3684.68	822.36	0.21	0.72
1	63368.	16970.00	481.46	506.43	500.87	506.57	0.000474	4.22	6876.01	1035.47	0.16	0.49
1	63368.	20220.00	481.46	507.40	501.41	507.55	0.000488	4.41	7724.02	1087.27	0.17	0.53
1	63368.	21330.00	481.46	507.82	501.57	507.96	0.000475	4.40	8095.69	1109.07	0.16	0.53
1	63593.	9950.00	483.05	502.50	498.53	503.18	0.001942	7.85	2115.43	527.07	0.37	1.52
1	63593.	16970.00	483.05	506.42	502.60	506.77	0.000952	6.50	4579.78	792.66	0.27	0.96
1	63593.	20220.00	483.05	507.40	503.10	507.75	0.000930	6.66	5302.06	833.51	0.27	0.99
1	63593.	21330.00	483.05	507.82	503.20	508.16	0.000881	6.58	5624.36	850.63	0.27	0.96
1	64080.	9950.00	482.68	503.47		503.95	0.001277	6.35	2585.26	638.76	0.30	1.00
1	64080.	16970.00	482.68	506.88		507.21	0.000844	5.99	4985.97	747.88	0.25	0.82
1	64080.	20220.00	482.68	507.84		508.18	0.000839	6.19	5715.88	766.32	0.26	0.86
1	64080.	21330.00	482.68	508.24		508.57	0.000813	6.18	6019.51	772.77	0.25	0.85
1	64705.	9950.00	484.90	504.39		504.60	0.000823	4.81	3134.11	512.76	0.23	0.59
1	64705.	16970.00	484.90	507.46		507.70	0.000723	5.17	4871.80	649.56	0.22	0.63
1	64705.	20200.00	484.90	508.41		508.67	0.000740	5.43	5501.98	674.97	0.23	0.69
1	64705.	21320.00	484.90	508.78		509.05	0.000731	5.47	5755.83	684.70	0.23	0.69
1	65384. F	9950.00	486.40	504.88		505.55	0.001880	7.40	1880.57	375.30	0.37	1.38
1	65384. F	16970.00	486.40	507.88		508.52	0.001601	7.88	3294.11	593.16	0.35	1.46
1	65384. F	20200.00	486.40	508.84		509.51	0.001634	8.28	3894.17	647.85	0.36	1.58
1	65384. F	21320.00	486.40	509.20		509.90	0.001704	8.58	4130.31	664.29	0.37	1.68
1	65620.	9950.00	487.08	505.57		506.05	0.002074	7.18	2458.67	569.96	0.37	1.35
1	65620.	16970.00	487.08	508.53		508.93	0.001500	7.09	4268.51	648.94	0.33	1.22
1	65620.	20200.00	487.08	509.52		509.92	0.001451	7.28	4918.80	678.04	0.32	1.26
1	65620.	21320.00	487.08	509.92		510.32	0.001398	7.27	5196.10	696.22	0.32	1.25
1	65692.	9950.00	488.88	505.84	497.93	506.16	0.000774	5.14	2868.70	477.30	0.24	0.64
1	65692.	16970.00	488.88	508.61	501.70	509.02	0.000877	6.17	4305.52	569.77	0.27	0.87
1	65692.	20200.00	488.88	509.56	502.34	510.03	0.000951	6.67	4880.30	646.86	0.28	1.00
1	65692.	21320.00	488.88	509.96	503.34	510.42	0.000937	6.72	5138.37	653.89	0.28	1.00
1	65721.	9950.00	488.62	505.74	501.75	506.32	0.002307	6.98	2276.72	434.72	0.36	1.56
1	65721.	16970.00	488.62	508.51	504.81	509.19	0.002324	8.06	3606.71	525.49	0.37	1.94
1	65721.	20200.00	488.62	509.46	505.49	510.21	0.002421	8.58	4128.08			

HEC-RAS Plan: WC-Edit River: Big Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	65874.	20200.00	492.19	509.85	506.08	510.56	0.003052	9.58	4287.08	618.05	0.43	2.69
1	65874.	21320.00	492.19	510.26	506.24	510.94	0.002912	9.53	4542.91	628.79	0.42	2.63
1	66091.	9950.00	492.24	507.11	502.91	507.40	0.001971	5.55	3018.15	566.15	0.30	1.23
1	66091.	16970.00	492.24	509.66	504.80	510.02	0.001937	6.38	4562.05	638.80	0.31	1.50
1	66091.	20200.00	492.24	510.72	504.80	511.09	0.001866	6.60	5252.72	665.61	0.31	1.57
1	66091.	21320.00	492.24	511.09	504.80	511.46	0.001839	6.67	5501.18	680.17	0.31	1.59
1	66350. CONFLUENCE OF TR	9950.00	491.44	507.50		507.85	0.001456	5.74	3241.80	713.84	0.29	1.03
1	66350. CONFLUENCE OF TR	16970.00	491.44	510.07		510.44	0.001388	6.37	5164.61	785.41	0.29	1.20
1	66350. CONFLUENCE OF TR	20200.00	491.44	511.13		511.50	0.001360	6.61	6020.99	838.93	0.29	1.26
1	66350. CONFLUENCE OF TR	21320.00	491.44	511.49		511.86	0.001325	6.62	6330.58	843.98	0.29	1.25
1	66867.	9850.00	491.75	508.35		508.82	0.002311	6.69	2757.87	638.00	0.35	1.46
1	66867.	16740.00	491.75	510.87		511.32	0.002026	7.17	4396.81	670.54	0.34	1.57
1	66867.	19920.00	491.75	511.90		512.35	0.001937	7.36	5104.55	702.59	0.34	1.61
1	66867.	21020.00	491.75	512.24		512.69	0.001897	7.40	5348.48	707.14	0.34	1.62
1	67141.	9850.00	492.00	509.01		509.15	0.000669	3.72	4621.20	824.76	0.20	0.44
1	67141.	16740.00	492.00	511.46		511.63	0.000708	4.36	6683.99	853.28	0.21	0.57
1	67141.	19920.00	492.00	512.47		512.66	0.000709	4.58	7553.74	865.70	0.21	0.62
1	67141.	21020.00	492.00	512.81		513.00	0.000715	4.67	7848.30	878.97	0.21	0.64
1	67952.	9850.00	492.09	509.60		509.72	0.000845	3.68	4922.74	963.96	0.20	0.53
1	67952.	16740.00	492.09	512.06		512.19	0.000779	4.05	7340.50	1002.09	0.20	0.61
1	67952.	19920.00	492.09	513.07		513.21	0.000764	4.22	8370.29	1035.94	0.20	0.64
1	67952.	21020.00	492.09	513.41		513.55	0.000751	4.25	8721.85	1038.23	0.20	0.64
1	68576.	9830.00	493.14	510.09		510.20	0.000815	3.85	6164.68	1507.82	0.19	0.57
1	68576.	16700.00	493.14	512.51		512.60	0.000650	3.88	9969.30	1637.23	0.18	0.54
1	68576.	19860.00	493.14	513.51		513.60	0.000600	3.90	11636.53	1685.33	0.17	0.54
1	68576.	20940.00	493.14	513.85		513.93	0.000581	3.89	12197.03	1690.28	0.17	0.53
1	69053.	9830.00	492.98	510.56		510.67	0.001310	4.28	5680.25	1489.09	0.23	0.75
1	69053.	16700.00	492.98	512.87		512.96	0.000947	4.14	9194.87	1574.05	0.20	0.66
1	69053.	19860.00	492.98	513.84		513.92	0.000844	4.10	10738.97	1606.67	0.19	0.63
1	69053.	20940.00	492.98	514.16		514.24	0.000812	4.08	11254.08	1610.25	0.19	0.62
1	69831.	9830.00	495.03	511.74		511.87	0.001910	4.75	5104.40	1530.34	0.26	1.09
1	69831.	16700.00	495.03	513.72		513.83	0.001399	4.56	8254.33	1641.64	0.23	0.96
1	69831.	19860.00	495.03	514.60		514.70	0.001236	4.49	9704.20	1675.17	0.22	0.90
1	69831.	20940.00	495.03	514.89		514.98	0.001183	4.46	10189.72	1677.70	0.21	0.88
1	70243. G	9830.00	495.91	512.40		512.57	0.001534	4.60	4882.20	1375.52	0.24	0.99
1	70243. G	16700.00	495.91	514.25		514.41	0.001423	4.90	7499.06	1452.22	0.24	1.07
1	70243. G	19860.00	495.91	515.07		515.22	0.001319	4.91	8694.49	1472.67	0.23	1.05
1	70243. G	20940.00	495.91	515.34		515.49	0.001288	4.92	9096.78	1486.65	0.23	1.05
1	70815.	9830.00	495.38	513.43		513.70	0.002551	6.12	3921.12	1105.15	0.29	1.73
1	70815.	16700.00	495.38	515.22		515.47	0.002411	6.47	5928.71	1154.08	0.29	1.85
1	70815.	19860.00	495.38	515.99		516.25	0.002454	6.75	6870.86	1267.31	0.30	1.98
1	70815.	20940.00	495.38	516.24		516.49	0.002396	6.74	7188.31	1272.16	0.29	1.96
1	71071.	9830.00	497.14	514.07		514.24	0.001653	4.48	4586.11	1233.31	0.25	0.97
1	71071.	16700.00	497.14	515.81		515.99	0.001664	5.00	6822.06	1328.03	0.26	1.14
1	71071.	19860.00	497.14	516.58		516.76	0.001592	5.11	7861.68	1358.71	0.26	1.17
1	71071.	20940.00	497.14	516.82		517.00	0.001580	5.15	8183.02	1364.82	0.25	1.18
1	72110. CONFLUENCE OF TR	9830.00	498.70	516.19		516.51	0.003047	6.72	3637.26	1080.32	0.35	1.82
1	72110. CONFLUENCE OF TR	16700.00	498.70	517.91		518.21	0.002941	7.25	5570.62	1164.86	0.35	2.02
1	72110. CONFLUENCE OF TR	19860.00	498.70	518.60		518.90	0.002856	7.40	6389.55	1199.46	0.35	2.07
1	72110. CONFLUENCE OF TR	20940.00	498.70	518.82		519.12	0.002827	7.44	6655.56	1217.96	0.35	2.08
1	72818.	9830.00	499.83	517.84		518.05	0.001675	5.32	4502.66	1158.19	0.27	1.10
1	72818.	16700.00	499.83	519.56		519.79	0.001801	6.05	6571.15	1255.32	0.29	1.36
1	72818.	19860.00	499.83	520.23		520.47	0.001821	6.28	7417.96	1277.96	0.30	1.45
1	72818.	20940.00	499.83	520.44		520.68	0.001827	6.36	7687.79	1281.27	0.30	1.47
1	73209.	9870.00	499.38	518.52		518.74	0.001798	5.22	4261.15	1125.53	0.28	1.09
1	73209.	16620.00	499.38	520.28		520.51	0.001816	5.81	6296.25	1175.43	0.29	1.29
1	73209.	19700.00	499.38	520.95		521.19	0.001820	6.03	7092.91	1185.24	0.29	1.36
1	73209.	20740.00	499.38	521.17		521.41	0.001826	6.11	7345.44	1189.95	0.30	1.39
1	73575.	9870.00	500.19	519.16	516.71	519.79	0.003431	8.47	2906.02	1094.16	0.39	2.65
1	73575.	16620.00	500.19	520.97	519.39	521.55	0.003600	9.38	5242.43	1391.15	0.41	3.13
1	73575.	19700.00	500.19	521.65	519.38	522.15	0.003277	9.20	6197.38	1403.16	0.39	2.97
1	73575.	20740.00	500.19	521.87	520.00	522.35	0.003207	9.17	6501.56	1415.12	0.39	2.94
1	73596. GLADE ROAD BR D	9870.00	500.19	518.22	517.15	520.84	0.021805	14.11	903.55	349.58	0.54	9.05
1	73596. GLADE ROAD BR D	16620.00	500.19	521.59	521.59	522.56	0.024074	11.40	2970.69	1210.47	0.30	6.74
1	73596. GLADE ROAD BR D	19700.00	500.19	522.26	522.26	522.85	0.021909	9.02	3832.79	1400.65	0.23	4.63
1	73596. GLADE ROAD BR D	20740.00	500.19	522.00	522.00	523.00	0.026692	12.00	3485.16	1269.75	0.30	7.47
1	73596. GLADE ROAD BR U	9870.00	500.19	521.46	517.15	521.85	0.009443	7.14	2794.86	1121.47	0.19	2.64
1	73596. GLADE ROAD BR U	16620.00	500.19	522.86	521.59	523.13	0.009395	6.08	4505.58	1315.31	0.15	2.08
1	73596. GLADE ROAD BR U	19700.00	500.19	522.97	521.87	523.32	0.012131	6.94	4641.19	1320.35	0.18	2.70
1	73596. GLADE ROAD BR U	20740.00	500.19	523.29	522.34	523.60	0.010417	6.53	5071.44	1336.20	0.16	2.37
1	73618.	9870.00	500.19	521.88	518.17	521.96	0.000591	3.94	6847.98	1321.05	0.17	0.54
1	73618.	16620.00	500.19	523.05	519.63	523.19	0.000965	5.26	8444.75	1391.63	0.22	0.95
1	73618.	19700.00	500.19	523.22	519.63	523.40	0.001260	6.05	8669.67	1397.97	0.25	1.25
1	73618.	20740.00	500.19	523.49	520.06	523.67	0.001235	6.04	9060.81	1409.90	0.24	1.24
1	73781.	9870.00	501.85	521.99		522.06	0.000514	3.05	6536.81	1036.37	0.15	0.41
1	73781.	16620.00	501.85	523.23		523.35	0.000894	4.27	7863.75	1126.75	0.19	0.77
1	73781.	19700.00	501.85	523.44		523.60	0.001171	4.93	8102.81	1132.18	0.22	1.03
1	73781.	20740.00	501.85	523.71		523.87	0.001167	4.98	8409.07	1137.80	0.22	1.04
1	73996.	9870.00	503.70	522.09		522.19	0.000701	3.47	5776.55	935.10	0.17	0.53
1	73996.	16620.00	503.70	523.40		523.57	0.001166	4.77	7021.78	974.38	0.22	0.98
1	73996.	19700.00	503.70	523								

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	75269.	9870.00	502.48	523.25		523.37	0.000671	3.91	5762.73	953.99	0.18	0.55
1	75269.	16620.00	502.48	525.17		525.34	0.000902	4.91	7665.42	1027.53	0.21	0.84
1	75269.	19700.00	502.48	525.80		525.99	0.001014	5.33	8315.16	1046.82	0.22	0.98
1	75269.	20740.00	502.48	526.08		526.28	0.001052	5.49	8608.02	1059.47	0.23	1.03
1	76025.	9870.00	504.12	523.72		523.82	0.000554	3.63	6668.74	1257.61	0.17	0.47
1	76025.	16620.00	504.12	525.79		525.92	0.000657	4.32	9371.49	1339.22	0.18	0.64
1	76025.	19700.00	504.12	526.49		526.63	0.000709	4.60	10312.90	1359.23	0.19	0.72
1	76025.	20740.00	504.12	526.79		526.93	0.000705	4.64	10718.67	1369.05	0.19	0.72
1	76885. H	9870.00	505.84	524.29		524.40	0.000861	4.00	6067.82	1335.64	0.20	0.61
1	76885. H	16620.00	505.84	526.43		526.55	0.000857	4.43	9059.56	1454.99	0.20	0.71
1	76885. H	19700.00	505.84	527.17		527.29	0.000889	4.66	10150.12	1489.67	0.21	0.77
1	76885. H	20740.00	505.84	527.46		527.59	0.000877	4.68	10585.76	1499.91	0.21	0.78
1	77780.	9870.00	507.47	525.16	522.87	525.28	0.001162	4.50	6111.44	1558.03	0.23	0.78
1	77780.	16620.00	507.47	527.26	523.73	527.36	0.001007	4.65	9386.89	1714.70	0.22	0.79
1	77780.	19700.00	507.47	528.02	523.99	528.13	0.001010	4.82	10625.09	1782.33	0.22	0.84
1	77780.	20740.00	507.47	528.30	524.11	528.41	0.000997	4.84	11092.06	1817.98	0.22	0.84
1	78876. I	9870.00	508.57	526.52		526.83	0.001669	5.28	3809.57	1049.62	0.28	1.09
1	78876. I	16620.00	508.57	528.51		528.84	0.001775	6.08	6056.39	1181.43	0.30	1.37
1	78876. I	19700.00	508.57	529.26		529.60	0.001754	6.27	6951.26	1188.21	0.30	1.43
1	78876. I	20740.00	508.57	529.52		529.86	0.001732	6.31	7264.09	1190.74	0.30	1.44
1	79644. CONFLUENCE OF TR	9870.00	512.81	527.94		528.13	0.001762	5.28	4465.77	1150.30	0.28	1.11
1	79644. CONFLUENCE OF TR	16620.00	512.81	529.93		530.11	0.001567	5.56	6890.68	1264.04	0.27	1.16
1	79644. CONFLUENCE OF TR	19670.00	512.81	530.66		530.84	0.001528	5.70	7821.89	1287.48	0.27	1.20
1	79644. CONFLUENCE OF TR	20720.00	512.81	530.90		531.09	0.001514	5.74	8139.74	1297.31	0.27	1.21
1	80429.	9870.00	511.50	529.09	522.77	529.27	0.001283	4.72	4192.07	814.11	0.24	0.86
1	80429.	16620.00	511.50	531.05	525.84	531.28	0.001474	5.61	5827.09	860.68	0.27	1.16
1	80429.	19670.00	511.50	531.77	525.84	532.03	0.001541	5.94	6453.97	896.26	0.28	1.27
1	80429.	20720.00	511.50	532.03	525.84	532.29	0.001601	6.12	6678.21	922.86	0.28	1.35
1	80901.	9870.00	512.00	529.82	528.30	530.33	0.003591	7.39	2637.02	624.51	0.39	2.19
1	80901.	16610.00	512.00	531.86	529.56	532.42	0.003573	8.27	3963.30	767.90	0.41	2.58
1	80901.	19660.00	512.00	532.62	529.93	533.22	0.003718	8.76	4484.77	889.82	0.42	2.85
1	80901.	20700.00	512.00	532.90	530.17	533.50	0.003704	8.87	4690.62	937.22	0.42	2.90
1	81320.	9870.00	511.72	530.96		531.23	0.001355	5.04	3388.48	644.38	0.26	0.97
1	81320.	16610.00	511.72	533.05		533.40	0.001598	6.09	4763.67	673.00	0.29	1.34
1	81320.	19660.00	511.72	533.86		534.25	0.001678	6.48	5326.14	717.70	0.29	1.48
1	81320.	20700.00	511.72	534.14		534.54	0.001698	6.60	5531.75	742.99	0.30	1.53
1	81788.	9870.00	511.87	531.64		532.06	0.002199	6.68	3048.78	676.33	0.32	1.66
1	81788.	16610.00	511.87	533.86		534.31	0.002308	7.56	4642.92	771.71	0.33	2.03
1	81788.	19660.00	511.87	534.71		535.18	0.002319	7.85	5321.25	814.20	0.34	2.15
1	81788.	20700.00	511.87	535.01		535.48	0.002339	7.97	5572.45	879.48	0.34	2.20
1	82195. DALLAS/FORT WORT	9840.00	511.04	532.22	522.75	532.55	0.000725	4.86	3052.15	1097.94	0.22	0.68
1	82195. DALLAS/FORT WORT	16550.00	511.04	534.41	525.40	534.89	0.001016	6.28	4512.40	1366.20	0.26	1.08
1	82195. DALLAS/FORT WORT	19580.00	511.04	535.27	526.45	535.80	0.001103	6.76	5167.19	1539.99	0.28	1.23
1	82195. DALLAS/FORT WORT	20620.00	511.04	535.56	526.76	536.11	0.001120	6.88	5423.66	1590.25	0.28	1.27
1	82275. EULESS GRAPEVINEBR D	9840.00	511.04	532.23	522.65	532.67	0.001387	5.36	1877.46	177.60	0.20	1.03
1	82275. EULESS GRAPEVINEBR D	16550.00	511.04	534.38	525.49	535.18	0.004889	7.68	2936.42	406.95	0.26	2.17
1	82275. EULESS GRAPEVINEBR D	19580.00	511.04	535.27	526.60	535.94		5.98	3738.47	538.77	0.28	
1	82275. EULESS GRAPEVINEBR D	20620.00	511.04	535.56	526.97	536.24		5.98	4071.90	583.50	0.28	
1	82275. EULESS GRAPEVINEBR U	9840.00	511.48	532.46	524.27	532.76	0.001536	4.65	2166.99	177.60	0.17	0.98
1	82275. EULESS GRAPEVINEBR U	16550.00	511.48	535.03	526.94	535.49	0.004425	6.22	3682.82	594.63	0.20	1.78
1	82275. EULESS GRAPEVINEBR U	19580.00	511.48	535.51	527.82	535.94		5.33	4123.84	633.00	0.22	
1	82275. EULESS GRAPEVINEBR U	20620.00	511.48	536.06	528.11	536.24		5.35	4404.34	1140.20	0.21	
1	82343.	9840.00	511.48	532.51	524.24	532.80	0.000933	4.73	3101.88	1327.62	0.22	0.80
1	82343.	16550.00	511.48	535.26	527.00	535.59	0.000982	5.45	5184.64	1534.60	0.23	1.00
1	82343.	19580.00	511.48	535.51	527.85	535.93	0.001261	6.24	5381.12	1556.89	0.27	1.31
1	82343.	20620.00	511.48	536.06	528.14	536.24	0.000663	4.62	9317.85	1624.54	0.19	0.71
1	82416. J	9840.00	512.30	532.40	529.43	533.18	0.004155	8.08	1831.71	770.34	0.42	2.59
1	82416. J	16550.00	512.30	535.13	532.08	536.01	0.004018	9.18	2954.11	1054.89	0.43	3.11
1	82416. J	19580.00	512.30	535.34	532.77	536.48	0.005170	10.51	3075.89	1085.20	0.49	4.06
1	82416. J	20620.00	512.30	536.08	533.02	536.38	0.001859	6.52	6383.00	1297.76	0.30	1.54
1	83019.	9840.00	514.08	533.86	524.68	534.10	0.000744	4.76	3970.84	782.57	0.21	0.66
1	83019.	16550.00	514.08	536.68	528.90	536.93	0.000750	5.34	6526.51	990.24	0.22	0.79
1	83019.	19580.00	514.08	537.28	531.12	537.57	0.000842	5.78	7128.46	1037.52	0.23	0.91
1	83019.	20620.00	514.08	536.87	531.83	537.23	0.001086	6.47	6712.89	996.76	0.26	1.15
1	83480.	9840.00	515.11	534.21	528.58	534.68	0.001846	6.41	2333.05	601.04	0.32	1.30
1	83480.	16550.00	515.11	537.04	533.75	537.41	0.001298	6.17	4133.43	818.84	0.28	1.12
1	83480.	19580.00	515.11	537.69	534.23	538.10	0.001412	6.62	4634.29	1030.25	0.29	1.27
1	83480.	20620.00	515.11	537.39	534.41	537.90	0.001751	7.28	4389.90	906.87	0.33	1.55
1	83695.	9830.00	515.35	534.66	527.12	535.02	0.001128	4.91	2148.07	527.09	0.26	0.77
1	83695.	16540.00	515.35	537.22	529.56	537.82	0.001467	6.42	2824.25	690.40	0.30	1.23
1	83695.	19550.00	515.35	537.85	530.48	538.60	0.001729	7.17	2991.04	725.92	0.33	1.51
1	83695.	20570.00	515.35	537.62	530.77	538.48	0.002037	7.70	2929.13	713.57	0.36	1.75
1	83794. STATE HIGHWAY 36BR D	9830.00	515.35	534.77	527.17	535.15	0.001550	4.98	2085.30	238.63	0.20	0.85
1	83794. STATE HIGHWAY 36BR D	16540.00	515.35	537.37	529.69	537.99	0.002138	6.50	2705.87	238.63	0.24	1.37
1	83794. STATE HIGHWAY 36BR D	19550.00	515.35	537.85	530.62	538.60	0.002655	7.37	2820.50	238.63	0.27	1.75
1	83794. STATE HIGHWAY 36BR D	20570.00	515.35	537.62	530.91	538.48	0.003112	7.91	2764.45	238.63	0.29	2.03
1	83794. STATE HIGHWAY 36BR U	9830.00	514.15	534.91	525.94	535.22	0.000927	4.52	2291.66	238.63	0.17	0.55
1	83794. STATE HIGHWAY 36BR U	16540.00	514.15	537.54	528.39	538.09	0.001387	6.08	2920.89	238.63	0.22	0.95
1	83794. STATE HIGHWAY 36BR U	19550.00	514.15	538.78	529.39	539.91	0.003087	6.61	3216.15		0.23	1.32

HEC-RAS Plan: WC-Edit River: Big Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	84127.	16540.00	515.19	537.91	530.25	538.50	0.001130	6.35	2862.97	1007.75	0.30	0.96
1	84127.	19550.00	515.19	539.66	531.20	540.28	0.001032	6.55	3288.76	1128.34	0.29	0.99
1	84127.	20570.00	515.19	539.79	531.49	540.46	0.001109	6.83	3320.93	1141.29	0.30	1.07
1	84216. STATE HIGHWAY 36BR D	9830.00	515.19	535.20	527.90	535.59	0.001367	5.05	2063.51	218.71	0.20	0.72
1	84216. STATE HIGHWAY 36BR D	16540.00	515.19	537.99	530.46	538.64	0.001881	6.64	2673.22	218.68	0.24	1.17
1	84216. STATE HIGHWAY 36BR D	19550.00	515.19	539.73	531.36	540.42	0.001807	6.89	3052.45	218.66	0.24	1.23
1	84216. STATE HIGHWAY 36BR D	20570.00	515.19	539.86	531.67	540.61	0.001946	7.18	3082.27	218.66	0.25	1.33
1	84216. STATE HIGHWAY 36BR U	9830.00	516.61	535.25	528.99	535.67	0.001563	6.03	2264.51	218.71	0.21	1.14
1	84216. STATE HIGHWAY 36BR U	16540.00	516.61	538.06	531.51	538.76	0.002311	7.90	2878.91	218.68	0.25	1.88
1	84216. STATE HIGHWAY 36BR U	19550.00	516.61	539.79	532.32	540.53	0.002301	8.19	3257.79	218.66	0.25	1.98
1	84216. STATE HIGHWAY 36BR U	20570.00	516.61	539.93	532.58	540.74	0.002481	8.53	3288.78	218.66	0.26	2.14
1	84303.	9830.00	516.61	535.40	528.95	535.76	0.001021	5.65	2497.57	865.68	0.25	0.92
1	84303.	16540.00	516.61	538.31	531.38	538.89	0.001367	7.34	3205.50	1123.70	0.30	1.47
1	84303.	19550.00	516.61	540.05	532.15	540.66	0.001304	7.62	3629.16	1202.02	0.30	1.54
1	84303.	20570.00	516.61	540.21	532.40	540.88	0.001395	7.93	3669.37	1217.70	0.31	1.66
1	84840. K	9830.00	515.99	536.04		536.43	0.001525	5.96	3096.61	868.49	0.29	1.11
1	84840. K	16540.00	515.99	539.35		539.57	0.000874	5.27	6108.94	949.38	0.23	0.80
1	84840. K	19550.00	515.99	541.10		541.27	0.000627	4.78	7799.92	1003.30	0.20	0.64
1	84840. K	20570.00	515.99	541.34		541.51	0.000638	4.86	8044.31	1016.11	0.20	0.66
1	85214.	9810.00	516.41	536.54	529.98	537.04	0.001532	6.46	2625.11	640.85	0.30	1.25
1	85214.	16520.00	516.41	539.61	533.79	540.02	0.001215	6.57	4701.51	725.87	0.28	1.21
1	85214.	19530.00	516.41	541.28	536.25	541.61	0.000960	6.21	5953.75	848.22	0.25	1.05
1	85214.	20540.00	516.41	541.52	536.60	541.87	0.000979	6.33	6145.49	865.32	0.26	1.08
1	85787.	9780.00	517.86	537.32	531.27	537.93	0.001456	7.30	2542.64	619.14	0.33	1.27
1	85787.	16460.00	517.86	540.24	536.05	540.77	0.001270	7.66	4631.14	841.44	0.32	1.32
1	85787.	19450.00	517.86	541.78	536.81	542.20	0.001001	7.18	5932.55	945.25	0.29	1.13
1	85787.	20460.00	517.86	542.04	536.81	542.46	0.001011	7.28	6153.62	959.54	0.29	1.15
1	85857.	9780.00	516.57	537.48	532.47	538.06	0.001826	7.30	2353.47	523.03	0.34	1.34
1	85857.	16460.00	516.57	540.33	536.52	540.89	0.001693	7.95	4248.56	801.77	0.34	1.50
1	85857.	19450.00	516.57	541.85	537.22	542.30	0.001360	7.55	5527.98	945.53	0.31	1.31
1	85857.	20460.00	516.57	542.11	537.33	542.57	0.001367	7.63	5762.65	981.57	0.31	1.33
1	85872. WALKBRIDGE BR D	9780.00	516.57	537.77	534.77	538.15	0.004782	6.03	2268.80	560.98	0.19	1.28
1	85872. WALKBRIDGE BR D	16460.00	516.57	540.73	537.01	541.01	0.003111	5.45	4329.51	844.97	0.15	0.99
1	85872. WALKBRIDGE BR D	19450.00	516.57	542.17	537.53	542.39	0.002307	4.97	5583.08	991.60	0.13	0.80
1	85872. WALKBRIDGE BR D	20460.00	516.57	542.43	537.79	542.65	0.002311	5.02	5824.23	1014.61	0.13	0.81
1	85872. WALKBRIDGE BR U	9780.00	516.91	537.94	531.36	538.22	0.003857	5.29	2608.62	609.55	0.16	1.17
1	85872. WALKBRIDGE BR U	16460.00	516.91	540.81	537.05	541.04	0.002614	4.88	4579.04	788.93	0.14	0.94
1	85872. WALKBRIDGE BR U	19450.00	516.91	542.22	537.51	542.42	0.001980	4.46	5714.49	877.07	0.13	0.77
1	85872. WALKBRIDGE BR U	20460.00	516.91	542.47	537.57	542.68	0.001976	4.49	5927.01	890.88	0.13	0.77
1	85887.	9780.00	516.91	537.88	531.29	538.33	0.001503	6.62	2762.07	602.68	0.29	1.29
1	85887.	16460.00	516.91	540.74	536.53	541.15	0.001365	7.02	4716.44	785.45	0.28	1.38
1	85887.	19450.00	516.91	542.16	537.40	542.50	0.001136	6.72	5858.20	874.12	0.26	1.23
1	85887.	20460.00	516.91	542.42	537.56	542.76	0.001151	6.82	6069.94	887.90	0.26	1.26
1	86022.	9780.00	515.92	538.06	533.71	538.52	0.001598	6.61	2590.48	479.07	0.30	1.31
1	86022.	16460.00	515.92	540.87	536.82	541.36	0.001587	7.38	4078.36	588.66	0.31	1.54
1	86022.	19450.00	515.92	542.26	537.38	542.70	0.001398	7.28	4892.94	645.38	0.29	1.46
1	86022.	20460.00	515.92	542.51	537.68	542.97	0.001425	7.41	5045.40	655.55	0.30	1.51
1	86374. L	9780.00	519.00	538.54	532.03	539.19	0.001921	6.94	2042.57	459.84	0.33	1.47
1	86374. L	16470.00	519.00	541.34	535.73	542.02	0.001871	7.77	3480.36	537.69	0.34	1.74
1	86374. L	19450.00	519.00	542.66	538.22	543.29	0.001655	7.70	4198.74	578.22	0.32	1.66
1	86374. L	20470.00	519.00	542.92	538.55	543.56	0.001685	7.85	4342.18	588.63	0.33	1.72
1	86548.	9780.00	519.00	539.07		539.48	0.001250	5.29	2247.78	524.31	0.27	0.88
1	86548.	16470.00	519.00	541.84		542.31	0.001311	6.07	3995.28	663.92	0.28	1.10
1	86548.	19450.00	519.00	543.11		543.55	0.001180	6.09	4839.55	674.86	0.27	1.07
1	86548.	20470.00	519.00	543.38		543.83	0.001195	6.20	5023.02	676.83	0.27	1.11
1	86898. CONFLUENCE OF TR	9670.00	520.00	539.52		539.96	0.001472	6.43	2977.78	660.78	0.29	1.23
1	86898. CONFLUENCE OF TR	16270.00	520.00	542.33		542.80	0.001526	7.33	5058.22	784.53	0.30	1.51
1	86898. CONFLUENCE OF TR	19400.00	520.00	543.56		543.99	0.001396	7.33	6029.33	802.30	0.29	1.48
1	86898. CONFLUENCE OF TR	20440.00	520.00	543.84		544.28	0.001413	7.44	6256.24	813.89	0.30	1.52
1	87195.	9670.00	521.00	540.00		540.37	0.001318	6.23	3329.10	658.51	0.27	1.14
1	87195.	16270.00	521.00	542.84		543.24	0.001375	7.07	5341.41	753.17	0.28	1.39
1	87195.	19400.00	521.00	544.01		544.40	0.001333	7.24	6238.71	787.66	0.28	1.43
1	87195.	20440.00	521.00	544.30		544.69	0.001355	7.36	6464.69	796.96	0.28	1.48
1	87489.	9670.00	522.00	540.35		540.90	0.002232	7.50	2661.95	625.24	0.32	1.72
1	87489.	16270.00	522.00	543.26		543.68	0.001835	7.56	4975.15	862.17	0.30	1.66
1	87489.	19400.00	522.00	544.44		544.80	0.001606	7.34	6008.14	890.80	0.28	1.54
1	87489.	20440.00	522.00	544.74		545.09	0.001590	7.38	6275.35	898.35	0.28	1.54
1	88058.	9670.00	523.80	541.44		541.94	0.001542	6.35	2442.74	426.52	0.30	1.22
1	88058.	16270.00	523.80	544.11		544.78	0.001858	7.84	3747.58	619.05	0.34	1.76
1	88058.	19400.00	523.80	545.17		545.87	0.001894	8.25	4498.96	851.62	0.35	1.90
1	88058.	20440.00	523.80	545.45		546.16	0.001902	8.36	4755.01	919.32	0.35	1.94
1	88500.	9680.00	520.50	542.22	536.29	542.39	0.000646	4.54	3869.18	504.48	0.20	0.59
1	88500.	16290.00	520.50	545.09	538.44	545.31	0.000729	5.37	5425.57	690.21	0.22	0.79
1	88500.	19410.00	520.50	546.18	539.20	546.45	0.000865	6.07	6105.05	891.40	0.24	0.99
1	88500.	20460.00	520.50	546.48	539.38	546.76	0.000892	6.22	6297.66	956.33	0.24	1.03
1	88915.	9680.00	524.83	542.44	535.78	542.76	0.000985	5.37	2785.08	477.04	0.25	0.85
1	88915.	16290.00	524.83	545.32	537.95	545.74	0.001135	6.51	4214.40	527.87	0.28	1.18
1	88915.	19410.00	524.83	546.47	538.69	546.92	0.001177	6.92	4843.55	634.87	0.28	1.30
1	88915.	20460.00	524.83	546.77	538.92	547.24	0.001210	7.10	5030.38	678.81	0.29	1.36

HEC-RAS Plan: WC-Edit River: Big Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	89252. WILLIAM D. TATE BR D	20400.00	525.28	548.55	541.82	549.16		10.95	2739.77	1100.31	0.38	
1	89252. WILLIAM D. TATE BR U	9690.00	525.28	543.02	537.19	543.57	0.001876	6.04	1671.82	172.93	0.25	1.02
1	89252. WILLIAM D. TATE BR U	16350.00	525.28	546.91	539.57	547.48		8.06	2328.51	261.99	0.31	
1	89252. WILLIAM D. TATE BR U	19410.00	525.28	548.21	540.52	548.82		8.43	2856.07	567.97	0.32	
1	89252. WILLIAM D. TATE BR U	20400.00	525.28	548.55	540.81	549.16		8.42	3037.94	581.30	0.32	
1	89291.	9690.00	525.28	543.10	537.18	543.62	0.001354	5.84	1745.65	246.69	0.31	0.89
1	89291.	16350.00	525.28	546.91	539.46	547.47	0.001120	6.49	3318.34	514.10	0.30	0.99
1	89291.	19410.00	525.28	548.21	540.41	548.81	0.001109	6.83	4026.10	765.59	0.30	1.07
1	89291.	20400.00	525.28	548.55	540.67	549.16	0.001099	6.89	4232.54	778.92	0.30	1.08
1	89326.	9690.00	525.28	543.20	537.19	543.68	0.001468	5.55	1745.10	182.26	0.32	0.84
1	89326.	16350.00	525.28	546.90	539.53	547.59	0.001541	6.65	2475.94	270.06	0.34	1.12
1	89326.	19410.00	525.28	548.17	540.42	548.95	0.001566	7.08	2866.19	357.72	0.34	1.23
1	89326.	20400.00	525.28	548.50	540.70	549.30	0.001582	7.23	2980.12	361.69	0.35	1.28
1	89426. STATE HIGHWAY 12BR D	9690.00	525.28	543.25	537.43	543.77	0.002213	5.74	1687.96	177.63	0.33	0.98
1	89426. STATE HIGHWAY 12BR D	16350.00	525.28	546.95	539.79	547.68	0.002496	6.89	2391.92	261.09	0.35	1.33
1	89426. STATE HIGHWAY 12BR D	19410.00	525.28	548.22	540.69	549.05	0.002639	7.32	2772.38	339.30	0.35	1.48
1	89426. STATE HIGHWAY 12BR D	20400.00	525.28	548.55	540.94	549.40	0.002693	7.47	2882.77	340.72	0.36	1.53
1	89426. STATE HIGHWAY 12BR U	9690.00	525.28	543.61	538.36	544.15	0.002659	6.00	1704.58	238.07	0.35	1.10
1	89426. STATE HIGHWAY 12BR U	16350.00	525.28	547.46	540.88	548.09	0.002330	6.62	2758.38	345.14	0.32	1.23
1	89426. STATE HIGHWAY 12BR U	19410.00	525.28	548.82	541.86	549.47	0.002251	6.81	3232.27	351.09	0.32	1.27
1	89426. STATE HIGHWAY 12BR U	20400.00	525.28	549.17	542.07	549.84	0.002268	6.91	3355.82	352.38	0.32	1.31
1	89527.	9690.00	525.28	543.70	538.13	544.19	0.001568	5.69	1804.40	246.46	0.33	0.89
1	89527.	16350.00	525.28	547.50	540.61	548.11	0.001309	6.46	2896.01	455.01	0.32	1.03
1	89527.	19410.00	525.28	548.85	541.51	549.49	0.001244	6.73	3395.01	482.21	0.31	1.08
1	89527.	20400.00	525.28	549.20	541.82	549.86	0.001247	6.84	3525.49	485.10	0.31	1.11
1	89587.	9690.00	527.00	543.61	537.55	544.50	0.002133	7.60	1275.54	171.96	0.39	1.48
1	89587.	16350.00	527.00	547.46	540.48	548.33	0.001878	7.82	2720.47	630.40	0.38	1.50
1	89587.	19410.00	527.00	548.84	541.67	549.67	0.001672	7.88	3870.40	1025.34	0.36	1.47
1	89587.	20400.00	527.00	549.22	542.01	550.00	0.001585	7.80	4267.99	1092.55	0.35	1.43
1	89646. WILLIAM D. TATE BR D	9690.00	527.00	543.56	538.13	544.77	0.005386	8.84	1096.61	92.23	0.38	2.34
1	89646. WILLIAM D. TATE BR D	16350.00	527.00	548.07	541.42	548.73		8.21	3174.86	665.91	0.34	
1	89646. WILLIAM D. TATE BR D	19410.00	527.00	548.85	542.72	549.67		6.64	4183.74	888.44	0.32	
1	89646. WILLIAM D. TATE BR D	20400.00	527.00	549.22	543.09	550.00		6.19	4492.89	955.20	0.30	
1	89646. WILLIAM D. TATE BR U	9690.00	528.14	544.35	538.48	545.12	0.004331	7.20	1403.71	117.11	0.31	1.91
1	89646. WILLIAM D. TATE BR U	16350.00	528.14	549.11	541.09	549.26		7.89	2983.56	866.69	0.30	
1	89646. WILLIAM D. TATE BR U	19410.00	528.14	549.98	542.14	550.14		6.53	3957.40	1188.57	0.24	
1	89646. WILLIAM D. TATE BR U	20400.00	528.14	550.21	542.45	550.38		6.12	4238.48	1202.23	0.23	
1	89704.	9690.00	528.14	544.69	538.20	545.27	0.001515	6.38	1714.55	899.48	0.31	1.23
1	89704.	16350.00	528.14	549.11	540.58	549.27	0.000479	4.35	8298.33	1221.20	0.18	0.52
1	89704.	19410.00	528.14	549.98	541.54	550.15	0.000504	4.61	9395.90	1304.07	0.19	0.57
1	89704.	20400.00	528.14	550.21	541.84	550.38	0.000519	4.71	9693.82	1311.17	0.19	0.60
1	89814. M	9690.00	527.41	545.22	536.72	545.48	0.000765	4.21	2776.28	1111.66	0.21	0.55
1	89814. M	16350.00	527.41	549.21	539.07	549.32	0.000335	3.37	9008.26	1261.41	0.15	0.32
1	89814. M	19410.00	527.41	550.08	540.00	550.20	0.000351	3.58	10120.83	1298.81	0.15	0.36
1	89814. M	20400.00	527.41	550.31	540.32	550.44	0.000360	3.65	10422.93	1317.32	0.16	0.37
1	91637. N	9660.00	527.50	547.21	541.67	547.48	0.001791	5.29	3660.18	1205.34	0.28	1.11
1	91637. N	16310.00	527.50	550.12	546.56	550.28	0.001024	4.68	6856.42	1400.21	0.22	0.81
1	91637. N	19360.00	527.50	551.00	546.89	551.17	0.000977	4.77	7875.95	1438.63	0.22	0.82
1	91637. N	20350.00	527.50	551.25	547.01	551.42	0.000975	4.82	8160.00	1445.00	0.22	0.83
1	93031. O	9590.00	530.13	549.90		550.50	0.002594	7.18	2593.37	816.62	0.37	1.67
1	93031. O	16170.00	530.13	551.90		552.48	0.002539	7.91	4412.18	1004.54	0.38	1.92
1	93031. O	19180.00	530.13	552.72		553.28	0.002469	8.11	5270.71	1126.12	0.38	1.98
1	93031. O	20160.00	530.13	552.95		553.51	0.002426	8.13	5540.73	1167.22	0.38	1.98
1	93757.	9610.00	528.40	550.95		551.11	0.000375	3.57	4990.78	1590.09	0.17	0.31
1	93757.	16190.00	528.40	552.97		553.14	0.000419	4.13	8351.16	1722.47	0.18	0.39
1	93757.	19160.00	528.40	553.76		553.93	0.000416	4.24	9725.73	1736.08	0.18	0.41
1	93757.	20140.00	528.40	553.98		554.15	0.000419	4.30	10114.48	1741.99	0.18	0.42
1	94374.	9610.00	531.30	551.16		551.20	0.000057	1.69	7463.52	1223.69	0.07	0.06
1	94374.	16190.00	531.30	553.18		553.25	0.000096	2.35	10040.37	1312.48	0.09	0.12
1	94374.	19160.00	531.30	553.97		554.05	0.000110	2.58	11091.06	1360.46	0.10	0.14
1	94374.	20140.00	531.30	554.19		554.28	0.000115	2.66	11397.08	1377.19	0.10	0.15
1	94755.	9610.00	532.10	551.17		551.24	0.000155	2.16	5040.58	1007.15	0.11	0.12
1	94755.	16190.00	532.10	553.20		553.32	0.000225	2.89	7187.39	1098.87	0.13	0.20
1	94755.	19160.00	532.10	553.99		554.13	0.000246	3.13	8070.96	1126.31	0.14	0.23
1	94755.	20140.00	532.10	554.22		554.36	0.000254	3.21	8325.28	1143.00	0.14	0.24
1	94950.	9610.00	533.41	551.17		551.31	0.000432	2.96	3340.83	533.29	0.17	0.24
1	94950.	16190.00	533.41	553.19		553.42	0.000623	3.95	4569.82	676.48	0.21	0.41
1	94950.	19160.00	533.41	553.97		554.24	0.000679	4.29	5109.40	699.89	0.23	0.47
1	94950.	20140.00	533.41	554.19		554.48	0.000700	4.40	5265.56	708.25	0.23	0.49
1	95284. CONFLUENCE OF TR	9540.00	532.50	551.32		551.43	0.000326	3.12	4065.45	446.73	0.16	0.24
1	95284. CONFLUENCE OF TR	16160.00	532.50	553.39		553.62	0.000550	4.40	5019.66	466.45	0.21	0.46
1	95284. CONFLUENCE OF TR	18650.00	532.50	554.20		554.46	0.000596	4.71	5398.29	471.77	0.22	0.53
1	95284. CONFLUENCE OF TR	19620.00	532.50	554.43		554.70	0.000623	4.85	5505.86	473.27	0.22	0.56
1	96073.	9540.00	534.50	551.70		551.86	0.001020	3.81	3185.39	481.28	0.25	0.44
1	96073.	16160.00	534.50	553.99		554.24	0.001209	4.83	4510.11	654.24	0.28	0.65
1	96073.	18650.00	534.50	554.83		555.10	0.001191	5.07	5094.82	728.62	0.28	0.70
1	96073.	19620.00	534.50	555.08		555.37	0.001245	5.27	5293.39	852.40	0.29	0.75
1	96548.	9540.00	534.60	550.26	550.26	554.35	0.018465	16.24	587.61	72.70	1.01	7.93
1	96548.	16160.00	534.60	555.38	555.38	557.10	0.006254	12.07	2346.48	790.37	0.63	3.88
1	96548.</											

HEC-RAS Plan: WC-Edit River: Big Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	97515.	9750.00	537.94	557.40		557.51	0.000411	3.58	5255.63	992.98	0.16	0.37
1	97515.	16080.00	537.94	559.47		559.59	0.000459	4.11	7384.50	1083.65	0.17	0.47
1	97515.	18530.00	537.94	560.08		560.21	0.000492	4.35	8071.98	1152.31	0.18	0.52
1	97515.	19490.00	537.94	560.28		560.42	0.000501	4.43	8309.50	1157.12	0.18	0.54
1	97536. LOW WATER CROSSI	Culvert										
1	97556.	9750.00	538.14	557.38	552.81	557.53	0.000862	4.70	4624.31	978.20	0.21	0.78
1	97556.	16080.00	538.14	559.47	554.24	559.63	0.000870	5.12	6768.51	1098.53	0.21	0.88
1	97556.	18530.00	538.14	560.04	555.78	560.21	0.000902	5.32	7401.88	1124.04	0.22	0.95
1	97556.	19490.00	538.14	560.30	555.95	560.46	0.000897	5.35	7686.64	1132.58	0.22	0.95
1	97855.	9750.00	538.10	557.65		557.86	0.000930	4.54	3600.32	807.77	0.23	0.65
1	97855.	16080.00	538.10	559.74		559.99	0.000992	5.23	5375.98	880.18	0.25	0.82
1	97855.	18530.00	538.10	560.32		560.59	0.001046	5.52	5890.01	896.65	0.26	0.90
1	97855.	19490.00	538.10	560.57		560.85	0.001051	5.59	6115.38	903.27	0.26	0.92
1	98519.	9750.00	540.50	558.24	553.05	558.32	0.000646	3.10	5121.81	1002.88	0.17	0.39
1	98519.	16080.00	540.50	560.36	554.31	560.46	0.000650	3.52	7303.12	1072.13	0.18	0.47
1	98519.	18530.00	540.50	560.97	554.75	561.08	0.000675	3.70	7948.74	1095.92	0.18	0.51
1	98519.	19490.00	540.50	561.23	554.89	561.34	0.000677	3.75	8218.94	1105.80	0.18	0.52
1	98957.	9750.00	541.60	558.53	553.99	558.79	0.001580	4.74	3020.59	655.19	0.27	0.92
1	98957.	16080.00	541.60	560.63	556.61	560.94	0.001590	5.43	4451.15	750.34	0.28	1.12
1	98957.	18530.00	541.60	561.25	557.06	561.58	0.001636	5.70	4889.91	772.08	0.29	1.22
1	98957.	19490.00	541.60	561.50	557.22	561.84	0.001638	5.78	5072.12	780.78	0.29	1.24
1	99115.	9750.00	542.30	558.66		559.27	0.004146	8.12	2328.32	573.08	0.42	2.61
1	99115.	16080.00	542.30	560.80		561.38	0.003656	8.53	3598.28	609.07	0.40	2.72
1	99115.	18530.00	542.30	561.43		562.02	0.003673	8.81	3981.69	617.60	0.41	2.86
1	99115.	19490.00	542.30	561.68		562.28	0.003648	8.88	4138.60	621.06	0.41	2.89
1	99484.	9750.00	544.00	560.19		560.69	0.003612	6.71	2142.77	407.68	0.43	1.64
1	99484.	16080.00	544.00	562.11		562.79	0.003981	8.03	2958.23	433.51	0.46	2.20
1	99484.	18530.00	544.00	562.72		563.47	0.004108	8.50	3224.19	439.84	0.48	2.42
1	99484.	19490.00	544.00	562.96		563.74	0.004141	8.67	3328.88	442.88	0.48	2.50
1	99650.	9750.00	542.80	560.84		561.19	0.002466	5.71	2483.81	444.15	0.35	1.17
1	99650.	16080.00	542.80	562.84		563.35	0.002753	6.99	3401.26	470.89	0.39	1.63
1	99650.	18530.00	542.80	563.49		564.05	0.002853	7.42	3708.98	478.99	0.40	1.80
1	99650.	19490.00	542.80	563.74		564.33	0.002881	7.57	3828.91	482.06	0.40	1.86
1	99868.	9750.00	544.10	561.30		561.46	0.000673	3.58	3594.79	504.00	0.20	0.42
1	99868.	16080.00	544.10	563.42		563.68	0.000885	4.65	4720.29	551.95	0.23	0.67
1	99868.	18530.00	544.10	564.11		564.41	0.000951	5.00	5104.60	563.85	0.24	0.76
1	99868.	19490.00	544.10	564.38		564.69	0.000973	5.12	5253.63	568.38	0.25	0.79
1	100187.	9750.00	542.80	561.50	556.91	561.87	0.002045	5.79	2381.59	646.15	0.32	1.14
1	100187.	16080.00	542.80	563.68	558.85	564.16	0.002117	6.73	3452.83	671.82	0.34	1.44
1	100187.	18530.00	542.80	564.39	559.63	564.91	0.002152	7.05	3805.89	680.33	0.35	1.55
1	100187.	19490.00	542.80	564.66	559.89	565.20	0.002161	7.16	3941.21	683.56	0.35	1.59
1	100441.	9750.00	543.57	561.96	557.57	562.40	0.001978	5.78	1994.24	628.54	0.32	1.13
1	100441.	16080.00	543.57	564.14	559.23	564.83	0.002429	7.30	2688.86	761.12	0.37	1.69
1	100441.	18530.00	543.57	564.85	559.82	565.62	0.002573	7.80	2913.20	783.17	0.38	1.89
1	100441.	19490.00	543.57	565.11	560.03	565.92	0.002622	7.98	2998.07	786.31	0.39	1.96
1	100518. POOL ROAD BR D	9750.00	543.57	562.13	557.67	562.61	0.002388	5.98	1922.33	291.75	0.23	1.24
1	100518. POOL ROAD BR D	16080.00	543.57	564.35	559.43	565.10	0.003082	7.59	2569.24	291.75	0.27	1.90
1	100518. POOL ROAD BR D	18530.00	543.57	565.06	560.08	565.91	0.003318	8.12	2777.53	291.75	0.28	2.14
1	100518. POOL ROAD BR D	19490.00	543.57	565.33	560.31	566.22	0.003403	8.31	2856.13	291.75	0.29	2.23
1	100518. POOL ROAD BR U	9750.00	543.57	562.30	556.94	562.89	0.004138	6.20	1620.88	248.31	0.37	1.74
1	100518. POOL ROAD BR U	16080.00	543.57	564.57	559.76	565.45	0.005027	7.69	2197.18	260.84	0.41	2.52
1	100518. POOL ROAD BR U	18530.00	543.57	565.30	560.61	566.29	0.005315	8.16	2389.28	265.43	0.42	2.80
1	100518. POOL ROAD BR U	19490.00	543.57	565.57	560.90	566.60	0.005423	8.34	2463.00	271.01	0.43	2.90
1	100671. Q	9750.00	543.57	562.64	556.94	563.15	0.002841	5.78	1752.82	621.34	0.34	1.43
1	100671. Q	16080.00	543.57	565.00	559.71	565.76	0.003153	7.14	2400.14	945.13	0.38	2.01
1	100671. Q	18530.00	543.57	565.76	560.55	566.61	0.003258	7.59	2617.27	1026.06	0.39	2.22
1	100671. Q	19490.00	543.57	566.05	560.81	566.93	0.003290	7.75	2702.63	1046.78	0.39	2.30
1	101032.	9750.00	545.70	563.88	563.37	565.24	0.010293	10.13	1214.68	751.26	0.64	4.57
1	101032.	16080.00	545.70	566.24	564.92	567.55	0.007617	10.41	2022.83	914.11	0.58	4.41
1	101032.	18530.00	545.70	567.01	565.41	568.34	0.007123	10.57	2298.27	934.66	0.56	4.44
1	101032.	19490.00	545.70	567.30	565.59	568.64	0.006958	10.63	2403.51	941.14	0.56	4.45
1	101304. CONFLUENCE OF FE	9750.00	546.00	566.05	562.97	566.33	0.001813	5.00	2758.97	826.34	0.28	1.03
1	101304. CONFLUENCE OF FE	16080.00	546.00	568.17	564.82	568.48	0.001650	5.43	4048.07	861.38	0.27	1.13
1	101304. CONFLUENCE OF FE	18530.00	546.00	568.91	565.15	569.23	0.001593	5.55	4507.16	875.12	0.27	1.16
1	101304. CONFLUENCE OF FE	19490.00	546.00	569.20	565.28	569.52	0.001572	5.59	4683.08	880.21	0.27	1.17
1	102523.	9720.00	546.40	567.59		567.79	0.000906	4.50	3585.84	804.45	0.23	0.64
1	102523.	16020.00	546.40	569.65		569.87	0.000900	4.98	5317.90	876.55	0.23	0.74
1	102523.	18440.00	546.40	570.36		570.59	0.000890	5.11	5959.22	911.79	0.23	0.77
1	102523.	19410.00	546.40	570.63		570.87	0.000884	5.16	6207.35	921.75	0.23	0.78
1	103113.	9720.00	548.60	568.01		568.86	0.002898	7.69	1520.83	284.65	0.41	1.91
1	103113.	16020.00	548.60	569.90	566.50	571.11	0.003711	9.66	2462.78	815.66	0.47	2.86
1	103113.	18440.00	548.60	570.56	567.84	571.86	0.003851	10.18	3058.42	969.92	0.49	3.12
1	103113.	19410.00	548.60	570.88		572.08	0.003617	10.02	3366.38	996.53	0.47	3.00
1	104030.	9740.00	550.60	570.35	567.85	570.53	0.001185	4.35	3587.26	1135.46	0.25	0.65
1	104030.	16030.00	550.60	572.57	568.90	572.74	0.000955	4.51	5430.46	1177.69	0.23	0.65
1	104030.	18450.00	550.60	573.29	569.18	573.47	0.000916	4.60	6040.08	1195.99	0.23	0.66
1	104030.	19420.00	550.60	573.48	569.28	573.68	0.000935	4.69	6204.63	1201.00	0.23	0.69
1	104286. R	9740.00	553.13	570.58	565.60	571.08	0.002031	5.71	1709.87	553.70	0.33	1.12
1	104286. R	16030.00	553.13	572.71	567.49	573.26	0.001937	6.42	3259.97	1355.84	0.34	1.31
1	104286. R	18450.00	553.13	573.43	568.18	573.97	0.0					

HEC-RAS Plan: WC-Edit River: Big Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	104405.	9740.00	553.13	571.18	565.33	571.65	0.001786	5.46	1783.84	1777.97	0.31	1.01
1	104405.	16030.00	553.13	574.34	567.80	574.45	0.000519	3.55	8037.29	2748.99	0.18	0.39
1	104405.	18450.00	553.13	574.52	568.43	574.66	0.000614	3.90	8393.31	2758.67	0.19	0.47
1	104405.	19420.00	553.13	574.58	568.67	574.73	0.000653	4.04	8525.32	2761.10	0.20	0.50
1	104420.	9740.00	553.90	571.22	564.45	571.67	0.001289	5.54	1898.85	1316.00	0.28	0.95
1	104420.	16030.00	553.90	574.30	566.63	574.51	0.000659	4.61	7048.83	2676.95	0.21	0.61
1	104420.	18450.00	553.90	574.47	567.41	574.72	0.000789	5.08	7380.29	2701.17	0.23	0.74
1	104420.	19420.00	553.90	574.54	567.73	574.80	0.000842	5.26	7503.28	2706.31	0.24	0.79
1	104446. DART RAILROAD BR D	9740.00	553.90	571.22	564.74	571.67	0.005909	5.91	1705.50	161.00	0.25	1.53
1	104446. DART RAILROAD BR D	16030.00	553.90	575.04	567.06	575.45		6.94	3050.33	1507.09	0.27	
1	104446. DART RAILROAD BR D	18450.00	553.90	575.31	567.94	575.77		7.35	4552.42	1686.11	0.29	
1	104446. DART RAILROAD BR D	19420.00	553.90	575.50	568.29	575.85		7.36	4696.94	1813.95	0.22	
1	104446. DART RAILROAD BR U	9740.00	553.90	571.80	564.76	572.21	0.009040	5.47	1824.63		0.23	1.76
1	104446. DART RAILROAD BR U	16030.00	553.90	575.43	567.19	575.49		6.66	3075.58	1767.02	0.23	
1	104446. DART RAILROAD BR U	18450.00	553.90	575.76	567.94	575.83		7.05	3521.47	1988.27	0.23	
1	104446. DART RAILROAD BR U	19420.00	553.90	575.82	568.22	575.90		7.06	4722.19	2030.99	0.24	
1	104471.	9740.00	553.90	571.84	564.47	572.21	0.001244	4.98	2061.50	2010.39	0.25	0.93
1	104471.	16030.00	553.90	575.43	566.72	575.49	0.000274	2.77	10610.05	2644.25	0.12	0.26
1	104471.	18450.00	553.90	575.76	567.52	575.83	0.000313	3.00	11260.73	2743.44	0.13	0.31
1	104471.	19420.00	553.90	575.82	567.85	575.90	0.000340	3.14	11388.16	2747.43	0.14	0.34
1	104750.	9590.00	553.30	572.46	568.54	572.54	0.000643	3.19	4697.63	1220.71	0.17	0.40
1	104750.	15650.00	553.30	575.53	569.64	575.58	0.000276	2.48	10168.29	1504.61	0.12	0.22
1	104750.	18430.00	553.30	575.88	569.95	575.93	0.000331	2.76	10687.49	1527.73	0.13	0.28
1	104750.	19440.00	553.30	575.95	570.06	576.01	0.000358	2.88	10800.45	1534.04	0.14	0.30
1	105649.	9590.00	554.30	573.05		573.25	0.001048	4.60	3367.65	901.11	0.24	0.68
1	105649.	15650.00	554.30	575.79		575.92	0.000597	4.01	6139.59	1101.52	0.19	0.48
1	105649.	18430.00	554.30	576.18		576.34	0.000702	4.43	6575.57	1123.53	0.21	0.59
1	105649.	19440.00	554.30	576.28		576.44	0.000745	4.59	6684.13	1127.85	0.21	0.63
1	106674.	9590.00	555.60	574.26		574.54	0.001496	4.98	2647.09	640.72	0.27	0.97
1	106674.	15650.00	555.60	576.53		576.79	0.001190	5.05	4322.16	787.44	0.25	0.94
1	106674.	18430.00	555.60	577.04		577.33	0.001318	5.45	4731.12	848.74	0.26	1.08
1	106674.	19440.00	555.60	577.18		577.49	0.001373	5.60	4853.91	863.38	0.27	1.13
1	107067. S	9600.00	556.30	574.80		574.96	0.000803	4.08	3550.62	729.23	0.20	0.62
1	107067. S	15630.00	556.30	576.98		577.15	0.000768	4.43	5280.41	856.14	0.20	0.69
1	107067. S	18410.00	556.30	577.53		577.73	0.000830	4.71	5759.01	868.25	0.21	0.77
1	107067. S	19420.00	556.30	577.70		577.91	0.000860	4.83	5902.50	871.83	0.21	0.81
1	107429. CONFLUENCE OF TR	9600.00	557.00	575.11		575.18	0.000517	2.90	5131.88	1073.18	0.16	0.33
1	107429. CONFLUENCE OF TR	15630.00	557.00	577.27		577.35	0.000439	3.02	7495.02	1111.95	0.15	0.34
1	107429. CONFLUENCE OF TR	18410.00	557.00	577.85		577.94	0.000473	3.22	8142.72	1121.16	0.15	0.38
1	107429. CONFLUENCE OF TR	19420.00	557.00	578.02		578.13	0.000488	3.31	8341.21	1123.96	0.16	0.40
1	107917.	9400.00	558.20	575.29	572.14	575.69	0.001949	6.45	2777.38	642.61	0.33	1.33
1	107917.	15140.00	558.20	577.40	574.31	577.80	0.001777	6.89	4179.02	672.54	0.33	1.43
1	107917.	17820.00	558.20	577.99	574.80	578.42	0.001916	7.35	4574.80	701.94	0.34	1.61
1	107917.	18830.00	558.20	578.17	574.95	578.62	0.001988	7.55	4696.79	707.53	0.35	1.69
1	108168.	9400.00	558.90	575.86	572.19	576.11	0.001444	5.20	3045.72	543.15	0.28	0.89
1	108168.	15140.00	558.90	577.88	573.62	578.20	0.001573	6.11	4173.47	614.51	0.31	1.16
1	108168.	17820.00	558.90	578.49	574.08	578.86	0.001733	6.63	4524.00	628.89	0.32	1.34
1	108168.	18830.00	558.90	578.69	574.26	579.08	0.001804	6.83	4636.57	633.55	0.33	1.42
1	108445.	9400.00	559.20	576.22	570.53	576.33	0.000489	3.45	3888.47	674.74	0.17	0.37
1	108445.	15140.00	559.20	578.30	572.20	578.45	0.000536	3.99	5305.18	775.85	0.18	0.47
1	108445.	17820.00	559.20	578.96	572.70	579.14	0.000583	4.29	5777.04	794.90	0.19	0.53
1	108445.	18830.00	559.20	579.18	572.89	579.37	0.000603	4.40	5933.04	801.54	0.20	0.56
1	108863. T	9400.00	559.50	576.46	572.43	576.55	0.000461	3.10	4320.44	726.52	0.16	0.31
1	108863. T	15140.00	559.50	578.57	573.11	578.68	0.000459	3.47	5864.68	742.40	0.17	0.36
1	108863. T	17820.00	559.50	579.25	573.68	579.38	0.000489	3.70	6376.47	747.56	0.17	0.41
1	108863. T	18830.00	559.50	579.48	573.79	579.62	0.000502	3.79	6546.70	749.49	0.18	0.43
1	109228.	9380.00	558.90	576.65		576.91	0.001715	4.75	2381.57	448.24	0.30	0.81
1	109228.	15060.00	558.90	578.71		579.05	0.001632	5.40	3354.09	495.21	0.30	0.97
1	109228.	17720.00	558.90	579.40		579.78	0.001710	5.78	3698.92	512.41	0.31	1.09
1	109228.	18720.00	558.90	579.63		580.03	0.001750	5.93	3816.40	519.06	0.32	1.14
1	109553.	9380.00	558.60	577.16		577.41	0.001559	5.16	2590.14	571.57	0.28	0.90
1	109553.	15060.00	558.60	579.24		579.52	0.001415	5.54	3840.80	633.92	0.27	0.97
1	109553.	17720.00	558.60	579.96		580.27	0.001444	5.80	4309.13	662.08	0.28	1.05
1	109553.	18720.00	558.60	580.21		580.52	0.001460	5.91	4473.10	672.84	0.28	1.08
1	109946. U	9380.00	559.60	577.66		578.51	0.004104	8.50	1736.33	552.75	0.47	2.42
1	109946. U	15060.00	559.60	579.74		580.38	0.002954	8.15	2931.08	592.68	0.41	2.09
1	109946. U	17720.00	559.60	580.47		581.11	0.002781	8.22	3369.37	598.48	0.40	2.09
1	109946. U	18720.00	559.60	580.72		581.36	0.002744	8.27	3519.88	600.55	0.40	2.10
1	110189.	9380.00	560.50	578.67		579.46	0.003814	7.83	1657.95	583.75	0.42	2.42
1	110189.	15060.00	560.50	580.47		581.09	0.003019	7.71	2903.32	770.06	0.38	2.23
1	110189.	17720.00	560.50	581.19		581.75	0.002646	7.49	3476.86	808.67	0.36	2.07
1	110189.	18720.00	560.50	581.44		581.99	0.002536	7.42	3681.56	821.81	0.35	2.02
1	110568.	9380.00	561.50	580.13		580.29	0.001436	4.40	3396.94	757.32	0.25	0.80
1	110568.	15060.00	561.50	581.63		581.84	0.001507	4.95	4552.46	784.68	0.26	0.97
1	110568.	17720.00	561.50	582.22		582.46	0.001534	5.17	5022.50	794.93	0.26	1.03
1	110568.	18720.00	561.50	582.44		582.68	0.001542	5.25	5192.62	799.20	0.27	1.06
1	110835.	9380.00	562.90	580.42		580.77	0.001992	5.93	2505.50	491.94	0.30	1.35
1	110835.	15060.00	562.90	581.91		582.39	0.002449	7.11	3272.74	570.46	0.34	1.87
1	110835.	17720.00	562.90	582.50		583.03	0.002587	7.52	3625.53	616.49	0.36	2.07
1	110835.	18720.00	562.90	582.72		583.26	0.002648	7.69	3762.16	655.52	0.36	2.15

HEC-RAS Plan: WC-Edit River: Big Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	111744.	17470.00	565.60	584.35		584.49	0.000651	3.84	6116.13	847.51	0.18	0.53
1	111744.	18480.00	565.60	584.59		584.73	0.000659	3.90	6318.74	851.37	0.18	0.55
1	112258.	9300.00	565.50	582.16		582.24	0.000322	2.20	4213.65	769.63	0.12	0.19
1	112258.	14870.00	565.50	583.92		584.04	0.000366	2.61	5610.23	812.95	0.13	0.26
1	112258.	17470.00	565.50	584.60		584.74	0.000383	2.77	6165.76	826.24	0.14	0.29
1	112258.	18480.00	565.50	584.84		584.98	0.000390	2.83	6366.29	830.16	0.14	0.30
1	113009. V	9300.00	565.50	582.43		582.92	0.003564	7.35	2627.63	776.28	0.40	2.17
1	113009. V	14870.00	565.50	584.30		584.70	0.002833	7.31	4110.57	811.88	0.37	2.03
1	113009. V	17470.00	565.50	585.01		585.40	0.002713	7.42	4687.74	825.30	0.36	2.05
1	113009. V	18480.00	565.50	585.26		585.65	0.002685	7.48	4896.05	829.87	0.36	2.07
1	113618.	9310.00	568.30	584.19		584.39	0.001744	5.38	3197.92	947.22	0.28	1.13
1	113618.	14820.00	568.30	585.71		585.91	0.001465	5.36	4667.14	992.26	0.26	1.08
1	113618.	17410.00	568.30	586.34		586.54	0.001382	5.37	5299.60	1009.80	0.26	1.07
1	113618.	18420.00	568.30	586.57		586.78	0.001355	5.38	5534.69	1014.68	0.26	1.07
1	114290.	9310.00	569.50	585.68		586.32	0.004863	7.78	2072.33	666.40	0.46	2.55
1	114290.	14820.00	569.50	586.98		587.68	0.005099	8.73	2966.30	703.60	0.48	3.06
1	114290.	17410.00	569.50	587.54		588.25	0.005049	8.99	3360.20	714.02	0.48	3.20
1	114290.	18420.00	569.50	587.75		588.47	0.005025	9.09	3508.39	717.55	0.48	3.24
1	115217. W	9290.00	571.40	588.26		588.37	0.001211	4.06	4308.22	1151.58	0.22	0.68
1	115217. W	14760.00	571.40	589.61		589.74	0.001186	4.37	5875.63	1168.24	0.22	0.75
1	115217. W	17340.00	571.40	590.19		590.32	0.001198	4.53	6556.01	1205.74	0.23	0.80
1	115217. W	18350.00	571.40	590.39		590.53	0.001199	4.58	6805.50	1213.05	0.23	0.81
1	115764.	9290.00	570.70	588.68		588.75	0.000567	2.90	5471.81	1407.97	0.16	0.34
1	115764.	14760.00	570.70	590.04		590.12	0.000604	3.26	7429.11	1465.09	0.17	0.41
1	115764.	17340.00	570.70	590.62		590.71	0.000607	3.38	8281.10	1483.88	0.17	0.43
1	115764.	18350.00	570.70	590.82		590.92	0.000610	3.43	8590.96	1491.04	0.17	0.44
1	116128.	9160.00	570.00	588.89	584.22	589.35	0.002401	6.77	2435.93	1080.01	0.32	1.74
1	116128.	14410.00	570.00	590.29	588.25	590.75	0.002509	7.37	3586.65	1210.63	0.33	1.99
1	116128.	16910.00	570.00	590.87	589.03	591.34	0.002593	7.68	4118.77	1307.73	0.34	2.14
1	116128.	17920.00	570.00	591.08	589.15	591.55	0.002580	7.73	4325.55	1322.72	0.34	2.15
1	116157. WHITE CHAPEL ROABR D	9160.00	568.45	588.59	583.16	589.77	0.012408	8.94	914.72	64.02	0.34	4.93
1	116157. WHITE CHAPEL ROABR D	14410.00	568.45	591.38	586.30	592.07		6.70	2996.55	832.16	0.36	
1	116157. WHITE CHAPEL ROABR D	16910.00	568.45	592.34	592.41	592.55		7.16	3541.11	1436.30	0.26	
1	116157. WHITE CHAPEL ROABR D	17920.00	568.45	592.41	592.49	592.63		7.57	3658.84	1454.92	0.27	
1	116157. WHITE CHAPEL ROABR U	9160.00	568.45	588.86	583.16	590.00	0.011775	8.76	932.52	64.02	0.33	4.72
1	116157. WHITE CHAPEL ROABR U	14410.00	568.45	591.79	586.29	592.17		7.03	2996.55	1024.34	0.30	
1	116157. WHITE CHAPEL ROABR U	16910.00	568.45	592.34	592.42	592.55		7.16	3541.11	1436.30	0.26	
1	116157. WHITE CHAPEL ROABR U	17920.00	568.45	592.41	592.50	592.63		7.57	3658.84	1454.92	0.27	
1	116186. CONFLUENCE OF TR	9160.00	569.00	590.01	582.47	590.30	0.001251	5.33	3479.91	1185.67	0.24	1.03
1	116186. CONFLUENCE OF TR	14410.00	569.00	591.79	585.82	592.17	0.001579	6.45	5249.87	1592.66	0.28	1.45
1	116186. CONFLUENCE OF TR	16910.00	569.00	592.34	588.41	592.55	0.001044	5.36	7932.06	1635.88	0.23	0.99
1	116186. CONFLUENCE OF TR	17920.00	569.00	592.41	589.05	592.63	0.001136	5.61	8032.52	1639.55	0.24	1.08
1	116737. X	9160.00	573.50	590.95		591.25	0.002740	5.69	2833.98	689.72	0.34	1.38
1	116737. X	14410.00	573.50	592.90		593.20	0.002344	6.02	4242.74	769.10	0.32	1.44
1	116737. X	16910.00	573.50	593.10		593.49	0.002926	6.81	4404.91	779.68	0.36	1.84
1	116737. X	17920.00	573.50	593.23		593.64	0.003104	7.07	4501.03	785.53	0.37	1.97
1	119599. Y	8640.00	578.90	596.78		597.08	0.001634	5.79	2762.08	483.69	0.28	1.25
1	119599. Y	13420.00	578.90	598.64		599.01	0.001874	6.77	3706.30	533.33	0.31	1.63
1	119599. Y	15770.00	578.90	599.53		599.92	0.001869	7.02	4186.29	548.33	0.31	1.72
1	119599. Y	16780.00	578.90	599.86		600.26	0.001884	7.15	4373.08	554.85	0.31	1.77
1	120595.	8640.00	582.60	598.23		598.34	0.001157	3.83	3611.19	563.63	0.22	0.62
1	120595.	13420.00	582.60	600.21		600.36	0.001188	4.42	4749.51	581.00	0.23	0.77
1	120595.	15770.00	582.60	601.09		601.26	0.001190	4.65	5263.53	587.91	0.23	0.83
1	120595.	16780.00	582.60	601.44		601.61	0.001196	4.75	5468.46	591.08	0.24	0.85
1	121319. Z	8670.00	583.63	598.99		599.17	0.001140	4.25	3509.75	722.56	0.23	0.72
1	121319. Z	13380.00	583.63	600.99		601.20	0.001131	4.77	5104.50	882.28	0.24	0.85
1	121319. Z	15720.00	583.63	601.86		602.07	0.001083	4.88	5896.94	927.07	0.24	0.87
1	121319. Z	16730.00	583.63	602.21		602.42	0.001061	4.92	6219.16	934.12	0.24	0.88
1	122075.	8670.00	584.00	599.70		599.80	0.000634	3.23	4387.32	1009.93	0.19	0.36
1	122075.	13380.00	584.00	601.66		601.76	0.000533	3.37	6501.30	1123.73	0.18	0.36
1	122075.	15720.00	584.00	602.50		602.61	0.000498	3.42	7456.73	1146.94	0.17	0.36
1	122075.	16730.00	584.00	602.84		602.94	0.000489	3.46	7842.10	1157.33	0.17	0.37
1	122995. AA	8670.00	584.10	600.38		600.48	0.001023	4.10	4589.24	1206.87	0.23	0.57
1	122995. AA	13380.00	584.10	602.21		602.30	0.000744	3.92	6845.63	1250.32	0.20	0.49
1	122995. AA	15720.00	584.10	603.01		603.10	0.000675	3.91	7851.39	1264.74	0.20	0.48
1	122995. AA	16730.00	584.10	603.34		603.42	0.000655	3.91	8260.35	1270.43	0.19	0.48
1	124420. AB	8590.00	586.00	602.59		603.19	0.004598	8.06	1949.44	516.82	0.43	2.65
1	124420. AB	13170.00	586.00	603.87		604.57	0.005106	9.15	2645.01	566.70	0.47	3.29
1	124420. AB	15450.00	586.00	604.51		605.21	0.005031	9.40	3013.90	589.50	0.47	3.41
1	124420. AB	16470.00	586.00	604.78		605.49	0.004984	9.49	3175.47	597.62	0.47	3.46
1	126767. AC	8620.00	591.20	608.04		608.30	0.001450	5.24	3033.01	510.02	0.26	1.04
1	126767. AC	13160.00	591.20	609.89		610.21	0.001627	6.09	4006.48	539.37	0.29	1.34
1	126767. AC	15420.00	591.20	610.63		610.98	0.001714	6.47	4409.22	546.82	0.30	1.49
1	126767. AC	16440.00	591.20	610.94		611.30	0.001754	6.63	4578.96	549.81	0.30	1.55
1	130321. AD	8240.00	597.20	611.03		611.13	0.000600	3.80	4563.30	763.41	0.19	0.45
1	130321. AD	12620.00	597.20	613.08		613.19	0.000622	4.28	6215.19	850.82	0.20	0.54
1	130321. AD	14860.00	597.20	613.99		614.12	0.000657	4.58	7038.06	941.96	0.21	0.61
1	130321. AD	15920.00	597.20	614.34		614.47	0.000660	4.66	7369.72	948.59	0.21	0.62
1	131289. CONFLUENCE OF TR	8170.00	598.50	611.74	607.42	612.23	0.002353	5.64	1520.27	306.77	0.35	1.14
1	131289. CONFLUENCE OF TR	12480.00	598.50	613.73	609.01	614.36	0.002411	6.53	2315.57	553.45	0.37	1.42
1	131289. CONFLUENCE OF TR	14700.00	59									

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	131514. FM 1938 BR U	8170.00	598.62	612.74	608.19	613.73	0.008394	5.86	1394.15		0.27	1.91
1	131514. FM 1938 BR U	12480.00	598.62	612.74	609.84	616.05	0.019585	8.95	1394.15		0.42	4.45
1	131514. FM 1938 BR U	14700.00	598.62	617.53	610.59	617.70		10.49	1456.46	186.24	0.43	
1	131514. FM 1938 BR U	15750.00	598.62	618.03	610.92	618.19		10.81	1741.12	657.05	0.43	
1	131592. AE	8170.00	598.62	613.32	608.13	613.73	0.002268	5.14	1589.09	603.80	0.32	1.13
1	131592. AE	12480.00	598.62	615.45	609.70	616.05	0.002454	6.24	2003.09	902.06	0.34	1.54
1	131592. AE	14700.00	598.62	617.53	610.43	617.69	0.000777	3.91	5425.41	988.56	0.20	0.57
1	131592. AE	15750.00	598.62	618.03	610.72	618.20	0.000716	3.86	5933.24	1036.63	0.19	0.55
1	131836.	8170.00	599.00	614.04	611.23	614.19	0.001154	4.11	3028.19	908.72	0.23	0.68
1	131836.	12480.00	599.00	616.37	612.03	616.51	0.000823	3.99	4422.94	998.75	0.20	0.60
1	131836.	14700.00	599.00	617.79	612.33	617.87	0.000441	3.15	7354.11	1060.40	0.15	0.36
1	131836.	15750.00	599.00	618.27	612.47	618.35	0.000416	3.13	7871.11	1081.59	0.15	0.35
1	132852.	8090.00	599.10	615.48		615.71	0.001982	5.35	2620.73	685.84	0.29	1.16
1	132852.	12370.00	599.10	617.40		617.59	0.001411	5.03	3979.10	755.90	0.25	0.97
1	132852.	14550.00	599.10	618.40		618.59	0.001206	4.89	4751.35	782.25	0.23	0.89
1	132852.	15610.00	599.10	618.85		619.03	0.001149	4.87	5106.43	798.47	0.23	0.88
1	133156.	8090.00	599.10	616.03		616.40	0.002576	6.74	2178.74	534.15	0.32	1.75
1	133156.	12370.00	599.10	617.80		618.13	0.002206	6.75	3153.41	572.43	0.30	1.69
1	133156.	14550.00	599.10	618.74		619.05	0.001941	6.58	3703.23	592.38	0.28	1.57
1	133156.	15610.00	599.10	619.17		619.48	0.001861	6.55	3960.32	605.98	0.28	1.55
1	133430. AF	8090.00	599.10	616.55		616.71	0.000610	3.41	2920.66	532.65	0.17	0.44
1	133430. AF	12370.00	599.10	618.24		618.45	0.000717	4.04	3846.27	561.60	0.19	0.59
1	133430. AF	14550.00	599.10	619.14		619.35	0.000712	4.19	4352.44	570.48	0.19	0.62
1	133430. AF	15610.00	599.10	619.55		619.77	0.000708	4.26	4588.94	574.57	0.19	0.64
1	133922.	8090.00	600.00	616.86		617.20	0.002199	6.20	2116.09	552.54	0.30	1.49
1	133922.	12370.00	600.00	618.59		618.90	0.001869	6.22	3159.17	652.51	0.29	1.43
1	133922.	14550.00	600.00	619.47		619.76	0.001571	5.93	3750.16	686.95	0.27	1.28
1	133922.	15610.00	600.00	619.88		620.15	0.001458	5.81	4029.97	689.55	0.26	1.22
1	134131.	8090.00	605.05	617.57		617.72	0.001330	3.74	2699.38	603.03	0.24	0.61
1	134131.	12370.00	605.05	619.18		619.36	0.001171	3.98	3700.86	637.06	0.23	0.65
1	134131.	14550.00	605.05	619.97		620.17	0.001088	4.05	4212.49	653.76	0.22	0.66
1	134131.	15610.00	605.05	620.35		620.55	0.001054	4.08	4457.08	661.63	0.22	0.66
1	135809.	8090.00	606.10	620.24	618.77	620.47	0.002181	4.77	2479.47	971.49	0.28	1.14
1	135809.	12370.00	606.10	621.52	619.53	621.75	0.001890	4.85	3502.47	1007.85	0.27	1.13
1	135809.	14550.00	606.10	622.14	619.79	622.38	0.001749	4.85	4001.89	1023.69	0.26	1.11
1	135809.	15610.00	606.10	622.44	619.91	622.68	0.001680	4.84	4244.82	1032.19	0.25	1.09
1	136244.	7910.00	606.45	620.78	614.34	620.96	0.000720	3.48	2355.39	715.97	0.20	0.41
1	136244.	12060.00	606.45	622.05	615.55	622.37	0.001065	4.61	2716.53	731.70	0.25	0.69
1	136244.	14240.00	606.45	622.65	616.12	623.04	0.001220	5.12	2888.59	739.20	0.27	0.83
1	136244.	15290.00	606.45	622.94	616.36	623.37	0.001286	5.34	2970.37	742.77	0.28	0.90
1	136354. BEAR CREEK PARKWBR D	7910.00	606.45	620.83	614.41	621.09	0.001519	4.09	1958.48	219.46	0.19	0.63
1	136354. BEAR CREEK PARKWBR D	12060.00	606.45	622.12	615.70	622.58	0.002479	5.46	2245.51	227.52	0.24	1.10
1	136354. BEAR CREEK PARKWBR D	14240.00	606.45	622.73	616.32	623.29	0.002957	6.07	2385.33	231.34	0.26	1.35
1	136354. BEAR CREEK PARKWBR D	15290.00	606.45	623.02	616.58	623.63	0.003173	6.35	2452.41	233.15	0.27	1.46
1	136354. BEAR CREEK PARKWBR U	7910.00	606.45	621.05	614.23	621.26	0.001311	3.72	2125.67	220.80	0.17	0.53
1	136354. BEAR CREEK PARKWBR U	12060.00	606.45	622.48	615.40	622.85	0.002091	4.93	2447.51	229.76	0.22	0.90
1	136354. BEAR CREEK PARKWBR U	14240.00	606.45	623.16	615.97	623.62	0.002467	5.47	2606.07	234.04	0.24	1.10
1	136354. BEAR CREEK PARKWBR U	15290.00	606.45	623.48	616.22	623.99	0.002635	5.70	2682.00	236.07	0.24	1.19
1	136466. AG	7910.00	606.45	621.16	614.15	621.30	0.000538	3.05	2616.38	1038.94	0.17	0.31
1	136466. AG	12060.00	606.45	622.67	615.33	622.92	0.000756	3.99	3048.07	1170.60	0.21	0.51
1	136466. AG	14240.00	606.45	623.40	615.87	623.70	0.000848	4.41	3255.90	1182.53	0.23	0.61
1	136466. AG	15290.00	606.45	623.75	616.12	624.07	0.000887	4.60	3354.06	1189.54	0.23	0.66
1	136749.	7910.00	610.00	621.20	617.49	621.88	0.003774	6.94	1275.66	566.83	0.41	2.01
1	136749.	12060.00	610.00	622.79	619.59	623.57	0.003645	7.60	1796.51	640.59	0.41	2.29
1	136749.	14240.00	610.00	623.56	621.31	624.35	0.003443	7.74	2082.49	676.90	0.40	2.32
1	136749.	15290.00	610.00	623.92	621.55	624.72	0.003319	7.76	2225.30	699.08	0.40	2.30
1	137197.	7910.00	608.70	622.50	617.38	622.88	0.001577	5.25	1686.30	469.12	0.30	0.92
1	137197.	12060.00	608.70	624.09	620.09	624.59	0.001815	6.22	2235.45	561.09	0.32	1.23
1	137197.	14240.00	608.70	624.80	620.79	625.34	0.001834	6.51	2521.27	590.26	0.33	1.33
1	137197.	15290.00	608.70	625.12	621.08	625.68	0.001837	6.63	2657.33	603.60	0.33	1.36
1	137763.	7910.00	616.00	623.50		623.73	0.001473	4.21	2161.00	582.63	0.28	0.65
1	137763.	12060.00	616.00	625.16		625.39	0.001161	4.30	3227.25	707.98	0.25	0.63
1	137763.	14240.00	616.00	625.87		626.11	0.001053	4.31	3738.94	740.37	0.25	0.62
1	137763.	15290.00	616.00	626.19		626.43	0.001011	4.31	3978.78	753.15	0.24	0.62
1	138002.	7910.00	616.00	623.83		624.04	0.001161	3.82	2295.75	581.26	0.25	0.53
1	138002.	12060.00	616.00	625.43		625.66	0.001045	4.13	3303.34	679.70	0.24	0.58
1	138002.	14240.00	616.00	626.11		626.35	0.001017	4.28	3786.40	734.91	0.24	0.61
1	138002.	15290.00	616.00	626.43		626.67	0.000991	4.31	4018.26	747.99	0.24	0.61
1	138382.	7910.00	610.20	623.94	623.02	625.29	0.007366	10.04	1044.33	347.23	0.57	4.14
1	138382.	12060.00	610.20	625.55		626.77	0.006379	10.36	1733.37	491.13	0.55	4.19
1	138382.	14240.00	610.20	626.28		627.39	0.005750	10.26	2106.94	541.55	0.52	4.02
1	138382.	15290.00	610.20	626.60		627.67	0.005510	10.22	2285.25	574.62	0.51	3.96
1	138892.	7910.00	610.80	626.90	625.50	627.38	0.002517	6.80	1620.35	580.17	0.34	1.76
1	138892.	12060.00	610.80	628.13	626.71	628.59	0.002276	6.88	2440.19	743.55	0.33	1.75
1	138892.	14240.00	610.80	628.63		629.09	0.002216	6.95	2827.00	802.19	0.32	1.77
1	138892.	15290.00	610.80	628.85		629.32	0.002178	6.96	3010.40	823.68	0.32	1.76
1	139185. AH	7910.00	611.20	627.59		628.22	0.003267	7.15	1278.79	281.78	0.37	2.03
1	139185. AH	12060.00	611.20	628.63		629.56	0.004166	8.55	1594.69	328.59	0.42	2.82
1	139185. AH	14240.00	611.20	629.04		630.13	0.004647	9.23	1738.92	371.72	0.45	3.25
1	139185. AH	15290.00	611.20	629.23		630						

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	152554.	10730.00	640.50	656.51	654.61	657.35	0.003596	8.38	1659.37	470.44	0.46	2.29
1	152735. AM	4690.00	640.75	655.47	647.98	655.62	0.000445	3.12	1568.46	295.12	0.17	0.26
1	152735. AM	7320.00	640.75	656.73	649.43	656.98	0.000664	4.13	2059.67	350.21	0.22	0.44
1	152735. AM	8580.00	640.75	657.22	650.01	657.51	0.000762	4.55	2234.47	367.43	0.23	0.53
1	152735. AM	9320.00	640.75	657.47	650.28	657.79	0.000821	4.79	2326.82	374.08	0.24	0.58
1	152814. RUFESNOW BR D	4690.00	640.75	655.49	648.07	655.66	0.000771	3.35	1440.35	170.83	0.15	0.34
1	152814. RUFESNOW BR D	7320.00	640.75	656.13	649.51	656.98	0.003114	4.88	1550.43		0.22	0.84
1	152814. RUFESNOW BR D	8580.00	640.75	656.13	650.08	657.51	0.004278	5.72	1550.43		0.25	1.15
1	152814. RUFESNOW BR D	9320.00	640.75	656.13	650.40	657.79	0.005048	6.21	1550.43		0.28	1.36
1	152814. RUFESNOW BR U	4690.00	640.75	655.59	647.22	655.70	0.000646	2.76	1699.81	170.82	0.13	0.28
1	152814. RUFESNOW BR U	7320.00	640.75	656.13	648.49	657.27	0.002704	4.08	1792.81		0.18	0.72
1	152814. RUFESNOW BR U	8580.00	640.75	656.13	649.00	657.96	0.003715	4.79	1792.81		0.22	1.00
1	152814. RUFESNOW BR U	9320.00	640.75	656.13	649.30	658.34	0.004383	5.20	1792.81		0.23	1.18
1	152870.	4690.00	640.75	655.66	646.95	655.73	0.000231	2.22	2122.00	520.79	0.12	0.16
1	152870.	7320.00	640.75	657.12	647.95	657.27	0.000370	3.06	2407.91	714.79	0.15	0.29
1	152870.	8580.00	640.75	657.78	648.37	657.96	0.000429	3.41	2535.34	920.95	0.17	0.35
1	152870.	9320.00	640.75	658.14	648.63	658.34	0.000462	3.60	2605.75	1083.58	0.17	0.39
1	152953.	4690.00	641.20	655.66	650.07	655.79	0.000715	3.25	1847.23	751.13	0.20	0.37
1	152953.	7320.00	641.20	657.15	651.69	657.33	0.000778	3.78	2490.08	832.52	0.21	0.47
1	152953.	8580.00	641.20	657.82	653.07	658.01	0.000781	3.96	2777.46	951.67	0.21	0.51
1	152953.	9320.00	641.20	658.20	653.36	658.39	0.000781	4.05	2939.13	1129.77	0.22	0.53
1	153133.	4690.00	641.50	655.81	652.08	655.94	0.000978	3.42	1881.89	740.63	0.22	0.43
1	153133.	7320.00	641.50	657.33	653.90	657.47	0.000833	3.59	2914.02	902.43	0.21	0.44
1	153133.	8580.00	641.50	658.01	654.42	658.15	0.000763	3.60	3428.25	950.80	0.21	0.44
1	153133.	9320.00	641.50	658.39	654.57	658.53	0.000731	3.62	3735.27	1002.69	0.20	0.44
1	153207.	4690.00	641.95	655.88	649.54	656.01	0.000782	3.26	2027.86	654.68	0.19	0.44
1	153207.	7320.00	641.95	657.41	651.25	657.53	0.000704	3.43	3204.94	890.91	0.18	0.46
1	153207.	8580.00	641.95	658.09	651.95	658.21	0.000638	3.40	3842.84	1009.47	0.18	0.44
1	153207.	9320.00	641.95	658.47	652.33	658.59	0.000609	3.39	4234.41	1057.58	0.17	0.44
1	153220. TRAILBRIDGE BR D	4690.00	641.95	655.98	649.54	656.04	0.001491	1.82	1128.25	105.53	0.09	0.76
1	153220. TRAILBRIDGE BR D	7320.00	641.95	657.57	651.25	657.57	0.004635	0.00	1239.56	34.55	0.00	1.71
1	153220. TRAILBRIDGE BR D	8580.00	641.95	658.25	651.95	658.25	0.007363	0.00	1252.69	4.53	0.00	2.39
1	153220. TRAILBRIDGE BR D	9320.00	641.95	658.51	652.33	658.60	0.001236	2.37	4090.58	1061.05	0.11	0.30
1	153220. TRAILBRIDGE BR U	4690.00	641.95	655.99	649.54	656.04	0.001494	1.82	1126.35	105.43	0.09	0.76
1	153220. TRAILBRIDGE BR U	7320.00	641.95	657.57	651.25	657.57	0.004643	0.00	1237.41	34.55	0.00	1.71
1	153220. TRAILBRIDGE BR U	8580.00	641.95	658.25	651.95	658.25	0.007376	0.00	1250.54	4.53	0.00	2.40
1	153220. TRAILBRIDGE BR U	9320.00	641.95	658.52	652.34	658.61	0.001633	2.72	3949.09	1140.45	0.11	0.40
1	153234.	4690.00	641.95	655.94	649.54	656.10	0.000884	3.48	1926.22	647.69	0.20	0.50
1	153234.	7320.00	641.95	657.50	651.25	657.65	0.000821	3.72	3119.16	851.91	0.20	0.54
1	153234.	8580.00	641.95	658.18	651.95	658.32	0.000756	3.72	3739.78	976.26	0.19	0.53
1	153234.	9320.00	641.95	658.51	652.34	658.65	0.000748	3.77	4067.97	1085.01	0.19	0.54
1	153278.	4690.00	643.00	655.97		656.16	0.001356	3.82	1743.26	602.18	0.24	0.64
1	153278.	7320.00	643.00	657.54		657.69	0.001046	3.79	3132.35	1125.47	0.22	0.59
1	153278.	8580.00	643.00	658.23		658.36	0.000890	3.67	3943.55	1232.92	0.21	0.54
1	153278.	9320.00	643.00	658.56		658.69	0.000842	3.65	4364.87	1292.66	0.20	0.53
1	153650.	4690.00	644.87	656.62		656.88	0.002900	5.15	1605.48	749.89	0.34	1.20
1	153650.	7320.00	644.87	658.02		658.19	0.001870	4.67	2745.67	872.85	0.28	0.93
1	153650.	8580.00	644.87	658.63		658.79	0.001592	4.51	3295.01	924.56	0.26	0.85
1	153650.	9320.00	644.87	658.94		659.09	0.001501	4.48	3584.58	956.89	0.26	0.83
1	154117.	4690.00	645.52	657.77		658.30	0.003000	6.25	1081.67	618.97	0.40	1.41
1	154117.	7320.00	645.52	658.82		659.35	0.003019	6.83	1828.25	810.47	0.40	1.61
1	154117.	8580.00	645.52	659.32		659.79	0.002729	6.73	2242.21	843.12	0.39	1.54
1	154117.	9320.00	645.52	659.59		660.04	0.002597	6.70	2474.53	867.60	0.38	1.51
1	155095. AN	4690.00	648.00	660.79		661.40	0.003460	6.74	919.96	269.12	0.42	1.63
1	155095. AN	7320.00	648.00	661.94		662.78	0.004314	8.24	1248.42	304.25	0.48	2.34
1	155095. AN	8580.00	648.00	662.28		663.30	0.005012	9.11	1357.84	332.83	0.53	2.82
1	155095. AN	9320.00	648.00	662.47		663.59	0.005434	9.61	1420.24	352.86	0.55	3.12
1	155538.	4360.00	649.00	662.28		662.90	0.003280	6.88	1019.29	420.30	0.41	1.66
1	155538.	6850.00	649.00	663.81		664.39	0.002980	7.32	1725.11	489.78	0.41	1.78
1	155538.	8070.00	649.00	664.43		665.00	0.002870	7.47	2038.25	514.59	0.40	1.82
1	155538.	8830.00	649.00	664.78		665.35	0.002861	7.62	2220.13	534.75	0.40	1.87
1	155660.	4360.00	650.15	662.93	657.67	663.24	0.001403	4.85	1332.10	476.16	0.28	0.80
1	155660.	6850.00	650.15	664.32	659.54	664.70	0.001667	5.79	2135.68	693.11	0.31	1.08
1	155660.	8070.00	650.15	664.91	660.93	665.31	0.001668	6.00	2562.65	732.67	0.31	1.14
1	155660.	8830.00	650.15	665.27	661.77	665.66	0.001626	6.05	2831.50	765.62	0.31	1.15
1	155676. TRAILBRIDGE BR D	4360.00	650.15	663.05	657.67	663.29	0.005256	4.44	1265.50	508.79	0.19	0.97
1	155676. TRAILBRIDGE BR D	6850.00	650.15	664.58	659.51	664.79	0.004331	4.47	2195.13	713.94	0.17	0.93
1	155676. TRAILBRIDGE BR D	8070.00	650.15	665.21	660.26	665.40	0.003684	4.29	2656.41	750.86	0.16	0.84
1	155676. TRAILBRIDGE BR D	8830.00	650.15	665.57	660.60	665.75	0.003405	4.21	2940.46	834.58	0.15	0.80
1	155676. TRAILBRIDGE BR U	4360.00	650.15	663.04	657.93	663.40	0.007008	5.43	1105.51	395.50	0.23	1.41
1	155676. TRAILBRIDGE BR U	6850.00	650.15	664.58	660.05	664.87	0.005810	5.44	2030.98	762.62	0.20	1.35
1	155676. TRAILBRIDGE BR U	8070.00	650.15	665.22	662.93	665.46	0.005079	5.27	2527.72	809.90	0.18	1.24
1	155676. TRAILBRIDGE BR U	8830.00	650.15	665.58	663.06	665.80	0.004579	5.10	2825.51	833.95	0.17	1.16
1	155692.	4360.00	650.15	663.04	657.93	663.47	0.001784	5.76	1211.43	394.31	0.31	1.09
1	155692.	6850.00	650.15	664.51	661.04	665.01	0.002066	6.75	2081.26	754.21	0.34	1.44
1	155692.	8070.00	650.15	665.12	662.22	665.62	0.002086	7.01	2556.29	803.35	0.35	1.53
1	155692.	8830.00	650.15	665.48	662.62	665.96	0.002008	7.01	2851.42	827.44	0.34	1.51
1	155743.	4360.00	651.01	663.45	656.77	663.60	0.000550	3.36	1998.15	564.36	0.18	0.36
1	155743.	6850.00	651.01	664.97	658.49	665						

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	156019.	8830.00	652.86	666.00		666.56	0.003354	7.13	1929.00	495.21	0.42	1.77
1	156465. AO	4360.00	653.38	664.77		665.28	0.002600	6.32	1078.95	335.04	0.38	1.38
1	156465. AO	6850.00	653.38	666.32		666.88	0.002653	7.11	1636.08	384.42	0.39	1.66
1	156465. AO	8070.00	653.38	666.92		667.51	0.002702	7.46	1873.35	402.77	0.40	1.79
1	156465. AO	8830.00	653.38	667.26		667.86	0.002745	7.67	2010.23	412.99	0.40	1.87
1	156678.	4360.00	654.80	665.39		665.67	0.001383	4.64	1481.00	490.91	0.30	0.63
1	156678.	6850.00	654.80	666.95		667.24	0.001299	5.11	2287.05	539.90	0.30	0.72
1	156678.	8070.00	654.80	667.57		667.87	0.001287	5.31	2625.52	554.18	0.30	0.76
1	156678.	8830.00	654.80	667.92		668.22	0.001284	5.43	2819.57	558.83	0.30	0.79
1	156755.	4360.00	654.52	665.47	660.45	665.77	0.001092	4.90	1500.64	427.85	0.27	0.65
1	156755.	6850.00	654.52	667.01	662.76	667.36	0.001226	5.72	2206.87	490.70	0.30	0.84
1	156755.	8070.00	654.52	667.62	663.29	668.00	0.001279	6.05	2514.31	515.28	0.31	0.93
1	156755.	8830.00	654.52	667.96	663.50	668.36	0.001312	6.24	2694.38	529.02	0.31	0.98
1	156791. BEAR CREEK PARKW	Culvert										
1	156827.	4360.00	654.52	665.52	660.66	665.82	0.001086	4.90	1498.17	426.39	0.27	0.65
1	156827.	6850.00	654.52	667.08	662.56	667.44	0.001216	5.72	2216.72	495.56	0.30	0.84
1	156827.	8070.00	654.52	667.68	664.29	668.06	0.001278	6.06	2522.17	521.93	0.31	0.93
1	156827.	8830.00	654.52	668.03	664.68	668.43	0.001305	6.25	2708.54	535.53	0.31	0.98
1	156869.	4360.00	654.39	665.45	662.57	666.02	0.002526	6.86	1171.00	429.37	0.40	1.33
1	156869.	6850.00	654.39	667.06	665.38	667.59	0.002291	7.28	1930.52	510.31	0.39	1.42
1	156869.	8070.00	654.39	667.68	665.76	668.20	0.002241	7.48	2254.25	547.90	0.39	1.46
1	156869.	8830.00	654.39	668.03	665.95	668.57	0.002290	7.72	2453.36	579.68	0.40	1.54
1	156890. PARK BRIDGE BR D	4360.00	654.39	665.57	665.35	666.14	0.019818	7.94	863.69	433.70	0.32	2.76
1	156890. PARK BRIDGE BR D	6850.00	654.39	667.47	665.89	667.74	0.006544	5.71	1784.35	525.66	0.20	1.28
1	156890. PARK BRIDGE BR D	8070.00	654.39	668.08	666.18	668.35	0.005840	5.72	2124.91	581.75	0.20	1.24
1	156890. PARK BRIDGE BR D	8830.00	654.39	668.47	666.32	668.72	0.005214	5.59	2354.85	609.89	0.19	1.17
1	156890. PARK BRIDGE BR U	4360.00	654.39	665.99	665.32	666.36	0.009451	6.54	1092.88	462.96	0.25	1.44
1	156890. PARK BRIDGE BR U	6850.00	654.39	667.54	665.91	667.81	0.005317	5.83	1883.10	544.95	0.20	1.05
1	156890. PARK BRIDGE BR U	8070.00	654.39	668.15	666.15	668.41	0.004597	5.75	2222.14	568.02	0.19	0.99
1	156890. PARK BRIDGE BR U	8830.00	654.39	668.53	666.30	668.78	0.004249	5.71	2437.25	585.44	0.19	0.96
1	156910.	4360.00	654.39	665.99	662.96	666.42	0.001472	6.12	1425.27	462.00	0.35	0.82
1	156910.	6850.00	654.39	667.47	665.40	667.93	0.001547	6.90	2177.06	542.10	0.36	0.99
1	156910.	8070.00	654.39	668.07	665.85	668.54	0.001559	7.18	2508.49	564.27	0.37	1.05
1	156910.	8830.00	654.39	668.44	665.96	668.91	0.001554	7.31	2719.67	581.16	0.37	1.08
1	157025.	4360.00	655.00	666.10		666.80	0.003002	7.46	1028.89	409.41	0.48	1.32
1	157025.	6850.00	655.00	667.63		668.27	0.002594	7.86	1681.96	463.17	0.46	1.37
1	157025.	8070.00	655.00	668.24		668.86	0.002448	7.98	1968.73	473.45	0.45	1.38
1	157025.	8830.00	655.00	668.62		669.22	0.002353	8.02	2147.09	480.01	0.45	1.38
1	157593.	4360.00	656.00	667.73		668.33	0.002411	6.69	867.50	330.80	0.43	1.06
1	157593.	6850.00	656.00	669.05		669.67	0.002330	7.34	1358.13	413.26	0.44	1.20
1	157593.	8070.00	656.00	669.58		670.20	0.002261	7.52	1584.58	438.09	0.44	1.24
1	157593.	8830.00	656.00	669.90		670.52	0.002199	7.59	1729.07	453.23	0.43	1.25
1	157757.	4360.00	654.28	668.31	663.30	668.67	0.001295	5.52	1183.83	362.29	0.30	0.81
1	157757.	6850.00	654.28	669.55	666.89	670.01	0.001622	6.64	1716.00	526.51	0.34	1.13
1	157757.	8070.00	654.28	670.08	667.65	670.54	0.001608	6.81	2011.00	570.66	0.34	1.17
1	157757.	8830.00	654.28	670.41	668.04	670.85	0.001571	6.84	2199.15	590.01	0.34	1.17
1	157765. PARK BRIDGE BR D	4360.00	654.28	668.51	662.89	668.73	0.003148	4.24	1213.83	375.53	0.17	0.68
1	157765. PARK BRIDGE BR D	6850.00	654.28	669.87	667.17	670.09	0.002927	4.44	1845.39	558.36	0.17	0.72
1	157765. PARK BRIDGE BR D	8070.00	654.28	670.39	667.59	670.62	0.002662	4.36	2145.38	588.96	0.17	0.68
1	157765. PARK BRIDGE BR D	8830.00	654.28	670.70	667.82	670.92	0.002531	4.32	2328.90	608.22	0.17	0.66
1	157765. PARK BRIDGE BR U	4360.00	654.28	668.53	662.89	668.75	0.002559	4.30	1254.77	396.81	0.17	0.55
1	157765. PARK BRIDGE BR U	6850.00	654.28	669.90	667.12	670.12	0.002355	4.49	1907.96	553.03	0.17	0.58
1	157765. PARK BRIDGE BR U	8070.00	654.28	670.41	667.58	670.64	0.002213	4.48	2204.06	588.50	0.17	0.57
1	157765. PARK BRIDGE BR U	8830.00	654.28	670.72	667.87	670.94	0.002121	4.46	2386.34	605.80	0.17	0.56
1	157774.	4360.00	654.28	668.48	663.30	668.82	0.000949	5.37	1276.69	390.97	0.29	0.60
1	157774.	6850.00	654.28	669.81	666.80	670.22	0.001116	6.29	1905.58	546.14	0.32	0.79
1	157774.	8070.00	654.28	670.33	667.53	670.74	0.001140	6.53	2197.52	583.46	0.32	0.85
1	157774.	8830.00	654.28	670.63	668.02	671.04	0.001140	6.63	2379.03	600.99	0.32	0.87
1	157844.	4360.00	654.78	668.56		668.91	0.001713	5.37	1178.73	406.79	0.29	0.98
1	157844.	6850.00	654.78	669.99		670.33	0.001677	5.79	1822.22	505.14	0.30	1.09
1	157844.	8070.00	654.78	670.50		670.85	0.001722	6.03	2091.11	551.87	0.30	1.16
1	157844.	8830.00	654.78	670.79		671.16	0.001732	6.15	2260.45	579.83	0.31	1.20
1	158406.	4360.00	658.00	669.69		670.36	0.003709	7.22	949.90	480.72	0.44	1.84
1	158406.	6850.00	658.00	671.07		671.59	0.003011	7.19	1691.92	597.61	0.40	1.74
1	158406.	8070.00	658.00	671.60		672.09	0.002832	7.22	2017.18	641.56	0.39	1.73
1	158406.	8830.00	658.00	671.90		672.38	0.002763	7.27	2214.08	674.50	0.39	1.73
1	158664. AP	4360.00	658.73	670.74	664.39	670.90	0.000829	3.41	1554.04	483.08	0.21	0.41
1	158664. AP	6850.00	658.73	671.88	665.86	672.11	0.001067	4.22	2252.31	700.95	0.24	0.60
1	158664. AP	8070.00	658.73	672.34	666.95	672.59	0.001119	4.46	2585.68	738.52	0.25	0.66
1	158664. AP	8830.00	658.73	672.62	667.44	672.88	0.001138	4.58	2793.37	761.73	0.25	0.69
1	158686. SHADY DAM	Culvert										
1	158708.	4360.00	662.00	670.86	666.20	671.08	0.001314	3.91	1349.39	530.05	0.26	0.57
1	158708.	6850.00	662.00	671.98	667.79	672.27	0.001573	4.72	2047.53	695.76	0.29	0.79
1	158708.	8070.00	662.00	672.37	668.28	672.69	0.001687	5.04	2324.36	722.46	0.30	0.88
1	158708.	8830.00	662.00	672.64	668.60	672.97	0.001695	5.15	2524.87	741.61	0.30	0.91
1	158956.	4360.00	663.20	671.21		671.35	0.000758	3.20	1769.46	566.26	0.20	0.37
1	158956.	6850.00	663.20	672.41		672.60	0.000900	3.84	2513.89	666.29	0.23	0.50
1	158956.	8070.00	663.20	672.83		673.04	0.000987	4.15	2800.85	701.67	0.24	0.58
1	158956.	8830.00	663.20	673.11		673.32	0.001019	4.29	2996.25	725.96	0.24	0.61
1	159323.	4360.00	659.70	671.4								

HEC-RAS Plan: WC-Edit River: Big Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	160637.	6870.00	663.42	675.62	674.88	676.05	0.003256	6.66	1834.08	1138.26	0.41	1.58
1	160637.	8100.00	663.42	676.01	675.11	676.37	0.002792	6.37	2303.49	1205.47	0.39	1.42
1	160637.	8870.00	663.42	676.21	675.40	676.55	0.002644	6.29	2540.87	1210.27	0.38	1.38
1	160668. BEAR CREEK PARKW	Culvert										
1	160698.	4370.00	663.42	674.59	672.23	675.24	0.005005	6.67	776.14	347.00	0.49	1.77
1	160698.	6870.00	663.42	674.81	674.49	676.20	0.010458	9.89	853.90	374.45	0.71	3.83
1	160698.	8100.00	663.42	675.37	675.37	676.67	0.009270	9.88	1107.02	618.54	0.68	3.71
1	160698.	8870.00	663.42	675.38	675.38	676.93	0.011034	10.79	1112.60	625.85	0.74	4.43
1	160706.	4370.00	665.76	674.32	673.67	675.61	0.007944	9.51	538.63	197.84	0.68	2.88
1	160706.	6870.00	665.76	676.00	676.00	676.85	0.004908	8.75	1418.40	904.58	0.56	2.25
1	160706.	8100.00	665.76	676.29	676.29	677.16	0.005128	9.17	1694.06	1021.21	0.58	2.44
1	160706.	8870.00	665.76	676.45	676.45	677.30	0.005126	9.29	1861.07	1047.84	0.58	2.49
1	161050.	4370.00	665.00	676.64		676.92	0.002029	4.53	1267.21	584.06	0.34	0.67
1	161050.	6870.00	665.00	677.63		677.94	0.002262	5.07	1947.34	778.84	0.37	0.82
1	161050.	8100.00	665.00	677.95		678.28	0.002343	5.34	2202.68	825.05	0.38	0.89
1	161050.	8870.00	665.00	678.09		678.44	0.002463	5.56	2323.46	864.35	0.39	0.96
1	161291. AR	4370.00	666.00	677.09		677.41	0.002029	4.62	1042.88	405.68	0.35	0.69
1	161291. AR	6870.00	666.00	678.10		678.51	0.002521	5.53	1674.39	740.58	0.39	0.96
1	161291. AR	8100.00	666.00	678.42		678.87	0.002630	5.84	1927.63	810.59	0.40	1.05
1	161291. AR	8870.00	666.00	678.59		679.05	0.002736	6.06	2063.55	843.25	0.41	1.12
1	161493.	3870.00	667.19	677.50	672.74	677.72	0.000951	3.89	1342.50	804.00	0.27	0.37
1	161493.	6130.00	667.19	678.68	674.63	678.85	0.000775	3.93	2470.11	1054.13	0.25	0.36
1	161493.	7270.00	667.19	679.04	675.36	679.22	0.000781	4.07	2861.97	1099.85	0.26	0.38
1	161493.	7970.00	667.19	679.24	675.78	679.42	0.000792	4.17	3080.01	1127.00	0.26	0.39
1	161526. WHITLEY ROAD	Culvert										
1	161559.	3870.00	667.65	677.90	672.88	678.08	0.000776	3.64	1583.44	718.98	0.25	0.32
1	161559.	6130.00	667.65	678.64	674.44	678.93	0.001153	4.75	2214.20	993.25	0.31	0.53
1	161559.	7270.00	667.65	678.98	675.15	679.30	0.001249	5.10	2561.47	1046.24	0.32	0.60
1	161559.	7970.00	667.65	679.13	676.04	679.47	0.001357	5.38	2713.37	1086.21	0.34	0.66
1	161717.	3870.00	668.30	678.05	672.23	678.19	0.000477	3.05	1270.55	221.95	0.20	0.22
1	161717.	6130.00	668.30	678.80	673.40	679.10	0.000894	4.38	1400.35	288.30	0.27	0.44
1	161717.	7270.00	668.30	679.14	673.94	679.52	0.001109	4.98	1459.90	390.02	0.31	0.56
1	161717.	7970.00	668.30	679.29	674.21	679.73	0.001264	5.36	1486.05	472.69	0.33	0.65
1	161833.	3870.00	668.70	678.09	673.13	678.27	0.000664	3.36	1152.78	171.49	0.23	0.27
1	161833.	6130.00	668.70	678.88	674.21	679.23	0.001200	4.75	1290.90	187.76	0.31	0.53
1	161833.	7270.00	668.70	679.24	674.69	679.69	0.001466	5.36	1355.58	195.23	0.35	0.67
1	161833.	7970.00	668.70	679.41	675.01	679.92	0.001655	5.75	1385.30	235.52	0.37	0.77
1	161947.	3870.00	668.57	678.19	672.41	678.33	0.000471	2.99	1293.52	176.89	0.19	0.21
1	161947.	6130.00	668.57	679.08	673.54	679.35	0.000845	4.22	1452.68	183.77	0.26	0.41
1	161947.	7270.00	668.57	679.49	674.03	679.84	0.001027	4.76	1528.54	191.01	0.29	0.51
1	161947.	7970.00	668.57	679.68	674.32	680.09	0.001151	5.09	1565.93	195.61	0.31	0.58
1	162070.	3870.00	669.05	678.22	673.70	678.43	0.000840	3.64	1063.97	167.65	0.25	0.33
1	162070.	6130.00	669.05	679.13	674.81	679.52	0.001418	5.03	1218.92	175.00	0.34	0.60
1	162070.	7270.00	669.05	679.55	675.34	680.04	0.001682	5.62	1293.08	178.42	0.37	0.74
1	162070.	7970.00	669.05	679.75	675.63	680.31	0.001863	5.99	1330.11	181.84	0.39	0.84
1	162213. AS	3870.00	670.26	678.28	675.18	678.74	0.002214	5.47	707.26	122.48	0.40	0.77
1	162213. AS	6130.00	670.26	679.20	676.50	680.06	0.003605	7.44	823.70	129.72	0.52	1.37
1	162213. AS	7270.00	670.26	679.62	677.13	680.69	0.004217	8.27	879.31	134.31	0.57	1.67
1	162213. AS	7970.00	670.26	679.83	677.49	681.03	0.004641	8.79	907.20	143.78	0.60	1.87
1	162291. U.S. ROUTE 377 BR D	3870.00	670.26	678.44	675.33	678.93	0.003008	5.60	691.63	119.16	0.41	0.85
1	162291. U.S. ROUTE 377 BR D	6130.00	670.26	679.20	676.71	680.06	0.005299	7.83	783.27	122.42	0.46	1.63
1	162291. U.S. ROUTE 377 BR D	7270.00	670.26	679.62	677.34	680.69	0.008358	8.73	833.10	84.86	0.50	2.15
1	162291. U.S. ROUTE 377 BR D	7970.00	670.26	679.83	677.72	681.03	0.013558	9.44	844.72	26.43	0.54	2.73
1	162291. U.S. ROUTE 377 BR U	3870.00	670.26	678.79	675.32	679.22	0.002550	5.28	732.95	120.69	0.32	0.75
1	162291. U.S. ROUTE 377 BR U	6130.00	670.26	679.92	676.71	681.39	0.009082	7.25	845.88		0.41	1.66
1	162291. U.S. ROUTE 377 BR U	7270.00	670.26	679.92	677.35	682.08	0.012774	8.59	845.88		0.49	2.34
1	162291. U.S. ROUTE 377 BR U	7970.00	670.26	679.92	677.72	682.63	0.015352	9.42	845.88		0.53	2.81
1	162391.	3870.00	670.26	678.88	675.18	679.26	0.001665	4.95	781.92	127.17	0.35	0.61
1	162391.	6130.00	670.26	680.87	676.51	681.39	0.001819	5.84	1050.45	142.75	0.38	0.80
1	162391.	7270.00	670.26	681.45	677.13	682.08	0.002051	6.41	1134.81	196.36	0.41	0.95
1	162391.	7970.00	670.26	681.96	677.49	682.63	0.002029	6.59	1210.70	223.96	0.41	0.99
1	162465.	3870.00	671.30	679.00	675.70	679.39	0.001837	4.98	777.89	137.52	0.37	0.63
1	162465.	6130.00	671.30	681.03	677.00	681.54	0.001796	5.72	1071.34	337.26	0.38	0.78
1	162465.	7270.00	671.30	681.64	677.57	682.24	0.001967	6.24	1164.39	462.06	0.40	0.91
1	162465.	7970.00	671.30	682.15	677.92	682.79	0.001954	6.41	1243.84	728.27	0.40	0.94
1	162570.	3870.00	672.50	678.78	678.14	680.03	0.009931	8.98	431.14	111.47	0.80	2.34
1	162570.	6130.00	672.50	680.84	679.54	682.09	0.006818	8.95	684.65	134.01	0.70	2.12
1	162570.	7270.00	672.50	681.43	680.15	682.83	0.006868	9.51	764.65	137.40	0.71	2.33
1	162570.	7970.00	672.50	681.95	680.48	683.36	0.006297	9.52	836.76	140.38	0.69	2.28
1	162663.	2230.00	672.50	680.42	676.73	680.68	0.001407	4.09	549.90	259.58	0.31	0.44
1	162663.	3620.00	672.50	682.28	678.17	682.64	0.001343	4.88	750.06	661.50	0.32	0.57
1	162663.	4370.00	672.50	682.99	678.83	683.43	0.001421	5.35	826.67	966.32	0.34	0.66
1	162663.	4850.00	672.50	683.45	679.24	683.93	0.001444	5.60	876.48	1048.68	0.34	0.71
1	162709. UNION PACIFIC RABR D	2230.00	672.50	680.45	676.96	680.79	0.003791	4.65	479.12	82.00	0.29	0.69
1	162709. UNION PACIFIC RABR D	3620.00	672.50	682.27	678.35	682.79	0.004772	5.76	628.51	82.00	0.32	1.00
1	162709. UNION PACIFIC RABR D	4370.00	672.50	682.97	679.06	683.60	0.005520	6.38	685.46	82.00	0.35	1.21
1	162709. UNION PACIFIC RABR D	4850.00	672.50	683.42	679.38	684.12	0.005920	6.71	722.39	82.00	0.36	1.33
1	162709. UNION PACIFIC RABR U	2230.00	672.50	680.59	676.68	680.84	0.002386	4.03	553.58	82.00	0.25	0.49
1	162709. UNION PACIFIC RABR U	3620.00	672.50	682.45	677.77	682.86	0.003300	5.13</				

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	163228.	2230.00	674.32	682.28	678.58	682.54	0.001068	4.27	713.30	374.09	0.29	0.44
1	163228.	3620.00	674.32	683.36	679.93	683.66	0.001200	4.99	1229.52	518.70	0.32	0.57
1	163228.	4370.00	674.32	684.13	680.62	684.38	0.000961	4.76	1656.20	575.43	0.29	0.50
1	163228.	4850.00	674.32	684.65	681.16	684.87	0.000833	4.61	1974.99	705.35	0.27	0.46
1	163276. CHISHOLM	Culvert										
1	163323.	2230.00	674.32	682.56	678.70	682.82	0.001528	4.21	597.95	149.80	0.28	0.66
1	163323.	3620.00	674.32	683.43	679.90	683.93	0.002560	5.88	779.83	298.47	0.37	1.24
1	163323.	4370.00	674.32	684.02	680.52	684.54	0.002566	6.18	991.03	429.47	0.37	1.33
1	163323.	4850.00	674.32	684.56	680.75	685.00	0.002174	5.93	1247.26	514.82	0.35	1.20
1	163618.	2230.00	678.09	683.28	683.28	684.79	0.025436	9.87	225.93	74.28	1.00	4.77
1	163618.	3620.00	678.09	684.85	684.85	686.03	0.014513	9.15	467.98	209.64	0.79	3.70
1	163618.	4370.00	678.09	685.25	685.25	686.48	0.014318	9.53	556.41	228.31	0.80	3.92
1	163618.	4850.00	678.09	685.47	685.46	686.75	0.014445	9.80	606.61	238.27	0.80	4.10
1	164471. AU	2040.00	682.94	689.71		689.84	0.002321	2.86	712.38	251.30	0.30	0.41
1	164471. AU	3290.00	682.94	690.62		690.80	0.002702	3.44	955.69	286.63	0.33	0.56
1	164471. AU	3990.00	682.94	691.04		691.25	0.002715	3.70	1085.65	350.43	0.34	0.63
1	164471. AU	4470.00	682.94	691.29		691.52	0.002728	3.86	1183.90	413.57	0.34	0.67
1	165167.	2040.00	685.47	691.32		691.49	0.002404	3.53	664.15	312.22	0.38	0.40
1	165167.	3290.00	685.47	692.28		692.48	0.002168	3.80	989.68	383.53	0.37	0.44
1	165167.	3990.00	685.47	692.68		692.89	0.002086	4.02	1161.23	495.09	0.37	0.47
1	165167.	4470.00	685.47	692.92		693.15	0.002033	4.14	1290.39	557.44	0.37	0.49
1	166259.	2040.00	691.60	695.86	695.86	696.35	0.007576	7.11	535.31	503.12	0.69	1.54
1	166259.	3290.00	691.60	696.27	696.22	696.90	0.009562	8.63	766.69	702.16	0.79	2.19
1	166259.	3990.00	691.60	696.54	696.54	697.09	0.008523	8.53	960.53	782.00	0.76	2.09
1	166259.	4470.00	691.60	696.65	696.65	697.22	0.008634	8.76	1055.16	819.53	0.76	2.18
1	167796. AV	1910.00	696.81	701.42		701.55	0.001974	3.82	856.15	558.28	0.36	0.43
1	167796. AV	3090.00	696.81	702.13		702.27	0.001857	4.19	1286.27	648.66	0.36	0.49
1	167796. AV	3730.00	696.81	702.44		702.60	0.002047	4.61	1507.05	773.56	0.38	0.58
1	167796. AV	4180.00	696.81	702.61		702.78	0.002072	4.75	1642.19	804.64	0.39	0.61
1	169721.	1910.00	703.50	706.70		706.94	0.005572	4.54	558.82	409.94	0.51	0.87
1	169721.	3090.00	703.50	707.29		707.58	0.006190	5.50	870.07	654.31	0.55	1.19
1	169721.	3730.00	703.50	707.66	706.79	707.93	0.005408	5.55	1156.64	936.55	0.53	1.17
1	169721.	4180.00	703.50	707.81	707.06	708.08	0.005277	5.64	1301.85	1007.20	0.52	1.19
1	171043.	1910.00	709.21	712.49		712.59	0.003540	3.07	847.99	742.03	0.42	0.36
1	171043.	3090.00	709.21	712.97		713.09	0.003150	3.44	1211.79	778.34	0.42	0.42
1	171043.	3730.00	709.21	713.14		713.29	0.003314	3.72	1352.15	797.19	0.43	0.47
1	171043.	4180.00	709.21	713.26		713.42	0.003381	3.89	1448.71	807.20	0.44	0.51
1	171959. AW	1310.00	712.69	715.74		715.89	0.003880	3.67	479.28	365.63	0.46	0.48
1	171959. AW	2080.00	712.69	716.16		716.38	0.004653	4.57	650.93	489.11	0.52	0.70
1	171959. AW	2460.00	712.69	716.45		716.69	0.004638	4.91	814.49	661.45	0.53	0.78
1	171959. AW	2710.00	712.69	716.56		716.80	0.004478	4.96	892.83	682.04	0.52	0.79
1	172618.	1310.00	714.15	718.38	717.23	718.42	0.001188	2.38	928.18	947.96	0.26	0.19
1	172618.	2080.00	714.15	718.45	717.78	718.54	0.002596	3.58	976.46	956.54	0.39	0.42
1	172618.	2460.00	714.15	718.68	718.02	718.73	0.001284	2.49	1551.30	991.23	0.27	0.21
1	172618.	2710.00	714.15	718.21	718.21	718.46	0.007421	5.69	810.67	921.45	0.65	1.10
1	172649. GOLDEN TRIANGLE	Culvert										
1	172679.	1310.00	713.12	719.36	716.14	719.46	0.000583	2.69	558.55	915.23	0.20	0.19
1	172679.	2080.00	713.12	719.73	716.76	719.78	0.000441	2.44	1613.10	963.94	0.18	0.15
1	172679.	2460.00	713.12	719.98	717.04	720.03	0.000459	2.57	1795.81	1019.94	0.18	0.17
1	172679.	2710.00	713.12	720.10	717.24	720.15	0.000489	2.68	1880.67	1054.08	0.19	0.18
1	172970.	1310.00	714.40	719.75	719.75	720.28	0.006467	6.64	330.18	333.92	0.64	1.34
1	172970.	2080.00	714.40	720.15	720.15	720.78	0.007716	7.81	468.06	354.13	0.71	1.79
1	172970.	2460.00	714.40	720.33	720.33	720.99	0.007958	8.19	532.95	364.03	0.73	1.93
1	172970.	2710.00	714.40	720.45	720.45	721.12	0.008023	8.38	576.07	371.85	0.73	2.00
1	173159.	1310.00	715.50	721.03		721.14	0.002726	3.48	585.14	384.31	0.33	0.57
1	173159.	2080.00	715.50	721.64		721.77	0.002872	3.98	856.62	531.16	0.35	0.71
1	173159.	2460.00	715.50	721.85		721.98	0.002889	4.13	970.60	553.62	0.35	0.75
1	173159.	2710.00	715.50	721.98		722.12	0.002886	4.21	1044.42	567.42	0.35	0.77
1	173457.	1310.00	715.80	721.82		721.98	0.004053	4.35	521.49	431.42	0.40	0.88
1	173457.	2080.00	715.80	722.41		722.56	0.003547	4.50	798.32	520.03	0.39	0.90
1	173457.	2460.00	715.80	722.61		722.77	0.003524	4.62	905.34	538.54	0.39	0.93
1	173457.	2710.00	715.80	722.74		722.90	0.003488	4.69	974.94	549.57	0.39	0.95
1	173534.	1310.00	715.77	722.10	722.10	722.69	0.004835	6.82	338.14	388.49	0.56	1.30
1	173534.	2080.00	715.77	722.64	722.64	723.19	0.004951	7.44	569.82	463.34	0.58	1.48
1	173534.	2460.00	715.77	722.77	722.77	723.39	0.005540	8.01	635.34	479.17	0.62	1.70
1	173534.	2710.00	715.77	722.89	722.89	723.51	0.005610	8.18	692.95	495.43	0.62	1.77
1	173558. ALTA VISTA ROAD	Culvert										
1	173582.	1310.00	715.77	722.68	721.19	723.28	0.003852	6.60	317.82	381.43	0.51	1.16
1	173582.	2080.00	715.77	723.24	723.24	723.85	0.004294	7.46	559.53	473.04	0.55	1.44
1	173582.	2460.00	715.77	723.44	723.44	724.07	0.004477	7.80	662.83	537.03	0.57	1.55
1	173582.	2710.00	715.77	723.57	723.57	724.19	0.004521	7.95	732.82	583.64	0.57	1.60
1	173663.	1310.00	718.10	723.14	722.53	723.70	0.006725	6.21	268.76	252.20	0.63	1.22
1	173663.	2080.00	718.10	723.74	723.74	724.34	0.006666	6.98	475.90	437.90	0.65	1.45
1	173663.	2460.00	718.10	723.92	723.92	724.55	0.006900	7.34	558.52	474.99	0.67	1.58
1	173663.	2710.00	718.10	724.01	724.00	724.67	0.007216	7.63	602.02	490.40	0.69	1.69
1	174096.	1310.00	719.56	724.99		725.11	0.001839	2.86	489.11	313.52	0.32	0.28
1	174096.	2080.00	719.56	725.64		725.80	0.001942	3.35	726.37	422.07	0.34	0.35
1	174096.	2460.00	719.56	725.88		726.06	0.002019	3.57	861.98	703.28	0.36	0.39
1	174096.	2710.00	719.56	726.02		726.20	0.002013	3.66	960.12	745.52	0.36	0.41
1	174881. AX	1310.00	725.30	727.74		727.97	0.010618	4.41	355.17	339.38	0.70	0.82
1	174881. AX	2080.00	725.30	728.24		728.50	0.007963	4.79	536.51	384.11	0.64	0.86
1	174881. AX	2460.00	725.30	728.47		728.74	0.007191	4.93	626.19	412.64	0.62	0.88
1	174881. AX	2710.00	725.30	728.58		728.87	0.007141	5.10	673.47	428.59	0.62	0.92
1	176010.	1310.00	730.00	732.88		732.93	0.002459	2.73	806.38	806.22	0.35	0.28
1	176010.	2080.00	730.00	733.24		733.30	0.002725	3.23	1109.06	859.24	0.38	0.37
1	176010.	2460.00	730.00	733.37		733.44	0.002810	3.41	1221.48	869.46	0.39	0.40
1	176010.	2710.00	730.00	733.47		733.54	0.002791	3.49	1301.79	876.91	0.39	0.41

HEC-RAS Plan: WC-Edit River: Big Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	176659.	1310.00	731.10	736.41	736.41	736.56	0.005858	5.12	542.67	615.15	0.55	0.88
1	176659.	2080.00	731.10	736.43	736.43	736.79	0.013699	7.85	558.97	624.18	0.85	2.08
1	176659.	2460.00	731.10	736.57	736.49	736.92	0.013757	8.00	647.57	695.18	0.85	2.14
1	176659.	2710.00	731.10	736.64	736.61	736.99	0.013739	8.07	698.87	716.39	0.85	2.16
1	176763.	1310.00	732.00	737.09	736.86	737.22	0.006570	4.46	532.13	693.86	0.57	0.74
1	176763.	2080.00	732.00	737.53	737.09	737.64	0.005022	3.86	857.95	781.24	0.50	0.56
1	176763.	2460.00	732.00	737.66	737.18	737.78	0.005086	4.07	960.63	805.28	0.51	0.60
1	176763.	2710.00	732.00	737.74	737.23	737.86	0.005185	4.21	1021.60	821.69	0.52	0.64
1	176847.	1310.00	733.20	737.52	737.04	737.61	0.003370	3.67	626.74	590.28	0.43	0.47
1	176847.	2080.00	733.20	737.91	737.33	738.01	0.003934	3.54	888.27	788.70	0.45	0.46
1	176847.	2460.00	733.20	738.06	737.50	738.16	0.004054	3.59	1005.22	837.31	0.46	0.47
1	176847.	2710.00	733.20	738.15	737.55	738.26	0.004207	3.72	1083.72	869.67	0.47	0.50
1	176872. KEL WEST DRIVE	Culvert										
1	176898.	1310.00	733.20	738.52	738.27	738.75	0.003428	5.22	510.28	651.86	0.47	0.80
1	176898.	2080.00	733.20	739.02	738.59	739.18	0.002713	5.03	1014.90	895.49	0.43	0.71
1	176898.	2460.00	733.20	739.04	738.68	739.25	0.003642	5.85	1031.01	904.54	0.49	0.96
1	176898.	2710.00	733.20	739.20	738.86	739.38	0.003102	5.53	1182.50	956.66	0.46	0.85
1	176954.	1310.00	734.00	738.90		738.96	0.002419	3.14	760.92	703.16	0.36	0.34
1	176954.	2080.00	734.00	739.27		739.35	0.002728	3.68	1064.14	878.88	0.40	0.45
1	176954.	2460.00	734.00	739.37		739.47	0.003000	3.96	1157.69	906.61	0.42	0.51
1	176954.	2710.00	734.00	739.47		739.57	0.002966	4.03	1249.06	950.93	0.42	0.52
1	177018.	1310.00	734.26	738.99	738.85	739.26	0.004021	5.47	506.82	542.03	0.51	0.89
1	177018.	2080.00	734.26	739.39	739.16	739.68	0.004646	6.30	760.30	711.16	0.55	1.14
1	177018.	2460.00	734.26	739.51	739.36	739.82	0.005027	6.69	849.58	758.42	0.58	1.27
1	177018.	2710.00	734.26	739.61	739.44	739.91	0.004942	6.74	927.99	798.30	0.58	1.28
1	177035. PRIVATE DRIVE	Culvert										
1	177055.	1310.00	734.26	739.34	738.87	739.53	0.002595	4.68	616.60	650.88	0.41	0.63
1	177055.	2080.00	734.26	739.54	739.22	739.84	0.004381	6.27	745.99	694.18	0.54	1.11
1	177055.	2460.00	734.26	739.52	739.52	739.96	0.006321	7.52	735.80	690.40	0.65	1.60
1	177055.	2710.00	734.26	739.59	739.59	740.05	0.006628	7.78	785.27	711.22	0.67	1.71
1	177155.	1060.00	736.25	739.64	739.36	740.01	0.007197	5.16	293.18	445.17	0.63	0.94
1	177155.	1690.00	736.25	740.04	739.97	740.41	0.006903	5.67	522.22	647.43	0.63	1.07
1	177155.	1990.00	736.25	740.30		740.59	0.005237	5.28	700.76	714.32	0.56	0.90
1	177155.	2200.00	736.25	740.41		740.69	0.005070	5.33	777.56	732.80	0.55	0.90
1	177404.	1060.00	737.00	740.81		740.97	0.002364	3.36	379.44	321.95	0.37	0.37
1	177404.	1690.00	737.00	741.25		741.48	0.002954	4.17	545.28	413.19	0.43	0.55
1	177404.	1990.00	737.00	741.35		741.63	0.003503	4.64	585.91	420.55	0.47	0.67
1	177404.	2200.00	737.00	741.45		741.75	0.003669	4.85	627.96	428.01	0.48	0.72
1	177599.	1060.00	737.20	741.33		741.54	0.003551	3.94	350.37	323.05	0.45	0.53
1	177599.	1690.00	737.20	741.87		742.10	0.003468	4.41	542.16	388.73	0.46	0.62
1	177599.	1990.00	737.20	742.06		742.31	0.003492	4.63	618.83	406.26	0.47	0.67
1	177599.	2200.00	737.20	742.19		742.45	0.003490	4.75	671.26	415.18	0.47	0.69
1	177647.	1060.00	737.48	741.36	740.93	742.06	0.010314	6.68	161.05	77.41	0.76	1.52
1	177647.	1690.00	737.48	741.79	741.79	743.02	0.014982	8.97	198.44	100.91	0.94	2.59
1	177647.	1990.00	737.48	742.41	742.41	743.39	0.009608	8.20	313.40	263.75	0.78	2.03
1	177647.	2200.00	737.48	742.87	742.87	743.56	0.006274	7.21	484.37	435.94	0.65	1.50
1	177652. GOLD RUSH DRIVE	Culvert										
1	177706.	1060.00	737.48	742.99	740.89	743.18	0.001518	3.62	414.06	297.73	0.32	0.38
1	177706.	1690.00	737.48	743.29	741.68	743.65	0.002768	5.13	534.84	479.03	0.44	0.74
1	177706.	1990.00	737.48	743.39	742.02	743.83	0.003393	5.77	585.77	552.43	0.48	0.92
1	177706.	2200.00	737.48	743.44	742.63	743.94	0.003904	6.23	612.02	565.96	0.52	1.07
1	177746.	1060.00	738.00	743.03		743.29	0.002396	4.51	385.79	266.61	0.40	0.58
1	177746.	1690.00	738.00	743.37		743.84	0.004102	6.24	491.49	364.74	0.53	1.09
1	177746.	1990.00	738.00	743.46	743.01	744.09	0.005319	7.21	532.28	467.75	0.61	1.44
1	177746.	2200.00	738.00	743.52	743.12	744.23	0.005990	7.72	561.11	488.40	0.65	1.65
1	177910. AY	1060.00	738.98	743.46	742.21	743.67	0.002240	4.20	421.94	298.55	0.38	0.52
1	177910. AY	1690.00	738.98	744.10	742.82	744.39	0.002663	5.10	653.90	429.42	0.43	0.72
1	177910. AY	1990.00	738.98	744.43	743.37	744.70	0.002485	5.17	798.73	521.61	0.42	0.72
1	177910. AY	2200.00	738.98	744.60	743.54	744.87	0.002427	5.23	885.40	553.06	0.42	0.73
1	178014.	1060.00	739.10	743.75	742.88	743.92	0.002496	4.39	518.31	384.59	0.40	0.57
1	178014.	1690.00	739.10	744.49	743.38	744.66	0.002211	4.67	833.96	456.94	0.39	0.60
1	178014.	1990.00	739.10	744.79	743.54	744.96	0.002151	4.81	978.70	508.02	0.39	0.63
1	178014.	2200.00	739.10	744.94	743.48	745.13	0.002279	5.06	1061.76	557.90	0.41	0.69
1	178132.	1060.00	739.50	744.14	742.77	744.36	0.005614	3.78	300.44	155.31	0.39	1.02
1	178132.	1690.00	739.50	744.80	743.43	745.11	0.006418	4.63	411.08	342.11	0.43	1.43
1	178132.	1990.00	739.50	745.07	743.71	745.42	0.006627	4.94	456.98	421.66	0.44	1.59
1	178132.	2200.00	739.50	745.24	743.89	745.62	0.006813	5.15	485.50	442.01	0.45	1.70
1	178160.	1060.00	739.64	744.25	741.91	744.44	0.001295	3.51	320.21	108.64	0.30	0.34
1	178160.	1690.00	739.64	744.88	742.63	745.23	0.002057	4.84	372.09	115.91	0.38	0.63
1	178160.	1990.00	739.64	745.14	742.93	745.57	0.002393	5.40	393.34	119.55	0.42	0.77
1	178160.	2200.00	739.64	745.29	743.14	745.79	0.002638	5.78	406.36	123.62	0.44	0.87
1	178189. RANCHO DRIVE	Culvert										
1	178218.	1060.00	739.64	744.48	741.88	744.63	0.001091	3.13	339.18	116.14	0.27	0.28
1	178218.	1690.00	739.64	745.36	742.58	745.62	0.001456	4.11	411.53	133.85	0.32	0.45
1	178218.	1990.00	739.64	745.76	742.86	746.07	0.001553	4.47	445.25	139.24	0.34	0.52
1	178218.	2200.00	739.64	746.03	743.09	746.37	0.001616	4.71	467.27	150.23	0.35	0.56
1	178252.	1060.00	740.30	744.56	742.34	744.68	0.000998	2.84	417.37	153.56	0.26	0.23
1	178252.	1690.00	740.30	745.51	742.96	745.69	0.001103	3.47	567.77	187.82	0.28	0.32
1	178252.	1990.00	740.30	745.96	743.21	746.15	0.001094	3.67	641.28	205.20	0.28	0.35
1	178252.	2200.00	740.30	746.26	743.37	746.46	0.001088	3.79	691.17	218.07	0.29	0.37
1	178404.	1060.00	740.96	744.79		745.02	0.					

HEC-RAS Plan: WC-Edit River: Big_Bear Reach: 1 (Continued)

Reach	River Sta	Q Total	Min Ch EI	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Shear Chan
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(lb/sq ft)
1	178654.	1060.00	745.00	747.92	746.94	748.13	0.008629	4.08	325.73	235.38	0.49	1.12
1	178654.	1690.00	745.00	748.56	747.79	748.77	0.010356	5.29	512.21	339.77	0.56	1.72
1	178654.	1990.00	745.00	748.72		748.95	0.010632	5.56	565.26	343.03	0.58	1.87
1	178654.	2200.00	745.00	748.83		749.08	0.010627	5.70	603.64	345.37	0.58	1.94
1	178837.	1060.00	745.00	748.94		749.02	0.003175	2.69	511.78	357.32	0.31	0.46
1	178837.	1690.00	745.00	749.62		749.71	0.002995	3.09	771.40	399.42	0.31	0.56
1	178837.	1990.00	745.00	749.82		749.93	0.003110	3.28	853.41	408.84	0.32	0.62
1	178837.	2200.00	745.00	749.95		750.06	0.003188	3.41	907.14	414.29	0.33	0.67
1	179077.	1060.00	746.00	749.60		749.66	0.002469	2.43	592.15	329.56	0.27	0.38
1	179077.	1690.00	746.00	750.24		750.32	0.002401	2.80	808.96	347.29	0.28	0.46
1	179077.	1990.00	746.00	750.47		750.56	0.002500	3.00	888.42	353.74	0.29	0.52
1	179077.	2200.00	746.00	750.62		750.71	0.002569	3.13	940.63	358.29	0.30	0.55
1	179180.	1060.00	746.00	749.94		750.06	0.005508	3.74	456.36	351.56	0.41	0.88
1	179180.	1690.00	746.00	750.56		750.68	0.004561	3.93	686.11	390.73	0.39	0.90
1	179180.	1990.00	746.00	750.80		750.92	0.004456	4.07	779.42	407.82	0.39	0.94
1	179180.	2200.00	746.00	750.95		751.08	0.004412	4.16	842.68	421.28	0.39	0.97
1	179344.	1060.00	747.00	750.84		751.09	0.006908	4.58	338.77	265.39	0.47	1.26
1	179344.	1690.00	747.00	751.36		751.65	0.007492	5.31	489.96	303.58	0.50	1.60
1	179344.	1990.00	747.00	751.57		751.88	0.007480	5.53	556.53	314.91	0.51	1.70
1	179344.	2200.00	747.00	751.72		752.04	0.007606	5.72	603.71	334.31	0.52	1.80
1	179671.	1060.00	748.00	752.48		752.63	0.003810	3.65	381.78	259.25	0.36	0.77
1	179671.	1690.00	748.00	753.10		753.28	0.004051	4.22	570.83	367.81	0.38	0.97
1	179671.	1990.00	748.00	753.32		753.51	0.004100	4.40	653.87	403.49	0.38	1.04
1	179671.	2200.00	748.00	753.49		753.69	0.004095	4.52	727.34	455.40	0.38	1.08
1	180001.	1060.00	749.00	753.68		753.84	0.003553	3.24	359.69	224.06	0.34	0.63
1	180001.	1690.00	749.00	754.36		754.55	0.003678	3.79	542.17	322.73	0.36	0.81
1	180001.	1990.00	749.00	754.59		754.81	0.003787	4.02	623.89	367.34	0.36	0.89
1	180001.	2200.00	749.00	754.77		754.99	0.003817	4.15	692.79	439.33	0.37	0.94
1	180355.	1060.00	750.00	754.78		754.93	0.002719	3.60	380.38	175.83	0.31	0.69
1	180355.	1690.00	750.00	755.53		755.73	0.003099	4.30	524.66	207.47	0.34	0.93
1	180355.	1990.00	750.00	755.82		756.04	0.003274	4.59	585.05	223.01	0.35	1.04
1	180355.	2200.00	750.00	756.01		756.24	0.003353	4.75	628.63	235.98	0.36	1.11
1	180740. AZ	650.00	752.00	757.39	757.39	757.76	0.014044	5.38	178.11	267.95	0.63	1.91
1	180740. AZ	1000.00	752.00	757.70	757.70	758.07	0.014189	5.89	270.59	326.13	0.65	2.19
1	180740. AZ	1170.00	752.00	757.75	757.75	758.20	0.016967	6.52	287.38	333.58	0.71	2.67
1	180740. AZ	1240.00	752.00	757.85	757.84	758.24	0.014957	6.27	319.73	348.95	0.67	2.44
1	181450.	650.00	756.00	760.74		760.81	0.002060	2.65	341.95	242.93	0.30	0.30
1	181450.	1000.00	756.00	761.19		761.29	0.002212	3.07	457.22	263.81	0.32	0.38
1	181450.	1170.00	756.00	761.42		761.52	0.002157	3.19	517.59	274.30	0.32	0.40
1	181450.	1240.00	756.00	761.46		761.57	0.002275	3.30	529.60	276.21	0.33	0.43
1	182036.	650.00	758.00	762.85	762.85	763.81	0.016885	8.00	91.00	67.23	0.84	2.69
1	182036.	1000.00	758.00	763.77	763.77	764.49	0.010331	7.57	195.62	157.09	0.69	2.18
1	182036.	1170.00	758.00	763.99	763.99	764.71	0.010066	7.77	233.46	177.49	0.69	2.26
1	182036.	1240.00	758.00	764.09	764.09	764.79	0.009774	7.78	250.99	184.99	0.68	2.25
1	182244.	650.00	758.03	765.06	763.07	765.47	0.003934	5.28	132.07	51.36	0.41	1.00
1	182244.	1000.00	758.03	765.48	764.03	766.27	0.007003	7.41	144.51	104.76	0.55	1.92
1	182244.	1170.00	758.03	765.73	764.41	766.71	0.008137	8.23	152.14	157.76	0.60	2.33
1	182244.	1240.00	758.03	765.81	764.56	766.87	0.008683	8.58	154.60	162.56	0.62	2.52
1	182274. OLD DENTON ROAD	Culvert										
1	182304.	650.00	758.48	767.21	762.93	767.26	0.000377	2.02	494.56	275.97	0.14	0.13
1	182304.	1000.00	758.48	767.92	763.77	767.97	0.000367	2.04	841.23	410.37	0.14	0.13
1	182304.	1170.00	758.48	768.08	764.15	768.13	0.000430	2.24	906.25	428.12	0.16	0.16
1	182304.	1240.00	758.48	768.11	764.29	768.16	0.000468	2.35	919.26	432.06	0.16	0.17
1	182552. BA	650.00	763.50	767.39		767.53	0.004525	3.37	248.58	191.31	0.43	0.53
1	182552. BA	1000.00	763.50	768.08		768.21	0.003133	3.45	413.13	308.14	0.38	0.50
1	182552. BA	1170.00	763.50	768.26		768.40	0.003234	3.67	470.76	341.02	0.39	0.55
1	182552. BA	1240.00	763.50	768.30		768.46	0.003391	3.80	486.46	349.54	0.40	0.59
1	183803.	650.00	769.03	772.12		772.24	0.003435	2.77	234.77	137.03	0.37	0.37
1	183803.	1000.00	769.03	772.55		772.72	0.004654	3.35	298.57	166.58	0.44	0.53
1	183803.	1170.00	769.03	772.74		772.93	0.004537	3.53	338.28	228.79	0.44	0.57
1	183803.	1240.00	769.03	772.83		773.02	0.004380	3.57	358.91	239.70	0.44	0.57
1	185338. LIMIT OF DETAILE	650.00	775.03	777.98		778.12	0.004293	3.02	215.50	130.76	0.41	0.44
1	185338. LIMIT OF DETAILE	1000.00	775.03	778.72		778.86	0.003476	3.08	324.44	162.66	0.38	0.43
1	185338. LIMIT OF DETAILE	1170.00	775.03	778.91		779.08	0.003564	3.28	357.02	166.33	0.39	0.48
1	185338. LIMIT OF DETAILE	1240.00	775.03	778.98		779.16	0.003651	3.36	368.66	168.19	0.40	0.50

Pier Shape Coefficient (K)	1.5	1.5 for round nose and 1.7 for rectangular
Velocity on Pier (ft/s)	8.9	0.9*Average Channel Velocity for Pier near Bank to 1.7* Average Channel Velocity for pier in main current of flow. Or use velocity distribution in HEC-RAS
Specific Gravity of Riprap	2.65	2.65 is standard
Pier Diameter (ft)	2	

D50 (ft)	1.160643	
D50 (in)	13.92772	24"

Extent of Riprap from Pier (ft)	4	
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Contraction Scour (ft):	4.75	
Minimum riprap thickness (3*D50) (in):	41.78316	72

Filter Extents (ft):	2.666667	
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Notes:	Velocity on Pier is taken from HEC-RAS Velocity Distribution (10% Flood)
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Volume of Riprap (CY)	11.17011	
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ROCK RIPRAP SIZING

From iSWM Design Manual for Site Development, Jan. 2006

Gregory Method - Channels

Calculate Boundary Shear

$T_o = \gamma_w * R * S$

T_o = average tractive stress on channel bottom (lb/ft²)

γ_w = specific weight of water = 62.4 pcf

R = hydraulic radius of channel (ft)

S = slope of energy gradient

$T_o' = T_o * K_1$

K₁ = Side Slope Correction Factor

$K_1 = [1 - (\sin^2 \theta / \sin^2 \phi)]^{1/2}$

θ = Angle of side slope

φ = Angle of repose of riprap material (usually 40°)

If riprap will be placed at a bend

$T_b = 3.15T(r/w)^{-0.5}$

T = the greater of T_o or T_o' from above

r = centerline radius of the bend (ft)

w = water surface width at upstream end of bend (ft)

T_b = local tractive stress in the bend (lb/ft²)

$D_{50} = T / 0.04(\gamma_s - \gamma_w)$

T = Design shear stress (greatest value from above equations)

γ_s = specific weight of stone

γ_w = specific weight of water = 62.4 pcf

D₅₀ = required average size of riprap stone (ft)

T FROM RAS 5.23 Maximum RAS computed internal bridge scour (10% ACE)

T _o =	3.17
γ _w =	62.4
ENTER R =	10.37
ENTER S =	0.0049

From HEC-RAS 10% ACE just below bridge

From HEC-RAS 10% ACE just below bridge

K ₁ =	0.505
ENTER θ	33.69
ENTER φ	40

To calculate θ:

Enter side slope (XX H : 1 V)	θ =
1.5	33.69

$T_o' = 1.60$

T =	3.17
ENTER r =	1000
ENTER w =	1
T _b =	0.32

T =	5.23
ENTER γ _s =	165
γ _w =	62.4

D₅₀ = 1.27
(feet)

15.3

(inches)

Base Factor of Safety	1.7	Channel Bed/Bank: 1.2-1.4; Bridge pier/abutment: 1.5-1.7; Overtopping spillway: 1.8-2.0
Consequence of Failure	1.8	Low: 1.0-1.2; Medium: 1.3-1.5; High: 1.6-1.8; Extreme or loss of life: 1.9-2.0
Model Uncertainty	1.3	HEC-RAS: 1.0-1.3; Empirical/stochastic: 1.4-1.7; Estimates: 1.8-2.0
Target Factor of Safety	4.0	
Pier Shape Coefficient (K)	1.5	1.5 for round nose and 1.7 for rectangular
Velocity on Pier (ft/s)	8.9	0.9*Average Channel Velocity for Pier near Bank to 1.7* Average Channel Velocity for pier in main current of flow. Or use velocity distribution in HEC-RAS
Specific Gravity of Riprap	2.65	2.65 is standard
Pier Diameter (ft)	3.5	
Depth of Flow at Pier (ft)	19.97	
Manning's Roughness	0.035	
Design Shear (psf)	2.27	
D50 (ft)	0.878582	
D50 (in)	10.54299	
Minimum Thickness (in):	21.08598	

Attachment F

HALFF ASSOCIATES, Inc.
4000 Fossil Creek Boulevard
Fort Worth, Texas 76137
(817) 847-1422

CLIENT: City of Southlake, City of Colleyville
PROJECT: Scour Study at South White Chapel Road

12/12/2012
 AVO 28736

ALTERNATIVE A - CONCRETE COLLARS & LOCAL PIER ROCK RIPRAP PROTECTION

Item No.	Description	Unit	Total Quantity	Unit Cost	Total Amount
Design/Permitting					\$37,000
1	Engineering Plans, Specifications, Bidding Services	LS	1	\$33,000.00	\$33,000
2	Survey	LS	1	\$1,500.00	\$1,500
3	Environmental Permitting	LS	1	\$2,500.00	\$2,500
Mobilization					\$5,500
4	General Site Preparation	LS	1	\$5,000.00	\$5,000
5	Stabilized Construction Entrance	EA	1	\$500.00	\$500
Site					\$22,940
6	Care of Water	LS	1	\$10,000.00	\$10,000
7	Unclassified Channel Excavation	CY	77	\$20.00	\$1,540
8	Compacted Backfill	CY	60	\$15.00	\$900
9	Furnish and Install 18-inch Rock Riprap w/ Bedding & Filter Fabric	CY	70	\$150.00	\$10,500
Structural					\$36,540
10	Temporary Shoring	LS	1	\$15,000.00	\$15,000
11	Fiber wrap	SF	600	\$20.00	\$12,000
12	42" Dia Concrete Collar	CY	11	\$900.00	\$9,540
SUB-TOTAL					\$101,980
15% Contingency					\$15,297
ROUNDED TOTAL					\$117,000
This statement was prepared utilizing standard cost estimate practices. It is understood and agreed that this is an estimate only, and that Engineer shall not be liable to Owner or to a third party for any failure to accurately estimate the cost of the project, or any part thereof.					

HALFF ASSOCIATES, Inc.
4000 Fossil Creek Boulevard
Fort Worth, Texas 76137
(817) 847-1422

CLIENT: City of Southlake, City of Colleyville
PROJECT: Scour Study at South White Chapel Road

12/12/2012
 AVO 28736

ALTERNATIVE B - CONCRETE COLLARS, LOCAL PIER & NORTH BANK ROCK RIPRAP PROTECTION

Item No.	Description	Unit	Total Quantity	Unit Cost	Total Amount
Civil					\$37,000
1	Engineering Plans, Specifications, & Bidding Services	LS	1	\$33,000.00	\$33,000
2	Survey	LS	1	\$1,500.00	\$1,500
3	Environmental Permitting	LS	1	\$2,500.00	\$2,500
Mobilization					\$5,500
4	General Site Preparation	LS	1	\$5,000.00	\$5,000
5	Stabilized Construction Entrance	EA	1	\$500.00	\$500
Site					\$26,600
6	Care of Water	LS	1	\$10,000.00	\$10,000
7	Unclassified Channel Excavation	CY	100	\$20.00	\$2,000
8	Compacted Backfill	CY	20	\$15.00	\$300
9	Removal of Excess Excavation	CY	80	\$10.00	\$800
10	Furnish and Install 18-inch Rock Riprap w/ Bedding & Filter Fabric	CY	90	\$150.00	\$13,500
Structural					\$36,540
11	Temporary Shoring	LS	1	\$15,000.00	\$15,000
12	Fiber wrap	SF	600	\$20.00	\$12,000
13	42" Dia Concrete Collar	CY	11	\$900.00	\$9,540
SUB-TOTAL					\$105,640
15% Contingency					\$15,846
ROUNDED TOTAL					\$121,000
This statement was prepared utilizing standard cost estimate practices. It is understood and agreed that this is an estimate only, and that Engineer shall not be liable to Owner or to a third party for any failure to accurately estimate the cost of the project, or any part thereof.					

INTERLOCAL AGREEMENT

STATE OF TEXAS §
 §
COUNTY OF TARRANT §

This Agreement is made by and between the City of Southlake, Texas (“Southlake”) and the City of Colleyville, Texas (“Colleyville”), acting herein by and through their duly authorized city managers, for the purpose of documenting the terms and conditions of an agreement whereby Southlake will administer the engineering design contract and the construction contract to make improvements to scour protection at South White Chapel Road bridge over Big Bear Creek to be known as the White Chapel Road over Big Bear Creek Scour Countermeasure Project (“Project”) and the cities will divide the local cost share of such project for the design and construction of the Project as indicated in Exhibit A.

WHEREAS, Chapter 791, Texas Government Code authorizes Interlocal Contracts between governmental entities to perform services either could undertake individually; and

WHEREAS, Southlake and Colleyville desire to design and construct the White Chapel Road over Big Bear Creek Scour Countermeasure Project; and

NOW, THEREFORE,

W I T N E S S E T H

1. Southlake shall provide administration for an engineering consultant contract for design of the Project.
2. The cost for design of the Project is not to exceed \$44,350.00. The share of the cost for design required from each city will be divided as indicated in Exhibit A.
3. Southlake shall provide administration for a construction contract for construction of the Project.
4. The cost for construction of the Project is \$121,000.00. The share of the cost for construction required from each city will be divided as indicated in Exhibit A.
5. The City of Colleyville will provide their share of the design and construction costs in a lump sum payment to the City of Southlake prior to the start of construction.
6. In the event there are additional design costs or expenses involved in the engineering design contract, the parties agree to share such costs proportionally in the same manner as used for the initial design cost sharing identified in Exhibit A.
7. In the event there are additional construction costs or expenses involved in the construction contract, the parties agree to share such costs proportionally in the same manner as used for the initial construction cost sharing identified in Exhibit A.

AGREED to this _____ day of _____, 2013.

CITY OF SOUTHLAKE

By: _____
Shana Yelverton, City Manager

ATTEST:

Alicia Richardson, City Secretary

APPROVED AS TO FORM AND LEGALITY:

Attorney

CITY OF COLLEYVILLE

By: _____
Jennifer Fadden, City Manager

ATTEST:

Amy Shelley, City Secretary

APPROVED AS TO FORM AND LEGALITY:

Matthew Boyle, City Attorney

EXHIBIT A

WHITE CHAPEL ROAD OVER BIG BEAR CREEK SCOUR COUNTERMEASURE PROJECT PARTICIPATION

<u>Halff Associates, Inc. Design Fee</u>	\$ 44,350.00
<u>Construction Cost Amount</u>	\$121,000.00
<u>Amount shared by Cities of Southlake and Colleyville</u>	\$165,350.00
City of Southlake share (50%)	\$ 82,675.00
City of Colleyville share (50%)	\$ 82,675.00



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 4d

Agenda Date 09/17/2013

Number Resolution R-13-3665

Type Resolution

Department Public Works

Title

Approval to award a janitorial services contract to Oriental Building Services, Inc., acting as a primary vendor through the City of Arlington Interlocal Agreement, in an amount not to exceed \$128,000, and authorize the city manager to execute same, subject to the approval of funding in the Fiscal Year 2014 (FY 2014) budget

Explanation

Reading and Public Hearing

The City of Colleyville has an Interlocal Agreement with the City of Arlington, which allows the City to take advantage of contracts bid by Arlington. On March 22, 2011, the City of Arlington awarded Bid No. 11-0014 to Oriental Building Services, Inc., for janitorial services. Bid No. 11-0014 is a one year contract with four one-year options to renew. Acceptance of this purchasing option through the Interlocal Agreement with Arlington allows the City of Colleyville to use the same vendor, fixed pricing, and terms and conditions offered to the City of Arlington until March 30, 2016, subject to satisfactory performance by the vendor, and annual renewal of the contract.

Oriental Building Services began providing custodial services to Colleyville City facilities on August 16, 2013, after the previous vendor, acquired through the Tarrant County Cooperative Purchasing Contract, was terminated for performance. Oriental Building Services, Inc. has satisfactorily provided the janitorial and ancillary maintenance services in other cities in the region for several years, and their performance with Colleyville since August 16, 2013 has been satisfactory. Under the Arlington bid, ancillary services, such as carpet shampooing, and floor striping and waxing, are included in the base contract price, as opposed to being additional costs as they were in the previous Tarrant County contract. Due to this pricing structure, the overall cost for janitorial services for FY 2014, will be slightly less than FY 2013.

Approval of the resolution extends the current short term agreement with Oriental Building Services, Inc., through September 30, 2014. The FY 2014 agreement with Oriental Building Services, Inc., will provide custodial services for the Justice Center, City Hall, Colleyville Public Library, Senior Center, Fire Administration, Colleyville Center, and the Public Works Service Center.

Financial Impact

Funding in the amount of \$128,000, is included in the various departmental building maintenance operating budgets for FY 2014.

Recommendation

Approve

Attachments

1. Proposal from Oriental Building Services, Inc.



Original

P R O P O S A L

PRESENTED

TO

Mr. Robert Lowry

-N-

Mr. Jaime Gutierrez

Public Works Department



Proposal FOR

JANITORIAL SERVICES

FOR

City Facility

PRESENTED BY

Nixon Shum

ORIENTAL BUILDING SERVICES

June 13, 2013



Introduction

Mr. Sang Gye and his brother found Oriental Building Services in 1992; he is the sole owner of the company. The business is conducted under proprietorship in the State of Texas. Has been providing full spectrum of janitorial services to business, corporation, and government entities in Texas for 19 years. In 2006 the company becomes a corporation. Home office and warehouses are located at:

2526 Manana Dr. Suite 208

Dallas, TX 75220

Phone: 469-522-0001

Fax: 469-522-0003

E-Mail obsco@msn.com or nshum@obsusa.net

Company's Vision, Mission, Creed, Commitment

Vision: Eventually, every building from the basement to the executive office, single home to multi-unit complex, school to university, train stations to airports, independent business, corporation to government entities, will benefit from the cleanest environment make possible by Oriental Building Services.

Mission: With the most effective technology, high quality products and knowledgeable personnel, creating the cleanest building environment for customers and communities, without increasing their cost.

Creed: We shall provide our Customers with the most dependable cleaning service through technological and operational excellence. Our people will be the best-trained, most knowledgeable building cleaning specialist who takes pride in being the best.

Commitment: At Oriental Building Services, we stand ready to custom design the most cost-efficient cleaning program to fit each building and project. Our management and employees are committed to respond "Twenty-five" hours a day, seven days a week, three hundred sixty five days a year, to provide the best service and coverage for each building and project like you are our only customer.



About Oriental Building Services

Oriental Building Services is a regional company, with 18 years of professional operating experience, excellent references and a desire to get better, with our focus on commercial and government entities janitorial and custodial services.

Oriental Building Services uses the most effective technology, high quality products and knowledgeable personnel, and is continuing a period of strong growth, as our reputation grows. The company's revenue will be approaching 3.3 million dollars per year in 2010. Oriental Building Services fiscally sound and stands ready to provide a high quality of services to our customers. Also, we are an **M/WBE & GREEN CLEANING certified company**. **M/WBE certified** by North Central Texas Regional Certification Agency. **GREEN CLEANING certified** by Green Clean Institute. In 2007 the company had received award for **Asian company of the year** by **Dallas Regional Minority Enterprise Development**. 2008, 2009 award received **Top 100 Asian Owner Business in U.S.** 2010 award received **Top 10 Fastest Growing Asian Business**.

Executive Team

Sang Gye, Owner/President

Sang Gye, hold a business degree from Dan-Kook University in Seoul, Korea. Come to United State in 1985. Start working as a Supervisor for B.P.A Inc. Responsible for 22 janitors and 5 Building, 1989 H.B.M. Services Corp. as a Operations Manager, Responsible for two route supervisor and 4 Building, 1990 Oriental Building Services, as a Project Manager, later become owner/president of the business.

Nixon Shum, Vice President

Nixon joint Oriental Building Services in 2000, after many years in the restaurant and finance industry. Bring along the experience he have on how to keeping a clean restaurant and customer services, to joint OBS as a project manager. Promoted through the ranks as Vice president by developed new training program, customers services and improve employees productive.

Joon Lee, Director of Development

Joon joint Oriental Building Services in 2002. After year in property management, he bring along the experience he have obtain in the field of property management, what property management expectations from custodial services to help increase Oriental Building Services customer satisfaction.

Andrew Kim, Vice President Operation

Andrew returns to Oriental Building Services in 1999 as Vice President of Operation, after two years of absent. He bring along 20 years of cleaning service experience from major national building services company, to added depth to our executive team.

Richard U Chu Kim, Quality Control Director/VP

Richard joint Oriental Building Services in 2000. After 15 years as Quality Engineering Specialist with Lockheed Martin Tactical Aircraft System, he is a certified green belt & six sigma by International Organization for standardization (ISO). He bring along the experience he have as QES with Lockheed Martin, and help develop the quality control program at Oriental Building Services.

Full Service Solutions

Janitorial
Day Porter Services
Carpet & Floor Care Services
Minor & General Maintenance
Landscaping / Grounds Keeping
Parking Lot Sweeping
Garage Maintenance
Window Washing / Power Washing
Event Service Staffing
Marble and Terrazzo maintenance and resurfacing



Our Customer

City of Dallas
Dallas County
City of Grand Prairie
City of Arlington
Texas Work Force Commission
DFW Airport
City of Flower Mount
Mori Seiki Corporation
Texas Women University
University of Texas Arlington
University of North Texas

Our Customer Past Customer

Dallas County Community Collage
Dallas Meyerson Symphony Center
Tarrant County TX
Dallas Water Utilities
Dallas Area Rapid Transit
North Texas Tollway Authority
Trinity River Authority of Texas

Our Support Group and M/W/DV/BE Associate

Jan Pak
Bob Schapansky
4252 Simonton Rd
Dallas, TX 75244
972-385-0188 Ext.231

Procter & Gamble
Keith Koraska
Account Manager
711 Live Oak Dr.
Euless, TX 76040
817-355-0990

Master Cleaning Supply
Supply and Equipment
Yun Sun Kim
2254 Royal Ln Suite 200
Dallas, TX 75229
973-243-6747

Access Capital Corporation
Equipment Leasing
Robert Calzaretta
630-434-0088

VCP Int'l
Equipment
Jesse Valladarez
972-271-7474 ext 454

Alto Financial Services
Equipment Leasing
16091 Swingley Ridge Rd, Suite 180
Chesterfield, MO 63017
636-532-7430

Bonding and Insurance Support

The Grayhawk Companies
Bretns M. Blonigan
1740 N. Collins Blvd. Suite 200
Richardson, TX 75080
972-671-9105



City of Colleyville

Cost by Building Break Down

BL DG	DESCRIPTION	SF	SF COST	Cleaning COST/MO	Monthly Supply Cost Per Building	Monthly Cost Per Building	Sub Annual Cost Per Building	Floor Care (Shampoo & Wax) Unit Cost Per Building	2 Time Per Year Cost	Total Annual Cost Per Building
1	City Hall	29,585	\$ 0.081	\$ 2,396.39	\$ 150.00	\$ 2,546.39	\$ 30,556.62	\$ 739.63	\$ 1,479.25	\$ 32,035.87
2	Library	22,543	\$ 0.090	\$ 2,028.87	\$ 260.00	\$ 2,288.87	\$ 27,466.44	\$ 563.58	\$ 1,127.15	\$ 28,593.59
3	Fire Administration	12,172	\$ 0.016	\$ 194.75	\$ 50.00	\$ 244.75	\$ 2,937.02	\$ 304.30	\$ 608.60	\$ 3,545.62
4	Justice	31,293	\$ 0.083	\$ 2,597.32	\$ 260.00	\$ 2,857.32	\$ 34,287.83	\$ 782.33	\$ 1,564.65	\$ 35,852.48
5	Senior Center	9,667	\$ 0.060	\$ 580.02	\$ 80.00	\$ 660.02	\$ 7,920.24	\$ 241.68	\$ 483.35	\$ 8,403.59
6	Public Work	8,720	\$ 0.085	\$ 741.20	\$ 110.00	\$ 851.20	\$ 10,214.40	\$ 218.00	\$ 436.00	\$ 10,650.40
7	Colleyville Center	11,059	\$ 0.030	\$ 331.77	\$ 80.00	\$ 411.77	\$ 4,941.24	\$ 276.48	\$ 552.95	\$ 5,494.19
	Group Total	125,039		\$ 8,870.32	\$ 990.00	\$ 9,860.32	\$ 118,323.79	\$ 3,125.98	\$ 6,251.95	\$ 124,575.74

Annual Total Services & Supply	\$ 118,323.79
Annual Total Floor Care	\$ 6,251.95
Grand Total	\$ 124,575.74



**Janitorial Services
For
7 CITY OF COLLEYVILLE
Facilities**

Services Approach

I Explanation of how the process staffing will meet the contract requirements:

Oriental Building Services (OBS) has the management team, partnership and the experience in place and ready to mobilize as needed on this contract.

We intend to hire associates currently performing on this contract as well as qualified associates from the economy. We will do whatever it takes to ensure a smooth transition. Therefore the separation between the current contract and a new contract will be seamless.

All associates will attend documented training on the scope of work and will be provided a copy. Likewise, new associates will attend documented training on the scope of work and provided a copy. To ensure continuous improvement, these classes will be repeated quarterly or as needed and documented.

II Introduce the contractor's team:

1. Mr. Nixon Shum is **Vice President** of Oriental Business Services and as such has full power and authority to make decisions on behalf of Oriental Business Services. He oversees general business operations and development.

2. Joon Lee is the **Director of Development**; his responsibility is to help coordinate and development of this contract, with the Director of Quality Control Mr. U Chu Kim and on site project manager Mr. Henry Lee. To he will be responsible for helping Mr. Henry Lee the project manager assign, to identification of tasks to be performed, time frames to be perform, time schedule of scope of work to perform, developing policy, plans, and procedures for the CITY OF COLLEYVILLE project.

3. Mr. U Chu Kim **Director of Quality Control**, his responsibility is to help develop a quality control program to comply with all aspect of Scope of Work and monthly inspections and surveys.

4. Project Supervisor TBD for CITY OF COLLEYVILLE project. He or she will work closely hand on with Mr. Lee Director of Development. Further he will be responsible for coordinating



and communications with Team Members to ensure all building are Sustainable level of contract compliance. He will personally inspect the job site and contractor's inspection report for OBS quality control team. In fact, his job description will include the responsibilities of ensuring ALL aspects of Specifications and Services Requirements are complied with.

A 24 hr. emergency phone number will be given to CITY OF COLLEYVILLE representative, for any **Non** fire or medical emergency response.

Working Hour: Monday-Friday OPEN

5. Working Supervisor, reports to Project manager and all CITY OF COLLEYVILLE Representatives. Responsibility - Common area, support space, break rooms, elevators, and restroom, office, driver waiting area, trash remove, restroom, recycle, dispatch area sidewalk, parking area.

Working Hour: Between Monday-Friday 6:00 a.m. – 2 p.m.

6. Day Cleaning Crew, Cover area: **125,029** sq. ft. cleanable space daily, **City Hall & Library** - (2 crews team) **8** hr., **Justice Center** - (1 crew team) **8** hr., **Fire Administration & Colleyville Center** - (1 crew team) 4 hr each one day per week, **Senior Center** – (1 crew team) 4 hr. 3 days per week, **Public Work** – (1 crew team) 2 hrs 3 days per week. All personal will report to working supervisor. Responsibility; perform all daily, weekly, monthly, quarterly tasks under Specifications and Services Requirements.

Working Hour: Between Monday to Friday 6:00 a.m. – 7 p.m.

Oriental Building Services will perform all work cleaning work with in-house employees. They will receive 10 holiday pay.

III Supply Order & Delivery:

- a. Equipment and supply will be purchased from the following certified NCTRCA Company.

Master Cleaning Supply Inc
Yun Sun Kim
2254 Royal Ln, Suite 200
Dallas TX. 75229
NCTRCA # PMDB29981Y0207

Supply will be delivery weekly by supervisor, cleaning crew will place order each Friday and delivery to each location on Tuesday.



IV Describe Management Approach

OBS has developed a **PROACTIVE** approach to managing contracts. It will involve the entire OBS team.

Our management methodology is **PROACTIVE** because we have a system of procedures and methods not only for accomplishing the contract requirements, but also for reviewing contract performance for indications of discrepancies, potential problems and/or adverse trends. Our entire team is **fully INFORMED** about contract performance at regular documented training events. By including ALL team members, we can closely monitor the contract. This allows us to detect the need for corrective action before contract performance is adversely affected.

Our management system and techniques have been implemented and have resulted in success on similar type contracts. Our approach stems from the classical management functions of Strategic Planning, Organizing, Directing, Coordinating, and Controlling.

Associates will be encouraged to discuss all issues directly with their supervisor. However, they may go to the Project Manager or Vice President should they so desire. OBS has an open door policy.

Supervisors, Project supervisor, and the Vice President will communicate day-to-day by cell phones. However, The Vice President will hold monthly meetings with the Project Manager and Supervisors to discuss contract compliance.



QUALITY CONTROL PROGRAM

We've structured our Quality Control standards and procedures to always meet and very often exceed Government quality assurance expectations. Our Quality Control program and approach has been implemented on numerous Government Custodial/Janitorial contracts. The success of the program has provided Oriental Building Services Management "OBS" with the confidence to expand our Quality Control applications and objectives to evolve with client requests. Four elements are key to effective Quality Control administration:

1. **TRAINING** - For a thorough understanding of quality objectives and requirements, periodic refresher classes keep quality performance in the minds of our employees.
2. **DAILY SUPERVISION** - By a qualified management team to ensure proper adherence to contract quality requirements.
3. **SCHEDULING** - The judicious application of resources in the right area at the right time is the best assurance of quality.
4. **INSPECTION** - Periodic and unannounced checks for adherence to define Quality Control policy by both the management team and Government inspectors to predict potential deviations, as well as, to document and correlate improvements.

The following paragraphs present an outline of our Quality Control practices:

- An efficient **Inspection System**
- Timely **Deficiency Identification**
- **Quality Control Documentation and Enforcement**
- **Government Communication Interfaces**
- A qualified **Organization and Structure**
- A responsive **Customer Comment Program**
- Steps to implement **Corrective Action**
- **Recommendation Program** with the appropriate provisions for:
 - ◆ reporting mechanisms
 - ◆ complaint investigation
 - ◆ preventive measures
 - ◆ synopsis of complaints and steps taken for improvement



Inspection Program - The following major areas of concern are considered routine inspection items:

- **Employee Personal Hygiene** - Cleanliness of hands, arms, face, hair, uniforms, proper use of hair restraints, gloves, and associated sanitary protections.
- **Safety** - The safe use of janitorial and custodial equipment, insure the proper safety procedures are in place to include the use of wet floor caution signs but not limited to constant inspection of floor conditions, walls, ceilings to preclude accidents and assure dust less cleaning methods.
- **Janitorial & Custodial Operations** - We shall insure that quality and efficiency of sweeping, mopping, dusting, etc. service display cases, walls, wall hangings, floor and entryways, proper ventilation, lighting, toilet and lavatory facilities.
- **Property & Equipment Maintenance** - Check on all exterior and interior maintenance responsibilities falling under the service contract requirements, snow and ice removal from entrance/exit walkways, proper trash disposal and inspection of lighting fixtures (both interior and exterior).
- **Employee Conduct & Attitude** - Checks for the practice of the proper code and conduct in employee/customer relations including decorum, respect, politeness, and responsiveness to customer needs.

Inspection Schedule - Our Project Manager and/or Supervisor will conduct daily or bi-daily unscheduled inspections of all contract functional areas to assure continuing compliance with the PWS in conjunction with the Government QAE. Additionally, weekly inspections will occur on a scheduled basis to alert deficiencies that continue for more than one or two days. As a result, problems can be "nipped in the bud" before they affect overall performance or can spill over into other functional areas.

After inspection, the Project Manager will document all deficiencies on Oriental Building Services forms. A copy of these completed forms will be retained in each facility and one will be given to the affected functional area Supervisor. The affected employee will be required to sign the deficiency report, acknowledging the deficiency and the corrective actions to be taken. If the problem persists beyond the maximum two-hour time limit after notification, a subsequent deficiency report will be filed with the Project Manager for immediate remedial action.

The Project Managers will prepare a synopsis report of all deficiencies and associated corrections on a monthly basis. Copies of the report will then be given to the Project Manager, Corporate Operations
Oriental Building Services



Manager, and the Contracting Officer. A copy of the monthly report will be filed in each facility's QUALITY CONTROL records for review in the event of a recurrence.

Our Corporate Operations Manager will conduct random site visits for spot checks and to review on-site project operations throughout the term of the contract. Subsequent inspections will be scheduled during the first and third quarters of performance for each contract year. Should circumstance require, more frequent inspections will be conducted as determined by persisting deficiencies, or at the request of the Contracting Officer. If required, the Operations Manager will conduct additional or remedial QUALITY CONTROL training of the on-site project management staff and affected employees.

Corrective Action - The Project Manager will document his/her findings in a QUALITY CONTROL Deficiency/Correction Report and instruct the Supervisors of the affected area to take corrective action for resolution of the problem within two hours or within the minimum reasonable time period to adequately correct the deficiency.

The Project Manager will then require the Supervisors to initial the deficiency report, acknowledging the problem(s) identified. When the deficiency has been corrected and re-inspected, the Project Manager will complete the corrective action portion of the deficiency form. If unresolved, the deficiency will be escalated to an official reprimand of the employee(s) responsible. The Project Manager will then perform random spot-checks of the subject area to verify adherence to quality standards.

Each Supervisor will submit a monthly Quality Control Inspection Report to the Project Manager after each detailed inspection. The Project Manager will complete and file the Monthly QC Inspection Summary in the Project Office and send a copy to the Home Office.

The Corporate Operations Manager will also conduct unannounced inspections of all on-site project operations, providing an independent quality control function. During the Operations Manager's visit, a discussion of quality levels with the Project Manager and Supervisors will provide further corporate oversight of the contract. Should any problem persist, the Operations Manager will conduct refresher training of the affected project staff and employees. If despite additional training, directives for correction or pronounced deficiencies persist, the Operations Manager is delegated the authority to dismiss the deficient employee(s) and replace them. Notification to the Project Manager and the Government QAE will be made.

Government Communication Interfaces - Quality complaints and suggestions for improvement at the customer level will be handled in accordance with Government specifications and coordinated through the



customer Complaint and Improvement Recommendation Program. Official communications between Government Contract personnel and the project office will adhere to all contract terms and conditions. Where necessary or desired, the Contracting Officer and our Contract Manager can have special "one-on-one" meetings. Our Project Manager is delegated the necessary authority and access to executive management to fully commit the company. We further propose quarterly roundtable forums to be attended by the Contracting Officer and his/her designees, our Project Manager, Supervisors and corporate Operations Manager. Through this open discussion, a forecast of impending quality decisions can be discussed and problem areas isolated before they impact the project. As a general rule, however, deficiencies discovered by the Government should be delivered in writing to the Project Manager for immediate corrective action.

Quality Control Documentation and Enforcement - OBS has several standard forms to document quality control inspection, enforcement, deficiency and corrective actions reports. Further documentation practices will be coordinated through the Customer Complaint/Improvement Program. All project quality control records will be available to the Government for review throughout the term of the contract. The Project Manager will keep the following reports on file in the project office for review during normal business hours:

- Completed Quality Control Inspection forms for all functional areas, detailing deficiencies and corrective actions taken.
- Completed Operations Managers inspection evaluations after surprise inspections, including corporate directives for enforcing corrective actions.
- All weekly deficiency/correction inspection reports from Operations Manager.
- Completed Customer Comment Forms.
- All monthly synopsis reports to the Operations Manager and Contracting Officer, listed identified deficiencies/complaints and the corrective action taken.

Customer Comment Program – OBS firmly believes in a strong contractor-consumer interface for identifying problems. Solutions to some of the simplest or toughest problems may be very obvious to the customer, but we may be "too close to the trees to see the forest." To facilitate this program, we will make a Customer Comment Form available at various places throughout the work areas. This will make the forms readily available to all customers. Additionally, our Project Manager and Supervisors will be highly visible during the day-to-day operations. They will be available to receive customer comments and complaints. All Customer Comment Sheets received will be delivered directly to the Project Manager. All Comment Sheets will be serialized, logged and maintained in a file in the Project Office for Government review.



All complaints will be carefully investigated and timely solutions will be implemented. If the customer chooses to give his/her name and telephone number, we will provide feedback to them regarding the corrective action taken to alleviate their complaint.

Employee Training/Qualification - In addition to the OBS initial and follow-on training we will ensure our employees attend additional company sponsored training based on Government requirements. In all cases, OBS will perform initial and refresher training. We will maintain training folders on all employees and ensure all training, briefings, and physical examinations are properly recorded. We will forward a list of employees and training they have received to the Contracting Officer Representative if required.



TRAINING PROGRAM SUMMARY

The training program at Oriental Building Services is very detailed and comprehensive. All new employees go through five steps of training before he or she is permanently assigned to the building. The five steps are classroom training, video training, first aid, chemical, equipment, safety, hands on training and green cleaning and products. We use the **3M™** Service, Maintenance, Analysis, Resource, Training (**S.M.A.R.T.**) Program. This program allow OBS to customize the training for each project or facilities, the employees will have first hand training before they step foot in to the facilities. It allow OBS to customize to the point an employees will know what the same office, trouble area, or restrooms, look like and what step, tool and chemical to use. It also allows OBS to implement proven green cleaning methods in all facility and to combine any facilities owner's maintenance schedules into the training. For any customers that are working towards Green Sealed or Leadership in Energy and Environmental Design **L.E.E.D** certifications, we will provide a green care system (green cleaning procedures & products) that will help you earn points to getting that certification.

Supervisor Training: The supervisor will receive ongoing skill development training as needed.

Training programs available for Supervisors will include:

- ✓ Supervisory Skills 101
- ✓ Managing Change
- ✓ Building Productivity through Mutual Respect
- ✓ Eliminating Un-lawful harassment in the workplace
- ✓ Conducting performance reviews
- ✓ Hiring and Firing procedures (Conducting Interviews)
- ✓ Building Productive Teams

(Note: All basic employees training will be available to supervisors also)

Basic Employee Training:

1. Classroom Training

- ✓ General Cleaning
- ✓ Floor Care Task
- ✓ Housekeeping
- ✓ Hard Floor Care
- ✓ Carpet Care
- ✓ Disinfectants Tips and information
- ✓ Restroom Cleaning
- ✓ Office Cleaning
- ✓ MSDS Information
- ✓ Specialized Cleaning



Training Facility

2. 3M™ Video Training (English and Spanish)

- ✓ Commercial Care
- ✓ Restroom Care Procedures
- ✓ Twist and Fill
- ✓ Working Safety
- ✓ Equipment
- ✓ Safe Cleaning



3M Green Seal Products

3. First Aid, Chemicals, Equipments, Safety

- ✓ Basis first aid
- ✓ Safe use of chemicals
- ✓ Understanding equipment
- ✓ Blood borne Pathogen
- ✓ Hazard program
- ✓ Asbestos awareness Training



**Environmental
Friendly Equipment**



4. Green Cleaning

- ✓ Building Expectations
- ✓ Green Cleaning Basics
- ✓ Custodial Duty
- ✓ Green Clean Procedures
- ✓ How to evaluate Green Clean Products
- ✓ List of Environmental Issues
- ✓ Traditional versus Green Products
- ✓ Understanding the impact of Cleaning Green



5. Hand on Training

A supervisor works with the trainee and showing actual cleaning procedure and answering all questions. During this time, he or she is obligate to take note on and special instruction, such as any door to be locked after cleaning turning of light, alarm-setting procedures. Onsite training will take up to 2 weeks before the trainee works on their own.

Training Review and Development: Current training material will be reviewed to assure all aspects needed for job performance are covered. Training will be evaluated on the following basis:

- Compliance to contract requirements
- Compliance to current contract requirements to delivery requirement
(Example: Annual or Quarterly training)
- Documentation of completed training (Training Completion Form)
- Documentation filed in appropriate place

Additional training will be developed and delivered by the Project Manager



Major Equipment and Tool List

CITY OF COLLEYVILLE

No.	Item	Description	Brand	Qt.
Equipments				
1	Trash Containers	55 gl. Brut Barrel Container	Rubbermaid	16
2	Shelf-Type Cleaning Cart	Tool holder clips, 2 swivel casters & 2 non	Rubbermaid	2
3	Tilt Truck	750 lb., 10' vulcanized 4 rubber wheels	Rubbermaid	1
4	Vacuum Cleaner	HEPA Filter 12" Upright, attached hose	Sanitaire	6
5	Backpack Vacuum	6'ft. 1 1/4" flex hose, disposable filter bag	Pro-Team	1
6	Wet/Dry Tank Vacuum	20 gl. Tank, 50 ft. water lift, Auto overflow	Kent	1
7	Low Speed Floor Scrubber	20" single disc, 175 rpm, 25' cable length	Kent	1
8	High Speed Floor Machine	20" single disc, 1500 rpm, 50' cable length	Kent	1
9	Garage & Street Sweeper	9" Two brush out door sweeper	Hoover	1
10	Power Washer	Gas power, 1750 psi (KARCHER)		1
11	Floor Signs	Wet and Dry, Yellow and Red	Rubbermaid	21
Tools				
1	Dust Mop	24" & 36" Cotton string head, 5" Handle		6
2	Dust Pan	Nonmetallic Construction, lobby style, 12"		7
3	Mop Bucket & Wringer	3" casters, 38qt. 'Caution' printed on 2		7
4	Wet Mop	24 & 32 Oz. Cotton Synthetic fiber		7
5	Push Brooms	Street 18" head & self-Flagging Bristles		3
6	Toy Broom	Corn straw, 36" handle, For Spot Sweeping		7
7	Scrub Brushes	Deck Scrub 16 inch Blk. w/Tapered holes		3
8	Toilet Brushes	Synthetic Fiber Mop Head, Pliable Squeeze Cup		7
9	Putty Scraper	1 1/4" Blade width, Plastic handle		6
10	Lambs Wool Duster	Wool dusting head with an extending handle		7
11	Pails	Plastic 2.5 gallon with Handle		3
12	Glove	Leather Palm, Cotton Back		12
13	Spray Bottle & Gun	16 oz. Chemically resistant plastic		21
14	Squeegees set	Window 12" wide, Brass Channel		2



PHOTOGRAPH
OF
DAILY UNIFORM & WINTER JACKET





CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

06/26/2012

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 Phone: 972-671-9105 Fax: 972-671-9804

GRAYHAWK INSURANCE & RISK MANAGEMENT
1740 NORTH COLLINS, SUITE 200
RICHARDSON TX 75080

CONTACT NAME: **GRAYHAWK INSURANCE & RISK MANAGEMENT**PHONE (A/C, No, Ext): **972-671-9105**FAX (A/C, No): **972-671-9804**

E-MAIL ADDRESS:

INSURER(S) AFFORDING COVERAGE

NAIC #

INSURER A : **TRAVELERS LLOYDS INSURANCE CO**INSURER B : **THE TRAVELERS INDEMNITY COMPANY**

INSURER C :

INSURER D:

INSURER E :

INSURER F :

INSURED

ORIENTAL BUILDING SERVICES, INC.
2526 MANANA DR. SUTE 208
DALLAS, TX 75220

COVERAGES

CERTIFICATE NUMBER: 62232

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	ADD'L INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY ☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☐ PRO-JECT ☐ LOC			PACP6178X697	03/10/12	03/10/13	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED. EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
B	AUTOMOBILE LIABILITY ☒ ANY AUTO ☐ ALL OWNED AUTOS ☐ HIRED AUTOS ☐ SCHEDULED AUTOS ☐ NON-OWNED AUTOS			BA6178X777	03/10/12	03/10/13	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (per accident) \$ \$
B	☒ UMBRELLA LIAB ☐ EXCESS LIAB ☐ DED ☒ RETENTION \$ 10,000 ☐ OCCUR ☐ CLAIMS-MADE			CUP6179X288	03/10/12	03/10/13	EACH OCCURRENCE \$ 10,000,000 AGGREGATE \$ 10,000,000 \$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? ☐ Y / N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below		N / A	UB3678T743	03/10/12	03/10/13	☒ WC STATU-TORY LIMITS ☐ 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

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER IS PROVIDED ADDITIONAL INSURED STATUS ON THE GENERAL LIABILITY AND AUTO LIABILITY POLICIES BY A BLANKET AUTOMATIC ADDITIONAL INSURED PROVISION THAT PROVIDES ADDITIONAL INSURED STATUS AND ARE PROVIDED A WAIVER OF SUBROGATION FOR GENERAL LIABILITY, AUTO LIABILITY, AND WORKERS COMPENSATION PER THE BLANKET WAIVER OF SUBROGATION ENDORSEMENTS ATTACHED TO THE POLICIES ONLY WHEN THERE IS A WRITTEN CONTRACT BETWEEN THE NAMED INSURED AND THE CERTIFICATE HOLDER.

CERTIFICATE HOLDER**CANCELLATION**

FOR INFORMATION PURPOSES ONLY

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

Attention:

Gary Johnson



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 4e

Agenda Date 09/17/2013

Number Resolution R-13-3665

Type Resolution

Department Parks and Recreation

Title

Approval to renew the Grounds Maintenance Mowing Contract with Whitmore and Sons, Inc., in an amount not to exceed \$141,340.29, and authorize the city manager to execute same, and any associated change orders, in an amount not to exceed \$25,000, subject to the approval of funding in the Fiscal Year 2014 (FY 2014) budget

Explanation

Reading and Public Hearing

On September 21, 2010, City Council approved a bid award for the Grounds Maintenance Mowing Contract, in the amount of \$126,090, with Whitmore and Sons, Inc. The contract contains an option to renew for five (5) additional one (1) year periods, with pricing not to exceed the consumer price index (CPI) of the Dallas/Fort Worth standard metropolitan area, for the previous twelve (12) month period. The initial contract period expired September 30, 2011. City Council approved the first year renewal option on September 20, 2011, and the second year option on September 18, 2012.

Staff recommends renewal of the Grounds Maintenance Mowing Contract for the third year option with Whitmore and Sons, Inc. Staff contacted Whitmore and Sons, Inc. and confirmed the intent to renew the contract for Fiscal Year 2014, (FY 2014) with all pricing to remain the same. Mowing frequencies were increased from Fiscal Year 2012 (FY 2012) to enhance the service level for Fiscal Year 2013 (FY 2013). Most City properties, which were allocated 24 maintenance cycles annually, were increased to 28 maintenance cycles annually. A total of 22 properties received enhanced service levels during Fiscal Year 2013 (FY 2013). For FY 2014, a change order to the existing contract will be made in the amount of \$3,360 for maintenance of the grounds around the monument signs located at 7150 Colleyville Boulevard, 4551 Colleyville Boulevard, 305 W. Glade Road, and 6900 Pool Road. These properties will each receive 28 maintenance cycles.

Annual Contract Cost Summary	
• FY 2012 - Contract Price	\$ 124,312.59
• FY 2012 - Change Order (increase cycles at Bidault House and mowing of Cotton Belt II for remainder of the year)	791.88
• FY 2013 - Cycle Increase 24 to 28	11,280.00
• FY 2013 - Cycle Increase 24 to 26	207.00
• FY 2013 - Cycle Increase 24 to 27	621.00

• FY 2013 - Cycle Increase 22 to 28 (increase cycles at Bidault House)	557.82
• FY 2013 – Cotton Belt II Full Year	210.00
• FY 2013 Contract Price	137,980.92
• FY 2014 Change Order (Monument signs at specified locations)	3,360.00
FY 2014 Contract Price	\$ 141,340.29

The scope of services for this contract include mowing, edging, trimming, and debris removal of medians, trails, parks, and public buildings throughout the City.

Financial Impact

Funding in the amount of \$141,340.29 has been allocated in the proposed FY 2014 Parks Maintenance budget, account 001-32-10-6226, Miscellaneous Contractual Services.

Recommendation

Approve

Attachments

1. Renewal Prices of Mowing Contract - FY 2014

MOWING CONTRACT FY 2014 RENEWAL PRICES

Properties to be maintained

Annual Contract Extension with any proposed price change increase shall not exceed the consumer price index of the Dallas / Fort Worth standard metropolitan area for the previous twelve-month period.

Price changes should reflect changes in the number of mowing cycles and/or updates in property perimeters for mowing cycles during FY 2014. No price increase requested.

Area One - Common Areas / Medians
areas

Manicured / Irrigated turf

PROPERTY	NUMBER OF CYCLES	COST PER CYCLE	INITIAL CONTRACT TOTAL COST
Colleyville Center	36	154.95	5,578.20
Justice Center	36	185.94	6,693.84
Bogart ROW	28	69.00	1,932.00
Bransford Park	26	103.50	2,691.00
Bransford / Center Park Medians	28	51.75	1,449.00
City Hall / Library	28	51.75	1,449.00
City Park	28	690.00	19,320.00
Central Fire Station	28	103.50	2,898.00
Fire Station 2	28	51.75	1,449.00
Fire Station 3	28	51.75	1,449.00
Hall-Johnson Road / Riverwalk Drive / Bogart Drive	28	232.50	6,510.00
Heritage Medians	28	103.50	2,898.00
Kimzey Park	28	207.00	5,796.00
McDonwell School Road Trail	28	103.50	2,898.00
McPherson Park (10.35 acres)	28	287.50	8,050.00
Old Grove Trail	0	0.00	0.00
Pleasant Run Practice Facility	27	207.00	5,589.00
Pleasant Run Soccer Complex	28	299.00	8,372.00
Reagan Park	28	69.00	1,932.00
Senior Center (1.2 acres)	28	103.50	2,898.00
Sparger Park	28	207.00	5,796.00
Westmont Trail	28	69.00	1,932.00
Woodbriar Park	28	69.00	1,932.00
		TOTAL COST:	\$99,512.04

Properties to be maintained

Page 2

Area Two – Common Areas / Medians

Manicured / Non-irrigated turf areas

PROPERTY	NUMBER OF CYCLES	COST PER CYCLE	INITIAL CONTRACT TOTAL COST
Bidault House (add .75 acres)	28	92.97	2,603.16
Monument Sign 7150 Colleyville Blvd.	28	30.00	840.00
Monument Sign 4551 Colleyville Blvd.	28	30.00	840.00
Monument Sign 305 W. Glade Road	28	30.00	840.00
Monument Sign 6900 Pool Road	28	30.00	840.00
Castleton Trail	18	46.48	836.64
Cottonbelt Trail	18	216.93	3,904.74
Cottonbelt Phase II Trail	18	134.29	2,417.22
Fire Station 1	18	30.99	557.82
Glade Road	18	30.99	557.82
LD Lockett Park	18	46.48	836.64
Longwood Drive / Broadoak Way	18	92.97	1,673.46
McCain Park	18	46.48	836.64
McPherson Park (11.53 acres)	18	154.95	2,789.10
Nature Center	18	413.20	7,437.60
Old City Hall	18	46.48	836.64
Pleasant Run and Hwy 26 (Lot)	18	30.99	557.82
Riley Cemetery	18	46.48	836.64
Senior Center (8 acres)	18	185.94	3,346.92
Shalimar Court	18	46.48	836.64
Cottonbelt Railroad R-O-W	9	844.75	7,602.75
		TOTAL COST:	\$41,828.25

WORKSHEET PAGE NUMBER	TOTAL COST (BOTTOM LINE TOTAL OF WORKSHEET)
Area One – Irrigated Turf Areas – Page 1	\$99,512.04
Area Two - Non-Irrigated Turf Areas - Page 2	\$41,828.25
GRAND TOTAL	\$141,340.29

New Contract Mowing Prices for FY 2014 Submitted By:

Company Name: _____

Signature of Company Representative: _____

Please Print Name of Company Rep.: _____



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 4f

Agenda Date 09/17/2013

Number Resolution R-13-3665

Type Resolution

Department Parks and Recreation

Title

Approval of a contract renewal for the Horticultural Grounds Maintenance Contract to the Lawn Firm, in an amount not to exceed \$145,734, and authorizing the city manager to execute same, and any associated change orders, in an amount not to exceed \$25,000, subject to the approval of funding in the Fiscal Year 2014 (FY 2014) budget

Explanation

Reading and Public Hearing

On September 18, 2012, the City Council awarded the bid for the Horticulture Grounds Maintenance Contract, to the Lawn Firm, in the amount of \$145,734. The initial contract will expire on September 30, 2013, with the option to renew for five (5) additional one (1) year periods, not to exceed the consumer price index (CPI) of the Dallas/Fort Worth standard metropolitan area, for the previous twelve (12) month period.

The scope of services for this contract includes:

- Bed weeding
- Pre and post weed control
- Shrub, tree, and ground cover pruning
- Mulching of beds
- Installation of seasonal color
- Fertilization
- Insect control

Staff recommends renewal of the Horticulture Grounds Maintenance Contract for the first year option with the Lawn Firm for a total net contract amount of \$145,734. Pricing has not changed from the 2013 contract.

The Horticulture Grounds Maintenance Contract includes horticulture practices, annual color changes, and required chemical application services for the period of October 1,

2013 through September 30, 2014.

The attached FY 2014 Property Chart is a summary of annual costs to maintain individual properties.

Financial Impact

Funds have been allocated in the proposed FY 2014 budget with the Park Maintenance Miscellaneous Contractual Services account 001-32-10-6226, to provide services from October 1, 2013 through September 30, 2014, in the amount of \$145,734.

Recommendation

Approve

Attachments

1. Fiscal Year 2014 Property Chart

Fiscal Year 2014 Property Chart

Property Maintained	Cost
Entry Sign Landscape Bed Number 1 7150 Colleyville Boulevard	\$ 816
Entry Sign Landscape Bed Number 2 4551 Colleyville Boulevard	\$ 816
Entry Sign Landscape Bed Number 3 305 W. Glade Road	\$ 774
Entry Sign Landscape Bed Number 4 3829 Glade Road	\$ 1,325
Entry Sign Landscape Bed Number 5 1101 W. McDonwell School Road	\$ 795
Entry Sign Landscape Bed Number 6 6900 Pool Road	\$ 795
Entry Sign Landscape Bed Number 7 5700 Pool Road	\$ 795
Riverwalk Medians and ROW	\$ 3,866
Bogart Road Median and ROW From Hall-Johnson to Pleasant Run	\$ 3,734
Bransford Park 405 Bransford Road	\$ 2,144
Bransford /Centerpark Medians and ROW	\$ 348
Church Street Church Street and Pleasant Run Road (NE Corner)	\$ 952
City Hall / Library 100 Main Street	\$ 8,249
City Park 5205 Bransford Road	\$ 29,248
Colleyville Center 5301 Riverwalk Drive	\$ 11,508
Cottonbelt Trail Hurst city limits to North of John McCain Road	\$ 1,920
Central Fire Station 5209 Colleyville Boulevard	\$ 1,194
Fire Station Number 1 1900 Hall-Johnson Road	\$ 294
Fire Station Number 2 5212 Pool Road	\$ 540
Fire Station Number 3 312 W. McDonwell School Road	\$ 550
Glade Road Medians Heritage Avenue to Auburndale Avenue	\$ 5,404

Fiscal Year 2014 Property Chart

Glade / Pool Road Traffic Circle Median Glade Road at Pool Road	\$ 1,285
Hall-Johnson Road Medians and ROW	\$ 9,078
Heritage Medians Glade Road to Grapevine city limits	\$ 174
Justice Center 5201 Riverwalk Drive	\$ 5,228
Kimzey Park 2200 Melanie Drive	\$ 5,538
LD Lockett Park 315 LD Lockett Road	\$ 1,405
McPherson Park 240 W. McDonwell School Road	\$ 15,293
Bidault House 1416 Glade Road	\$ 809
Nature Center 100 Millwood Drive	\$ 1,207
Pleasant Run Soccer Complex 6501 Pleasant Run Road	\$ 14,647
Pleasant Run Practice Facility 6600 Pleasant Run Road	\$ 3,854
Reagan Park 709 LD Lockett Road	\$ 1,803
Senior Center 2512 Glade Road	\$ 6,260
Sparger Park 4301 Bedford Road	\$ 1,650
Westmont Trail John McCain Road/Westcoat Road/McDonwell School Road	\$ 666
Woodbriar Park 301 W. Greenbriar Drive	\$ 770
Total	\$ 145,734



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 4g

Agenda Date 09/17/2013

Number Resolution R-13-3665

Type Resolution

Department City Manager

Title

Approval of an Interlocal Agreement for participation in Fort Worth's Environmental Collection Center Household Hazardous Waste program, and authorize the city manager to execute the agreement

Explanation

Reading and Public Hearing

The City of Fort Worth operates the Environmental Collection Center (ECC), a permanent collection facility for household hazardous waste. In 1997, the City of Colleyville entered into an interlocal agreement, which allows Colleyville residents to utilize the facility for disposal of pesticides, solvents, paints, cleansers, and other household chemicals. The ECC is open three days a week and is located at 6400 Bridge Street in Fort Worth. Colleyville residents present a current water bill or drivers license, and are allowed to use the ECC free of personal charge. The City of Fort Worth then bills the City of Colleyville quarterly at a rate of \$47.00 per household visit, as stated in the attached interlocal agreement.

Utilization of the ECC minimizes the disposal of chemicals in sink drains, which aids in the prevention of excessive wear on the City's sewer infrastructure, and provides an alternative to dumping chemicals in yards, streets, or gutters, which facilitates compliance with regulations for runoff and protects creeks and rivers.

Through the ECC, a mobile collection unit (Crud Cruiser) is scheduled to participate in the annual Clean Sweep event. Residents bring their household hazardous waste to the Clean Sweep event location where it is off-loaded by City staff and volunteers. Drop off of household hazardous waste at the Clean Sweep event is billed to the City of Colleyville at the same rate as drop offs at the ECC, \$47.00 per household visit.

In Fiscal Year 2012, a total of 524 Colleyville households utilized the ECC (144 of those occurred at the Clean Sweep event) for a total cost of \$24,628. Through the first three quarters of Fiscal Year 2013, 453 households have utilized the ECC (130 at the Clean Sweep event).

Financial Impact

The City is billed quarterly at \$47.00 per household use of the ECC. Historically, \$15,000 from the garbage and recycling franchise fee is utilized to pay for a portion of the ECC cost. The remaining cost is paid for out of Miscellaneous Contractual Services

in the Drainage Fund. It is estimated that Fiscal Year 2014 costs will be \$27,000.

Recommendation

Approve

Attachments

1. FY 2014 ECC Agreement

INTERLOCAL AGREEMENT FOR PARTICIPATION IN FORT WORTH'S
ENVIRONMENTAL COLLECTION CENTER
HOUSEHOLD HAZARDOUS WASTE PROGRAM

FY2014

COLLEYVILLE

INTERLOCAL AGREEMENT FOR PARTICIPATION IN FORT WORTH'S
ENVIRONMENTAL COLLECTION CENTER
HOUSEHOLD HAZARDOUS WASTE PROGRAM

THIS AGREEMENT is entered into by and between the City of Fort Worth, Texas, a home-rule municipal corporation situated in Tarrant, Denton, Parker, and Wise Counties, Texas, hereinafter called "Fort Worth," acting by and through Fernando Costa, its duly authorized Assistant City Manager and the City of Colleyville, hereinafter referred to as "Participating City" and located in Tarrant County, Texas acting herein by and through Jennifer Fadden its duly authorized City Manager.

(Name) (Title)

DELIVERY OF NOTICES

Any notices required to be given under this Agreement shall be delivered as follows:

If to Fort Worth:

Michael A. Gange, Assistant Director
TPW – Environmental Management Division
City of Fort Worth
1000 Throckmorton
Fort Worth, Texas 76102

If to Participating City:

Adrienne Lothery, Strategic Services Manager

City of Colleyville

100 Main Street

Colleyville, TX 76034

OPERATIONAL CONTACTS

Participating City's Operational Contact Persons:

Designated person is: Adrienne Lothery telephone number: 817-503-1112
Mobile phone number (24-hour) where he or she can be reached: 972-998-3105
Email Address: alothery@colleyville.com

Alternate person is Randy Bright telephone number: 817-503-1092
Mobile phone number (24-hour) where he or she can be reached: 682-554-0199
Email Address: rbright@colleyville.com

VOUCHER UTILIZATION

The Participating City:

☐

DOES wish to use a voucher system for its residents visiting the ECC or a mobile event.



DOES NOT wish to use a voucher system for its residents visiting the ECC or a mobile event.

If a voucher system will be used only residents with an official voucher provided by Participating City will be allowed to drop wastes off at the ECC or at mobile events in Participating City. **A copy of the official voucher must be attached to this agreement.**

INVOICE DELIVERY

Invoices to Participating City shall be delivered to:

Adrienne Lothery

Name

City Manager's Office

Department (if applicable)

100 Main Street

Street Address or PO Box

Colleyville, TX 76034

City, State, ZIP

alothery@colleyville.com

email address for billing questions and correspondence

Participating City shall notify Fort Worth in writing if the above contact information changes during the term of this Agreement.

Remainder of this page intentionally left blank

WITNESSETH

WHEREAS, Texas Government Code, Chapter 791, authorizes the formulation of interlocal cooperation agreements between and among local governments; and

WHEREAS, Texas Government Code, §791.011 provides that a local government may contract with another local government to perform governmental functions and services, and §791.003(3)(H) defines waste disposal as a governmental function and service; and

WHEREAS, Texas Government Code, §791.025 provides that a local government may agree with another local government to purchase services; and

WHEREAS, Fort Worth and Participating City desire to enter into an interlocal agreement whereby Fort Worth will purchase the services of a waste disposal/recycling firm or firms and will administer a household hazardous waste collection program; and

WHEREAS, Fort Worth and Participating City mutually desire to be subject to the provisions of Texas Government Code, Chapter 791, also known as the Interlocal Cooperation Act.

NOW THEREFORE, it is agreed as follows:

1. DEFINITIONS

- A. Unless a provision in this Agreement explicitly states otherwise, the following terms and phrases, as used in this Agreement, shall have the meanings hereinafter designated.

Act of God means an act occasioned by the direct, immediate, and exclusive operation of the forces of nature, uncontrolled or uninfluenced by the power of humans and without human intervention.

Bill of Lading lists the contents of the mobile collection unit.

Environmental Collection Center (ECC) means the City of Fort Worth TPW-Environmental Management Division facility located at 6400 Bridge Street, Fort Worth, Texas, which is to be used by Fort Worth for the aggregation of household hazardous wastes that have been brought to the facility by participating cities' households for subsequent recycling, disposal, and/or reuse.

Environmental damages means all claims, judgments, damages, losses, penalties, fines, liabilities (including strict liability), encumbrances, liens, costs, and expenses of investigation and defense of any claim, whether or not such claim is ultimately defeated, and of any good faith settlement or judgment, of whatever kind or nature, contingent or otherwise, matured or un-matured, foreseeable or unforeseeable, including without limitation reasonable attorney's fees and disbursements and consultant's fees, any of which are incurred subsequent to the execution of this Agreement as a result of the handling, collection, transportation, storage, disposal, treatment, recovery, and/or reuse of waste pursuant to this Agreement, or the existence of a violation of environmental requirements pertaining to same, and including without limitation:

- (a) Damages for personal injury and death, or injury to property or natural resources;
- (b) Fees incurred for the services of attorneys, consultants, contractors, experts, laboratories and all other costs incurred in connection with the investigation or remediation of such wastes or violation of environmental requirements including, but not limited to, the preparation of any feasibility studies or reports or the performance of any cleanup, remediation, removal, response, abatement, containment, closure, restoration or monitoring work required by any federal, state or local governmental agency or political subdivision, or otherwise expended in connection with the existence of such wastes or violations of environmental requirements, and including without limitation any attorney's fees, costs and expenses incurred in enforcing this Agreement or collecting any sums due hereunder; and
- (c) Liability to any third person or governmental agency to indemnify such person or agency for costs expended in connection with the items referenced in subparagraph (b) herein.

Environmental requirements means all applicable present and future statutes, regulations, rules, ordinances, codes, licenses, permits, orders, approvals, plans, authorizations, concessions, franchises, and similar items, of all governmental agencies, departments, commissions, boards, bureaus, or instrumentalities of the United States, states, and political subdivisions thereof and all applicable judicial, administrative, and regulatory decrees, judgments, and orders relating to the protection of human health or the environment, including without limitation:

- (a) All requirements, including but not limited to those pertaining to reporting, licensing, permitting, investigation, and remediation of emissions, discharges, releases, or threatened releases of hazardous materials, pollutants, contaminants, or hazardous or toxic substances, materials, or wastes whether solid, liquid, or gaseous in nature, into the air, surface water, groundwater, storm water, or land, or relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport, or handling of pollutants, contaminants, or hazardous or toxic substances, materials, or wastes, whether solid, liquid, or gaseous in nature; and
- (b) All requirements pertaining to the protection of the health and safety of employees or the public.

Force majeure means decrees of or restraints by a governmental instrumentality other than the Parties, acts of God, work stoppages due to labor disputes or strikes, failure of Fort Worth's contractor(s) to perform pursuant to their agreements with Fort Worth for the conduct of the collection of household hazardous waste, fires, explosions, epidemics, floods, extreme weather, riots, war, rebellion, and sabotage.

Household hazardous waste (HHW) means any solid waste generated in a household by a consumer which, except for the exclusion provided for in 40 CFR § 261.4(b)(1), would be classified as a hazardous waste under 40 CFR Part 261.

Manifest means the uniform hazardous waste manifest form(s) that must accompany shipments of municipal hazardous waste or Class 1 industrial solid waste.

Mobile collection event means a household hazardous waste collection event by Participating City utilizing a mobile collection unit.

Mobile Collection Unit (MCU) means a non-self-propelled vehicle used for the periodic collection of household hazardous waste by Participating City, off-site of the ECC, which is transported to the ECC to dispose of the household hazardous waste collected at the mobile collection event. Mobile Collection Units owned by Fort Worth are designed to hold the hazardous waste of approximately 50 to 75 households.

Participating City means the municipality which has entered into this agreement with the City of Fort Worth.

Participating Entities, when used in the plural, means Fort Worth, Participating City, and all other entities which have entered into interlocal agreements with Fort Worth for the ECC household hazardous waste collection program.

Person means an individual, corporation, organization, government, or governmental subdivision or agency, business trust, partnership, association, or any other legal entity.

Waste has the same meaning as "solid waste" as that term is defined in Texas Health and Safety Code §361.003, and including hazardous substances.

- B. Unless a provision in this Agreement explicitly states otherwise, the following abbreviations, as used in this Agreement, shall have the meanings hereinafter designated.

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act, its amendments, associated case law, and state counterparts.

CPR - cardiopulmonary resuscitation.

DOT - United States Department of Transportation.

ECC – Fort Worth Environmental Collection Center.

EPA - United States Environmental Protection Agency.

HAZCAT - hazardous categorization.

HAZWOPER - hazardous waste operations and emergency response and the training, certification, and legal requirements associated therewith.

HM - hazardous materials.

HHW - household hazardous waste.

MCU - Mobile Collection Unit.

TCEQ – Texas Commission on Environmental Quality.

2.
PURPOSE

The purpose of this interlocal agreement (hereafter "Agreement") is the provision of services by Fort Worth to Participating City whereby, subject to the terms and conditions specified below, Fort Worth will administer and supervise a regional household hazardous waste collection program, which will be available to households within Participating City as described herein.

3.
TERM

This Agreement shall be effective from October 1, 2013 or the date the last party has signed this Agreement, whichever is later, through September 30, 2014; however, the duties and responsibilities of the Parties for events which occurred during the term of the contract shall survive. If Participating City has mobile collection events scheduled during the months of October through December 2014 and this Agreement has not been renewed by the end of the regular term, this agreement shall be extended on a month to month basis until the mobile collection events have been completed or cancelled by Participating City.

In addition, this agreement may be extended by the duly authorized, mutual, and written agreement of the parties for up to three (3) additional one-year terms..

4.
SERVICES OF FORT WORTH

Fort Worth agrees to perform the following services for Participating City in connection with the ECC household hazardous waste collection program:

- A. Fort Worth will administer a regional household hazardous waste collection program. This program will include the operation of the Environmental Collection Center, which will accept for disposal and/or recycling household hazardous waste from households located within Participating City. Fort Worth shall not accept compressed flammable gas containers; radioactive materials; explosives or potentially shock sensitive materials; biological, etiologic, or infectious materials; wastes from businesses; or any other wastes that Fort Worth has determined are unacceptable.
- B. Fort Worth will employ or retain personnel to provide the services necessary to perform Fort Worth's obligations in this Agreement.
- C. Fort Worth will enter into a contract(s) with a waste disposal/recycling firm(s) for the handling, collection, transportation, storage, disposal, treatment, recovery, and/or reuse of household hazardous waste that is collected at the ECC or during mobile collection events.
- D. Fort Worth will, if requested in writing by Participating City, provide Participating City with copies of waste manifests for shipments of waste from the ECC.
- E. Fort Worth will, if requested in writing by Participating City, provide Participating City a monthly report of the Participating City's households who disposed of household hazardous waste at the Environmental Collection Center or a mobile collection event.

- F. Fort Worth will issue a report and an invoice at the end of each quarter detailing the number of Participating City's households that disposed of household hazardous waste at the Environmental Collection Center or at mobile collection events.
- G. Fort Worth will act under this Agreement in accordance with all applicable state and federal laws.

H. Mobile Collection Events

Participating City may schedule a mobile collection event to be operated by Fort Worth personnel using one of Fort Worth's MCUs or conduct their own mobile collection events using either Participating City's MCU or Fort Worth's Reserve MCU (as available). State regulations require notification to the Texas Commission on Environmental Quality (TCEQ) at least 45 days prior to conducting the event.

1. Fort Worth Operated Events:

If Participating City would like to schedule a mobile collection event with the Fort Worth Mobile Collection Unit, Participating City shall contact the ECC as soon as possible for a list of available dates. The time and location shall be agreeable to both parties. Participating City may schedule one mobile collection event each contract year. Fort Worth will file notification of the event with TCEQ as required by 30 TAC §335.403.

(a) Scheduling Events

Fort Worth will begin scheduling mobile collection events for the 2014 calendar year on January 2, 2014. To ensure proper notification to TCEQ, events must be scheduled at least sixty (60) days ahead of the proposed date. Participating City acknowledges that Fort Worth contracts with other municipalities and that Fort Worth will be accommodating each Participating City's request on a first come first served basis. Therefore, Participating City acknowledges that its chosen date to schedule a mobile collection event may be reserved by another city and Participating City will have to then choose another date. Participating City will, in no event, be entitled to any damages or recovery of any costs, except as provided herein.

(b) Location

If Participating City chooses to hold the Mobile Collection Event on private property, Participating City shall obtain a signed waiver from the owner of the property sixty (60) days prior to the event. The waiver shall be in the form of Exhibit B or similar form approved by Fort Worth. The signed waiver must be sent to Fort Worth sixty (60) days before the Mobile Collection Event. If the signed waiver is not sent to Fort Worth sixty (60) days before the Mobile Collection Event, Fort Worth will not send the Fort Worth Mobile Collection Unit to the event and Participating City will, in no event, be entitled to any damages or recovery of any costs, except as provided herein. All events must be held on an impervious surface.

(c) At the Mobile Collection Event, Participating City acknowledges and agrees that Fort Worth shall accept household hazardous waste from the first 50 households that show proof of residency at the Mobile Collection Event. After the first 50 households, Fort Worth will determine in its sole discretion how much more waste it can accept for proper transport back

to the ECC. If more households arrive at the event than Fort Worth can accept, Participating City will in no event be entitled to any damages or recovery of any costs, except as provided herein.

- (d) Due to the lack of storage space at the ECC, Participating City acknowledges and agrees that if it requests the Fort Worth Mobile Collection Unit at a mobile collection event, a Participating City's MCU shall not also be at the event.
- (e) Fort Worth, in its sole discretion, will determine whether to send the Fort Worth Mobile Collection Unit to Participating City's Collection Event during adverse weather, the threat of adverse weather, or other hazardous conditions including but not limited to sleet, snow, rain, mist or hail. In the event Fort Worth determines not to send the Fort Worth Mobile Collection Unit, Fort Worth shall attempt to notify persons listed herein as an "Operational Contact" by the Participating City and shall attempt to send a Fort Worth employee to the Participating City's event to tell any residents that come to dispose of household hazardous waste that the Fort Worth Mobile Collection Unit will not be coming to the event, but the resident can go to the ECC to dispose of the waste. A map with directions to the ECC also will be provided.

2. Participating City Mobile Collection Unit:

- (a) Fort Worth agrees to accept household hazardous waste from mobile collection events conducted by Participating City using Participating City's MCU in accordance with the terms of this Agreement.
- (b) Fort Worth agrees to restock the items it removes from Participating City's MCU, however, Fort Worth shall only restock items listed in Exhibit "A", attached and incorporated herein as if set forth.

3. Loan of the Reserve Mobile Collection Unit

The reserve MCU is a specially designed and equipped thirty-six (36) foot gooseneck box-trailer and one (1) ton pickup owned by Fort Worth. Participating City may request the loan of Fort Worth's Reserve MCU free of charge for use in a Household Hazardous Waste collection event when available. Participating City may use the Reserve MCU to transport HHW to Fort Worth's ECC or another collection center that may lawfully receive HHW. Participating City shall provide Fort Worth with a written request, facsimile or e-mail at least sixty (60) days prior to the event date for which the request is made. Fort Worth shall have sole determination whether the Reserve MCU is available for use by Participating City and shall notify Participating City as soon as is reasonably practicable of such decision. Fort Worth shall not participate in nor be responsible for any part of the Participating City's HHW Collection Event unless and except by written mutual agreement.

- (a) Fort Worth shall disclose any known problems the Reserve MCU may have in performing the tasks necessary for the HHW Collection Event. Prior to issuance of the Reserve MCU, a pre-trip inspection for potential maintenance problems will be preformed by Fort Worth. Also, both parties

will complete a pre-trip aesthetic assessment. Participating City shall be responsible for all certifications and insurance necessary for the proper operation of the Reserve MCU.

- (b) Participating City agrees to maintain and return the Reserve MCU in as good condition as it was in when Participating City took possession for use. Participating City shall return the Reserve MCU to Fort Worth in a timely manner and as mutually agreed upon.
- (c) Participating City shall be responsible for all property damage, personal injury or death caused by Participating City's employees, volunteers, contractors, or agents and arising out of the use of the Reserve MCU during the term of this Agreement.
- (d) It is expressly understood and agreed that, in the execution of this Agreement, neither of the parties waives, nor shall be deemed hereby to waive, any immunity or defense that would otherwise be available to it against claims arising in the exercise of governmental powers and functions. By entering into this Agreement the parties do not intend to create any obligations, expressed or implied, other than those set forth herein and this Agreement shall not create any rights in parties not signatories hereto.

5.

DUTIES OF PARTICIPATING CITY

Participating City agrees to perform the following duties in connection with the household hazardous waste collection program:

- A. Participating City will designate one of its employees, and another as an alternate, to act as its household hazardous waste collection Operational Contact to interact with Fort Worth as designated on the signature page to this contract.
- B. Participating City will coordinate and fund all program advertising targeted to its own citizens, as it deems necessary. Such advertising shall include the type of wastes that will be accepted at the ECC, the requirement of proof of residency, and weather cancellation information.
- C. Participating City shall notify its residents of the ECC hours of operation and dates it is closed as provided in Section 9 "The Environmental Collection Center Hours of Operation."
- D. Participating City may choose to utilize a voucher system for its residents in order for them to bring HHW to the ECC. If Participating City chooses to use such a system, it shall designate so herein and include a copy of the official voucher. In addition, if a citizen from a Participating City that utilizes a voucher system comes to the ECC or a mobile collection event without a voucher, Participating City acknowledges and agrees that Fort Worth will not accept the household hazardous waste until Participating City authorizes the acceptance in writing.

- E. Participating City may submit a written request for a monthly report listing the number of its city's households that have disposed of household hazardous waste at the ECC or a mobile collection event.
- F. Participating City shall provide traffic control and signage for the mobile collection event, and shall provide personnel to assist Fort Worth with the offloading of material, surveys, and screening of persons dropping off household hazardous waste. Prior to the event, the parties shall agree upon the details of the traffic control, signage, and personnel assistance.
- G. If a Participating City resident presents waste that was collected from multiple households, Fort Worth reserves the right to charge the Participating City based on the total number of households from which the waste originated even if the resident has only one voucher.
- H. Participating City shall provide a means for disposing of solid waste (e.g. boxes, trash, containers) on site during a mobile collection event.
- I. Mobile Collection Events using Participating City's MCU or Reserve MCU
 - 1. Participating City is responsible for proper notification to TCEQ as required by 30 TAC §335.403.
 - 2. Participating City shall advise the ECC at least 72 hours in advance of its mobile collection events. Participating City shall collect only HHW during a mobile collection event. Wastes from commercial, agricultural, and industrial sources shall not be accepted. Participating City shall not accept compressed flammable gas containers; radioactive materials; explosives or potentially shock sensitive materials; biological, etiologic, or infectious materials; or any other wastes that Fort Worth has determined are unacceptable.
 - 3. In accordance with the latest DOT requirements, Participating City's MCU operators will properly categorize, package, mark, label, and load into the MCU, all wastes received at the mobile collection event. Recyclable products (used oil, used oil filters, latex paint, recyclable anti-freeze, lead-acid batteries, and fluorescent lights) will be segregated into containers for recyclables.
 - 4. After accepting wastes, Participating City's MCU operators shall thoroughly check each container for proper labeling and identification. If a container is properly identified, the material will be segregated according to hazard class and prepared for packaging. If a container does not have adequate labeling to permit identification, the MCU operators shall then attempt to identify the material from its physical characteristics using HAZCAT analysis and from information provided by the household presenting the waste.
 - 5. The Participating City's MCU operators shall package all hazardous materials in accordance with United States Department of Transportation (DOT) requirements, United States Environmental Protection Agency (EPA) requirements, and all other applicable federal and state requirements. After all the wastes have been properly identified and segregated, the MCU operators will reexamine the wastes for compatibility, list them on the container content sheets,

and pack them into drums. Oil-based paints and latex paints shall be bulked separately in 55-gallon drums, or if the paint is left in its container, the paint can be packed in a lined cubic yard box, and packed and labeled according to federal and state regulations. Participating City shall not transport waste that is not HHW to the ECC. Participating City agrees to make its own arrangements to dispose of any non-HHW waste collected at the event.

6. Prior to transporting the HHW from the collection event site, Participating City's MCU operators shall complete a Bill of Lading, and shall keep the Bill of Lading in the cab of the truck hauling the MCU during transportation of the HHW to the ECC. Participating City shall require that a minimum of one copy of the latest North American Emergency Response Guidebook be kept within the cab of the truck.
7. During transportation, Participating City's MCU operators shall placard the MCU for transportation of hazardous waste in accordance with federal and state law.
8. Upon the return of the MCU to the ECC, Participating City's MCU operators shall follow the instructions of Fort Worth regarding the placement of the MCU for unloading. Fort Worth shall take possession of the MCU from Participating City after the MCU has been properly parked for unloading in accordance with Fort Worth's instructions and all required documents have been delivered to the ECC manager or his designee at the ECC. Fort Worth shall, within a reasonable amount of time, unload the HHW from the Participating City's MCU and store the unit at the ECC. After being contacted, Participating City shall pickup their unit within 10 days.
9. If Fort Worth, in its sole discretion, determines that Participating City's MCU operators improperly packaged any of the HHW delivered to the ECC, Fort Worth shall repackage such waste, and Participating City shall reimburse Fort Worth as set forth herein.
10. If a spill emanating from the Participating City's MCU or the Reserve MCU occurs at the ECC while the MCU is still in Participating City's possession, Fort Worth shall take control of the spill response and Participating City will reimburse Fort Worth for its response costs as set forth herein.

6.

USE OF WASTE DISPOSAL/RECYCLING FIRMS FOR HOUSEHOLD HAZARDOUS WASTE

- A. Fort Worth will enter into a contract(s) with a waste disposal/recycling firm(s) for the handling, collection, transportation, storage, disposal, treatment, recovery, and/or reuse of household hazardous waste, from the ECC.
- B. Such firm(s) shall be required pursuant to the contract(s) to assume generator status for the waste collected, (excluding used oil, lead-acid batteries and antifreeze) to choose a disposal site for the waste subject to Fort Worth's approval, and to indemnify Fort Worth and participating cities against any and all environmental damages and the violation of any and all environmental requirements resulting from the handling, collection, transportation, storage, disposal, treatment, recovery, and/or recycling of waste collected pursuant to this agreement, when said environmental damages or the violation of said

environmental requirements was the result of any act or omission of contractor, its officers, agents, employees, or subcontractors, or the joint act or omission of contractor, its officers, agents, employees, or subcontractors and any other person or entity.

- C. **THE PARTIES RECOGNIZE THAT ALTHOUGH THE FIRM (S) WILL BE REQUIRED TO ASSUME GENERATOR STATUS, THIS ASSUMPTION WILL NOT RELIEVE PARTICIPATING CITY OF LIABILITY FOR THE WASTE UNDER FEDERAL LAW AND STATE LAW.** Fort Worth will arrange for recycling vendors for used oil, batteries, antifreeze, and other materials, as it deems appropriate.

7.

REUSE OF COLLECTED MATERIALS

- A. From time-to-time Fort Worth will make available to residents and businesses of Fort Worth, as well as, Participating City and residents and businesses of Participating City for their use, collected household hazardous waste materials that are suitable for reuse, such as paint, fertilizer, motor oil, and antifreeze. Fort Worth shall not charge for any materials that are picked up for reuse.
- B. Some materials made available for reuse may have been consolidated and filtered by Fort Worth prior to being made available. Used antifreeze will have been consolidated in a barrel, filtered, and pH balanced, and new antifreeze may have been added to the barrel.
- C. In regards to materials accepted by Participating City, its employees, residents, or any other person **FORT WORTH MAKES NO REPRESENTATIONS, WARRANTIES, OR GUARANTIES THAT:**
1. the container contents are what the label indicates;
 2. the container contents are those originally placed into the container by the manufacturer;
 3. the product is of the quality intended for its use;
 4. the contents of the container have been stored properly;
 5. the instructions on the container label for use, storage, and first aid are current or correct;
 6. the container is in unimpaired condition;
 7. the product is still approved for use (i.e., it has not been banned or recalled); and
 8. the product can be used without risk to persons, property or the environment.

FURTHERMORE, ALL WARRANTIES, EXPRESS AND IMPLIED, ARE SPECIFICALLY DENIED. PARTICIPATING CITY SHALL NOTIFY RECIPIENTS OF THESE TERMS AND CONDITIONS.

D. Participating City shall contact the ECC manager to arrange a pickup time to obtain materials. Participating City agrees that it shall not return to Fort Worth, directly or indirectly, any materials it obtains from Fort Worth under this paragraph.

E. **INDEMNIFICATION REGARDING REUSED OR RECYCLED MATERIALS.**

1. IN REGARDS TO REUSED OR RECYCLED MATERIALS ACCEPTED BY PARTICIPATING CITY, PARTICIPATING CITY DOES HEREBY WAIVE ALL CLAIMS, INCLUDING PRODUCTS LIABILITY CLAIMS, AND RELEASES, AND HOLDS HARMLESS THE CITY OF FORT WORTH, AND ALL OF ITS OFFICIALS, OFFICERS, EMPLOYEES, AGENTS, AND VOLUNTEERS, IN BOTH THEIR PUBLIC AND PRIVATE CAPACITIES, FROM ANY AND ALL LIABILITY, CLAIMS, SUITS, DEMANDS, EXPENSES OF LITIGATION, OR CAUSES OF ACTION WHICH MAY ARISE BY REASON OF INJURY TO PERSONS, LOSS OF PROPERTY, DAMAGE TO PROPERTY, OR LOSS OF USE OF ANY PROPERTY , OCCASIONED BY THE TRANSPORTATION, STORAGE, HANDLING, USE, AND DISPOSAL BY PARTICIPATING CITY OF ANY MATERIALS ACCEPTED BY PARTICIPATING CITY UNDER THIS AGREEMENT FROM FORT WORTH.

2. IF THE PARTICIPATING CITY DOES NOT AGREE TO THE INDEMNIFICATION AND WAIVER IN PARAGRAPH E ABOVE, THEN THE PARTICIPATING CITY SHALL NOT ACCEPT, NOR ALLOW ANY OTHER PERSON TO ACCEPT ANY OF THE REUSED OR RECYCLED MATERIALS AND SHALL NOT BE REQUIRED TO AGREE TO THE WAIVER IN PARAGRAPH E. Initial here to reject term 7.E.1. and accept alternate term 7.E.2. _____.

F. In regards to materials accepted by residents or businesses of Participating Cities, FORT WORTH MAKES NO REPRESENTATIONS, WARRANTIES OR GUARANTIES THAT:

1. the container contents are what the label indicates;
2. the container contents are those originally placed into the container by the manufacturer;
3. the product is of the quality intended for its use;
4. the contents of the container have been stored properly;
5. the instructions on the container label for use, storage, and first aid are current or correct;
6. the container is in unimpaired condition;
7. the product is still approved for use (i.e., it has not been banned or recalled); and
8. the product can be used without risk to persons, property or the environment.

FURTHERMORE, ALL WARRANTIES, EXPRESS AND IMPLIED, ARE SPECIFICALLY DENIED.

- G. Participating City shall attempt to inform its residents and businesses that if they go to the Environmental Collection Center to pick up household hazardous waste for reuse, a release of liability must be signed to accept the household hazardous waste for reuse.

8.
RIGHT TO REFUSE WASTE

Participating City agrees that Fort Worth shall have the right to refuse to accept waste at the ECC from Participating City or Participating City's resident, if in the reasonable judgment of Fort Worth:

- A. The waste is not household hazardous waste;
- B. The waste fails to meet other established criteria established by this Agreement, or that have been established by Fort Worth subsequent to the execution of the Agreement;
- C. The individual does not have sufficient identification to establish that he/she is in fact a resident of Participating City;
- D. Participating City has implemented a voucher system for its residents to dispose of waste, and the individual does not have a valid voucher; or
- E. The waste or the individual presents a hazard to the ECC or to persons or property at the ECC.

9.
ENVIRONMENTAL COLLECTION CENTER HOURS AND DAYS
OF OPERATION

- A. Hours of Operation

During the term of the Agreement, the ECC's hours of operation are as follows:

Thursday and Friday 11:00 a.m. -- 7:00 p.m.

Saturday 9:00 a.m. -- 3:00 p.m.

- B. Days the Environmental Collection Center will be closed

During the term of the agreement, the ECC will be closed on the following holidays that are observed on days the ECC would otherwise be open to the public:

Thanksgiving Holiday, Thursday and Friday, November 28-29, 2013

Independence Day, Friday, July 4, 2014

In addition to the above closures Fort Worth employees will not be available to conduct mobile collection events on May 24, 2014 and August 30, 2014 although the ECC will remain open on those days. The ECC may close due to furlough days or other causes, and the City of Fort Worth does not represent to Participating City that the ECC will be open on any particular days. If additional closures due to any cause are necessary Fort Worth will notify Participating City prior to the closure unless due to an unforeseeable event.

C. Notifying Residents

Participating City agrees to notify its residents of the ECC's hours of operation and dates it will be closed. Participating City also may advertise the 24-hour Environmental Collection Center telephone number: (817) 871-5257.

10.
COMPENSATION

As fair compensation for the services provided by Fort Worth pursuant to this Agreement:

- A. Participating City agrees to pay Fort Worth the sum of **\$47.00** per household per visit to the ECC (or per participating household in a Mobile Collection Event) to dispose of household hazardous waste. If a Participating City resident presents waste that was collected from multiple households, Fort Worth reserves the right to charge the Participating City based on the total number of households from which the waste originated.
- B. If Fort Worth determines that Participating City's MCU operators improperly packaged any of the HHW delivered to the ECC, Fort Worth shall repackage such waste, and Participating City shall reimburse Fort Worth for its staff time at \$20.00 an hour and the cost of supplies.
- C. If a spill emanating from the Participating City's MCU or the Reserve MCU occurs at the ECC while the MCU is still in Participating City's possession, Fort Worth shall take control of the spill response and Participating City will reimburse Fort Worth for its response costs for City staff time (\$60.00 per hour) plus the cost of supplies and the actual costs for the spill response and remediation incurred by the City of Fort Worth for third party contractors and responding governmental agencies.
- D. The amount due to Fort Worth for services provided under this Section, Paragraphs A, B, and C, shall be billed to Participating City quarterly. Participating City shall pay Fort Worth within 30 days of receiving a bill from Fort Worth. If Fort Worth does not receive payment within 30 days, Fort Worth shall inform Participating City in writing that it will not accept any household hazardous waste from Participating City's residents and that Fort Worth will not participate in a mobile collection event or provide a mobile collection unit until paid.
- E. At the end of the term of this Agreement, Fort Worth shall provide a final accounting to Participating City, which will include the total number of Participating City's households which participated in the program, repackaging fees, if any, and the total cost of spill response charged to Participating City, if any.
- F. Pursuant to the requirements of Government Code §791.011 (a)(3), the amount due to Fort Worth under Subparagraph D. above shall be paid from revenues currently available to Participating City in the present fiscal year.

11.
ARTWORK, "CAPTAIN CRUD AND THE CRUDDIES," AND PROMOTIONAL MATERIALS
LICENSE AGREEMENT

Fort Worth is the owner of "**Captain Crud**" and the Cruddies ("**Bloomer**," "**Otto**," "**Pestie**," "**Scrub**," and "**Van Goo**") and the recycling buddies ("**Scrappy**," "**Juggles**," and "**Cana Nana**") "**Conquer Your Crud**," and "**Crud Cruiser**", and therefore all ownership rights belong

to Fort Worth. Fort Worth has registered these marks as service marks with the Secretary of State.

- A. Fort Worth hereby grants to Participating City a non-transferable, non-exclusive license to use all the artwork and promotional materials that may be provided by Fort Worth to be used solely in the conduct of the business of Participating City's disposal and recycling of household hazardous waste programs. If Participating City wishes to use to Licensed Art and/or Promotional Materials in other limited situations, Participating City must first obtain express written consent from Fort Worth.
- B. Fort Worth may provide licensed Artwork and Promotional Materials to Participating City pursuant to the terms of this Agreement. Participating City acknowledges that by virtue of this License, Participating City acquires only the right to use the original and permitted duplicate copies of the Licensed Artwork and Promotional Materials and does not acquire any rights of ownership in the Licensed Artwork and Promotional Materials, which rights shall remain exclusively with Fort Worth. If Participating City wants to modify or change the artwork and/or promotional materials in any manner, Participating City hereby agrees to contact Fort Worth in writing to obtain written consent before modifying or changing any artwork and/or promotional materials.
- C. If Participating City desires an actor to portray "Captain Crud" for an event, Participating City shall use actors approved by Fort Worth to portray "Captain Crud" since "Captain Crud" is owned by Fort Worth. Participating City shall be solely responsible for compensating actor for the services provided to Participating City. Participating City will contact Fort Worth as soon as possible with the date and time of the event agreeable to both parties to obtain approval for the chosen actor and to request and pickup the "Captain Crud" costume for its events. Fort Worth will provide the "Captain Crud" costume. However, Participating City agrees to be liable to Fort Worth for any damage to the costume or if Participating City fails to return the entire costume to Fort Worth or if the costume is not returned in the same condition as received.

12. IMMUNITY

It is expressly understood and agreed that, in the execution of this Agreement, none of the Participating Cities waives, nor shall be hereby deemed to waive, any immunity or defense that would otherwise be available to it against claims arising in the exercise of governmental powers and functions, and that the services described in this Agreement are a governmental function.

13. FORCE MAJEURE

A delay or failure of Fort Worth to perform services pursuant to this Agreement shall be excused to the extent that the delay or failure to perform resulted from a force majeure event, and the delay or failure was beyond the control of Fort Worth and not due to its fault or negligence. Participating City shall not have, and hereby waives, any claim whatever for any damages resulting from delays or failure to perform caused by a force majeure event.

14.
TERMINATION

The parties shall each have the right to terminate the Agreement for any reason, with or without cause, upon thirty (30) days written notice to the other party. Upon termination, the parties shall be released from all contractual obligations to the other party excluding "USE OF WASTE DISPOSAL/RECYCLING FIRMS FOR HOUSEHOLD HAZARDOUS WASTE" "REUSE OF COLLECTED MATERIALS" and "ARTWORK, "CAPTAIN CRUD AND THE CRUDDIES," AND "PROMOTIONAL MATERIALS LICENSE AGREEMENT" and any terms and conditions arising from events occurring during the term of the contract .

15.
ENTIRETY

This Agreement contains all commitments and Agreements of the parties hereto, and no other oral or written commitments shall have any force or effect if not contained herein, except that this Agreement can be amended or modified by the parties if such amendment or modification is in writing and signed by Participating City and Fort Worth.

16.
SEVERABILITY

In the event anyone or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision thereof and this Agreement shall be construed as if such invalid, illegal, or unenforceable provisions had never been contained herein.

17.
VENUE

Should any action, real or asserted, at law or in equity, arise out of the terms and conditions of this Agreement, venue for said action shall be in Tarrant County, Texas.

18.
AUTHORITY

This Agreement is made for Fort Worth and Participating City as an Interlocal Agreement, pursuant to Texas Government Code, Chapter 791.

19.
AUTHORIZATION

The undersigned officers and/or agents of the parties hereto are properly authorized officials and have the necessary authority to execute this Agreement on behalf of the parties hereto, and each party hereby certifies to the other that any necessary resolutions extending such authority have been duly passed and are now in full force and effect.

SIGNATURE PAGE
INTERLOCAL AGREEMENT FOR PARTICIPATION IN FORT WORTH'S
ENVIRONMENTAL COLLECTION CENTER, HOUSEHOLD HAZARDOUS WASTE PROGRAM

CITY OF FORT WORTH

CITY OF COLLEYVILLE

By:

By:

Fernando Costa
Assistant City Manager
Date: _____

Printed name: Jennifer Fadden
Title: City Manager
Date: _____

APPROVED AS TO FORM
AND LEGALITY:

APPROVED AS TO FORM
AND LEGALITY:

Arthur N. Bashor
Assistant City Attorney

City Attorney / Assistant City Attorney

ATTEST:

ATTEST:

Mary J. Kayser
City Secretary

City Secretary

Contract Authorization

Date

Exhibit "A"

RESTOCKING LIST FOR THE MOBILE COLLECTION UNIT

Material	Amount Restocked	Special Needs	Remarks
55 gallon open top drums (open top for loose packs)	Amount taken off the trailer		
55 gallon drums (closed top) (oil, antifreeze, bulk flammable materials and one extra)	Amount taken off the trailer		
Fiber drums (55 or 30 gallon) Aerosols, acids, bases and oxidizers)	Amount taken off the trailer		
Gaylord box liners (plastic)	Amount taken off the trailer		
55 gallon drum liners	Amount taken off the trailer		
5 gallon buckets (filters/haz chemicals)	Amount taken off the trailer		
Survey Forms	Amount taken off the trailer		
Labels/drum placard	Amount taken off the trailer		
Gaylord boxes	Amount taken off the trailer		
Absorbent pads	Amount taken off the trailer		
Vermiculite	Amount taken off the trailer		
Oil dry	Amount taken off the trailer		
Promotional Materials & Brochures	Amount needed		

Exhibit "B"

WAIVER AND RELEASE OF LIABILITY FOR COLLECTION OF HOUSEHOLD
HAZARDOUS WASTE

I being the owner of property located at _____
have been asked by the City of _____ to allow a mobile collection
event on my property to collect household hazardous waste on the _____, 20____.
I hereby give my permission to the City of _____ and the City of Fort
Worth, to hold a household hazardous waste collection event on my property in which the City
of _____ has asked the City of Fort Worth to send its mobile
collection unit to collect the household hazardous waste that is brought to the event.

Therefore, I hereby RELEASE, DISCHARGE, HOLD HARMLESS, INDEMNIFY the City of
Fort Worth or its officers, agents, and employees and the City of _____
and its officers, agents, and/or employees for any and all claims, demands, liability, causes of
action, actions or suits of any character that I may have against the City of Fort Worth or its
officers, agents, and/or employees and the City of _____ or its officers,
agents, and/or employees for any property loss or damage, for any and all personal injury
including death or any other damage of any kind or character which may arises or that arises
from allowing the City of _____ to hold a household hazardous waste
collection event, in which the City of Fort Worth sends its mobile collection unit on my property.

I have read this Waiver and Release and fully understand its terms and conditions. I have not
been influenced in any extent whatsoever by any representation or statements not contained in
this Agreement.

Signature

Date

Witness

Date



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 4h

Agenda Date 09/17/2013

Number Resolution R-13-3665

Type Resolution

Department City Manager

Title

Approval of Broker/Dealer firms for investment purchases

Explanation

Reading and Public Hearing

The City's Investment Policy provides that the City Council shall annually approve broker/dealer firms to receive quotes for investment purchases. A recap of the responses received to the City's broker/dealer questionnaire from the following firms is provided:

- Cantor Fitzgerald L.P.
- Coastal Securities, Inc.
- Duncan-Williams, Inc.
- J.P. Morgan Securities, Inc.

Cantor Fitzgerald L.P., Coastal Securities, Inc., Duncan Williams, Inc., and J.P. Morgan Securities, Inc. are firms the City has approved in the past and is currently using.

Financial Impact

There is no financial impact to the City.

Recommendation

Approve

Attachments

1. Recap of Broker / Dealer questionnaire responses

RECAP OF BROKER/DEALER QUESTIONNAIRE RESPONSES

	CANTOR FITZGERALD	COASTAL SECURITIES	DUNCAN WILLIAMS	J.P. MORGAN SECURITIES
PRIMARY DEALER?	YES	NO	NO	YES
HAVE FIRM'S PERSONNEL READ CITY'S INVESTMENT POLICY?	YES	YES	YES	YES
ANY PUBLIC SECTOR LOSSES OVER 10% DUE TO MISUNDERSTANDING OR MISREPRESENTATION?	NO	NO	NO	NO
DOES FIRM COMPLY WITH FEDERAL RESERVE CAPITAL ADEQUACY GUIDELINES?	YES	YES	YES	YES
DOES FIRM PARTICIPATE IN SPIC INSURANCE PROGRAM?	YES	YES	YES	YES
WHAT % OF FIRMS TRANSACTIONS FAILED LAST YEAR?	UNDER 1%	UNDER 1%	UNDER 1%	UNDER 1%
FINANCIAL STATEMENTS SUBMITTED?	YES	YES	YES	YES
CURRENT LICENSES SUBMITTED	YES	YES	YES	YES



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 4i
Type Resolution
Department Library

Agenda Date 09/17/2013

Number Resolution R-13-3665

Title

Approval of the use of the Voluntary Library Fund in Fiscal Year 2014 (FY 2014), for the purchase of library materials, collection processing supplies, and library programs, in an amount not to exceed \$145,000

Explanation

Reading and Public Hearing

Resolution R-03-2237 (attached) provides for the Voluntary Library Fund to be used for the purpose of the development and improvement of library programs and services, and for approved library programs and capital items, including collection development (books, DVDs, CDs, digital, and other materials). The Fiscal Year 2014 (FY 2014) Colleyville Public Library budget includes use of the Voluntary Library Fund for the purchase of collection materials, collection processing supplies, and library programs. On August 12, 2013, the Colleyville Public Library Board unanimously approved the use of the Voluntary Library Fund for the purchase of library collection materials, collection processing supplies, and library programs, in an amount not to exceed \$145,000.

Financial Impact

Funds are available in the Voluntary Library Fund, in the amount of \$327,747, as of August 31, 2013, per the attached FY 2013 Voluntary Library Fund report.

Recommendation

Approve

Attachments

1. Financial Status of Voluntary Library Fund at 8-31-2013
2. Resolution R-03-2237

FINANCIAL STATUS OF VOLUNTARY LIBRARY FUND AT 8-31-2013

FUND BALANCE AT 9-30-2012: \$369,083

FY 2013 REVENUE

Donations:	PROJECTED	ACTUAL
October	\$13,855	\$13,855
November	\$12,636	\$12,636
December	\$12,421	\$12,421
January	\$12,460	\$12,460
February	\$12,492	\$12,492
March	\$12,413	\$12,413
April	\$13,388	\$13,388
May	\$13,932	\$13,932
June	\$11,418	\$11,418
July	\$13,367	\$13,367
August	\$12,905	\$12,905
September	\$12,915	\$0
 Total Donations	 \$154,204	 \$141,289
 Interest income Received	 \$1,000	 \$460
 TOTAL	 \$155,204	 \$141,749

FY 2013 EXPENDITURES

	RECOMMENDED (BOARD)	APPROVED (COUNCIL)	EXPENDED YEAR-TO-DATE
BOOKS AND PROCESSING MATERIALS			
FY 2012 BALANCE OF AUTHORIZATION	\$38,085	\$38,085	\$38,085
FY 2013 AUTHORIZATION	\$145,000	\$145,000	\$91,192
 TOTAL	 \$183,085	 \$183,085	 \$129,277

AVAILABLE FUND BALANCE AT 8-31-2013 (COUNCIL APPROVED) \$327,747

PROJECTED AVAILABLE FUND BALANCE AT 9-30-2013 (COUNCIL APPROVED) \$341,202

RESOLUTION R-03-2237

**A RESOLUTION ESTABLISHING THE ALLOWED USES OF THE
VOLUNTARY LIBRARY FUND**

WHEREAS, the mission of the Colleyville Public Library is to provide cultural, educational, intellectual and recreational resources in an inviting environment to enhance the quality of life for all ages; and

WHEREAS, the City of Colleyville can anticipate continued growth in the demand for library programs and services; and

WHEREAS, it is the opinion of the City Council that the best interest of the citizens of Colleyville will be served by providing for a voluntary library fund; and

WHEREAS, the City Council has established the Colleyville Public Library Board and this Board shall serve as a recommending body to the City Council for the use of the Voluntary Library Fund.

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

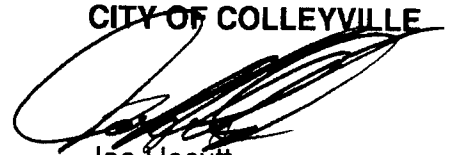
- Sec. 1. THAT a voluntary library fund has been established for the purpose of the development and improvement of library programs and services; and said fund can be used for approved library programs and capital items, including collection development (books and materials) and other items as desired by the City Council; however, said fund will not be used to provide for ongoing library maintenance and operations.
- Sec. 2. THAT the voluntary library fund is funded through a voluntary donation of one (\$1) per month from the citizens of Colleyville.
- Sec. 3. THAT this fee is listed with the Library Donation Fund as a separate entry on the Colleyville residents' water bills and is in all ways strictly voluntary.

AND SO IT IS RESOLVED.

PASSED BY A VOTE OF 5 AYES, 0 NAYS AND 0 ABSTENTIONS ON THIS
THE 7th DAY OF October 2003.

ATTEST:


Cynthia Singleton, TRMC
City Secretary

CITY OF COLLEYVILLE

Joe Hocutt
Mayor



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 4j
Type Resolution
Department Library

Agenda Date 09/17/2013

Number Resolution R-13-3665

Title

Approval of the disposal of surplus, damaged, worn and outdated library books, audiovisual items, DVDs, CDs, and non-book materials, learning games, and puzzles

Explanation

Reading and Public Hearing

The City of Colleyville Purchasing Manual requires the City Council to designate surplus property and salvage items before said property can be removed from inventory and disposed of by public auction or other approved means. The Colleyville Public Library has approximately 573 books, audiovisual items, DVDs, CDs, non-book materials, learning games, and puzzles, that are surplus, damaged, worn, and outdated, and recommended for disposal. The withdrawn books, audiovisual items, and non-book materials will be donated to the Friends of the Colleyville Public Library. Saleable items will be sold in used book sales. Proceeds from the used book sales will be donated to the Colleyville Public Library. Since 2003, the Friends of the Colleyville Public Library have donated approximately \$177,380 to the Colleyville Public Library, through their book sale and other fundraising efforts.

Financial Impact

The sale of items will provide revenue for the Colleyville Public Library through donations by the Friends of the Library.

Recommendation

Approve

Attachments



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 4k

Agenda Date 09/17/2013

Number Resolution R-13-3665

Type Resolution

Department Public Works

Title

Approval of the disposal of obsolete and non-serviceable equipment and vehicles

Explanation

Reading and Public Hearing

The City's purchasing manual requires the City Council to designate salvage items and obsolete, non-serviceable vehicles and equipment before property can be removed from inventory and disposed of by public auction or other approved means. The attached itemized list of equipment and vehicles cannot be reassigned or repurposed, and have been replaced due to age, mileage, and/or maintenance, and are no longer serviceable.

In May 2010, City Council approved a professional services agreement with Rene Bates Auctioneers of McKinney, Texas, to conduct City auctions in an online format. Rene Bates charges a fee of 7.5 percent of the gross auction sales for their services. With City Council approval of the attached auction list, it is anticipated an auction will be held in October 2013. The auction will last for a period of 14 days, and all equipment will be stored in its current location, until paid for and removed by the successful bidder. The last auction was held in May 2012.

Financial Impact

The financial impact of the auction will be determined by the gross proceeds of the auction, less a 7.5 percent fee charged by the auctioneer.

Recommendation

Approve

Attachments

1. October 2013 Auction List

City of Colleyville
October 2013 Auction List

City Manager's Office				
Item #	Qty.	Item Description	Model	Serial/VIN
CM-1	1	HP LaserJet (11A)		
CM-2	1	HP LaserJet toner (53X)		
Finance Office				
Item #	Qty.	Item Description	Model	Serial/VIN
FO-1	2	Printer Stands (2)		
FO-2	1	Computer Speakers (MLI 699 Hi-Fi Sound Monitor)	MLI 699 Hi-Fi	
Fire Department				
Item #	Qty.	Item Description	Model	Serial/VIN
FD-1	1	Ford Expedition	2002	1FMRU15L52LA96712
Police Department				
Item #	Qty.	Item Description	Model	Serial/VIN
PD-180	1	Ford Explorer II	2000	1FMZU61E9YUB46583
PD-190	1	Ford Crown Victoria	2002	2FAFP71W52X131050
PD-194	1	Ford Crown Victoria	2004	2FAFP71W34X144558
PD-195	1	Ford Crown Victoria	2004	2FAFP71W34X175843
PD-198	1	Ford Crown Victoria	2006	2FAFP71W06X107244
PD-199	1	Ford Crown Victoria	2006	2FAFP71W16X110637
PD-1103	1	Dodge Charger	2007	2B3KA43G07H708505
PD-1110	1	Dodge Charger	2008	2B3KA43G18H216390
PD-1111	1	Dodge Charger	2008	2B3KA43G58H216392
PD-1114	1	Dodge Charger	2009	2B3KA43V29H597666
PD-1117	1	Dodge Charger	2009	2B3KA43V69H597668
PD-1122	1	Ford Crown Victoria	1998	2FAFP71W4WX122992
PD-984	1	Ford F150 Pick Up	1993	1FTDF15YXPNA53533
PD-001	9	Verizon Wireless VZAccess PC5740 Air card	PC5740 Air card	
PD-002	4	Kustom Pro 1000 Radars		
	5	Kustom Antennas (small)		
	8	Wired Remotes		
PD-003	2	2-Kustom Trooper Radars		
	1	Kustom Antenna (long)		
	1	Kustom KR-12 Handheld radar	KR12	
PD-004	7	Nextel model 2710 push Talk Cell phones	2710	
	1	Nokia 6160 Cell phone	6160	
	1	Motorola 1265 Cell phone & misc chargers	1265	

PD-005	1	Nite Guard 1 million candlepower hand held spot light	Nite Guard	
PD-006	26	Rect 27 Ass't Halogen Tomar Lamps		
	3	Rect. 27 Halogen Tomar Lamps		
	2	Xenon Stealth System bulbs		
PD-007	54	Tungsten Halogen 130V/150W Lamps	890	
	10	Tomar 890 27watt Halogen 12v lamps		
PD-008	1	Galls Traffic Backer Rear Flashing System 1.9/sec Power Supply	Traffic Backer	
PD-009	1	1-Tomar Model 930SM0-N8-oo24 65 Watt Neobe Power Supply	930SM0-N8-oo24	
PD-010	9	Ass't Strobe Supply boxes. Includes Galls, Whelen and Lectric Lights		
PD-011	2	Tomar 940 Push button light bar/siren control box	940	
PD-012	10	Panasonic CF-VZSU04 Li-Ion Battery Packs	CF-VZSU04	
PD-013	4	Motorola/General Electric Radio speakers		
PD-014	2	Southwestern bell mountable cell phones		
PD-015	1	Kustom Signal Inc kr-10 Radar	KR-10	
	2	KR-10 Radar Antennas		
	1	Kustom Trooper Radar with Antenna and Wired Remote		
PD-016	3	halogen spot lights		
PD-017	1	Box of Streamlight Halogen Flashlight; numerous charges and miscellaneous parts		
PD-018	3	Federal Signal Control Boxes	Traffic Buster	
	2	Code 3 Traffic buster light controls		
	1	3 Socket cigarette lighter		
PD-019	10	Sierra Wireless MP200 Modems	MP200 750	
	8	Sierra Wireless 750 Modems		
	4	Flush mount Milleneum car antenna		
PD-020	7	Code 3 light/siren Control box with microphone	Code 3	
PD-021	1	Misc computer parts		
	3	WM-Pro wireless transmitters		
PD-022	9	Ram Tough Dock-Toughbook vehicle mounts (Dodge Charger/Crown Vics)		
PD-023	7	Assorted brands Siren Speakers		
PD-024	7	(2 each) Dodge Charger Mirror Lights (Red/Blue)		
PD-025	1	Tomar Heliobe Amber/Blue Halogen Strobe Light bar		
PD-026	1	Tomar Heliobe Amber/White Halogen Strobe Light bar		
PD-027	1	Tomar Heliobe red/blue with opticom LED light bar		
PD-028	5	Plastic Rear Replacement seats for Dodge Charger		
PD-029	1	Tomar Scorpion red/blue LED light bar		
PD-030	1	Federal Magnetic rotational light with cigarette plug lighter Amber/Blue	Signal Highlighter	
PD-031	1	Tomar red/blue with opticom heliobe halogen strobe light bar		
PD-032	1	Dodge Charger Push Bumper (Damaged)	Setina	
PD-033	1	Dodge Charger Push Bumper (Damaged)	Setina	

PD-034	1	Dodge Charger Push Bumper (Damaged)	Setina	
PD-035	1	Ford CV Push Bumper with Siren attached	Go Rhino	
PD-036	1	Ford CV Push Bumper with Siren attached	Go Rhino	
PD-037	1	Ford CV Push Bumper with Tomar Red/Blue LED lights attached	Go Rhino	
PD-038	1	Dodge Charger Prisoner Partition with Shotgun rack	Body Guard	
PD-039	1	Dodge Charger Prisoner Partition with Shotgun rack	Body Guard	
PD-040	1	Dodge Charger Prisoner Partition with Shotgun rack	Body Guard	
PD-041	1	Dodge Charger Prisoner Partition with Shotgun rack	Body Guard	
PD-042	1	Dodge Charger Prisoner Partition	Body Guard	
PD-043	1	Ford Crown Victoria Prisoner Partition (3/4 plexi-glass/1/4 expanded metal)	Setina	
PD-044	2	Siren/Lights control box with Ford Crown Victoria center consoles	Code 3	
PD-045	2	Desk Center Console for Dodge Charger with 2 cup holders/cushioned arm rest	Jotto	
PD-046	1	Box of Miscellaneous RAM computer mounts/accessories		
PD-047	2	General Electric UHF Radio Stations	BC-325	
	1	Tripp lite battery backup system		
PD-048	4	Ram No Drill Universal Laptop Mounts		
PD-049	1	box of containing misc. radar mounts and hard wire computer map lights		
PD-050	6 2 1 1 2 4	Sets Whelen Smart LED 200 Series TIR6 Super LED Fog Lights red/blue Tomar flush mount strobe lights 911 EP LED undercover interior mount light red/blue Traffic flasher high speed alternator 3.0/Sec. Sets of red/blue Halogen deck mount strober lights Undercover strobe lights	200 Series TIR6 Rect-25LSHPB-R Strobe 15	
PD-051	1	Black Panasonic Laptop with Power Supply. NO HARD DRIVE	CF-27 Toughbook	OAKSA11248
PD-052	1	Black Panasonic Laptop with Power Supply. NO HARD DRIVE	CF-27 Toughbook	OAKSA12141
PD-053	1	Black Panasonic Laptop with Power Supply. NO HARD DRIVE. Missing "S" Key	CF-27 Toughbook	OAKSA11259
PD-054	1	Black Panasonic Laptop with Power Supply. NO HARD DRIVE	CF-27 Toughbook	OAKSA11244
PD-055	1	Black Panasonic Laptop with Power Supply. NO HARD DRIVE	CF-27 Toughbook	OAKSA11859
PD-056	1	Black Panasonic Laptop with Power Supply. NO HARD DRIVE. Missing "X" Key	CF-27 Toughbook	OAKSA12004
PD-057	1	Black Panasonic Laptop with Power Supply. NO HARD DRIVE	CF-27 Toughbook	OAKSA11631
PD-058	1	Black Panasonic Laptop with Power Supply. NO HARD DRIVE	CF-27 Toughbook	OAKSA11835
PD-059	1	Black Panasonic Laptop with broken Power Supply. NO HARD DRIVE	Toughbook	OAKSA11693
PD-060	1	Black Panasonic Laptop with Power Supply. NO HARD DRIVE	Toughbook	OAKSA11916
PD-061	1	Gray Compaq Presario Laptop. NO POWER SUPPLY OR HARD DRIVE	1260	1V8CCFKCR5WR
PD-062	2	Hewlett Packard power supplies		
PD-064	1	Body guard Front/Rear Seat Partition for Ford Crown Victoria	Setina	
PD-065	1	Ford Crown Victoria Push Bumper	Go Rhino	
PD-066	1	Ford Crown Victoria Push Bumper	Go Rhino	
PD-067	1	Pro Guard Gun Rack	G3200	

PD-068	1	Body Guard Dual Vertical Weapon System (electronic lock)	Setina	
PD-069	1	Desk Center Console	Jotto	
PD-070	1	Gray Plastic Rear Seat replacement for Ford Crown Victoria		
PD-071	1	Black Plastic rear replacement seat for Dodge Charger		
PD-072	3	Rola 1-1/4"/2" reversible receiver hitch bike rack (parts missing)		
PD-073	1	Rola 2" receiver hitch bike rack (scissor style)		
PD-074	1	Unknown Brand Black Mountain Bike		
PD-075	1	F-500 black mountain bike (missing seat)		
PD-076	1	Animal control slide in dog box		

Public Works

Item #	Qty.	Item Description	Model	Serial/VIN
PW-333	1	Chevrolet C1500 Pick Up	1994	1GCEC14Z7RZ221857
PW-605	1	Ford Single axle dump truck	1996	1FDXF70J8TVA30574
PW-612	1	Swenson slide in street sander	1998	2048531
PW-650	1	Grimmer Schmidt air compressor	1998	21050
PW-669	1	Chevrolet C1500 Pick Up	1998	1GCEC14W6WZ201147
PW-683	1	GMC Single axle dump truck	1992	1GDM7H1P0NJ519991
PW-690	1	GMC Tandem axle dump truck	1990	1GDT7H4J3LJ608163
PW-691	1	Ford F250 Pick Up	1997	3FTHF25H3VMA21618
PW-792	1	Ford F250 Pick Up	1997	3FTHF25H5VMA21619
PW-804	1	Ford chassis with Vactor	1996	1FDYR82E1TVA25525
PW-808	1	Ford F150 Pick Up	2005	1FTRF12255NB61450
PW-870	1	Shop made single axle trailer	N/A	N/A
PW-874	1	Shop made triple axle trailer	N/A	N/A
PW-882	1	Ford F150 Pick Up	2007	1FTRF12217KC36973
PW-892	1	Chevrolet S10 Pick Up	2003	1GCCS19X038274804
PW-895	1	GMC Single axle flat bed dump truck	1991	1GBM7H1J5MJ111831
PW-001	1	8 JAMAR Trax I plus counters/ 8 Jamar Trax I counters/ 2 trax chargers 12 watt/ 2 trax charges 24 watt/ approx. 500' rubber tube/ trax accessories mastic stick down tape, nails tie down strap. 8 K-Hill wee counters./ 19- light socket inserts for traffic signal light./15- plastic yellow lens 1 red and 2 green for signal./ 5-135 watt bulbs, 3- 120watt signal light bulbs/ 6-67 watt ,24- 69 watt ped light bulbs/ 12-35 watt bulbs for school zone lights.		
PW-002	1	110 volt Frigidaire AC Window Unit		
PW-003	1	Wooden desk		
PW-004	1	Propane conversion & tank for 90's model ford		
PW-005	4	Infrared gas heaters		
PW-006	26	Round Tables		
PW-007	2	Rectangle Tables		
PW-008	454	Stackable chairs		

PW-009	32	Vinyl chairs		
PW-010	21	Fabric chairs		
PW-011	7	Misc. office chairs		
PW-012	2	Calculators		
PW-013	1	Microphone		
PW-014	1	Time clock with card rack		
PW-015	1	TV		
PW-016	1	Monitor		
PW-017	1	Typewriter		
PW-018	1	Printer		

Building Inspections				
Item #	Qty.	Item Description	Model	Serial/VIN
BI-909	1	Ford Ranger Pick Up	2002	1FTYR10D62PA16263
BI-955	1	Ford F150 Pick Up	1997	1FTDF1720VNC68814



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 5a

Agenda Date 09/17/2013

Number Ordinance O-13-1881

Type Ordinance

Department Community Development

Title

Request for approval of a Special Use Permit for alcoholic beverage sales for off-premises consumption on Lot 7A, Block 2, Village Park Addition located at 4801 Colleyville Boulevard. Approval of a Special Use Permit for alcoholic beverage sales for on-premises consumption on Lots 1R1, 4, 5A, 6A, 7A, and 9R, Block 2, Village Park Addition located at 4701, 4709, 4717, 4725, 4801, and 4843 Colleyville Boulevard, Case ZC13-009

Explanation

Second Reading and Public Hearing

There were no speakers regarding this request at the September 3, 2013 City Council meeting.

City Council recommended staff include language in the ordinance stating the Special Use Permit will expire upon any change in the certificate of occupancy for Whole Foods Market. Staff has included this language in the proposed ordinance.

First Reading and Public Hearing

AC Village Park Partners, LLC, has submitted a Special Use Permit (SUP) application to allow the sale of alcoholic beverages for off-premises consumption and a blanket provision for the sale of alcoholic beverages for on-premises consumption in the existing Village Park Shopping Center located between Colleyville Boulevard (SH26), Glade Road, Glade Creek Drive, and Centerpark Drive.

The applicant is the owner of the shopping center, which includes 195,865 square feet of existing retail space. The applicant plans to locate a Whole Foods Market in the vacant anchor tenant space located at 4801 Colleyville Boulevard. The applicant also plans to locate several restaurants in the shopping center. In conjunction with the proposed new tenants, the applicant plans to remodel the shopping center including the installation of a new front façade for the entire length of the shopping center.

Existing Zoning and Development Conditions. The subject properties are zoned CC2-Shopping Center zoning district. The sale of alcoholic beverages for on and off-premises consumption is allowed in the CC2-Shopping Center district with the approval of a SUP.

The only existing SUP for alcoholic beverage sales in the shopping center applies to the

Goody Goody Liquor package store located at 4701 Colleyville Boulevard, approved by Ordinance O-10-1780. Ordinance O-10-1780 would not be affected by the applicant's proposal. The subject properties are currently developed as follows:

4701 Colleyville Boulevard – 88,029 square feet of existing contiguous multi-tenant shopping center space

4709 Colleyville Boulevard – 24,400 square feet of existing contiguous multi-tenant shopping center space

4717 Colleyville Boulevard – 4,080 square feet of retail pad space

4725 Colleyville Boulevard – 2,137 square feet of retail pad space

4801 Colleyville Boulevard – 60,673 square feet of existing contiguous multi-tenant shopping center space

4843 Colleyville Boulevard – 16,546 square feet of existing contiguous multi-tenant shopping center space

Applicant's Request. The applicant is requesting a "restaurant overlay district" for all of the subject properties whereby the sale of alcoholic beverages for on-premises consumption would be allowed under a blanket provision with no time limit or ownership conditions. The applicant states that they "are working with a number of restaurant operators whose businesses involve the sale of alcoholic beverages for on-premises consumption". "In addition, Whole Foods Market is planning to introduce a restaurant concept within its store, and expects to sell alcoholic beverages for on-premises consumption."

The applicant also proposes to allow the sale of alcoholic beverages for off-premises consumption for the Whole Foods Market only, to be located at 4801 Colleyville Boulevard. The off-premises sales would include beer and wine only. The sale of liquor for off-premises consumption would not be permitted in the proposed Whole Foods Market.

Hours of Operation for Alcohol Sales for On-Premises Consumption. The applicant requests that no restrictions be placed on hours of operation for the SUP for on-premises alcohol consumption. As such, the restrictions on the hours of operation for any restaurant that sells alcohol for on-premises consumption authorized by the proposed SUP would be subject to the restrictions for hours of operation listed in the Texas Alcoholic Beverage Code, which are as follows:

Monday through Saturday: 7:00 a.m. to 2:00 a.m. the following day

Sunday: 10:00 a.m. to 2:00 a.m. the following day

Landscaping. With the exception of 4701 Colleyville Boulevard, the subject properties are currently not in compliance with Chapter 4-Landscaping and Buffering in the Land Development Code. Staff recommends that all of the subject properties be brought into compliance as a condition of approval for the SUP. This includes providing landscaped islands within the parking lots and providing the requisite number of trees and shrubs based on the linear frontage of the shopping center adjacent to Centerpark Drive, Colleyville Boulevard, and Glade Road. This provision is contained in the proposed ordinance.

Dumpster Screening. Staff recommends that all dumpsters be screened per the requirements of the Land Development Code prior to the issuance of the certificate of occupancy for any business selling alcoholic beverages per the provisions of the proposed ordinance.

Building Design and Construction. The applicant has provided proposed front building elevations (attached) for the entire length of the shopping center as seen from Colleyville Boulevard. According to Chapter 6-Building Design of the Land Development Code, all commercial buildings are required to meet a minimum design score of 30. Based upon staff's analysis, the elevations, as presented, contain an approximate design score of 30. Staff recommends the building elevations meet all requirements of Chapter 6-Building Design of the Land Development Code prior to the issuance of the certificate of occupancy for any business selling alcoholic beverages per the provisions of the proposed ordinance.

Signage. The applicant is proposing to construct a landmark sign per the attached exhibit. The new sign would be located close to Colleyville Boulevard at 4801 Colleyville Boulevard. The applicant also proposes to alter the existing landmark sign at 4701 Colleyville Boulevard (approved by Ordinance O-10-1780) such that it matches the sign in the attached exhibit.

Section 7-155(B) of the Sign Regulations in the Land Development Code states that landmark signs are only allowed with City Council approval. The purpose of a landmark sign is to identify a major shopping center and the name of a business, profession, service, product, or activity conducted, sold, or offered within a shopping center. A landmark sign is a free standing four-sided (unless approved otherwise) sign that provides an effective area for multi-tenant advertisement and is only allowed within major shopping centers containing more than 100,000 square feet.

The applicant is also allowed to place one monument sign per lot, per the provisions of Chapter 7-Sign Regulations in the Land Development Code. As such, the applicant would be allowed to place one monument sign along Centerpark Drive, four monument signs along Colleyville Boulevard (SH26), and one monument sign along Glade Road.

Wall signs are also allowed above each individual tenant space.

The landmark sign provisions noted above have been added to the proposed ordinance.

Parking. The Land Development Code requires one (1) parking space per 200 square feet of gross floor area for general retail uses such as a shopping center. The applicant is requesting a parking waiver such that the total spaces required are calculated at 4.5 spaces per 1,000 feet of gross floor area. This equates to one space per each 222.22 square feet of gross floor area.

There are currently 883 existing parking spaces on the subject properties. This does not account for any spaces that may be removed as a result of installing the required parking lot landscaping, mentioned above, or the proposed electrical charging stations mentioned in the Statement of Planning Objectives. Based on the existing gross floor area of 195,865 square feet for the entire shopping center, 979 total parking spaces are required under the existing City parking requirements. Based on the applicant's proposed calculation method, 881 spaces are required. There is additional space available behind the shopping center to add more required parking if necessary.

As mentioned above, the applicant plans to install two electrical car charging stations on the subject property. The applicant states that the stations will allow for the charging of electrically powered automobiles. However, the applicant has not yet determined a final location for the stations and they "are simply asking for the allowance of the land use in conjunction with this SUP request".

The parking waiver requested by the applicant and the use of two electrical car charging stations has been added to the proposed ordinance.

Required Distance Measurements and Findings. Section Six-Alcoholic Beverage Regulations of the Code of Ordinances requires a minimum distance of 300 feet from any establishment that sells alcoholic beverages and a church, public or private school, or hospital. The measurement distance must be calculated from closest front door to closest front door for churches and hospitals and from closest property line to closest property line for public or private schools.

There is an existing private school located behind the subject properties called the "Colleyville Montessori School". Per the attached map exhibit, the property lines for 4701, 4709, and 4801 Colleyville Boulevard are within the 300 foot separation required for the Montessori School. As such, a waiver will be required in order to approve the SUP. This waiver has been added to the proposed ordinance.

Surrounding Properties. Properties to the east are zoned CC2-Shopping Center District, and R-MF-Multifamily Residential district and are developed as offices, a private school, and single family detached residences. Properties to the south are

zoned PUD-R-Planned Unit Development Residential district and developed as single family detached residences. Properties to the west and north are zoned CC1-Village Retail and CC2-Shopping Center district and developed as retail and office uses.

Master Plan. The Colleyville Master Plan designates this property for future retail uses. The proposed use of the property complies with the plan, with the approval of a SUP.

Public Notification. Staff notified 110 property owners within 500 feet of the subject properties regarding this request as well as all homeowner's associations within 500 feet. Notice was published in the *Fort Worth Star-Telegram* as required by state law and the Land Development Code. Staff has not received any correspondence regarding this request.

Planning and Zoning Commission Recommendation. The Planning and Zoning Commission recommended approval of this item by a vote of (7-0) at the August 26, 2013 meeting.

Summary. Although there are several waivers being requested as part of this proposal, staff agrees that the waivers will have little to no impact above and beyond what is already in place with regard to the shopping center. Staff also agrees that the proposed tenant additions to the shopping center, along with the proposed improvements to the buildings and site, are consistent with the strategic goals of the City, as they relate to economic development and community sustainability.

Financial Impact

There is no financial impact to the City.

Recommendation

Approval with the following conditions:

1. GENERAL

a. The Special Use Permit shall apply to the sale of alcoholic beverages for on-premises consumption and off-premises consumption.

b. The sale of alcoholic beverages for on-premises consumption may apply to any restaurant located on the subject properties provided that the restaurant is in compliance with the City's alcoholic beverage regulations.

c. The provision for on-premises sales of alcoholic beverages shall automatically expire upon the abandonment of the business, change in the use, a change in ownership, or upon the expiration or termination of the Certificate of Occupancy for Whole Foods Market.

d. The sale of alcoholic beverages for off-premises consumption shall only include beer

and wine sales and shall only apply to the Whole Foods Market located at 4801 Colleyville Boulevard. The provision for off-premises sales of alcoholic beverages shall automatically expire upon the abandonment of the business, change in the use, a change in ownership or upon the expiration or termination of the Certificate of Occupancy for Whole Foods Market.

e. A variance to the 300 foot distance requirement to churches, public or private schools, or public hospitals is hereby granted by this ordinance.

f. All requirements of the Land Development Code and the Code of Ordinances shall be met, except where amended herein.

2. LANDSCAPING AND SCREENING

a. Prior to the issuance of any Certificate of Occupancy for any business authorized to sell alcoholic beverages per the provisions of this ordinance, all landscaping on the subject properties shall meet the requirements of Chapter 4-Landscaping and Buffering in the Land Development Code.

b. Prior to the issuance of any Certificate of Occupancy for any business authorized to sell alcoholic beverages per the provisions of this ordinance, all dumpsters on the subject properties shall be enclosed and screened per the requirements of Section 3.26 in the Land Development Code.

3. BUILDING DESIGN, SIGNAGE, AND PARKING

a. Prior to the issuance of any Certificate of Occupancy for any business authorized to sell alcoholic beverages per the provisions of this ordinance, the front façade of the shopping center shall meet the minimum requirements of Chapter 6-Building Design in the Land Development Code. The front façade shall be generally consistent with Exhibit "C".

b. Prior to the issuance of any Certificate of Occupancy for any business authorized to sell alcoholic beverages per the provisions of this ordinance, not more than two landmark signs, as described in Chapter 7-Sign Regulations in the Land Development Code, shall be placed on the subject properties. The signs shall be generally consistent with Exhibit "D". The existing landmark sign located at 4701 Colleyville Boulevard and authorized by Ordinance O-10-1780 shall meet the standards shown in Exhibit "D".

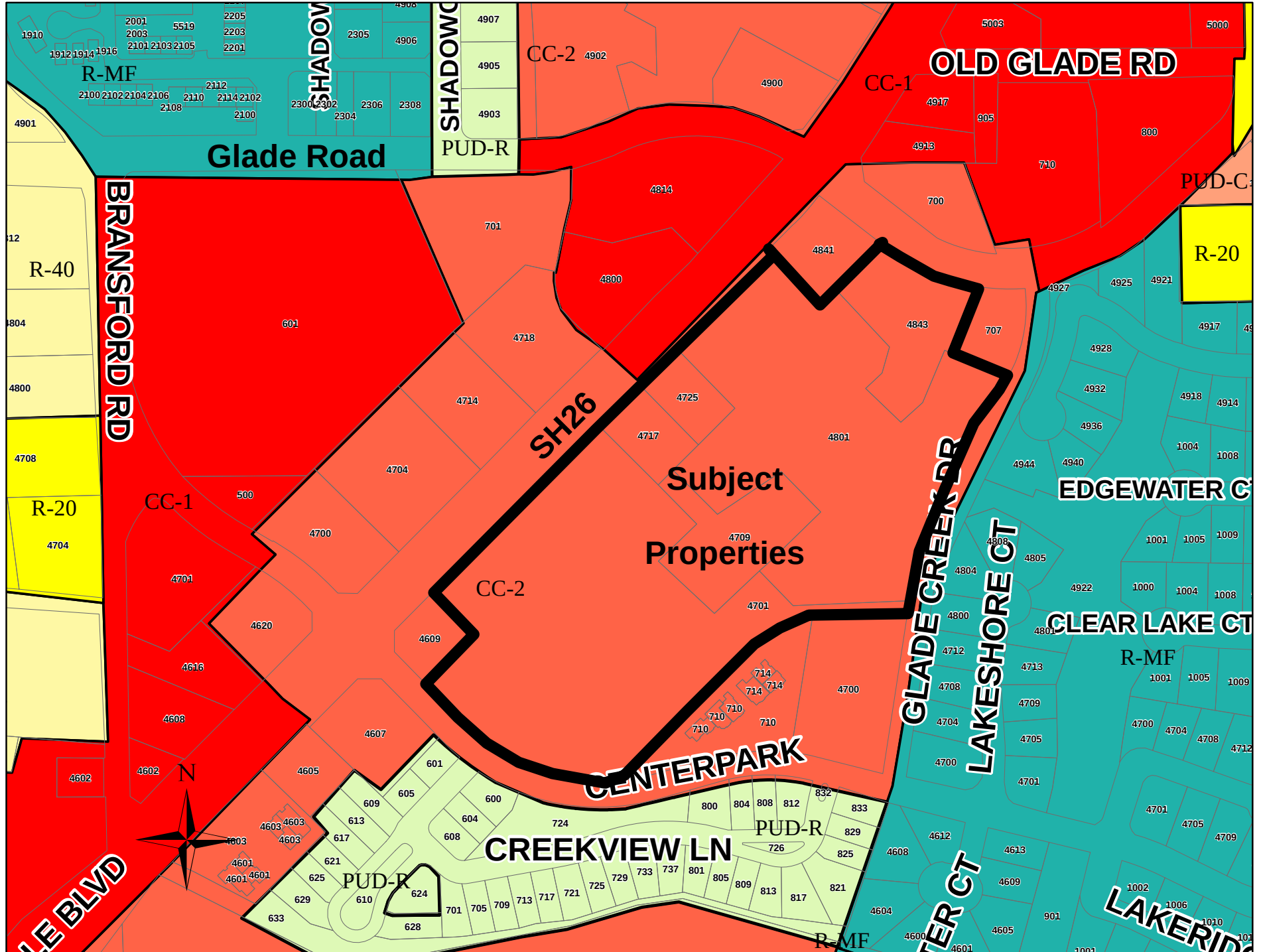
c. Required parking space calculations for the subject properties may be calculated at 4.5 parking spaces per 1,000 feet of gross floor area.

d. No more than two electrical charging stations shall be allowed on the subject properties in conjunction with this Special Use Permit.

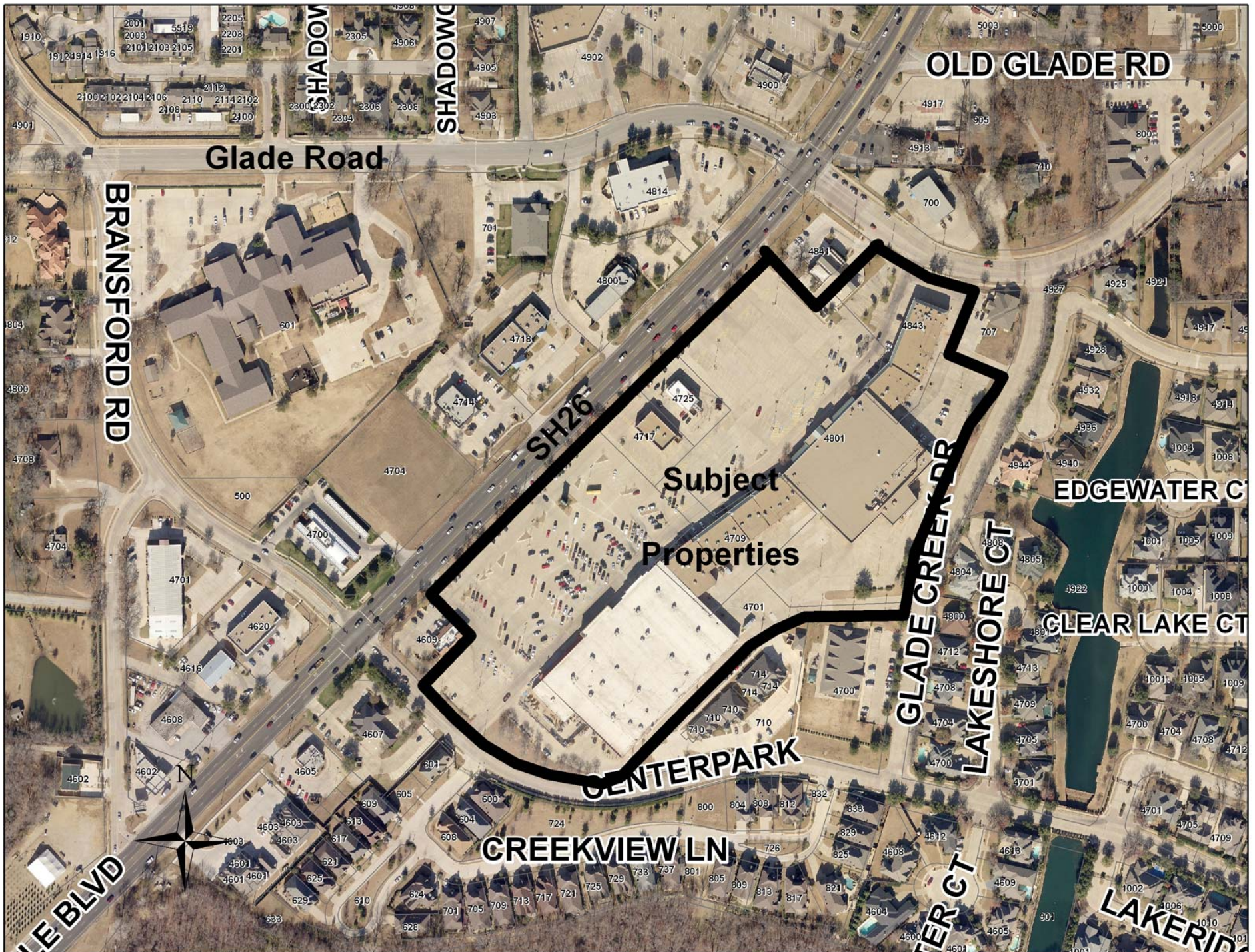
Attachments

1. Location and Zoning Map
2. Aerial
3. Buffer Map
4. Notification List
5. Statement of Planning Objectives
6. Proposed Alcohol Sales Site Exhibit
7. Proposed Front Elevations for Shopping Center
8. Landmark Sign Exhibits
9. Landmark Sign Location Exhibit
10. 300 Foot School Separation Map for Alcoholic Beverage Sales
11. Ordinance O-10-1780
12. Ordinance O-13-1881

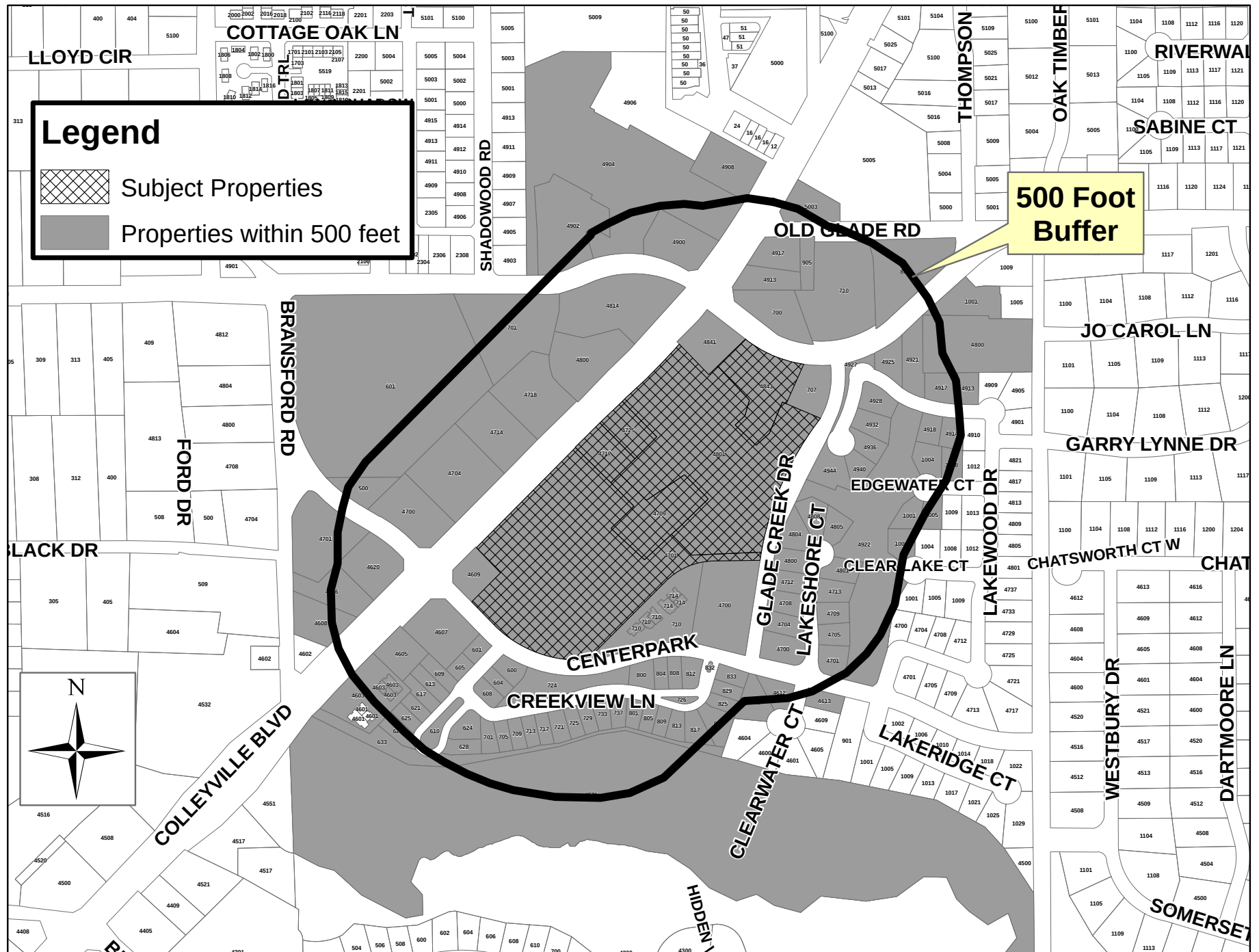
Location and Zoning Map



Aerial



Buffer Map



Notification List

Owner Name	Owner Address	Owner City	Owner State	Owner Zip	Situs Address
1 Chronicles 29:10-20 Llc	6620 Cedar Grove Dr	North Richland Hills	Texas	76182	714 Centerpark
Ac Village Park Partners Llc	8235 Douglas Ave Ste 655	Dallas	Texas	75225	4701 Colleyville Blvd
Alavi, Kambiz Etux Homa	5009 Westgrove Ln	Colleyville	Texas	76034	4709 Lakeshore Ct
Cambridge Homes Inc	5601 Democracy Dr Ste 190	Plano	Texas	75024	800 Creekview Ln
Ayia Properties Llc	1905 Central Dr Ste 205	Bedford	Texas	76034	714 Centerpark
Bennett, James Etux Joann	4917 Lakewood Dr	Colleyville	Texas	76034	4917 Lakewood Dr
Benton, Richard B Etux Susan N	4705 Lakeshore Ct	Colleyville	Texas	76034	4705 Lakeshore Ct
Betty B Pannell Rev Liv Tr	PO Box 815	Colleyville	Texas	76034	710 Centerpark
Blockbuster Investment Ltd	2317 Clearview Ct	Lewisville	Texas	75057	4608 Colleyville Blvd
Boney, Michael	4925 Lakewood Dr	Colleyville	Texas	76034	4925 Lakewood Dr
Bowden, William Etux Sharon	4928 Lakewood Dr	Colleyville	Texas	76034	4928 Lakewood Dr
Cambridge Homes Inc	5601 Democracy Dr Ste 190	Plano	Texas	75024	605 Creekview Ln
Centerpark Colleyville Prtnrs	3008 E Hebron Pkwy Bldg 300	Carrollton	Texas	75010	4712 COLLEYVILLE BLVD
Chandler, Raman	PO Box 611	Colleyville	Texas	76034	4501 COLLEYVILLE BLVD
Chonody, Andrew Etux Sandra	829 Creekview Ln	Colleyville	Texas	76034	829 Creekview Ln
Colleyville Blvd Condo Assoc	PO Box 47	Colleyville	Texas	76034	4603 Colleyville Blvd
Colleyville Centerpark Assoc	PO Box 47	Colleyville	Texas	76034	710 Centerpark
Colleyville Plaza Lp	580 Decker Dr Ste 203	Irving	Texas	75062	4908 Colleyville Blvd
Compass Bancshares Inc	PO Box 10566	Birmingham	Alabama	35296	4841 Colleyville Blvd
Crumpler, John K Etux Kandis L	725 Creekview Ln	Colleyville	Texas	76034	725 Creekview Ln
Curtis, Eleanor K Tr	629 Creekview Ln	Colleyville	Texas	76034	629 Creekview Ln
Daunis, Walter F & Letaine	8900 Crest Wood Dr	Fort Worth	Texas	76179	4609 Colleyville Blvd
Dehart, Doris	737 Creekview Ln	Colleyville	Texas	76034	737 Creekview Ln
Donato, Mario Jr Etux Melissa	4612 Clearwater Ct	Colleyville	Texas	76034	4612 Clearwater Ct
Drennan, Billy Etux Frances	705 Creekview Ln	Colleyville	Texas	76034	705 Creekview Ln
Enochson, Michael Etux Heather	4914 Lakewood Dr	Colleyville	Texas	76034	4914 Lakewood Dr
Erickson, O M & A L Magistrado	4804 Lakeshore Ct	Colleyville	Texas	76034	4804 Lakeshore Ct
Ervin, Richard L Etux Terri	1155 W Wall St Ste 101	Grapevine	Texas	76051	4700 Colleyville Blvd
Fick, Gary Etux Rebecca Cast	804 Creekview Ln	Colleyville	Texas	76034	804 Creekview Ln
Fiscal Fitness Center Lc	4603 Collyville Blvd Ste 140	Colleyville	Texas	76034	4603 Colleyville Blvd # 140
Fonberg, Mitchell Etal	5452 Glen Lakes Dr Ste 203	Dallas	Texas	75231	4714 Colleyville Blvd
Fonberg, Peter D	5452 Glen Lakes Dr Ste 203	Dallas	Texas	75231	4718 Colleyville Blvd
Giroir, Ron L Etux Lislina G	609 Creekview Ln	Colleyville	Texas	76034	609 Creekview Ln
Glade Road Capital Llc	PO Box 1821	Colleyville	Texas	76034	1001 Village Park Dr
Grapevine Colleyville ISD	3051 Ira E Woods Ave	Grapevine	Texas	76051	601 Glade Rd
Haochuan, Li Etux Mei Han	4313 Pembroke Pkwy N	Colleyville	Texas	76034	4603 Colleyville Blvd # 120
Hardin, Carl W Tr	223 N Guadalupe St Unit 559	Santa Fe	New Mexico	87501	713 Creekview Ln
Hardin, Jo Dora	600 Creekview Ln	Colleyville	Texas	76034	600 Creekview Ln
Harris, John	4808 Lakeshore Ct	Colleyville	Texas	76034	4808 Lakeshore Ct
Hawkins, Christopher & Patrici	PO Box 235	Colleyville	Texas	76034	4944 Lakewood Dr
Hendricks, Chas Etux Patricia	4918 Lakewood Dr	Colleyville	Texas	76034	4918 Lakewood Dr
Heritage Personal Training Inc	1208 Crest Dr	Colleyville	Texas	76034	707 Glade Rd
Hoa - Lakewood Estates	6707 Brentwood Stair Rd	Fort Worth	Texas	76112	4922 Lakewood Dr
Hoa - Lakewood Estates	6707 Brentwood Stair Rd	Fort Worth	Texas	76112	4935 LAKEWOOD DR
Hoa Of Cambridge Place Inc	3500 Maple Ave Ste 1165	Dallas	Texas	75219	633 Creekview Ln
Jackson, Sharon R	4801 Lakeshore Ct	Colleyville	Texas	76034	4801 Lakeshore Ct
Johnson, Yvonne F	608 Creekview Ln	Colleyville	Texas	76034	608 Creekview Ln
Karegeannes, Harry G Etux	1004 Edgewater Ct	Colleyville	Texas	76034	1004 Edgewater Ct
Kettle, Keith & Teresa S	714 Centerpark Dr Ste 120	Colleyville	Texas	76034	710 Centerpark
Krivsky-Bartusiak Inc	3220 Clear Fork Dr	Hurst	Texas	76054	4701 Bransford Rd
Kwik Kar Of Colleyville Tx Llc	4616 Collyville Blvd	Colleyville	Texas	76034	4616 Colleyville Blvd
Lee, Moon D Etux Young Sun Lee	628 Creekview Ln	Colleyville	Texas	76034	628 Creekview Ln
Looney, John R	3001 S Country Club Rd	Garland	Texas	75043	4917 Colleyville Blvd
Loveita & Schon Llc	803 Caprock Dr	Big Spring	Texas	79720	4620 Colleyville Blvd
Matlock, Jc Jr	805 Creekview Ln	Colleyville	Texas	76034	805 Creekview Ln
McMahon, Danial J	1008 Edgewater Ct	Colleyville	Texas	76034	1008 Edgewater Ct
Mejia, Eduardo Etux Maria Silv	247 S Maple Glade Cir	Spring	Texas	77382	4800 Lakeshore Ct
Miller, Harry M Etux Belinda	4805 Lakeshore Ct	Colleyville	Texas	76034	4805 Lakeshore Ct
Mirzadeh, Marzia	4608 Clearwater Ct	Colleyville	Texas	76034	4608 Clearwater Ct
Moroski, Peter J Etux Deborah	813 Creekview Ln	Colleyville	Texas	76034	813 Creekview Ln
Morse, Julius Etux Billie	821 Creekview Ln	Colleyville	Texas	76034	821 Creekview Ln
Moyer, Cecilia C	604 Creekview Ln	Colleyville	Texas	76034	604 Creekview Ln
Nicholas, Rene Lou	808 Creekview Ln	Colleyville	Texas	76034	808 Creekview Ln
Nobel Source Company Llc	640 S Hill St Ste 341	Los Angeles	California	90014	800 Glade Rd
Noblit, Don Etux Barbara	PO Box 820895	Fort Worth	Texas	76182	4913 Colleyville Blvd

Notification List

Noorani, Anis Etux Reema	4940 Lakewood Dr	Colleyville	Texas	76034	4940 Lakewood Dr
Owen, Geoffrey R Etux Helen M	809 Creekview Ln	Colleyville	Texas	76034	809 Creekview Ln
Pardo, Lisa D	904 Saddlebrook Dr	Colleyville	Texas	76034	4607 Colleyville Blvd
Patel, Geeta Tr	601 Creekview Ln	Colleyville	Texas	76034	601 Creekview Ln
Pettit, Lois Jeannean	625 Creekview Ln	Colleyville	Texas	76034	625 Creekview Ln
Pittman, Bobby G	4913 Lakewood Dr	Colleyville	Texas	76034	4913 Lakewood Dr
Poslick, Martin A Etux Evelyn	4932 Lakewood Dr	Colleyville	Texas	76034	4932 Lakewood Dr
R&L Capital Properties Llc	6903 Shepherds Gln	Colleyville	Texas	76034	4800 Colleyville Blvd
Raphael Leasing Llc	PO Box 820895	North Richland Hills	Texas	76182	710 Centerpark
Realty Income Tx Pro 1 Llc	PO Box 460069	Escondido	California	92046	4700 Glade Creek Dr
Reddy, Prabhakar Etux Pallavi	4701 Lakeshore Ct	Colleyville	Texas	76034	4701 Lakeshore Ct
Renberg, Timothy S	613 Creekview Ln	Colleyville	Texas	76034	613 Creekview Ln
Rhodes, Dee Ann Etvir Joe	4712 Lakeshore Ct	Colleyville	Texas	76034	4712 Lakeshore Ct
Pillai, Jaime	621 Creekview Ln	Colleyville	Texas	76034	621 Creekview Ln
Ross, Peter M Etux Mickey K	721 Creekview Ln	Colleyville	Texas	76034	721 Creekview Ln
Salemizadeh, A Etux Belgheys G	1005 Edgewater Ct	Colleyville	Texas	76034	1005 Edgewater Ct
Sawyer, Matthew Etux Christi	4700 Lakeshore Ct	Colleyville	Texas	76034	4700 Lakeshore Ct
Schwab Group Llc	714 Centerpark Dr Ste 100	Colleyville	Texas	76034	714 Centerpark
Sharp, Perry L Etux Lori A	812 Creekview Ln	Colleyville	Texas	76034	812 Creekview Ln
Sisdr Properties Llc	4603 Colleyville Blvd Ste 100	Colleyville	Texas	76034	4603 Colleyville Blvd # 100
Small, Marvin B Jr	4613 Clearwater Ct	Colleyville	Texas	76034	4613 Clearwater Ct
Sorlie, Victor A Etux Linda	729 Creekview Ln	Colleyville	Texas	76034	729 Creekview Ln
Stalford, Elizabeth R Tr	701 Creekview Ln	Colleyville	Texas	76034	701 Creekview Ln
Stitts, Andrea A	4713 Lakeshore Ct	Colleyville	Texas	76034	4713 Lakeshore Ct
Suiter, Scott M Etux Julie A	825 Creekview Ln	Colleyville	Texas	76034	825 Creekview Ln
Sveska, Dorothy & Robert F	4700 Lakewood Dr	Colleyville	Texas	76034	617 Creekview Ln
Tadlock, Larry & Karen	624 Creekview Ln	Colleyville	Texas	76034	624 Creekview Ln
Talkington, Mary Alice	4708 Lakeshore Ct	Colleyville	Texas	76034	4708 Lakeshore Ct
Taylor, Virginia Ann	809 Silver Lake Dr	Keller	Texas	76248	4936 Lakewood Dr
Teague, Mary P Etvir Daniel	733 Creekview Ln	Colleyville	Texas	76034	733 Creekview Ln
Terry, Doug Etux Lee Martin	PO Box 622	Colleyville	Texas	76034	1001 Edgewater Ct
Thompson, John E	5017 Montclair Dr	Colleyville	Texas	76034	905 Old Glade Rd
Trow, Bradley M	PO Box 1201	Hurst	Texas	76053	4605 Colleyville Blvd
Tutt, Dorothy	4800 Bedford Rd	Colleyville	Texas	76034	4800 Bedford Rd
Wal-Mart Real Estate Bus Trust	PO Box 8050	Bentonville	Arkansas	72716	4904 Colleyville Blvd
Wilson, Edwin E	817 Creekview Ln	Colleyville	Texas	76034	817 Creekview Ln
Wilson, Mark D & John B Blick	701 Glade Rd	Colleyville	Texas	76034	701 Glade Rd
Winstead, Debra A	717 Creekview Ln	Colleyville	Texas	76034	717 Creekview Ln
Worthington National Bank	500W Main St	Fort Worth	Texas	76102	4814 Colleyville Blvd
Wren, Donald C Etux Barbara	4704 Lakeshore Ct	Colleyville	Texas	76034	4704 Lakeshore Ct
Y2Kitchen Properties Llc	4500 Dartmoore Ln	Colleyville	Texas	76034	5003 Colleyville Blvd
Yellock, Johnnie Etux Reagan	709 Creekview Ln	Colleyville	Texas	76034	709 Creekview Ln
Young, Alan	1000 Clear Lake Ct	Colleyville	Texas	76034	1000 Clear Lake Ct
Zell Three Inc	1190 Explorer St	Duncanville	Texas	75137	700 GLADE RD
Zinger, Charles Etux Joanne	833 Creekview Ln	Colleyville	Texas	76034	833 Creekview Ln
Ac Village Park Partners Llc, Applicant	8235 Douglas Ave Ste 655	Dallas	Texas	76034	Applicant

Public Hearing notices were mailed
Fri., Aug. 16, 2013 by Taci Wrisley

Statement of Planning Objectives

AC VILLAGE PARK PARTNERS, LLC
8235 Douglas Avenue, Suite 655
Dallas, Texas 75225

We currently own the Village Park Shopping Center located at the Southeast corner of Hwy. 26/Colleyville Boulevard and Glade Road, containing approximately 192,865 square feet of retail space (the "Property"). The Property is within Tax Increment Reinvestment Zone Number One and is the subject of an Economic Development Grant Agreement executed on February 19, 2013 between us and the City of Colleyville, Texas.

As you know, we are in the process of redeveloping and rebranding the Property into Colleyville Downs, a Class A shopping center to be anchored by Whole Foods Market. The redevelopment will not only introduce a Whole Foods grocery store to Colleyville, but will also involve a renovation of the shopping center to achieve an elevated quality of appearance, which blends harmoniously with the character and history of the City of Colleyville. In addition, we are working to introduce other new retailers and multiple restaurants to the center. At this point, we have entered into a lease agreement with Whole Foods, are in various stages of pre-leasing other vacancies at the center and in the pre-development stage of our construction activity. While we have had and continue to have success in execution of the business plan, we are in need of assistance to overcome certain obstacles that we have identified and are interfering with our redevelopment plans.

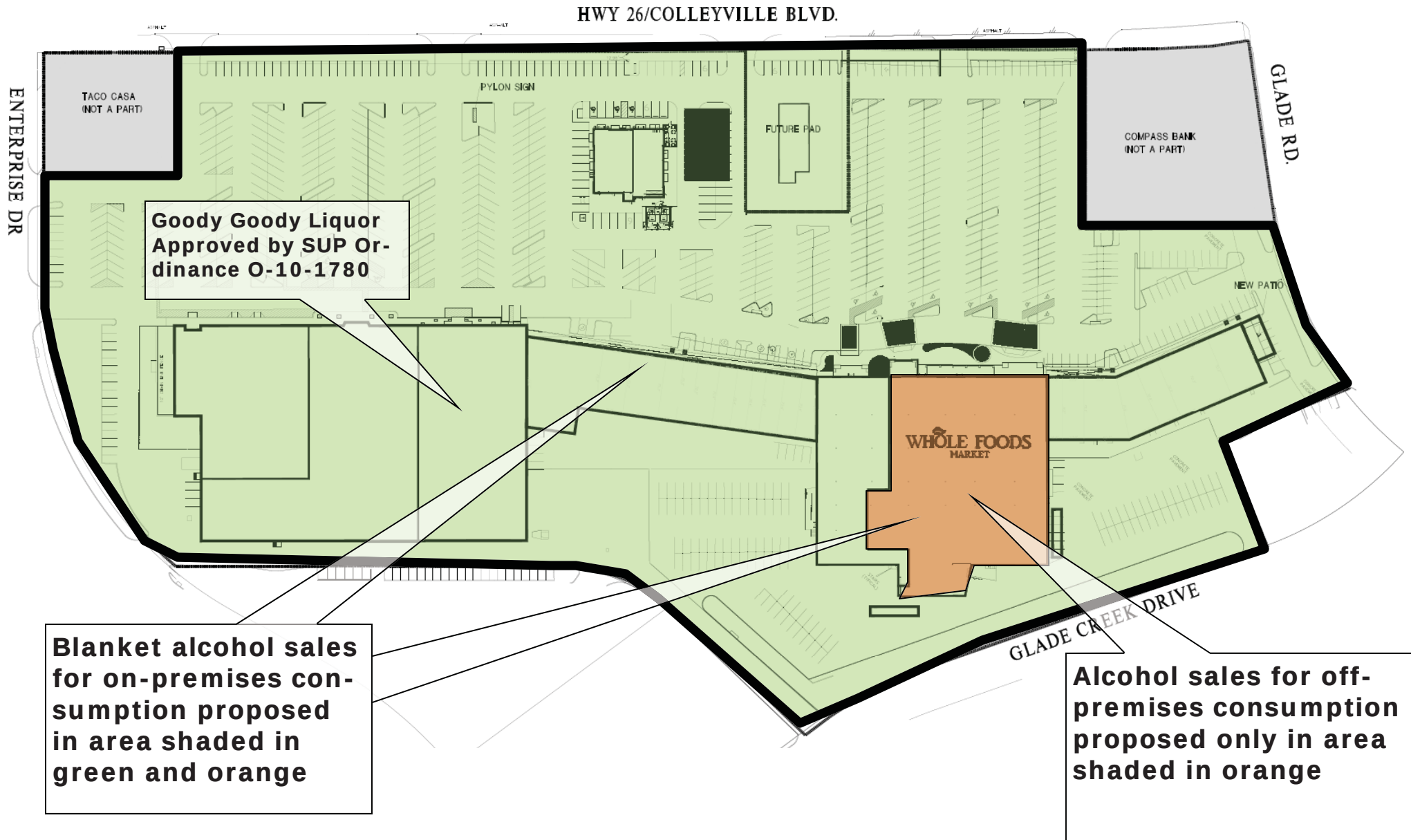
In furtherance of the Colleyville Downs redevelopment plan, we are writing to request that the City adopt a Special Use Permit that would provide for the following:

- **Restaurant Overlay District.** We are working with a number of restaurant operators whose businesses involve the sale of alcoholic beverages for on-premises consumption. In addition, Whole Foods is planning to introduce a restaurant concept within its store, and expects to sell alcoholic beverages for on-premises consumption. We would like to request a Restaurant Overlay District for Lots 1R1, 4, 5A, 6A, 7A and 9R.
- **Sale of Alcohol by Whole Foods.** Whole Foods is in the business of selling beer and wine for off-premises consumption. We would like to request permission for that activity on Lot 7A, Block 2 Village Park Addition – Colleyville.
- **Construction of New Landmark Sign.** Retailers that are interested in Colleyville Downs have demanding criteria for site selection, which include requirements of visibility, access and signage. Considering depth and slope of the parking field together with certain other issues, visibility in portions of the shopping center is limited. As a result, we will need to have the ability to offer additional signage to attract more retailers to the center. We would like to request permission to build a multi-tenant landmark sign at 4801 Colleyville Boulevard. The new landmark sign is designed to be consistent with the materials and design of the shopping center and resemble the existing landmark sign located at 4701 Colleyville Boulevard.

Statement of Planning Objectives

- **Improvement of Existing Landmark Sign.** As mentioned above, our success in leasing Colleyville Downs is determined in large part by available signage. In addition, considering our plan to improve the appearance of the shopping center, we think it would be appropriate to improve the appearance of existing signage so that it is consistent with the higher quality of the redeveloped shopping center. Thus, we would like to request permission to remodel the existing landmark sign that is identified on Exhibit “B”. The remodeled sign would be constructed to be substantially similar to the drawing on Exhibit “C”.
- **Establish 4.5 / 1000 Parking Ratio.** In order to accommodate the tenant interest in Colleyville Downs and optimize the occupancy, value, shopping traffic and sales volumes at the center, we would like to request a parking ratio of 4.5 /1000; which will suffice to comply with all permitted uses under the CC-2 Shopping Center district.
- **Allow for two electrical charging stations.** These stations will allow for the charging of electrically powered automobiles. We have not yet determined a final location for these devices and are simply asking for the allowance of the land use in conjunction with this Special Use Permit request.

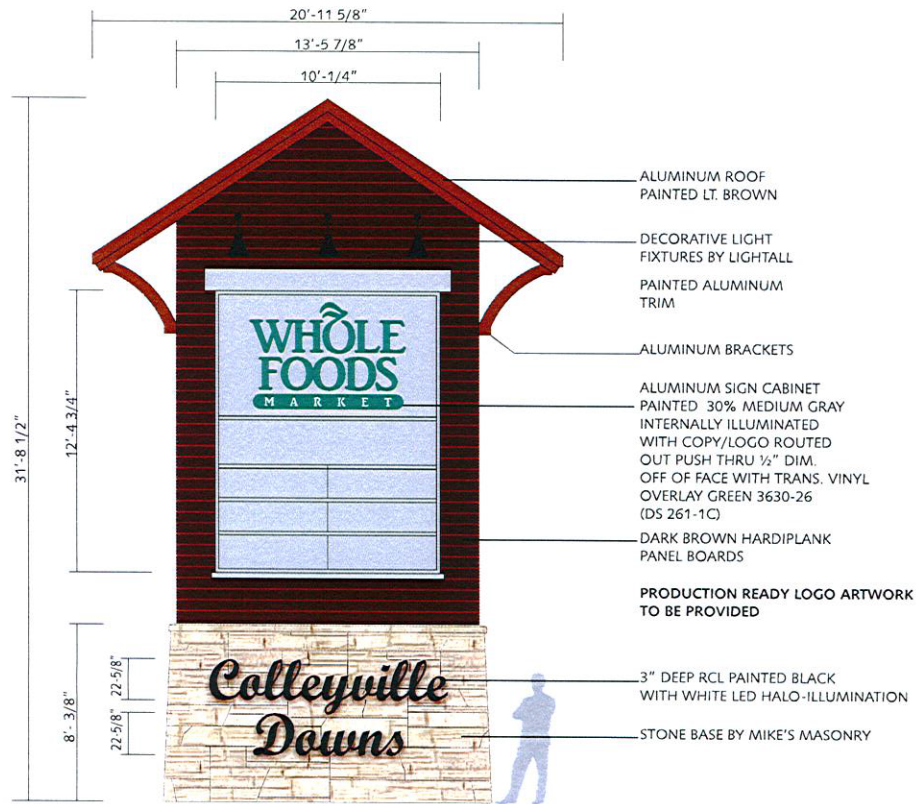
Proposed Alcohol Sales Site Exhibit



Proposed Front Elevations for Shopping Center

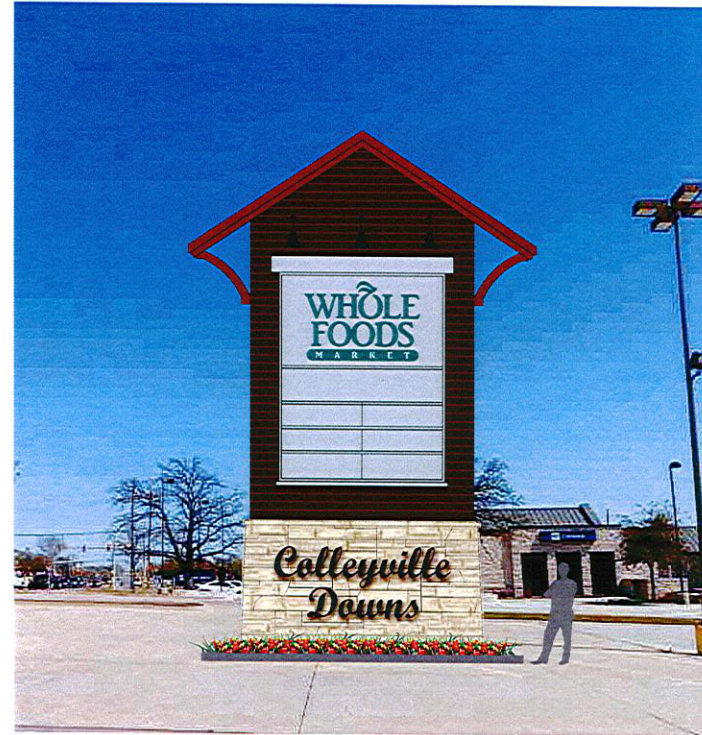


Landmark Sign Exhibits



D/F MONUMENT SIGN
(1) REQUIRED - MANUFACTURE & INSTALL

SCALE: 3/16"=1'-0"



**COLLEYVILLE
DOWNS**

Design #

13-0544R2

Sheet 1 of 4

Client:

COLLEYVILLE DOWNS

Address

4701 COLLEYVILLE BLVD
COLLEYVILLE, TX.

Account Rep. M. WILSON

Designer RFF

Date 03.18.13

Approval / Date

Client	
Sales	
Estimating	
Art	
Engineering	
Landlord	

Revision / Date

R1 RFF 03.21.13 add logos

R2 RFF 04.03.13 add colors

Chandler Signs
Brand Image Begins Here

www.chandler-signs.com

3201 Manor Way, Dallas, TX 75235
214-902-2000 Fax 214-902-2004

2106 Valliant Sanderson, TX 79216
210-349-3804 Fax 210-349-8724

335 Park Center Drive, Unit C
Vista, CA 92083
760-967-7003 Fax 760-967-7033

963 Baxter Avenue, Suite 200
Louisville, KY 40204
502-479-2015 Fax 502-412-0003

2584 Sand Hill Peing Circle
Davenport, FL 33832
863-450-1000 Fax 863-424-1160

37 Waterfront Park Court
Dawsonville, GA 30534
800-651-7062 Fax 210-349-8724

P.O. Box 125, 204 Rural Drive
Portland, TX 78374
281-563-5599 Fax 281-643-6533

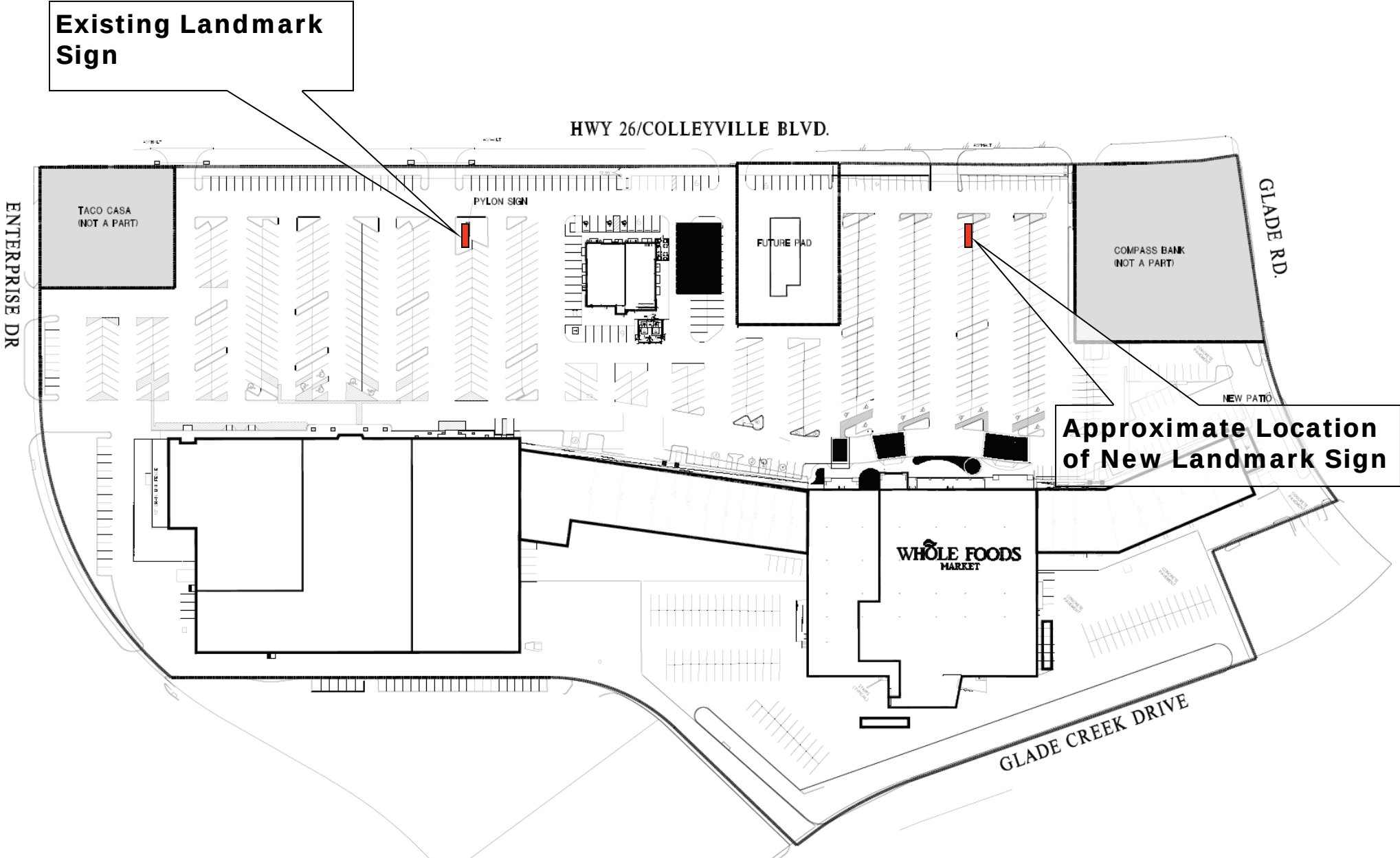
This drawing is the property of
Chandler Signs, L.P., L.P.

All rights in its use for reproduction are
reserved by Chandler Signs, L.P., L.P.

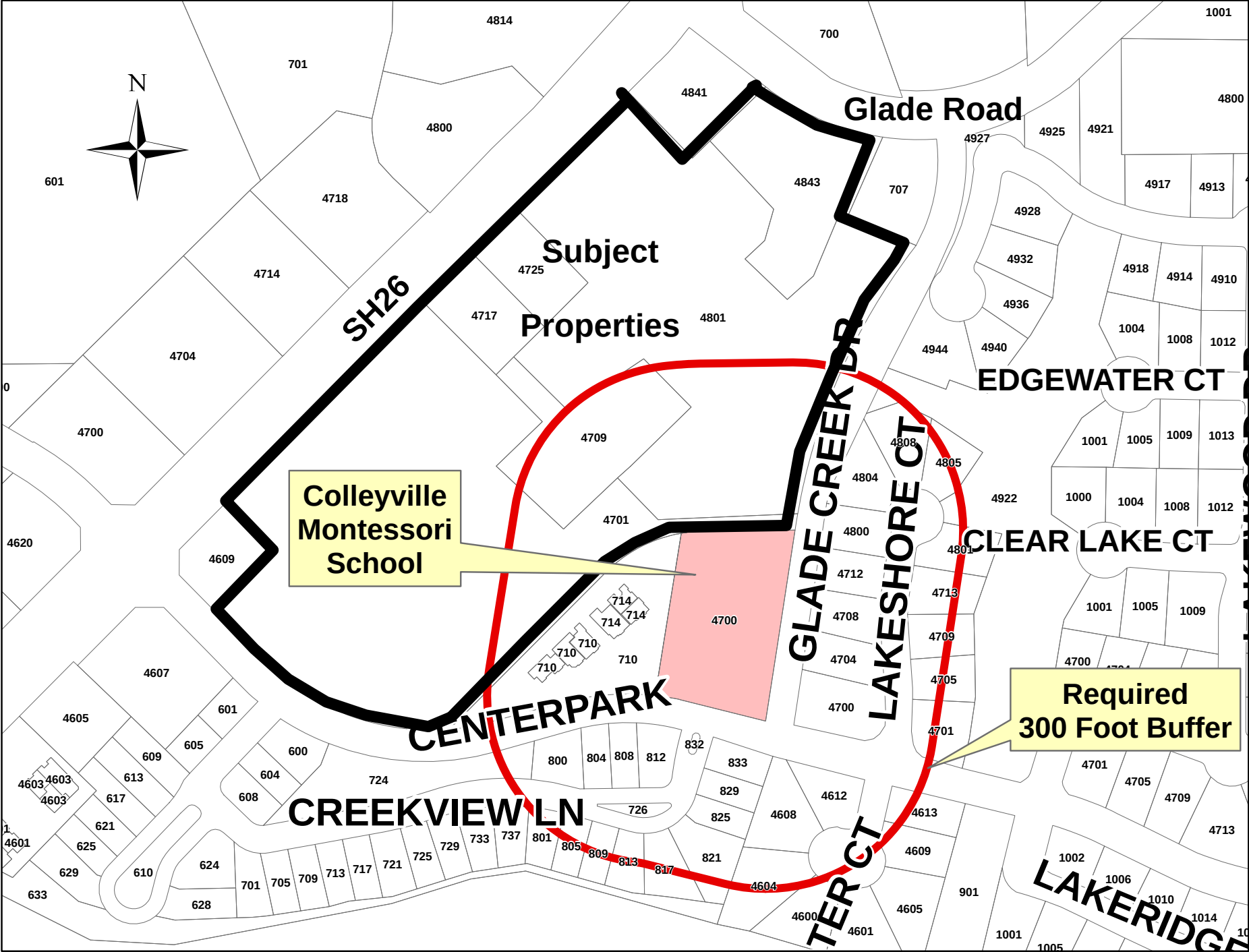
**FINAL ELECTRICAL
CONNECTION BY
CUSTOMER**

THIS SIGN IS INTENDED TO BE MANUFACTURED
IN ACCORDANCE WITH THE NATIONAL
ELECTRICAL CODE AND OTHER
APPLICABLE ELECTRICAL CODES. THE
PROPER ELECTRICAL CONNECTIONS
SHALL BE MADE BY THE
CUSTOMER.

Landmark Sign Location Exhibit



300 Foot School Separation Map for Alcoholic Beverage Sales



ORDINANCE O-10-1780

AN ORDINANCE OF THE CITY OF COLLEYVILLE, TEXAS, AMENDING THE OFFICIAL ZONING MAP AND CHANGING THE ZONING OF LOT 1R1, BLOCK 2, OF THE VILLAGE PARK ADDITION LOCATED AT 4701 COLLEYVILLE BOULEVARD BY AUTHORIZING A SPECIAL USE PERMIT FOR A PACKAGE STORE; PROVIDING A SAVINGS CLAUSE; PROVIDING FOR INJUNCTIVE RELIEF; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A PENALTY OF FINE NOT TO EXCEED THE SUM OF TWO THOUSAND DOLLARS (\$2,000.00) FOR EACH OFFENSE; AND PROVIDING AN EFFECTIVE DATE

WHEREAS, the City of Colleyville has received an application for rezoning under Case No. ZC10-024; and

WHEREAS, the City of Colleyville deems it necessary, for the purpose of promoting the health, safety, morals, or general welfare of the City to enact a new zoning ordinance; and

WHEREAS, the City Council has appointed a Planning and Zoning Commission to recommend the boundaries of the various original zoning districts and appropriate regulations be enforced therein and to recommend a new zoning ordinance; and

WHEREAS, the Planning and Zoning Commission has divided the City into districts and has prepared regulations pertaining to such districts in accordance with a comprehensive plan and designed to lessen congestion in the streets; to secure safety from fire, panic, and other dangers; to promote health, general welfare; to provide adequate light and air; to prevent the overcrowding of land; to avoid undue concentration of population; to facilitate the adequate provision of transportation, water, sewerage, schools, parks, and other public requirements; and

WHEREAS, the Planning and Zoning Commission, has given reasonable consideration to, among other things, the character of the districts and their peculiar suitability for particular uses, with a view to conserving the value of buildings and encouraging the most appropriate use of land throughout the City; and

WHEREAS, the Planning and Zoning Commission of the City of Colleyville and the City of Colleyville City Council, in compliance with the Charter of the City of Colleyville, and State Law with reference to changes to zoning classifications under the Zoning Ordinance Regulations and Zoning Map, having given the requisite notices by publication and otherwise, and after holding due hearings and affording a full and fair hearing to all the property owners generally, and to the persons interested and situated in the affected area and in the vicinity thereof, the governing body of the City of Colleyville is of the opinion that said change in zoning should be made.

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

- Sec. 1. THAT all the foregoing premises and findings are found to be true and correct and are incorporated into the body of this ordinance as if copied in their entirety.
- Sec. 2. THAT the Comprehensive Zoning Ordinance of the City of Colleyville, Texas, be, and the same is hereby amended by amending the official zoning map by authorizing a Special Use Permit for a package store on Lot 1R, Block 2, of the Village Park Addition located at 4701 Colleyville Boulevard, as depicted on Exhibit "A".
- Sec. 3. THAT the above described tract of land shall be used only in the manner and for the purposes provided by the Comprehensive Zoning Ordinance of the City of Colleyville as heretofore amended, and as amended herein.
- Sec. 4. THAT the above described tract of land shall be subject to the following conditions:

1. GENERAL

- a. This Special Use Permit shall only apply to the use of a package store as depicted on Exhibit "A" and described in Exhibit "B".
- b. The package store authorized by this Special Use Permit shall not exceed 28,560 square feet in size.
- c. The parking lot shall be landscaped per the requirements for parking lot landscaping in the Land Development Code except that no landscaping shall be required for the parking lot islands directly in front of the entrances for the proposed package store and Vineyard Antique Mall lease spaces. This exemption shall only apply to a maximum of three (3) parking lot islands on the subject property.
- d. All dumpsters shall, at a minimum, be screened per the requirements for dumpster screening in the Land Development Code.
- e. All buildings located on the subject property shall, at a minimum, meet a minimum design score of 25, per the requirements of Chapter 6-Building Design in the Land Development Code prior to the issuance of the certificate of occupancy for the package store. However, the front façade of the package store shall be generally consistent with Exhibit "E" and shall meet a minimum design score of 28.

- f. All signs advertising the package store shall meet the following conditions: (1) the existing multi-tenant pylon sign on the subject property shall be replaced with the landmark sign shown in Exhibit "D" prior to the issuance of the certificate of occupancy; (2) all signage, including existing signage, shall, at a minimum, meet the minimum requirements of Chapter 7-Sign Regulations in the Land Development Code; (3) Section 108.52 of the Texas Alcoholic Beverage Code is hereby adopted by reference of which all requirements pertaining to signage shall apply to this Special Use Permit; (4) Upon abandonment of the business authorized by this Special Use Permit, all signage advertising the package store shall be removed in its entirety at the expense of the business and/or property owner within thirty (30) days of abandonment.
 - g. The package store authorized by this Special Use Permit shall be required to comply with all provisions of the attached Exhibit "F".
 - h. This Special Use Permit shall automatically expire upon the abandonment of the business, change in the use, a change in ownership or upon the expiration or termination of the Certificate of Occupancy.
 - i. All requirements of the Land Development Code shall be met, except where amended herein.
- Sec. 5. THAT any person, firm or corporation violating any of the provisions or terms of this ordinance shall be subject to the same penalty as provided for in the Comprehensive Zoning Ordinance of the City of Colleyville, and upon conviction shall be punishable by a fine not to exceed the sum of Two Thousand Dollars (\$2,000.00) for each offense.
- Sec. 6. THAT if any section, paragraph, subdivision, clause, phrase or provision of this ordinance shall be judged invalid or unconstitutional, the same shall not affect the validity of this ordinance as a whole or any portion thereof other than that portion so decided to be invalid or unconstitutional.
- Sec. 7. THAT in addition to and accumulative of all other penalties, the City shall have the right to seek injunctive relief for any and all violations of this ordinance.

Sec. 8. THAT it has been found that there has been a change in conditions in the above described property, it is now necessary that it be given the above zoning classification in order to permit its proper development and in order to protect the public interest, comfort and general welfare, and requires that this ordinance shall take effect immediately from and after its passage.

AND IT IS SO ORDERED.

The first reading and public hearing being conducted on the 3rd day of November 2010.

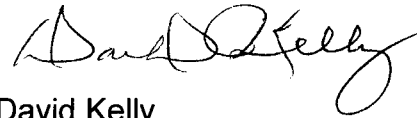
The second reading and public hearing being conducted on the 16th day of November 2010.

ATTEST:



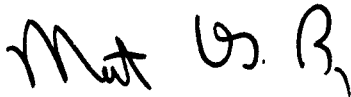
Cynthia Singleton, TRMC, CMC
City Secretary

CITY OF COLLEYVILLE



David Kelly
Mayor

APPROVED AS TO FORM AND LEGALITY:



Matthew C. G. Boyle
City Attorney

Exhibit "A" - Location and Zoning Map

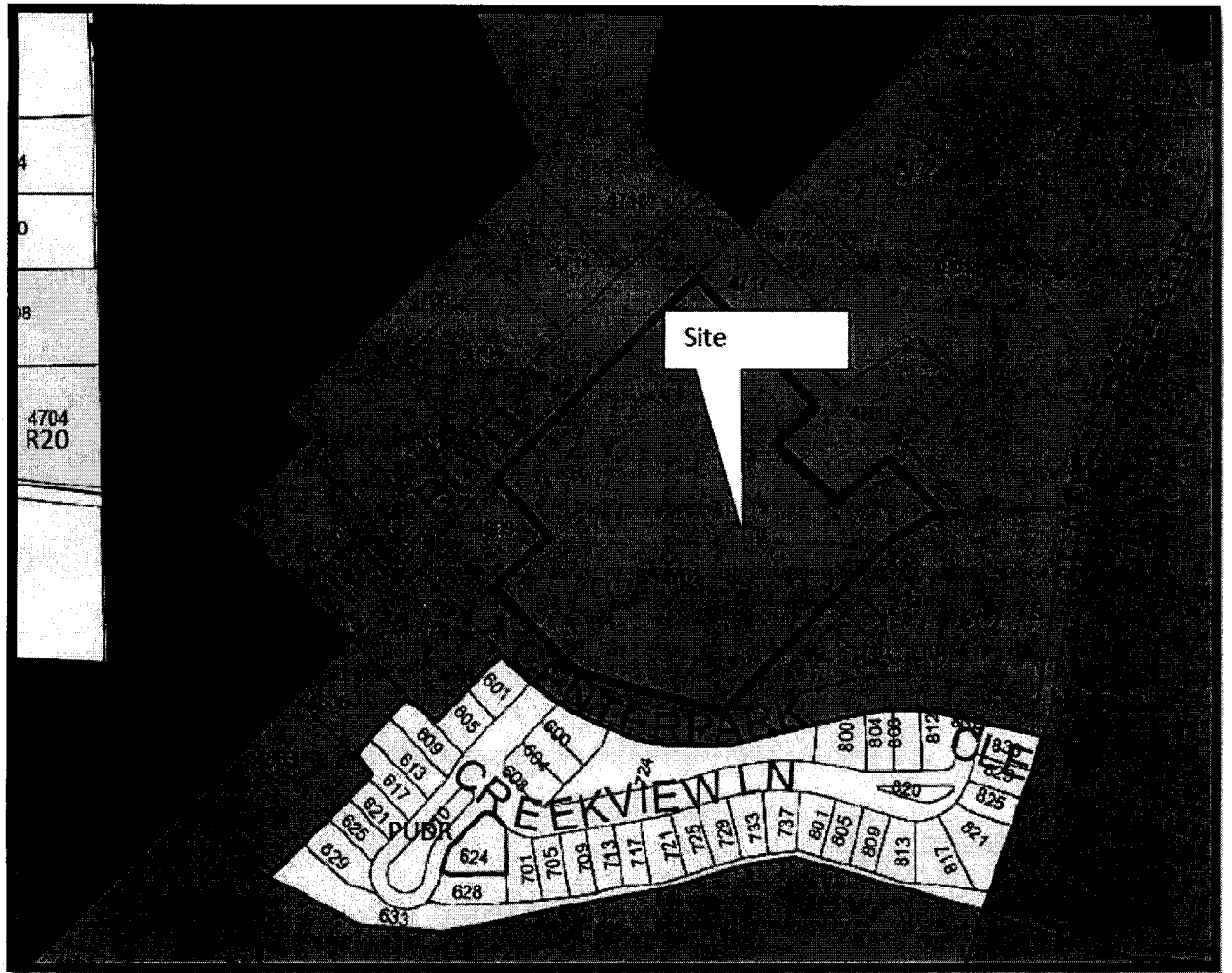


Exhibit "B" – Statement of Planning Objectives

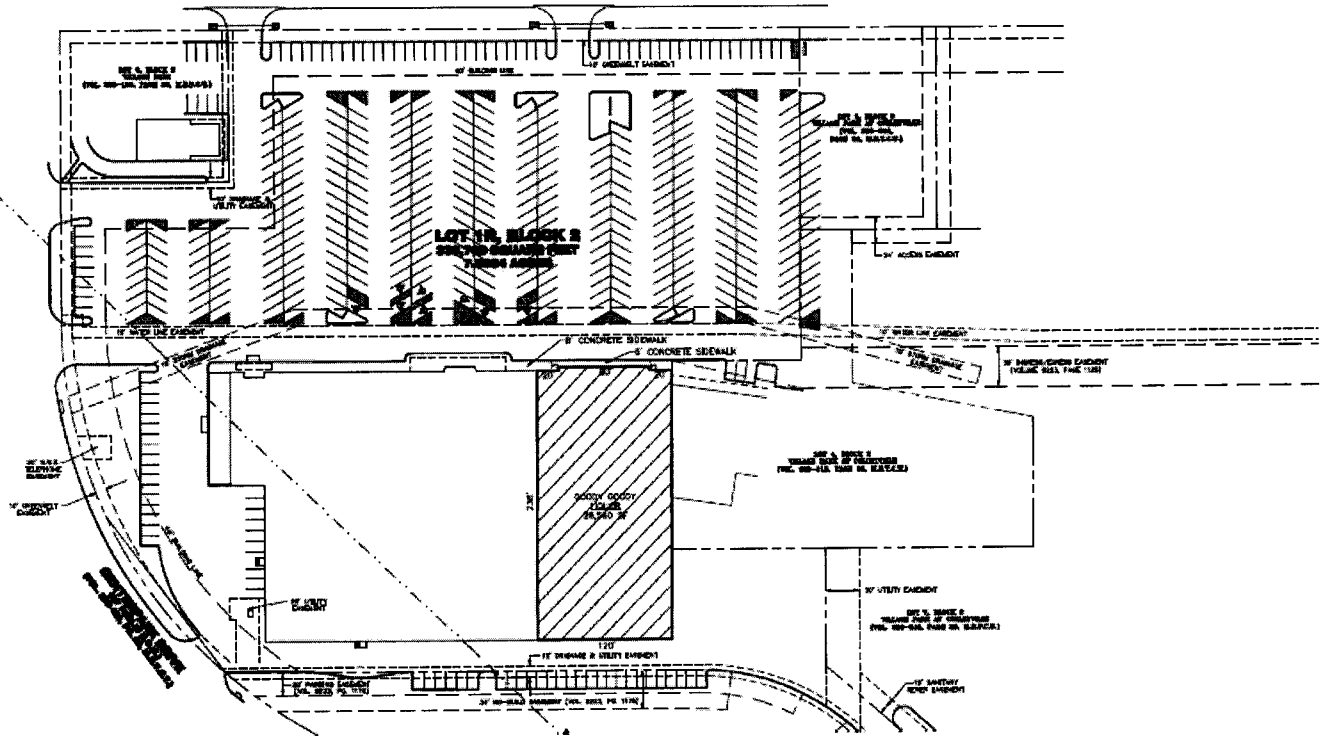
Goody Goody Liquor, inc. (The Company) has been a family owned and operated business since 1964 and is now the second largest package store chain in the state of Texas. The business model is large, clean stores with huge selections and the best pricing in the market. A store this size will carry 7,000 different products from around the world.

The proposed location is at 4701 Colleyville Blvd, which is currently being occupied by the Vineyard Antique Mall. The space will be split so that The Company will occupy 28,560 square feet. The finish out will be similar to the Companies' location on Camp Bowie Blvd. In Fort Worth, TX. Photos of that location are attached.

Application for TABC licenses will be made at the earliest possible date and will take no more than 90 days. The construction phase will take between four and five months after building permits are issued. Given this timetable, the earliest time the store could be opened would be late January or early February 2011.

The store will operate from 10 AM in the morning until 9 PM at night, 6days per week. The store will be closed on all Sundays, Thanksgiving, Christmas day, and New Years day. A store this size will start out employing fifteen people and will grow to twenty employees over the next eight years.

COLLEGEVILLE, N.Y.
FOR THE UNIVERSITY OF
THE STATE OF NEW YORK



STANDING SEAM METAL ROOF TO MATCH BLDGS.

EIFS BAND TO MATCH BLDGS.

CAST STONE TO MATCH BLDGS.

BRICK SOLDIER TO MATCH BLDGS.

(3) 10'-0" X 2'-6" X 3" REAR ILLUMINATED PLEXIGLAS FACED SIGN

(4) 10'-0" X 1'-4" X 3" REAR ILLUMINATED PLEXIGLAS FACED SIGN

CAST STONE WATERTABLE TO MATCH BLDGS.

ACCENT LIGHTING

CAST STONE SIGN FIELD TO MATCH BLDGS.

STONE TO MATCH BLDGS.

SHIPPING CENTER

12' 12'

7'-0" 2'-10" 2'-4"

12'-8" 30'-0"

10'-4" 2'-6" 3'-0" 2'-4"

14'-0" 6'-0"

[illegible]

2 FRONT ELEVATION
21'6" - 1'6"

ORDINANCE O-13-1881

AN ORDINANCE AMENDING THE ZONING ORDINANCE OF THE CITY OF COLLEYVILLE, TEXAS, BY AMENDING THE OFFICIAL ZONING MAP AND CHANGING THE ZONING OF LOTS 1R1, 4, 5A, 6A, 7A, AND 9R, BLOCK 2 OF THE VILLAGE PARK ADDITION, LOCATED AT 4701, 4709, 4717, 4725, 4801, AND 4843 COLLEYVILLE BOULEVARD, BY AUTHORIZING A SPECIAL USE PERMIT FOR THE SALE OF ALCOHOLIC BEVERAGES FOR ON-PREMISES CONSUMPTION AND OFF-PREMISES CONSUMPTION; PROVIDING A SAVINGS CLAUSE; PROVIDING FOR INJUNCTIVE RELIEF; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A PENALTY OF FINE NOT TO EXCEED THE SUM OF TWO THOUSAND DOLLARS (\$2,000.00) FOR EACH OFFENSE; AND PROVIDING AN EFFECTIVE DATE

WHEREAS, the City of Colleyville has received an application for the sale of alcoholic beverages for on and off-premises consumption under Case No. ZC13-009; and

WHEREAS, the City of Colleyville deems it necessary, for the purpose of promoting the health, safety, morals, or general welfare of the City to enact a new zoning ordinance; and

WHEREAS, the City Council has appointed a Planning and Zoning Commission to recommend the boundaries of the various original zoning districts and appropriate regulations be enforced therein and to recommend a new zoning ordinance; and

WHEREAS, the Planning and Zoning Commission has divided the City into districts and has prepared regulations pertaining to such districts in accordance with a comprehensive plan and designed to lessen congestion in the streets; to secure safety from fire, panic, and other dangers; to promote health, general welfare; to provide adequate light and air; to prevent the overcrowding of land; to avoid undue concentration of population; to facilitate the adequate provision of transportation, water, sewerage, schools, parks, and other public requirements; and

WHEREAS, the Planning and Zoning Commission, has given reasonable consideration to, among other things, the character of the districts and their peculiar suitability for particular uses, with a view to conserving the value of buildings and encouraging the most appropriate use of land throughout the City; and

WHEREAS, the Planning and Zoning Commission of the City of Colleyville and the City of Colleyville City Council, in compliance with the Charter of the City of Colleyville, and state law with reference to changes to zoning classifications under the Zoning Ordinance Regulations and Zoning Map, having given the requisite notices by publication and otherwise, and after holding due hearings and affording a full and fair hearing to all the property owners generally, and to the persons interested and situated in the affected area and in the vicinity thereof, the governing body of the City of Colleyville is of the opinion that said change in zoning should be made.

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

- Sec. 1. THAT all the foregoing premises and findings are found to be true and correct and are incorporated into the body of this ordinance as if copied in their entirety.
- Sec. 2. THAT the Comprehensive Zoning Ordinance of the City of Colleyville, Texas, be, and the same is hereby amended by changing the zoning on Lots 1R1, 4, 5A, 6A, 7A, and 9R, Block 2, Village Park Addition located at 4701, 4709, 4717, 4725, 4801, and 4843 Colleyville Boulevard by authorizing a Special Use Permit for the sale of alcoholic beverages for on-premises consumption and off-premises consumption, as depicted on Exhibit "A" and described in Exhibit "B".
- Sec. 3. THAT the above described tract of land shall be used only in the manner and for the purposes provided by the Comprehensive Zoning Ordinance of the City of Colleyville as heretofore amended, and as amended herein.
- Sec. 4. THAT the above described tract of land shall be subject to the following conditions:

1. GENERAL

- a. The Special Use Permit shall apply to the sale of alcoholic beverages for on-premises consumption and off-premises consumption.
- b. The sale of alcoholic beverages for on-premises consumption may apply to any restaurant located on the

subject properties provided that the restaurant is in compliance with the City's alcoholic beverage regulations.

- c. The blanket provision for on-premises sales of alcoholic beverages authorized by this ordinance and described in section "b" shall be permitted only in conjunction with the operation of the Whole Foods Market. Therefore, the provision for off-premises sales of alcoholic beverages authorized by this ordinance shall automatically expire in its entirety upon the abandonment, change in the use, change in ownership, or upon the expiration or termination of the Certificate of Occupancy for the Whole Foods Market.
- d. The sale of alcoholic beverages for off-premises consumption shall only include beer and wine sales and shall only apply to the Whole Foods Market located at 4801 Colleyville Boulevard. The provision for off-premises sales of alcoholic beverages shall automatically expire upon the abandonment of the business, change in the use, a change in ownership, or upon the expiration or termination of the Certificate of Occupancy for the Whole Foods Market.
- e. A variance to the 300 foot distance requirement to churches, public or private schools, or public hospitals is hereby granted by this ordinance.
- f. All requirements of the Land Development Code and the Code of Ordinances shall be met, except where amended herein.

2. LANDSCAPING AND SCREENING

- a. Prior to the issuance of any Certificate of Occupancy for any business authorized to sell alcoholic beverages per the provisions of this ordinance, all landscaping on the subject properties shall meet the requirements of Chapter 4-Landscaping and Buffering in the Land Development Code.
- b. Prior to the issuance of any Certificate of Occupancy for any business authorized to sell alcoholic beverages per the provisions of this ordinance, all dumpsters on the subject properties shall be enclosed and screened per the requirements of Section 3.26 in the Land Development Code.

3. BUILDING DESIGN, SIGNAGE, AND PARKING

- a. Prior to the issuance of any Certificate of Occupancy for any business authorized to sell alcoholic beverages per the provisions of this ordinance, the front façade of the shopping center shall meet the minimum requirements of Chapter 6-Building Design in the Land Development Code. The front façade shall be generally consistent with Exhibit "C".
- b. Prior to the issuance of any Certificate of Occupancy for any business authorized to sell alcoholic beverages per the provisions of this ordinance, not more than two landmark signs, as described in Chapter 7-Sign Regulations in the Land Development Code, shall be placed on the subject properties. The signs shall be generally consistent with Exhibit "D". The existing landmark sign located at 4701 Colleyville Boulevard and authorized by Ordinance O-10-1780 shall meet the standards shown in Exhibit "D".
- c. Required parking space calculations for the subject properties may be calculated at 4.5 parking spaces per 1,000 feet of gross floor area.
- d. No more than two electrical charging stations shall be allowed on the subject properties in conjunction with this Special Use Permit.

Sec. 5. THAT any person, firm, or corporation violating any of the provisions or terms of this ordinance shall be subject to the same penalty as provided for in the Comprehensive Zoning Ordinance of the City of Colleyville, and upon conviction shall be punishable by a fine not to exceed the sum of Two Thousand Dollars (\$2,000.00) for each offense.

Sec. 6. THAT if any section, paragraph, subdivision, clause, phrase, or provision of this ordinance shall be judged invalid or unconstitutional, the same shall not affect the validity of this ordinance as a whole or any portion thereof other than that portion so decided to be invalid or unconstitutional.

Sec. 7. THAT in addition to and accumulative of all other penalties, the City shall have the right to seek injunctive relief for any and all violations of this ordinance.

Sec. 8. THAT it has been found that there has been a change in conditions in the above described property, it is now necessary that it be given the above zoning classification in order to permit its proper development and in order to protect the public interest, comfort and general welfare, and requires that this ordinance shall take effect immediately from and after its passage.

AND IT IS SO ORDERED.

The first reading and public hearing being conducted on the 3rd day of September 2013.

The second reading and public hearing being conducted on the 17th day of September 2013.

PASSED AND APPROVED by the City Council of the City of Colleyville, Texas, on this the _____ day of _____ 2013.

ATTEST:

CITY OF COLLEYVILLE

Amy Shelley, TRMC
City Secretary

David Kelly
Mayor

APPROVED AS TO FORM AND LEGALITY:

Matthew C. G. Boyle
City Attorney

The map displays a residential area with the following features:

- Zoning Districts:**
 - CC-2:** Red areas, primarily in the center and west.
 - CC-1:** Red area in the northeast corner.
 - SH-26:** Red area running diagonally from the center towards the southeast.
 - SHAD:** Light blue area in the northwest corner.
 - SHADO:** Light green area in the northwest corner, adjacent to SHAD.
 - PUD-R:** Light green areas in the southwest and southeast.
 - R-MF:** Dark blue area in the southeast corner.
- Subject Properties:** A large area in the center, outlined with a thick black line, labeled "Subject Properties".
- Streets:**
 - Glade Road:** North boundary of the main area.
 - Creekview Ln:** South boundary of the main area.
 - Glade Creek Dr:** East boundary of the main area.
 - Lakeshore Ct:** East boundary of the main area.
 - Centerpark:** A street running along the bottom of the subject properties.
- Lot Numbers:** Numerous individual lots are labeled with numbers, such as 4905, 4903, 4900, 4819, 4800, 4841, 4843, 4801, 4701, 4700, 4714, 4717, 4725, 4718, 4704, 4620, 4609, 4607, 4605, 4601, 4603, 4604, 4606, 4608, 4609, 4610, 4611, 4612, 4613, 4614, 4615, 4616, 4617, 4618, 4619, 4620, 4621, 4622, 4623, 4624, 4625, 4626, 4627, 4628, 4629, 4630, 4631, 4632, 4633, 4634, 4635, 4636, 4637, 4638, 4639, 4640, 4641, 4642, 4643, 4644, 4645, 4646, 4647, 4648, 4649, 4650, 4651, 4652, 4653, 4654, 4655, 4656, 4657, 4658, 4659, 4660, 4661, 4662, 4663, 4664, 4665, 4666, 4667, 4668, 4669, 4670, 4671, 4672, 4673, 4674, 4675, 4676, 4677, 4678, 4679, 4680, 4681, 4682, 4683, 4684, 4685, 4686, 4687, 4688, 4689, 4690, 4691, 4692, 4693, 4694, 4695, 4696, 4697, 4698, 4699, 4700, 4701, 4702, 4703, 4704, 4705, 4706, 4707, 4708, 4709, 4710, 4711, 4712, 4713, 4714, 4715, 4716, 4717, 4718, 4719, 4720, 4721, 4722, 4723, 4724, 4725, 4726, 4727, 4728, 4729, 4730, 4731, 4732, 4733, 4734, 4735, 4736, 4737, 4738, 4739, 4740, 4741, 4742, 4743, 4744, 4745, 4746, 4747, 4748, 4749, 4750, 4751, 4752, 4753, 4754, 4755, 4756, 4757, 4758, 4759, 4760, 4761, 4762, 4763, 4764, 4765, 4766, 4767, 4768, 4769, 4770, 4771, 4772, 4773, 4774, 4775, 4776, 4777, 4778, 4779, 4780, 4781, 4782, 4783, 4784, 4785, 4786, 4787, 4788, 4789, 4790, 4791, 4792, 4793, 4794, 4795, 4796, 4797, 4798, 4799, 4800, 4801, 4802, 4803, 4804, 4805, 4806, 4807, 4808, 4809, 4810, 4811, 4812, 4813, 4814, 4815, 4816, 4817, 4818, 4819, 4820, 4821, 4822, 4823, 4824, 4825, 4826, 4827, 4828, 4829, 4830, 4831, 4832, 4833, 4834, 4835, 4836, 4837, 4838, 4839, 4840, 4841, 4842, 4843, 4844, 4845, 4846, 4847, 4848, 4849, 4850, 4851, 4852, 4853, 4854, 4855, 4856, 4857, 4858, 4859, 4860, 4861, 4862, 4863, 4864, 4865, 4866, 4867, 4868, 4869, 4870, 4871, 4872, 4873, 4874, 4875, 4876, 4877, 4878, 4879, 4880, 4881, 4882, 4883, 4884, 4885, 4886, 4887, 4888, 4889, 4890, 4891, 4892, 4893, 4894, 4895, 4896, 4897, 4898, 4899, 4900, 4901, 4902, 4903, 4904, 4905, 4906, 4907, 4908, 4909, 4910, 4911, 4912, 4913, 4914, 4915, 4916, 4917, 4918, 4919, 4920, 4921, 4922, 4923, 4924, 4925, 4926, 4927, 4928, 4929, 4930, 4931, 4932, 4933, 4934, 4935, 4936, 4937, 4938, 4939, 4940, 4941, 4942, 4943, 4944, 4945, 4946, 4947, 4948, 4949, 4950, 4951, 4952, 4953, 4954, 4955, 4956, 4957, 4958, 4959, 4960, 4961, 4962, 4963, 4964, 4965, 4966, 4967, 4968, 4969, 4970, 4971, 4972, 4973, 4974, 4975, 4976, 4977, 4978, 4979, 4980, 4981, 4982, 4983, 4984, 4985, 4986, 4987, 4988, 4989, 4990, 4991, 4992, 4993, 4994, 4995, 4996, 4997, 4998, 4999, 5000.

- North Arrow:** Located in the bottom left corner, pointing towards the top of the map.

Exhibit “B” – Statement of Planning Objectives

**AC VILLAGE PARK PARTNERS, LLC
8235 Douglas Avenue, Suite 655
Dallas, Texas 75225**

We currently own the Village Park Shopping Center located at the Southeast corner of Hwy. 26/Colleyville Boulevard and Glade Road, containing approximately 192,865 square feet of retail space (the “Property”). The Property is within Tax Increment Reinvestment Zone Number One and is the subject of an Economic Development Grant Agreement executed on February 19, 2013 between us and the City of Colleyville, Texas.

As you know, we are in the process of redeveloping and rebranding the Property into Colleyville Downs, a Class A shopping center to be anchored by Whole Foods Market. The redevelopment will not only introduce a Whole Foods grocery store to Colleyville, but will also involve a renovation of the shopping center to achieve an elevated quality of appearance, which blends harmoniously with the character and history of the City of Colleyville. In addition, we are working to introduce other new retailers and multiple restaurants to the center. At this point, we have entered into a lease agreement with Whole Foods, are in various stages of pre-leasing other vacancies at the center and in the pre-development stage of our construction activity. While we have had and continue to have success in execution of the business plan, we are in need of assistance to overcome certain obstacles that we have identified and are interfering with our redevelopment plans.

In furtherance of the Colleyville Downs redevelopment plan, we are writing to request that the City adopt a Special Use Permit that would provide for the following:

- **Restaurant Overlay District.** We are working with a number of restaurant operators whose businesses involve the sale of alcoholic beverages for on-premises consumption. In addition, Whole Foods is planning to introduce a restaurant concept within its store, and expects to sell alcoholic beverages for on-premises consumption. We would like to request a Restaurant Overlay District for Lots 1R1, 4, 5A, 6A, 7A and 9R.
- **Sale of Alcohol by Whole Foods.** Whole Foods is in the business of selling beer and wine for off-premises consumption. We would like to request permission for that activity on Lot 7A, Block 2 Village Park Addition – Colleyville.
- **Construction of New Landmark Sign.** Retailers that are interested in Colleyville Downs have demanding criteria for site selection, which include requirements of visibility, access and signage. Considering depth and slope of the parking field together with certain other issues, visibility in portions of the shopping center is limited. As a result, we will need to have the ability to offer additional signage to attract more retailers to the center. We would like to request permission to build a multi-tenant landmark sign at 4801 Colleyville Boulevard. The new landmark sign is designed to be consistent with the materials and design of the shopping center and resemble the existing landmark sign located at 4701 Colleyville Boulevard.

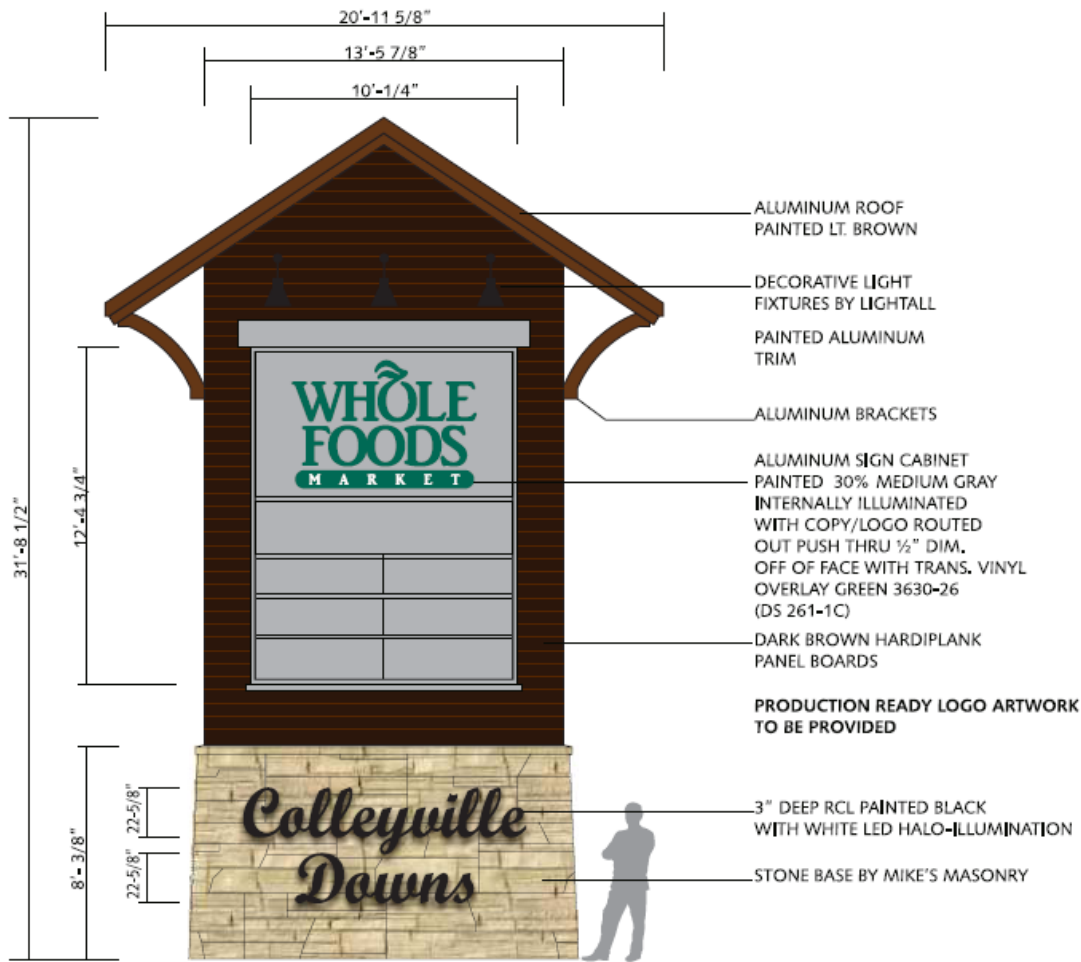
Exhibit “B” – Statement of Planning Objectives Cont.

- **Improvement of Existing Landmark Sign.** As mentioned above, our success in leasing Colleyville Downs is determined in large part by available signage. In addition, considering our plan to improve the appearance of the shopping center, we think it would be appropriate to improve the appearance of existing signage so that it is consistent with the higher quality of the redeveloped shopping center. Thus, we would like to request permission to remodel the existing landmark sign that is identified on Exhibit “B”. The remodeled sign would be constructed to be substantially similar to the drawing on Exhibit “C”.
- **Establish 4.5 / 1000 Parking Ratio.** In order to accommodate the tenant interest in Colleyville Downs and optimize the occupancy, value, shopping traffic and sales volumes at the center, we would like to request a parking ratio of 4.5 /1000; which will suffice to comply with all permitted uses under the CC-2 Shopping Center district.
- **Allow for two electrical charging stations.** These stations will allow for the charging of electrically powered automobiles. We have not yet determined a final location for these devices and are simply asking for the allowance of the land use in conjunction with this Special Use Permit request.

Exhibit "C" – Front Façade Elevations

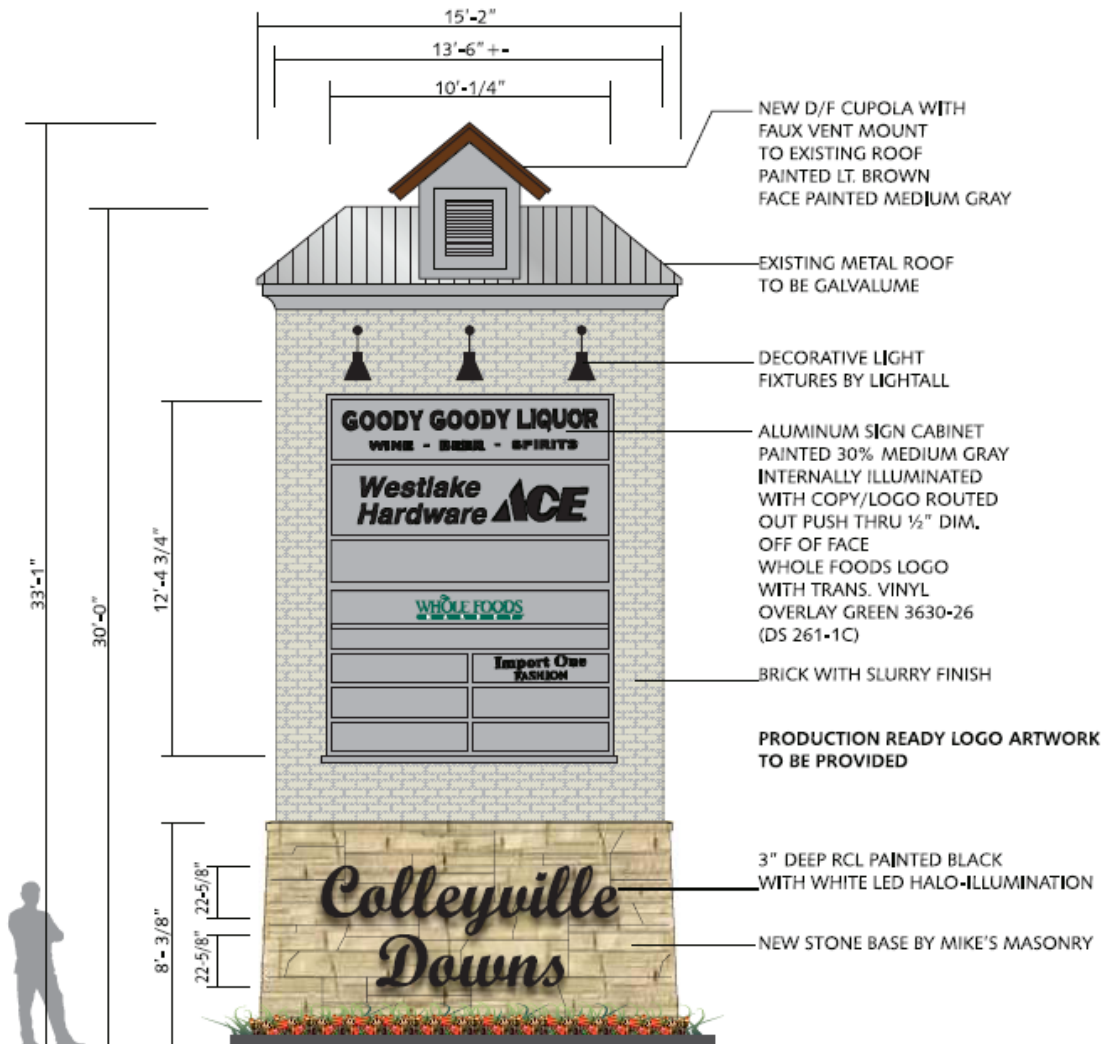


Exhibit "D" – Landmark Sign Exhibits



A D/F MONUMENT SIGN SCALE: 3/16" = 1'-0"
(1) REQUIRED - MANUFACTURE & INSTALL

Exhibit "D" – Landmark Sign Exhibits Cont.



D/F EXISTING MONUMENT SIGN SCALE: 3/16" = 1'-0" **MODIFIED**

(1) REQUIRED - MANUFACTURE & INSTALL
REF. W.O. 360714



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 5b
Type Ordinance
Department City Manager

Agenda Date 09/17/2013

Number Ordinance O-13-1882

Title

Adoption of the proposed Fiscal Year 2014 (FY 2014) budget

Explanation

Second Reading and Public Hearing

There were no speakers regarding this item at the September 3, 2013 City Council meeting.

First Reading and Public Hearing

On August 13, 2013, the City Council held a worksession to review the proposed FY 2014 budget. Funding for the General Fund, Utility Fund, Debt Service, and Drainage Utility Funds contained in the proposed ordinance is the same as presented to the City Council at the worksession. The proposed FY 2014 budget is outlined in more detail in the attached FY 2014 Proposed Budget Message. The budget for the first year (FY 2014) of the Five-Year Capital Improvement Program (CIP) contained in the proposed ordinance is also the same as presented to the City Council at the worksession.

The total proposed expenditures in each fund are:

General Fund:	\$21,533,967
Utility Fund:	\$13,176,572
Debt Service Fund:	\$ 1,685,797
Drainage Utility Fund:	\$ 873,519

Expenditures outlined in the first year (FY 2014) of the Five-Year CIP are \$27,118,446.

For FY 2014, the tax rate remains at \$.3559 per hundred dollars of valuation.

Financial Impact

The adoption of the budget will provide expense appropriation for the General Fund, Utility Fund, Debt Service Fund, and Drainage Utility Fund for Fiscal Year 2014. It will also authorize expenditures outlined in the first year (FY 2014) of the Five-Year Capital Improvement Program.

Recommendation

Approve

Attachments

1. FY 2014 Budget Message
2. Ordinance O-13-1882

COLLEYVILLE

FY 2014 Budget Message

We are pleased to present the proposed FY 2014 Combined Annual Operating Budget for the City of Colleyville. This document represents the City's ongoing commitment to prudent fiscal management in delivering services that enhance the quality of life of Colleyville's citizens and meeting the expressed needs of our community. It also addresses the need to protect the long-term future of the community, primarily in the areas of public safety, preservation of public infrastructure, and in delivering sustainable government that aligns with the demands of today, while ensuring the ability to rapidly respond to growth. While this budget covers only fiscal year 2014, it continues to define a path that will move Colleyville into the future as a safe city with a solid infrastructure and an ongoing commitment to a unique quality of life.

The proposed budget funds current and enhanced service levels to meet the Colleyville City Council's priorities for service delivery, while still maintaining the current tax rate. The proposed budget has been formulated with a philosophy of:

- Providing solid, high-quality, core governmental services
- Efficiently allocating resources to meet citizen needs
- Emphasizing affordability and sustainability
- Capitalizing on technology to improve service delivery
- Valuing our employees

Furthering our commitment to fostering community involvement and governmental transparency, a summary presentation of the proposed budget has been placed on the City's website. A public hearing on the budget is scheduled on September 3, 2013, to allow citizens an opportunity to provide input on the proposed budget. The proposed budget will be presented to the City Council for final approval on September 17, 2013. Any questions or requests for additional information should be directed to Adrienne Lothery, strategic services manager, at 817.503.1112 or by email to alothery@colleyville.com.



BUDGET DEVELOPMENT

By definition, preparation of any budget is the allocation of scarce resources. There will always be more needs than available funds. The challenge is to ensure that available resources are dedicated to the community and City Council's highest priorities. Delivery of citizen services is at the heart of city government. And recognition of the services desired and expected by the community is central to effective service delivery. Development of the fiscal year 2014 budget was aided immensely by the input provided by our citizens in the 2012 citizen survey, and each budget proposal was measured in large part by the priority placed on it by our citizens. Each item has been vetted for its alignment with the City's strategic plan, reviewed for resource optimization, and finally weighted against both current and future community needs.

The budget-building process included four key components:

- Determination of program and service priorities based on strategic plan alignment and the prioritization of citizens through the citizen survey.
- Determination of the value and cost of each service based on the level of service needed and/or desired by our citizens, including long-term forecasting.
- Determination of optimal service delivery methods to ensure the efficient, effective service delivery our citizens expect through utilization of performance measurement and benchmarking.
- Determination of the scope and value of government in relation to the availability of revenue for the City.

The fiscal year 2014 budget focuses on ensuring that services are provided at the high quality level expected by citizens, and that to the greatest extent possible current programs and services are considered fully funded and fully functioning at the desired level before the addition of any new services are considered. In line with this philosophy, additional funding requests submitted by departments in the budget process were categorized as either requests to fully fund the current service level, or as service enhancement requests. These efforts are meant to ensure that the City's resources and staff are aligned to meet the demands of today and that the service levels provided to meet those demands are sustainable for the foreseeable future.

The goal of the proposed budget is to align services delivered with the needs identified as priorities by the community. The reality of any budget is that it consists of a collection of purchasing decisions. The City Council, on behalf of the citizens, establishes the costs community members are willing to pay for local government services. Utilizing citizen input, the City Council determines various goals to meet the priorities of citizens. Staff's role is to guide the process by providing purchasing proposals pursuant to the City Council's priorities. It is important to note that, as the budget will serve as a policy document upon adoption for the next fiscal year, any service level enhancements beyond those included in the adopted budget must be vetted and determined by the City Council, and will

likely necessitate the loss or reduction of other programs or services in order to stay within the City's balanced budgetary parameters.

BUDGET OVERVIEW

Over the years, Colleyville's budget document has evolved from a simple financial report with proposals for expenditures and estimates of revenue, into the City's most comprehensive annual document establishing budgetary policies. The budget decisions outlined in this document influence the fiscal state of the city, the function of its government, and budget considerations for current and future needs. The City's budget, therefore, is the most important working policy and planning tool used by the City Council and staff to provide quality services to the citizens of Colleyville, as determined by the City Council and for which funds are available.

Financial Summary

The proposed budget is balanced in accordance with state law, the City Charter and ordinances. The combined proposed expenditures and transfers of the City's major operating funds total \$37,268,855 which is an \$1,345,105 increase from the current year budget.

<i>Fund Type</i>	<i>Proposed FY 2014</i>	<i>Adopted FY 2013</i>	<i>Change</i>
General	\$21,533,967	\$20,444,340	\$1,089,627
Drainage	\$ 873,519	\$ 867,192	\$ 6,327
Utility	\$13,176,572	\$12,315,772	\$ 860,800
Debt Service	\$ 1,685,797	\$ 2,296,446	(\$ 610,649)
Total:	\$37,269,855	\$35,923,750	\$1,346,105

One measure of a city's financial strength is the level of its fund balance. In keeping with the City Council's conservative fiscal policy of a 90-day reserve requirement, the General Fund is projected to have 102 days over the 90-day minimum for a total of a 192 day reserve and the Utility Fund is projected to have 98 days over the 90-day minimum cash balance for a total of a 188 day reserve as of September 30, 2013.

<i>Fund Type</i>	<i>Number of Days</i>	<i>Amount</i>
General	192	\$10,766,194
Utility	188	\$6,358,420

The reserve earns interest, bolsters cash flow and is available for unanticipated expenditures or emergencies. As a non-recurring revenue source, beginning fund balances are used to fund capital or other one-time expenses only.



Issues and Challenges

Colleyville benefits from a strong residential base, which helps mitigate the negative effects of economic fluctuations. Property values have rebounded substantially from the declines experienced in fiscal years 2011 and 2012, and continued growth is anticipated in economy-driven revenues, such as sales tax. While other funding sources for fiscal year 2014 remain relatively flat in the majority of revenue categories, prudent management of the City's finances on previous and current capital improvement projects has reduced debt and, subsequently, debt service costs. The resulting debt service savings will be used to help fund current and long-term funding priorities as delineated in the fiscal year 2014 budget. Through June of fiscal year 2013, 265 new single-family lots were approved. As such, it is anticipated that the number of building permits issued will increase in fiscal year 2014. As Colleyville approaches build-out, which is estimated to be in 2025, development revenues will be difficult to predict due to the declining availability of land for new development. Each revenue source is discussed in more detail in subsequent sections of this budget message.

Like much of the country, the City of Colleyville endured the uncertainties and financial turmoil of the economic climate that engulfed the nation for the past few years. And, like city governments and American households across the country, the City adjusted to what has been termed—the “new normal”—cutting back where possible and delaying large expenditures until the financial picture stabilized. In that new normal, while the future remained a consideration, out of necessity, the primary emphasis was on delivering city services in an efficient and effective manner in the present—balancing limited and sometimes dwindling resources with citizen expectations—against an ever-changing and unpredictable economic environment. The City was able to easily adjust to the new normal and beginning in fiscal year 2013 was able to again plan not only for the present and near-term, but for the long-term future of the Colleyville community.

At the budget worksession in June, staff presented a six-year General Fund budget forecasted to fiscal year 2019. That forecast includes conservative estimates for revenues such as property tax and sales tax, as well as expenditures and any changes that can be reasonably anticipated. One of the challenges Colleyville experiences is limited growth in the property tax revenue category due to a freeze on assessed valuation for properties owned by individuals 65 years or older, even though property values are increasing. Sales tax revenue is anticipated to grow, particularly with the development surrounding the opening of Whole Foods Market, but projections remain conservative as this is one of the most volatile revenue sources, often impacted by fluctuations in the overall economy. The forecast for expenditures includes the commitment to hire an additional police officer in each of the next four fiscal years, the commitment to hire three new fire personnel in each of the next two fiscal years, general cost increases for materials and contractual services required each year, and modest growth in personnel costs. This forecast served as the framework and starting point for budget discussions, helping staff and the City Council focus on the long-term budgetary implications of current funding decisions. It also helped to put long-term goals into perspective relative to



the overall resources available in the General Fund. This information was weighted heavily in determining fiscal year 2014 budget priorities, particularly in ensuring that all current services are adequately funded, prior to considering any new or enhanced services. Additionally, careful consideration was given to ensure that new expenditures could be sustained into the future.

Priorities and Fiscal Year 2014 Focus

With this budget, staff recommended allocating resources according to the priorities of our citizens and City Council, while maintaining the conservative fiscal approach that has allowed Colleyville to attain and maintain an AAA bond rating. The service delivery plan maintains or enhances the programs and services identified by our citizens as priorities. The overall focus of the fiscal year 2014 budget is to deliver “sustainable government,” one of the five strategic points adopted by the City Council.

As part of the effort to deliver sustainable government, staff reviewed current staffing levels to determine the best allocation of resources for addressing citizen priorities. This analysis led to the reclassification of several positions in fiscal year 2013; and, those changes are reflected in the proposed budget. The fiscal year 2014 budget also includes the addition of seven full time and two part time positions (three firefighter/paramedics, police officer, construction inspector, plans examiner, property room clerk, part-time building inspector, and part-time assistant librarian), which have been identified as necessary to achieving the City’s strategic goals. These personnel changes are categorized in the sections that follow, according to their relationship to the City’s strategic points.

Furthermore, the service delivery plan invests in the City’s most important resource—the employees who are ultimately responsible for service delivery. Local government is a service organization, and as with most service organizations, the skills, experience, education, and attitude of our employees are the essential ingredients of our success. We can only attract and retain quality employees if we provide compensation, facilities, equipment, and a work environment that allows each employee to reach his or her potential. The fiscal year 2014 budget includes funding for the transition to a new compensation and classification system that provides greater flexibility and responsiveness to market conditions. Implementation of the new system will involve moving from the current set of pay ranges and job classifications to broader decision bands and associated pay ranges. Market adjustments have been included for certain positions, as well as funding for performance-based merit increases.

One of the highest priorities in this and future budgets will be to improve the city’s public infrastructure, including roads, sidewalks, bridges, public buildings, water and sewer lines, pipes, inlets, parks and playgrounds, trails, traffic signs and signals, and the hardware associated with technology (computers, servers, etc.) While components of some of these will receive funding in this budget and will continue to be funded in future budgets to the extent funds are available, the improvement of our city streets will be one of our highest long-term priorities.



The fiscal year 2014 budget does include a strategic draw down of the City's fund balance to provide additional funding for street maintenance, while still maintaining a healthy fund balance in excess of the adopted 90-day reserve requirement. This will be the second year of this strategic draw down, which is anticipated to continue through fiscal year 2018. At that point, other funding must be identified to continue the same level of street maintenance.

In keeping with our focus to sustain and plan for Colleyville's long-term needs, the fiscal year 2014 budget includes the City's first 5-Year comprehensive Capital Improvement Plan (CIP). This plan identifies needed projects during the next five years, available funding sources, and a schedule for completion. Capital projects are defined as those projects requiring an investment of \$100,000 or more. Colleyville's CIP includes projects in a number of categories, as shown in the chart below. Similar to the six-year General Fund budget projection, the CIP provides an opportunity to consider all of the city's capital needs in the coming years and determine the priority of each, as well as whether available funding resources are sufficient to support those expenditures. The CIP operates on a multi-year basis and utilizes a variety of funding sources including the City's major operating funds, impact fees, special revenue funds, and other entities such as TxDOT. In the sections that follow, major fiscal year 2014 investments in the CIP from City resources has been described in more detail.

FY 2014 CIP Project Categories	
Facility - Rehabilitation	\$ 425,000
Parks	\$ 505,000
Streets - Intersection Improvements	\$ 2,953,433
Streets - Reconstruction	\$ 21,098,929
Streets - Rehabilitation	\$ 1,249,106
Utilities - Waterline Renewals (Including Upsizing)	\$ 886,979
TOTAL	\$ 27,118,446

The fiscal year 2014 budget continues delivery of current citizen services while placing greater emphasis on ensuring the long-term sustainability of the city's services and public infrastructure. As is typical in local government, funding requests exceed available revenues, requiring decisions regarding what to fund. As we begin to plan for the future in more detail, not all items can be funded. The fiscal year 2014 budget is a balanced budget based on community and City Council priorities and makes significant progress toward achieving many of the city's needs and long-term goals. Those items that were not funded this fiscal year are described in a subsequent section of this budget message and may be considered in future budgets.

ACCOUNTING FOR INTEGRITY

The proposed budget is balanced and prepared in accordance with state law, the Colleyville City Charter, ordinances, budget policies, and in accordance with the provisions outlined in the Governmental Accounting Standards Board (GASB) "Statement No. 34, Basic Financial Statements – and Management's Discussion and Analysis – for State and Local Governments."

The accounts of the City are organized on the basis of funds or account groups, each of which is considered to be a separate accounting entity. All funds are budgeted and accounted for on a Generally Accepted Accounting Practice (GAAP) basis for purposes of financial statement presentation. The governmental fund types use a financial resources measurement focus and are accounted and budgeted for using the modified accrual basis of accounting. Under this modified accrual basis, revenues are recorded when susceptible to accrual, i.e., both measurable and available. "Available" means collectible within the current period or soon enough thereafter to be used to pay liabilities of the current period. Expenditures represent a decrease in net financial resources and, other than interest on general long-term debt, are recorded when the fund liability is incurred, if measurable. Interest on general long-term debt is recorded when due.

Governmental fund types are those through which most governmental functions of the City are financed. The acquisition, use, and balances of the City's expendable financial resources and the related liabilities (except those accounted for in the proprietary and fiduciary fund types) are accounted for through governmental fund types.

Proprietary fund types are accounted and budgeted for on a cost-of-service or "capital maintenance" measurement focus, using the accrual basis of accounting. These fund types operate in a manner similar to private business. The City utilizes only the enterprise fund type. Under the accrual basis of accounting, revenues are recognized when earned; expenses are recognized when incurred. For purposes of this budget presentation, depreciation is not displayed, and capital expenditures and bond principal payments are shown as uses of funds.

The City provides a full range of municipal services supported by statute or the Colleyville City Charter. This budget contains all of the funds that account for these services. The identity and functions of these funds are:

- General Fund: Accounts for the resources and expenditures related to the generally recognized governmental services and/or functions provided by various City departments – a governmental fund type.
- Utility Fund: Accounts for all the activities required for the provision of water and sanitary sewer to residents of the city – a proprietary fund type.
- Capital Projects Fund: Accounts for financial resources to be used for the acquisition or construction of major capital projects – a governmental fund type.



- Capital Equipment Replacement Fund: An internal service fund to account for funding for, and acquisition of, the City's vehicles, maintenance equipment, and computer equipment – a governmental fund type.
- Drainage Utility Fund: Accounts for all the activities required for the management of storm water drainage – a proprietary fund type.
- Court Technology Fund: Accounts for all activities, in accordance with state statutes, related to the collection and use of the Municipal Court technology fee imposed on convictions on cases adjudicated in the Court – a governmental fund type.
- Court Security Fund: Accounts for all activities, in accordance with state statutes, related to the collection and use of the Municipal Court building security fee imposed on convictions on cases adjudicated in the Court – a governmental fund type.
- Strategic Initiatives Fund: Accounts for financial resources to be used with the City Council's authorization for programs and projects linked directly to the City's strategic plan – a governmental fund type.
- Colleyville Crime Control and Prevention District (CCCPD): Accounts for the City of Colleyville Crime Control and Prevention District formed to act on behalf of the City for financing the development of crime control throughout the City.
- Colleyville Economic Development Corporation (CEDC): Accounts for the use of bond proceeds and sales tax revenues for municipal park improvements, the purchase of land and equipment for additional neighborhood parks, and for the construction of a community center and library. Consistent with state law, some funds may be allocated by the board of directors for promotional efforts for special events and marketing.
- Voluntary Library Fund: Accounts for the operations for which voluntary contributions by citizens are used. Contributions are used primarily to support library activities.
- Voluntary Park Fund: Accounts for the operations for which voluntary contributions by citizens are used. Contributions are used primarily to support park activities.
- Colleyville Tax Increment Financing (TIF) District: Created in 1998, the primary goal of the district is to encourage quality commercial development in the city by using ad valorem revenues from property value growth since the creation of the district, within the district for infrastructure improvements and economic development.

BUDGET STRATEGY

In preparing this budget, the primary goal was to achieve the identified objectives that maintain and improve services for citizens. The proposed budget has been structured to steer a course toward fulfillment of the City's strategic vision by aligning municipal resources with the overall needs of the community. Staff used the City Council's strategic points as the primary guide:



- Make a long-term commitment to economic development and promote a more diversified tax base
- Foster excellence in core service delivery
- Protect and preserve Colleyville's neighborhoods
- Deliver sustainable government
- Brand Colleyville with a unique identity

By remaining focused on these initiatives, the community, City Council, and staff can weigh the divergent demands of the citizenry, pursuing only those elements that help achieve these initiatives, and thereby ensuring the highest priorities of the community as a whole are accomplished. For this reason, every new effort and element of the City's business plan, including existing programs, is tied to one or more of these strategic points, as detailed in the sections below. The items listed under each strategic point include highlights of the investments slated to receive continued funding in fiscal year 2014 and a description of new items that will receive funding.

MAKE A LONG-TERM COMMITMENT TO ECONOMIC DEVELOPMENT & PROMOTE A MORE DIVERSIFIED TAX BASE

In the 2012 citizen survey, attracting and retaining quality businesses ranked as the most critical issue facing Colleyville. Economic development continues to be a top priority for the City Council. In fiscal year 2013, the City made considerable strides on the economic development and redevelopment front. Whole Foods Market will open its second Tarrant County location in Colleyville in mid-2014. It will be the anchor tenant at the former Village Park Shopping Center, now rebranded as Colleyville Downs Shopping Center. Extensive renovations are planned for the center, which will help attract new restaurants and retailers to the area. The property across Colleyville Boulevard from Colleyville Downs has been purchased by a development group, in anticipation of growth spurred by Whole Foods Market. Colleyville has also welcomed several new restaurants, including Tribeca America Bistro & Lounge and Citrus Bistro.

In fiscal year 2014, with the strategies implemented in the past few years showing results, our investment in those successful strategies will continue. Additional funds have been allocated either to invest in current strategies at a higher level or invest in new strategies. Efforts to build economic development advocates within the community, such as through the Colleyville Exchange, will continue to be funded. Staff will continue to capitalize on the incentive guidelines and criteria previously adopted by the City Council for matching grant and forgivable loan programs to attract and retain commercial development and enhance the aesthetic value of Colleyville's legacy properties.



In the fiscal year 2014 budget, the economic development program is supported through the following:

General Fund

- CoStar subscription - \$2,415

The City's CoStar subscription augments marketing tools available on commercial properties in Colleyville. This funding provides wireless service to access property information wireless through the CoStar Go app (a new service), allowing staff to show property information on a mobile device from anywhere.

Colleyville Economic Development Corporation (CEDC)

- Special events and promotions - \$144,153

Special events and festivals bring visibility and economic impact to the city. The proposed budget contains recommendations that support the planning, promotion, and production of Colleyville events. Funding through the CEDC has been included for the Old Tyme Barbeque (\$15,000), Holly Colley Holiday (\$36,000), and Red, White, & Sousa (\$36,000) events, as well as \$57,153 for other economic development promotions.

Strategic Initiatives Fund

- Current available balance - \$495,446

The Strategic Initiatives Fund was established to fund programs and projects linked directly to the City's strategic plan, with the City Council's authorization. In particular, economic development incentives were indicated as an appropriate use of these resources. The current available balance may be appropriated at the discretion of the City Council.

FOSTER EXCELLENCE IN CORE SERVICE DELIVERY

At its most basic level, the need for city government is defined by those things that although essential, if not provided by local government, would likely not be available in a community. In the parlance of city government, these are known as core services. With that in mind, the City Council added a new strategic point in 2012—foster excellence in core service delivery. In Colleyville, these include public safety, street and utility infrastructure, community development, parks and trails, and life-long learning and community engagement through the public library.

As a part of the effort to foster excellence in core service delivery, staffing levels in the Community Development and Public Works departments were evaluated to determine whether existing positions were conducive to delivering the work and service levels demanded today. Staffing levels in these areas were reduced during the recession as construction and development activity waned, but recent increases in activity warranted another look at how to handle the greater workloads, while maintaining an efficient and sustainable staffing level. Being mindful that solutions must ensure delivery of sustainable government to the citizens of Colleyville, the



most appropriate response was to repurpose some existing positions to provide services in the areas experiencing the greatest need for staff support. Several reclassifications were done during fiscal year 2013, including creating a development engineer position from the stormwater manager position, creating an administrative support technician from the senior engineering technician position, and a construction inspector position from an equipment operator position. An additional construction inspector position is included in the fiscal year 2014 budget and will be project-funded from the capital projects that the position will be responsible for inspecting. Additionally, funding for the hours worked by the building inspector hired on a contract-basis will be converted to funding for an actual part-time building inspector employee. This conversion of a contract employee to a true City employee will not result in any additional cost and will serve to comply with FLSA standards. Finally, a plans examiner position has been included in the fiscal year 2014 proposed budget. These five position changes result in the addition of two FTEs (full-time equivalent positions) in the fiscal year 2014 budget. The additional construction inspector will not create an overall operating budget increase to the General Fund or Utility Fund because the position will be funded through capital projects budgets. As such, these changes result in additional costs for only one FTE (plans examiner) for fiscal year 2014. Again, every effort has been made to right-size staff to provide responsive, quality services, and avoid adding positions to current staffing levels without considering sustainability. The staffing changes made in fiscal year 2013 and 2014 will make significant strides toward ensuring timely, quality services to the development community and to citizens. Public infrastructure improvements will also benefit from the attention of a more robust construction inspection staff.

In the fiscal year 2014 budget, core service delivery is supported through the following:

General Fund

- Training for building inspection staff - \$6,770
The State of Texas requires rigorous training for building inspectors and building officials to ensure that those professionals are able to identify safety or construction problems. New training requirements relating to irrigation, medical gas, and fire protection are addressed with this additional funding, as well as training on the 2011 National Electrical Code and plan review.
- Reclassifications – no additional cost
Several reclassifications were made during 2013, including reclassifying a stormwater manager to a development engineer, a senior engineering technician to administrative support technician, and an equipment operator to a construction inspector. These changes will improve service levels provided by Community Development and Public Works, as mentioned above.
- New construction inspector position – funded from Capital Project budgets
With the increase in funding for capital projects comes a commensurate requirement for project inspection. With the State Highway 26 projects (utility relocations and reconstruction), numerous development projects, and a more



than threefold increase in funding for street and utility rehabilitation projects, an adequate inspection program is not only critical, but it pays for itself by ensuring quality construction that does not fail. Adequate inspection requires an inspector be on-site observing construction 25-30 percent of the time, on average. One construction inspection position was originally budgeted for fiscal year 2013, but based on anticipated projects, three construction inspectors are needed. The existing position (construction manager), the new project-funded construction inspector, and the construction inspector position created by reclassifying an equipment operator position will provide the three construction inspectors needed to operate an effective program.

- **New plans examiner position - \$63,225**
The plans examiner position is a much-needed addition to the current community development staff. The current workload far exceeds the capacity of the current staffing level, and an increase in development activity is anticipated for the foreseeable future. This position will perform a variety of tasks involved in reviewing plans for compliance with the City Code of Ordinances, Land Development Code, and Building Code; perform building inspections in a backup capacity; and respond to and direct calls from citizens, contractors, and tenants regarding code compliance and building permits. The performance target for plan reviews is for residential plan reviews to be completed in five days or less and for commercial plan reviews to be completed in ten days or less, 75% of the time. Actual achievement of this goal for fiscal year 2013 is projected to be 40% for residential plan review and 45% for commercial plan review. This type of delay has been consistent since development staffing was reduced.
- **Three new firefighter/paramedic positions - \$240,366**
This budget includes funding to hire three additional firefighter/paramedic positions. These positions fulfill previous commitments to implement the fire staffing plan, which provides for full operational staffing by October 2014 (fiscal year 2015). The plan calls for the addition of three firefighter/paramedic positions in both fiscal year 2014 and 2015 to achieve full operational staffing. These three positions will add one additional staff member to minimum operational staffing for each shift.
- **Police Property Room Clerk - \$46,478**
A new position has been included in the Police Department to provide oversight of thousands of pieces of evidence and property handled by the department. Many criminal cases, and prosecution of the offenders involved, rely heavily on the ability to properly control and maintain evidence. A dedicated property room clerk will provide day-to-day operation of the property room and will give the department an accountability system that is not currently in place.
- **Collaborative Adaptive Sensing of the Atmosphere (CASA WX) Project - \$3,000**
An additional \$3,000 has been included in the fiscal year 2014 budget for the CASA WX project. Cities across the region are working together to install and operate technology to provide real-time, detailed mapping of weather events in

the lower atmosphere that fall below conventional radar coverage including storms, winds, rain, hail, and the flow of airborne hazards.

Utility Fund

- Replacement of hand-held water meter devices - \$12,360
Part of delivering core services to Colleyville residents and businesses includes providing water. The hand-held water meter devices currently in use are six years old and technology in this arena has changed dramatically over the past few years. The current units require frequent repairs that are no longer supported by the software company, making replacement appropriate at this time.

Debt Service

Ambulance replacement - \$44,621

Second-year funding for replacement of the front line ambulance through a lease purchase plan is included through the Debt Service Fund. The total cost of the ambulance was \$209,425, which will be paid over a five-year period.

Colleyville Crime Control and Prevention District (CCCPD)

The CCCPD will fund six officer positions in fiscal year 2014, police vehicle replacement, public safety software maintenance, regional recruiting and hiring, crime report/mapping and analysis software, wireless support for mobile digital computers, mobile video system replacements and software maintenance, as well as continued support of the Teen Court program and funding of Justice Center debt service. In addition, funding for a new radar trailer and continuation of the weapons replacement program for patrol rifles will be funded through the CCCPD in fiscal year 2014.

- One new police officer position- \$36,975
The addition of one new police officer position is included in the fiscal year 2014 budget, to be funded from the Colleyville Crime Control and Prevention District (CCCPD) Budget. This position is to be added mid-year and will support the City Council's commitment to adding one new police position over each of the next four fiscal years.
- Vehicle replacements- \$230,600
Funding for replacement of four marked police vehicles and one unmarked police vehicle is included in the fiscal year 2014 CCCPD budget. The Police Department conducted a comprehensive analysis of department vehicle needs and was able to reduce the overall size of the fleet by six vehicles through more efficient distribution of resources. The new fleet management plan for the police department calls for retaining patrol vehicles for a period of three years and replacement of five vehicles annually, which is consistent with the funding available in the CCCPD budget and provides for long-term sustainability of the police fleet.

PROTECT AND PRESERVE COLLEYVILLE'S NEIGHBORHOODS

A community is about people and one of the most valuable assets in a community is its neighborhoods. Through deliberate and judicious land use decisions by Colleyville's past and present elected officials and policymakers, Colleyville's premier neighborhoods are in fact the focal point of the city. The City Council has made protecting and preserving neighborhoods an important focus of local government.

Protecting and preserving neighborhoods takes many forms. Beyond providing public safety, investment in the reliability of Colleyville's public infrastructure now and in the long-term is critical to our neighborhoods and, therefore, a top priority in the fiscal year 2014 budget. And, while the list of infrastructure projects touches virtually every aspect of life in Colleyville, it was important to address the city's most critical need— maintaining and rebuilding city streets. Road quality has an impact on every Colleyville resident, business, and visitor—affecting property values; business, school, and residential accessibility; and the quality of life of our citizens. Furthermore, in the 2012 citizen survey, residents rated street conditions as a major concern. With a population that has increased by more than 50 percent since the early 1990s, it is imperative that the City maintain a street infrastructure to meet the demands of a growing residential and commercial population.

As mentioned previously, a 5-Year Capital Improvement Plan (CIP) has been prepared to serve as the roadmap for the City's continued focus on infrastructure improvement and renewal. While the plan itself covers five fiscal years, the first year of the five-year plan is what is included in the City's budget each year. Year One of the CIP, which is included in the fiscal year 2014 budget, includes \$26.9 million for street reconstruction, street rehabilitation, construction of State Highway 26 Phase II, intersection improvements, waterline renewals, facility rehabilitation, trails, and concrete repairs. Funding sources for these projects are varied and come from both City sources and other sources. City funding sources primarily include the General Fund street maintenance budget, perimeter street fees, the utility fund, and the CEDC. Other funding sources include TxDOT funded projects and Tax Increment Financing (TIF) funded projects.

Investments in the protection and preservation of neighborhoods in the fiscal year 2014 budget include:

General Fund

- Street maintenance - \$2,400,000

A consistent focus by the City Council has been to continue effective funding levels for street maintenance. Given this, the proposed budget provides a base level of \$1,400,000 for street maintenance/rehabilitation and an additional \$1,000,000 through the draw-down of General Fund fund balance. Many of Colleyville's 158 miles of paved streets were county roads that the City



"inherited," but which were not constructed to current standards. As we move forward, those streets not built to current City standards will be brought up to standard either through a full-depth reclamation process or through complete reconstruction so that they will perform as they should in the long-term. The \$2,400,000 for street maintenance in the General Fund will ultimately be used as a funding source in the comprehensive CIP, to be spread out amongst various projects based on relative priority.

- **Street maintenance - \$500,000 (one-time expenditure)**
Based on data collected in the 2011 pavement maintenance survey and the analysis done by staff, it has been determined that to maintain the city's street system at its current level of service, it would be necessary to spend approximately \$2,700,000 annually on street maintenance. This amount does not include capital projects that result in reconstructed streets. At this time, there is currently \$2,400,000 budgeted annually for street maintenance. An additional \$300,000 is needed annually to fully fund the street maintenance program. The fiscal year 2014 budget includes a one-time commitment of \$500,000 for street maintenance to make progress toward that goal.
- **Pavement Condition Assessment – \$35,000**
Unused funds identified in the fiscal year 2013 budget have been used to fund an updated pavement condition assessment in the current fiscal year. This funding was originally requested in the fiscal year 2014 budget.
- **Sidewalk repair – \$50,000**
The proposed budget maintains funding for the repair and maintenance of sidewalks, helps ensure pedestrian safety, and enhances Colleyville's "walkability" factor. Funding in the amount of \$50,000 is recommended for ongoing maintenance. This is in addition to escrowed construction funds for neighborhood districts, as approved by the City Council in November 2008.
- **Traffic Signal Maintenance Contract – \$46,000**
Additional funding has been included in the fiscal year 2014 budget for maintenance of the two traffic signals owned and operated by the City, as well as maintenance of the 22 school zone flashers and 10 Opticom sensors attached to various signals. By providing an annual maintenance contract for these systems, preventive maintenance will be ensured and repairs will be completed more quickly. Properly maintaining the systems will improve overall operational readiness and reduce the cost of system maintenance in the long-term.

Utility Fund

- The cost of purchasing potable water from the Trinity River Authority (TRA) has increased during the past year due to additional operational costs, decreased usage through effective water conservation by area cities, and an overall percentage increase in Colleyville's percent of debt service due to usage during ongoing drought conditions. TRA faces higher raw water costs, chemical costs, ongoing infrastructure maintenance costs, labor-related costs, and compliance costs with more stringent state and federal water quality regulations, and it is



likely their rates will increase with TRA's new fiscal year beginning in December 2013. In the event TRA increases their cost for treated water and wastewater, consistent with City Council policy, that cost will be passed on proportionally to customers.

- **Water and wastewater renewal program - \$250,000**
As part of the City's focus on long-term infrastructure needs, the fiscal year 2014 budget provides funding for proactive replacement of City water and sewer lines, valves, pumps, lifts, manholes, inlets, and other materials used in the delivery of potable water to and the removal of sewage from Colleyville homes and businesses. This investment is utilized as one of the funding sources of the CIP.
- **VueWorks Conference - \$1,380**
VueWorks work order and asset management system was implemented in fiscal year 2013 and most maintenance activities performed by the Public Works Department are now being tracked. There are several modules available in VueWorks that require additional training to allow the department to fully utilize the program.

Drainage Fund

- **Drainage renewal program - \$40,000**
The fiscal year 2014 budget also provides funds for proactive replacement of the city's drainage and stormwater infrastructure. The amount proposed represents an increase of \$15,000 over the \$25,000 that was budgeted in fiscal year 2013 for infrastructure renewal.
- **Colleyville Clean Sweep - \$12,000**
Staff recommends continuation of the household hazardous waste collection program and the Clean Sweep annual collection with \$12,000 from the Drainage Fund and a conversion of solid waste franchise revenue in the amount of \$15,000, for total program funding of \$27,000. In future years, it is incumbent upon the City to measure the sustainability of these options based on overall usage and cost.

DELIVER SUSTAINABLE GOVERNMENT

An ongoing means of managing costs in the long-term is to aggressively seek ways to maximize economies of scale for cost savings. As in past years, part of the budget approach is to partner with other governmental units to reduce redundancy across city borders, using the guiding principal that such partnerships should meet the benefit, economic, and efficiency thresholds for Colleyville. With the success of current partner agreements, Colleyville has aggressively sought additional partnership opportunities to achieve successful, cost-efficient long-term service delivery.



The proposed budget provides contract services with other governments and agencies in the following areas:

- *Municipal Court:* In fiscal year 2013, Colleyville and Keller broke new ground as the first Texas cities to consolidate their municipal court operations. The combined court operation, located at the Colleyville Justice Center, has been projected to save Colleyville \$57,188 annually.
- *Animal Control:* In fiscal year 2013, Colleyville and Southlake consolidated animal control and shelter services with Keller, a change that resulted in improved animal services in all three communities, reduction of redundancy in operations, better utilization of building and technical resources, increased training time for employees, sufficient staffing for dedicated shelter and adoption personnel, and improved compliance with state and national standards for the humane treatment of animals. An additional \$30,065 is included in the fiscal year 2014 budget for the interlocal agreement to provide for Colleyville's share of the capital cost of an expanded animal shelter facility in Keller.
- *Public Safety:* Continuation of funding for the regional communications and jail services is included in fiscal year 2014 through a multi-year interlocal contract with Keller and Southlake. This funding budgeted for fiscal year 2014 increased by \$14,017, which reflects Colleyville's proportionate cost of the interlocal contract. Additionally in fiscal year 2011, Tarrant County 9-1-1 leased the Colleyville Communications Center as a permanent backup site, which created additional revenue. Tarrant County 9-1-1 also will keep the facility up to date with the latest technology. Funding is provided to meet the contractual obligations for fire response in the Bedford Response Area, a contract that will expire in September 2015.
- *Northeast Fire Department Association (NEFDA):* This association of 14 cities in Northeast Tarrant County provides resources, support, and staffing for emergency events such as a water rescue, HAZ-MAT incident, or an incident involving an explosive device. The cities each contribute financially to maintain and replace equipment or apparatus needed to respond to these situations. The funding budgeted for fiscal year 2014 increased by \$11,377 for capital equipment replacement.
- *Public Safety:* Colleyville will continue participation as a member city in Tarrant County's NETCO radio consortium. In 2012, the NETCO consortium commenced an upgrade to our 800MHz Trunked Radio System to Project 25 (P25) capability. The P25 conversion included all radio equipment (i.e., towers, consoles, portable radios, and handheld devices). NETCO member cities will continue to contribute to the consortium for future maintenance and system enhancement costs.



- *Street Overlay:* To maximize street maintenance activities, the City will continue partnering with Tarrant County for county labor resources for street maintenance. For these projects, the City only provides funding for materials. The county has specialized street overlay capabilities and has shown a strong interest in providing assistance to our maintenance program.
- *Teen Court:* Colleyville partners with Grapevine, Keller, and Southlake to operate the Metroport Teen Court. The program is managed by the City of Southlake. The fiscal year 2014 CCCPD provides funds for our continued participation in this program in the amount of \$33,750, one fourth of the total annual program cost.
- *Elections:* Staff recommends continuation of the contract with the Tarrant County Elections Administration Department to conduct local elections at an annual cost of \$7,000. The efficiency and expertise provided by the county enhances the quality of the electoral process available to our citizenry.
- *Tax Assessment and Collection Services:* The City will continue the agreement with the Grapevine-Colleyville Independent School District (GCISD) for tax collection services, as well as use of recreational facilities to maximize our operating budget.
- *Economic Development:* The City will continue partnering with the North Central Texas Council of Governments (NCTCOG) to host a website offering property information in support of our economic development efforts. Infrastructure information, mapping capabilities, and property information is provided on the site. Contracting services for GIS-related mapping information for aerial photography with the NCTCOG for public works and economic development will also continue.

The proposed budget provides a staffing level of 195.5 full-time equivalents (FTEs), eight more FTEs than in fiscal year 2013. This reflects the addition of one police officer (funded through the CCCPD), three firefighter/paramedics, one plans examiner, one construction inspector (project funded), one property room clerk, one part-time building inspector (conversion from hours contracted), and one part-time assistant librarian (conversion from hours contracted). The 2014 staffing level also reflects the reclassification of other positions as outlined in this document.

- *Implementation of a new classification and compensation system*
Paying fair and competitive wages for the level of work required allows the City to better attract well-qualified candidates. It also greatly contributes to the motivation and retention of current employees by showing they are valued for the work they do. A review of the City's classification and compensation system, last reviewed and updated in fiscal year 2006, was conducted to improve and update market competitiveness and internal equity. The new system is designed for sustainability, manageability, and flexibility. It also establishes a goal of paying successful employees at the 50th percentile of the market in which the City competes for employees. It has a flexible job



classification structure to support cross-training and accommodates alterations in job assignments within the structure. And it reinforces internal equity by defining and grouping jobs based on the complexity of work, leadership expectations, and decision-making required within a fair and competitive salary structure.

- **Market adjustments - \$237,722**
Employees currently earning below the new minimum salary of their position's pay range are proposed to receive a market adjustment, not to exceed 10 percent, in fiscal year 2014. If an employee is currently earning more than 10 percent below the new minimum salary, he/she will receive the adjustment over the next two to three fiscal years so that an individual's pay increase does not exceed 10 percent in any given year. The additional funding for market adjustments includes benefits and is the amount necessary for all funds. Year two and year three implementation costs for moving all employees to the minimum of the new range are currently projected to be \$72,063 and \$2,766, respectively. As these figures represent a snapshot in time, these figures are subject to change as the market changes in the future.
- **Performance-based merit increases- \$177,278**
Employees hired prior to October 1, 2013, will be eligible for a mid-year performance-based merit increase in fiscal year 2014 based on good and high performance. The percentage increases will vary based on performance and will not exceed five percent. Employees receiving a market adjustment of five percent or more are not eligible for the performance-based merit increase. The additional funding for performance-based merit increases includes benefits and is the amount necessary for all funds.
- **Comprehensive performance management program**
Performance management is a critical element of managing and rewarding the workforce to ensure goals are consistently met in an effective and efficient manner. A new performance management system will be implemented in fiscal year 2014 to better assess operational efficiency and create greater accountability. Performance-based merit increases in mid-fiscal year 2014 will be predicated on employee performance under the comprehensive performance management program. The new system will include more meaningful tools and a streamlined process to document employee goals, expectations, and performance to reinforce alignment of City services with citizen expectations as it pertains to the organization's standards today.
- **Employee insurance benefits**
Employee insurance benefits include medical, dental, life, accidental death and dismemberment, long-term disability, and COBRA, insurance, as well as flexible spending account and health reimbursement arrangement administration. The City continues to exhibit a substantial commitment to employee benefits by funding employee medical insurance at a base of 80 percent and up to 100 percent with wellness participation. Dependent insurance is at a base of 56.075 percent and up to 76.075 with wellness program participation. This tiered

structure for health insurance subsidies has proven to be an innovative approach to addressing increasing healthcare costs, while providing a benefit for employees that allows the City to maintain a competitive benefit position among its peer cities. The wellness initiative is designed to improve employee health and is trending favorably in the long-term due to reduced utilization of the medical plan.

Despite a 4.5 percent increase in medical premiums this fiscal year, employees will not see an increase in the employee-paid portion of premiums as the City was able to absorb this increase as a result of overall cost savings in insurance benefits and the addition of a fourth subsidy tier for medical insurance.

The Patient Protection and Affordable Care Act (PPACA) is expected to further increase medical premiums by approximately 4 percent to reflect the effects of the Health Insurer Fees and Reinsurance Fees. Final regulations and guidance regarding these fees, which are expected to be assessed beginning January 1, 2014 by the federal government, have not been fully established. The cost of these fees will be paid by the employees who are covered under the medical plan.

- **Texas Municipal Retirement System (TMRS)**
The City is committed to ensuring the retirement benefit offered to employees is both affordable and sustainable. The City's current plan design includes funding for participation in the TMRS program at a contribution rate of 7.00 percent (annualized 7.045 percent), down 2.56 percent from the current annualized rate of 7.23 percent. For the current actuarial period, the City has no unfunded liability.
- **Personnel Policies and Procedures Manual**
In fiscal year 2014, with input from an appointed employee committee, staff will complete the comprehensive update of the Personnel Policies and Procedures Manual. This includes reviewing and updating current policies and developing new ones. Training will take place to inform all employees of the changes.

With limited personnel resources, the City of Colleyville is heavily reliant on technology to optimize time and available personnel in the efficient delivery of City services. Staff focuses efforts based on a five-year information services strategic plan adopted by the City Council in 2011. A recently implemented Information Services Management (ISM) Governance Committee has also established criteria for evaluating technology investments and ranked each new technology request according to those criteria. This ranking strongly influenced decisions regarding which items to include in the fiscal year 2014 budget. Funding to maintain or enhance the City's technology infrastructure in fiscal year 2014 includes:

- **Phase II of audio-video equipment replacement in City Hall– \$174,000 (one-time expenditure)**
This funding is for Phase II of AV replacement at City Hall. It includes replacing equipment such as digital controls, overhead camera, projection screens, sound



equipment, and additional monitors in the Council Chambers, the Executive Conference Room, and the Training Room.

- Laserfiche integration project - \$29,000 (one-time expenditure)
The Laserfiche Integration Project will provide for integration with both the CRW (development) and CRIMES Software. Integration will allow for documents generated from these software programs to be directly stored in Laserfiche, as well as additional workflow capabilities that will help to automate currently paper intensive processes.
- Digitizing documents to Laserfiche - \$49,850 (one-time expenditure)
In fiscal year 2014, staff would contract with two clerical personnel for approximately six months to begin digitizing documents currently located in storage. After the six-month time period, staff can develop an annual program determined by the amount of work accomplished in the initial six-month timeframe. This project begins working toward the goal of transitioning all City documents into a digital form.
- Replacement of GIS Licensing with Enterprise Licensing - \$15,100
By providing an enterprise license for GIS, each department and internal working group would realize benefits from accessing a common platform for operational data by leveraging maps to support work and analyses. Multiple users would be able to simultaneously edit GIS datasets, making it possible to integrate with other information systems in real time. An enterprise system also provides additional capability for external communication to customers and citizens.
- Replacement of desktop computers - \$15,000
Funding has been included for replacement of 42 desktop computers with “thin clients” for employees. This is a part of the City’s regular computer replacement schedule, which calls for replacement of desktop computers every four years. All desktop computers are anticipated to be replaced with “thin clients” by fiscal year 2017.
- Replacement of laptop computers - \$55,000 (one-time expenditure)
Laptops are scheduled to be replaced every four years. Funding has been included in the fiscal year 2014 budget to replace those laptops that are due for replacement in the next 12 months.
- Replacement of ToughBook computers - \$11,000 (one-time expenditure)
Funding is included in fiscal year 2014 budget for replacement of ToughBooks with iPads. With iPads available for significantly less cost than a ToughBook, staff will be provided an iPad to conduct necessary City business and complete reports in the field.
- Off-site back-up system project– \$44,000 (one-time expenditure)
All back-up systems for the City will be replaced in fiscal year 2014. The current back-up systems were purchased prior to 2004 and are not consistent with

current technology. The new system will provide live, online back-ups at City Hall, the Justice Center, and off-site at the Keller City Hall as opposed to a tape library located only at City Hall and the Justice Center.

- Additional cameras at City buildings - \$35,400 (one-time expenditure)
To enhance current security levels, cameras will be installed at key locations in City Hall and the Senior Center, such as the breezeway between City Hall and the Library, parking areas, and ports of entry.
- Replacement of wireless system - \$21,000 (one-time expenditure)
The wireless system used in all City buildings is currently six years old and requires replacement. There are currently two main wireless networks available in city buildings, one for public access and one for staff access. The system hardware that supports these networks will be replaced with current technology.
- Additional software maintenance and support costs - \$34,464
The information services program contains funding for maintenance and support of software used in all City departments. As previously stated, staff relies heavily on technology to support a lean workforce, while maintaining a high level of service. The costs related to software, typically in the form of maintenance agreements or support contracts, increase annually. The more significant increases contributing to the \$34,464 in total additional cost are \$9,395 for support of the new Munis financial software, \$3,499 for the VMWARE support contract, \$3,139 for Nexus Viewer maintenance, and \$8,950 for HP Blade support.
- Laserfiche Enterprise Rio License - \$4,795
Laserfiche was upgraded in fiscal year 2013. Going forward, there will be an annual maintenance support fee, which has been included in the fiscal year 2014 budget.
- Training for GIS personnel - \$6,725
Additional training has been included in the fiscal year 2014 budget to maintain the capability of the City's GIS program. As software platforms and technology platforms change, it is imperative that staff remains abreast of these issues.
- Networkfleet GPS monitoring service - \$10,200
While not directly a part of the information services program budget, this technology enhancement for City vehicles enhances management of the fleet. The web-based tracking and monitoring system was tested as a pilot program in fiscal year 2013 and has aided in reducing fuel expenses, maintenance costs, and emissions. The system provides GPS location data used for crew location information or even stolen vehicle recovery. The annual cost represents \$25 per month, per vehicle, and is distributed as a \$4,200 cost to the General Fund, \$4,500 to the utility fund, and \$1,500 to the Drainage Fund.

- **Field Connectivity for Public Works Staff - \$4,800**
Funding for three tablet devices and aircards has been included for use by both wastewater and utility support employees in the fiscal year 2014 Utility Fund budget. This will allow staff to access VueWorks, the web-based public works asset management software, from the field and increase overall staff efficiency.
- **Venue Mapper software for Colleyville Center - \$1,400**
Software used for designing event floor plans is outdated and does not allow for real-time design updates when clients call in with changes. The Social Tables Venue Mapper software will reduce staff time required to design the diagrams for events and improve customer service in terms of turnaround times for approval of room layout.
- **Event booking software for Colleyville Center - \$6,500**
The current event booking software used by the Colleyville Center is dated and does not allow for real-time calendar updates or the mobility that a web-based program would provide. New software will provide a simplified booking process, streamline paperwork, and allow for remote access from any device with internet access.

Technology Items Funded from Fiscal Year 2013 Available Funds:

- **Camera Replacements- \$40,400 (one-time expenditure)**
The security cameras at the library and the public works building have reached the end of their useful life and are in need of replacement. Unspent funds in the fiscal year 2013 budget have been identified to fund these replacements.
- **AV replacement at the Justice Center and EOC - \$65,000 (one-time expenditure)**
Unused funds in the Police Department fiscal year 2013 budget have been committed for replacement of audio-visual equipment in the Justice Center and Emergency Operations Center (EOC).
- **Interview Room Camera and Equipment Replacement - \$40,000 (one-time expenditure)**
Updated cameras and equipment will be installed in the police interview rooms to implement the best practices recommended by the Tarrant County District Attorney's Office. Utilizing the latest technology will enhance the City's partnership with the District Attorney's office.

Consistent funding of capital equipment replacement directly aligns with the sustainable government objective. Transferring a calculated amount annually into the Capital Equipment Replacement Fund allows the City to set aside money to replace vehicles and equipment at the end of their useful life, without concerns about variations in annual expenditures if a number of items need to be replaced in a particular year. Capital equipment includes vehicles, heavy equipment, servers, and other technology-related hardware.

- Replacement of vehicles and capital equipment (General Fund) - \$242,000
The fiscal year 2014 budget includes a transfer from the General Fund to the Capital Equipment Replacement Fund, for which \$31,000 is designated for replacement of servers, and \$211,000 is designated for the replacement of vehicles and equipment utilized by programs accounted for in the General Fund.
- Replacement of vehicles and capital equipment (Utility Fund) - \$81,100
This funding has been budgeted for replacement of vehicles and capital equipment that are utilized by programs accounted for in the Utility Fund.

Maintaining the City's investment in buildings and facilities is also an important component in delivering sustainable government. The fiscal year 2014 budget provides additional funding of \$32,313 in the facility maintenance program for contractual services on a recurring basis. It also allocates funds set aside in the Building Capital Projects Fund by City Council from the fiscal year 2012 year-end budget amendment to several top priority maintenance and repair items, as well as utilizing balances from other identified capital maintenance funds.

- Contract for disposal of fluorescent light bulbs - \$10,000
This funding will be used to fund an annual contract to provide for pick up and proper disposal of fluorescent light bulbs, ballasts, and any other hazardous materials that are used in City facilities. The contractor would provide the required documentation certifying the type and quantity of the materials that were disposed of to satisfy new EPA regulations to prohibit disposal of these materials in landfills. As these EPA requirements are new, this funding is for a service not currently provided.
- Maintenance of parking lot gates at the Justice Center - \$3,000
The proposed budget includes additional funding for an annual maintenance contract for the parking lot gates at the Justice Center. The gates are activated many times per day, causing significant wear and tear. Utilizing a maintenance contract to service and maintain the gates is a cost-effective and efficient way to manage the maintenance of the gates, as opposed to calling a vendor each time repairs are needed.
- Increases to current contracts administered by Building Services - \$19,313
As is typical with prices for most goods and services, the cost increases from year to year to accommodate inflation and/or increased cost of materials or labor. The Building Services program currently administers a number of contracts that will experience a price increase in fiscal year 2014, including boiler inspections and maintenance, pest control, HVAC maintenance, floor and carpet cleaning, janitorial service, window cleaning, and fire inspections. The additional funding included in the fiscal year 2014 budget serves to maintain the current service level.

- Redundant HVAC unit for the Justice Center Data Center - \$25,000 (one-time expenditure)
Purchasing a redundant HVAC unit for the Justice Center Data Center allows back-up cooling capabilities if the primary unit fails or is out of service. It is imperative that servers and other hardware in the data center function in a room with cool temperatures if the equipment is to operate properly and if the financial investment made in the equipment is to be protected.
- City Hall/library emergency lighting - \$10,582 (one-time expenditure)
The emergency lighting in City Hall and the library has reached its projected useful life of 10 years and the ballasts are beginning to fail. To provide a safe environment, the emergency lighting will be replaced.
- City Hall/library boiler pumps and motors - \$13,560 (one-time expenditure)
The pumps and motors for the boiler have reached the limit of their design life, which is 10 years, and need to be replaced before they fail and cause City Hall or the library to be without heat.
- Justice Center fire alarm system - \$12,396 (one-time expenditure)
A recent study was conducted to evaluate life, safety, and building deficiencies in the Justice Center. This request will bring the fire alarm system into Uniform Building Code and National Fire Protection Association compliance.
- Justice Center VAV boxes - \$4,721 (one-time expenditure)
The variable air volume (VAV) boxes at the Justice Center are failing and require replacement. These boxes are a component of the HVAC system.
- Seal exterior building openings at the Justice Center - \$6,000 (one-time expenditure)
Sealing the exterior building openings at the Justice Center will keep small animals out of the attic space. Normal wear and tear and settlement requires buildings to be sealed on an as-needed basis to prevent small animals from chewing electrical and data wiring and eating insulation, causing damage to a critical operational facility.
- Redundant HVAC unit for the City Hall data center - \$7,580 (one-time expenditure)
Purchasing a redundant HVAC unit for the City Hall data center allows for back-up cooling capabilities if the primary unit fails or is out of service. It is imperative that the servers and other hardware in the data center function in a room with cool temperatures if the equipment is to operate properly and if the financial investment made in the equipment is to be protected.
- City Hall and library fire alarm system - \$33,488 (one-time expenditure)
A recent study was conducted to evaluate life, safety, and building deficiencies in City Hall. This request will bring the fire alarm system into Uniform Building Code and National Fire Protection Association compliance.

- City Hall and library concrete steps and handrail - \$33,832 (one-time expenditure)
The concrete steps in front of City Hall and the Library are failing and need to be replaced as they constitute a tripping hazard. In addition, the handrails have been broken and repaired several times and require replacement.
- City Hall exhaust fan - \$7,500 (one-time expenditure)
The exhaust fan on the third floor in City Hall (near the kitchen) requires replacement. The current exhaust fan does not provide for an adequate amount of air changes and creates more noise than is acceptable.
- Dumpster enclosures - \$8,000 (one-time expenditure)
In order to be in compliance with the current code, funding has been included to improve the screening around the dumpsters behind City Hall.

BRAND COLLEYVILLE WITH A UNIQUE IDENTITY

Colleyville is an affluent community populated by an engaged, educated citizenry. Quality of life and the quality of service delivery provided in Colleyville are important aspects of life in our community. The public amenities and services provided by the City are part of what makes Colleyville unique, and an important element in the quality of life enjoyed by our citizens. These include: availability of materials and programs at the library, first-rate parks and trails, recreational and athletic programs, social activities and events, and opportunities for public engagement and input.

In order to meet the quality-of-life expectations of Colleyville citizens, the fiscal year 2014 budget provides additional funding for the following:

General Fund

- Additional funding for a technical services librarian - \$14,815
Additional funding has been added to convert the hours worked by one of the technical services librarians on a contractual basis to a true part-time City employee. This position had previously been funded on a contractual basis through the state-funded Loan Star Library Grant, but this funding has been reduced and ultimately eliminated over the last few years.
- Training for library staff - \$4,598
The proposed budget provides additional funding for attendance at several conferences and training opportunities for the library director and library staff. These training opportunities allow staff to keep current in the latest development in library services and to identify opportunities to either increase efficiencies or improve services to library patrons.



- **Maintenance of railroad rights-of-way - \$35,000**
In order to construct the Cottonbelt Trail in the right-of-way belonging to Dallas Area Rapid Transit (DART) and operated by the Fort Worth and Western Railroad (FWWRR), the City was required to execute a licensing agreement that required it to maintain the railroad right-of-way, including mowing, tree trimming, debris removal from the Big Bear Creek bridge, and other specified maintenance tasks. In order to work in the railroad right-of-way, it is necessary to hire a “flagger” at the rate of \$800 per day. This funding allows staff to hire a vendor approved by the FWWRR to perform the required maintenance work.
- **Grounds maintenance mowing contract - \$3,360**
Additional funding for the grounds maintenance mowing contract provides for maintenance of grounds adjacent to City monument signs. There are seven locations with monument signs; this funding adds the remaining four locations to those maintained by the City’s contractor and includes mowing, trimming, and edging of the property.
- **Tree falling and removal at Nature Center - \$10,000 (one-time expenditure)**
Funding is included in the fiscal year 2014 budget for removal of certain trees at the Nature Center that have been identified as either threats to citizen traffic areas or to private property.
- **Ground maintenance horticulture maintenance contract cost increase - \$5,392**
The current contract with the grounds maintenance mowing contractor includes an option to request additional funding not to exceed the standard Consumer Price Index (CPI) for the DFW Metropolitan area for the past 12 months. Additional funding addresses the anticipated request by the contractor to recover rising fuel and fertilizer costs.
- **Street lighting cost increase - \$18,720**
Part of Colleyville’s unique identity includes adequate street lights. The cost of electricity for street lights has increased and the budgeted amount has not been adjusted in several years. The additional funding provides the amount necessary to continue providing street lighting at the current service level.
- **Motion picture licensing for senior center - \$305**
Funding for motion picture licensing has been included in the fiscal year 2014 budget in order to provide an enhanced level of service to include the ability to show movies to patrons of the Senior Center.

CEDC and Voluntary Park Fund

- **Colleyville Center Site Master Plan - \$25,000**
The Colleyville Center Site Master Plan will provide the development road map for the seven acres of land currently surrounding the Colleyville Center. The architectural renderings will establish both land and space utilization on Riverwalk Drive, incorporating plans for gardens, fountains and functional outdoor meeting and patio space. The overarching intent for a plan is to



accommodate larger, revenue driving business and community events at the Center with development scope and funding to be determined by the City Council.

- Design of renovations to the Senior Center - \$125,000
The design of renovations to the Senior Center is included in the CEDC proposed budget to implement recommendations from a study currently in progress. The study considers future use, programs, and renovations of the Senior Center, and is a fiscal year 2013 CEDC funded project.
- Trail system investments - \$545,000
The proposed 2014 CEDC budget includes the carry forward of funding for incomplete projects- completion of Pleasant Run Trail right-of-way acquisition and construction (Bogart to Mission). Funding is also included for improvements at the Cotton Belt – LD Lockett Park Trailhead.
- City Park landscape and amenities - \$175,000
Funding has been included in the fiscal year 2014 CEDC budget for updates at City Park. The park opened in 1998 and is in need of improvements that provide for more efficient irrigation, lower water use landscaping, and updates of dugout and spectator areas.
- Laser grading of baseball and softball fields at City Park - \$30,000
Over time, ball field clay and conditioner is displaced from field skinned areas by players, daily maintenance, and weather to the adjacent turf areas. Additional funding has been included in the fiscal year 2014 budget from the Voluntary Park Fund to provide field leveling, or laser grading, on a three year rotation.

ITEMS NOT FUNDED IN FISCAL YEAR 2014

As is typical in local government, funding needs often exceed the revenues available. Decisions must be made in terms of what items to fund and include in the budget. The items described below were not included in the fiscal year 2014 budget, either due to a lack of available funding or because these items represented a lower overall priority when compared to other items. Every request for additional funding was evaluated and ranked by the staff Leadership Team, which played a large role in determining those items that were chosen for inclusion in the fiscal year 2014 budget. When ranking each funding request, the Leadership Team referred to a set of criteria, which included considering how and to what extent the request furthers the goals laid out by City Council in the Strategic Plan, any risks faced by not funding a request, whether the request addresses an area identified in the City's performance measures as needing improvement, staff's ability to execute and implement the request if funded, why the funding request is being considered (i.e. what prompted this request), and overall impact of funding the request compared to the financial investment required.

- **Street Reconstruction - \$2,400,000**
Colleyville has 43.5 miles of unimproved (no curbs and open ditches for drainage) asphalt streets. The majority of these streets are arterial or collector streets carrying the majority of the city's traffic. The cost to reconstruct these roads to current standards is approximately \$75 million in 2013 dollars. Based on the previously proposed target of eliminating all unimproved roads in Colleyville during the next 25 years, an additional \$3 million is need each year to fund reconstruction. Because some of these streets are eligible for TIF funding, an additional \$2.4 million is needed annually from other funding sources, such as the General Fund.
- **ESRI training for the building official - \$3,775**
Funding has been requested for the building official to attend ESRI-GIS I & II Training. The training would enhance the building official's ability to research information, such as a property's zoning type, lot size, property ownership, utility locations, etc., that require the use of a GIS-type program.
- **Graduate Intern - \$11,040**
A graduate-level intern would provide professional support to all City departments, including providing analysis, completing studies, supporting departments to achieve citywide goals, and assisting with special projects. As current staff members manage already full workloads and lack the capacity to take on work related to new projects or initiatives, the addition of an intern would provide needed higher-level professional support at a lower cost than that of an additional full-time employee. A graduate internship program would also provide the ability to attract additional professionals to the city and identify individuals that could be excellent future employees.
- **Agency agreement funding for Save Haven - \$1,000**
Safe Haven, a non-profit organization providing shelter, case management, counseling, legal services, and support groups to victims of domestic violence, has requested an additional \$1,000 from the City, for total funding of \$2,000 annually. Colleyville currently supports Safe Haven at the \$1,000 level. No additional justification regarding utilization of these services by Colleyville residents has been provided by the organization.
- **Outgoing BCC member recognition/meeting items - \$2,600**
Additional funding for recognition of members of City boards, commissions, or committees was requested for an annual reception or other recognition for the service provided by these individuals.
- **Human resources coordinator - \$75,000**
In order to provide adequate support regarding recruiting, hiring, organizational development, performance management, and training, the addition of a human resources coordinator is requested. This position would be responsible for providing advanced support of human resources functions, including targeted recruiting and hiring, training and development, special projects and research,

various committee representation, volunteer and intern program implementation and administration, and safety program/risk administration. Without this additional position, the HR Department will continue to be challenged to provide these necessary services.

- **CRW website Upgrade - \$5,000**
An upgraded website interface is available through CRW that would provide a more modern visual display and would also be accessible from iPad devices. The upgrade was not recommended for inclusion in the fiscal year 2014 budget as the enhancements are more cosmetic in nature and the primary beneficiaries of the more user-friendly interface would be staff as opposed to external customers. When compared to other funding requests, this request ranked lower in priority.
- **CRW software upgrade - \$45,000**
A new version of the current CRW software is available, which would transition the current software to a web-based program that would not require software to be installed on City computers. The program could be accessed from anywhere with internet capabilities, ultimately allowing access from the field.
- **Colleyville Center technology upgrades - \$187,907**
To provide the most up-to-date technology for customers renting space at the Colleyville Center, additional funding was requested to offer enhanced capabilities, with the intention of attracting more business customers. A number of existing technology components were replaced in 2010; items in this request were for a service level above and beyond that which is currently provided. Technology improvements would include an enhanced audio and visual system in the stage and large hall area, enhanced receiver, speakers and controls for the small meeting room, speakers in the outdoor patio areas, video conferencing capabilities, and a portable interactive smartboard.
- **Installation of fiber for the City - \$395,000**
The City currently leases fiber to provide connectivity between buildings. By installing City-owned fiber, the cost for the current lease could be eliminated. It is anticipated that, based on the current amount of fiber used by the City and the fact that the amount used increases substantially each year, costs for the leased fiber will also continue to increase. Installation of City-owned fiber could be broken into phases. Phase 1 would connect City Hall and the Justice Center, at a cost of \$237,000. Implementation of Phase 1 would reduce leased fiber costs (approximately \$55,000 per year) by \$16,800. Additional phases would connect the central fire station and the public works building with the Justice Center, at a cost of approximately \$79,000 for each.
- **Citywide digital signage platform - \$105,000**
The addition of a citywide digital signage platform would enhance communication to citizens at key buildings including the library, City Hall, Justice Center, the Colleyville Center, the Senior Center, fire stations, and the public works building. This will also enhance communications to employees by placing



screens in employee areas of City buildings. A total of 25 digital signs are included in the proposal. The digital signs could provide information such as the programs offered that day at the library or Senior Center, or other items that would be helpful to communicate.

GENERAL FUND

In developing the proposed budget, the objective was to achieve a balance between revenues and expenditures, and prioritized operational needs with long-term community investment strategies.

Revenues

Major revenue considerations in the proposed General Fund budget include:

- An increased operation and maintenance (General Fund) portion of the tax rate due to declining bonded indebtedness. There is no overall increase in the total tax rate.
- An increase in ad valorem revenue due to a 3.1% increase in property values
- Increased sales tax revenue
- An increase in inter-fund transfers, both from a higher transfer from the Utility Fund and from a transfer from capital project budgets for the new construction inspector

Property Tax

The main source of income for the City is property taxes, accounting for 55 percent of our total revenue. The biggest budgetary issue in preparing an annual budget is the setting of the property tax rate. Once the roll is received in late July, the tax rate is determined by the debt rate needed to pay for the City's bonded indebtedness and funds needed for maintenance and operation funding in the General Fund.

The Tarrant Appraisal District has certified Colleyville's property valuations for 2013 at \$3,909,272,694 (\$3,847,268,162 in certified value and \$62,004,532 in pending appeals and incomplete valuations), and includes \$98,382,931 in new construction. This represents an increase of \$117,565,834 (3.10%) over the current year's taxable valuation of \$3,791,706,860, per the September 1, 2012 certified values. The value of existing property on the tax roll is \$3,810,889,763, representing an increase of \$19,182,903 (0.51%) over the current year's taxable valuation. The total taxable value includes TIF zone property, which has a combined taxable value of \$254,552,139 (TIF Zone #1 adopted in 1998- \$254,036,083 and TIF Zone #1A adopted in 2012- \$515,308) and includes \$5,721,554 in new construction. The final TIF value is subject to change, as \$4,875,712 in valuation is still under appeal. This represents an increase of \$3,343,649 (1.33%) over the current year TIF valuation of \$251,208,490.



In 2003, the City Council increased the over-65 property tax exemption to \$65,000 and approved the senior property tax freeze in 2004. The loss in property tax revenue from the over-65 property tax exemption for 2014 is projected to be \$400,645, combined with the loss of revenue for the senior tax freeze of \$151,399. Currently, 18.62 percent of all residential property tax accounts are frozen.

As submitted, the proposed budget maintains a property tax rate of \$0.3559 per \$100 value to support a property tax levy of \$12,855,752, excluding the TIF property and frozen value. The tax rate is comprised of an operation and maintenance rate of \$0.32442, and an interest and sinking rate of \$0.03148. The latter component provides funding for retirement of the annual debt obligations. In a review of peer cities, Colleyville has the second lowest tax rate in northeast Tarrant County. That is not expected to change with adoption of the proposed budget.

The proposed property tax rate of \$0.3559 is slightly less than the effective tax rate of \$0.357392. The effective tax rate is the rate at which the City would raise the same amount of revenue raised in the last fiscal year. If the City of Colleyville were to adopt a 2014 tax rate equal to the effective tax rate of \$0.357392 per \$100 of value, total taxes on existing property would increase compared to 2013 taxes by \$566,548.

As shown in the following table, the proposed 2014 property tax rate will increase the typical homeowner's tax bill compared to this year's tax billing by \$29.01.

Budget Year	Average Residential Property Value	Property Tax Rate	Average Property Tax Payment
2010	\$398,957	\$0.3559	\$1,419.89
2011	\$397,472	\$0.3559	\$1,414.60
2012	\$396,817	\$0.3559	\$1,412.28
2013	\$397,889	\$0.3559	\$1,416.09
2014	\$406,040	\$0.3559	\$1,445.10

Sales Tax

The second major financial consideration guiding development of the budget is the growth of sales tax revenues. The City collects a total two percent sales tax: one percent for General Fund and the remaining one percent allocated for two half-cent special purpose districts. The sales tax revenue category also includes mixed beverage tax. As there has been a slight upturn in the local economy and the opening of Whole Foods Market is anticipated in mid-fiscal year 2014, a 5.8 percent increase in sales tax over the fiscal year 2013 adopted budget is projected.

Licenses and Permits

Building related revenue remains relatively consistent with the fiscal year 2013 budget. The fiscal year 2014 budget includes a 1.8 percent increase over the fiscal year 2013 adopted budget. Activity has returned to pre-recession levels beginning



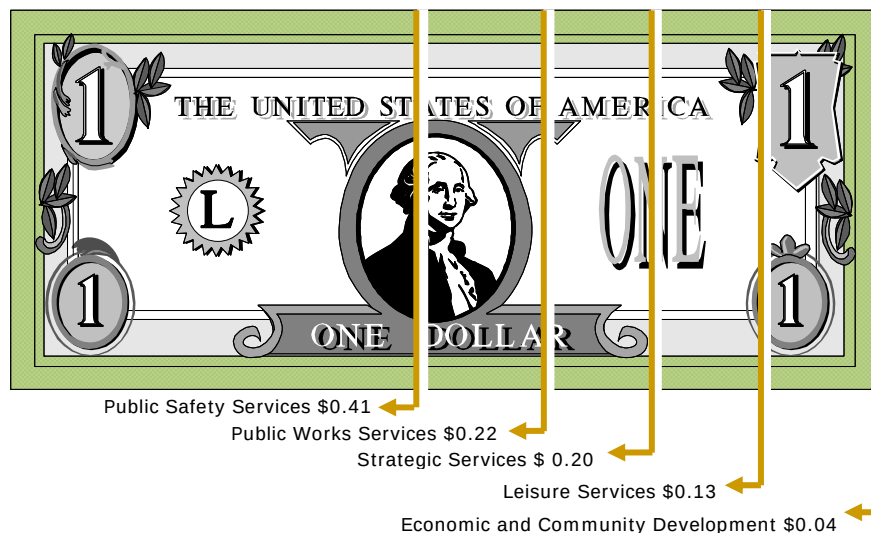
in fiscal year 2012. Based on current interest rates and the number of lots that have been approved or are under construction, staff anticipates that the current rate of construction of new single family residential homes will continue for the near future. There are also commercial developments and redevelopments anticipated for fiscal year 2014.

Intergovernmental Revenue

Intergovernmental revenue includes the annual payment from the City of Keller as a result of the municipal court consolidation in the amount of \$217,967. Keller is paying 45.9% of the total municipal court cost based upon their percentage of total citations issued by both cities. There is also a small reimbursement of administrative fees and building costs included in the payment.

Expenditures

The following illustration shows how the City spends each tax dollar for the upcoming fiscal year. The total proposed General Fund budget for fiscal year 2014 is \$21,533,967.



UTILITY FUND

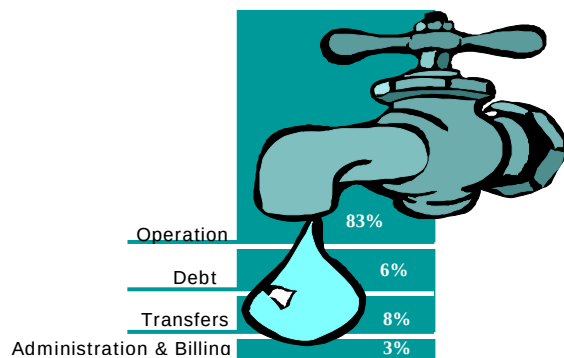
The Utility Fund is a proprietary fund structured and operated as a stand-alone business or enterprise. For budgeting purposes, the fund segregates the operating expenses and debt service in an accounting fashion similar to the General Fund. In accordance with Generally Accepted Accounting Principles (GAAP), this fund uses a full accrual basis of accounting that combines the accounting of long-term assets and liabilities with operating expenses and revenues. As a stand-alone Enterprise Fund, the Utility Fund pays its share of overhead costs as a reimbursement to the General Fund. The fund also makes a franchise fee payment to the General Fund.

Revenues

Under the current rate structure, water sales account for 75 percent of this amount and sewer revenues account for 23 percent. Interest, tap fees, and miscellaneous revenues make up the remainder. The current rates are based on the City paying TRA \$2.53 per 1,000 gallons for water and \$1.82 for wastewater, an increase of \$0.11 for wastewater from 2012 rates. Meeting bond covenant requirements, the existing rate structure provides for a 1.2 times coverage factor.

Expenditures

Utility Fund expenditures total \$13,176,572 for the proposed budget. The largest component, 64 percent of the fund, covers the contractual obligation for water and wastewater to the Trinity River Authority (TRA). In an effort to continue a comprehensive program to repair and rehabilitate the utility system, the budget includes funding in the amount of \$250,000 for infrastructure renewal, which is funded through a draw-down of the available cash in the Utility Fund retained earnings. The expenditure increase in the budget from fiscal year 2013 is due primarily to the increase in the cost of treated water and wastewater by TRA, setting aside \$81,100 for the future replacement of vehicles and equipment, and an increase in the amount transferred to the General Fund. The following illustrates the distribution of expenses for the Utility Fund.



DEBT SERVICE FUND

The City budgets for debt service in two separate funds - utility and tax supported debt services. The total fiscal year 2014 debt obligation for tax supported debt is \$1,684,797, a decrease from the fiscal year 2013 total of \$2,296,446. There is a planned drawdown of debt service fund balance in the amount of \$152,666 for the second year repayment of the lease purchase agreement for the towers, consoles, portable radios, and handhelds related to the upgrade of the 800MHz Trunked Radio System to Project 25 (P25) capability, which was entered into in fiscal year 2012. There is declining debt service in the remaining outstanding debt obligations and a refunding of outstanding callable debt occurred in fiscal year 2011. The projected ending fiscal year 2014 fund balance will be in excess of the 90-day reserve needed.

The Utility Fund's times coverage ratio of 1.20 is effectively met in the current tiered rate structure. The total utility-supported 2014 bonded debt obligation is \$819,137. Also included is the repayment to the Colleyville Tomorrow Fund for the internal financing the acquisition of a vactor truck in the amount of \$44,286. The acquisition was approved in fiscal year 2012 and the Utility Fund will be repaying the Colleyville Tomorrow Fund this amount annually for the next six years, which would be the term of the lease if financed externally.

Furthermore, the city's bond ratings are evidence of Colleyville's financial strength. In 2009, the City received an upgrade in its general obligation bond rating from AA+ to AAA from Standard and Poor's. Strong tax base growth coupled with a low tax rate, strong financial performance, and substantial cash balances are the primary reasons for the bond rating.

In fiscal year 2012, the city's rating went through its biannual bond rating review with Fitch Ratings for outstanding general obligation, and water and sewer debt. The AAA rating was reaffirmed by Fitch Ratings. The key ratings drivers for the AAA rating for the general obligation debt were a healthy financial profile, solid tax base, manageable debt burden, and a diverse economy. For water and sewer debt, the key ratings drivers for the AAA rating were conservative financial management, rate flexibility, low debt, and limited capital needs.

The waterworks and sewer system revenue bonds and the drainage system revenue bonds also received a rating upgrade in 2009. Standard and Poor's upgraded the water and sewer utility revenue bonds from AA- to AA+ and drainage utility revenue bonds from AA to AAA. Fitch ICBA also upgraded the drainage system revenue bonds from A+ to AA. Reasons for the upgrades include strong financial operations, growth in service area, adequate water and sewer treatment capacity to meet future demands, and moderate debt ratio with manageable future borrowing plans. These credit ratings for outstanding debt mean the City's bonds are considered to be of superior investment quality, resulting in lower interest payments for the City.

STORMWATER DRAINAGE UTILITY FUND

In 1993, the City Council adopted a monthly fee assessed on residential and commercial utility billing accounts for stormwater management. The Stormwater Drainage Utility Fund supports the operation and maintenance of the city's drainage system and addresses federally mandated requirements for stormwater systems.

This fund is designated to maintain streets, sewers, and drainage ditches to manage runoff from commercial and residential development, including related personnel and operating costs.

The fund is projected to receive revenues of \$944,519 in fiscal year 2014, primarily from the collection of the monthly fee. Annual debt payments for the outstanding bonds comprise \$255,568. In fiscal year 2014, \$40,000 has been allocated for



infrastructure renewal and the remaining funds of \$558,919 fully support six staff positions, partially fund two other staff positions for which costs are split between multiple funds, and drainage projects throughout the city. The drainage bonds require a coverage ratio of 1.25 times annual debt service, approximately \$319,460 annually. Also included is the repayment to the Colleyville Tomorrow Fund for the internal financing of the acquisition of a Gradall excavator in the amount of \$19,032. The acquisition was approved in fiscal year 2012 and the Stormwater Drainage Utility Fund will repay the Colleyville Tomorrow Fund this amount annually during the next five years, which would be the term of the lease if financed externally.

SPECIAL REVENUE FUNDS

The City Council continues to be innovative in evaluating financing options for various City programs. Programs implemented to date include:

Colleyville Tax Increment Financing (TIF) District

The Tax Increment Reinvestment Zone (TIRZ) District, also known as the TIF, was created in 1998. The primary goal of the district is to encourage quality commercial development in the city. The district boundaries predominately occupy property located along State Highway 26, comprising 633 acres of land area. The base value for the district was \$75,821,735 in 1998. Incremental values subsequent to January 1998 are taxed at the City's adopted property tax rate. However, the ad valorem revenues are utilized within the district rather than being allocated to the City's overall budget. Overlapping taxing entities, including Tarrant County College District and the Grapevine-Colleyville Independent School District participate at varying levels in the district by assigning their ad valorem tax dollars. Tarrant County and the Tarrant County Hospital District are no longer participating in contributing to the TIF as their level commitment has already been met. In November 2012, the TIF was amended to expand boundaries to include mostly additional vacant, underutilized land and some commercial property. The additional area added is called TIF #1A, as compared to the original area which is called TIF #1.

The incremental value for fiscal year 2014 (tax year 2013) is \$254,036,831 for TIF #1 and \$515,308 for TIF #1A. TIF #1 experienced an increase of \$2,828,341 from the valuation for fiscal year 2013 (tax year 2012). In 1998, initial planning projections stated the anticipated incremental property valuation for the District would be \$188,284,200 in fiscal year 2014. The actual fiscal year 2014 incremental value is a 35 percent increase over the original 1998 projection for fiscal year 2014. Colleyville's TIF District is one of the highest performing in the state.

The debt service payment for the coming year is \$683,700 for bonds issued for district projects. Additionally, expenditures are anticipated for payments to the Village at Colleyville and Town Center at Colleyville for developer asset repurchase agreements as a result of TIF Board and City Council incentivized approved projects. The proposed CIP budget recommends using TIF funds to pay for Glade Road improvements.



Colleyville Crime Control and Prevention District (CCCPD)

The primary goal of the district is to fund public safety facilities. The district was created by voter approval in 1999, with oversight of funds assigned to the board of directors, composed of the City Council. State law provides that a district's life is limited to five years, unless voters continue the district by approval of a referendum. In September 2003, Colleyville voters approved continuation of the district for an additional 20 years.

Expected revenue from the 0.5 percent special purpose sales tax, use of funds generated from prior years' coverage ratio and related interest income for the proposed budget is \$1,461,712. The budget provides funding for the annual debt on the Colleyville Justice Center, compensation for six police officers, vehicle replacement, and various minor capital items, with total expenditures of \$1,311,714 for fiscal year 2014.

Colleyville Economic Development Corporation (CEDC)

Authority for the corporation is provided by state statute as a 4B corporation. The 0.5 percent sales and use tax approved by the voters in August 1996 has been an important resource in our Capital Improvement Program for community-related facilities. Expected revenue from the special purpose sales tax, use of funds generated from prior years' coverage ratio, and related interest income for the proposed budget is \$2,247,560. The CEDC Board will meet in August to approve the proposed budget. Funding provided by this special sales tax has been allocated to community-enhancement initiatives consistent with the authorization of the corporation, including park facilities, the Colleyville Public Library, and Colleyville Center. Consistent with state law, some funds will likely be allocated by the board of directors for promotional efforts for special events and marketing.

Court Technology Fund

The Court Technology Fund receives revenues from the collection of the Municipal Court technology fee imposed on convictions on cases adjudicated in the Court. Available funds are spent on technology repairs, replacements, and upgrades for the Court. In fiscal year 2014 the Court Technology Fund will pay for software utilized by the Court.

Court Security Fund

The Court Security Fund receives revenues from the collection of the Municipal Court building security fee imposed on convictions on cases adjudicated in the Court. Available funds are spent on security-related expenses for the Court. In fiscal year 2014, this includes funding for bailiff services at various trial settings.

Strategic Initiatives Fund

Resources available in the Strategic Initiatives Fund are to be used with the City Council's authorization for programs and projects linked directly to the City's strategic plan. This fund does not have a dedicated revenue source; any income received is from transfers in from other funds. In fiscal year 2013, \$200,000 was transferred to the Strategic Initiatives Fund from the General Fund. The current



available balance in the Strategic Initiatives Fund is \$495,446 and is intended to be used primarily on economic development incentives. Funds may be allocated at the discretion of the City Council.

Voluntary Library Fund

When voluntary contributions are made to the Library by citizens, those contributions are placed in the Voluntary Library Fund. Contributions are used primarily to support library activities. In fiscal year 2014 the Voluntary Library Fund will pay for library materials, collection development, processing supplies, and library programs.

FUTURE OUTLOOK

As is apparent in the content of this proposed budget, the City's focus now and in the future is to provide adequate funding for the established services that provide value to our citizens and serve to enforce the City Council's strategic goals, particularly protecting neighborhoods, providing core services, and generating economic activity.

As the City's largest source of revenue to fund programs and services, revenue from property taxes fund the majority of the City's services. As a revenue source, property tax could be adversely affected in future years if state legislative efforts are successful in decreasing the current 10-percent cap on residential appraisal growth. Growth caps of 3 percent and 5 percent for local government property appraisals have been discussed in recent legislative sessions. Therefore, diversification of the tax base is essential and the most immediate means for remedy is through strong economic development efforts.

In 2013, economic development efforts resulted in attracting high-profile commercial development—particularly the announcement of a Whole Foods Market set to open in 2014. Historical data related to Whole Foods Markets in other areas shows that this store tends to attract other high-profile retailers—essentially serving as a “gateway” to more commercial development.

While the City will work to capitalize on this opportunity, this brings about some unique challenges. Colleyville is landlocked and is almost entirely developed. This means fewer opportunities for true growth and essentially obligates the City to maximize economic opportunities with the limited availability of commercial land and zoning. The city is primarily zoned and developed as residential, with only a small percentage of the land zoned for commercial activity. Prudent and judicious consideration must be made regarding its future use. It is incumbent upon us all to guardedly review all proposals for conversion of this limited commercial space for non-commercial uses or less productive commercial use.

Colleyville is maturing as a city, which also means an aging infrastructure. One of the highest priorities for the City in this and future years will be to ensure the city's public infrastructure remains sound so the investment our citizens have made in



Colleyville is protected. With a population that has increased by more than 50 percent since the early 1990s, it is imperative that the City plan for infrastructure so that it meets the demands of our residential and commercial population now and in the decades ahead.

To effectively and efficiently meet the needs of our citizens, innovation and continual improvements by the organization are essential. The City's ability to provide excellent public service for our citizens is due to the dedication, skills, and talents of our elected officials and volunteer board members, and our outstanding employees. Employee devotion and commitment to this community are demonstrated each day. The compensation components detailed in this proposed budget make significant strides in protecting the City's investment in the resource that is our employees—setting a path that will move the City forward with employees that can adapt and thrive in a changing environment.

The economy in the Dallas/Fort Worth area has been relatively robust through the economic downturn of the past few years, especially as compared to much of the rest of the nation. During this period, the Colleyville City Council exhibited prudent fiscal foresight and overall restraint in the face of compelling, yet competing demands for limited resources. Because of the current tax structure and the components of costs for local governments, facing long-term fiscal challenges is a reality for most cities in Texas, including Colleyville.

In a continued effort to be proactive and anticipate future needs, the City routinely evaluates trends and identifies specific challenges expected during the next 10 years. Each segment of the organization routinely conducts a thorough examination of future needs as they relate to the City's strategic plan, citizen expectations, and the vision for Colleyville. And then develops strategies to change, revise, and evolve in ways that provide better services in a more effective, efficient manner—and often involves establishing strategic partnerships with other cities to reduce redundancy and improve services. The City of Colleyville helped begin this trend a few years ago and has become a leader in partnering with other municipalities for shared city services.

CONCLUSION

The City has been consistently recognized throughout the years for its judicious management of financial resources to support an array of services and programs. With a dedicated workforce and a steady and diverse revenue base, the City of Colleyville continues to be in a position to deliver municipal programs and services that bring value to our residents and make Colleyville a desirable location for residents, businesses, and visitors.

In an environment of limited resources, it is imperative that every budget expenditure be measured by the value it provides to citizens and the cost of that value in relationship to other services, and in consideration of whether the City can



sustain provision of any expenditure in future years without jeopardizing necessary services. This budget dedicates resources to continue protection of our neighborhoods; continue work toward optimal staffing of our public safety operations; establish a fair, competitive compensation structure for the City's workforce; leverage technology to improve efficiency and service delivery; and continue the commitment to street and sidewalk repair work. These services will pay dividends in protecting property values and enhancing the unique quality of life enjoyed by Colleyville residents.

As always, staff will continue to be diligent in its review of City finances in order to assist the City Council in making decisions that will ensure the fiscal viability of its government. Additionally, staff will continue to evaluate and improve business practices in an effort to find efficiencies, while also looking at regional synergies and collaborations to reduce ongoing costs.

The proposed budget is presented for your consideration with the commitment and confidence that it effectively funds the varying needs of the community. It provides a strong financial plan, while ensuring a superior level of municipal services to our citizens. We feel confident the projections and estimates are conservative, yet reasonable and accurately reflect anticipated revenues and municipal needs. We look forward to working with you to achieve all the goals set forth in this proposed budget.

Preparing the proposed budget was a tremendous undertaking. It is important to acknowledge the efforts of the dedicated staff that worked resolutely to formulate fiscally responsible proposals. Together, the City will continue to plan prudently by following the strong financial management principles espoused by the City Council and to implement sound, long-term fiscal solutions that will carry the city into the future. While many of the changes included in this service plan were difficult decisions, they will help assure the long-term financial viability of the City and will help protect our core services and infrastructure.

Appreciation goes to the Mayor and City Council for their community leadership and solid financial acumen. I also want to thank the staff Budget Team, including Terry Leake, assistant city manager/chief financial officer; Karen Hines, finance manager; Michelle Reyes, human resources director; and Adrienne Lothery, strategic services manager, for their efforts in building our service plan for 2014.

My special thanks to all City employees who have worked so hard to provide quality services to our citizens and who are committed to the success of our great city.

In summary we pledge our time and talents to achieve continued excellence for the citizens we serve and it is our honor to do so.

Jennifer Fadden

Jennifer Fadden
City Manager



VISION

Colleyville is a model city with attention to being an efficient and attractive neighborhood-oriented community, sensitive to our history, resources and residents.

STRATEGIC POINTS

Make a long-term commitment to economic development and promote a more diversified tax base

- Protect and preserve commercial development along Colleyville Blvd. in order to maximize the highest and best use of the City's primary commercial corridor.
- Mitigate the economic impact of roadway reconstruction.
- Work with property owners and representatives to master plan the remaining large, undeveloped tracts of commercial property.
- Promote a destination / visitor's economy.
- Pursue opportunities to advance small business development and create business incubators in order to nurture the commercial tax base.
- Market Colleyville as a medical specialist, procedure and laboratory center.
- Encourage commercial development along Precinct Line Road.
- Promote the retention and support of local businesses.

Foster excellence in core service delivery

- Ensure adequate resources for the community's public safety priorities.
- Provide adequate reinvestment to ensure high quality infrastructure.
- Provide premier parks, open spaces and neighborhood connectivity.
- Promote life-long learning and community engagement through the Colleyville Public Library.
- Maintain a reputation for high quality and unique customer service.

Protect and preserve Colleyville's neighborhoods

- Preserve Colleyville's unique, rural neighborhoods and high property values.
- Mitigate the impact of aging infrastructure.
- Utilize partnerships to enhance safety and security and community amenities.
- Continue mobility enhancements that complement neighborhoods.

Deliver sustainable government

- Weigh and evaluate citizen expectations in relation to city build out and available revenues.
- Seek innovative technology solutions where appropriate.
- Identify alternatives to increasing costs of service delivery.
- Deliver fiscally responsible government.
- Attract and retain high quality employees.

Brand Colleyville with a unique identity

- Celebrate and promote Colleyville's willingness to be unique / set apart from other cities.
- Capitalize on Colleyville's small town feel in the middle of the metroplex.
- Continue to provide a unique public assembly facility that stimulates economic activity and promotes community interaction.
- Celebrate Colleyville's unique destinations.



ORDINANCE O-13-1882

AN ORDINANCE BY THE CITY COUNCIL OF THE CITY OF COLLEYVILLE, TEXAS, APPROVING AND ADOPTING THE ANNUAL BUDGET FOR THE CITY OF COLLEYVILLE, TEXAS, FOR THE FISCAL YEAR BEGINNING OCTOBER 1, 2013 THROUGH SEPTEMBER 30, 2014, A COPY OF SAME BEING ON FILE IN THE OFFICE OF THE CITY SECRETARY, TO BECOME EFFECTIVE ON OCTOBER 1, 2013

WHEREAS, in compliance with Article 689a-14, Vernon's Texas Civil Statutes, the city manager did file with the city secretary, a copy of the budget of the proposed expenditures for the fiscal year beginning October 1, 2013, and ending September 30, 2014, such filing being more than thirty (30) days prior to the date on which the City Council makes its tax levy for said fiscal year; and

WHEREAS, all statutory and constitutional requirements for the passage of this ordinance have been adhered to, including but not limited to the Open Meeting Act; and

WHEREAS, the City Council determines that the passage of this ordinance is in the best interests of the health, safety, and welfare of the public.

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

- Sec. 1. THAT all matters stated hereinabove are found to be true and correct and are incorporated herein by reference as if copied in their entirety.
- Sec. 2. THAT the budget of the proposed expenditures for the fiscal year beginning October 1, 2013, and ending September 30, 2014, which was prepared by the city manager, a copy of which is on file in the Office of the City Secretary, is hereby made a part of this ordinance by reference and is hereby approved and adopted by the City Council of the City of Colleyville, Texas, as the official budget for the fiscal year beginning October 1, 2013, and ending September 30, 2014.
- Sec. 3. THAT appropriation amounts for the Fiscal Year 2014 Budget for the different funds of the City of Colleyville are hereby fixed as follows:

General Fund	\$21,533,967
Utility Fund (Water & Wastewater)	\$13,176,572
Debt Service Fund	\$ 1,685,797
Drainage Utility Fund	\$ 873,519

Sec. 4. THAT the expenditure budget for the Fiscal Year 2014 Capital Improvement Program (CIP) of the City of Colleyville is hereby approved as follows:

Fiscal Year 2014 CIP	\$27,118,446
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Sec. 5. THAT the city manager is hereby authorized to execute all contracts and documents for which funding is appropriated in the aforementioned budgets.

AND IT IS SO ORDERED.

The first reading and public hearing being conducted on the 3rd day of September 2013.

The second reading and public hearing being conducted on the 17th day of September 2013.

PASSED, APPROVED, and ADOPTED BY THE CITY COUNCIL OF THE CITY OF COLLEYVILLE, TEXAS, THIS THE _____ DAY OF _____ 2013, BY THE FOLLOWING VOTE:

David Kelly	_____
Chuck Mogged	_____
Jody Short	_____
Mike Taylor	_____

Carol Wollin	_____
Stan Hall	_____
Tom Hart	_____

ATTEST:

CITY OF COLLEYVILLE

Amy Shelley, TRMC
City Secretary

David Kelly
Mayor

APPROVED AS TO FORM AND LEGALITY:

Matthew C. G. Boyle
City Attorney



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 5c
Type Ordinance
Department City Manager

Agenda Date 09/17/2013

Number Ordinance O-13-1883

Title

Adoption of the Ad Valorem Tax Rate for Fiscal Year 2014 (FY 2014)

Explanation

Second Reading and Public Hearing

There were no speakers on this item at the September 3, 2013 City Council meeting.

First Reading and Public Hearing

Chapter 26, Texas Property Tax Code, requires taxing units to comply with "Truth-in-Taxation" laws in setting tax rates and perform an effective tax rate calculation. The calculated Fiscal Year 2014 (FY 2014) effective tax rate is \$.357392. As the proposed rate of \$.3559 is lower than the effective tax rate of \$.357392, legislation requires that a city only need to publish the "Notice of Effective Tax Rate" to be in compliance with Chapter 26 of the Texas Property Tax Code. The "Notice of Effective Tax Rate" for FY 2014 was published on Thursday, August 15, 2013 in the *Fort Worth Star-Telegram*. In order that the citizens of Colleyville be informed of the proposed FY 2014 tax rate, City Council adopted Resolution R-13-3659 reflecting their intention to adopt a tax rate of \$.3559 per hundred dollars of valuation at a public hearing held on August 20, 2013.

Additionally, the FY 2014 proposed tax rate of \$.3559 per hundred dollars of valuation is unchanged from FY 2013 to FY 2014, and this is the seventh year that the tax rate is \$.3559. The average residential value for FY 2013 was \$397,889, and the average residential value for FY 2014 is \$406,040. The increase in average residential property value between FY 2013 and FY 2014 was primarily driven by higher values for new residential construction, as in many cases, the value of new homes constructed during the assessment period was greater than \$400,000. This equates to an annual property tax increase of \$29.01, or an adjustment of \$.08 per day to support City services. If the taxable valuation for a residence did not increase from FY 2013, there is no corresponding increase in taxes, as there is no proposed tax increase in FY 2014.

As a point of reference, the effective tax rate calculation sets the interest and sinking rate (Debt Service Fund rate) at \$.03148, the remainder of the tax rate of \$.32442 will be allocated to operations and maintenance (General Fund rate). The ordinance adopting the FY 2014 tax rate reflects these rates as required by the effective tax rate calculation.

Financial Impact

Adoption of the tax rate and its subsequent levy will provide a portion of the funding for the Fiscal Year 2014 General Fund budget.

Recommendation

Approve

Attachments

1. Ordinance O-13-1883

ORDINANCE O-13-1883

AN ORDINANCE BY THE CITY COUNCIL OF THE CITY OF COLLEYVILLE, TEXAS, LEVYING TAXES FOR THE OPERATION OF THE MUNICIPAL GOVERNMENT OF THE CITY OF COLLEYVILLE, TEXAS, FOR THE FISCAL YEAR 2014; ESTABLISHING THE AD VALOREM TAX RATE OF THIRTY-FIVE AND FIFTY-NINE HUNDREDTHS CENTS (\$.3559) PER ONE HUNDRED DOLLARS PROPERTY ASSESSMENT; PROVIDING FOR APPORTIONMENT OF TAXES FOR INTEREST AND SINKING FUND FOR CERTAIN BOND INDEBTEDNESS AND FOR GENERAL OPERATING NEEDS, PROVIDING PENALTIES AND INTEREST FOR THE DELINQUENT TAXES, AND TO BECOME EFFECTIVE ON OCTOBER 1, 2013

WHEREAS, a budget has been adopted by the City Council of the City of Colleyville, Texas, covering the proposed expenditures of the municipal government of the City of Colleyville for the fiscal year beginning October 1, 2013 and ending September 30, 2014; and

WHEREAS, said budget reflects the needs for revenue to meet the expenses proposed therein; and

WHEREAS, the City is required to accumulate an Interest and Sinking Fund for certain outstanding bond indebtedness; and

WHEREAS, all statutory and constitutional requirements for the passage of this ordinance have been adhered to, including, but not limited to, the Open Meetings Act; and

WHEREAS, the City Council determines that the passage of this ordinance is in the best interests of the health, safety, and welfare of the public.

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

Sec. 1. THAT there is hereby levied an ad valorem tax that shall be collected for the use and support of the municipal government of the City of Colleyville. It shall provide the legally required Interest and Sinking Fund for certain outstanding bond indebtedness during the 2014 fiscal year. Such tax shall be levied upon all property, real, personal, or mixed within the corporate limits of Colleyville, Texas, which is subject to

taxation. The rate of tax shall be thirty-five and fifty-nine hundredths cents (\$.3559) on each one hundred dollars (\$100.00) property assessment. Said tax levied for and apportioned to the following specific purposes:

A. For the General Fund, a tax rate of \$.32442 is levied.

B. For the Interest and Sinking Fund, a tax rate of \$.03148 is levied.

Sec. 2. THAT taxes levied by this ordinance shall be due and payable on the first day of October 2013, and shall become delinquent on the first day of February 2014, if unpaid. Upon taxes becoming delinquent, interest and penalty will be added as required in Section 33.01 of the Texas Property Tax Code, and shall commence on the first day of February 2014. The City of Colleyville is hereby authorized to adopt any and all legal remedies provided by the Texas Property Tax Code for the purpose of collecting delinquent taxes.

AND IT IS SO ORDERED.

The first reading and public hearing being conducted on the 3rd day of September 2013.

The second reading and public hearing being conducted on the 17th day of September 2013.

PASSED, APPROVED, and ADOPTED BY THE CITY COUNCIL OF THE CITY OF COLLEYVILLE, TEXAS, THIS THE _____ DAY OF _____ 2013, BY THE FOLLOWING VOTE:

David Kelly _____
Chuck Mogged _____
Jody Short _____
Mike Taylor _____

Carol Wollin _____
Stan Hall _____
Tom Hart _____

ATTEST:

CITY OF COLLEYVILLE

Amy Shelley, TRMC
City Secretary

David Kelly
Mayor

APPROVED AS TO FORM AND LEGALITY:

Matthew C. G. Boyle
City Attorney



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 5d
Type Ordinance
Department City Manager

Agenda Date 09/17/2013

Number Ordinance O-13-1884

Title

Adoption of the Colleyville Economic Development Corporation Fiscal Year 2014 (FY 2014) Budget

Explanation

Second Reading and Public Hearing

There were no speakers on this item at the September 3, 2013 City Council meeting.

First Reading and Public Hearing

Per the Colleyville Economic Development Corporation (CEDC) Corporate Bylaws, the Board of Directors must adopt an annual budget for the CEDC. This budget must also be approved and adopted by the City Council. The CEDC Board unanimously adopted the FY 2014 budget proposed in Ordinance O-13-1884 at the annual Board meeting held August 27, 2013. This budget replicates the FY 2014 expenditures in the Economic Development Capital Improvement Program FY 2014 - 2018 adopted by the Board on August 27, 2013.

The sales tax portion of the revenue estimate (\$1,437,500) is one-half of the sales tax revenue estimate in the City's proposed FY 2014 budget. Total proposed expenditures include the following:

Capital:	
• Interfund loan - Colleyville Center renovations	\$165,332
• City Park Update – Landscape and amenities	\$175,000
• Colleyville Center – Replacement original stage curtain	\$ 25,000
• Colleyville Center – Refinish stage	\$ 4,000
• Colleyville Center – Repairs to original sloped metal roof	\$ 48,000
• Colleyville Center – Site Master Plan	\$ 25,000
• Pleasant Run Trail right-of-way acquisition (Mission to Bogart) FY 2013 carry forward	\$168,000
• Pleasant Run Trail construction (Mission to Bogart) FY 2013 carry forward	\$277,000
• Improvements at Cotton Belt – L.D. Lockett Park Trailhead	\$100,000
• Senior Center – Renovation - Design	\$125,000

Operating:	
• Administrative	\$ 2,000
• Debt service on the 2005 sales tax refunding bonds	\$644,630
• Water/wastewater McPherson Park	\$ 17,750
• Personnel - Senior Center	\$ 64,975
• Personnel - Library	\$ 76,448
• Operations – Library	\$ 4,421
Promotional:	
• Old Tyme BBQ event	\$ 15,000
• Holly Colley Holiday event	\$ 36,000
• Red, White & Sousa event	\$ 36,000
• Economic Development promotional	\$ 57,153

The budget also utilizes \$883,033 in available cash balance, with the projected ending Fiscal Year 2013 Fund Balance being \$2,013,612.

Financial Impact

Adoption will provide appropriations for the FY 2014 CEDC budget.

Recommendation

Approve

Attachments

1. Proposed FY 2014 CEDC Budget summary
2. Ordinance O-13-1884

**COLLEYVILLE ECONOMIC DEVELOPMENT CORPORATION
FY 2014 BUDGET SUMMARY**

	FY 2013 ANTICIPATED	FY 2014 PROPOSED
BEGINNING FUND BALANCE	\$ 1,974,664	\$ 2,013,612
REVENUES:		
SALES TAX REVENUES	\$ 1,335,000	\$ 1,437,500
INTEREST INCOME	\$ 3,895	\$ 4,028
USE OF AVAILABLE CASH	\$ 1,062,844	\$ 883,033
TOTAL REVENUES	\$ 2,401,739	\$ 2,324,561
LESS EXPENSES:		
<i>OPERATING:</i>		
ADMINISTRATIVE EXPENSES	\$ 2,000	\$ 2,000
PROMOTIONAL:		
OLD TYME BBQ EVENT	\$ 15,000	\$ 15,000
HOLLY COLLEY HOLIDAY EVENT	\$ 40,000	\$ 36,000
RED, WHITE & SOUSA EVENT	\$ 30,000	\$ 36,000
ECONOMIC DEVELOPMENT PROMOTIONAL	\$ 48,889	\$ 57,153
PERSONNEL- SENIOR CENTER SUPERVISOR	\$ 65,025	\$ 64,975
PERSONNEL- LIBRARY	\$ 71,095	\$ 76,448
OPERATIONS - LIBRARY	\$ 4,292	\$ 4,421
WATER-MC PHERSON PARK	\$ 1,615	\$ 17,750
DEBT SERVICE - 2005 SALES TAX REFUNDING BONDS	\$ 648,365	\$ 644,630
INTERFUND LOAN REPAYMENT - COLLEYVILLE CENTER RENOVATION	\$ 165,331	\$ 165,332
<i>CAPITAL PROJECTS:</i>		
CITY PARK - LANDSCAPE AND AMENITIES	\$ -	\$ 175,000
COLLEYVILLE CENTER - REPLACEMENT TABLES	\$ 9,580	\$ -
COLLEYVILLE CENTER - REPLACEMENT CHAIRS	\$ 38,400	\$ -
COLLEYVILLE CENTER - REPLACEMENT MAIN AIR CONDITIONER UNIT	\$ 30,000	\$ -
COLLEYVILLE CENTER - REPLACEMENT FLAT ROOF	\$ 49,732	\$ -
COLLEYVILLE CENTER - ORIGINAL STAGE CURTAIN	\$ -	\$ 25,000
COLLEYVILLE CENTER - REFINISH STAGE	\$ -	\$ 4,000
COLLEYVILLE CENTER - REPAIRS TO ORIGINAL SLOPED METAL ROOF	\$ -	\$ 48,000
COLLEYVILLE CENTER - REFINISH STAGE	\$ -	\$ 25,000
TRAIL CONSTRUCTION - COTTON BELT II SPUR AT WEBB HOUSE	\$ -	\$ -
TRAIL CONSTRUCTION - PLEASANT RUN (BOGART TO MISSION) DESIGN	\$ 41,340	\$ -
TRAIL CONSTRUCTION - PLEASANT RUN (BOGART TO MISSION) ROW ACQUISITION	\$ -	\$ 168,000
TRAIL CONSTRUCTION - PLEASANT RUN (BOGART TO MISSION) CONSTRUCTION	\$ -	\$ 277,000
TRAIL IMPROVEMENTS AT COTTON BELT - L.D. LOCKETT PARK TRAILHEAD	\$ -	\$ 100,000
SENIOR CENTER - REBRANDING STUDY	\$ 35,000	\$ -
SENIOR CENTER - RENOVATIONS	\$ -	\$ -
SENIOR CENTER - RENOVATION DESIGN	\$ -	\$ 125,000
SENIOR CENTER - TABLE AND CHAIR REPLACEMENTS	\$ 4,283	\$ -
TOTAL EXPENSES	\$ 1,299,947	\$ 2,066,709
EXCESS REVENUES OVER EXPENSES	\$ 1,101,792	\$ 257,852
ENDING FUND BALANCE	\$ 2,013,612	\$ 1,388,431

NOTE: A COVERAGE RATIO OF 1.4 IS REQUIRED TO MEET THE SALES TAX BOND COVENANTS
FOR FY 2014, REVENUES MUST EXCEED EXPENDITURES BY AT LEAST \$257,852.

ORDINANCE O-13-1884

AN ORDINANCE BY THE CITY COUNCIL OF THE CITY OF COLLEYVILLE, TEXAS, APPROVING AND ADOPTING THE ANNUAL BUDGET FOR THE COLLEYVILLE ECONOMIC DEVELOPMENT CORPORATION, FOR THE FISCAL YEAR BEGINNING OCTOBER 1, 2013 THROUGH SEPTEMBER 30, 2014; A COPY OF SAME BEING ON FILE IN THE OFFICE OF THE CITY SECRETARY

WHEREAS, the Bylaws of the Colleyville Economic Development Corporation require the Board of Directors of the Corporation to adopt a budget of proposed revenues and expenditures and the budget must be formally approved by the City Council; and

WHEREAS, on August 27, 2013, the Board of Directors of the Colleyville Economic Development Corporation approved the following budget for expected revenues and expenditures; and

WHEREAS, the Colleyville Economic Development Corporation Board of Directors and the City Council have determined that the projects, included in the annual budget for the fiscal year beginning October 1, 2013 through September 30, 2014, further the objectives of the purpose of the Colleyville Economic Development Corporation, as established by the electorate of the City and the provisions of state statute.

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

- Sec. 1. THAT the budget of the proposed revenues and expenditures for the fiscal year beginning October 1, 2013, and ending September 30, 2014, for the Colleyville Economic Development Corporation, a copy of which is on file in the Office of the City Secretary, is hereby made a part of this ordinance by reference and is hereby approved and adopted by the City Council of the City of Colleyville, Texas, as the official budget for the fiscal year beginning October 1, 2013, and ending September 30, 2014.

Sec. 2. THAT the revenue and expenditure amounts for the Fiscal Year 2014 budget for the Colleyville Economic Development Corporation are hereby fixed as follows:

Revenues	\$2,324,561
Expenditures	\$2,066,709

AND IT IS SO ORDERED.

The first reading and public hearing being conducted on the 3rd day of September 2013.

The second reading and public hearing being conducted on the 17th day of September 2013.

PASSED AND APPROVED by the City Council of the City of Colleyville, Texas, on this the _____ day of _____ 2013.

ATTEST:

CITY OF COLLEYVILLE

Amy Shelley, TRMC
City Secretary

David Kelly
Mayor

APPROVED AS TO FORM AND LEGALITY:

Matthew C.G. Boyle
City Attorney



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 5e

Agenda Date 09/17/2013

Number Ordinance O-13-1885

Type Ordinance

Department City Manager

Title

Request for approval to amend Part II, Chapter 2- Administration, Article II- Finance, Division 1, Sec. 2-26 of the Colleyville, Texas, Code of Ordinances, which sets fees and charges for City services

Explanation

Second Reading and Public Hearing

There were no speakers regarding this item at the September 3, 2013 City Council meeting.

First Reading and Public Hearing

As a part of the annual budget process, staff reviews the fees charged by the City and proposes new fees, revisions of current fees, or deletions of fees. The following fee changes are proposed by staff and were discussed at the City Council Worksession on July 23, 2013:

Colleyville Center Fees and Charges

In reviewing the Colleyville Center ancillary services and how to better serve clients, staff researched the addition of garden chairs to increase ceremony rentals and revenue generated by the Balustrada/Garden area. On May 20, 2013, the Colleyville Center Advisory Committee approved the packaging of garden chairs with ceremony rental and an increase in weekend rental rates to recover costs incurred servicing and maintaining the facility during weekend events. The recommended changes, as approved by the Colleyville Center Advisory Committee, are as follows:

New Combined Fee for Balustrada and Chair Rental: \$300

Weekend Standard Rental Rates:

	Current Rate	Proposed Rate
Friday & Sunday	\$1,600	\$1,800
Saturday	\$1,800	\$2,200

Development Fees and Charges

Based on a recent analysis of fees charged by other cities (survey attached) and considering the current costs incurred by the City for staff time and administration, several development fee changes are proposed in order to more fully recover costs. The average fee charged by benchmarked cities, the City of Colleyville's current fee, and the proposed new fee amount are listed below.

<i>Development Fee</i>	<i>City Avg.</i>	<i>Current</i>	<i>Proposed</i>
PUD Amendment	\$428	\$250	\$450
Amending Plat	\$224	\$150	\$250
ZBA Variance and Appeal Application	\$165	\$125	\$175
Sign Board Appeal	\$228	\$125	\$175
Fence Permit	\$68.38	\$25	\$75
Wall Sign	\$71.32	\$45	\$75
Development Sign	\$70.10	\$35	\$75
New Residence Plan Review	N/A	\$250	\$350
Swimming Pool Plan Review	N/A	\$25	\$50
Grading and Earthwork	\$83.67	\$55	\$75
Residential Addition and Remodel Plan Review	\$114	\$100	\$150

Engineering Fees and Charges

Staff is recommending the addition of a \$50 per hour fee for all inspections performed outside of regular business hours for the construction of public infrastructure projects. The current fee amount is \$25 per hour. The proposed fee increase is intended to more accurately recover personnel costs incurred by the City. The overtime inspection fee was originally authorized in Ordinance O-91-832 and will be incorporated into Sec. 2-26 of the Code of Ordinances, which contains fees and charges for City services.

Staff also recommends eliminating the section of the miscellaneous fee ordinance in Chapter 2, Section 2-26 (d) relating to the printing of maps and large documents for consistency purposes. Upon approval, staff would defer to the fees charged for public information requests, in accordance with the Texas State Library and Archives Commission.

Financial Impact

Approval of the recommended fee changes and additions would, ultimately, increase the amount of revenue received by the City. However, as the majority of the changes would result in a relatively small incremental revenue increase, no corresponding increase is proposed for revenue budgeted in fiscal year 2014. The proposed fee changes are intended to more fully recover the cost of providing services.

Recommendation

Approve

Attachments

1. Development Fee Survey
2. Ordinance O-91-832
3. Ordinance O-13-1885

Colleyville Miscellaneous Permit Fee Survey 2013

Permit Type	North Richland Hills	Euless	Bedford	Hurst	Keller	Grapevine	Southlake	City Average	Colleyville (Current)	Colleyville (Proposed)
PUD Amendment	\$564	\$500 + \$10/acre	\$205+ \$205 (For each additional acre over 1)	\$600 (>10 acre) \$700 (<10 acre)	N/A	\$500 + \$25/acre	\$200	\$428	\$250	\$450
Amending Plat	\$248	\$275	\$100 + \$25/lot	\$250 + \$25/acre	\$200 + \$10/lot	\$200	\$300 + \$20/lot (res) \$300 + \$20/acre (comm)	\$224	\$150	\$250
ZBA/SBA	ZBA - \$186(res), \$220 (commercial) SBA - \$621	\$75	\$100	\$200	\$200	\$100	\$300	\$165 -ZBA \$228 - SBA	\$125	\$175 (for Both)
Fence permit	\$21.00 (wood) \$21.00 (iron)	*Based on Valuation Min \$30.00 + \$3.05/\$100	*Based on Valuation Min \$30.00 + \$4.00/\$100	*Residential Min \$75.00 Commercial on Valuation Min \$23.50 + \$3.05/\$100	*Based on Valuation Min \$23.50 + \$3.05/\$100	*Based on Valuation Min \$21.00 first \$500 Min \$21.00 + \$2.75/\$100	\$75.00	\$68.38	\$25.00	\$75.00
Wall sign	Base on sqft min \$57 max- \$2.00/sqft	*Based on Valuation Min \$30.00 + \$3.05/\$100	**Based on sqft Min \$50.00+	*Based on Valuation Min 23.50 first \$500 then Min 26.55 + \$3.05/\$100	*Based on Valuation Min \$23.50 + \$3.05/\$100	*Based on Valuation Min \$21.00 first \$500 Min \$21.00 + \$2.75/\$100	\$85.00	\$71.32	\$45.00	\$75.00
Development sign	Base on sqft min \$57 max- \$2.00/sqft	*Based on Valuation Min \$30.00 + \$3.05/\$100	**Based on sqft Min \$50.00+	*Based on Valuation Min 23.50 first \$500 then Min 26.55 + \$3.05/\$100	*Based on Valuation Min \$23.50 + \$3.05/\$100	*Based on Valuation Min \$21.00 first \$500 Min \$21.00 + \$2.75/\$100	\$25.00	\$70.10	\$35.00	\$75.00
New residence plan review	65% of permit fee added	No fee, Included in Permit	65% of Permit Fee Credit to Permit fee	No fee, Included in Permit	40% of permit fee added	No fee, Included in Permit	No fee, Included in Permit	N/A	Flat Fee \$250.00	Flat Fee \$350.00
Residential addition and remodel--Plan review	No fee, Included in Permit	No fee, Included in Permit	65% of Permit fee Credit to Permit fee	No fee, Included in Permit	40% of permit fee added	No fee, Included in Permit	No fee, Included in Permit	Based on 3 cities \$114.00	Flat Fee \$100.00	\$150.00

Colleyville Miscellaneous Permit Fee Survey 2013

\$10,000 and greater										
Footnote #1										
Swimming pool plan review fee	No fee, Included in Permit	**Comm. Only: Valuation	No fee, Included in Permit	No fee, Included in Permit	No fee, Included in Permit	No fee, Included in Permit	No fee, Included in Permit	N/A	\$25.00	\$50.00
Grading and earthwork permit	\$93.00	Determined by Eng. Dept.	*\$38.00 min +sqft	Determined by Public Works	\$25/lot \$100/acre	10% of permit fee	\$100.00	\$83.67	\$55.00	\$75.00

* **City of North Richland Hill:** permit fees based on dollar valuation (e.g. minimum: Sum; \$28.00 + \$3.26 for each additional \$100.00 or fraction thereof). For a complete permit fee list refer to the table in the Appendix-A "Fee Schedule".

* **City of Euless:** permit fees based on dollar valuation (e.g. minimum: Sum; \$30.00 + \$3.06 for each additional \$100.00 or fraction thereof). For a complete permit fee list refer to the table in the Table 30-13(d) "Fee Schedule".

* **City of Bedford:** permit fees based on dollar valuation (e.g. minimum: Sum; \$30.00 + \$4.00 for each additional \$100.00 or fraction thereof). For a complete permit fee list refer to the table in the Table 30-13(d) "Fee Schedule".

* **City of Hurst:** permit fees based on dollar valuation (e.g. minimum: \$23.50 for the first \$500.00 then Sum; \$26.55 + \$3.05 for each additional \$100.00 or fraction thereof). For a complete permit fee list refer to the table in "Fee Schedule" City of Hurst.

* **City of Keller:** permit fees based on dollar valuation (e.g. minimum: Sum; \$23.50 + \$3.50 for each additional \$100.00 or fraction thereof). For a complete permit fee list refer to the table in the Table 4-120 "Fee Schedule".

* **City of Grapevine:** permit fees based on dollar valuation (e.g. minimum: \$21.00 for the first \$500.00 then Sum; \$21.00 + \$2.75 for each additional \$100.00 or fraction thereof, to and including \$2000.00). For a complete permit fee list refer to the Exhibit A; table1-An in "Building Permit Fees" City of Grapevine.

* **Foot Note #1, City Averages:** In order to establish a common denominator between permits evaluated on a valuation cost verses permit costs based on a flat fee, the city averages category of residential remodels has been based on two classes

1. \$10,001.00 (greater than)
2. \$9,999.00 (less than)

* **Foot Note #2, City Averages:** In order to establish a common denominator between permits evaluated on a valuation cost verses permit costs based on a flat fee, the city averages category of residential and commercial new construction has been based on a \$500,001.00 structure or in the case based on dollar amount per square foot a 5,000 square foot structure was used for the example.

Colleyville Miscellaneous Permit Fee Survey 2013

Posted
6-14-91
4:30 P.M.
by

AN ORDINANCE AMENDING THE COLLEYVILLE CODE BY PROVIDING A FEE FOR REVIEW AND INSPECTION OF GRADING, STREET CONSTRUCTION AND DRAINAGE IMPROVEMENTS, PROVIDING A PENALTY AND AUTHORIZING PUBLICATION.

WHEREAS, in order to protect and promote public health and safety, it is necessary that a lot grading plan and construction and street and drainage plans and construction be reviewed in inspected by the City; and

WHEREAS, the City Council finds that the reasonable cost of reviewing and inspecting lot grading is One Hundred Twenty-five Dollars (\$125.00) per lot and finds that the cost for review and inspection of streets and drainage plans and construction is three percent (3%) of the cost of construction for inspection and two percent (2%) of the cost of construction for plan review;

NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF COLLEYVILLE, TEXAS AS FOLLOWS:

Sec. 1: THAT Section 1 of Chapter 3 of the Colleyville Code be amended by adding to part E thereof, the following:

"Grading Review and Inspection Fees:

In addition to the foregoing building permit fees, an additional charge for a Grading Review and Inspection Fee of One Hundred Twenty-five Dollars (\$125.00) per lot shall be paid upon application for a building permit.

Sec. 2: THAT Section 8 of Chapter 9 of the Colleyville Code be amended by adding thereto a part L, providing as follows:

"L. Street Plan Review and Inspection Fees:

Prior to the acceptance by the City of the public improvements within a subdivision, the subdivider shall pay to the City a sum equal to five percent (5%) of the actual cost of the street improvements within the subdivision as a fee for the review by the City of the street plan and inspection of street construction. Two percent (2%) of said fee shall be allocated for plan review and three percent (3%) shall be allocated for inspection.

1
2
3
4 Sec.3: THAT Section 8 of Chapter 9 of the Colleyville Code be amended by adding thereto a part M, providing as follows:

5 "M. Inspection Overtime Reimbursement:

6 Any work prior to 7:30 A.M. or after 4:30 P.M. on
7 Monday through Friday and between 8:00 A.M. and 5:00 P.M.
8 on Saturday and Holidays may only be undertaken if the
9 contractor signs the necessary forms committing to
10 reimburse the City of Colleyville for overtime costs of
11 Twenty-five Dollars (\$25.00) per hour. Work performed
12 between 8:00 A.M. and 5:00 P.M. on Saturdays and Holidays
13 will require a commitment to reimburse the City of
14 Colleyville a guaranteed minimum of four (4) hours. By
15 signing the forms, the contractor commits to reimburse
16 the City on a monthly basis upon receipt of a monthly
17 invoice from the City.

18
19 Sec. 4 THAT Section 12 of Chapter 9 of the Colleyville Code be amended by adding thereto a part H, providing as follows:

20 "H. Drainage Improvements and Inspection Fees:

21 Prior to the acceptance by the City of the
22 public improvements within a subdivision, the subdivider
23 shall pay to the City a sum equal to five percent (5%) of
24 the actual cost of the drainage improvements within the
25 subdivision as a fee for the review by the City of the
26 drainage improvements and inspection of drainage
improvements. Two percent (2%) of said fee shall be
allocated for plan review and three percent (3%) shall be
allocated for inspection.

18 Sec. 5 THAT any person, firm or corporation violating any
19 provision of this ordinance shall be deemed guilty of a
20 misdemeanor and upon final conviction thereof fined in an
21 amount not to exceed Five Hundred Dollars (\$500.00).
22 Each day any such violation continues or is allowed to
23 exist shall constitute a separate violation and be
24 punishable hereunder.

22 Sec. 6: THAT the City Secretary is hereby authorized and directed
23 to cause publication of the descriptive caption and
24 penalty clause hereof as an alternative method of
25 publication provided by law.
26

AND IT IS SO ORDERED.

The first reading and public hearing being conducted on the
18th day of June, 1991.

The second reading and public hearing being conducted on the
2nd day of July, 1991.

The third reading and public hearing being conducted on the
16th day of July, 1991.

ATTEST:

CITY OF COLLEYVILLE


Lavada Johnson
City Secretary


Chris Hawkins
Mayor

APPROVED AS TO FORM AND LEGALITY:


Ross T. Foster, City Attorney

jh/ord/091832
Updated 07/17/91

ORDINANCE O-13-1885

AN ORDINANCE AMENDING PART II, CHAPTER 2-ADMINISTRATION, ARTICLE II- FINANCE, DIVISION 1, SEC. 2-26 OF THE COLLEYVILLE, TEXAS, CODE OF ORDINANCES, WHICH SETS FEES AND CHARGES FOR CITY SERVICES, AND PROVIDING FOR AN EFFECTIVE DATE

WHEREAS, the City of Colleyville charges fees for miscellaneous services and materials as authorized by Ordinance O-92-880 and it is desirous to update those fees; and

WHEREAS, the fees being updated herewith include the inspection overtime reimbursement fees initially adopted via Ordinance O-91-832; and

WHEREAS, all statutory and constitutional requirements for the passage of this ordinance have been adhered to, including but not limited to the Open Meeting Act; and

WHEREAS, the City Council determines that the passage of this ordinance is in the best interests of the health, safety, and welfare of the public.

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

Sec. 1. THAT all matters stated hereinabove are found to be true and correct and are incorporated herein by reference as if copied in their entirety.

Sec. 2. THAT from and after the effective date of this ordinance, Chapter 2 Section 2-26 (b) of the City of Colleyville Code of Ordinances shall be revised with the following:

Amending Plat	\$250.00
Amendment to existing PUD to add, delete, or change a special condition to an existing PUD ordinance	\$450.00
ZBA variance and appeal application	\$175.00
Sign board appeal	\$175.00

Sec. 3. THAT from and after the effective date of this ordinance, Chapter 2 Section 2-26 (d) of the City of Colleyville Code of Ordinances shall be revised with the following deletions:

Floodplain map	\$ 3.00
Storm drainage master plan	\$35.00

Maps:

11" x 17"	\$ 4.00
20" x 20"	\$ 7.00
36" x 36"	\$15.00
62" x 62"	\$40.00

Sec. 4. THAT from and after the effective date of this ordinance, Chapter 2 Section 2-26 (d) of the City of Colleyville Code of Ordinances shall be revised with the following addition:

A \$50 per hour fee will apply for all inspections performed outside of regular business hours for the construction of public infrastructure projects.

Sec. 5. THAT from and after the effective date of this ordinance, Chapter 2 Section 2-26 (g) of the City of Colleyville Code of Ordinances shall be revised with the following:

Fence permit	\$ 75.00
Wall sign	\$ 75.00
Development sign	\$ 75.00
New residence plan review	\$350.00
Residential addition and remodel plan review	\$150.00
Swimming pool plan review fee	\$ 50.00
Grading and earthwork permit	\$ 75.00

Sec. 6. THAT from and after the effective date of this ordinance, Chapter 2 Section 2-26 (j), Colleyville Center rental rates: Standard Room Fee Schedule With Resident/Local Business Discount, of the City of Colleyville Code of Ordinances shall be revised with the following revisions as shown on Exhibit "A".

Entire Building Rental - Standard Weekend Fee:
\$1,800 up to 8 hours Fri. or Sun. or any wedding package
\$2,200 Sat. Prime after 1:00 p.m.
Addtl. Hour - \$250.00

Balustrada/Garden Plaza Rental:
\$300.00/\$150.00 (First 2 hours/each additional)

Sec. 7. THAT the effective date of this ordinance shall be October 1, 2013.

AND IT IS SO ORDERED.

The first reading and public hearing being conducted on the 3rd day of September 2013.

The second reading and public hearing being conducted on the 17th day of September 2013.

PASSED AND APPROVED by the City Council of the City of Colleyville, Texas, on this the _____ day of _____ 2013.

ATTEST:

CITY OF COLLEYVILLE

Amy Shelley, TRMC
City Secretary

David Kelly
Mayor

APPROVED AS TO FORM AND LEGALITY:

Matthew C. G. Boyle
City Attorney

Exhibit "A"

Colleyville Center Rental Rates:

STANDARD ROOM FEE SCHEDULE WITH RESIDENT/ LOCAL BUSINESS DISCOUNT

Colleyville Center Rooms	Standard Weekday Fee Mon – Thurs 8:00 a.m. – 11:00 p.m. Friday 8:00 a.m. – 1:00 p.m. FIRST 2 HOURS / EACH ADDITIONAL	Standard Weekend Fee Friday and Saturday 1:00 p.m. – 12:00 a.m. Sunday 8 a.m. - 11:00 p.m. FIRST 2 HOURS / EACH ADDITIONAL	Colleyville Resident or Local Business Owner Discount ALL FEES DISCOUNTED FROM STANDARD FEE
North Conference	\$50/\$15	\$125/\$30*	20% DISCOUNT
South Conference	\$50/\$15	\$125/\$30*	20% DISCOUNT
Combined North/South Conference	\$85/\$20	\$205/\$40*	20% DISCOUNT
North Hall	\$180/\$35	\$400/\$55*	20% DISCOUNT
South Hall	\$180/\$35	\$400/\$55*	20% DISCOUNT
Combined North/South 4-hour min. required	\$350/\$60	\$545/\$90*	20% DISCOUNT
Entire Building Rental	\$1,200 up to 8 hours Addtl. hour - \$250	\$1,800 up to 8 hours Fri. or Sun. or any wedding package \$2,200 Sat Prime after 1:00 p.m. Addtl. hour - \$250	20% DISCOUNT
Balustrada/ Garden Plaza Rental	First 2 hours/each additional \$300.00/\$150.00		

Pricing based on first two hours / each additional hour unless otherwise noted for Entire-Building rental

*Weekend fees for individual rooms based on availability 30 days out



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 5f
Type Ordinance
Department City Manager

Agenda Date 09/17/2013

Number Ordinance O-13-1886

Title

Amending Ordinance O-12-1850 relating to the Fiscal Year 2013 budget

Explanation

Second Reading and Public Hearing

There were no speakers regarding this item at the September 3, 2013 City Council meeting.

First Reading and Public Hearing

The proposed ordinance will amend Ordinance O-12-1850 Approving and Adopting the Fiscal Year 2013 budget, to authorize the transfer of the unspent Fiscal Year 2013 (FY 2013) General Fund budget appropriations for street rehabilitation (account 001-3310-6319) and \$40,000 for upgraded audio visual equipment for the police department to the Capital Projects Fund on September 30, 2013. Included in the FY 2013 General Fund street maintenance budget was \$2,400,000 for the rehabilitation of various streets. In order to preserve unspent contingency funds from FY 2013 street rehabilitation projects, the unspent balance of the General Fund Street Department line item 001-3310-6319 will be transferred to the Capital Projects Fund for future street rehabilitation use. Similarly, \$40,000 of unspent FY 2013 funds for upgraded audio visual equipment for the police department must be transferred to the Capital Projects Fund to preserve those funds for future use when a project spans across two fiscal years.

The proposed ordinance will also amend the General Fund budget to provide for the transfer of any additional General Fund revenue received in FY 2013 that exceeds the budgeted amount for expenditures in FY 2013. This difference of revenues over expenditures will be transferred to the Capital Projects Fund for the future capital projects identified in the FY 2014-2018 Capital Improvement Program. The funding for the proposed transfer will be from the projected increase in General Fund revenues, such as sales tax revenues, over the FY 2013 budgeted revenues.

Additionally, if expenditures in a department exceed the adopted budget, the city manager is authorized to transfer all or part of the unencumbered appropriation balance from one department to another, per the Charter of the City of Colleyville, Section 9.04 (D).

The proposed budget amendment would also authorize the transfer of FY 2013 Utility Fund revenues that exceed the amount needed for the debt coverage ratio to a reserved cash account. The reserved funds would be designated for use solely on future capital projects for utility infrastructure.

Financial Impact

The amendment to the FY 2013 General Fund budget for the transfer for future capital projects is offset by the General Fund revenue received in excess of the amount budgeted. Also, the funds to be transferred to the Capital Projects Fund from the unspent balance of the street rehabilitation line item account were appropriated as a part of the FY 2013 General Fund budget and there is no financial impact. Finally, the Utility Fund revenues to be transferred to a reserved cash account for future utility infrastructure projects only uses the revenue above and beyond that needed for the debt coverage ratio.

Recommendation

Approve

Attachments

1. Ordinance O-13-1886

ORDINANCE O-13-1886

AN ORDINANCE BY THE CITY COUNCIL OF THE CITY OF COLLEYVILLE, TEXAS, AMENDING ORDINANCE O-12-1850 OF THE GENERAL FUND BUDGET FOR THE TRANSFER OF FISCAL YEAR 2013 REVENUES RECEIVED ABOVE FISCAL YEAR 2013 BUDGETED EXPENDITURES FOR FUTURE CAPITAL PROJECTS FROM THE GENERAL FUND TO THE CAPITAL PROJECTS FUND ON SEPTEMBER 30, 2013; AUTHORIZING THE CITY MANAGER TO TRANSFER FISCAL YEAR 2013 REVENUES RECEIVED ABOVE THOSE REQUIRED FOR THE DEBT COVERAGE RATIO IN THE UTILITY FUND TO A RESERVED CASH ACCOUNT FOR FUTURE UTILITY INFRASTRUCTURE PROJECTS ON SEPTEMBER 30, 2013; AND AUTHORIZING THE CITY MANAGER TO TRANSFER UNSPENT FY 2013 GENERAL FUND BUDGET APPROPRIATIONS FOR STREET REHABILITATION AND AUDIO VISUAL EQUIPMENT FOR THE POLICE DEPARTMENT FROM THE GENERAL FUND TO THE CAPITAL PROJECTS FUND ON SEPTEMBER 30, 2013

WHEREAS, the Fiscal Year 2013 (FY 2013) General Fund projected year end revenues are anticipated to exceed budgeted revenues and the City Council desires to provide additional funding for the future capital projects identified in the FY 2014-2018 Capital Improvement Program, it is necessary to amend the FY 2013 budget to include the transfer of any General Fund revenues received in FY 2013 over FY 2013 budgeted expenditures to the Capital Projects Fund; and

WHEREAS, the FY 2013 Utility Fund projected year end revenues are anticipated to exceed the amount required for the debt coverage ratio in the Utility Fund and the City Council desires to provide additional funding for future utility infrastructure capital projects, it is necessary to amend the FY 2013 budget to include the transfer of any Utility Fund revenues received in FY 2013 over the amount required for the debt coverage ratio to a reserved cash account; and

WHEREAS, the City Council desires to preserve unspent FY 2013 General Fund budget appropriations for street rehabilitation projects and upgraded audio visual equipment for the police department; and

WHEREAS, all statutory and constitutional requirements for the passage of this ordinance have been adhered to, including but not limited to the Open Meetings Act; and

WHEREAS, the City Council determines that the passage of this ordinance is in the best interests of the health, safety, and welfare of the public.

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

- Sec. 1. THAT the city manager is authorized to transfer the difference in FY 2013 General Fund revenues over expenditures from the General Fund to the Capital Projects Fund for future capital projects identified in the FY 2014-2018 Capital Improvement Program on September 30, 2013.
- Sec. 2. THAT the city manager is authorized to transfer the difference in FY 2013 Utility Fund revenues over the amount required for the debt coverage ratio in the Utility Fund to a reserved cash account for future utility infrastructure capital projects on September 30, 2013.
- Sec. 3. THAT the city manager is authorized to transfer unspent FY 2013 General Fund budget appropriations for street rehabilitation (account 001-3310-6319) and \$40,000 for upgraded audio visual equipment for the police department from the General Fund to the Capital Projects Fund for future street rehabilitation and the upgrade of police department audio visual equipment on September 30, 2013.
- Sec. 4. THAT, in the event that expenditures in a department exceed the adopted budget for that department, the city manager is authorized to transfer all or part of the unencumbered appropriation balance from one department to another per the Charter of the City of Colleyville, Section 9.04 (D).
- Sec. 5. THAT the effective date of this ordinance shall be September 30, 2013.

AND IT IS SO ORDERED.

The first reading and public hearing being conducted on the 3rd day of September 2013.

The second reading and public hearing being conducted on the 17th day of September 2013.

PASSED AND APPROVED by the City Council of the City of Colleyville, Texas, on this the _____ day of _____ 2013.

ATTEST:

CITY OF COLLEYVILLE

Amy Shelley, TRMC
City Secretary

David Kelly
Mayor

APPROVED AS TO FORM AND LEGALITY:

Matthew C.G. Boyle
City Attorney



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 6a

Agenda Date 09/17/2013

Number Resolution R-13-3666

Type Resolution

Department Public Works

Title

Adoption of the Fiscal Year 2014 - Fiscal Year 2018 Capital Improvement Program (CIP)

Explanation

Reading and Public Hearing

As part of the Fiscal Year 2014 (FY 2014) budget process, staff developed a comprehensive Five Year Capital Improvement Program (CIP) which includes all projects with a cost of more than \$100,000 that can be executed within the 2014-2018 timeframe. The CIP is fiscally constrained, and is fully funded with available cash and other funding from TxDOT, Tarrant County, the Fort Worth Transportation Authority, and the North Central Texas Council of Governments.

The FY 2014 CIP includes 19 projects with an estimated cost of \$27,118,447, and will be included in the FY 2014 adopted budget. The Five Year CIP includes 54 projects with an estimated cost of \$53,637,719, outlined in Exhibit "A", attached to the resolution.

The CIP was presented to City Council at the June and August 2013 budget worksessions, and revised as requested by City Council.

Financial Impact

Adoption will provide appropriations for the FY 2014 Capital Improvement Program budget.

Recommendation

Approve

Attachments

1. Resolution R-13-3666

RESOLUTION R-13-3666

**A RESOLUTION ADOPTING A COMPREHENSIVE FIVE YEAR CAPITAL
IMPROVEMENT PROGRAM FOR FISCAL YEARS 2014-2018 FOR THE
CITY OF COLLEYVILLE, TEXAS**

WHEREAS, planning for capital expenditures is an essential function of local government; and

WHEREAS, a multi-year capital improvement program is an important communication tool for residents and businesses; and

WHEREAS, a multi-year capital improvement program is a valuable tool in addressing infrastructure renewal and replacement needs and an essential part of the City's financial planning.

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

- Sec. 1. THAT the Fiscal Year 2014-2018 Capital Improvement Program attached as Exhibit "A", is hereby adopted.
- Sec. 2. THAT the Capital Improvement Program will be reviewed and updated on an annual basis, or as otherwise necessary.
- Sec. 3. THAT changes to the Capital Improvement Program will require approval of the City Council.

AND IT IS SO RESOLVED.

APPROVED BY A VOTE OF _____ AYES, _____ NAYS, AND _____
ABSTENTIONS ON THIS THE 17TH DAY OF SEPTEMBER 2013.

ATTEST:

COLLEYVILLE CITY COUNCIL

Amy Shelley, TRMC
City Secretary

David Kelly
Mayor



EXHIBIT "A"

City of Colleyville

Capital Improvement Program

FY 2014 to FY 2018

			FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	
Project Title		Project Category	Project Costs					
1	ST14-001	Reconstruct Kingston Estates	Streets - Reconstruction	\$ 1,879,814	\$ -	\$ -	\$ -	\$ -
2	ST14-002	Rehabilitate Lavaca Trail - 2014 County Project	Streets - Rehabilitation	\$ 151,000	\$ -	\$ -	\$ -	\$ -
3	ST14-003	Rehabilitate Streets in Jewel Estates Subdivision	Streets - Rehabilitation	\$ 575,806	\$ -	\$ -	\$ -	\$ -
4	ST14-004	Construct Jackson Cheek-Sparger Roundabout	Streets - Intersection Improvements	\$ 2,153,433	\$ -	\$ -	\$ -	\$ -
5	ST14-005	Design of Frontier Court Reconstruction	Streets - Reconstruction	\$ 130,000	\$ -	\$ -	\$ -	\$ -
6	ST14-006	Reconstruct Pleasant Run: Veranda to Bogart	Streets - Reconstruction	\$ 1,054,865	\$ -	\$ -	\$ -	\$ -
7	ST14-007	Construction SH26 Phase I Enhancements	Streets - Reconstruction	\$ 333,250	\$ -	\$ -	\$ -	\$ -
8	ST14-008	Construct SH26, Phase II	Streets - Reconstruction	\$ 14,000,000	\$ -	\$ -	\$ -	\$ -
9	ST14-009	2014 Miscellaneous Concrete Repairs	Other	\$ 422,300	\$ -	\$ -	\$ -	\$ -
10	ST14-010	Final Design of Glade Road	Streets - Reconstruction	\$ 701,000	\$ -	\$ -	\$ -	\$ -
11	UT14-001	Upsize Utility Lines - Western Trails	Utilities - Waterline Renewals/Upsizing	\$ 886,979	\$ -	\$ -	\$ -	\$ -
12	RC14-001	Design of Senior Center Renovation	Facility-Rehabilitation	\$ 125,000	\$ -	\$ -	\$ -	\$ -
13	PK14-001	Construct Cottonbelt Trail - Phase 3	Parks	\$ 230,000	\$ -	\$ -	\$ -	\$ -
14	FA14-001	Clean and Seal Exterior Stone City Hall/Library	Facility-Rehabilitation	\$ 300,000	\$ -	\$ -	\$ -	\$ -
15	ST14-011	Pavement Markings	Streets - Rehabilitation	\$ 100,000	\$ -	\$ -	\$ -	\$ -
16	PK14-002	Improvements @ Trailhead	Parks	\$ 100,000	\$ -	\$ -	\$ -	\$ -
17	ST14-012	Glade Road ROW Acquisition	Streets - Reconstruction	\$ 3,000,000	\$ -	\$ -	\$ -	\$ -
18	ST14-013	Construct Roundabout at Bedford and Cheek-Sparger	Streets - Intersection Improvements	\$ 800,000	\$ -	\$ -	\$ -	\$ -
19	PK14-003	Landscape & Amenity Upgrades	Parks	\$ 175,000	\$ -	\$ -	\$ -	\$ -
				\$ 27,118,446	\$ -	\$ -	\$ -	\$ -
1	UT15-001	Upsize Utility Lines - Reagan Estates	Utilities - Waterline Renewals/Upsizing	\$ -	\$ 650,209	\$ -	\$ -	\$ -
2	OT15-001	Install Quiet Zones at Three RR Crossings	Other	\$ -	\$ 1,600,921	\$ -	\$ -	\$ -
3	OT15-002	Reconstruct Whites Chapel Road Bridge	Other	\$ -	\$ 150,000	\$ -	\$ -	\$ -
4	ST15-001	2015 Miscellaneous Concrete Repairs	Other	\$ -	\$ 422,300	\$ -	\$ -	\$ -
5	ST16-002	Reconstruct Streets in Western Trails	Streets - Reconstruction	\$ -	\$ 1,377,058	\$ -	\$ -	\$ -
6	ST15-003	Rehabilitate Jackson Road - 2015 County Project	Streets - Rehabilitation	\$ -	\$ 151,000	\$ -	\$ -	\$ -
7	ST15-004	Design Pleasant Run: Shelton to Tinker	Streets - Reconstruction	\$ -	\$ 91,000	\$ -	\$ -	\$ -
8	OT15-003	Reconstruct Bedford Road Retaining Wall	Other	\$ -	\$ 300,050	\$ -	\$ -	\$ -
9	ST15-005	Pavement Markings	Streets - Rehabilitation	\$ -	\$ 100,000	\$ -	\$ -	\$ -
10	PK15-001	Construct New Trail	Parks	\$ -	\$ 150,000	\$ -	\$ -	\$ -
11	ST15-006	Construct Glade Road	Streets - Reconstruction	\$ -	\$ 3,507,875	\$ -	\$ -	\$ -
12	PK15-002	Construct Cottonbelt Trail Spur	Parks	\$ -	\$ 165,000	\$ -	\$ -	\$ -
				\$ -	\$ 8,665,413	\$ -	\$ -	\$ -
1	ST16-001	Reconstruct Pleasant Run: Shelton to Tinker	Streets - Reconstruction	\$ -	\$ -	\$ 856,167	\$ -	\$ -
2	ST16-002	Rehabilitate Streets in Western Trails Subdivision	Streets - Rehabilitation	\$ -	\$ -	\$ 737,770	\$ -	\$ -
3	ST16-003	Design Pleasant Run: Tinker to John McCain	Streets - Rehabilitation	\$ -	\$ -	\$ 201,000	\$ -	\$ -
4	ST16-004	2016 Miscellaneous Concrete Repair	Other	\$ -	\$ -	\$ 422,300	\$ -	\$ -
5	ST16-005	Rehabilitate Bandit Trail - 2016 County Project	Streets - Rehabilitation	\$ -	\$ -	\$ 151,000	\$ -	\$ -
6	UT16-001	Upsize Utility Lines, Sunrise Terrace/Brighton Oaks	Utilities - Waterline Renewals/Upsizing	\$ -	\$ -	\$ 1,833,320	\$ -	\$ -
7	ST16-006	Design Pleasant Run: John McCain to North City Limits	Streets - Reconstruction	\$ -	\$ -	\$ 131,000	\$ -	\$ -
8	PK16-001	Construct New Trail	Parks	\$ -	\$ -	\$ 150,000	\$ -	\$ -
9	ST16-007	Pavement Markings	Streets - Rehabilitation	\$ -	\$ -	\$ 100,000	\$ -	\$ -
10	ST16-008	Construct Glade Road	Streets - Reconstruction	\$ -	\$ -	\$ 2,479,250	\$ -	\$ -
				\$ 7,061,807				
1	UT17-001	Upsize Utility Lines - Woodbriar/Quailcrest Estates	Utilities - Waterline Renewals/Upsizing	\$ -	\$ -	\$ -	\$ 1,697,035	\$ -
2	ST17-001	2017 Miscellaneous Concrete Repair	Other	\$ -	\$ -	\$ -	\$ 414,050	\$ -
3	ST17-002	Rehabilitate Street TBD - 2017 County Project	Streets - Reconstruction	\$ -	\$ -	\$ -	\$ 151,000	\$ -
4	ST17-003	Rehabilitate Streets Pecan Park and Sand Oaks	Streets - Rehabilitation	\$ -	\$ -	\$ -	\$ 1,516,064	\$ -
5	ST17-004	Construct Glade Road	Streets - Reconstruction	\$ -	\$ -	\$ -	\$ 1,503,375	\$ -
6	ST17-005	Design Reconstruction of Roberts Road	Streets - Reconstruction	\$ -	\$ -	\$ -	\$ 100,000	\$ -
7	PK17-001	Construct New Trail	Parks	\$ -	\$ -	\$ -	\$ 150,000	\$ -
				\$ -	\$ -	\$ -	\$ 5,531,524	\$ -
1	ST18-001	Rehabilitate Streets in Woodbriar, Quail Crest Estates	Streets - Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ 1,443,269
2	ST18-002	2018 Miscellaneous Concrete Repair	Other	\$ -	\$ -	\$ -	\$ -	\$ 264,050
3	ST18-003	Rehabilitate Streets TBD - 2018 County Road Project	Streets - Reconstruction	\$ -	\$ -	\$ -	\$ -	\$ 151,000
4	ST18-005	Reconstruct Pleasant Run: Tinker to John McCain	Streets - Reconstruction	\$ -	\$ -	\$ -	\$ -	\$ 2,099,959
5	PK18-001	Construct Pleasant Run Trail	Parks	\$ -	\$ -	\$ -	\$ -	\$ 300,000
6	ST18-006	Construct Glade Road	Streets - Reconstruction	\$ -	\$ -	\$ -	\$ -	\$ 1,002,250
				\$ 5,260,528				
Five Year Total:				\$ 27,118,446	\$ 8,665,413	\$ 7,061,807	\$ 5,531,524	\$ 5,260,528 \$ 53,637,719

CITY FUNDING

	Proposed Funding					
Capital Project Transfer for Street Rehab <i>(PROJECTED AVAILABLE: \$1,667,000)</i>	\$ 1,652,656	\$ -	\$ -	\$ -	\$ -	\$ 1,652,656
CEDC (Parks, Trails & Libraries)	\$ 904,000	\$ 315,000	\$ 150,000	\$ 150,000	\$ 300,000	\$ 1,819,000
COG/TxDOT/County	\$ 175,000	\$ -	\$ -	\$ -	\$ -	\$ 175,000
County Bond Program	\$ 535,415	\$ -	\$ -	\$ -	\$ -	\$ 535,415
Crime Tax	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Drainage Fund	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ 200,000
Perimeter Street Fees	\$ 676,587	\$ -	\$ 236,546	\$ 9,394	\$ -	\$ 922,527
General Fund <i>(PROJECTED AVAILABLE: \$2.4M/YEAR = \$12M)</i>	\$ 2,262,959	\$ 2,491,408	\$ 2,362,691	\$ 2,171,720	\$ 2,758,278	\$ 12,047,056
Grants/Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
NCTCOG	\$ 349,320	\$ -	\$ -	\$ -	\$ -	\$ 349,320
Parkland Dedication Fund and Voluntary Park Fund	\$ 230,000	\$ -	\$ -	\$ -	\$ -	\$ 230,000
Roadway Impact - West District	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Roadway Impact - East District	\$ 222,964	\$ -	\$ -	\$ -	\$ -	\$ 222,964
Tomorrow Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Utility Fund	\$ 962,131	\$ 597,593	\$ 1,833,320	\$ 1,697,035	\$ -	\$ 5,090,079
Wastewater Impact Fees	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Impact Fees	\$ 62,458	\$ 52,616	\$ -	\$ -	\$ -	\$ 115,074
End of Year Transfer to GF	\$ 958,250	\$ 100,000	\$ -	\$ -	\$ 1,200,000	\$ 2,258,250
	\$ 9,191,740	\$ 3,556,617	\$ 4,582,557	\$ 4,028,149	\$ 4,258,278	\$ 25,617,341

NON-CITY FUNDING

FWHA/TxDOT/Other	\$ 14,800,000	\$ 1,280,737	\$ -	\$ -	\$ -	\$ 16,080,737
Other: FWTA	\$ -	\$ 320,184	\$ -	\$ -	\$ -	\$ 320,184
TIF	\$ 3,126,707	\$ 3,507,875	\$ 2,479,250	\$ 1,503,375	\$ 1,002,250	\$ 11,619,457
	\$ 17,926,707	\$ 5,108,796	\$ 2,479,250	\$ 1,503,375	\$ 1,002,250	\$ 28,020,378

TOTAL FUNDING

\$ 27,118,447	\$ 8,665,413	\$ 7,061,807	\$ 5,531,524	\$ 5,260,528	\$ 53,637,719
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City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 6b

Agenda Date 09/17/2013

Number Resolution R-13-3667

Type Resolution

Department Community Development

Title

Consideration of a Right-of-Way Encroachment and Joint Use Agreement on Lot 9R, Block 1, of the Blackberry Farm Addition, located at 6504 Westcoat Drive, Case GC13-017

Explanation

Reading and Public Hearing

Chip Mercer, applicant and property owner, is requesting approval of a Right-of-Way Encroachment and Joint Use Agreement for a proposed fence located at 6504 Westcoat Drive. The encroachment is a result of the replacement of a fence, which is currently in the right-of-way.

Section 8.170(5), Easement and Right-of-Way Encroachments of the Colleyville Land Development Code, requires City Council approval for a right-of-way encroachment.

Existing Conditions. The subject property contains 2.3 acres, is zoned RE-Single Family "Estate" Residential, and is developed as a single family residence. The original home and fencing were constructed in 1984.

Encroachment Description. The proposed fence will replace the existing fence. Similar to the existing fence, the proposed fence will be a split-rail, wood fence as depicted in the attached photos provided by the applicant. The fence would be located completely within the right-of-way for Westcoat Drive, and situated between the street and the front property line as follows: 17 feet from the edge of pavement for Westcoat Drive and 25 feet from the front property line for the house, as illustrated in the attached fence placement exhibit.

Westcoat Drive. The pavement width for Westcoat Drive is currently 20 feet. The street is unimproved with open bar ditches on each side. Westcoat Drive is classified as a minor collector street on the Master Thoroughfare Plan. Minor collector streets require a total right-of-way width of 75 feet. As such, a maximum right-of-way width of 37.5 feet is required to be dedicated whenever adjacent properties are platted. However, when the subject property was platted in 1984, 50 feet of right-of-way was dedicated for Westcoat Drive. The extra right-of-way dedication, however, does not have any affect on the present proposal.

There are no plans to widen Westcoat Drive in front of the subject property at this

time.

Summary. All utilities have approved the Right-of-Way Encroachment and Joint Use Agreement, and there are no traffic issues or concerns regarding this request. The existing/proposed fence is in line with the front property lines for properties located to the south of the subject property. Staff concurs that the fence may encroach in the right-of-way for Westcoat Drive until such time that the right-of-way may be needed for future expansion of Westcoat Drive.

Financial Impact

There is no financial impact to the City.

Recommendation

Approve

Attachments

1. Encroachment and Joint Use Agreement Application
2. Black and White Photos Submitted by Applicant
3. Fence Placement Exhibit
4. Right-of-Way Exhibit
5. Resolution R-13-3667



**INSTRUCTIONS FOR COMPLETING AN ENCROACHMENT AND JOINT USE AGREEMENT
OF A PUBLIC DRAINAGE AND / OR UTILITY EASEMENT OR RIGHT-OF-WAY**

All forms shall be signed in ink only by a property owner, legal partner or corporate officer. An authorized agent of the landowner must submit a Power of Attorney.

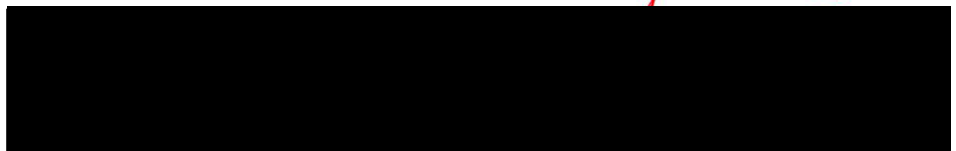
PLEASE SUBMIT ALL OF THE FOLLOWING REQUIRED DOCUMENTS:

1. One copy of the Application with an original signature, signed in black ink.
2. One copy of the Easement / Right-of-Way Joint Use Agreement with an original signature, signed and notarized in black ink. Do not submit copies of signatures and notary acknowledgments.
3. One copy of EXHIBIT NO. 1 that contains the precise metes and bounds description of the part of the easement or right-of-way to be used. This information is best provided by a registered land surveyor. **Note that the City staff is not authorized to prepare this information.** Do not place drawings or plats on this exhibit.
4. One copy of EXHIBIT NO. 2 which shows in graphic form the nature of the encroachment with dimensions. Please limit the area of usage of the easement / right-of-way to only that needed to accommodate your needs. Plans or drawings may be reduced, provided the final document is legible. City staff will make final decision on legibility.
5. The Engineering Division may require an additional EXHIBIT NO. 2A which may include a detailed drawing or cross sectional drawings of decks, signs, retaining walls, fences, driveways, piers, footings, etc. to fully evaluate the extent of the encroachment
6. One copy of EXHIBIT NO. 3 with original signatures, signed by all agencies listed regardless of whether they have utility equipment in the easement. This will need to be done before submitting to the City of Colleyville.
7. After this agreement is filled out, you will need to return it to Community Development Department and pay the \$55.00 application fee.
8. This agreement will be circulated through the Community Development, Building Inspection, and the Engineering Division within the City of Colleyville. Please allow approximately seven to ten working days to complete the circulation process. Easement encroachments may be approved administratively. **Right-of-way encroachments require approval by the City Council.**
9. After approval by the necessary City departments, a copy of the agreement is forwarded to the Building Permit Department for retention in any pending permit files. The Community Development Department is responsible for filing the agreement in the deed records of Tarrant County. After filing with Tarrant County, a copy is retained in the Engineering Division and a copy is sent to the applicant for their records.

Submit these documents to:

City of Colleyville
Community Development Department
100 Main Street
Colleyville, TX 76034
817.503.1050 office
817.503.1059 fax

ENG 1308-001



**APPLICATION FOR ENCROACHMENT AND JOINT USE AGREEMENT
OF A PUBLIC DRAINAGE AND / OR UTILITY EASEMENT OR RIGHT-OF-WAY**

Date of Submittal

To the City of Colleyville:

The undersigned hereby makes application to allow an encroachment and joint use of a portion of the public drainage and / or utility easement or right-of-way situated on or abutting property located at 6504 Westcoat Dr., and described by metes and bounds in Exhibit No. 1 of the attached agreement.

The reason for the encroachment and use of the easement/right-of-way is as follows:

Fence.

Lee C. Mercer Jr
Printed Name of Property Owner

Lee C. Mercer Jr
Signature of Property Owner

(817) 503-8998
Telephone

(817) 275-1765
Fax Number

6504 Westcoat Dr
Address

Colleyville, TX 76034
City State Zip

Easement / Right-of-Way Joint Use Agreement

THE STATE OF TEXAS §
COUNTY OF TARRANT §

Be it known, that the City of Colleyville, herein after referred to as "City," and its franchised Utility Companies, herein referred to as "Utilities," do consent and agree to permit the following Lee C. Mercer Jr, herein after referred to as "Applicant," to use an easement / right-of-way, situated on or abutting LOT 9R, BLOCK 1, OF Blackberry Farm (6504 Westcott) IN THE CITY OF COLLEYVILLE, TEXAS, as described on the attached Exhibit No. 1, depicted graphically on the attached EXHIBIT No. 2 and consented to by the public utility companies as listed on the attached EXHIBIT No. 3, to be used for the purposes of Fence

_____ and being subject to the following conditions:

I.

That the Applicant, his successors or assigns shall maintain in good condition all of the easement area and the improvements situated thereon; and, that City and Utilities shall not become responsible for such maintenance at any time in the future.

II.

That the Applicant shall and does hereby agree to indemnify and hold harmless the City and the Utilities from any and all damages, loss or liability of any kind whatsoever by reason of injury to property or third person occasioned by its use of the easement / right of way or act of omission, neglect or wrong doing of Applicant, his officers, agents, employees, invitees or other persons, with regard to the improvements and maintenance of such improvements; and the Applicant shall, at his own cost and expense, defend and protect City and Utilities against any and all such claims and demands.

III.

That the Applicant shall arrange for all activities and improvements in the easements to be discontinued and / or removed within thirty (30) days of written notification, at the discretion of City, for:

- (1) Lack of maintenance to the easement / right-of-way;
- (2) Failure to provide access to the City or its designees; or
- (3) Compliance with a City Council directive that use of the easement by the Applicant be discontinued and the cost associated with the discontinuing of such activities, and the removal of such improvements, as well as property adjacent to the easement / right-of-way necessitated by such discontinuation of the easement / right-of-way use, shall be borne by the Applicant.

IV.

That the Applicant, his successors or assigns shall not seek compensation from City or Utilities for loss of the value of the improvements made hereunder when such improvements are required to be removed by Applicant.

V.

This agreement shall be filed of record in the Deed Records of Tarrant County, Texas, and shall bind all future owners of this lot and shall for all purposes be considered a covenant running with the land.

IN TESTIMONY WHEREOF, Applicant executes this Easement / Right-of-Way Use Agreement on this _____ day of _____, 20____.

City of Colleyville

By: _____
Director of Public Works

Lee C. Mercer, Jr
Printed Name

By: 
Applicant's Signature

NOTE: Complete the attached acknowledgements.

Note: Only complete the appropriate acknowledgements

THE STATE OF TEXAS §
COUNTY OF TARRANT §

Corporate Acknowledgment

BEFORE ME, the undersigned authority, A Notary Public in and for the State of Texas, on this day personally appeared _____, known to me to be the person and officer whose name is subscribed to the foregoing instrument and acknowledged to me that same was the act of said _____, a corporation, and that he executed same for the purposes and consideration therein expressed and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the _____ day of _____, 20____.

Notary Public in and for the State of Texas

My Commission Expires: _____

THE STATE OF TEXAS §
COUNTY OF TARRANT §

Individual Acknowledgment

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared W. C. Mercer Jr, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed same for the purposes and consideration therein expressed.



GIVEN UNDER MY HAND AND SEAL OF OFFICE this the 26 day of June, 2013.

Notary Public in and for the State of Texas

My Commission Expires: March 8, 2016

THE STATE OF TEXAS §
COUNTY OF TARRANT §

City of Colleyville Acknowledgment

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared _____, known to me to be the person and officer whose name is subscribed to the foregoing instrument and acknowledged to me that same was the act of said _____, a municipal corporation, and that he executed same for the purposes and consideration therein expressed and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OFFICE this the _____ day of _____, 20____.

Notary Public in and for the State of Texas

My Commission Expires: _____

EXHIBIT NO. 1

Being that portion of that certain public utility easement / drainage easement / right of way situated in Blackberry Farm Addition/Survey to the City of Colleyville, Tarrant County, Texas, and being more particularly described by metes and bounds as follows:

Fence to go in
Same location as
Existing Fence

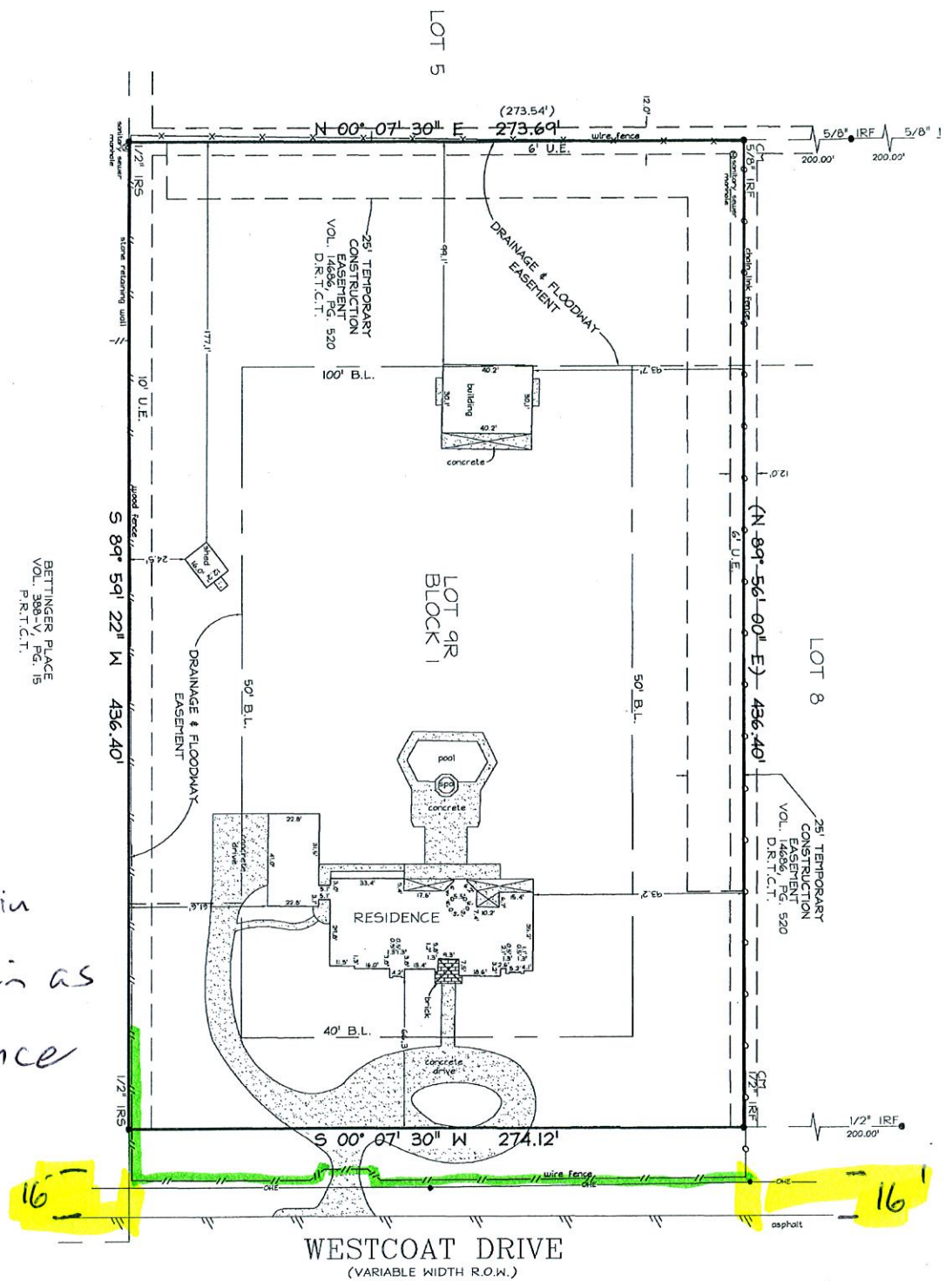


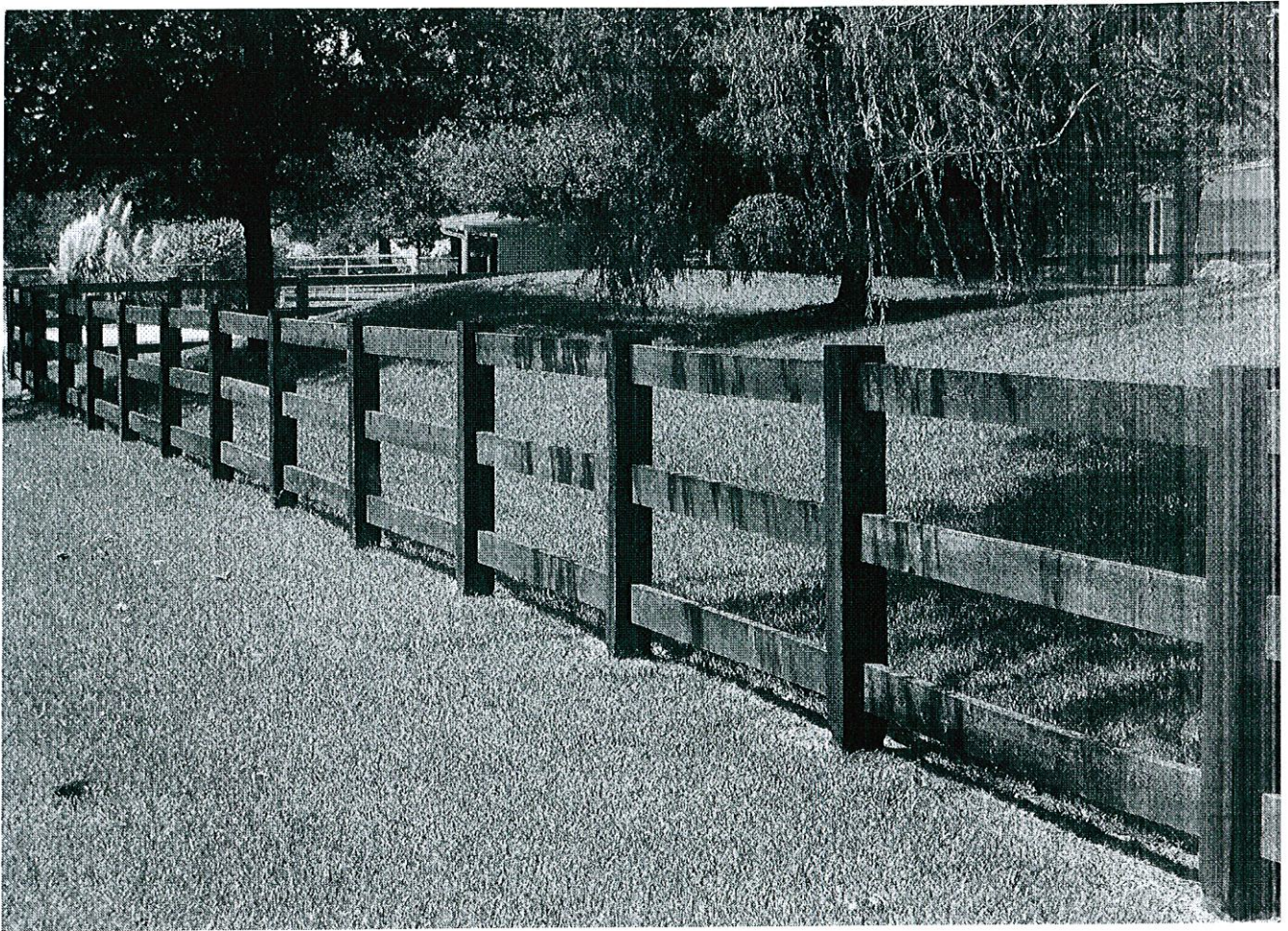
EXHIBIT NO. 2

The following is a drawing depicting the area or portion of the easement / right-of-way and property described in Exhibit No. 1, that is subject to the encroachment and joint use agreement in this application showing the nature of the encroachment and use with dimensions. .

This drawing shall include a north arrow, legal description of the subject property and adjoining properties. Indicate on the drawing whether the encroachment is for a **utility, drainage, private access, easement or right-of-way**.

EXHIBIT NO. 2A

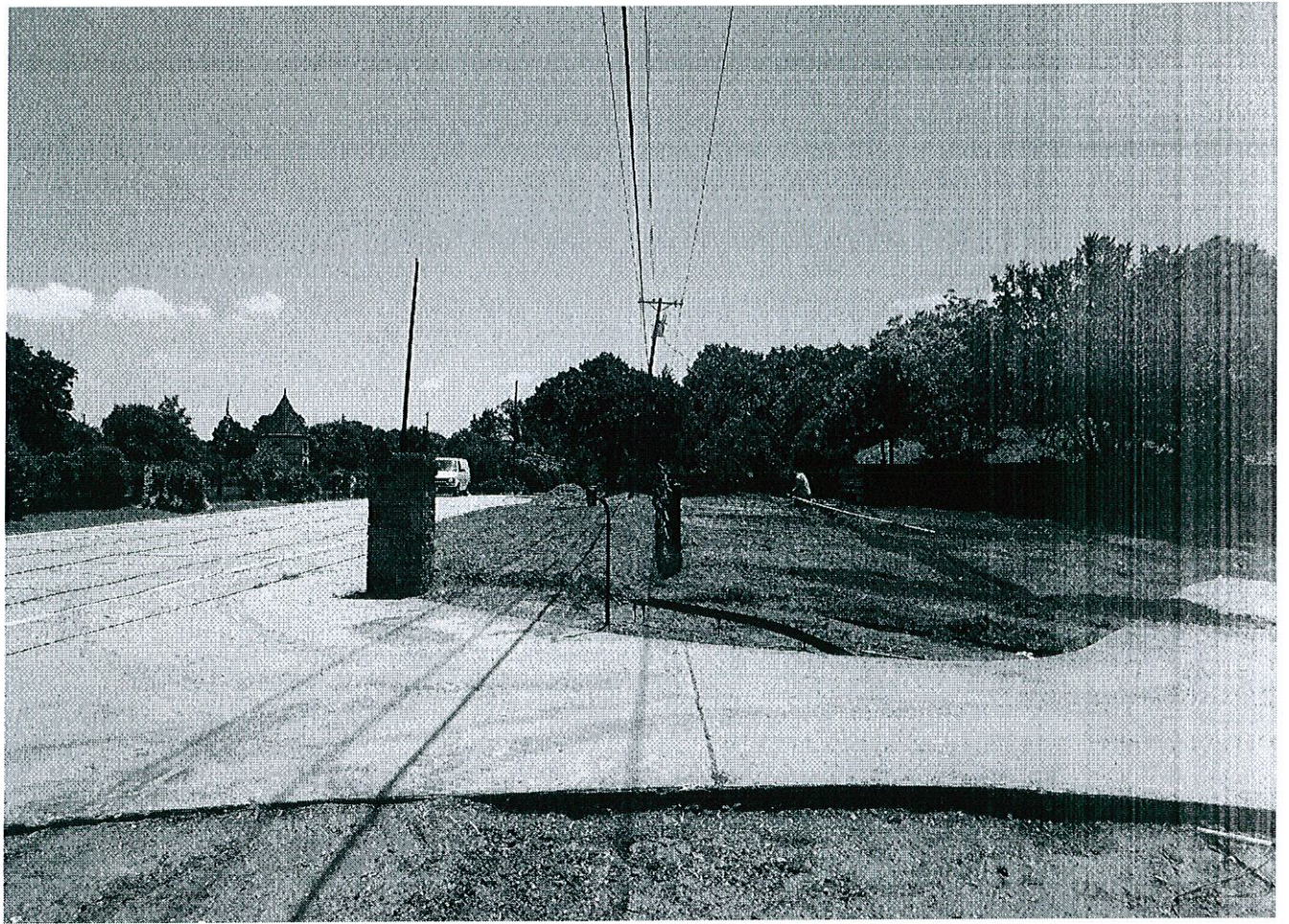
The following is a detail and / or cross section drawing of the improvement(s) in the utility easement / drainage easement / right of way to be subject to the encroachment and joint use agreement in this application.



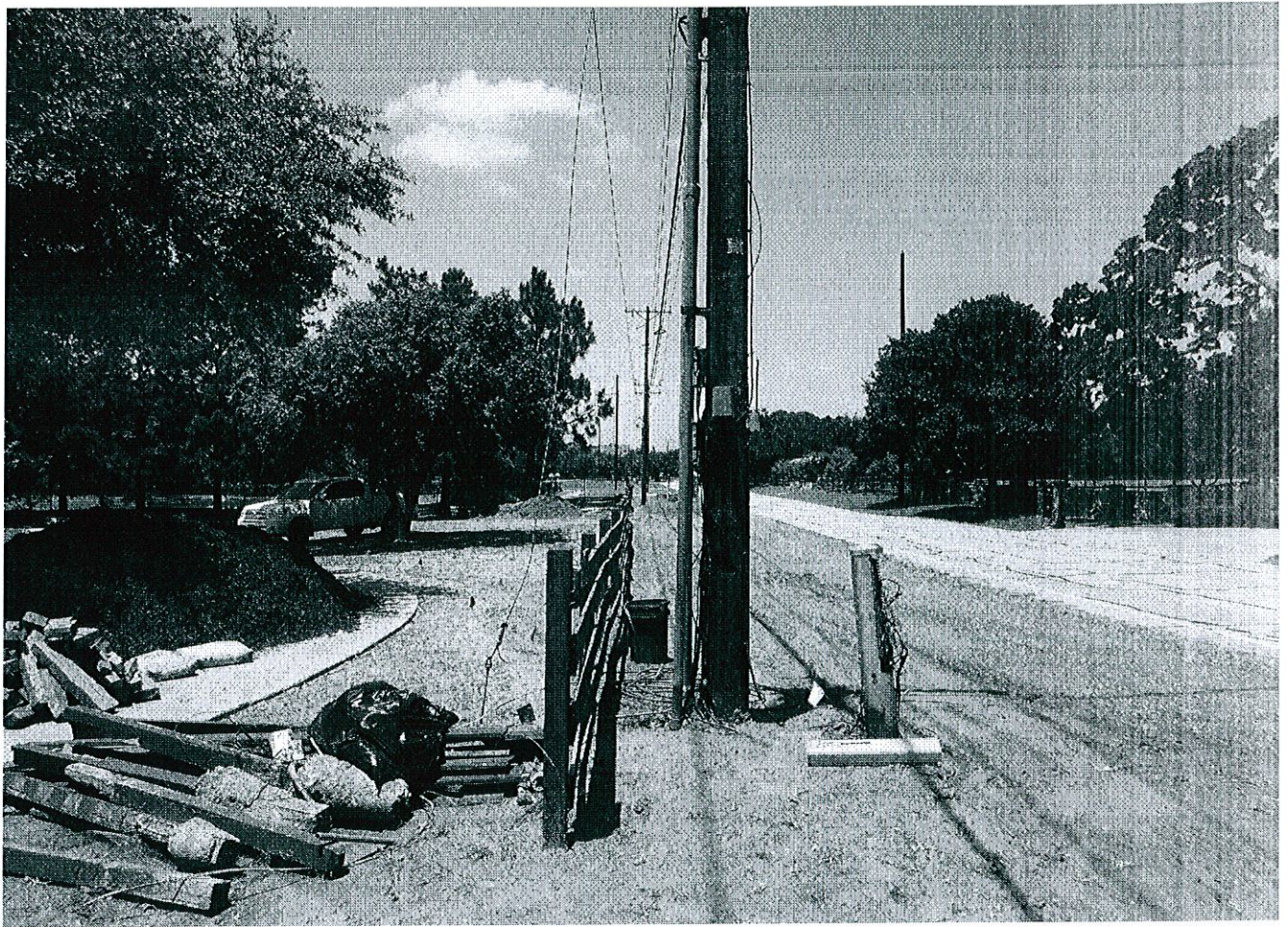
New Fence Style to replace
existing wood / wire fence



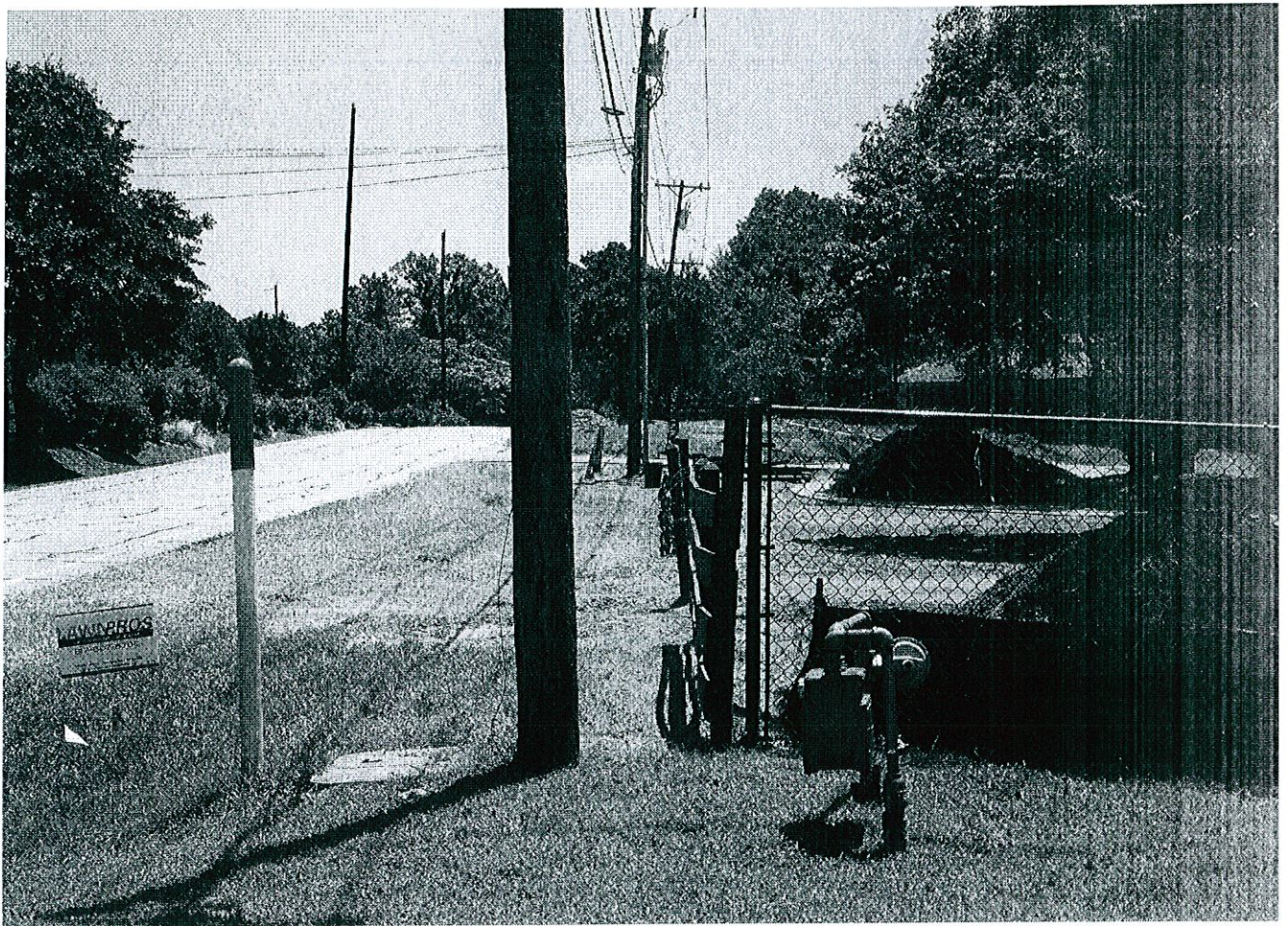
SE Corner of Property Looking North
to drive way



Driveway looking towards SE Corner



Driveway Looking North to NE Corner



NE Corner looking South to Driveway

EXHIBIT NO. 3

The undersigned public utility companies, using or entitled to use, under the terms and provisions of our respective franchise with the City of Colleyville, do hereby consent to the encroachment and joint use of the described portion of such drainage and / or utility easement or right-of-way requested in this Application for encroachment and joint use of a public drainage and utility easement or right-of-way Lot(s) _____, Block(s) _____ of the _____ Addition to the City of Colleyville, Tarrant County, Texas.

Street name: _____

TXU Electric & Gas Company

By: _____
(Please Print)

Title: _____
(Please Print)

Signature: _____

Southwestern Bell Telephone Company (AT&T)

By: _____
(Please Print)

Title: _____
(Please Print)

Signature: _____

Verizon Telephone Company

By: _____
(Please Print)

Title: _____
(Please Print)

Signature: _____

Tri-County Electric Company

By: _____
(Please Print)

Title: _____
(Please Print)

Signature: _____

Comcast Cable, Inc.

By: _____
(Please Print)

Title: _____
(Please Print)

Signature: _____

City of Colleyville

By: _____
(Please Print)

Title: _____
(Please Print)

Signature: _____

[Print](#) | [Close Window](#)

Subject: RE: Utility joint use agreement per City of Colleyville
From: Scott Baumbach
Date: Wed, Jul 17, 2013 12:00 pm
To: -
Attach: 0304_001.pdf

Mike, agreement attached.....

Sincerely,
Scott D. BaumBach
Manager, Northeast Division
Tri-County Electric Cooperative, Inc.

From:
Sent: Wednesday, July 17, 2013 11:41 AM
To:
Subject: Utility joint use agreement per City of Colleyville

Scott,

I was given your name as the Tri County Electric contact regarding a " utility easement joint use agreement " for the replacement and installation of a fence as is being required by the City of Colleyville for completing their fence permit application.

Please review attached property survey, we will be removing the old wire/wood fence and reinstalling a 4' tall 3 rail type cedar fence in same location as existing " wire fence " noted on survey along the front of the property line parallel to Westcoat Drive. I have also attached a photo taken in the field to assist. Please contact me if you need any additional information regarding this Utility use agreement form. I have attached the form needing authorization to be completed and returned to me.

Call me if you have any questions, if all good please sign attached form and return via email if possible.

I sincerely appreciate your help in this matter.

Mike Watson
Estimating & Sales
B & S Fence Company
2509 Carson Street
Haltom City, TX. 76117
817-966-4233 cell
817-353-0492 office
817-759-0797 fax

www.bandstencecompany.com
www.facebook.com/pages/B-S-F-Company/140126962715508

" The greatest compliment for a job well done is to be honored with your trust of a personal referral to others".... MW

" If you think Contracting with a Professional is expensive, try hiring an Amateur first "....

EXHIBIT NO. 3

The undersigned public utility companies, using or entitled to use, under the terms and provisions of our respective franchise with the City of Colleyville, do hereby consent to the encroachment and joint use of the described portion of such drainage and / or utility easement or right-of-way requested in this Application for encroachment and joint use of a public drainage and utility easement or right-of-way Lot(s) 92 Block(s) 1 of the Blackberry Farm Addition to the City of Colleyville, Tarrant County, Texas.

Street name: 6504 Westcoat Drive

TXU Electric & Gas Company

By: RANDY L. CREW
(Please Print)
Title: Project Manager
(Please Print)
Signature: [Signature]

Verizon Telephone Company

By: _____
(Please Print)
Title: _____
(Please Print)
Signature: _____

Comcast Cable, Inc.

By: _____
(Please Print)
Title: _____
(Please Print)
Signature: _____

Southwestern Bell Telephone Company (AT&T)

By: _____
(Please Print)
Title: _____
(Please Print)
Signature: _____

Tri-County Electric Company

By: SCOTT D. BAUMBACH
(Please Print)
Title: MANAGER
(Please Print)
Signature: [Signature]

COOPERATIVE, INC.

7.17.13

City of Colleyville

By: _____
(Please Print)
Title: _____
(Please Print)
Signature: _____

[Print](#) | [Close Window](#)

Subject: RE: Utility Use Agreement form

From:

Date: Wed, Jul 17, 2013 11:12 am

To:

Attach: encroachment- 6504 Westcoat- CVL.pdf

Mike,

Attached is the signed form for easement encroachment from Oncor.

Thanks,

Randy Crelia

Design Lead- HEB

☐ **Oncor Electric Delivery, LLC , 2001 N. Industrial Blvd. , Bedford, TX 76021**

☐ **(o) 817-858-2579 ☎: © (817) 817-480-0513**

fax: 817-858-2590

From:

Sent: Wednesday, July 17, 2013 10:45 AM

To: Crelia, Randy

Subject: Utility Use Agreement form

Randy,

Please review attached property survey, we will be removing and reinstalling a 4' tall 3 rail type cedar fence in same location as existing " wire fence " noted on survey along the front of the property line parallel to Westcoat Drive.

Call me if you have any questions, if all good please sign attached form and return via email if possible.. our fax is being funky..

Thanks man..

Mike Watson

Estimating & Sales

B & S Fence Company

2509 Carson Street

Haltom City, TX. 76117

817-966-4233 cell

817-353-0492 office

817-759-0797 fax

www.bandsfencecompany.com

www.facebook.com/pages/B-S-F-Company/140126962715508

" The greatest compliment for a job well done is to be honored with your trust of a personal referral to others".... MW

" If you think Contracting with a Professional is expensive, try hiring an Amateur first "....

EXHIBIT NO. 3

The undersigned public utility companies, using or entitled to use, under the terms and provisions of our respective franchise with the City of Colleyville, do hereby consent to the encroachment and joint use of the described portion of such drainage and / or utility easement or right-of-way requested in this Application for encroachment and joint use of a public drainage and utility easement or right-of-way Lot(s) 9 R Block(s) 1 of the Blackberry Farm Addition to the City of Colleyville, Tarrant County, Texas.

Street name: 6504 Westcoat Drive

TXU Electric & Gas Company

By: RANDY L. CRELIA
(Please Print)
Title: PROTECT MANAGER
(Please Print)
Signature: [Signature]

Southwestern Bell Telephone Company (AT&T)

By: _____
(Please Print)
Title: _____
(Please Print)
Signature: _____

Verizon Telephone Company

By: _____
(Please Print)
Title: _____
(Please Print)
Signature: _____

Tri-County Electric Company

By: _____
(Please Print)
Title: _____
(Please Print)
Signature: _____

Comcast Cable, Inc.

By: _____
(Please Print)
Title: _____
(Please Print)
Signature: _____

City of Colleyville

By: _____
(Please Print)
Title: _____
(Please Print)
Signature: _____

[Print](#) | [Close Window](#)**Subject:** RE: Utility joint use agreement form per City of Colleyville**From:** "Messenheimer JR, Paul Mervin"**Date:** Thu, Jul 18, 2013 7:32 am**To:****Attach:** FORM.pdf

Thank you,

Paul Messenheimer

Verizon

SEC MGR-NTWK ENG

Texas Region Network Engineering & Planning

1132 FM 407 - Lewisville, TX 75077

972 318 5186 Tel

214 437 1090 Cell

From:**Sent:** Wednesday, July 17, 2013 11:45 AM**To:** Messenheimer JR, Paul Mervin**Subject:** Utility joint use agreement form per City of Colleyville

Paul,

I was given your name as the Verizon contact regarding a " utility easement joint use agreement " for the replacement and installation of a fence as is being required by the City of Colleyville for completing their fence permit application.

Please review attached property survey, we will be removing the old wire/wood fence and reinstalling a 4' tall 3 rail type cedar fence in same location as existing " wire fence " noted on survey along the front of the property line parallel to Westcoat Drive. I have also attached a photo taken in the field to assist. Please contact me if you need any additional information regarding this Utility use agreement form. I have attached the form needing authorization to be completed and returned to me.

Call me if you have any questions, if all good please sign attached form and return via email if possible.

I sincerely appreciate your help in this matter.

Mike Watson

Estimating & Sales

B & S Fence Company

2509 Carson Street

Haltom City, TX. 76117

817-966-4233 cell

817-353-0492 office

817-759-0797 fax

www.bandsfencecompany.com

www.facebook.com/pages/B-S-F-Company/140126962715508

" The greatest compliment for a job well done is to be honored with your trust of a personal

EXHIBIT NO. 3

The undersigned public utility companies, using or entitled to use, under the terms and provisions of our respective franchise with the City of Colleyville, do hereby consent to the encroachment and joint use of this described portion of such drainage and / or utility easement or right-of-way requested in this Application for encroachment and joint use of a public drainage and utility easement or right-of-way Lot(s) 92, Block(s) 1 of the Blackberry Farm Addition to the City of Colleyville, Tarrant County, Texas.

Street name: GSG4 Westcoat Drive

TXU Electric & Gas Company

By: RANDY L. COLEMAN
(Please Print)

Title: Project Manager
(Please Print)

Signature: [Signature]

Southwestern Bell Telephone Company (AT&T)

By: _____
(Please Print)

Title: _____
(Please Print)

Signature: _____

Verizon Telephone Company

By: PAUL MISSENLEINER
(Please Print)

Title: SUPV
(Please Print)

Signature: [Signature]

Tri-County Electric Company

By: _____
(Please Print)

Title: _____
(Please Print)

Signature: _____

Comcast Cable, Inc.

By: _____
(Please Print)

Title: _____
(Please Print)

Signature: _____

City of Colleyville

By: _____
(Please Print)

Title: _____
(Please Print)

Signature: _____

[Print](#) | [Close Window](#)

Subject: RE: Utility Easement use agreement for City of Colleyville

From: "Campos, Anibal"

Date: Thu, Jul 18, 2013 1:53 pm

To:

Attach: image003.jpg

6504 Westcoat Drive (COLLEYVILLE).pdf

Mike,

Let me know if there is anything else I can do for you. Have a great day!



Anibal (Omar) Campos

Project Manager

Mid-Tex Division

817-359-1313 - Office

817-359-1300 - Fax

469-261-2114 - Mobile

From:

Sent: Thursday, July 18, 2013 12:00 PM

To: Campos, Anibal

Subject: Utility Easement use agreement for City of Colleyville

Omar,

I was given your name as the Atmos Energy contact regarding a "utility easement joint use agreement" for the replacement and installation of a fence as is being required by the City of Colleyville for completing their fence permit application.

Please review attached property survey, we will be removing the old wire/wood fence and reinstalling a 4' tall 3 rail type cedar fence in same location as existing "wire fence" noted on survey along the front of the property line parallel to Westcoat Drive. I have also attached a photo taken in the field to assist. Please contact me if you need any additional information regarding this Utility use agreement form. I have attached the form needing authorization to be completed and returned to me. Note the City provide form still lists TXU as the gas provider, please just add your information at bottom of form with an Atmos Energy heading like the other listed.

Call me if you have any questions, if all good please sign attached form and return via email if possible.

I sincerely appreciate your help in this matter.

EXHIBIT NO. 3

The undersigned public utility companies, using or entitled to use, under the terms and provisions of our respective franchise with the City of Colleyville, do hereby consent to the encroachment and joint use of the described portion of such drainage and / or utility easement or right-of-way requested in this Application for encroachment and joint use of a public drainage and utility easement or right-of-way Lot(s) 9 & 10 Block(s) 4 of the Blackberry Farm Addition to the City of Colleyville, Tarrant County, Texas.

Street name: 6504 Westcoat Drive

TXU Electric & Gas Company

By: Randy L. Cullen
(Please Print)

Title: Project Manager
(Please Print)

Signature: [Signature]

Southwestern Bell Telephone Company (AT&T)

By: _____
(Please Print)

Title: _____
(Please Print)

Signature: _____

Verizon Telephone Company

By: _____
(Please Print)

Title: _____
(Please Print)

Signature: _____

Tri-County Electric Company

By: _____
(Please Print)

Title: _____
(Please Print)

Signature: _____

Comcast Cable, Inc.

By: _____
(Please Print)

Title: _____
(Please Print)

Signature: _____

City of Colleyville

By: _____
(Please Print)

Title: _____
(Please Print)

Signature: _____

Atmos Energy Corporation

By: Anibal Campos

Title: Project Manager

Signature: [Signature]

[Print](#) | [Close Window](#)

Subject: 6504 Westcoat Drive, Colleyville

From: "SWANCY, RUTH E"

Date: Mon, Jul 29, 2013 3:31 pm

To:

Attach: img-729151943-0001.pdf

Mike:

Attached is AT&T's ok to build the fence at the above address.

Please do not hesitate to call me on 817-267-5511 if you have any questions.

Thanks,

Rut E. Swancy

13845 FAA Blvd.

Ft. Worth, TX 76155

Copyright © 2003-2013. All rights reserved.

[Print](#) | [Close Window](#)**Subject: Utility Joint Use Agreement for Fence installation.****From: Travis Bondiek****Date: Tue, Jul 30, 2013 12:08 pm****To:****Cc: Forced Relocates <ForceRelos@kinetic-eng.com>****Attach: 4264_001.pdf**

TWC

Good Afternoon Mike,

I have your request signed and dated. If anything else is needed please let me know.

Thank you,

TRAVIS BONDIEK
FORCED RELOCATION COORDINATOR
KINETIC SOLUTIONS
888-519-9188
DIRECT EXT: 124
TRAVIS_BONDIEK@KINETIC-ENG.COM

Copyright © 2003-2013. All rights reserved.

EXHIBIT NO. 3

The undersigned public utility companies, using or entitled to use, under the terms and provisions of our respective franchise with the City of Colleyville, do hereby consent to the encroachment and joint use of the described portion of such drainage and / or utility easement or right-of-way requested in this Application for encroachment and joint use of a public drainage and utility easement or right-of-way Lot(s) 92 Block(s) 1 of the Blackberry Farm Addition to the City of Colleyville, Tarrant County, Texas.

Street name: 6504 Westcoat Drive

TXU Electric & Gas Company

By: _____
(Please Print)

Title: _____
(Please Print)

Signature: _____

Southwestern Bell Telephone Company (AT&T)

By: _____
(Please Print)

Title: _____
(Please Print)

Signature: _____

Verizon Telephone Company

By: _____
(Please Print)

Title: _____
(Please Print)

Signature: _____

Tri-County Electric Company

By: _____
(Please Print)

Title: _____
(Please Print)

Signature: _____

Comcast Cable, Inc.

By: Marty Morlan
(Please Print)

Title: Exp. Manager
(Please Print)

Signature: Marty Morlan

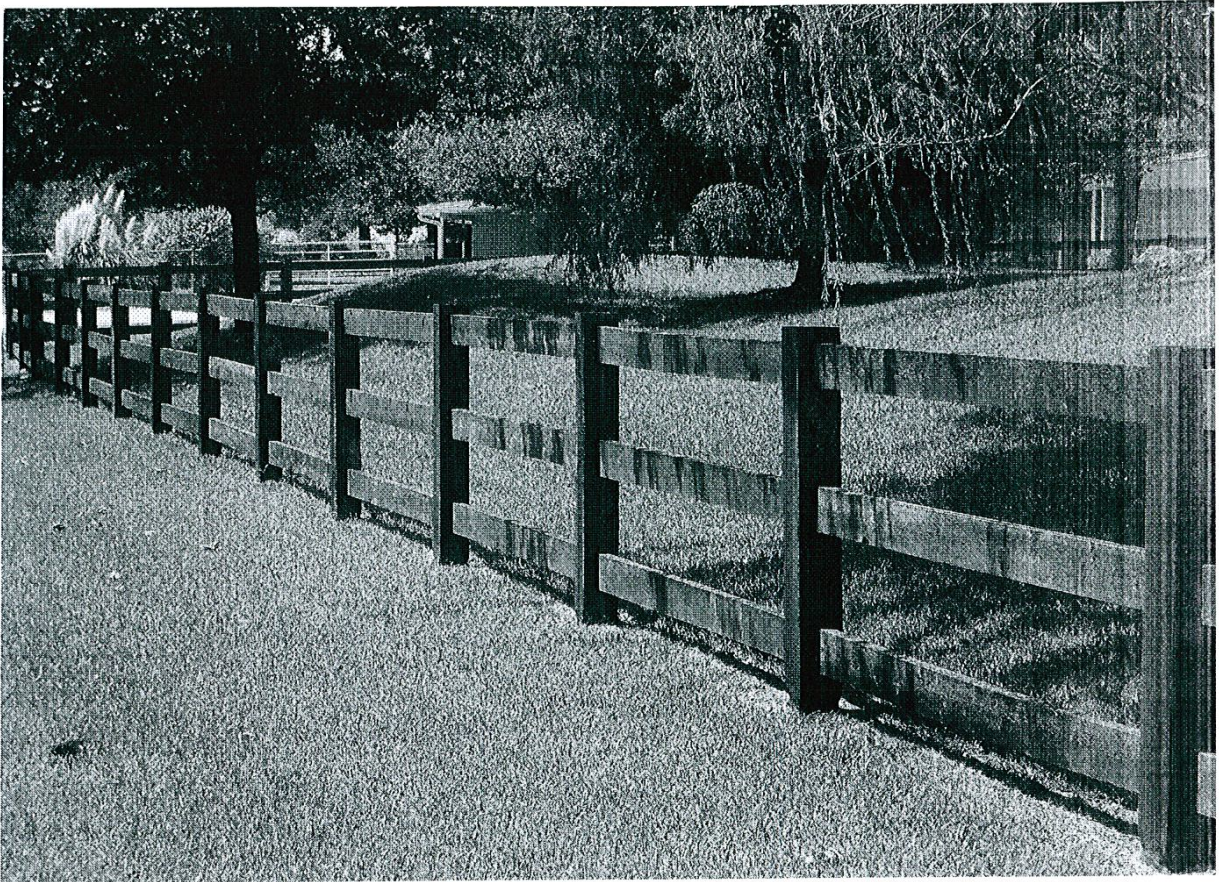
City of Colleyville

By: _____
(Please Print)

Title: _____
(Please Print)

Signature: _____

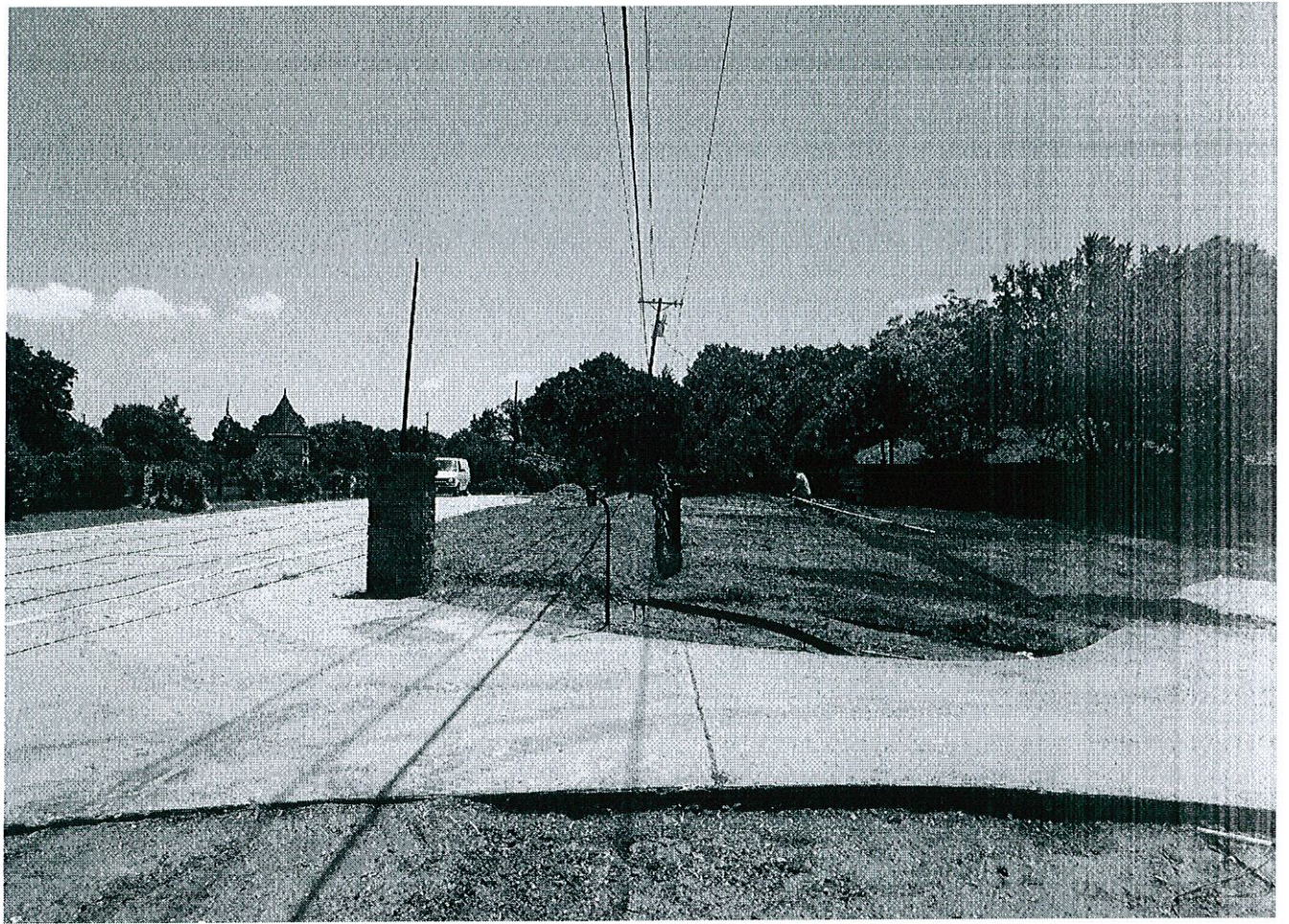
Photos Submitted by Applicant



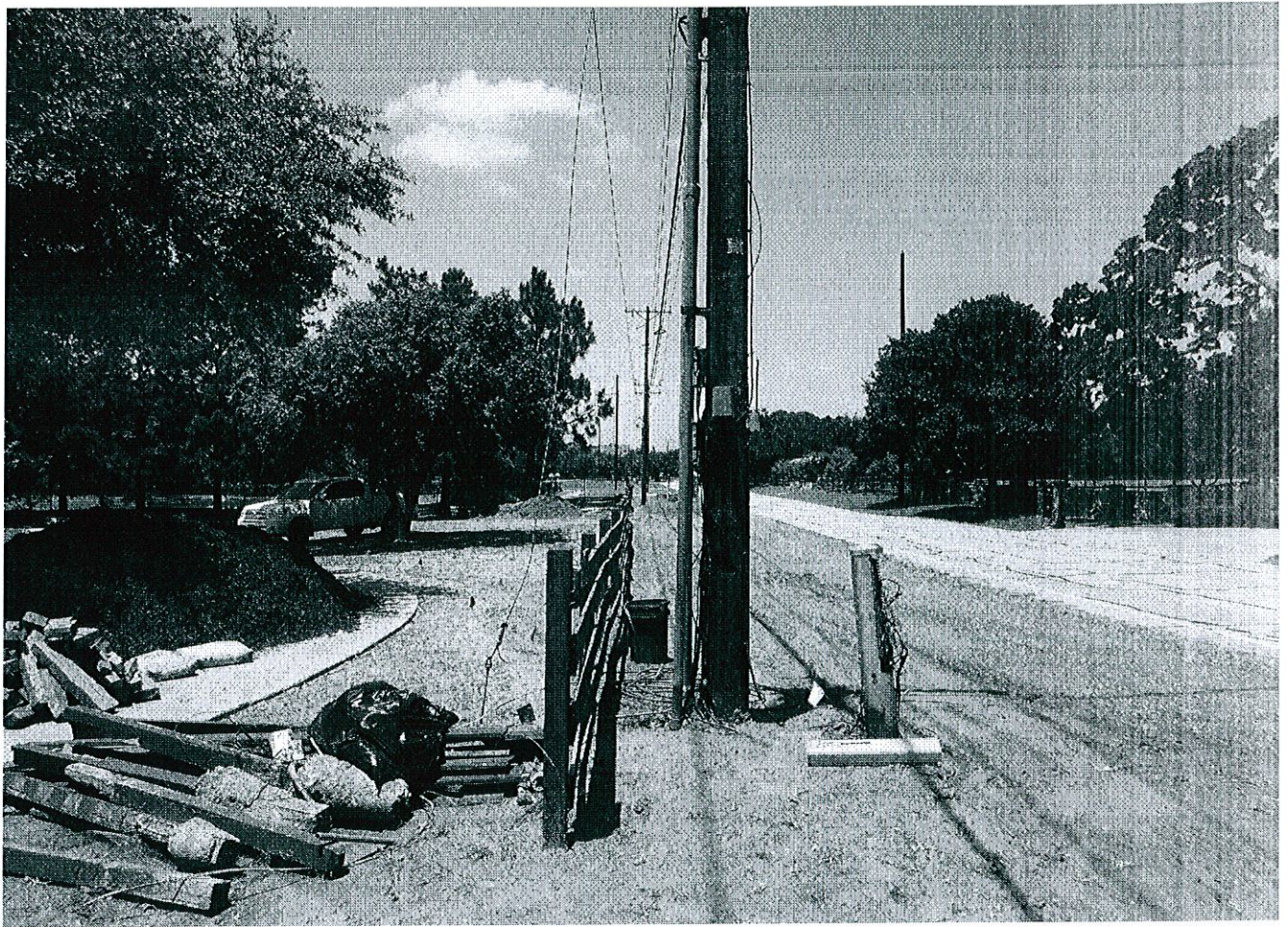
New fence style to replace
existing wood / wire fence



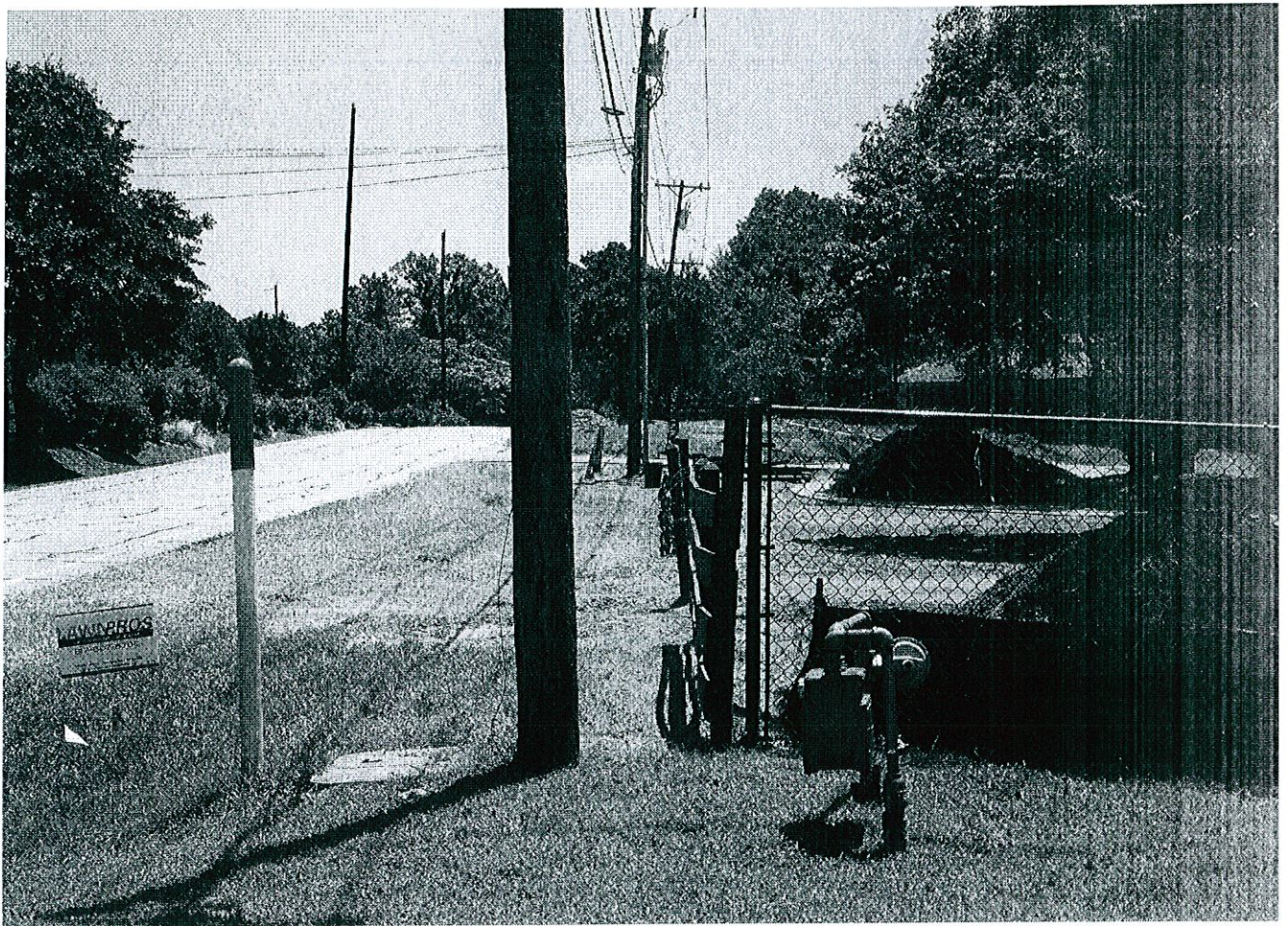
SE Corner of Property Looking North
to drive way



Driveway looking towards SE Corner



Driveway Looking North to NE Corner



NE Corner looking South to Driveway

0 in
tion as
ence

16

16

WESTCOAT DRIVE
(VARIABLE WIDTH R.O.W.)

Fence to go in
Same location as
Existing Fence

Right-of-Way Exhibit



RESOLUTION R-13-3667

**A RESOLUTION APPROVING A RIGHT-OF-WAY ENCROACHMENT AND
JOINT USE AGREEMENT WITH CHIP MERCER TO ALLOW AN
EXISTING AND PROPOSED SPLIT-RAIL WOOD FENCE TO ENCROACH
IN THE WESTCOAT DRIVE RIGHT-OF-WAY LOCATED AT
6504 WESTCOAT DRIVE**

WHEREAS, Section 8.170(5), Easement and Right-of-Way Encroachments of the Land Development Code, requires City Council approval for a right-of-way encroachment.

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

- Sec. 1. THAT the Right-of-Way Encroachment and Joint Use Agreement with Chip Mercer to allow an existing and proposed split-rail wood fence to encroach in the Westcoat Drive right-of-way located at 6504 Westcoat Drive, as depicted in Exhibit "A", is hereby approved subject to the following condition:
- a. This agreement shall become null and void upon any expansion or reconstruction of Westcoat Drive where it is adjacent to the subject property.
 - b. The fence shall be located behind the utility poles adjacent to Westcoat Drive.

AND IT IS SO RESOLVED.

PASSED BY A VOTE OF _____ AYES, _____ NAYS AND _____ ABSTENTIONS
ON THIS THE 17th DAY OF September 2013.

ATTEST:

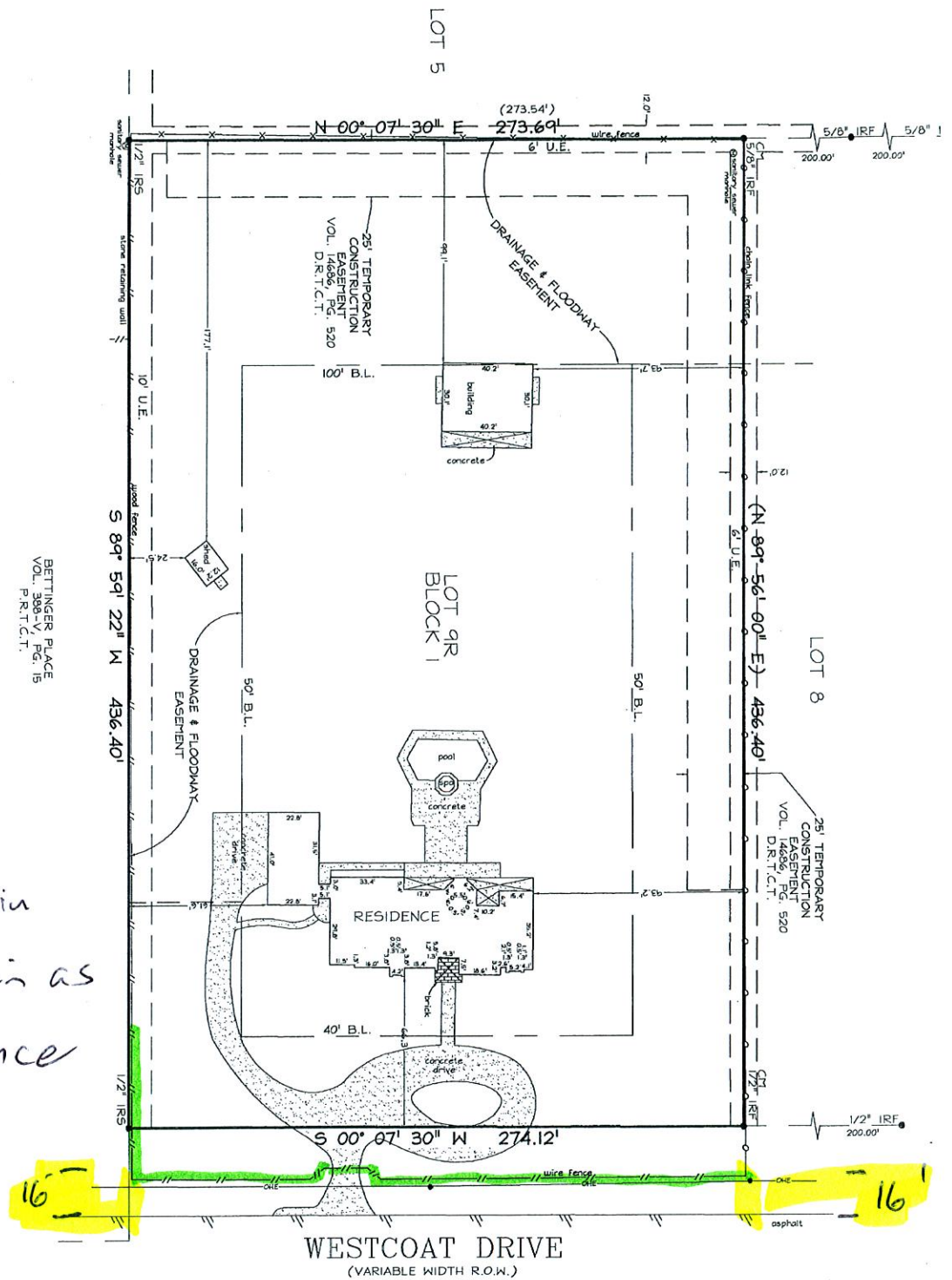
CITY OF COLLEYVILLE

Amy Shelley, TRMC
City Secretary

David Kelly
Mayor

Exhibit "A"

Fence to go in
Same location as
Existing Fence





City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 6c

Agenda Date 09/17/2013

Number Resolution R-13-3668

Type Resolution

Department City Secretary

Title

Consideration of appointments to the Colleyville Economic Development Corporation

Explanation

Reading and Public Hearing

There are three (3) positions on the Colleyville Economic Development Corporation Board whose terms expire September 2013. The positions were advertised and applications accepted July 1 through August 30, 2013. The incumbents were notified their term was expiring and asked to submit an application if they wished to be considered for reappointment.

The following Board member's term expire September 2013.

- Timothy Kelso
- Mark Slosson
- Carel Tornes

The applicants are listed below and the applications are attached.

- Steve Burak
- Mark Collier
- Dee Kamerman
- Timothy Kelso
- Vernon Noronha
- Bradley Shields
- Mark Slosson
- Lisa Sturgeon
- John Terhoeve
- Carel Tornes

Financial Impact

There is no financial impact to the City.

Recommendation

Approve

Attachments

1. Colleyville Economic Development Corporation roster
2. Colleyville Economic Development Corporation applications
3. Resolution R-13-3668

Colleyville Economic Development Corporation

PRESIDENT

Carol Wollin
4600 Dartmoore Lane
Colleyville, TX 76034
H: (817) 281-3058
cwollin@colleyville.com
TERM: Jun 2013 - May 2016

DIRECTOR

Tom Hart
1717 Avondale
Colleyville, TX 76034
H: (817) 540-1171
thart@colleyville.com
TERM: Jul 2012 - May 2015

DIRECTOR

Timothy Mark Kelso
504 Bandit Trail
Colleyville, TX 76034
W: (817) 269-4600
timkelso@verizon.net
TERM: Oct 2011 - Sep 2013

DIRECTOR

Carel Tornes
6712 Hillier Court
Colleyville, TX 76034
H: (817) 788-5611
careltornes@gmail.com
TERM: Sep 2011 - Sep 2013

GENERAL MANAGER

Jennifer Fadden
100 Main Street
Colleyville, TX 76034
W: (817) 503-1116
jfadden@colleyville.com

VICE PRESIDENT

Stan Hall
6229 Cimmaron Trail
Colleyville, TX 76034
H: (817) 488-2996
shall@colleyville.com
TERM: May 2011 - May 2014

DIRECTOR

David Kelly
905 Inwood Lane
Colleyville, TX 76034
H: (817) 656-1862
dkelly@colleyville.com
TERM: Jun 2013 - May 2016

DIRECTOR

Mark Slosson
2407 Poplar Court East
Colleyville, TX 76034
W: (817) 455-6900
H: (817) 540-3144
slosson@verizon.net
TERM: Sep 2011 - Sep 2013

FINANCE MANAGER

Terry Leake
100 Main Street
Colleyville, TX 76034
W: (817) 503-1115
tleake@colleyville.com

SECRETARY

Amy Shelley
100 Main Street
Colleyville, TX 76034
W: (817) 503-1133
ashelley@colleyville.com



Application for Appointment for City Council Boards, Commissions, and Committees

Planning and Zoning Commission and Zoning Board of Adjustment applicants are required to file Financial Disclosure and Business Conflict of Interest forms two (2) business days after the application deadline. These forms are available by contacting the City Secretary at 817.503.1130, and on the City's website at: www.colleyville.com/files/Financial%20Disclosure%20form.pdf

Board, Commission, or Committee: (only those with current openings)

1. Colleyville Economic Development Corporation

If you are willing to be considered for another board, commission, or committee, please list below.

2. Planning and Zoning Commission

3. Click here for drop down menu

Name: ☐ Ms. ☐ Mrs. ☒ Mr. Steve Burak

Address: 6119 Waller Lane

Home phone: 817-657-2471

Work phone: 817-657-2471

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: steve@steveburak.com

Fax: #N/A

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

VP of Sales & Marketing of a \$100MM Consumer Products Company

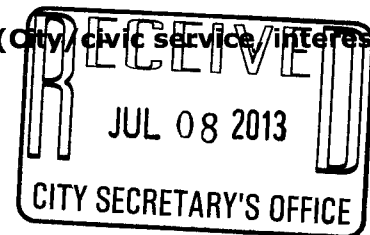
CFO & Co-Founder of a \$20MM Consumer Products Company

CFO of a \$60MM Furniture Distributor

City of Colleyville Historical Preservation Committee

City of Colleyville City Center Committee

☐ Check if additional materials are attached. Other information (City, civic service, interests):



☒ I understand attendance and active support is required for each appointee.

Signature: *Steve Burak*

Date: 7/6/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



Application for Appointment for City Council Boards, Commissions, and Committees

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Board, Commission, or Committee: (only those with current openings)

1. Zoning Board of Adjustment

If you are willing to be considered for another board, commission, or committee, please list below.

2. Colleyville Economic Development Corporation

3. Planning and Zoning Commission

Name: ☐ Ms. ☐ Mrs. ☒ Mr. Mark Collier

Address: 4727 Meandering Way, Colleyville, TX 76034

Home phone: 972-333-2058

Work phone:

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: mcollier@goffcp.com

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

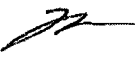
I am the chief financial officer of Goff Capital Partners, LP (GCP), a private investment firm and registered investment advisor with over \$2.5 billion in assets under management. I have held this position for the past 8 years and have gained significant experience in making both private and public investments in a number of industries. GCP has a successful track record as general partners and asset managers of real estate and real estate debt opportunity funds. Through various investment entities GCP has been involved in the selection, acquisition and ongoing management of over \$2.5 billion in real estate, subordinate commercial mortgage backed securities, and other high yield real estate debt. I have an M.S. in Finance and a B.B.A in Finance & Accounting from Texas A&M University. I am also a Certified Public Accountant. I believe my education and the experience gained in my professional career can be helpful in many Colleyville commissions or committees.

☐ Check if additional materials are attached. Other information (City/civic service, interests):

My wife and I were born and raised in the DFW area. Once we had a family, we chose to move to Colleyville for the quality of life and our children's education. We have been Colleyville residents for about three years. I have served on the ZBA for a little over a year and hope to continue and grow my involvement in the community.

☒ I understand attendance and active support is required for each appointee.

☒ I understand I will be required to comply with the Texas Open Meetings Act training.

Signature: 

Date: 8/5/13

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Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



Application for Appointment for City Council Boards, Commissions, and Committees

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Board, Commission, or Committee: (only those with current openings)

1. Planning and Zoning Commission

If you are willing to be considered for another board, commission, or committee, please list below.

2. Zoning Board of Adjustment

3. Colleyville Economic Development Corporation

Name: ☐ Ms. ☒ Mrs. ☐ Mr. Dee Kamerman

Address: 1521 Tennison Parkway Colleyville, tx

Home phone: 817-416-2277

Work phone: 817-251-5320

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: deekamerman@hotmail.com

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

Living in various cities and states has given me a more open view point to ideas and changes. My occupation has allowed me to work with hundredths of local residents to be a problem solver. I have a masters in administration and a minor in math. I have held the office of President, VP, and treasurer of my professional organization.

☐ Check if additional materials are attached. Other information (City/civic service, interests):

☒ I understand attendance and active support is required for each appointee.

Signature: *Dee Kamerman*

Date: 8/5/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



Application for Appointment for City Council Boards, Commissions, and Committees

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Board, Commission, or Committee: (only those with current openings)

1. Colleyville Economic Development Corporation

If you are willing to be considered for another board, commission, or committee, please list below.

2. Historical Preservation Committee

3. Click here for drop down menu

Name: ☐ Ms. ☐ Mrs. ☒ Mr. Timothy Keiso

Address: 504 Bandit Trl Colleyville, TX 76034

Home phone: 817-369-4549

Work phone: 817-995-6200

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: timkelso@verizon.net

Fax: 817-369-4549

Knowledge, experience, or education applicable to Board, Commission, or Committee function:
Business development and management

☐ Check if additional materials are attached. Other information (City/civic service, interests):
I am now off the road (stopped traveling for my job) and available to serve on a more regular basis.

☒ I understand attendance and active support is required for each appointee.

Signature: _____

Date: 8/1/2013

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Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



Application for Appointment for City Council Boards, Commissions, and Committees

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Board, Commission, or Committee: (only those with current openings)

1. Planning and Zoning Commission

☐

If you are willing to be considered for another board, commission, or committee, please list below.

2. Library Board

☐

3. Colleyville Economic Development Corporation

☐

Name: ☐ Ms. ☐ Mrs. ☒ Mr. Vernon Noronha

Address: 200 Old Grove Rd, Colleyville TX 76034

Home phone: 817 576 2050

Work phone: 214 840 4255

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: vernon.noronha@gmail.com

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

As new residents of Colleyville and indeed Texas, my family are very concerned to maintain the beauty and sustainable development of Colleyville. We would like to see Colleyville continue to grow but without sacrificing its aesthetic appeal, its safety and its commitment to provide high quality facilities and services to residents. I work as a tax consultant at KPMG, a public accounting firm, having spent 16 years in management, economic and tax consulting. I obtained my Ph.D. in Managerial Economics from the Kellogg School of Management at Northwestern University and a B.A. in Economics from Cambridge University in England. I would welcome this opportunity to serve the community.

☐ Check if additional materials are attached. Other information (City/civic service, interests):

☒ I understand attendance and active support is required for each appointee.

Signature:

V. Noronha

Date: 8/8/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



Application for Appointment for City Council Boards, Commissions, and Committees

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Board, Commission, or Committee: (only those with current openings)

1. Planning and Zoning Commission

If you are willing to be considered for another board, commission, or committee, please list below.

2. Colleyville Economic Development Corporation

3. Click here for drop down menu

Name: ☐ Ms. ☐ Mrs. ☒ Mr. Bradley Shields

Address: 206 Mill Wood Ct

Home phone: 817 829 4994

Work phone: 214 647 3572

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: bshields129@gmail.com

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

Broad financial experience including roles as commercial banker, controller and financial advisor.
Current employer is Wells Fargo Financial Advisors.

BBA Texas Tech
CFP Certificate SMU
Series 7
Series 66

☐ Check if additional materials are attached. Other information (City/civic service, interests):

Will be assisting with the planning and operation of the 2014 Colleyville Old Tyme BBQ cookoff.

☒ I understand attendance and active support is required for each appointee.

Signature: *Bradley Shields*

Date: 7/2/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



Application for Appointment for City Council Boards, Commissions, and Committees

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Board, Commission, or Committee: (only those with current openings)

1. Colleyville Economic Development Corporation

If you are willing to be considered for another board, commission, or committee, please list below.

2. Click here for drop down menu
3. Click here for drop down menu

Name: ☐ Ms. ☐ Mrs. ☒ Mr. Mark R. Slosson

Address: 2407 Poplar Ct Colleyville TX 76034

Home phone: 8174556900

Work phone: 2145571082

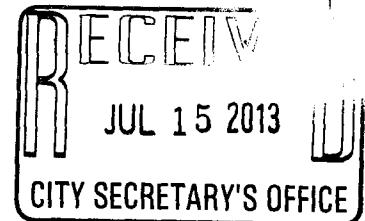
By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: slosson@verizon.net

Fax:

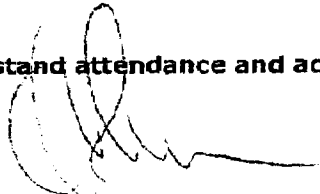
Knowledge, experience, or education applicable to Board, Commission, or Committee function:

Colleyville Economic Development Corp. 2011-2013



☐ Check if additional materials are attached. Other information (City/civic service, interests):

☒ I understand attendance and active support is required for each appointee.

Signature: 

Date: 7/1/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034

**Application for Appointment
For City Council Appointed Boards, Commissions, and Committees**

Planning and Zoning Commission and Zoning Board of Adjustment applicants are required to file Financial Disclosure and Business Conflict of Interest forms two (2) business days after the application deadline. These forms are available by contacting the City Secretary at 817.503.1130 and on the City's website at: <http://www.colleyville.com/files/Financial%20Disclosure%20form.pdf>.

Board, Commission, or Committee: (only those with current openings)

Please write-in your preference of (up to three) board(s), commission(s), or committee(s), for which you would like to be considered.

1. Planning + Zoning
2. Colleyville ED Corporation
3. _____

Name: ☒ Ms. ☐ Mrs. ☐ Mr. Lisa Sturgeon

Address: 1308 Ashford Ct.

Home Phone: cell 214 208 7396 Work Phone: 972 871 6202

☒ I understand attendance and active support is required for each appointee.

☒ By providing an e-mail address, I consent to the release of my e-mail address by the City.

E-mail Address: achdw@allstate.com Fax: 877 224 1495

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

- ① B.A. in Economics from University of Texas at Austin
- ② Marketing Certification from SMU (graduate work)
- ③ 24 years w/ Allstate Insurance - product, pricing, sales management + marketing
- ④ Haag Roofing Certification

City service and experience, civic organizations, interest: ☐ Additional materials attached.

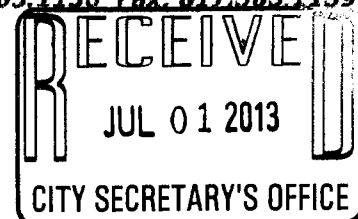
- ① Past Chair Greater Irving - Las Colinas Chamber of Commerce
- ② Past Board Member: Las Colinas Assn, Irving Symphony Orchestra, Hallberry Creek Women's Club, One Irving, ICVB
- ③ Current Board member/treasurer - Draw Humane Society, Texas Dept of Ins Windpool Building trades

Signature: Lisa Sturgeon Date: 6/28/13

Once positions have been filled, you must reapply for future openings.
All information provided is public pursuant to the Texas Public Information Act.

Please return completed application to:

City Secretary, 100 Main Street, Colleyville, TX 76034, Office: 817.503.1130 Fax: 817.503.1139
ashelley@colleyville.com





Application for Appointment for City Council Boards, Commissions, and Committees

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Board, Commission, or Committee: (only those with current openings)

1. Colleyville Economic Development Corporation

If you are willing to be considered for another board, commission, or committee, please list below.

2. Click here for drop down menu

3. Click here for drop down menu

Name: ☐ Ms. ☐ Mrs. ☒ Mr. John M. Terhoeve

Address: 1204 Opal Court, Colleyville, TX 76034

Home phone: 817-488-0800

Work phone: 817-999-5629

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: jmterhoeve@hotmail.com

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

Served on CEDC 2003-2007 and resigned due to work commitments, but now ready to serve again. During this period, I helped drive the refunding of Colleyville's \$4M debt managed by the CEDC during the inversion of municipal interest rates (which was the right decision as the time).

30 years of corporate business experience, primarily in Business Development developing new products, product lines, business units of businesses, so New Business is what I know.

☐ Check if additional materials are attached. Other information (City/civic service, interests):

☒ I understand attendance and active support is required for each appointee.

Signature:

Date: 7/4/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



Application for Appointment for City Council Boards, Commissions, and Committees

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Board, Commission, or Committee: (only those with current openings)

1. Colleyville Economic Development Corporation

If you are willing to be considered for another board, commission, or committee, please list below.

2. Click here for drop down menu

3. Click here for drop down menu

Name: ☐ Ms. ☐ Mrs. ☒ Mr. Carel Tornes

Address: 6712 Hillier Court Colleyville, TX 76034

Home phone: 817-788-5611

Work phone: 000-0000

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: careltornes@gmail.com

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

I have served on the board for the last 4 years

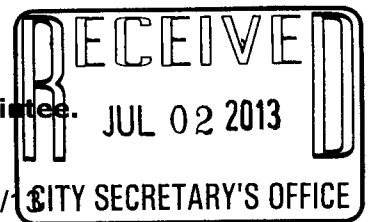
☐ Check if additional materials are attached. Other information (City/civic service, interests):

☒ I understand attendance and active support is required for each appointee.

JUL 02 2013

Signature: *Carel Tornes*

Date: 7/2/13



Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034

RESOLUTION R-13-3668

**A RESOLUTION APPOINTING MEMBERS TO THE
COLLEYVILLE ECONOMIC DEVELOPMENT CORPORATION
BOARD OF DIRECTORS**

WHEREAS, three (3) positions on the Colleyville Economic Development Corporation Board of Directors have a term expiring September 2013.

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

Sec. 1. THAT the City Council hereby appoints the following persons to the Colleyville Economic Development Corporation with a term expiring September 2015:

-
-
-

AND IT IS SO RESOLVED.

APPROVED BY A VOTE OF ____ AYES, ____ NAYS, AND ____ ABSTENTIONS
ON THIS THE 17th DAY OF SEPTEMBER 2013.

ATTEST:

CITY OF COLLEYVILLE

Amy Shelley, TRMC
City Secretary

David Kelly
Mayor



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 6d

Agenda Date 09/17/2013

Number Resolution R-13-3669

Type Resolution

Department City Secretary

Title

Consideration of appointments to the Historical Preservation Committee

Explanation

Reading and Public Hearing

The terms of three (3) members of the Historical Preservation Committee expire September 2013. There are an additional two (2) unfilled vacancies due to the resignation of members Brent Davis and Thomas Parker, in January and February 2013 respectively. The incumbents were notified their term was expiring and asked to submit an application if they wished to be considered for reappointment.

The following Committee member's term expire September 2013.

- Steve Burak
- Joe Deupree
- Gigi Walker

The applicants are listed below and the applications are attached.

- Joe Deupree
- Timothy Kelso
- Gigi Walker

As there are more vacancies than applicants, City Council will determine the need for readvertising and advise staff accordingly.

Financial Impact

There is no financial impact to the City.

Recommendation

Approve

Attachments

1. Historical Preservation Committee roster
2. Historical Preservation Committee applications
3. Resolution R-13-3669

Historical Preservation Committee

Steve Burak

6119 Waller Lane
Colleyville, TX 76034
W: (817) 657-2471
H: (817) 416-6375
steve@steveburak.com
TERM: Dec 2011 - Sep 2013

Joe Deupree

5101 Montclair Drive
Colleyville, TX 76034
H: (817) 283-7002
j.deupree@tx.rr.com
TERM: Sep 2011 - Sep 2013

Louis C. Miller

7802 Tillman Hill Court
Colleyville, TX 76034
W: (817) 994-6180
H: (817) 577-8546
millerlouis@sbcglobal.net
TERM: Dec 2012 - Dec 2014

Cynthia Phillips

4204 York Drive
Colleyville, TX 76034
W: (817) 996-4746
H: (817) 571-5622
cynthia.p.phillips@gmail.com
TERM: Sep 2012 - Sep 2014

VACANT

TERM: Feb 2013 - Sep 2013

Nancy Coplen

4803 Queensbury Way E.
Colleyville, TX 76034
H: (817) 300-8351
coplen2@gmail.com
TERM: Sep 2012 - Sep 2014

Marilyn Keith

1112 Riverwalk Court
Colleyville, TX 76034
H: (817) 605-9515
mnkeith@tx.rr.com
TERM: Sep 2012 - Sep 2014

Walt Mills

404 Vintage Court
Colleyville, TX 76034
W: (817) 271-0353
H: (817) 271-0353
walt@PhotosByWalt.com
TERM: Sep 2012 - Sep 2014

VACANT

TERM: Jan 2013 - Sep 2013

Gigi Walker

2620 Meandering Court
Colleyville, TX 76034
W: (214) 761-2449
H: (903) 821-3418
gigi_gerig@neimanmarcus.com
TERM: Dec 2011 - Sep 2013



Application for Appointment for City Council Boards, Commissions, and Committees

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Board, Commission, or Committee: (only those with current openings)

1. Historical Preservation Committee

If you are willing to be considered for another board, commission, or committee, please list below.

2. Click here for drop down menu
3. Click here for drop down menu

Name: ☐ Ms. ☐ Mrs. ☒ Mr. Joe Deupree

Address: 5101 Montclair Drive

Home phone: 817 283-7002

Work phone: 865-604-7111

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

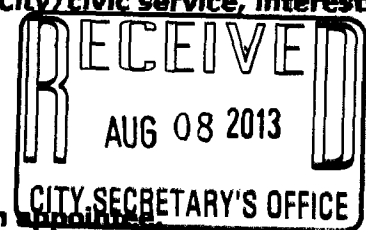
E-mail Address: j.deupree@tx.rr.com

Fax: 682-503-6469

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

- 1..A few years experience preserving Colleyville's history
2. Many years of experience observing Colleyville growth, government, newsworthy events and citizens
3. An ability to work with individuals holding diverse opinions

☐ Check if additional materials are attached. Other Information (City/civic service, interests):



☒ I understand attendance and active support is required for each appointment.

Signature:

Date: August 8, 2013

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



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Board, Commission, or Committee: (only those with current openings)

1. Colleyville Economic Development Corporation

If you are willing to be considered for another board, commission, or committee, please list below.

2. Historical Preservation Committee

3. Click here for drop down menu

Name: ☐ Ms. ☐ Mrs. ☒ Mr. Timothy Kelso

Address: 504 Bandit Trl Colleyville, TX 76034

Home phone: 817-369-4549

Work phone: 817-995-6200

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: timkelso@verizon.net

Fax: 817-369-4549

Knowledge, experience, or education applicable to Board, Commission, or Committee function:
Business development and management

☐ **Check if additional materials are attached. Other information (City/civic service, interests):**

I am now off the road (stopped traveling for my job) and available to serve on a more regular basis.

☒ **I understand attendance and active support is required for each appointee.**

Signature: _____

Date: 8/1/03

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



Application for Appointment for City Council Boards, Commissions, and Committees

Planning and Zoning Commission and Zoning Board of Adjustment applicants are required to file Financial Disclosure and Business Conflict of Interest forms two (2) business days after the application deadline. These forms are available by contacting the City Secretary at 817.503.1130, and on the City's website at: www.colleyville.com/files/Financial%20Disclosure%20form.pdf

Board, Commission, or Committee: (only those with current openings)

1. Historical Preservation Committee

If you are willing to be considered for another board, commission, or committee, please list below.

2. Click here for drop down menu

3. Click here for drop down menu

Name: ☐ Ms. ☒ Mrs. ☐ Mr. Gisela G. Walker (Gigi)

Address: 2620 Meandering Ct., Colleyville, TX 76034

Home phone: 903-821-3418

Work phone: 214-761-2449

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: gigi_gerig@neimanmarcus.com

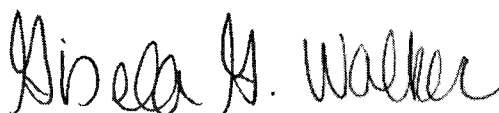
Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

Currently serve on Historic Preservation Committee

☐ Check if additional materials are attached. Other information (City/civic service, interests):

☒ I understand attendance and active support is required for each appointee.

Signature: 

Date: 8/1/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034

RESOLUTION R-13-3669

**A RESOLUTION APPOINTING MEMBERS TO
THE HISTORICAL PRESERVATION COMMITTEE**

WHEREAS, the Historical Preservation Committee has five (5) positions whose terms expire September 2013.

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

Sec. 1. THAT the City Council hereby appoints the following persons to the Historical Preservation Committee with a term expiring September 2015:

-
-
-
-
-

AND IT IS SO RESOLVED.

APPROVED BY A VOTE OF ____ AYES, ____ NAYS, AND ____ ABSTENTIONS
THIS THE 17TH DAY OF SEPTEMBER 2013.

ATTEST:

CITY OF COLLEYVILLE

Amy Shelley, TRMC
City Secretary

David Kelly
Mayor



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 6e

Agenda Date 09/17/2013

Number Resolution R-13-3670

Type Resolution

Department City Secretary

Title

Consideration of appointments to the Library Board

Explanation

Reading and Public Hearing

There are three (3) place positions, and two (2) alternate positions on the Library Board, whose terms expire September 2013. The Alternate 2 position has been vacant since the resignation of member Amy Dowell in February 2013. The positions were advertised and applications accepted July 1 through August 30, 2013. The incumbents were notified their term was expiring and asked to submit an application if they wished to be considered for reappointment.

The following Board member's terms expire September 2013:

- | | | |
|-------------------|----------------|-----------------|
| Place 1 | Place 3 | Place 5 |
| • Kay Newton | • Thad Bolline | • Billie Tuttle |
| Alternate 1 | Alternate 2 | |
| • Melissa Orlando | • Vacant | |

The applicants are listed below and the applications are attached.

- Thad Bolline
- Vernon Noronha
- Billie Tuttle

Ordinance O-04-1466 provides for the President of the Friends of the Colleyville Public Library and the President of the Colleyville Public Library Foundation to serve as ex-officio members of the Library Board, with terms to run concurrent with the terms as President of each organization.

Currently, Kay Newton serves as the President of the Friends of the Colleyville Public Library and Cecilia Monacelli as President of the Colleyville Public Library Foundation.

As there are more vacancies than applicants, City Council will determine the need for readvertising and advise staff accordingly.

Financial Impact

There is no financial impact to the City.

Recommendation

Approve

Attachments

1. Library Board roster
2. Library Board applications
3. Resolution R-13-3670

Library Board

PLACE 1

Kay Newton
6002 Meadowhill
Colleyville, TX 76034
H: (817) 421-0139
gksafig@aol.com
TERM:Feb 2013 - Sep 2013

PLACE 3

Thad Bolline
3013 Sherwood Lane
Colleyville, TX 76034
H: (817) 685-8864
public.bollini@gmail.com
TERM:Sep 2011 - Sep 2013

PLACE 5

Billie Tuttle
202 Madison Square
Colleyville, TX 76034
W: (817) 991-1170
H: (817) 581-4188
tuttlebob@sbcglobal.net
TERM:Sep 2011 - Sep 2013

PLACE 7

Charna Gray
3300 Pembroke Parkway South
Colleyville, TX 76034
W: (817) 996--9217
H: (817) 318-8229
cvquilter@verizon.net
TERM:Sep 2012 - Sep 2014

ALTERNATE 2

VACANT
TERM:Feb 2013 - Sep 2013

EX-OFFICIO

Kay Newton
6002 Meadowhill
Colleyville, TX 76034
H: (817) 421-0139
gksafig@aol.com
TERM:Sep 2012 - Sep 2014

PLACE 2

Victoria Kennedy-Ziegler
5105 Camelot Drive
Colleyville, TX 76034
W: (972) 571-3719
H: (817) 540-1191
dvrkennedy@tx.rr.com
TERM:Sep 2012 - Sep 2014

PLACE 4

Jerome Davis
1704 Avalon
Colleyville, TX 76034
H: (817) 571-2153
davisjerome15@yahoo.com
TERM:Sep 2012 - Sep 2014

PLACE 6

Pam Jones
2102 Maplewood Trail
Colleyville, TX 76034
W: (817) 577-2963
H: (817) 577-2963
pam.jones1@att.net
TERM:Sep 2012 - Sep 2014

ALTERNATE 1

Melissa Orlando
3009 Scarborough Lane West
Colleyville, TX 76034
W: (215) 470-6800
H: (682) 738-8153
melissa_orlando@hotmail.com
TERM:Feb 2013 - Sep 2013

EX-OFFICIO

Cecilia Monacelli
2504 Meandering Court
Colleyville, TX 76034
H: (817) 571-6210
cecilia@monacelli.net
TERM:Sep 2012 - Sep 2014



Application for Appointment for City Council Boards, Commissions, and Committees

Planning and Zoning Commission and Zoning Board of Adjustment applicants are required to file Financial Disclosure and Business Conflict of Interest forms two (2) business days after the application deadline. These forms are available by contacting the City Secretary at 817.503.1130, and on the City's website at: www.colleyville.com/files/Financial%20Disclosure%20form.pdf

Board, Commission, or Committee: (only those with current openings)

1. Library Board

If you are willing to be considered for another board, commission, or committee, please list below.

2. Click here for drop down menu

3. Click here for drop down menu

Name: ☐ Ms. ☐ Mrs. ☒ Mr. Thad M Bolline

Address: 3013 Sherwood Ln, Colleyville, TX 76034

Home phone: 817.685.8864

Work phone: 817.961.5118

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: public.bollini@gmail.com

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

I have served on the Library Board for 6 years, 2 as an alternate and 4 years as the Place 3 representative. I have two children (7yr and 9yr) that are regular Library users and this Board role is one way to demonstrate both the importance of the Library in a community and Civic Responsibility to them.

☐ **Check if additional materials are attached. Other information (City/civic service, interests):**

I lead the Dave Ramsey Financial Peace University program at Centerpoint Church.

☒ **I understand attendance and active support is required for each appointee.**

Signature: *Thad M Bolline*

Date: 8/13/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



Application for Appointment for City Council Boards, Commissions, and Committees

Planning and Zoning Commission and Zoning Board of Adjustment applicants are required to file Financial Disclosure and Business Conflict of Interest forms two (2) business days after the application deadline. These forms are available by contacting the City Secretary at 817.503.1130, and on the City's website at: www.colleyville.com/files/Financial%20Disclosure%20form.pdf

Board, Commission, or Committee: (only those with current openings)

1. Planning and Zoning Commission

☐

If you are willing to be considered for another board, commission, or committee, please list below.

2. Library Board

☐

3. Colleyville Economic Development Corporation

☐

Name: ☐ Ms. ☐ Mrs. ☒ Mr. Vernon Noronha

Address: 200 Old Grove Rd, Colleyville TX 76034

Home phone: 817 576 2050

Work phone: 214 840 4255

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: vernon.noronha@gmail.com

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

As new residents of Colleyville and indeed Texas, my family are very concerned to maintain the beauty and sustainable development of Colleyville. We would like to see Colleyville continue to grow but without sacrificing its aesthetic appeal, its safety and its commitment to provide high quality facilities and services to residents. I work as a tax consultant at KPMG, a public accounting firm, having spent 16 years in management, economic and tax consulting. I obtained my Ph.D. in Managerial Economics from the Kellogg School of Management at Northwestern University and a B.A. in Economics from Cambridge University in England. I would welcome this opportunity to serve the community.

☐ Check if additional materials are attached. Other information (City/civic service, interests):

☒ I understand attendance and active support is required for each appointee.

Signature:

V. Noronha

Date: 8/8/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034

Application for Appointment For City Council Appointed Boards, Commissions, and Committees

Planning and Zoning Commission and Zoning Board of Adjustment applicants are required to file Financial Disclosure and Business Conflict of Interest forms two (2) business days after the application deadline. These forms are available by contacting the City Secretary at 817.503.1130 and on the City's website at: <http://www.colleyville.com/files/Financial%20Disclosure%20form.pdf>.

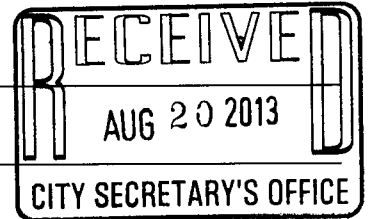
Board, Commission, or Committee: (only those with current openings)

Please write-in your preference of (up to three) board(s), commission(s), or committee(s), for which you would like to be considered.

1. Library Board

2. _____

3. _____



Name: ☐ Ms. ☒ Mrs. ☐ Mr. Billie Tuttle

Address: 202 Madison Sq. Colleyville

Home Phone: 817-581-4188 Work Phone: 817-991-1170

- ☐ I understand attendance and active support is required for each appointee.
☐ I understand I will be required to comply with the Texas Open Meetings Act training.
☐ By providing an e-mail address, I consent to the release of my e-mail address by the City.

E-mail Address: tuttlebob@sbcglobal.net Fax: _____

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

50 yrs library Experience, public, & schools. MLIS (Master Library and Information Science) OU

City service and experience, civic organizations, interest: ☐ Additional materials attached.

Friends of the Library Board

Signature: Billie J Tuttle Date: 8/21/13

Once positions have been filled, you must reapply for future openings.
All information provided is public pursuant to the Texas Public Information Act.

Please return completed application to:

City Secretary, 100 Main Street, Colleyville, TX 76034, Office: 817.503.1130 Fax: 817.503.1139
cloven@colleyville.com or ashelley@colleyville.com

RESOLUTION R-13-3670

**A RESOLUTION APPOINTING BOARD MEMBERS
TO THE LIBRARY BOARD**

WHEREAS, five (5) positions on the Library Board have expiring terms effective September 2013; and

WHEREAS, Ordinance O-04-1466 provides for City Council to appoint the President of the Friends of the Colleyville Public Library and the President of the Colleyville Public Library Foundation, as ex-officio members with terms concurrent with the terms on each organization.

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

Sec. 1. THAT the following persons are hereby appointed to the Library Board, for a two-year term expiring September 2015:

Place 1
Place 3
Place 5
Alternate 1
Alternate 2

Sec. 2. THAT the President of the Friends of the Colleyville Public Library and the President of the Colleyville Public Library Foundation will serve as ex-officio members with terms concurrent with their terms on each organization.

AND IT IS SO RESOLVED.

APPROVED BY A VOTE OF ____ AYES, ____ NAYS, AND ____ ABSTENTIONS
ON THIS THE 17TH DAY OF SEPTEMBER 2013.

ATTEST:

CITY OF COLLEYVILLE

Amy Shelley, TRMC
City Secretary

David Kelly
Mayor



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 6f
Type Resolution
Department City Secretary

Agenda Date 09/17/2013

Number Resolution R-13-3671

Title

Consideration of appointments to the Metroport Teen Court Advisory Board

Explanation

Reading and Public Hearing

There are two (2) positions on the Metroport Teen Court Advisory Board whose terms expire September 2013. The positions were advertised and applications accepted July 1 through August 30, 2013. The incumbents were notified their term was expiring and asked to submit an application if they wished to be considered for reappointment.

The following Board member's terms expire September 2013:

- Brian Loftus
- Carrie Stewart

The applicants are listed below and the applications are attached.

- Catherine Burton
- Carrie Stewart

Financial Impact

There is no financial impact to the City.

Recommendation

Approve

Attachments

1. Metroport Teen Court Advisory Board roster
2. Metroport Teen Court Advisory Board applications
3. Resolution R-13-3671

Metroport Teen Court Advisory Board

Brian Loftus

2008 Frances Drive
Colleyville, TX 76034
W: (940) 369-5343
H: (817) 488-2962
bjl678@gmail.com
TERM: Sep 2012 - Sep 2013

Court Coordinator

Crystal Maddalena

600 State Street, Suite 1000
Southlake, TX 76092
W: (817) 748-8346
cmaddalena@ci.southlake.tx.us

Carrie Stewart

5407 Sycamore
Colleyville, TX 76034
W: (512) 350-9030
H: (817) 685-2542
cls2001@swbell.net
TERM: Sep 2012 - Sep 2013

Council Liaison

Mike Taylor

5209 Coventry Place
Colleyville, TX 76034
H: (817) 267-5407
mtaylor@colleyville.com

Application for Appointment For City Council Appointed Boards, Commissions, and Committees

Planning and Zoning Commission and Zoning Board of Adjustment applicants are required to file Financial Disclosure and Business Conflict of Interest forms two (2) business days after the application deadline. These forms are available by contacting the City Secretary at 817.503.1130 and on the City's website at: <http://www.colleyville.com/files/Financial%20Disclosure%20form.pdf>.

Board, Commission, or Committee: (only those with current openings)

Please write-in your preference of (up to three) board(s), commission(s), or committee(s), for which you would like to be considered.

1. Metroport Teen Court Advisory Board

2. _____

3. _____

Name: ☐ Ms. ☒ Mrs. ☐ Mr. Catherine W. Burton, M.A., LPC, LMFT

Address: 615 Terrace Lane, Colleyville, Texas 76034

Home Phone: 214-793-6306 Work Phone: 972-248-6677

☒ **I understand attendance and active support is required for each appointee.**

☒ **By providing an e-mail address, I consent to the release of my e-mail address by the City.**

E-mail Address: anchorline@hotmail.com Fax: _____

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

Relationship/Family Private Counseling Practice over fifteen (15) years in Dallas, Plano & Southlake.

City service and experience, civic organizations, interest: ☒ Additional materials attached. +

2011 to 2013 Southlake Rotary Club member & Secretary, CWB Media Group, Inc. - Productions.

Signature: Catherine W. Burton Date: 6/29/2013

**Once positions have been filled, you must reapply for future openings.
All information provided is public pursuant to the Texas Public Information Act.**

**Please return completed application to:
City Secretary, 100 Main Street, Colleyville, TX 76034, Office: 817.503.1130 Fax: 817.503.1139
ashelley@colleyville.com**



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Areas of Expertise
Industry Statistics
Publicity Photos
Articles
Contact

**Cat is the
#1 expert for:**

- Divorce Recovery
- Relationship Issues
- Emotional Problems
- Personal Empowerment
- Communication
- Depression
- Anxiety

Listen Live When on Air

**Listen Live
automatic connect
Windows Media
Player**

Radio Contact info.:
Cat Burton Show
Who Are You Listening To?
WORLD AFFAIRS
with a Psychological Perspective

100 + Live Shows 2006 thru
11/2/2007
(temporarily off Air)

1160 AM KVCE
"The Voice" of Dallas
DFW & Texas
from Urban Towers, Las Colinas

prior Show 2006
910 AM KXEB
DFW, Austin & San Antonio

Email cat@catburtonshow.com
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Media call 214-534-4818
Also see www.catburtonshow.com



Watch Cat on Good Morning Texas
8/23/12 - wfaa 8 abc TV GMT
Password to watch: cat

See Info on Counseling with Cat ✓

Clip from 6/4/07 Radio Show
"A Trip Into the Future"

View Cat's media appearances.

Read comments
on '4+4 = Mate'

Read expert advice
on marriage,
relationships,
emotional problems,
personal empowerment
and more.

Welcome to our show, "Who Are You Listening To?" with your Host, Cat Burton. Cat is a licensed psychotherapist who keenly observes the world we live in. You know, now more than ever, it is important who you listen to. Because, who you listen to will influence what you think, how you feel and how you act. This is a time to keep our ears sharp and our eyes open. Join us for a

sharp and open discussion as we dig underneath the headlines for a different look at the world around you.

Catherine Burton, M.A., LPC, LMFT, is a Licensed marriage and family therapist who runs a private counseling practice in Dallas. She holds a B.A. in Psychology from the University of Texas at Dallas and an M.A. in Psychology from Southern Methodist University. Cat is the author of the forthcoming book: "4+4 = Mate" ([read comments](#)). Cat has been counseling, training and lecturing for more than 15 years.

Cat Burton uses emerging new therapy to change the way America thinks about relationships and marriage in her practice for psychotherapy, family therapy and marriage therapy.

In addition to the above Cat works with people to resolve problems like abuse, sex, communication, boundaries, and emotional problems.

She also counsels on emotional recovery after disaster, self-esteem issues, emotional problems, and personal development.

Cat has been a guest on major media around the country including Montel Williams, Fox, CNN, TBN and MSNBC.

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Catherine W. Burton, CEO
PO Box 823181, Dallas TX 75382
Anytime Voice Mail @ 214-341-4117
Cat Burton Show™
"Who are you listening to?"®



Start Texas Tarrant County Southlake 76092

**Catherine W. Burton**

Marriage & Family Therapist, MA, LPC, LMFT

About

(972) 478-1340

verified by Psychology Today

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Website

COUPLES: Drifting apart? Feeling disconnected? Communication impossible? Then its time to make a change. 4 keys will open your eyes to see how to get back that loving feeling. Add 4 practical tools to place you in a position to improve communication, de-escalate anger, set appropriate limits, & solve problems. And you have a recipe for success. - - -

FAMILIES: Negative feedback loops keep families in chaotic cycles, creating frustration & anger. Get out of the trap; hear how objective assessment and skill building can create higher family functioning.

INDIVIDUALS: Tired of being on losing end? In relationships? Career? Finances? Sagging self esteem? Re-balance the scale. Stop the self sabotage. Discover your passion. Get smarter in relationships.

ADOLESCENTS: A confusing stage when young people are trying to figure out who they are and fit into the world. Adolescents need help to chart a course in a positive direction and create a healthy self concept and become a responsible adult. - - - **SELF PAY:** Receipts offered for filing insurance, credit card.

Call or [Email](#) Catherine Burton for a **free phone consultation** now - **(972) 478-1340**

Qualifications

Years In Practice: 15+ Years
School: Southern Methodist University
Year Graduated: 1993
License No. and State: 4958 Texas

Finances

Avg Cost (per session): \$100 - \$110
Sliding Scale: No
Accepted Payment Methods: Mastercard, Visa

Location

Southridge Executive Suites
 1500 Corporate Circle, Suites 10 & 11
 Southlake, Texas 76092
 (972) 478-1340

[Email Me](#) [Nearby Areas](#)

Additional Location

Catherine W. Burton, M.A., LPC, LMFT
 5172 Village Creek Drive
 Suite 101
 Plano, Texas 75093
 (972) 478-1340

[Show Map](#)

Specialties

- Relationship Issues
- Divorce
- Assertivess training

Issues:

- Addiction
- Child or Adolescent
- Domestic Abuse
- Life Coaching
- Parenting
- Spirituality
- Trauma and PTSD
- Anxiety or Fears
- Depression
- Domestic Violence
- Loss or Grief
- Sex Therapy
- Substance Abuse

Mental Health:

- Dissociative Disorders
- Thinking Disorders
- Impulse Control Disorders

Client Focus

Age:

- Adolescents / Teenagers (14 to 19)
- Adults

Treatment Approach

Treatment Orientation:

- Coaching
- Cognitive Behavioral (CBT)

Modality:

- Couples
- Family
- Group

Last Modified: 10 Jan 2013



Application for Appointment for City Council Boards, Commissions, and Committees

Planning and Zoning Commission and Zoning Board of Adjustment applicants are required to file Financial Disclosure and Business Conflict of Interest forms two (2) business days after the application deadline. These forms are available by contacting the City Secretary at 817.503.1130, and on the City's website at: www.colleyville.com/files/Financial%20Disclosure%20form.pdf

Board, Commission, or Committee: (only those with current openings)

1. Metroport Teen Court Advisory Board

If you are willing to be considered for another board, commission, or committee, please list below.

2. Click here for drop down menu

3. Click here for drop down menu

Name: ☒ Ms. ☐ Mrs. ☐ Mr. Carrie Stewart

Address: 5407 Sycamore Ct., Colleyville, TX 76034

Home phone: 817-685-2542

Work phone: 512-350-9030

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: cls2001@swbell.net

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

3 years, Metroport Teen Court Advisory Board

Trained Advanced Mediator

Diversity Trainer

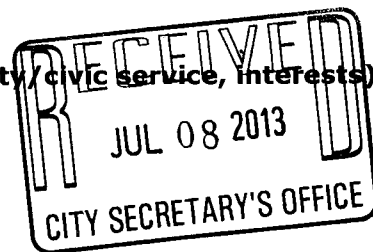
Volunteer mediator, Dispute Resolution Services, Fort Worth, TX

15 years, litigation paralegal

Past Chair, GCISD Diversity Advisory Council

12 years, PTA Board member

☐ Check if additional materials are attached. Other information (City/civic service, interests):



☒ I understand attendance and active support is required for each appointee.

Signature: *Carrie L. Stewart*

Date: 7/8/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034

RESOLUTION R-13-3671

**A RESOLUTION APPOINTING MEMBERS TO THE
METROPORT TEEN COURT ADVISORY BOARD**

WHEREAS, two (2) positions on the Metroport Teen Court Advisory Board have expiring terms ending September 2013.

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

Sec. 1. THAT the Colleyville City Council hereby appoints the following persons to the Metroport Teen Court Advisory Board to serve a one-year term expiring September 2014:

•
•

AND IT IS SO RESOLVED.

APPROVED BY A VOTE OF _____ AYES, _____ NAYS, AND _____ ABSTENTIONS ON THIS THE 17TH DAY OF SEPTEMBER 2013.

ATTEST:

CITY OF COLLEYVILLE

Amy Shelley, TRMC
City Secretary

David Kelly
Mayor



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 6g

Agenda Date 09/17/2013

Number Resolution R-13-3672

Type Resolution

Department City Secretary

Title

Consideration of appointments to the Planning and Zoning Commission

Explanation

Reading and Public Hearing

There are three (3) place positions on the Planning and Zoning Commission whose terms expire September 2013. The positions were advertised and applications accepted July 1 through August 30, 2013. The incumbents were notified their term was expiring and asked to submit an application if they wished to be considered for reappointment.

The following Commission member's terms expire September 2013:

- | Place 5 | Place 6 | Place 7 |
|-----------------|----------------|--------------|
| • David Dudziak | • Don C. Davis | • Larry Knox |

The applicants are listed below and the applications are attached.

- | | | |
|---------------------|------------------|-------------------|
| • Lloyd Bohnstengel | • Steve Burak | • Mark Collier |
| • Mark Davidson | • Don C. Davis | • Dee Kamerman |
| • Larry Knox | • Denise LaPosta | • Vernon Noronha |
| • Gary Panno | • Chris Putnam | • Bradley Shields |
| • Lisa Sturgeon | | |

Financial Impact

There is no financial impact to the City.

Recommendation

Approve

Attachments

1. Planning and Zoning Commission roster
2. Planning and Zoning Commission applications
3. Resolution R-13-3672

Planning and Zoning Commission

PLACE 1

Jim Gotcher

4105 Springhollow Street
Colleyville, TX 76034
W: (817) 845-7340
H: (817) 283-7334
jim.gotcher@verizon.net
TERM: Sep 2012 - Sep 2014

PLACE 3

David Wheelwright

5701 Reatta Place
Colleyville, TX 76034
W: (817) 485-5071
H: (817) 875-6082
dwheelwright@me.com
TERM: Sep 2012 - Sep 2014

PLACE 5

David Dudziak

2301 Wilkes Court
Colleyville, TX 76034
W: (817) 684-7404
H: (817) 421-8789
dudziakd@colleyville.com
TERM: Oct 2011 - Sep 2013

PLACE 7

Larry Knox

7205 Monticello Parkway
Colleyville, TX 76034
H: (817) 581-0941
knoxl@colleyville.com
TERM: Oct 2011 - Sep 2013

PLACE 2 - CHAIRMAN

Jeffrey Byerly

7109 Pebble Hill Drive
Colleyville, TX 76034
H: (817) 329-3372
jeff.byerly@tx.rr.com
TERM: Sep 2012 - Sep 2014

PLACE 4

David Phelps

304 Bridlewood North
Colleyville, TX 76034
W: (972) 467-7319
H: (817) 428-8597
phelps-david@swbell.net
TERM: Sep 2012 - Sep 2014

PLACE 6

Don C. Davis

3409 Middleton Way
Colleyville, TX 76034
H: (817) 991-7808
davisd@colleyville.com
TERM: Oct 2011 - Sep 2013



Application for Appointment for City Council Boards, Commissions, and Committees

Planning and Zoning Commission and Zoning Board of Adjustment applicants are required to file Financial Disclosure and Business Conflict of Interest forms two (2) business days after the application deadline. These forms are available by contacting the City Secretary at 817.503.1130, and on the City's website at: www.colleyville.com/files/Financial%20Disclosure%20form.pdf

Board, Commission, or Committee: (only those with current openings)

1. Planning and Zoning Commission

If you are willing to be considered for another board, commission, or committee, please list below.

2. Zoning Board of Adjustment
3. Click here for drop down menu

Name: ☐ Ms. ☐ Mrs. ☒ Mr. Lloyd Bohnstengel

Address: 4801 Jim Mitchell Trail E

Home phone: 806-296-9524

Work phone:

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: lloyd391@gmail.com

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

For 25 years I served as the Plant Maintenance Supervisor for Pioneer Hi-Bred Int'l, a subsidiary of DuPont, in Plainview, Tx. I was responsible for project management, capital planning, and all aspects of maintaining facilities. This included the installation and repair of electrical, gas, ventilation, and hydraulics systems, ensuring everything was in code compliance and within OSHA safety regulations. I received bids, submitted budgets, approved expenses, and supervised multi million dollar projects. In addition, I built two steel frame houses in my spare time, overseeing all aspects.

☐ Check if additional materials are attached. Other information (City/civic service, interests):

Now that I'm retired I enjoy landscaping, home renovation, and gardening. In the past I have served in the parish council on the administrative committee for St. Alice Catholic Church. I'm a member of the Knights of Columbus.

☒ I understand attendance and active support is required for each appointee.

☒ I understand I will be required to comply with the Texas Open Meetings Act training.

Signature:

Date: 8/30/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034

INFORMATION STATEMENT**Form 1**

Filed in accordance with Ordinance 02-1322
For more information see INSTRUCTION GUIDE

TOTAL NUMBER OF PAGES FILED:

OFFICE USE ONLY**1 NAME**

TITLE; FIRST, MI

Lloyd L.

NICK NAME; LAST, SUFFIX

Bohnstengel

Account Number

Date Received

2 ADDRESS

ADDRESS / CITY / STATE / ZIP

*4801 Jim Mitchell Trail E.
Colleyville, Tx 76034***3 TELEPHONE
NUMBER**

AREA CODE

PHONE NUMBER; EXTENSION

(806) 296-9524

Receipt Number

Amount

Date Processed

Date Imaged

**4 REASON
FOR FILING
STATEMENT**☐

CANDIDATE _____ (INDICATE OFFICE)

☐

ELECTED OFFICIAL _____ (INDICATE OFFICE)

☒

ZONING BOARD OF ADJUSTMENT (APPLICANT OR APPOINTEE) _____

☒

PLANNING AND ZONING COMMISSION (APPLICANT OR APPOINTEE) _____

☐TWO (2) BUSINESS DAYS FOLLOWING THE CLOSING OF FILING FOR ELECTIVE
OFFICE OR APPOINTMENT☐

CHANGES TO BE FILED JANUARY 15TH

☐

CHANGES TO BE FILED JULY 15TH

☐

SUPPLEMENTAL CHANGES

5 Provide information for spouse and dependent children whose financial activity the filer had actual control over during this filing period. In addition, the source of annual income of the spouse shall be provided, as subject to federal election reporting requirements for a spouse:

☒

SPOUSE

Jonie Bohnstengel☐

DEPENDENT CHILD 1

2

3

6 ☐ NO CHANGE. I do by here verify that there has been no changes since the previous filing of the Financial Disclosure and Business Conflict of Interest Forms. PLEASE SEE FORM 8

In parts 1-4 disclose your financial activity during the 12 months proceeding the date of filing. In part 5 disclose not only your own financial activity, but also that of your spouse and/or dependent child or children, if you had actual control over that person's financial activity.

COPY AND ATTACH ADDITIONAL PAGES AS NECESSARYINITIAL HERE: *LL*DATE: *9-4-13*

SOURCES OF OCCUPATIONAL INCOME**Form 2**

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on FORM 1.

¹ INFORMATION RELATES TO	☒ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
² EMPLOYMENT ☐ EMPLOYED BY ANOTHER ☐ SELF EMPLOYED	NAME AND ADDRESS OF EMPLOYER / POSITION HELD <i>Retired</i> NATURE OF OCCUPATION / NAME AND ADDRESS / POSITION HELD
INFORMATION RELATES TO	☐ FILER ☒ SPOUSE ☐ DEPENDENT CHILD _____
EMPLOYMENT ☐ EMPLOYED BY ANOTHER ☐ SELF EMPLOYED	NAME AND ADDRESS OF EMPLOYER / POSITION HELD <i>Retired</i> NATURE OF OCCUPATION / NAME AND ADDRESS / POSITION HELD
INFORMATION RELATES TO	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
EMPLOYMENT ☐ EMPLOYED BY ANOTHER ☐ SELF EMPLOYED	NAME AND ADDRESS OF EMPLOYER / POSITION HELD NATURE OF OCCUPATION
COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY	

INITIAL HERE: *JS*DATE: 9-4-13

INTERESTS IN REAL PROPERTY**Form 3**

Describe all beneficial interests in real property held or acquired by you, your spouse, or a dependent child during the calendar year within the area crosshatched on the map attached to Ordinance 02-1322.
For more information see INSTRUCTION GUIDE

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on Form 1.

1 HELD OR ACQUIRED BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
2 DESCRIPTION	Lot _____ City _____ Block _____ County _____ Subdivision _____ Ad Valorem Tax Account Number _____ Acres and Tract _____
3 STREET ADDRESS ☐ NOT APPLICABLE	STREET ADDRESS, INCLUDING CITY, COUNTY, AND STATE
4 NAME ☐ INDIVIDUAL ☐ BUSINESS	LIST THE NAMES AND ADDRESSES OF OTHER PERSONS OR BUSINESS ENTITIES WHICH OWN AN INTEREST IN THE REAL PROPERTY
HELD OR ACQUIRED BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
2 DESCRIPTION	Lot _____ City _____ Block _____ County _____ Subdivision _____ Ad Valorem Tax Account Number _____ Acres and Tract _____
3 STREET ADDRESS ☐ NOT APPLICABLE	STREET ADDRESS, INCLUDING CITY, COUNTY, AND STATE
4 NAME ☐ INDIVIDUAL ☐ BUSINESS	LIST THE NAMES AND ADDRESSES OF OTHER PERSONS OR BUSINESS ENTITIES WHICH OWN AN INTEREST IN THE REAL PROPERTY

COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY

INITIAL HERE: _____

DATE: _____

9-4-13

Gifts**Form 4**

Identify any person or organization that has given a gift worth more than \$250 to you, or those under your financial control as defined in Ordinance 02-1322. Do not include: 1) expenditures required to be reported by a person required to be registered as a lobbyist under Government Code, Chapter 305, 2) political contributions reported as required by law, or 3) gifts given by a person related to the recipient within the second degree by consanguinity or affinity.

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on Form 1.

¹ RECIPIENT	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
² DONOR	NAME AND ADDRESS
³ DESCRIPTION OF GIFT	
RECIPIENT	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
DONOR	NAME AND ADDRESS
DESCRIPTION OF GIFT	
RECIPIENT	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
DONOR	NAME AND ADDRESS
DESCRIPTION OF GIFT	
RECIPIENT	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
DONOR	NAME AND ADDRESS
DESCRIPTION OF GIFT	
COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY	

INITIAL HERE: *JS*DATE: 9-4-13

BOARDS AND EXECUTIVE POSITIONS**Form 5**

This section is for information concerning executive positions and directorship held by you or those under your financial control. For more information see INSTRUCTION GUIDE

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on Form 1.

¹ POSITION HELD BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
² ORGANIZATION ☐ NON PROFIT ☐ CHARITABLE ASSOCIATION ☐ BUSINESS ASSOCIATION	ADDRESS
³ POSITION HELD	
POSITION HELD BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
ORGANIZATION ☐ NON PROFIT ☐ CHARITABLE ASSOCIATION ☐ BUSINESS ASSOCIATION	ADDRESS
POSITION HELD	
POSITION HELD BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
ORGANIZATION	
POSITION HELD	

COPY AND ATTACH ADDITIONAL PAGES AS NECESSARYINITIAL HERE: *7/* DATE: *9-4-13*

BANKRUPTCIES**Form 6**

Individuals shall disclose any bankruptcy petition by or against the individual, their spouse, a business entity in which the individual owned a beneficial interest of 10% or more, or a business entity in which the individual was an officer or director of the business entity at the time of bankruptcy filing. For more information see INSTRUCTION GUIDE

1 TYPE OF BANKRUPTCY NAME _____	☐ PERSONAL ☐ BUSINESS ☐ N/A ☐ NONE
2 CHAPTER	☐ 7 ☐ 11 ☐ 13
3 IF CHAPTER 7 DID YOU RECEIVE A DISCHARGE	☐ YES ☐ NO
4 IF CHAPTER 11 OR 13 DID YOU COMPLETE A SUCCESSFUL REORGANIZATION	☐ YES ☐ NO

Misdemeanor Involving Moral Turpitude and Felonies

Individuals shall disclose any information which charges a misdemeanor involving moral turpitude, a felony indictment, conviction of a misdemeanor involving moral turpitude or conviction of a felony of the individual or of a business entity in which the individual had a 10% or more beneficial interest or where the individual was at the time of the filing or conviction an officer or director of the business entity.

1 NAME _____ Business or Entity Charged	☐ PERSONAL ☐ BUSINESS
2 TYPE OF INDICTMENT or INFORMATION	
3 NATURE OF OFFENSE	DESCRIPTION
4 DISPOSITION OF INDICTMENT or INFORMATION	

COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY

INITIAL HERE: *JS*

DATE: 9-4-13

INTERESTS IN PARTNERSHIPS, JOINT VENTURES, OR OTHER BUSINESS ASSOCIATIONS

Form 7

Describe all interests in business entities held or acquired by you or those under your financial control as defined in Ordinance 02-1322. For an explanation of "beneficial interest" and other specific directions for completing this section, see INSTRUCTION GUIDE.

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on Form 1.

¹ HELD OR ACQUIRED BY	☐ FILER	☐ SPOUSE	☐ DEPENDENT CHILD _____
² DESCRIPTION	NAME AND ADDRESS		
³ NATURE OF BUSINESS			
HELD OR ACQUIRED BY	☐ FILER	☐ SPOUSE	☐ DEPENDENT CHILD _____
DESCRIPTION	NAME AND ADDRESS		
NATURE OF BUSINESS			
HELD OR ACQUIRED BY	☐ FILER	☐ SPOUSE	☐ DEPENDENT CHILD _____
DESCRIPTION	NAME AND ADDRESS		
NATURE OF BUSINESS			

COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY

INITIAL HERE: ~~2-4-13~~ / /

DATE: 9-4-13

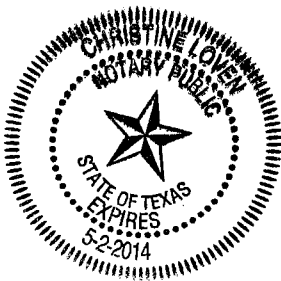
**PERSONAL FINANCIAL STATEMENT
AFFIDAVIT****Form 8**

The Ordinance 02-1322 requires that the disclosures in the Financial Disclosure and Business Conflict of Interest Forms be verified. The verification page must have the signatures of the Financial Disclosure and Business Conflict of Interest Forms, as well as the signature and seal of a notary public. Without proper verification, the statement is not considered filed. Falsification of information is subject to criminal prosecution under state penal code.

Before me, the undersigned authority, personally appeared Lloyd Bohnstengel
who, after being duly sworn upon their oath deposed and stated as follows:

"My name is Lloyd Bohnstengel and I hereby submit for filing pursuant to
Ordinance No. 0-02-1322 of the City of Colleyville, the attached Financial Disclosure and Business Conflict
of Interest Forms. I have personal knowledge of all information contained in said forms and all information
contained in the forms is true and correct."

"Further, all of the information contained in the forms is complete. There is no information that has
been withheld or not disclosed which is responsive to or required to be disclosed by the forms."



Lloyd Bohnstengel
Affiant

Sworn to and subscribed before me, this the 4th day of SEPTEMBER 2013

Christine Loven
Notary Public, State of Texas

INITIAL HERE: LBDATE: 9-4-13



Application for Appointment for City Council Boards, Commissions, and Committees

Planning and Zoning Commission and Zoning Board of Adjustment applicants are required to file Financial Disclosure and Business Conflict of Interest forms two (2) business days after the application deadline. These forms are available by contacting the City Secretary at 817.503.1130, and on the City's website at: www.colleyville.com/files/Financial%20Disclosure%20form.pdf

Board, Commission, or Committee: (only those with current openings)

1. Colleyville Economic Development Corporation

If you are willing to be considered for another board, commission, or committee, please list below.

2. Planning and Zoning Commission

3. Click here for drop down menu

Name: ☐ Ms. ☐ Mrs. ☒ Mr. Steve Burak

Address: 6119 Waller Lane

Home phone: 817-657-2471

Work phone: 817-657-2471

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: steve@steveburak.com

Fax: #N/A

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

VP of Sales & Marketing of a \$100MM Consumer Products Company

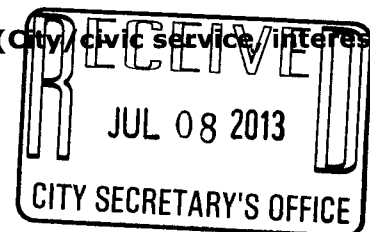
CFO & Co-Founder of a \$20MM Consumer Products Company

CFO of a \$60MM Furniture Distributor

City of Colleyville Historical Preservation Committee

City of Colleyville City Center Committee

☐ Check if additional materials are attached. Other information (City, civic service, interests):



☒ I understand attendance and active support is required for each appointee.

Signature: *Steve Burak*

Date: 7/6/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



Application for Appointment for City Council Boards, Commissions, and Committees

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Board, Commission, or Committee: (only those with current openings)

1. Zoning Board of Adjustment

If you are willing to be considered for another board, commission, or committee, please list below.

2. Colleyville Economic Development Corporation

3. Planning and Zoning Commission

Name: ☐ Ms. ☐ Mrs. ☒ Mr. Mark Collier

Address: 4727 Meandering Way, Colleyville, TX 76034

Home phone: 972-333-2058

Work phone:

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: mcollier@goffcp.com

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

I am the chief financial officer of Goff Capital Partners, LP (GCP), a private investment firm and registered investment advisor with over \$2.5 billion in assets under management. I have held this position for the past 8 years and have gained significant experience in making both private and public investments in a number of industries. GCP has a successful track record as general partners and asset managers of real estate and real estate debt opportunity funds. Through various investment entities GCP has been involved in the selection, acquisition and ongoing management of over \$2.5 billion in real estate, subordinate commercial mortgage backed securities, and other high yield real estate debt. I have an M.S. in Finance and a B.B.A. in Finance & Accounting from Texas A&M University. I am also a Certified Public Accountant. I believe my education and the experience gained in my professional career can be helpful in many Colleyville commissions or committees.

☐ Check if additional materials are attached. Other information (City/civic service, interests):

My wife and I were born and raised in the DFW area. Once we had a family, we chose to move to Colleyville for the quality of life and our children's education. We have been Colleyville residents for about three years. I have served on the ZBA for a little over a year and hope to continue and grow my involvement in the community.

☒ I understand attendance and active support is required for each appointee.

☒ I understand I will be required to comply with the Texas Open Meetings Act training.

Signature: 

Date: 8/5/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



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Board, Commission, or Committee: (only those with current openings)

1. Planning and Zoning Commission

If you are willing to be considered for another board, commission, or committee, please list below.

2. Click here for drop down menu

3. Click here for drop down menu

Name: ☐ Ms. ☐ Mrs. ☒ Mr. Mark Davidson

Address: 4708 Behrens Road

Home phone: none

Work phone: 469-417-9995

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: mdavidson@mdcomre.com

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

BA from Texas Tech, Texas Real Estate License since 1988, Broker's license since 2008, Focuses on commercial transactions, primarily in Dallas, Owner: MD Commercial Real Estate, completed over 800 commercial transactions. Built a house on Behrens Road almost 20 years ago and lived there ever since.

☐ Check if additional materials are attached. Other information (City/civic service, interests):

☒ I understand attendance and active support is required for each appointee.

☒ I understand I will be required to comply with the Texas Open Meetings Act training.

Signature:

Date: 8/29/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



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Board, Commission, or Committee: (only those with current openings)

1. Planning and Zoning Commission

If you are willing to be considered for another board, commission, or committee, please list below.

2. Click here for drop down menu

3. Click here for drop down menu

Name: ☐ Ms. ☐ Mrs. ☒ Mr. Donald C. Davis

Address: 3409 Middleton Way - Colleyville, Texas 76034

Home phone: 817-991-7808

Work phone: same

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: dondavis@yourcorvette.com

Fax: (817) 571-7445

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

Most recent - 2 terms on Colleyville Planning & Zoning Commission.

Several business Boards and Charity Boards.

☐ Check if additional materials are attached. Other information (City/civic service, interests):

☒ I understand attendance and active support is required for each appointee.

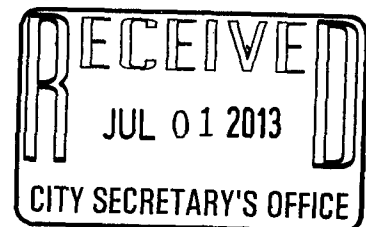
Signature: *Donald C. Davis*

Date: 7/1/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034





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Board, Commission, or Committee: (only those with current openings)

1. Planning and Zoning Commission

If you are willing to be considered for another board, commission, or committee, please list below.

2. Zoning Board of Adjustment

3. Colleyville Economic Development Corporation

Name: ☐ Ms. ☒ Mrs. ☐ Mr. Dee Kamerman

Address: 1521 Tennison Parkway Colleyville, tx

Home phone: 817-416-2277

Work phone: 817-251-5320

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: deekamerman@hotmail.com

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

Living in various cities and states has given me a more open view point to ideas and changes. My occupation has allowed me to work with hundredths of local residents to be a problem solver. I have a masters in administration and a minor in math. I have held the office of President, VP, and treasurer of my professional organization.

☐ **Check if additional materials are attached. Other information (City/civic service, interests):**

☒ **I understand attendance and active support is required for each appointee.**

Signature: *Dee Kamerman*

Date: 8/5/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



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Board, Commission, or Committee: (only those with current openings)

1. Planning and Zoning Commission

If you are willing to be considered for another board, commission, or committee, please list below.

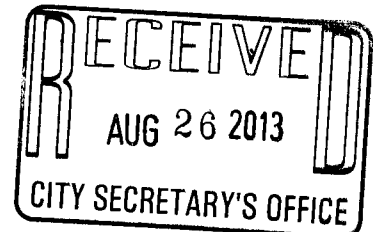
2. Click here for drop down menu

3. Click here for drop down menu

Name: ☐ Ms. ☐ Mrs. ☒ Mr. Larry D. Knox

Address: 7205 Monticello Parkway, Colleyville, Texas 76034

Home phone: (817) 581-0941



Work phone: (817) 640-1200

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: knox.ldk@gmail.com

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

I have been an active member of the Planning & Zoning Commission since May of 2007. I would like to continue my service by being re-appointed to another term on the Commission. I attended a training seminar on October 4th 2012 in Fort Worth, TX and recently on July 29th in Hurst, TX. During my current term the Commission met 39 times and out of the 39 meetings I only missed two meetings because of family obligations. I believe my re-appointment to the Commission will insure consistency with past decisions and precedents set by the Commission over the years of my tenure. I have no future obligations that will prohibit me from continuing to be an active member of the Commission.

☐ Check if additional materials are attached. Other information (City/civic service, interests):

☒ I understand attendance and active support is required for each appointee.

☒ I understand I will be required to comply with the Texas Open Meetings Act training.

Signature:

Larry D. Knox

Date: *08/26/13*

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



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Board, Commission, or Committee: (only those with current openings)

1. Senior Center Advisory Committee

If you are willing to be considered for another board, commission, or committee, please list below.

2. Planning and Zoning Commission

3. Click here for drop down menu

Name: ☐ Ms. ☒ Mrs. ☐ Mr. Denise LaPosta

Address: 2203 Hawthorne Ave

Home phone: 817.571.5657

Work phone: 817.291.2745

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address:

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

Currently serving first term on senior advisory board.

I've lived in Colleyville for 22 years.

I am interested in supporting my community.

☐ Check if additional materials are attached. Other information (City/civic service, interests):

☒ I understand attendance and active support is required for each appointee.

Signature: *Denise LaPosta*

Date: 8/29/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



Application for Appointment for City Council Boards, Commissions, and Committees

Planning and Zoning Commission and Zoning Board of Adjustment applicants are required to file Financial Disclosure and Business Conflict of Interest forms two (2) business days after the application deadline. These forms are available by contacting the City Secretary at 817.503.1130, and on the City's website at: www.colleyville.com/files/Financial%20Disclosure%20form.pdf

Board, Commission, or Committee: (only those with current openings)

1. Planning and Zoning Commission

☐

If you are willing to be considered for another board, commission, or committee, please list below.

2. Library Board

☐

3. Colleyville Economic Development Corporation

☐

Name: ☐ Ms. ☐ Mrs. ☒ Mr. Vernon Noronha

Address: 200 Old Grove Rd, Colleyville TX 76034

Home phone: 817 576 2050

Work phone: 214 840 4255

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: vernon.noronha@gmail.com

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

As new residents of Colleyville and indeed Texas, my family are very concerned to maintain the beauty and sustainable development of Colleyville. We would like to see Colleyville continue to grow but without sacrificing its aesthetic appeal, its safety and its commitment to provide high quality facilities and services to residents. I work as a tax consultant at KPMG, a public accounting firm, having spent 16 years in management, economic and tax consulting. I obtained my Ph.D. in Managerial Economics from the Kellogg School of Management at Northwestern University and a B.A. in Economics from Cambridge University in England. I would welcome this opportunity to serve the community.

☐ Check if additional materials are attached. Other information (City/civic service, interests):

☒ I understand attendance and active support is required for each appointee.

Signature:

Date: 8/8/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



ACKNOWLEDGEMENT STATEMENT

I, ***Vernon Noronha***, hereby acknowledge that I have read and am familiar with the provisions of the City of Colleyville Charter, Section 14.02, Ethics and Conflict of Interest, and all other sections of State law pertaining to conflict of interest and, these statements shall be maintained as a public record of the City. The foregoing acknowledgement is, in part, based upon the opinion of the City Attorney.

Name of Board, Commission or Committee ***Planning Zoning Commission***

Print Name ***Vernon Noronha***

Signature

A handwritten signature in black ink, appearing to read "V. Noronha", with a horizontal line underneath.

Date ***8/12/13***



CONSENT TO RELEASE EMAIL ADDRESS

Name: Vernon Noronha

☒ **I affirmatively consent to the release of my personal email address by the City of Colleyville.**

Email Address: vernon.noronha@gmail.com

Signature:

A handwritten signature in black ink, appearing to read "V. Noronha", written over a horizontal line.

Date: 8/12/13

INFORMATION STATEMENT**Form 1**

Filed in accordance with Ordinance 02-1322
For more information see INSTRUCTION GUIDE

TOTAL NUMBER OF PAGES FILED:

8

OFFICE USE ONLY**1 NAME**

TITLE: FIRST, MI

Dr. Vernon A

NICK NAME: LAST, SUFFIX

Noronha

2 ADDRESS

ADDRESS / CITY / STATE / ZIP

200 Old Grove Rd
Colleyville TX 76034**3 TELEPHONE
NUMBER**

AREA CODE

PHONE NUMBER: EXTENSION

(817) 576-2050

Account Number

Date Received

Receipt Number

Amount

Date Processed

Date Imaged

**4 REASON
FOR FILING
STATEMENT**☐ CANDIDATE _____ (INDICATE OFFICE)☐ ELECTED OFFICIAL _____ (INDICATE OFFICE)☐ ZONING BOARD OF ADJUSTMENT (APPLICANT OR APPOINTEE) _____☒ PLANNING AND ZONING COMMISSION (APPLICANT OR APPOINTEE) Applicant☒ TWO (2) BUSINESS DAYS FOLLOWING THE CLOSING OF FILING FOR ELECTIVE
OFFICE OR APPOINTMENT☐ CHANGES TO BE FILED JANUARY 15TH☐ CHANGES TO BE FILED JULY 15TH☐ SUPPLEMENTAL CHANGES

5 Provide information for spouse and dependent children whose financial activity the filer had actual control over during this filing period. In addition, the source of annual income of the spouse shall be provided, as subject to federal election reporting requirements for a spouse:

☒ SPOUSE Emilia Noronha☒ DEPENDENT CHILD 1 Clarissa Noronha2 Sebastian Noronha

3 _____

6 ☐ NO CHANGE. I do by here verify that there has been no changes since the previous filing of the Financial Disclosure and Business Conflict of Interest Forms. PLEASE SEE FORM 8

In parts 1-4 disclose your financial activity during the 12 months proceeding the date of filing. In part 5 disclose not only your own financial activity, but also that of your spouse and/or dependent child or children, if you had actual control over that person's financial activity.

COPY AND ATTACH ADDITIONAL PAGES AS NECESSARYINITIAL HERE: VNDATE: 08/12/2013

SOURCES OF OCCUPATIONAL INCOME**Form 2**

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on FORM 1.

¹ INFORMATION RELATES TO	☒ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
² EMPLOYMENT ☒ EMPLOYED BY ANOTHER ☐ SELF EMPLOYED	NAME AND ADDRESS OF EMPLOYER / POSITION HELD Tax Senior Manager KPMG LLP 717 N Harwood St., Ste 3100 Dallas TX 75201 NATURE OF OCCUPATION / NAME AND ADDRESS / POSITION HELD
INFORMATION RELATES TO	☐ FILER ☒ SPOUSE ☐ DEPENDENT CHILD _____
EMPLOYMENT ☐ EMPLOYED BY ANOTHER ☐ SELF EMPLOYED	NAME AND ADDRESS OF EMPLOYER / POSITION HELD (not employed; no income) NATURE OF OCCUPATION / NAME AND ADDRESS / POSITION HELD
INFORMATION RELATES TO	☐ FILER ☐ SPOUSE ☒ DEPENDENT CHILD <u>Both</u>
EMPLOYMENT ☐ EMPLOYED BY ANOTHER ☐ SELF EMPLOYED	NAME AND ADDRESS OF EMPLOYER / POSITION HELD (not employed; no income) NATURE OF OCCUPATION
COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY	

INITIAL HERE: VNDATE: 08/12/2013

INTERESTS IN REAL PROPERTY**Form 3**

Describe all beneficial interests in real property held or acquired by you, your spouse, or a dependent child during the calendar year within the area crosshatched on the map attached to Ordinance 02-1322.
For more information see INSTRUCTION GUIDE

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on Form 1.

1 HELD OR ACQUIRED BY	☒ FILER	☒ SPOUSE	☐ DEPENDENT CHILD _____
2 DESCRIPTION	Lot _____ City <u>Colleyville</u> Block _____ County <u>Tarrant</u> Subdivision _____ Ad Valorem Tax Account Number Acres and Tract _____ 40694194		
3 STREET ADDRESS	STREET ADDRESS, INCLUDING CITY, COUNTY, AND STATE 200 Old Grove Rd Colleyville TX 76034 ☐ NOT APPLICABLE		
4 NAME	LIST THE NAMES AND ADDRESSES OF OTHER PERSONS OR BUSINESS ENTITIES WHICH OWN AN INTEREST IN THE REAL PROPERTY (no-one) ☐ INDIVIDUAL ☐ BUSINESS		
HELD OR ACQUIRED BY	☐ FILER	☐ SPOUSE	☐ DEPENDENT CHILD _____
2 DESCRIPTION	Lot _____ City _____ Block _____ County _____ Subdivision _____ Ad Valorem Tax Account Number Acres and Tract _____		
3 STREET ADDRESS	STREET ADDRESS, INCLUDING CITY, COUNTY, AND STATE ☐ NOT APPLICABLE		
4 NAME	LIST THE NAMES AND ADDRESSES OF OTHER PERSONS OR BUSINESS ENTITIES WHICH OWN AN INTEREST IN THE REAL PROPERTY ☐ INDIVIDUAL ☐ BUSINESS		
COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY			

INITIAL HERE: VNDATE: 08/12/2013

Gifts**Form 4**

Identify any person or organization that has given a gift worth more than \$250 to you, or those under your financial control as defined in Ordinance 02-1322. Do not include: 1) expenditures required to be reported by a person required to be registered as a lobbyist under Government Code, Chapter 305, 2) political contributions reported as required by law, or 3) gifts given by a person related to the recipient within the second degree by consanguinity or affinity.

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on Form 1.

¹ RECIPIENT	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
² DONOR	NAME AND ADDRESS (no gifts)
³ DESCRIPTION OF GIFT	
RECIPIENT	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
DONOR	NAME AND ADDRESS
DESCRIPTION OF GIFT	
RECIPIENT	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
DONOR	NAME AND ADDRESS
DESCRIPTION OF GIFT	

COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY

INITIAL HERE: VN

DATE: 08/12/2013

BOARDS AND EXECUTIVE POSITIONS**Form 5**

This section is for information concerning executive positions and directorship held by you or those under your financial control. For more information see INSTRUCTION GUIDE

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on Form 1.

1 POSITION HELD BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
2 ORGANIZATION ☐ NON PROFIT ☐ CHARITABLE ASSOCIATION ☐ BUSINESS ASSOCIATION	ADDRESS
3 POSITION HELD	(no positions)
POSITION HELD BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
ORGANIZATION ☐ NON PROFIT ☐ CHARITABLE ASSOCIATION ☐ BUSINESS ASSOCIATION	ADDRESS
POSITION HELD	
POSITION HELD BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
ORGANIZATION	
POSITION HELD	
COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY	

INITIAL HERE: VNDATE: 08/12/2013

BANKRUPTCIES**Form 6**

Individuals shall disclose any bankruptcy petition by or against the individual, their spouse, a business entity in which the individual owned a beneficial interest of 10% or more, or a business entity in which the individual was an officer or director of the business entity at the time of bankruptcy filing. For more information see INSTRUCTION GUIDE

1 TYPE OF BANKRUPTCY NAME _____	☐ PERSONAL ☐ BUSINESS ☐ N/A ☒ NONE
2 CHAPTER	☐ 7 ☐ 11 ☐ 13
3 IF CHAPTER 7 DID YOU RECEIVE A DISCHARGE	☐ YES ☐ NO
4 IF CHAPTER 11 OR 13 DID YOU COMPLETE A SUCCESSFUL REORGANIZATION	☐ YES ☐ NO

Misdemeanor Involving Moral Turpitude and Felonies

Individuals shall disclose any information which charges a misdemeanor involving moral turpitude, a felony indictment, conviction of a misdemeanor involving moral turpitude or conviction of a felony of the individual or of a business entity in which the individual had a 10% or more beneficial interest or where the individual was at the time of the filing or conviction an officer or director of the business entity.

1 NAME _____ Business or Entity Charged	☐ PERSONAL ☐ BUSINESS
2 TYPE OF INDICTMENT or INFORMATION	(none)
3 NATURE OF OFFENSE	DESCRIPTION
4 DISPOSITION OF INDICTMENT or INFORMATION	

COPY AND ATTACH ADDITIONAL PAGES AS NECESSARYINITIAL HERE: VNDATE: 08/12/2013

**INTERESTS IN PARTNERSHIPS, JOINT VENTURES,
OR OTHER BUSINESS ASSOCIATIONS****Form 7**

Describe all interests in business entities held or acquired by you or those under your financial control as defined in Ordinance 02-1322. For an explanation of "beneficial interest" and other specific directions for completing this section, see INSTRUCTION GUIDE.

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on Form 1.

¹ HELD OR ACQUIRED BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
² DESCRIPTION	NAME AND ADDRESS
³ NATURE OF BUSINESS	(none)
HELD OR ACQUIRED BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
DESCRIPTION	NAME AND ADDRESS
NATURE OF BUSINESS	
HELD OR ACQUIRED BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
DESCRIPTION	NAME AND ADDRESS
NATURE OF BUSINESS	

COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY

INITIAL HERE: VNDATE: 8/12/13

**PERSONAL FINANCIAL STATEMENT
AFFIDAVIT****Form 8**

The Ordinance 02-1322 requires that the disclosures in the Financial Disclosure and Business Conflict of Interest Forms be verified. The verification page must have the signatures of the Financial Disclosure and Business Conflict of Interest Forms, as well as the signature and seal of a notary public. Without proper verification, the statement is not considered filed. Falsification of information is subject to criminal prosecution under state penal code.

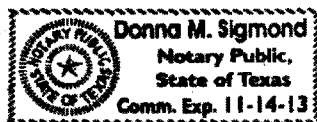
Before me, the undersigned authority, personally appeared Vernon Noronha
who, after being duly sworn upon their oath deposed and stated as follows:

"My name is Vernon Noronha and I hereby submit for filing pursuant to
Ordinance No. 0-02-1322 of the City of Colleyville, the attached Financial Disclosure and Business Conflict
of Interest Forms. I have personal knowledge of all information contained in said forms and all information
contained in the forms is true and correct."

"Further, all of the information contained in the forms is complete. There is no information that has
been withheld or not disclosed which is responsive to or required to be disclosed by the forms."

VN
Affiant

Sworn to and subscribed before me, this the 12th day of August 2013



Donna M. Sigmond
Notary Public, State of Texas

INITIAL HERE: VN

DATE: 8/12/13



Application for Appointment for City Council Boards, Commissions, and Committees

Planning and Zoning Commission and Zoning Board of Adjustment applicants are required to file Financial Disclosure and Business Conflict of Interest forms two (2) business days after the application deadline. These forms are available by contacting the City Secretary at 817.503.1130, and on the City's website at: www.colleyville.com/files/Financial%20Disclosure%20form.pdf

Board, Commission, or Committee: (only those with current openings)

1. Planning and Zoning Commission

If you are willing to be considered for another board, commission, or committee, please list below.

2. Click here for drop down menu

3. Click here for drop down menu

Name: ☐ Ms. ☐ Mrs. ☒ Mr. Gary Panno

Address: 5307 Maple Lane, Colleyville, Texas 76034

Home phone: 817-808-1331

Work phone: 817-808-1331

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: garypanno@gmail.com

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

My background is an Engineering Degree from Northeastern University 1979. I have been building new homes in Colleyville for the past 25 years and have lived in this great city for most of those. I understand the Developers view point as well as the residence concerns. I have worked with the city staff and many homeowners through the years to resolve issues. I have also worked with P&Z and the City Council. It is now time to give back and serve the City of Colleyville. It would be an honor and a pleasure to serve. If asked I will stand tall and meet my commitment to the citizens of Colleyville. Thank you for your consideration. Gary Panno

☐ Check if additional materials are attached. Other information (City/civic service, interests):

☒ I understand attendance and active support is required for each appointee.

☒ I understand I will be required to comply with the Texas Open Meetings Act training.

Signature: *Gary Panno*

Date: 8/30/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139
Mail: City Secretary, 100 Main Street, Colleyville, TX 76034

INFORMATION STATEMENT**Form 1**

Filed in accordance with Ordinance 02-1322
For more information see INSTRUCTION GUIDE

TOTAL NUMBER OF PAGES FILED:

OFFICE USE ONLY**1 NAME**

TITLE, FIRST, MI

Gary

NICK NAME, LAST, SUFFIX

Panno

Account Number

Date Received

2 ADDRESS

ADDRESS / CITY / STATE / ZIP

5307 Maple Lane
Colleyville, Tx 76034

**3 TELEPHONE
NUMBER**

AREA CODE

PHONE NUMBER, EXTENSION

(817) 808-1331

Receipt Number

Amount

Date Processed

Date Imaged

**4 REASON
FOR FILING
STATEMENT**☐

CANDIDATE _____ (INDICATE OFFICE)

☐

ELECTED OFFICIAL _____ (INDICATE OFFICE)

☐

ZONING BOARD OF ADJUSTMENT (APPLICANT OR APPOINTEE) _____

☒

PLANNING AND ZONING COMMISSION (APPLICANT OR APPOINTEE) _____

☒TWO (2) BUSINESS DAYS FOLLOWING THE CLOSING OF FILING FOR ELECTIVE
OFFICE OR APPOINTMENT☐

CHANGES TO BE FILED JANUARY 15TH

☐

CHANGES TO BE FILED JULY 15TH

☐

SUPPLEMENTAL CHANGES

5 Provide information for spouse and dependent children whose financial activity the filer had actual control over during this filing period. In addition, the source of annual income of the spouse shall be provided, as subject to federal election reporting requirements for a spouse:

☒

SPOUSE

Lisa D Panno

☐

DEPENDENT CHILD 1

2

3

6 ☐ NO CHANGE. I do by here verify that there has been no changes since the previous filing of the Financial Disclosure and Business Conflict of Interest Forms. PLEASE SEE FORM 8

In parts 1-4 disclose your financial activity during the 12 months proceeding the date of filing. In part 5 disclose not only your own financial activity, but also that of your spouse and/or dependent child or children, if you had actual control over that person's financial activity.

COPY AND ATTACH ADDITIONAL PAGES AS NECESSARYINITIAL HERE: GPDATE: 08/30/2013

SOURCES OF OCCUPATIONAL INCOME**Form 2**

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on FORM 1.

¹ INFORMATION RELATES TO	☒ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
² EMPLOYMENT ☐ EMPLOYED BY ANOTHER ☒ SELF EMPLOYED	NAME AND ADDRESS OF EMPLOYER / POSITION HELD NATURE OF OCCUPATION / NAME AND ADDRESS / POSITION HELD Gary Panno Inc DBA Ryan Homes PO Box 715
INFORMATION RELATES TO	☒ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
EMPLOYMENT ☐ EMPLOYED BY ANOTHER ☐ SELF EMPLOYED	NAME AND ADDRESS OF EMPLOYER / POSITION HELD NATURE OF OCCUPATION / NAME AND ADDRESS / POSITION HELD
INFORMATION RELATES TO	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
EMPLOYMENT ☐ EMPLOYED BY ANOTHER ☐ SELF EMPLOYED	NAME AND ADDRESS OF EMPLOYER / POSITION HELD NATURE OF OCCUPATION
COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY	

INITIAL HERE: GPDATE: 08/30/2013

INTERESTS IN REAL PROPERTY**Form 3**

Describe all beneficial interests in real property held or acquired by you, your spouse, or a dependent child during the calendar year within the area crosshatched on the map attached to Ordinance 02-1322.
For more information see INSTRUCTION GUIDE

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on Form 1.

1 HELD OR ACQUIRED BY	☒ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
2 DESCRIPTION	Lot _____ City <u>Colleyville</u> Block _____ County <u>Tarrant</u> Subdivision _____ Ad Valorem Tax Account Number _____ Acres and Tract <u>Wilton, S C H 5</u>
3 STREET ADDRESS ☐ NOT APPLICABLE	STREET ADDRESS, INCLUDING CITY, COUNTY, AND STATE <u>2501 Cheek Sparger Rd</u> <u>Colleyville, Tx</u>
4 NAME ☐ INDIVIDUAL ☒ BUSINESS	LIST THE NAMES AND ADDRESSES OF OTHER PERSONS OR BUSINESS ENTITIES WHICH OWN AN INTEREST IN THE REAL PROPERTY <u>Adams Homes</u> <u>Bill Adams PO Box 1137 Colleyville, Tx 76034</u>
HELD OR ACQUIRED BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
2 DESCRIPTION	Lot _____ City _____ Block _____ County _____ Subdivision _____ Ad Valorem Tax Account Number _____ Acres and Tract _____
3 STREET ADDRESS ☐ NOT APPLICABLE	STREET ADDRESS, INCLUDING CITY, COUNTY, AND STATE
4 NAME ☐ INDIVIDUAL ☐ BUSINESS	LIST THE NAMES AND ADDRESSES OF OTHER PERSONS OR BUSINESS ENTITIES WHICH OWN AN INTEREST IN THE REAL PROPERTY
COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY	

INITIAL HERE: GPDATE: 08/30/2013

Gifts**Form 4**

Identify any person or organization that has given a gift worth more than \$250 to you, or those under your financial control as defined in Ordinance 02-1322. Do not include: 1) expenditures required to be reported by a person required to be registered as a lobbyist under Government Code, Chapter 305, 2) political contributions reported as required by law, or 3) gifts given by a person related to the recipient within the second degree by consanguinity or affinity.

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on Form 1.

¹ RECIPIENT	☒ FILER ☒ SPOUSE ☐ DEPENDENT CHILD _____
² DONOR	NAME AND ADDRESS NONE
³ DESCRIPTION OF GIFT	
RECIPIENT	☒ FILER ☒ SPOUSE ☐ DEPENDENT CHILD _____
DONOR	NAME AND ADDRESS NONE
DESCRIPTION OF GIFT	
RECIPIENT	☒ FILER ☒ SPOUSE ☐ DEPENDENT CHILD _____
DONOR	NAME AND ADDRESS NONE
DESCRIPTION OF GIFT	
RECIPIENT	☒ FILER ☒ SPOUSE ☐ DEPENDENT CHILD _____
DONOR	NAME AND ADDRESS NONE
DESCRIPTION OF GIFT	
COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY	

INITIAL HERE: GPDATE: 08/30/2013

BOARDS AND EXECUTIVE POSITIONS**Form 5**

This section is for information concerning executive positions and directorship held by you or those under your financial control. For more information see INSTRUCTION GUIDE

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on Form 1.

1 POSITION HELD BY	☒ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
2 ORGANIZATION ☐ NON PROFIT ☐ CHARITABLE ASSOCIATION ☐ BUSINESS ASSOCIATION	ADDRESS NONE
3 POSITION HELD	
POSITION HELD BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
ORGANIZATION ☐ NON PROFIT ☐ CHARITABLE ASSOCIATION ☐ BUSINESS ASSOCIATION	ADDRESS
POSITION HELD	
POSITION HELD BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
ORGANIZATION	
POSITION HELD	

COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY

INITIAL HERE: _____

DATE: _____

BANKRUPTCIES**Form 6**

Individuals shall disclose any bankruptcy petition by or against the individual, their spouse, a business entity in which the individual owned a beneficial interest of 10% or more, or a business entity in which the individual was an officer or director of the business entity at the time of bankruptcy filing. For more information see INSTRUCTION GUIDE

1 TYPE OF BANKRUPTCY NAME _____	☐ PERSONAL ☐ BUSINESS ☐ N/A ☒ NONE
2 CHAPTER	☐ 7 ☐ 11 ☐ 13
3 IF CHAPTER 7 DID YOU RECEIVE A DISCHARGE	☐ YES ☐ NO
4 IF CHAPTER 11 OR 13 DID YOU COMPLETE A SUCCESSFUL REORGANIZATION	☐ YES ☐ NO

Misdemeanor Involving Moral Turpitude and Felonies

Individuals shall disclose any information which charges a misdemeanor involving moral turpitude, a felony indictment, conviction of a misdemeanor involving moral turpitude or conviction of a felony of the individual or of a business entity in which the individual had a 10% or more beneficial interest or where the individual was at the time of the filing or conviction an officer or director of the business entity.

1 NAME _____ Business or Entity Charged	☐ PERSONAL ☐ BUSINESS
2 TYPE OF INDICTMENT or INFORMATION	
3 NATURE OF OFFENSE	DESCRIPTION
4 DISPOSITION OF INDICTMENT or INFORMATION	

COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY

INITIAL HERE: GP

DATE: 08/13/2013

**INTERESTS IN PARTNERSHIPS, JOINT VENTURES,
OR OTHER BUSINESS ASSOCIATIONS****Form 7**

Describe all interests in business entities held or acquired by you or those under your financial control as defined in Ordinance 02-1322. For an explanation of "beneficial interest" and other specific directions for completing this section, see INSTRUCTION GUIDE.

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on Form 1.

¹ HELD OR ACQUIRED BY	☒ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
² DESCRIPTION	NONE NAME AND ADDRESS
³ NATURE OF BUSINESS	
HELD OR ACQUIRED BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
DESCRIPTION	NAME AND ADDRESS
NATURE OF BUSINESS	
HELD OR ACQUIRED BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
DESCRIPTION	NAME AND ADDRESS
NATURE OF BUSINESS	
COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY	

INITIAL HERE: GPDATE: 08/13/2013

**PERSONAL FINANCIAL STATEMENT
AFFIDAVIT****Form 8**

The Ordinance 02-1322 requires that the disclosures in the Financial Disclosure and Business Conflict of Interest Forms be verified. The verification page must have the signatures of the Financial Disclosure and Business Conflict of Interest Forms, as well as the signature and seal of a notary public. Without proper verification, the statement is not considered filed. Falsification of information is subject to criminal prosecution under state penal code.

Before me, the undersigned authority, personally appeared _____
who, after being duly sworn upon their oath deposed and stated as follows:

"My name is Gary Panno and I hereby submit for filing pursuant to
Ordinance No. 0-02-1322 of the City of Colleyville, the attached Financial Disclosure and Business Conflict
of Interest Forms. I have personal knowledge of all information contained in said forms and all information
contained in the forms is true and correct."

"Further, all of the information contained in the forms is complete. There is no information that has
been withheld or not disclosed which is responsive to or required to be disclosed by the forms."

Affiant

Sworn to and subscribed before me, this the _____ day of _____ 20____

Notary Public, State of Texas

INITIAL HERE: GP

DATE: 8/30/2013



Application for Appointment for City Council Boards, Commissions, and Committees

Planning and Zoning Commission and Zoning Board of Adjustment applicants are required to file Financial Disclosure and Business Conflict of Interest forms two (2) business days after the application deadline. These forms are available by contacting the City Secretary at 817.503.1130, and on the City's website at: www.colleyville.com/files/Financial%20Disclosure%20form.pdf

Board, Commission, or Committee: (only those with current openings)

1. Planning and Zoning Commission

If you are willing to be considered for another board, commission, or committee, please list below.

2. Click here for drop down menu

3. Click here for drop down menu

Name: ☐ Ms. ☐ Mrs. ☒ Mr. Chris Putnam

Address: 204 White Drive, Colleyville, Texas 76034

Home phone: 817-427-1925

Work phone: 972-839-2343

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: madtexan@verizon.net

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

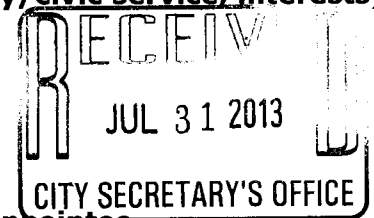
North Richland Hills Board of Adjustments

North Richland Hills Parks and Recreation Board

Experience working directly with Colleyville Community Development city staff, P&Z, and City Council on sidewalk policy issues.

☐ Check if additional materials are attached. Other information (City/civic service, interests):

☒ I understand attendance and active support is required for each appointee.



Signature: *Chris Putnam*

Date: 7/30/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



Application for Appointment for City Council Boards, Commissions, and Committees

Planning and Zoning Commission and Zoning Board of Adjustment applicants are required to file Financial Disclosure and Business Conflict of Interest forms two (2) business days after the application deadline. These forms are available by contacting the City Secretary at 817.503.1130, and on the City's website at: www.colleyville.com/files/Financial%20Disclosure%20form.pdf

Board, Commission, or Committee: (only those with current openings)

1. Planning and Zoning Commission

If you are willing to be considered for another board, commission, or committee, please list below.

2. Colleyville Economic Development Corporation

3. Click here for drop down menu

Name: ☐ Ms. ☐ Mrs. ☒ Mr. Bradley Shields

Address: 206 Mill Wood Ct

Home phone: 817 829 4994

Work phone: 214 647 3572

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: bshields129@gmail.com

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

Broad financial experience including roles as commercial banker, controller and financial advisor.
Current employer is Wells Fargo Financial Advisors.

BBA Texas Tech
CFP Certificate SMU
Series 7
Series 66

☐ **Check if additional materials are attached. Other information (City/civic service, interests):**

Will be assisting with the planning and operation of the 2014 Colleyville Old Tyme BBQ cookoff.

☒ **I understand attendance and active support is required for each appointee.**

Signature: *Bradley Shields*

Date: 7/2/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034

INFORMATION STATEMENT**Form 1**

Filed in accordance with Ordinance 02-1322
For more information see INSTRUCTION GUIDE

TOTAL NUMBER OF PAGES FILED:

OFFICE USE ONLY**1 NAME**

TITLE; FIRST, MI

Bradley

NICK NAME; LAST; SUFFIX

Shields

Account Number

Date Received

2 ADDRESS

ADDRESS / CITY / STATE / ZIP

206 Mill Wood Ct
Colleyville TX 76034

**3 TELEPHONE
NUMBER**

AREA CODE

PHONE NUMBER; EXTENSION

(817) 829 4994

Receipt Number

Amount

Date Processed

Date Imaged

**4 REASON
FOR FILING
STATEMENT**☐

CANDIDATE _____ (INDICATE OFFICE)

☐

ELECTED OFFICIAL _____ (INDICATE OFFICE)

☐

ZONING BOARD OF ADJUSTMENT (APPLICANT OR APPOINTEE) _____

☒PLANNING AND ZONING COMMISSION (APPLICANT OR APPOINTEE) Applicant☐TWO (2) BUSINESS DAYS FOLLOWING THE CLOSING OF FILING FOR ELECTIVE
OFFICE OR APPOINTMENT☐

CHANGES TO BE FILED JANUARY 15TH

☐

CHANGES TO BE FILED JULY 15TH

☐

SUPPLEMENTAL CHANGES

5 Provide information for spouse and dependent children whose financial activity the filer had actual control over during this filing period. In addition, the source of annual income of the spouse shall be provided, as subject to federal election reporting requirements for a spouse:

☒SPOUSE Holly Shields☒DEPENDENT CHILD 1 Caitlyn Shields2 Madelyn Shields

3 _____

6 ☐ NO CHANGE. I do by here verify that there has been no changes since the previous filing of the Financial Disclosure and Business Conflict of Interest Forms. PLEASE SEE FORM 8

In parts 1-4 disclose your financial activity during the 12 months proceeding the date of filing. In part 5 disclose not only your own financial activity, but also that of your spouse and/or dependent child or children, if you had actual control over that person's financial activity.

COPY AND ATTACH ADDITIONAL PAGES AS NECESSARYINITIAL HERE: BSDATE: 07/13/2013

SOURCES OF OCCUPATIONAL INCOME**Form 2**

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on FORM 1.

1 INFORMATION RELATES TO	☒ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
2 EMPLOYMENT ☒ EMPLOYED BY ANOTHER ☐ SELF EMPLOYED	NAME AND ADDRESS OF EMPLOYER / POSITION HELD Wells Fargo Financial Advisors Financial Advisor 2305 Cedar Springs Dallas Texas NATURE OF OCCUPATION / NAME AND ADDRESS / POSITION HELD
INFORMATION RELATES TO	☐ FILER ☒ SPOUSE ☐ DEPENDENT CHILD _____
EMPLOYMENT ☒ EMPLOYED BY ANOTHER ☐ SELF EMPLOYED	NAME AND ADDRESS OF EMPLOYER / POSITION HELD Professional Clinical Laboratory COO 3020 Wichita Ct Fort Worth TX 76034 NATURE OF OCCUPATION / NAME AND ADDRESS / POSITION HELD
INFORMATION RELATES TO	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
EMPLOYMENT ☐ EMPLOYED BY ANOTHER ☐ SELF EMPLOYED	NAME AND ADDRESS OF EMPLOYER / POSITION HELD NATURE OF OCCUPATION
COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY	

INITIAL HERE: BSDATE: 07/13/2013

INTERESTS IN REAL PROPERTY**Form 3**

Describe all beneficial interests in real property held or acquired by you, your spouse, or a dependent child during the calendar year within the area crosshatched on the map attached to Ordinance 02-1322.
For more information see INSTRUCTION GUIDE

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on Form 1.

1 HELD OR ACQUIRED BY	☒ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
2 DESCRIPTION	Lot _____ City _____ Block _____ County _____ Subdivision _____ Ad Valorem Tax Account Number _____ Acres and Tract _____
3 STREET ADDRESS ☐ NOT APPLICABLE	STREET ADDRESS, INCLUDING CITY, COUNTY, AND STATE 206 Mill Wood Ct Colleyville, TX 76034
4 NAME ☐ INDIVIDUAL ☐ BUSINESS	LIST THE NAMES AND ADDRESSES OF OTHER PERSONS OR BUSINESS ENTITIES WHICH OWN AN INTEREST IN THE REAL PROPERTY
HELD OR ACQUIRED BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
2 DESCRIPTION	Lot _____ City _____ Block _____ County _____ Subdivision _____ Ad Valorem Tax Account Number _____ Acres and Tract _____
3 STREET ADDRESS ☐ NOT APPLICABLE	STREET ADDRESS, INCLUDING CITY, COUNTY, AND STATE
4 NAME ☐ INDIVIDUAL ☐ BUSINESS	LIST THE NAMES AND ADDRESSES OF OTHER PERSONS OR BUSINESS ENTITIES WHICH OWN AN INTEREST IN THE REAL PROPERTY
COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY	

INITIAL HERE: BSDATE: 07/13/2013

Gifts**Form 4**

Identify any person or organization that has given a gift worth more than \$250 to you, or those under your financial control as defined in Ordinance 02-1322. Do not include: 1) expenditures required to be reported by a person required to be registered as a lobbyist under Government Code, Chapter 305, 2) political contributions reported as required by law, or 3) gifts given by a person related to the recipient within the second degree by consanguinity or affinity.

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on Form 1.

1 RECIPIENT	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
2 DONOR	NAME AND ADDRESS
3 DESCRIPTION OF GIFT	
RECIPIENT	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
DONOR	NAME AND ADDRESS
DESCRIPTION OF GIFT	
RECIPIENT	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
DONOR	NAME AND ADDRESS
DESCRIPTION OF GIFT	
COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY	

INITIAL HERE: _____

DATE: _____

BOARDS AND EXECUTIVE POSITIONS**Form 5**

This section is for information concerning executive positions and directorship held by you or those under your financial control. For more information see INSTRUCTION GUIDE

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on Form 1.

¹ POSITION HELD BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
² ORGANIZATION ☐ NON PROFIT ☐ CHARITABLE ASSOCIATION ☐ BUSINESS ASSOCIATION	ADDRESS
³ POSITION HELD	
POSITION HELD BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
ORGANIZATION ☐ NON PROFIT ☐ CHARITABLE ASSOCIATION ☐ BUSINESS ASSOCIATION	ADDRESS
POSITION HELD	
POSITION HELD BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
ORGANIZATION	
POSITION HELD	
COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY	

INITIAL HERE: _____

DATE: _____

BANKRUPTCIES**Form 6**

Individuals shall disclose any bankruptcy petition by or against the individual, their spouse, a business entity in which the individual owned a beneficial interest of 10% or more, or a business entity in which the individual was an officer or director of the business entity at the time of bankruptcy filing. For more information see INSTRUCTION GUIDE

¹ TYPE OF BANKRUPTCY NAME _____	☐ PERSONAL ☐ BUSINESS ☐ N/A ☒ NONE
² CHAPTER	☐ 7 ☐ 11 ☐ 13
³ IF CHAPTER 7 DID YOU RECEIVE A DISCHARGE	☐ YES ☐ NO
⁴ IF CHAPTER 11 OR 13 DID YOU COMPLETE A SUCCESSFUL REORGANIZATION	☐ YES ☐ NO

Misdemeanor Involving Moral Turpitude and Felonies

Individuals shall disclose any information which charges a misdemeanor involving moral turpitude, a felony indictment, conviction of a misdemeanor involving moral turpitude or conviction of a felony of the individual or of a business entity in which the individual had a 10% or more beneficial interest or where the individual was at the time of the filing or conviction an officer or director of the business entity.

¹ NAME _____ Business or Entity Charged	☐ PERSONAL ☐ BUSINESS
² TYPE OF INDICTMENT or INFORMATION	
³ NATURE OF OFFENSE	DESCRIPTION
⁴ DISPOSITION OF INDICTMENT or INFORMATION	

COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY

INITIAL HERE: BS

DATE: 07/13/2013

**INTERESTS IN PARTNERSHIPS, JOINT VENTURES,
OR OTHER BUSINESS ASSOCIATIONS****Form 7**

Describe all interests in business entities held or acquired by you or those under your financial control as defined in Ordinance 02-1322. For an explanation of "beneficial interest" and other specific directions for completing this section, see INSTRUCTION GUIDE.

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on Form 1.

¹ HELD OR ACQUIRED BY	☐ FILER ☒ SPOUSE ☐ DEPENDENT CHILD _____
² DESCRIPTION	NAME AND ADDRESS ProLab 3020 Wichita Ct Fort Worth TX
³ NATURE OF BUSINESS	Medical Laboratory
HELD OR ACQUIRED BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
DESCRIPTION	NAME AND ADDRESS
NATURE OF BUSINESS	
HELD OR ACQUIRED BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
DESCRIPTION	NAME AND ADDRESS
NATURE OF BUSINESS	

COPY AND ATTACH ADDITIONAL PAGES AS NECESSARYINITIAL HERE: BSDATE: 07/02/2013

**PERSONAL FINANCIAL STATEMENT
AFFIDAVIT****Form 8**

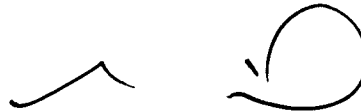
The Ordinance 02-1322 requires that the disclosures in the Financial Disclosure and Business Conflict of Interest Forms be verified. The verification page must have the signatures of the Financial Disclosure and Business Conflict of Interest Forms, as well as the signature and seal of a notary public. Without proper verification, the statement is not considered filed. Falsification of information is subject to criminal prosecution under state penal code.

Before me, the undersigned authority, personally appeared _____

who, after being duly sworn upon their oath deposed and stated as follows:

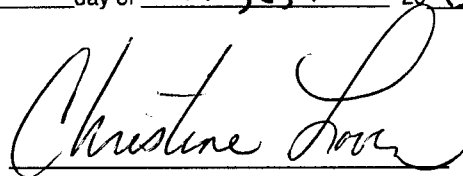
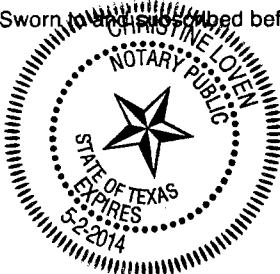
"My name is Bruce Shields and I hereby submit for filing pursuant to Ordinance No. 0-02-1322 of the City of Colleyville, the attached Financial Disclosure and Business Conflict of Interest Forms. I have personal knowledge of all information contained in said forms and all information contained in the forms is true and correct."

"Further, all of the information contained in the forms is complete. There is no information that has been withheld or not disclosed which is responsive to or required to be disclosed by the forms."



Affiant

Sworn to and subscribed before me, this 6 day of August 20 13



Notary Public, State of Texas

INITIAL HERE: BS

DATE: 8/6/13



ACKNOWLEDGEMENT STATEMENT

I, ***Bradley Shields***, hereby acknowledge that I have read and am familiar with the provisions of the City of Colleyville Charter, Section 14.02, Ethics and Conflict of Interest, and all other sections of State law pertaining to conflict of interest and, these statements shall be maintained as a public record of the City. The foregoing acknowledgement is, in part, based upon the opinion of the City Attorney.

Name of Board, Commission or Committee ***Planning and Zoning Commi***

Print Name ***Bradley Shields***

Signature ***Bradley Shields***

Date ***7/13/13***



CONSENT TO RELEASE EMAIL ADDRESS

Name: Bradley Shields

☒ **I affirmatively consent to the release of my personal email address by the City of Colleyville.**

Email Address: bshields129@gmail.com

Signature: *Bradley Shields*

Date: 07/13/2013

**Application for Appointment
For City Council Appointed Boards, Commissions, and Committees**

Planning and Zoning Commission and Zoning Board of Adjustment applicants are required to file Financial Disclosure and Business Conflict of Interest forms two (2) business days after the application deadline. These forms are available by contacting the City Secretary at 817.503.1130 and on the City's website at: <http://www.colleyville.com/files/Financial%20Disclosure%20form.pdf>.

Board, Commission, or Committee: (only those with current openings)

Please write-in your preference of (up to three) board(s), commission(s), or committee(s), for which you would like to be considered.

1. Planning + Zoning
2. Colleyville ED Corporation
3. _____

Name: ☒ Ms. ☐ Mrs. ☐ Mr. Lisa Sturgeon

Address: 1308 Ashford Ct.

Home Phone: cell 214 208 7396 Work Phone: 972 871 6202

- ☒ I understand attendance and active support is required for each appointee.
☒ By providing an e-mail address, I consent to the release of my e-mail address by the City.

E-mail Address: achdw@allstate.com Fax: 877 224 1495

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

- ① B.A. in Economics from University of Texas at Austin
- ② Marketing Certification from SMU (graduate work)
- ③ 24 years w/ Allstate Insurance - product, pricing, sales management + marketing
- ④ Haag Roofing Certification

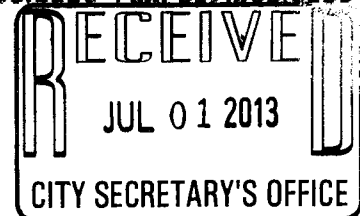
City service and experience, civic organizations, interest: ☐ Additional materials attached.

- ① Past Chair Greater Irving - Las Colinas Chamber of Commerce
- ② Past Board Member: Las Colinas Assn, Irving Symphony Orchestra, Hallberry Creek Women's Club, One Irving, ICVB
- ③ Current Board member/treasurer - Draw Humane Society, Texas Dept of Ins wind pool Building Lates

Signature: Jim Allstetter Date: 6/28/13

Once positions have been filled, you must reapply for future openings.
All information provided is public pursuant to the Texas Public Information Act.

Please return completed application to:
City Secretary, 100 Main Street, Colleyville, TX 76034, Office: 817.503.1130 Fax: 817.503.1139
ashellew@colleyville.com



RESOLUTION R-13-3672

**A RESOLUTION APPOINTING MEMBERS TO THE
PLANNING AND ZONING COMMISSION**

WHEREAS, three (3) positions on the Planning and Zoning Commission have terms expiring September 2013.

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

Sec. 1. THAT the Colleyville City Council hereby appoints the following persons to serve a two-year term, expiring September 2015:

Place 5

Place 6

Place 7

AND IT IS SO RESOLVED.

APPROVED BY A VOTE OF ____ AYES, ____ NAYS, AND ____ ABSTENTIONS,
THIS THE 17TH DAY OF SEPTEMBER 2013.

ATTEST:

CITY OF COLLEYVILLE

Amy Shelley, TRMC
City Secretary

David Kelly
Mayor



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 6h

Agenda Date 09/17/2013

Number Resolution R-13-3673

Type Resolution

Department City Secretary

Title

Consideration of appointments to the Senior Center Advisory Committee

Explanation

Reading and Public Hearing

There are two (2) positions on the Senior Center Advisory Committee whose terms expire September 2013. The positions were advertised and applications accepted July 1 through August 30, 2013. The incumbents were notified their term was expiring and asked to submit an application if they wished to be considered for reappointment.

The following Committee member's terms expire September 2013:

- Denise LaPosta
- Dorothy Parker

The applicants are listed below and the applications are attached.

- Donna Bertram
- Denise LaPosta
- William Morton
- Beth Wasson

Financial Impact

There is no financial impact to the City.

Recommendation

Approve

Attachments

1. Senior Center Advisory Committee roster
2. Senior Center Advisory Committee applications
3. Resolution R-13-3673

Senior Center Advisory Committee

CHAIRMAN

Debra Minea

1007 Dogwood Court

Colleyville, TX 76034

H: (817) 428-8335

dgminea@gmail.com

TERM: Sep 2012 - Sep 2014

Heath Dowell

1816 Avondale Drive

Colleyville, TX 76034

W: (214) 513-7953

H: (817) 358-0499

heathdowell@mac.com

TERM: Sep 2012 - Sep 2014

Denise LaPosta

2203 Hawthorne Avenue

Colleyville, TX 76034

W: (817) 291-2745

H: (817) 571-5657

dlaposta@sbcglobal.net

TERM: Sep 2011 - Sep 2013

Molly Skinner

309 Chestnut Bend

Colleyville, TX 76034

W: (214) 536-7219

H: (817) 485-7354

mollyskinn@aol.com

TERM: Sep 2012 - Sep 2014

VICE-CHAIRMAN

Charna Gray

3300 Pembroke Parkway South

Colleyville, TX 76034

W: (817) 996--9217

H: (817) 318-8229

cvquilter@verizon.net

TERM: Sep 2012 - Sep 2014

Anna King

4803 Mill View Drive

Colleyville, TX 76034

W: (210) 287-8656

H: (682) 325-4223

aking61@aol.com

TERM: Sep 2012 - Sep 2014

Dorothy Parker

509 West L. D. Lockett Road

Colleyville, TX 76034

H: (817) 498-1660

TERM: Sep 2011 - Sep 2013



Application for Appointment for City Council Boards, Commissions, and Committees

Planning and Zoning Commission and Zoning Board of Adjustment applicants are required to file Financial Disclosure and Business Conflict of Interest forms two (2) business days after the application deadline. These forms are available by contacting the City Secretary at 817.503.1130, and on the City's website at: www.colleyville.com/files/Financial%20Disclosure%20form.pdf

Board, Commission, or Committee: (only those with current openings)

1. Senior Center Advisory Committee

If you are willing to be considered for another board, commission, or committee, please list below.

2. Click here for drop down menu

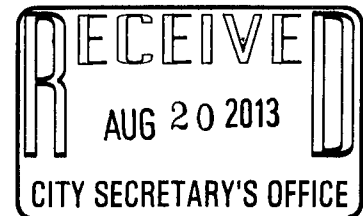
3. Click here for drop down menu

Name: ☒ Ms. ☐ Mrs. ☐ Mr. Donna L Bertram

Address: 5108 Stonebridge Dr Colleyville, TX 76034

Home phone: 817-393-3003

Work phone:



By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: donnabertram@tx.rr.com

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

I am a retired health care executive using the senior center 2-3 times a week. I have participated in many classes at the center and have become aware of the potential to expand services and activities. I am a registered nurse with a master's in business administration so my skill set is in leadership and management. I have lived in Colleyville for eight years and have visited the senior center in Grapevine, Southlake, and Hurst. I would like to see our senior center as a very vibrant, active and appropriate place for the community of all ages to gather and enjoy each other, activities, and learning new things.

☐ **Check if additional materials are attached. Other information (City/civic service, interests):**

I have served on professional and volunteer boards. I am on adjunct faculty at UTA School of Nursing and TCU Harris College of Nursing.

☒ **I understand attendance and active support is required for each appointee.**

☒ **I understand I will be required to comply with the Texas Open Meetings Act training.**

Signature: *Donna L Bertram*

Date: 8/20/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



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Board, Commission, or Committee: (only those with current openings)

1. Senior Center Advisory Committee

If you are willing to be considered for another board, commission, or committee, please list below.

2. Planning and Zoning Commission

3. Click here for drop down menu

Name: ☐ Ms. ☒ Mrs. ☐ Mr. Denise LaPosta

Address: 2203 Hawthorne Ave

Home phone: 817.571.5657

Work phone: 817.291.2745

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address:

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

Currently serving first term on senior advisory board.

I've lived in Colleyville for 22 years.

I am interested in supporting my community.

☐ Check If additional materials are attached. Other information (City/civic service, interests):

☒ I understand attendance and active support is required for each appointee.

Signature: *Denise LaPosta*

Date: 8/29/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



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Board, Commission, or Committee: (only those with current openings)

1. Senior Center Advisory Committee



If you are willing to be considered for another board, commission, or committee, please list below.

2. Click here for drop down menu

3. Click here for drop down menu

Name: ☐ Ms. ☐ Mrs. ☒ Mr. William Morton

Address: 6805 David Ln., Colleyville

Home phone: 817-421-7414

Work phone: 501-258-4273

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: argiguy@hotmail.com

Fax: 817-421-7414

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

Active participant in Social Bridge weekly activities at the Senior Center, interest in developing exercise facility there.

☐ Check if additional materials are attached. Other information (City/civic service, interests):

☒ I understand attendance and active support is required for each appointee.

Signature: William Morton, MD

Date: 8/2/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



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Board, Commission, or Committee: (only those with current openings)

1. Senior Center Advisory Committee

If you are willing to be considered for another board, commission, or committee, please list below.

2. Click here for drop down menu

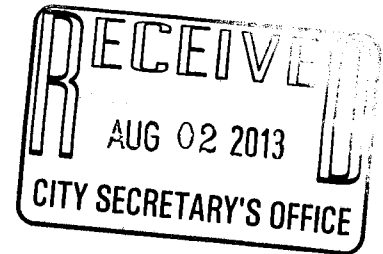
3. Click here for drop down menu

Name: ☐ Ms. ☒ Mrs. ☐ Mr. Elizabeth (Beth) C. Wasson

Address: 3709 Cliffwood Drive

Home phone: 817-281-3790

Work phone:



By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: ecwasson@gmail.com

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

Currently serving on Tarrant County College Senior Advisory Council

Currently Teaching a Photo Lab at Colleyville Senior Center

Member of Colleyville Senior Center for 3 years

Trained in Non Violent Communications

BA Communications

☐ **Check if additional materials are attached. Other information (City/civic service, interests):**

Current church positions include Finance Team and Membership Committee. Past church positions include: Hospitality Coordinator 8 years; Leadership Development Committee 4 years; Nominating Committee 2 years. Served on GCISD Substance Abuse Prevention Committee 4 years; received Mentor of the Year in 2003; Regularly attend 2 book clubs and 1 movie club at Colleyville Library.

☐ **I understand attendance and active support is required for each appointee.**

Signature:

Elizabeth C. Wasson

Date: August 2, 2013

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034

RESOLUTION R-13-3673

**A RESOLUTION APPOINTING MEMBERS TO THE
SENIOR CENTER ADVISORY COMMITTEE**

WHEREAS, two (2) positions on the Senior Center Advisory Committee have terms expiring September 2013.

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

Sec. 1. THAT the following persons are hereby appointed to the Senior Center Advisory Committee, with a term expiring September 2015:

•
•

AND IT IS SO RESOLVED.

APPROVED BY A VOTE OF ____ AYES, ____ NAYS, AND ____ ABSTENTIONS ON THIS THE 17TH DAY OF SEPTEMBER 2013.

ATTEST:

CITY OF COLLEYVILLE

Amy Shelley, TRMC
City Secretary

David Kelly
Mayor



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 6i
Type Resolution
Department City Secretary

Agenda Date 09/17/2013

Number Resolution R-13-3674

Title

Consideration of appointments to the Zoning Board of Adjustment

Explanation

Reading and Public Hearing

There are two (2) place positions on the Zoning Board of Adjustment whose terms expire September 2013. The positions were advertised and applications accepted July 1 through August 30, 2013. The incumbents were notified their term was expiring and asked to submit an application if they wished to be considered for reappointment.

The following Board member's terms expire September 2013:

- | | |
|---------------|----------------|
| Place 4 | Place 5 |
| • Dee McNosky | • Mark Collier |

The applicants are listed below and the applications are attached.

- | | | |
|---------------------|----------------|-------------------|
| • Lloyd Bohnstengel | • Mark Collier | • Stephanie Goble |
| • Dee Kamerman | • Dee McNosky | |

Financial Impact

There is no financial impact to the City.

Recommendation

Approve

Attachments

1. Zoning Board of Adjustment roster
2. Zoning Board of Adjustment applications
3. Resolution R-13-3674

Zoning Board of Adjustment

PLACE 1

Judson Orlando
3009 Scarborough Lane W.
Colleyville, TX 76034
W: (214) 456-1929
H: (215) 470-6836
judd_orlando@hotmail.com
TERM: Jun 2013 - Sep 2014

PLACE 3 - VICE CHAIRMAN

Mike Leathers
6300 Emerald Drive
Colleyville, TX 76034
W: (972) 653-3705
H: (817) 291-2852
mike.leathers@hanson.com
TERM: Sep 2012 - Sep 2014

PLACE 5

Mark Collier
4727 Meandering Way
Colleyville, TX 76034
W: (817) 509-3969
H: (972) 333-2058
mcollier@goffcp.com
TERM: Sep 2012 - Sep 2013

ALTERNATE 2

Mike Patino
4302 Hidden Valley Court
W: (310) 621-9539
H: (682) 214-1186
michaelrpatino@verizon.net
TERM: Jun 2013 - Sep 2014

PLACE 2

Jason Elms
801 Shelton
Colleyville, TX 76034
W: (817) 808-7275
H: (817) 581-3888
jason@allengroup.com
TERM: Sep 2012 - Sep 2014

PLACE 4 - CHAIRMAN

Dee McNosky
5108 Pleasant Run Road
Colleyville, TX 76034
W: (817) 788-3101x5606
H: (817) 656-3727
dtmcnosky@aol.com
TERM: Oct 2011 - Sep 2013

ALTERNATE 1

Larry Kainer
4709 Jim Mitchell Trail, East
Colleyville, TX 76034
W: (817) 307-4459
H: (817) 267-6323
larryfkainer@gmail.com
TERM: Jun 2013 - Sep 2014



Application for Appointment for City Council Boards, Commissions, and Committees

Planning and Zoning Commission and Zoning Board of Adjustment applicants are required to file Financial Disclosure and Business Conflict of Interest forms two (2) business days after the application deadline. These forms are available by contacting the City Secretary at 817.503.1130, and on the City's website at: www.colleyville.com/files/Financial%20Disclosure%20form.pdf

Board, Commission, or Committee: (only those with current openings)

1. Planning and Zoning Commission

If you are willing to be considered for another board, commission, or committee, please list below.

2. Zoning Board of Adjustment

3. Click here for drop down menu

Name: ☐ Ms. ☐ Mrs. ☒ Mr. Lloyd Bohnstengel

Address: 4801 Jim Mitchell Trail E

Home phone: 806-296-9524

Work phone:

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: lloyd391@gmail.com

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

For 25 years I served as the Plant Maintenance Supervisor for Pioneer Hi-Bred Int'l, a subsidiary of DuPont, in Plainview, Tx. I was responsible for project management, capital planning, and all aspects of maintaining facilities. This included the installation and repair of electrical, gas, ventilation, and hydraulics systems, ensuring everything was in code compliance and within OSHA safety regulations. I received bids, submitted budgets, approved expenses, and supervised multi million dollar projects. In addition, I built two steel frame houses in my spare time, overseeing all aspects.

☐ Check if additional materials are attached. Other information (City/civic service, interests):

Now that I'm retired I enjoy landscaping, home renovation, and gardening. In the past I have served in the parish council on the administrative committee for St. Alice Catholic Church. I'm a member of the Knights of Columbus.

☒ I understand attendance and active support is required for each appointee.

☒ I understand I will be required to comply with the Texas Open Meetings Act training.

Signature:

Date: 8/30/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034

INFORMATION STATEMENT**Form 1**

Filed in accordance with Ordinance 02-1322
For more information see INSTRUCTION GUIDE

TOTAL NUMBER OF PAGES FILED:

OFFICE USE ONLY**1 NAME**

TITLE; FIRST, MI

Lloyd L.

NICK NAME; LAST, SUFFIX

Bohnstengel

Account Number

Date Received

2 ADDRESS

ADDRESS / CITY / STATE / ZIP

4801 Jim Mitchell Trail E.
Colleyville, Tx 76034**3 TELEPHONE
NUMBER**

AREA CODE

PHONE NUMBER; EXTENSION

(806) 296-9524

Receipt Number

Amount

Date Processed

Date Imaged

**4 REASON
FOR FILING
STATEMENT**☐

CANDIDATE _____ (INDICATE OFFICE)

☐

ELECTED OFFICIAL _____ (INDICATE OFFICE)

☒

ZONING BOARD OF ADJUSTMENT (APPLICANT OR APPOINTEE) _____

☒

PLANNING AND ZONING COMMISSION (APPLICANT OR APPOINTEE) _____

☐TWO (2) BUSINESS DAYS FOLLOWING THE CLOSING OF FILING FOR ELECTIVE
OFFICE OR APPOINTMENT☐

CHANGES TO BE FILED JANUARY 15TH

☐

CHANGES TO BE FILED JULY 15TH

☐

SUPPLEMENTAL CHANGES

5 Provide information for spouse and dependent children whose financial activity the filer had actual control over during this filing period. In addition, the source of annual income of the spouse shall be provided, as subject to federal election reporting requirements for a spouse:

☒

SPOUSE

Jonie Bohnstengel

☐

DEPENDENT CHILD 1

2

3

6 ☐ NO CHANGE. I do by here verify that there has been no changes since the previous filing of the Financial Disclosure and Business Conflict of Interest Forms. PLEASE SEE FORM 8

In parts 1-4 disclose your financial activity during the 12 months proceeding the date of filing. In part 5 disclose not only your own financial activity, but also that of your spouse and/or dependent child or children, if you had actual control over that person's financial activity.

COPY AND ATTACH ADDITIONAL PAGES AS NECESSARYINITIAL HERE: LLDATE: 9-9-13

SOURCES OF OCCUPATIONAL INCOME**Form 2**

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on FORM 1.

¹ INFORMATION RELATES TO	☒ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
² EMPLOYMENT ☐ EMPLOYED BY ANOTHER ☐ SELF EMPLOYED	NAME AND ADDRESS OF EMPLOYER / POSITION HELD <i>Retired</i> NATURE OF OCCUPATION / NAME AND ADDRESS / POSITION HELD
INFORMATION RELATES TO	☐ FILER ☒ SPOUSE ☐ DEPENDENT CHILD _____
EMPLOYMENT ☐ EMPLOYED BY ANOTHER ☐ SELF EMPLOYED	NAME AND ADDRESS OF EMPLOYER / POSITION HELD <i>Retired</i> NATURE OF OCCUPATION / NAME AND ADDRESS / POSITION HELD
INFORMATION RELATES TO	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
EMPLOYMENT ☐ EMPLOYED BY ANOTHER ☐ SELF EMPLOYED	NAME AND ADDRESS OF EMPLOYER / POSITION HELD NATURE OF OCCUPATION
COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY	

INITIAL HERE: *TH*DATE: 9-4-13

INTERESTS IN REAL PROPERTY**Form 3**

Describe all beneficial interests in real property held or acquired by you, your spouse, or a dependent child during the calendar year within the area crosshatched on the map attached to Ordinance 02-1322.
For more information see INSTRUCTION GUIDE

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on Form 1.

1 HELD OR ACQUIRED BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
2 DESCRIPTION	Lot _____ City _____ Block _____ County _____ Subdivision _____ Ad Valorem Tax Account Number _____ Acres and Tract _____
3 STREET ADDRESS	STREET ADDRESS, INCLUDING CITY, COUNTY, AND STATE
☐ NOT APPLICABLE	
4 NAME	LIST THE NAMES AND ADDRESSES OF OTHER PERSONS OR BUSINESS ENTITIES WHICH OWN AN INTEREST IN THE REAL PROPERTY
☐ INDIVIDUAL ☐ BUSINESS	
HELD OR ACQUIRED BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
2 DESCRIPTION	Lot _____ City _____ Block _____ County _____ Subdivision _____ Ad Valorem Tax Account Number _____ Acres and Tract _____
3 STREET ADDRESS	STREET ADDRESS, INCLUDING CITY, COUNTY, AND STATE
☐ NOT APPLICABLE	
4 NAME	LIST THE NAMES AND ADDRESSES OF OTHER PERSONS OR BUSINESS ENTITIES WHICH OWN AN INTEREST IN THE REAL PROPERTY
☐ INDIVIDUAL ☐ BUSINESS	
COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY	

INITIAL HERE: *LB*DATE: 9-4-13

Gifts**Form 4**

Identify any person or organization that has given a gift worth more than \$250 to you, or those under your financial control as defined in Ordinance 02-1322. Do not include: 1) expenditures required to be reported by a person required to be registered as a lobbyist under Government Code, Chapter 305, 2) political contributions reported as required by law, or 3) gifts given by a person related to the recipient within the second degree by consanguinity or affinity.

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on Form 1.

¹ RECIPIENT	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
² DONOR	NAME AND ADDRESS
³ DESCRIPTION OF GIFT	
RECIPIENT	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
DONOR	NAME AND ADDRESS
DESCRIPTION OF GIFT	
RECIPIENT	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
DONOR	NAME AND ADDRESS
DESCRIPTION OF GIFT	
RECIPIENT	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
DONOR	NAME AND ADDRESS
DESCRIPTION OF GIFT	
COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY	

INITIAL HERE: *LB*DATE: 9-4-13

BOARDS AND EXECUTIVE POSITIONS**Form 5**

This section is for information concerning executive positions and directorship held by you or those under your financial control. For more information see INSTRUCTION GUIDE

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on Form 1.

¹ POSITION HELD BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
² ORGANIZATION ☐ NON PROFIT ☐ CHARITABLE ASSOCIATION ☐ BUSINESS ASSOCIATION	ADDRESS
³ POSITION HELD	
POSITION HELD BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
ORGANIZATION ☐ NON PROFIT ☐ CHARITABLE ASSOCIATION ☐ BUSINESS ASSOCIATION	ADDRESS
POSITION HELD	
POSITION HELD BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
ORGANIZATION	
POSITION HELD	
COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY	

INITIAL HERE: _____

DATE: 9-4-13

BANKRUPTCIES**Form 6**

Individuals shall disclose any bankruptcy petition by or against the individual, their spouse, a business entity in which the individual owned a beneficial interest of 10% or more, or a business entity in which the individual was an officer or director of the business entity at the time of bankruptcy filing. For more information see INSTRUCTION GUIDE

1 TYPE OF BANKRUPTCY NAME _____	☐ PERSONAL ☐ BUSINESS ☐ N/A ☐ NONE
2 CHAPTER	☐ 7 ☐ 11 ☐ 13
3 IF CHAPTER 7 DID YOU RECEIVE A DISCHARGE	☐ YES ☐ NO
4 IF CHAPTER 11 OR 13 DID YOU COMPLETE A SUCCESSFUL REORGANIZATION	☐ YES ☐ NO

Misdemeanor Involving Moral Turpitude and Felonies

Individuals shall disclose any information which charges a misdemeanor involving moral turpitude, a felony indictment, conviction of a misdemeanor involving moral turpitude or conviction of a felony of the individual or of a business entity in which the individual had a 10% or more beneficial interest or where the individual was at the time of the filing or conviction an officer or director of the business entity.

1 NAME _____ Business or Entity Charged	☐ PERSONAL ☐ BUSINESS
2 TYPE OF INDICTMENT or INFORMATION	
3 NATURE OF OFFENSE	DESCRIPTION
4 DISPOSITION OF INDICTMENT or INFORMATION	

COPY AND ATTACH ADDITIONAL PAGES AS NECESSARY

INITIAL HERE: _____

DATE: _____

9-4-13

**INTERESTS IN PARTNERSHIPS, JOINT VENTURES,
OR OTHER BUSINESS ASSOCIATIONS****Form 7**

Describe all interests in business entities held or acquired by you or those under your financial control as defined in Ordinance 02-1322. For an explanation of "beneficial interest" and other specific directions for completing this section, see INSTRUCTION GUIDE.

When reporting information about a dependent child's activity, indicate the child about whom you are reporting by providing the number under which the child is listed on Form 1.

¹ HELD OR ACQUIRED BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
² DESCRIPTION	NAME AND ADDRESS
³ NATURE OF BUSINESS	
HELD OR ACQUIRED BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
DESCRIPTION	NAME AND ADDRESS
NATURE OF BUSINESS	
HELD OR ACQUIRED BY	☐ FILER ☐ SPOUSE ☐ DEPENDENT CHILD _____
DESCRIPTION	NAME AND ADDRESS
NATURE OF BUSINESS	

COPY AND ATTACH ADDITIONAL PAGES AS NECESSARYINITIAL HERE: ~~24-13~~ /11DATE: 9-4-13

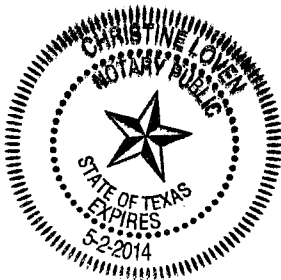
**PERSONAL FINANCIAL STATEMENT
AFFIDAVIT****Form 8**

The Ordinance 02-1322 requires that the disclosures in the Financial Disclosure and Business Conflict of Interest Forms be verified. The verification page must have the signatures of the Financial Disclosure and Business Conflict of Interest Forms, as well as the signature and seal of a notary public. Without proper verification, the statement is not considered filed. Falsification of information is subject to criminal prosecution under state penal code.

Before me, the undersigned authority, personally appeared Lloyd Bohnstengel
who, after being duly sworn upon their oath deposed and stated as follows:

"My name is Lloyd Bohnstengel and I hereby submit for filing pursuant to
Ordinance No. 0-02-1322 of the City of Colleyville, the attached Financial Disclosure and Business Conflict
of Interest Forms. I have personal knowledge of all information contained in said forms and all information
contained in the forms is true and correct."

"Further, all of the information contained in the forms is complete. There is no information that has
been withheld or not disclosed which is responsive to or required to be disclosed by the forms."



Lloyd Bohnstengel
Affiant

Sworn to and subscribed before me, this the 4th day of September 2013

Christine Loven
Notary Public, State of Texas

INITIAL HERE: LBDATE: 9-4-13



Application for Appointment for City Council Boards, Commissions, and Committees

Planning and Zoning Commission and Zoning Board of Adjustment applicants are required to file Financial Disclosure and Business Conflict of Interest forms two (2) business days after the application deadline. These forms are available by contacting the City Secretary at 817.503.1130, and on the City's website at: www.colleyville.com/files/Financial%20Disclosure%20form.pdf

Board, Commission, or Committee: (only those with current openings)

1. Zoning Board of Adjustment

If you are willing to be considered for another board, commission, or committee, please list below.

2. Colleyville Economic Development Corporation

3. Planning and Zoning Commission

Name: ☐ Ms. ☐ Mrs. ☒ Mr. Mark Collier

Address: 4727 Meandering Way, Colleyville, TX 76034

Home phone: 972-333-2058

Work phone:

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: mcollier@goffcp.com

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

I am the chief financial officer of Goff Capital Partners, LP (GCP), a private investment firm and registered investment advisor with over \$2.5 billion in assets under management. I have held this position for the past 8 years and have gained significant experience in making both private and public investments in a number of industries. GCP has a successful track record as general partners and asset managers of real estate and real estate debt opportunity funds. Through various investment entities GCP has been involved in the selection, acquisition and ongoing management of over \$2.5 billion in real estate, subordinate commercial mortgage backed securities, and other high yield real estate debt. I have an M.S. in Finance and a B.B.A. in Finance & Accounting from Texas A&M University. I am also a Certified Public Accountant. I believe my education and the experience gained in my professional career can be helpful in many Colleyville commissions or committees.

☐ Check if additional materials are attached. Other information (City/civic service, interests):

My wife and I were born and raised in the DFW area. Once we had a family, we chose to move to Colleyville for the quality of life and our children's education. We have been Colleyville residents for about three years. I have served on the ZBA for a little over a year and hope to continue and grow my involvement in the community.

☒ I understand attendance and active support is required for each appointee.

☒ I understand I will be required to comply with the Texas Open Meetings Act training.

Signature:

Date: 8/5/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



Application for Appointment for City Council Boards, Commissions, and Committees

Planning and Zoning Commission and Zoning Board of Adjustment applicants are required to file Financial Disclosure and Business Conflict of Interest forms two (2) business days after the application deadline. These forms are available by contacting the City Secretary at 817.503.1130, and on the City's website at: www.colleyville.com/files/Financial%20Disclosure%20form.pdf

Board, Commission, or Committee: (only those with current openings)

1. Zoning Board of Adjustment

If you are willing to be considered for another board, commission, or committee, please list below.

2. Click here for drop down menu

3. Click here for drop down menu

Name: ☒ Ms. ☐ Mrs. ☐ Mr. STEPHANIE GOBLE, JD, SPHR

Address: 1001 DOGWOOD COURT, COLLEYVILLE, TEXAS 76034

Home phone: 817-581-5952

Work phone: 817-718-5627

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: stephanie14092@gmail.com

Fax: N/A

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

I have experience with a variety of Texas real estate matters as: (1) in-house counsel for a title company and (2) general counsel of a company handling real estate for Fortune 500 clients. I am licensed as an attorney in California (active for over 12 years) and am licensed as a Texas real estate salesperson (currently valid, but inactive status). I obtained two certifications in title insurance through the Texas Land Title Association: (a) CTIA - certified title insurance associate and (b) CESA - certified escrow settlement associate.

☐ Check if additional materials are attached. Other information (City/civic service, interests):

Currently in a masters program (MSc) with Oxford University and HEC Paris (joint degree) in business with an emphasis on change management. I am also in my final year of classes for a doctorate degree in strategic leadership with a major in strategic foresight at Regent University (distance program).

☒ I understand attendance and active support is required for each appointee.

☒ I understand I will be required to comply with the Texas Open Meetings Act training.

Signature: 

Date: 8-30-2013

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



Application for Appointment for City Council Boards, Commissions, and Committees

Planning and Zoning Commission and Zoning Board of Adjustment applicants are required to file Financial Disclosure and Business Conflict of Interest forms two (2) business days after the application deadline. These forms are available by contacting the City Secretary at 817.503.1130, and on the City's website at: www.colleyville.com/files/Financial%20Disclosure%20form.pdf

Board, Commission, or Committee: (only those with current openings)

1. Planning and Zoning Commission

If you are willing to be considered for another board, commission, or committee, please list below.

2. Zoning Board of Adjustment

3. Colleyville Economic Development Corporation

Name: ☐ Ms. ☒ Mrs. ☐ Mr. Dee Kamerman

Address: 1521 Tennison Parkway Colleyville, tx

Home phone: 817-416-2277

Work phone: 817-251-5320

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: deekamerman@hotmail.com

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

Living in various cities and states has given me a more open view point to ideas and changes. My occupation has allowed me to work with hundredths of local residents to be a problem solver. I have a masters in administration and a minor in math. I have held the office of President, VP, and treasurer of my professional organization.

☐ Check if additional materials are attached. Other information (City/civic service, interests):

☒ I understand attendance and active support is required for each appointee.

Signature: *Dee Kamerman*

Date: 8/5/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034



Application for Appointment for City Council Boards, Commissions, and Committees

Planning and Zoning Commission and Zoning Board of Adjustment applicants are required to file Financial Disclosure and Business Conflict of Interest forms two (2) business days after the application deadline. These forms are available by contacting the City Secretary at 817.503.1130, and on the City's website at: www.colleyville.com/files/Financial%20Disclosure%20form.pdf

Board, Commission, or Committee: (only those with current openings)

1. Zoning Board of Adjustment

If you are willing to be considered for another board, commission, or committee, please list below.

2. Click here for drop down menu

3. Click here for drop down menu

Name: ☐ Ms. ☒ Mrs. ☐ Mr. Dee McNoskey

Address: 5108 Pleasant Run Road, Colleyville, TX 76034

Home phone: 817-320-4060

Work phone:

By providing an e-mail address, you are consenting to the release of your e-mail address by the City.

E-mail Address: dtmcnosky@aol.com

Fax:

Knowledge, experience, or education applicable to Board, Commission, or Committee function:

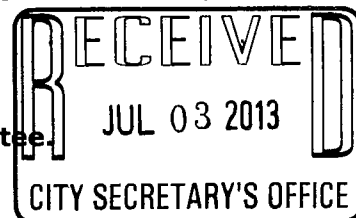
I have served on this board for several years and I believe by continuing to do so I have lent some continuity to the proceedings, especially when there has been a recent turn over of members.

I have completed several hours of training that pertained to both serving on this board and serving the city in general. It has been my pleasure to serve my community by using what I have learned.

☐ **Check if additional materials are attached. Other information (City/civic service, interests):**

I have been a member of other committees and I am a member of the COP program for the city of Colleyville.

☒ **I understand attendance and active support is required for each appointee.**



Signature: *Dee McNoskey*

Date: 7/2/13

Once positions are appointed, you must reapply for future openings. All information provided is public pursuant to the Texas Public Information Act. If additional information is required, please call 817.503.1130. Please return completed application to the Office of the City Secretary:

Email: cloven@colleyville.com or ashelley@colleyville.com **Fax:** 817.503.1139

Mail: City Secretary, 100 Main Street, Colleyville, TX 76034

RESOLUTION R-13-3674

**A RESOLUTION APPOINTING MEMBERS TO THE
ZONING BOARD OF ADJUSTMENT**

WHEREAS, two (2) positions on the Zoning Board of Adjustment have terms expiring September 2013.

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

Sec. 1. THAT the Colleyville City Council hereby appoints the following persons to serve a two-year term expiring September 2015:

Place 4

Place 5

AND IT IS SO RESOLVED.

APPROVED BY A VOTE OF ____ AYES, ____ NAYS, AND ____ ABSTENTIONS
THIS THE 17TH DAY OF SEPTEMBER 2013.

ATTEST:

COLLEYVILLE

CITY OF

Amy Shelley, TRMC
City Secretary

David Kelly
Mayor



City of Colleyville City Council Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 8

Agenda Date 09/17/2013

Type Report

Department City Secretary

Title

Sign Board of Appeals Meeting Minutes - August 14, 2013

Zoning Board of Adjustment Meeting Minutes - August 14, 2013

Planning and Zoning Commission Meeting Minutes - August 26, 2013

Attachments

1. Sign Board of Appeals Meeting Minutes - August 14, 2013
2. Zoning Board of Adjustment Meeting Minutes - August 14, 2013
3. Planning and Zoning Commission Meeting Minutes - August 26, 2013



City of Colleyville Sign Board of Appeals Minutes

City Hall
100 Main Street
Colleyville, Texas 76034
817. 503.1000
www.colleyville.com

Wednesday, August 14, 2013

City Council Chambers

Call to Order

The Sign Board of Appeals meeting of the City of Colleyville was called to order by Board member McNosky on August 14, 2013 at 7:36 p.m.

Roll Call

Present: Board members Jason Elms, Mark Collier, Judson Orlando, and Dee McNosky

Absent: Board member Larry Kainer (Alternate 1), Mike Patino (Alternate 2), and Mike Leathers

Staff Present: Ron Ruthven and Taci Wrisley

1. APPROVAL OF MINUTES

Board member Elms moved to approve the July 9, 2013 meeting minutes as written. Board member Collier seconded.

The motion to approve as written carried by the following vote:

Aye: 4 – Elms, Collier, Orlando, and McNosky

2. PUBLIC HEARING AGENDA ITEMS

- 2a** Request for a variance from the sign regulations regarding a wall sign on Lot 1A, Block 2, of the Andy Felps Addition, located at 4121 Colleyville Boulevard, Suite 11, Case SC13-006.

Ron Ruthven presented the case and briefed the Board.

The public hearing was opened at 7:38 p.m.

Lynn Bural, the applicant, came forward and briefed the Board.

There being no one else wishing to speak, the public hearing was closed at 7:39 p.m.

Board member Elms made a motion to approve case SC13-006.

Board member Collier seconded.

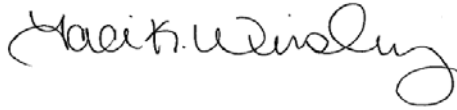
The motion to approve case SC13-006 was approved with the following vote:

Aye: 4 – Elms, Collier, Orlando, and McNosky

3. ADJOURNMENT

The meeting was adjourned at 7:39 p.m.

The minutes were written and prepared by:



Taci Wrisley
Planning and Zoning Assistant

The meeting minutes were approved on September 10, 2013 by a vote of 5-0.



City of Colleyville Zoning Board of Adjustment Minutes

City Hall
100 Main Street
Colleyville, Texas 76034
817. 503.1000
www.colleyville.com

Wednesday, August 14, 2013

City Council Chambers

Call to Order

The Zoning Board of Adjustment meeting of the City of Colleyville was called to order by Board member McNosky on August 14, 2013 at 7:06 p.m.

Roll Call

Present: Board members Jason Elms, Mark Collier, Judson Orlando, and Dee McNosky

Absent: Board member Larry Kainer (Alternate 1), Mike Patino (Alternate 2), and Mike Leathers

Staff Present: Ron Ruthven and Taci Wrisley

1. SWEARING IN OF NEWLY APPOINTED MEMBER

The swearing in of newly appointed member, Mike Patino (Alternate 2), did not take place as Mr. Patino was absent from this meeting.

2. APPROVAL OF MINUTES

Board member Elms moved to approve the May 15, 2013 meeting minutes as written. Board member Collier seconded.

The motion to approve the minutes as written carried by the following vote:

Aye: 4 – Elms, Collier, Orlando, and McNosky

3. PUBLIC HEARING AGENDA ITEMS

3a Consideration of a variance to the rear yard setback requirements of the Land Development Code regarding swimming pools on Lot 15, Block B, of the Cambridge Place Addition, located at 717 Creekview Lane, case VC13-009.

Ron Ruthven presented the case and briefed the Board.

The public hearing was opened at 7:10 p.m.

The applicant was not present for questions.

Board member Orlando questioned staff regarding whether the approval of this variance would set precedent for others. Ron Ruthven replied no. He further explained the Board takes variances on a case-by-case basis.

Discussion occurred amongst the Board and staff regarding whether or not a hardship existed in this case.

There being no one wishing to speak, the public hearing was closed at 7:14 p.m.

Board member Elms made a motion to approve case VC13-009. Board member Collier seconded.

The motion to approve case VC13-009 carried by the following vote:

Aye: 4 – Elms, Collier, Orlando, and McNosky

- 3b** Consideration of a variance to the fence requirements in Section 3.26 in the Land Development Code on Lot 1, Block 1, of the Toth Addition, located at 5001 Montclair Drive, case VC13-010.

Ron Ruthven presented the case and briefed the Board.

The public hearing was opened at 7:19 p.m.

Steve Gumm, the applicant, came forward and briefed the Board.

Tony Seris, 5000 Montclair Drive, came forward and spoke in support of this case.

There being no one else wishing to speak, the public hearing was closed at 7:31 p.m.

Board member Elms questioned Mr. Gumm regarding the specifics of the variance; Was he okay with adjusting the fence for the visibility triangle?; Beyond the 40 foot front building line, was he requesting to leave the fence solid masonry? Mr. Gumm replied correct.

Board member Orlando questioned staff regarding whether the request was for one variance or multiple. Ron Ruthven replied the

Board could make that determination.

Board member Collier questioned staff regarding whether there was a precedent on Montclair Drive or Glade Road for fences such as the one in question. Ron Ruthven replied yes. He further explained there is precedent all over the city.

Board member Orlando questioned staff regarding whether the section of fence along Glade Road from the 40 foot front building line to the rear of the property was part of the variance. Ron Ruthven replied no. He further explained this section of the fence is legal.

Discussion occurred between the Board and staff regarding the 15 foot of fence between the visibility triangle and the 40 foot front building line.

Ron Ruthven explained while there were no renderings of the future widening of Glade Road, the roadway would be closer to the fence and question. He further explained this is why the visibility triangle would be important in this case.

Board member McNosky questioned staff regarding whether the required 15 foot visibility triangle would be enough distance. Ron Ruthven replied yes.

Board member Orlando made a motion to approve the fence height, in the current condition, of three (3) foot for case VC13-010. Board member Elms seconded.

The motion to approve the fence height, in the current condition, of three (3) foot carried by the following vote:

Aye: 4 – Elms, Collier, Orlando, and McNosky

Board member Collier made a motion to approve the variance to the solid fence construction, in the current condition, along Glade Road, subject to the visibility triangle for case VC13-010. Board member Elms seconded.

The motion to approve the variance to the solid fence construction, in the current condition, along Glade Road, subject to the visibility triangle carried by the following vote:

Aye: 4 – Elms, Collier, Orlando, and McNosky

Board member Elms made a motion to deny the variance to the current construction of the fence in the visibility triangle for case VC13-010. Board member Collier seconded.

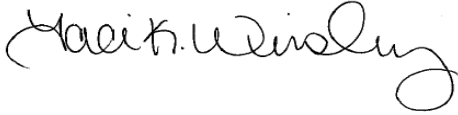
The motion to deny the variance to the current construction of the fence in the visibility triangle carried with the following vote:

Aye: 4 – Elms, Collier, Orlando, and McNosky

4. ADJOURNMENT

The meeting adjourned at 7:35 p.m.

Minutes were written and prepared by:



Taci Wrisley
Planning and Zoning Assistant

The meeting minutes were approved on September 10, 2013 by a vote of 5-0.



City of Colleyville Planning and Zoning Commission Minutes

City Hall
100 Main Street
Colleyville, Texas 76034
817. 503.1000
www.colleyville.com

Monday, August 26, 2013

City Council Chambers

CALL MEETING TO ORDER

The Planning and Zoning Commission meeting of the City of Colleyville was called to order by Chairman Byerly on August 26, 2013 at 7:00 p.m.

Roll Call

Present: Commissioners Larry Knox, Dave Dudziak, David Wheelwright, David Phelps, Jim Gotcher, Don Davis, and Jeff Byerly

Staff Present: Ron Ruthven, Taci Wrisley, Dale Crown, Rob McKeown, Marty Wieder, and Matt Butler (City Attorney)

INVOCATION

The invocation was given by Commissioner Knox

1. APPROVAL OF MINUTES

Commissioner Knox made a motion to approve the minutes as amended. Commissioner Davis seconded.

The motion to approve the minutes as amended carried by the following vote:

Aye: 7 – Knox, Dudziak, Wheelwright, Gotcher, Davis, Phelps, and Byerly

A second vote was made at the end of the Continued Public Hearing Item based on corrections made by the applicant of case ZC13-008.

Chairman Byerly made a motion to approve the minutes as corrected. Commissioner Knox seconded.

The motion to approve the minutes as corrected carried by the following vote:

Aye: 7 – Knox, Dudziak, Wheelwright, Gotcher, Davis, Phelps, and Byerly

2. CITIZEN COMMENTS/PRESENTATIONS REGARDING ITEMS NOT ON

THE AGENDA AS A PUBLIC HEARING ITEM

There were no citizen comments/presentations regarding items not on the agenda as a public hearing item.

3. REGULAR AGENDA ITEMS

- 3a** Approval of a minor plat for 1.97 acres on Tract 1B01A, of Abstract 1248 of the Thomas J. Polson Survey, located at 4800 Bedford Road, case PC13-014.

Ron Ruthven presented the case and briefed the Commission.

Commissioner Davis questioned staff regarding whether the fence line along the front of the property would allow for a single fence line along Bedford Road. Ron Ruthven replied correct.

Scott Sandlin, the property owner of 4800 Bedford Road, came forward and briefed the Commission.

Commissioner Davis made a motion to approve case PC13-014. Commissioner Wheelwright seconded.

The motion to approve case PC13-014 carried by the following vote:

Aye: 7 – Knox, Dudziak, Wheelwright, Gotcher, Davis, Phelps, and Byerly

4. PUBLIC HEARING AGENDA ITEMS

- 4a** Request for approval of a Special Use Permit for alcoholic beverage sales for off-premises consumption on Lot 7a, Block 2, Village Park Addition located at 4801 Colleyville Blvd. Approval of a Special Use Permit for alcoholic beverage sales for on-premises consumption on Lots 1R1, 4, 5a, 6a, 7a and 9R, Block 2, Village Park Addition located at 4701, 4709, 4717, 4725, 4801 and 4843 Colleyville Blvd, case ZC13-009.

Ron Ruthven and Marty Wieder presented the case and briefed the Commission.

Commissioner Phelps questioned staff regarding whether there is a different standard for parking requirements for a stand-alone business versus a business with a shared parking agreement. Ron

Ruthven replied no.

Discussion continued between the Commissioners and staff regarding the parking requirements.

Commissioner Dudziak questioned staff regarding the number of parking spaces that were located at the rear of the property, behind the building. Ron Ruthven replied approximately 60 parking spaces. Commissioner Dudziak further questioned regarding whether there was reasonable access to those parking spaces other than walking around to the front of the building. Ron Ruthven replied unless there were an employee that will have access to a rear door, one will have to walk to the front of the building. Commissioner Davis stated when Albertson's was in business, the rear parking spaces were for employees.

Commissioner Dudziak questioned staff regarding whether there was a separate provision for employee parking in the code. Ron Ruthven replied no.

Discussion continued between Commissioner Dudziak and staff regarding the parking requirements.

Chairman Byerly questioned staff regarding whether the shopping center was already short on parking spaces. Ron Ruthven replied correct.

The public hearing was opened at 7:29 p.m.

Scott Woodruff, the applicant, came forward and briefed the Commission.

Commissioner Dudziak questioned Mr. Woodruff regarding whether he thought there was sufficient parking for the shopping center and surrounding pad sites. Mr. Woodruff replied yes. He further explained, as landlords, they would prefer the parking lot to appear to be full versus having an empty parking lot. Mr. Woodruff also explained their lease agreement with Whole Foods states employees would have to park in the rear parking spaces.

Commissioner Dudziak questioned Mr. Woodruff regarding whether there would be an employee entrance on the rear of the building. Mr. Woodruff replied the plans for an employee entrance are in the works but have not been finalized.

Commissioner Dudziak questioned staff regarding parking along the front of the property and would any be lost with the future expansion of Highway 26. Ron Ruthven replied no additional spaces will be

taken with the future expansion.

Commissioner Dudziak questioned Mr. Woodruff regarding their control over the leases ability to open restaurants within their current businesses. Mr. Woodruff replied the current businesses are leased under a specific use. He further explained if the businesses wanted to change their use they would have to go through the landlord to do so.

Commissioner Dudziak questioned Mr. Woodruff regarding whether he had been approached by other businesses wanting to build on a pad site. Mr. Woodruff replied yes, hundreds. He further explained they were limited to 6,000 square feet of restaurant space for the pad site and they are maxed out already.

Commissioner Dudziak questioned Mr. Woodruff regarding the possibility of a parking garage. Mr. Woodruff replied a parking garage would be economically impossible to do in this location.

Commissioner Gotcher questioned Mr. Woodruff regarding the possibility of re-striping the lot if the number of parking spaces ever became an issue. Mr. Woodruff replied yes, there are ways of creating additional spaces.

There being no one else wishing to speak, the public hearing was closed at 7:42 p.m.

Commissioner Phelps stated he liked having the pad sites out front because it eliminated the look of a vacant parking lot.

Discussion occurred amongst the Commissioners regarding the lack of parking issues when the shopping center was fully functioning.

Ron Ruthven referred to an earlier question regarding the number of parking spaces in the rear of the property and there are a total of 100 parking spaces. He further explained that an additional 100 parking spaces could potentially be added.

Discussion continued between the Commissioners and staff regarding the current and future use of the parking spaces on the north, south, and east sides of the property.

Commissioner Dudziak questioned Mr. Woodruff regarding what would happen with Ace Hardware's outdoor storage. Mr. Woodruff replied it is part of their lease and it will stay. Commissioner Dudziak further questioned Mr. Woodruff whether the parking spaces the outdoor storage would take up was included in the total parking space count. Mr. Woodruff replied no, the spaces were counted by them as non-usable spaces.

Commissioner Dudziak questioned Mr. Woodruff regarding whether all the other business, with the exception of Whole Foods, would have to park behind the building. Mr. Woodruff replied he did not believe so due to the other business not seeing as much traffic as Whole Foods would.

Commissioner Phelps made a motion to approve case ZC13-009. Commissioner Knox seconded.

The motion to approve case ZC13-009 carried by the following vote:

Aye: 7 – Knox, Dudziak, Wheelwright, Gotcher, Davis, Phelps, and Byerly

5. CONTINUED PUBLIC HEARING AGENDA ITEMS

- 5a** Consideration for a zoning change from PUD-C-Planned Unit Development Commercial to PUD-R-Planned Unit Development Residential on 1.94 acres on Lot 1, Block 1 of the San Bar Square Addition located at 105 Cheek-Sparger Road, case ZC13-008.

Ron Ruthven presented the case and briefed the Commission.

The public hearing was opened at 7:54 p.m.

Mark Howe, the applicant, came forward and briefed the Commission.

Steve Isbell, the development engineer for the project, came forward and briefed the Commission.

Claudia Bevill, 119 Cheek-Sparger Road, came forward and spoke in opposition of the case.

James Bevill, 119 Cheek-Sparger Road, came forward and spoke in opposition of the case.

Three (3) attendees did not wish to speak but wished to record their opposition: Cyndi Wallace of 104 Greenbriar Lane, David Wallace of 104 Greenbriar Lane, Mike Davila of 100 Greenbriar Lane.

There being no one else wishing to speak, the public hearing was closed at 8:21 p.m.

Commissioner Gotcher questioned staff regarding the uses allowed by the current Planned Unit Development-Commercial. Ron Ruthven

replied the uses that would be allowed would most likely be the uses allowed by the code today. He further stated before any building permits would be issued, staff would verify that the use is in fact allowed.

Commissioner Phelps questioned staff regarding the process for approving the uses; would the request for any of the allowed uses be heard by the Planning and Zoning Commission or the City Council? Ron Ruthven replied no.

Commissioner Davis questioned staff regarding whether the property owner could build a Sonic Drive-In restaurant on this property. Ron Ruthven replied based on his initial interpretation, yes.

Chairman Byerly questioned staff regarding whether the calculation of density or right-of-way was effected by the miscalculation of land. Ron Ruthven replied no. He further stated the correct number would be amended to go before City Council.

Commission Knox questioned Keith Hamilton, the engineer for the project, and Mr. Howe regarding the drainage for Lots 4, 5, & 6. Mr. Howe replied a 12 inch drainage pipe would be installed along the rear of the properties and will drain into the detention pond.

Discussion continued between the Commissioners, Mr. Hamilton, and Mr. Howe regarding construction of the drainage system.

Commissioner Dudziak questioned Mr. Isbell regarding the plans for the open space in the center of the roadway. Mr. Isbell replied as a request of a neighbor, they would construct a flag pole that would be lighted.

Commissioner Gotcher made a motion to deny case ZC13-008. Commissioner Dudziak seconded.

The motion to deny case ZC13-008 failed by the following vote:

Aye: 2 – Dudziak and Gotcher

Nay: 5 – Knox, Wheelwright, Davis, Phelps, and Byerly

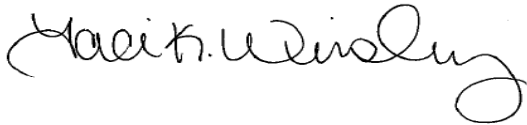
Commissioner Knox made a motion to approve case ZC13-008. Commissioner Davis seconded.

The motion to approve case ZC13-008 carried by the following

vote:**Aye: 5** – Knox, Wheelwright, Davis, Phelps, and Byerly**Nay: 2** – Dudziak and Gotcher**6. ADJOURNMENT**

The meeting adjourned at 8:35 p.m.

The minutes were written and prepared by:



Taci Wrisley
Planning and Zoning Assistant

The meeting minutes were approved on September 9, 2013 by a vote of 5-0.

RESOLUTION R-13-3675

**A RESOLUTION APPROVING CITY COUNCIL ACTION
UNDER BUSINESS AT THE REGULAR
CITY COUNCIL MEETING OF
SEPTEMBER 17, 2013**

WHEREAS, City Council has taken action on certain items on the agenda under Business.

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

Sec. 1. THAT the agenda decisions approved by City Council action under Business this date and not otherwise adopted by Ordinance and/or separate Resolution as follows are hereby adopted:

a. THAT

AND IT IS SO RESOLVED.

APPROVED BY A VOTE OF ____ AYES, ____ NAYS, AND ____ ABSTENTIONS ON THIS THE 17TH DAY OF SEPTEMBER 2013.

ATTEST:

CITY OF COLLEYVILLE

Amy Shelley, TRMC
City Secretary

David Kelly
Mayor