

This Agenda is posted pursuant to Chapter 551, Texas Government Code

**Matters to Come Before a Meeting of the Board of Directors
of Tarrant Regional Water District**

To Be Held the 20th Day of August 2024 at 9:00 a.m.

**Front Doors to the Main Admin Building at 800 East Northside Drive Will Open to the
Public at 8:30 a.m. and Close Fifteen (15) Minutes After the Meeting Adjourns**

**TRWD Board Room
800 East Northside Drive
Fort Worth, Texas 76102**

**PLEASE BE ADVISED THAT A QUORUM OF THE BOARD OF DIRECTORS OF TRWD
WILL CONVENE ON THE ABOVE DATE AND TIME FOR THE PURPOSE OF
CONSIDERING AND ACTING UPON THE MATTERS SET FORTH IN THIS AGENDA. THE
LINK TO VIEW AND LISTEN TO THE MEETING VIA INTERNET IS
<HTTPS://WWW.TRWD.COM/BOARDVIDEOS>. A RECORDING OF THE MEETING WILL
ALSO BE AVAILABLE AT <HTTPS://WWW.TRWD.COM/BOARDVIDEOS>.**

1. Pledges of Allegiance

2. Public Comment

Citizens may present public comment at this time, limited to a total time of three (3) minutes per speaker, unless the speaker addresses the Board through a translator, in which case the limit is a total time of six (6) minutes. Each proposed speaker must have completed and submitted a speaker card prior to the commencement of the meeting, identifying any agenda item number(s) and topic(s) the speaker wishes to address with the Board. By law, the Board may not deliberate, debate, or take action on public comment but may place the item on a future agenda.

3. Consider Approval of the Minutes from the Meetings Held on July 16, 2024, and July 25, 2024

4. Consider Approval of a Consent Agenda

All items listed on the consent agenda are considered to be regular, routine, and ministerial items that require little or no discussion. Therefore, in the interest of efficiency there will be no separate discussion of these items and the board will act on them through one motion and vote. If a board member wishes for an item to be discussed and considered individually, upon the board member's request the item will be removed from the consent agenda and considered separately.

- Consider Approval of Change in Calculation of Retainage with Archer Western Construction, LLC for Richland-Chambers Lake Pump Station Backup Sodium Hypochlorite Feed Facility and Hydraulic Actuator Installation Project**

- **Consider Approval of Release of Retainage with Hydro Resources Mid-Continent, Inc. for ASR Well Demonstration Study - Well Drilling Project**
5. **Consider Approval of Contract with Kennedy Jenks Consultants, Inc. for Design of 4.42 Miles of Cedar Creek Section 2 Phase 2 Pipeline Replacement in the Kennedale to Mansfield Area - Jason Gehrig, Infrastructure Engineering Director**
 6. **Consider Approval of Contract with CP&Y, Inc. dba STV Infrastructure for Design of 8.6 Miles of Cedar Creek Section 4 Pipeline Replacement from the Trinity River to the Cedar Creek Lake Pump Station - Jason Gehrig, Infrastructure Engineering Director**
 7. **Consider Approval of Contract with HDR Engineering, Inc. for Corrosion Control Engineering Design Services for Cedar Creek Section 2 Phase 2 Pipeline Replacement in the Kennedale to Mansfield Area and Cedar Creek Section 4 Pipeline Replacement Project from the Trinity River to Cedar Creek Lake - Jason Gehrig, Infrastructure Engineering Director**
 8. **Consider Approval of Contract with Freese and Nichols, Inc. for Environmental and Permitting Services for Two Sections of the Cedar Creek Pipeline Replacement Project - Darrel Andrews, Environmental Director**
 9. **Consider Approval of Contract with Terracon for Environmental and Permitting Services for Section 4 of the Cedar Creek Pipeline Replacement Project - Darrel Andrews, Environmental Director**
 10. **Consider Approval of Local Budget Reallocation for Central City Flood Control Project - Kate Beck, Central City Flood Control Program Director**
 11. **Consider Approval of Contract Amendment with Freese and Nichols, Inc. for Value Engineering Services for Technical Evaluation of the Stormwater Canal Structures - Kate Beck, Central City Flood Control Program Director**
 12. **Consider Approval of a Facilities Extension Agreement with Oncor Electric Delivery Company LLC, for High Voltage Electric Service to the Integrated Pipeline Lake Palestine Pump Station - Zachary Huff, Water Resources Engineering Director**
 13. **Vote to Place a Proposal to Adopt a Tax Year 2024 Tax Rate on the Agenda for the September 17, 2024, Board of Directors Meeting; and Establish a Date for a Public Hearing to be Held September 12, 2024, at 11:00am on the Proposed Tax Year 2024 Tax Rate - Sandy Newby, Chief Financial Officer**
 14. **Staff Updates**
 - **Water Resources and Planning Update - Rachel Ickert, Chief Water Resources Officer**

- **Water Conservation Strategic Plan Update - Linda Christie, Government Affairs Director**

15. Executive Session under Texas Government Code:

Section 551.071 of the Texas Government Code, for Private Consultation with its Attorney about Pending or Contemplated Litigation or on a Matter in which the Duty of the Attorney to the Governmental Body under the Texas Disciplinary Rules of Professional Conduct of the State Bar of Texas Clearly Conflicts with this Chapter; and

Section 551.072 of the Texas Government Code, to Deliberate the Purchase, Exchange, Lease or Value of Real Property Concerning the Richland-Chambers Wetlands Project and the Panther Island/Central City Flood Control Project

16. Consideration of Approval of Sale of Land in the R. Ybarbo Survey, Abstract No. 606, Kaufman County, Texas - Steve Christian, Real Property Director

17. Consider Approval of Authorization to Acquire Real Property Interests by Purchase for the Construction of the Richland-Chambers Wetlands Project - Steve Christian, Real Property Director

A permanent easement interest over and across a 1.078-acre of land located in the JOHN HENRY SURVEY, Abstract No. 398, Navarro County, Texas

18. Texas Open Government and Ethics Training (Training Regarding the Texas Open Meetings Act, the Texas Public Information Act, and Key Ethics Rules) - Stephen Tatum, General Counsel

19. Future Agenda Items

20. Schedule Next Board Meeting

21. Adjourn

MINUTES OF A MEETING OF THE BOARD OF DIRECTORS OF
TARRANT REGIONAL WATER DISTRICT
HELD ON THE 16th DAY OF JULY 2024 AT 9:00 A.M.

The call of the roll disclosed the presence of the Directors as follows:

Present
Leah King
James Hill
Mary Kelleher
C.B. Team
Paxton Motheral

Also present were Alan Thomas, Chris Akers, Airin Barnett, Heather Bass, Darrell Beason, Steve Christian, Linda Christie, Dustan Compton, Ellie Garcia, Rachel Ickert, Courtney Kelly, Laramie LaRue, Melissa Malone, Betsy Marsh, Vanessa Navarro, Sandy Newby, Kathleen Ray, Stephen Tatum and Ed Weaver of the Tarrant Regional Water District (District or TRWD).

1.

All present were given the opportunity to join in reciting the Pledges of Allegiance to the U.S. and Texas flags.

2.

There were no requests from the public to address the Board of Directors during the Public Comment portion of the agenda.

3.

Director Hill moved to approve the minutes from the meeting held on June 18, 2024. Director Team seconded the motion, and the votes were 5 in favor, 0 against. It was accordingly ordered that these minutes be placed in the permanent files of the District.

4.

With the recommendation of management, Director Team moved to approve an order authorizing the issuance of Tarrant Regional Water District, a water control and improvement district, unlimited tax bonds; levying an ad valorem tax in support of the bonds; establishing the procedures of selling and delivering the bonds; and authorizing other matters related to the issuance of the bonds. Per the Bond Order, the Board delegates pricing authority to the General Manager, Deputy General Manager, and Chief Financial Officer, separately, subject to certain parameters being met. Director Kelleher seconded the motion, and the votes were 5 in favor, 0 against.

5.

With the recommendation of management, Director Hill moved to approve disposition of surplus equipment as outlined in the chart below. Director Team seconded the motion, and the votes were 5 in favor, 0 against.

Fund	Item	Disposal Explanation
General	Brick Paver Salvage	Brick pavers salvaged as part of the TxDOT Main Street Bridge Project. Selling 158 pallets for a total of \$118,500 x 8.25% sales tax = \$128,276.25
General	Chairs	Stadium chairs at LaGrave Field
General	Handrails	Handrails at LaGrave Field
General	Pavers	Brick and granite pavers at LaGrave Field
General	Misc. Metal	Metal within LaGrave Field

6.

With the recommendation of management, Director Team moved to approve a contract in an amount not-to-exceed \$154,200 with The National Theatre for Children, Inc., to provide elementary school water conservation education services. The contract has up to four annual renewal options for a total potential cost not-to-exceed of \$771,000.

Funding for this item is included in the Fiscal Year 2024 Revenue Fund Budget and Proposed Fiscal Year 2025 Revenue Fund Budget. Director Motheral seconded the motion, and the votes were 5 in favor, 0 against.

7.

With the recommendation of management, Director Motheral moved to approve a contract in an amount not-to-exceed \$90,000 with Tinker LLC to provide elementary school water conservation education services. The contract has up to four annual renewal options, with ten percent annual increases, for a total potential not-to-exceed cost of \$549,459. Funding for this item is included in the Fiscal Year 2024 Revenue Fund Budget and Proposed Fiscal Year 2025 Revenue Fund Budget. Director Kelleher seconded the motion, and the votes were 5 in favor, 0 against.

8.

With the recommendation of management, Director Team moved to approve a contract amendment in an amount not-to-exceed \$81,394.55 with M&M Irrigation and Illumination to provide additional services for residential sprinkler system evaluations. Funding for this item is included in the Fiscal Year 2024 Revenue Fund Budget. Director Motheral seconded the motion, and the votes were 5 in favor, 0 against.

9.

With the recommendation of management, Director Team moved to accept a philanthropic donation valued at \$35,000 of smart poles from Safe and Happy Trails. This donation will allow the District and Fort Worth Police Department's Real Time Crime Center an opportunity to test a smart pole which comes equipped with solar power, LED lighting, emergency call button, and gunshot detection. Director Kelleher seconded the

motion, and the votes were 5 in favor, 0 against.

10.

Staff Updates

- Water Resources and Planning Update presented by Rachel Ickert, Chief Water Resources Officer
- Conservation Award and Update presented by Linda Christie, Government Affairs Director
- Fly Fest Update presented by Darrell Beason, Chief Operations Officer

The Board of Directors recessed for a break from 9:54 a.m. to 9:57 a.m.

11.

The Board next held an Executive Session commencing at 9:57 a.m. under Section 551.071 of the Texas Government Code to Consult with Legal Counsel on a Matter in Which the Duty of Counsel Under the Texas Disciplinary Rules of Professional Conduct Clearly Conflicts with Chapter 551, Texas Government Code; and Section 551.072 of the Texas Government Code to Deliberate the Purchase, Exchange, Lease or Value of Real Property.

Upon completion of the executive session at 10:10 a.m., the President reopened the meeting.

12.

With the recommendation of management, President King moved to approve authorization to acquire interests in the following described land, which are necessary for the public use and purpose of construction and operation of the Cedar Creek Pipeline Rehab Project, whether by eminent domain or by purchase.

A temporary construction easement situated in the B.F. Berry Survey, Abstract No. 98, the C. Self Survey, Abstract No. 994, and the A. Newton Survey, Abstract

No. 806, City of Midlothian, Ellis County, Texas, and being a portion of a tract of land described as Tract Two, Parcel 1 conveyed to Finch FP, LTD, F/K/A RB Finch Family Partnership, LTD. as recorded in Volume 1409, Page 781 of the Deed Records of Ellis County, Texas, and also being a portion of a tract of land described as Tract Two, Parcel 2 conveyed to Finch FP, LTD, F/K/A RB Finch Family Partnership, LTD. as recorded in Volume 1409, Page 781 of said Deed Records of Ellis County, Texas, and also being a portion of a tract of land described as Tract Eight, First Tract conveyed to Finch FP, LTD, F/K/A RB Finch Family Partnership, LTD. as recorded in Volume 1409, Page 781 of said Deed Records of Ellis County, Texas, and also being a portion of a tract of land described as Tract Eight, Second Tract conveyed to Finch FP, LTD, F/K/A RB Finch Family Partnership, LTD. as recorded in Volume 1409, Page 781 of said Deed Records of Ellis County, Texas, such tract being further described in the accompanying resolution and in the survey plat for Parcel 40, attached thereto. A written appraisal prepared by an independent, qualified real estate appraiser using standard accepted valuation techniques established the amount of \$62,600 as just compensation for the value of the property interests being acquired and the damages, if any, to the property owner's remaining property.

EXHIBIT "A"
TARRANT REGIONAL WATER DISTRICT
CEDAR CREEK SECTION 2 REPLACEMENT
PARCEL NO. 40-TCE

TEMPORARY CONSTRUCTION EASEMENT
B.F. BERRY SURVEY, ABSTRACT NO. 98
C. SELF SURVEY, ABSTRACT NO. 994
A. NEWTON SURVEY, ABSTRACT NO. 806
CITY OF MIDLOTHIAN
ELLIS COUNTY, TEXAS

Being a temporary construction easement situated in the B.F. Berry Survey, Abstract No. 98, the C. Self Survey, Abstract No. 994, and the A. Newton Survey, Abstract No. 806, City of Midlothian, Ellis County, Texas, and being a portion of a tract of land described as Tract Two, Parcel 1 conveyed to Finch FP, LTD, F/K/A RB Finch Family Partnership, LTD. as recorded in Volume 1409, Page 781 of the Deed Records of Ellis County, Texas, and also being a portion of a tract of land described as Tract Two, Parcel 2 conveyed to Finch FP, LTD, F/K/A RB Finch Family Partnership, LTD. as recorded in Volume 1409, Page 781 of said Deed Records of Ellis County, Texas, and also being a portion of a tract of land described as Tract Eight, First Tract conveyed to Finch FP, LTD, F/K/A RB Finch Family Partnership, LTD. as recorded in Volume 1409, Page 781 of said Deed Records of Ellis County, Texas, and also being a portion of a tract of land described as Tract Eight, Second Tract conveyed to Finch FP, LTD, F/K/A RB Finch Family Partnership, LTD. as recorded in Volume 1409, Page 781 of said Deed Records of Ellis County, Texas, said temporary construction easement being more particularly described by metes and bounds as follows:

COMMENCING at a 5/8 inch iron rod found for the southeast corner of said Tract Two, Parcel 2 and the southwest corner of said Tract Two, Parcel 1, said 5/8 inch iron rod also being in the north line of a tract of land conveyed to Arbors Development LLC. as recorded in Instrument No. 1715451 of the Official Public Records of Ellis County, Texas; THENCE North 88 degrees 43 minutes 13 seconds East, with the south line of said Tract Two, Parcel 1 and the north line of said tract of land conveyed to Arbors Development LLC., a distance of 449.68 feet to a calculated point for the southwest corner of a called 9.141 acre tract of land granted to Texas Department of Transportation as recorded in Instrument No. 2303564 of said Official Public Records of Ellis County, Texas, said calculated point being in the west line of Ovilla Road (variable width right-of-way), said calculated point also being the beginning of a curve to the right having a radius of 1,670.00 feet, a delta of 08 degrees 43 minutes 09 seconds, and whose chord bears North 06 degrees 49 minutes 33 seconds West, a chord distance of 253.89 feet; from which a 5 inch iron rod found for reference bears North 88 degrees 43 minutes 13 seconds East, a distance of 52.36 feet; THENCE Northerly, with said curve to the right, an arc distance of 254.14 feet to a calculated point for corner, said calculated point being in the southwesterly line of a 130' Pipeline Right-of-Way granted to Tarrant County Water Control and Improvement District Number One as recorded in

(Exhibit "A")

Volume 490, Page 197 of said Deed Records of Ellis County, Texas; THENCE North 03 degrees 22 minutes 14 seconds West, with the west line of said called 9.141 acre tract of land and with the west line of said Ovilla Road, a distance of 141.28 feet to a calculated point for the **POINT OF BEGINNING**, said calculated point being in the northeasterly line of said 130' Pipeline Right-of-Way, said calculated point also having grid coordinates of N=6,853,230.49 and E=2,468,653.64;

THENCE North 69 degrees 20 minutes 39 seconds West, with the northeasterly line of said 130' Pipeline Right-of-Way, passing at a distance of 447.56 feet, the west line of said Tract Two, Parcel 1 and the east line of said Tract Two, Parcel 2, and also passing at a distance of 2,062.99 feet, the north line of said Tract Two, Parcel 2, the south line of said Tract Eight, First Tract, the most easterly west corner of said 130' Pipeline Right-of-Way, and the east corner of a 130' Pipeline Right-of-Way granted to Tarrant County Water Control and Improvement District Number One as recorded in Volume 489, Page 553 of said Deed Records of Ellis County, Texas, and also passing at a distance of 4,140.49 feet, the west line of said Tract Eight, First Tract and the east line of said Tract Eight, Second Tract, in all, a distance of 4,322.28 feet to a calculated point for corner;

THENCE North 20 degrees 39 minutes 21 seconds East, a distance of 50.00 feet to a calculated point for corner, from which a 5/8 inch iron rod found for the northwest corner of said Tract Eight, Second Tract bears North 69 degrees 08 minutes 36 seconds West, a distance of 2,347.35 feet, said 5/8 inch iron rod being in the east line of Blackchamp Road (undefined width right-of-way);

THENCE South 69 degrees 20 minutes 39 seconds East, passing at a distance of 162.03 feet, the east line of said Tract Eight, Second Tract and the west line of said Tract Eight, First Tract, and also passing at a distance of 2,388.62 feet, the east line of said Tract Eight, First Tract and the west line of said Tract Two, Parcel Two, and also passing at a distance of 3,855.09 feet, the east line of said Tract two, Parcel 2, and the west line of said Tract Two, Parcel 1, in all a distance of 4,299.99 feet to a calculated point for corner in the west line of said called 9.141 acre tract of land and in the west line of said Ovilla Road;

THENCE South 03 degrees 22 minutes 14 seconds East, with the west line of said called 9.141 acre tract of land and with the west line of said Ovilla Road, a distance of 54.74 feet to the **POINT OF BEGINNING**, containing 215,557 square feet or 4.949 acres of land, more or less.

(Exhibit "A")

Notes:

- (1) A plat of same date herewith accompanies this legal description.
- (2) All bearings and coordinates are referenced to the Texas State Plane Coordinate System, NAD-83(2011), North Central Zone (4202). All distances and areas shown are surface utilizing a surface adjustment factor of 1.000072449.

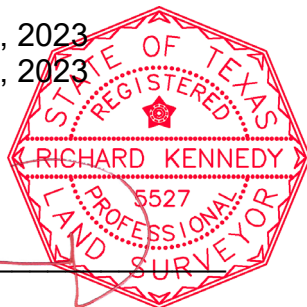
*** SURVEYOR'S CERTIFICATE ***


TO ALL PARTIES INTERESTED IN TITLE TO THE PREMISES SURVEYED, I DO HEREBY CERTIFY THAT THE ABOVE LEGAL DESCRIPTION WAS PREPARED FROM PUBLIC RECORDS AND FORM AN ACTUAL AND ACCURATE SURVEY UPON THE GROUNDS AND THAT SAME IS TRUE AND CORRECT.

September 27, 2022

Revised: December 11, 2023

Revised: December 20, 2023




Richard Kennedy
Registered Professional Land Surveyor
Texas No. 5527
Gorrondona & Associates, Inc.
Texas Firm No. 10106900

(Exhibit "A")

EXHIBIT "A"

PARCEL No. 40-TCE

MATCHLINE PAGE 5

TRACT TWO
PARCEL 2
FINCH FP, LTD
F/K/A
RB FINCH FAMILY
PARTNERSHIP, LTD.
VOLUME 1409, PAGE 781
D.R.E.C.T.

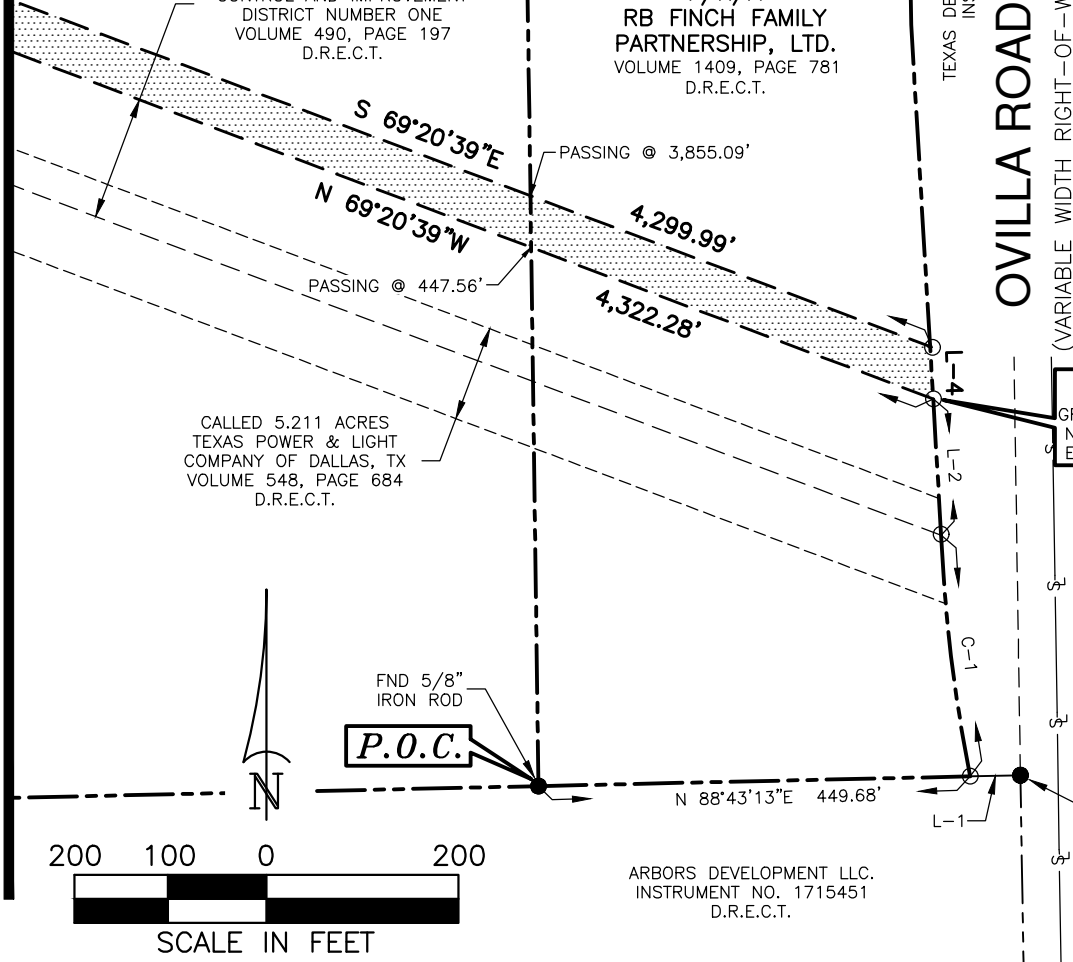
130' PIPELINE RIGHT-OF-WAY
TARRANT COUNTY WATER
CONTROL AND IMPROVEMENT
DISTRICT NUMBER ONE
VOLUME 490, PAGE 197
D.R.E.C.T.

B.F. BERRY SURVEY
ABSTRACT NO. 98

TRACT TWO
PARCEL 1
FINCH FP, LTD
F/K/A
RB FINCH FAMILY
PARTNERSHIP, LTD.
VOLUME 1409, PAGE 781
D.R.E.C.T.

CALLED 9.141 ACRES
TEXAS DEPARTMENT OF TRANSPORTATION
INSTRUMENT NO. 2303564
O.P.R.E.C.T.

OVILLA ROAD
(VARIABLE WIDTH RIGHT-OF-WAY)



CALLED 5.211 ACRES
TEXAS POWER & LIGHT
COMPANY OF DALLAS, TX
VOLUME 548, PAGE 684
D.R.E.C.T.

P.O.B.
GRID COORDINATE
N=6,853,230.49
E=2,468,653.64

FND 5/8"
IRON ROD
P.O.C.

FND 5/8"
IRON ROD



ARBORS DEVELOPMENT LLC.
INSTRUMENT NO. 1715451
D.R.E.C.T.

REVISED: DECEMBER 11, 2023 REVISED: DECEMBER 20, 2023



Tarrant Regional Water District

800 E. NORTHSIDE DRIVE • FORT WORTH, TEXAS 76102

CEDAR CREEK SECTION 2 REPLACEMENT

PARCEL NO. 40-TCE	TEMPORARY CONSTRUCTION EASEMENT
OWNER: FINCH FP, LTD, F/K/A RB FINCH FAMILY PARTNERSHIP, LTD.	
SURVEY: B.F. BERRY SURVEY, ABS. NO. 98, C. SELF SURVEY, ABS. NO. 994, A. NEWTON ABS. NO. 806	
LOCATION: CITY OF MIDLOTHIAN, ELLIS COUNTY, TEXAS	
ACQUISITION AREA: 215,557 SQUARE FEET OR 4.949 ACRES	
WHOLE PROPERTY ACREAGE: 893.101 ACRES (CALCULATED)	



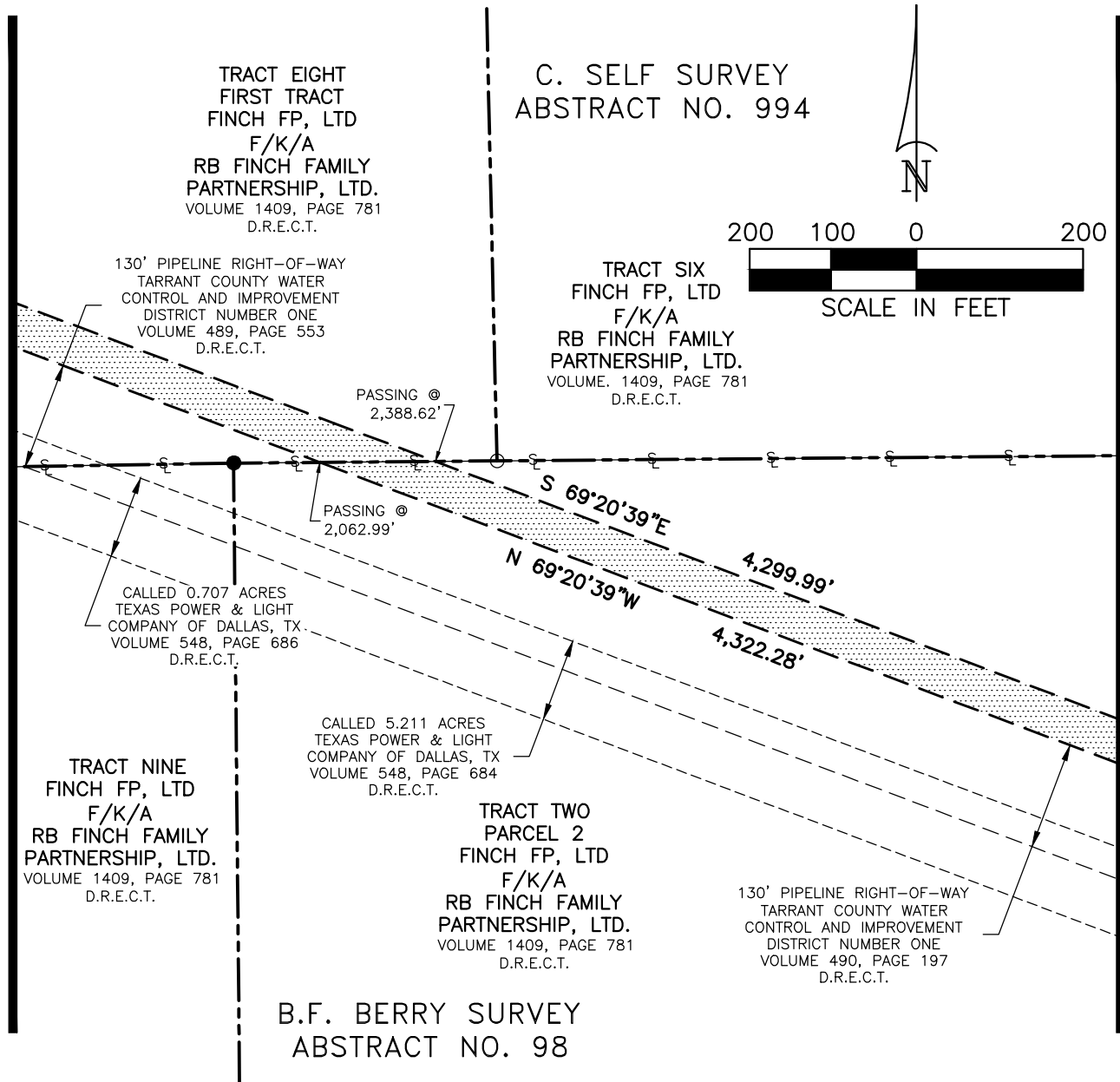
G&AI JOB NO. B&V_1901.00	DRAWN BY: BM	CAD FILE: P40_TCE_R02.DWG
SEPTEMBER 27, 2022	EXHIBIT A	SCALE: 1" = 200'

RICHARD KENNEDY
REGISTERED PROFESSIONAL LAND SURVEYOR
NO. 5527 TEXAS FIRM No. 10106900

EXHIBIT "A"
PARCEL No. 40-TCE

MATCHLINE PAGE 6

MATCHLINE PAGE 4



REVISED: DECEMBER 11, 2023 REVISED: DECEMBER 20, 2023



Tarrant Regional Water District

800 E. NORTHSIDE DRIVE • FORT WORTH, TEXAS 76102

CEDAR CREEK SECTION 2 REPLACEMENT

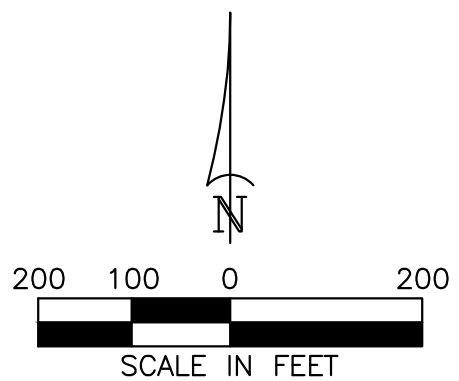
PARCEL NO. 40-TCE	TEMPORARY CONSTRUCTION EASEMENT
OWNER: FINCH FP, LTD, F/K/A RB FINCH FAMILY PARTNERSHIP, LTD.	
SURVEY: B.F. BERRY SURVEY, ABS. NO. 98, C. SELF SURVEY, ABS. NO. 994, A. NEWTON ABS. NO. 806	
LOCATION: CITY OF MIDLOTHIAN, ELLIS COUNTY, TEXAS	
ACQUISITION AREA: 215,557 SQUARE FEET OR 4.949 ACRES	
WHOLE PROPERTY ACREAGE: 893.101 ACRES (CALCULATED)	



G&A JOB NO. B&V_1901.00	DRAWN BY: BM	CAD FILE: P40_TCE_R02.DWG
SEPTEMBER 27, 2022	EXHIBIT A	SCALE: 1" = 200'

RICHARD KENNEDY
 REGISTERED PROFESSIONAL LAND SURVEYOR
 NO. 5527 TEXAS FIRM No. 10106900

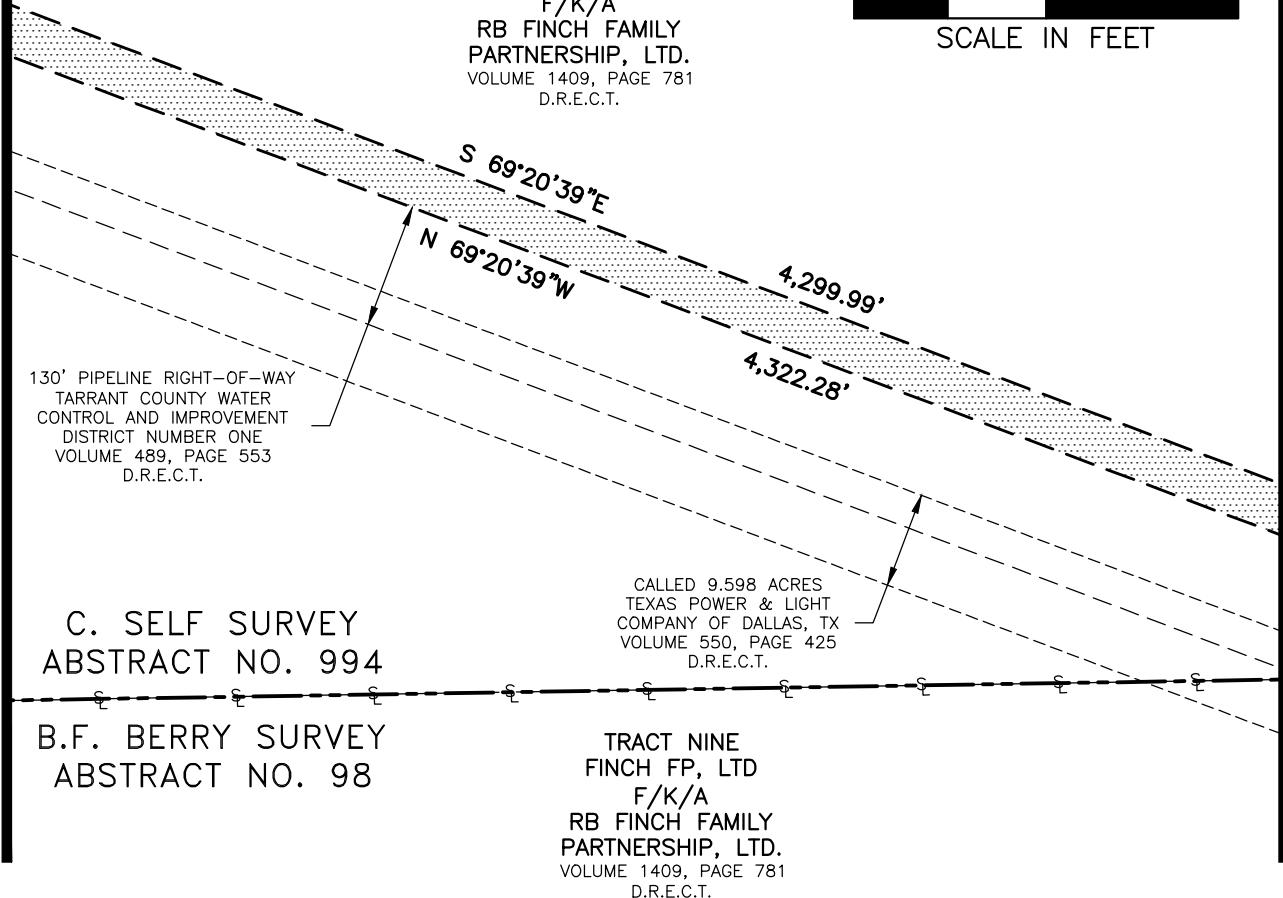
EXHIBIT "A"
PARCEL No. 40-TCE



TRACT EIGHT
 FIRST TRACT
 FINCH FP, LTD
 F/K/A
 RB FINCH FAMILY
 PARTNERSHIP, LTD.
 VOLUME 1409, PAGE 781
 D.R.E.C.T.

MATCHLINE PAGE 7

MATCHLINE PAGE 5



130' PIPELINE RIGHT-OF-WAY
 TARRANT COUNTY WATER
 CONTROL AND IMPROVEMENT
 DISTRICT NUMBER ONE
 VOLUME 489, PAGE 553
 D.R.E.C.T.

C. SELF SURVEY
 ABSTRACT NO. 994

CALLED 9.598 ACRES
 TEXAS POWER & LIGHT
 COMPANY OF DALLAS, TX
 VOLUME 550, PAGE 425
 D.R.E.C.T.

B.F. BERRY SURVEY
 ABSTRACT NO. 98

TRACT NINE
 FINCH FP, LTD
 F/K/A
 RB FINCH FAMILY
 PARTNERSHIP, LTD.
 VOLUME 1409, PAGE 781
 D.R.E.C.T.

REVISED: DECEMBER 11, 2023 REVISED: DECEMBER 20, 2023

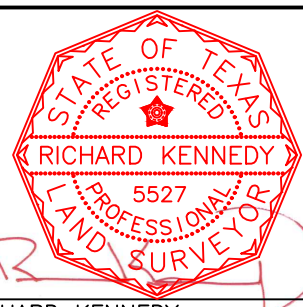


Tarrant Regional Water District

800 E. NORTHSIDE DRIVE • FORT WORTH, TEXAS 76102

**CEDAR CREEK
 SECTION 2 REPLACEMENT**

PARCEL NO. 40-TCE	TEMPORARY CONSTRUCTION EASEMENT
OWNER: FINCH FP, LTD, F/K/A RB FINCH FAMILY PARTNERSHIP, LTD.	
SURVEY: B.F. BERRY SURVEY, ABS. NO. 98, C. SELF SURVEY, ABS. NO. 994, A. NEWTON ABS. NO. 806	
LOCATION: CITY OF MIDLOTHIAN, ELLIS COUNTY, TEXAS	
ACQUISITION AREA: 215,557 SQUARE FEET OR 4.949 ACRES	
WHOLE PROPERTY ACREAGE: 893.101 ACRES (CALCULATED)	



G&A JOB NO. B&V_1901.00	DRAWN BY: BM	CAD FILE: P40_TCE_R02.DWG
SEPTEMBER 27, 2022	EXHIBIT A	SCALE: 1" = 200'

RICHARD KENNEDY
 REGISTERED PROFESSIONAL LAND SURVEYOR
 NO. 5527 TEXAS FIRM No. 10106900

EXHIBIT "A"

PARCEL No. 40-TCE

MATCHLINE PAGE 8

MATCHLINE PAGE 6

DONALD R. CHENEY
AND EDITH A. CHENEY
VOLUME 637, PAGE 726
D.R.E.C.T.

TRACT EIGHT
SECOND TRACT
FINCH FP, LTD
F/K/A
RB FINCH FAMILY
PARTNERSHIP, LTD.
VOLUME 1409, PAGE 781
D.R.E.C.T.

A. NEWTON SURVEY
ABSTRACT NO. 806

C. SELF SURVEY
ABSTRACT NO. 994

130' PIPELINE RIGHT-OF-WAY
TARRANT COUNTY WATER
CONTROL AND IMPROVEMENT
DISTRICT NUMBER ONE
VOLUME 489, PAGE 553
D.R.E.C.T.

TRACT EIGHT
FIRST TRACT
FINCH FP, LTD
F/K/A
RB FINCH FAMILY
PARTNERSHIP, LTD.
VOLUME 1409, PAGE 781
D.R.E.C.T.

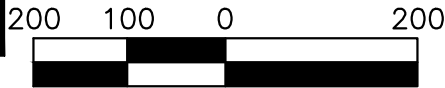
PASSING @
162.03'

PASSING @
4,140.49'

S 69°20'39"E
4,299.99'

N 69°20'39"W
4,322.28'

CALLED 9.598 ACRES
TEXAS POWER & LIGHT
COMPANY OF DALLAS, TX
VOLUME 550, PAGE 425
D.R.E.C.T.



SCALE IN FEET

REVISED: DECEMBER 11, 2023 REVISED: DECEMBER 20, 2023



Tarrant Regional Water District

800 E. NORTHSIDE DRIVE • FORT WORTH, TEXAS 76102

CEDAR CREEK SECTION 2 REPLACEMENT

PARCEL NO. 40-TCE	TEMPORARY CONSTRUCTION EASEMENT
OWNER: FINCH FP, LTD, F/K/A RB FINCH FAMILY PARTNERSHIP, LTD.	
SURVEY: B.F. BERRY SURVEY, ABS. NO. 98, C. SELF SURVEY, ABS. NO. 994, A. NEWTON ABS. NO. 806	
LOCATION: CITY OF MIDLOTHIAN, ELLIS COUNTY, TEXAS	
ACQUISITION AREA: 215,557 SQUARE FEET OR 4.949 ACRES	
WHOLE PROPERTY ACREAGE: 893.101 ACRES (CALCULATED)	

G&A JOB NO. B&V_1901.00	DRAWN BY: BM	CAD FILE: P40_TCE_R02.DWG
SEPTEMBER 27, 2022	EXHIBIT A	SCALE: 1" = 200'

RICHARD KENNEDY
REGISTERED PROFESSIONAL LAND SURVEYOR
NO. 5527 TEXAS FIRM No. 10106900

EXHIBIT "A"
PARCEL No. 40-TCE

DONALD R. CHENEY
 AND EDITH A. CHENEY
 VOLUME 637, PAGE 726
 D.R.E.C.T.

BLACKCHAMP ROAD
 (UNDEFINED WIDTH RIGHT-OF-WAY)

O. GRAGG SURVEY
 ABSTRACT NO. 426

A. NEWTON SURVEY
 ABSTRACT NO. 806

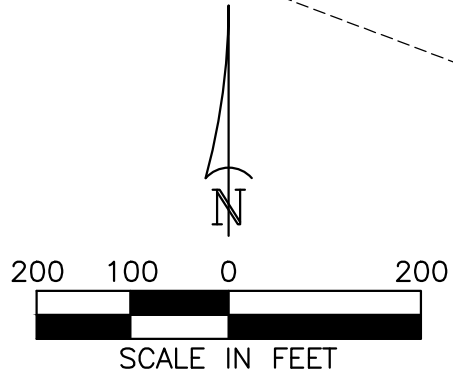
FND 5/8" IRON ROD BEARS
 N 69°08'36"W 2,347.35'

CALLED 9.598 ACRES
 TEXAS POWER & LIGHT
 COMPANY OF DALLAS, TX
 VOLUME 550, PAGE 425
 D.R.E.C.T.

TRACT EIGHT
 SECOND TRACT
 FINCH FP, LTD
 F/K/A
 RB FINCH FAMILY
 PARTNERSHIP, LTD.
 VOLUME 1409, PAGE 781
 D.R.E.C.T.

130' PIPELINE RIGHT-OF-WAY
 TARRANT COUNTY WATER
 CONTROL AND IMPROVEMENT
 DISTRICT NUMBER ONE
 VOLUME 489, PAGE 553
 D.R.E.C.T.

MATCHLINE PAGE 7



REVISED: DECEMBER 11, 2023 REVISED: DECEMBER 20, 2023



Tarrant Regional Water District

800 E. NORTHSIDE DRIVE • FORT WORTH, TEXAS 76102

**CEDAR CREEK
 SECTION 2 REPLACEMENT**

PARCEL NO. 40-TCE TEMPORARY CONSTRUCTION EASEMENT
 OWNER: FINCH FP, LTD, F/K/A RB FINCH FAMILY PARTNERSHIP, LTD.
 SURVEY: B.F. BERRY SURVEY, ABS. NO. 98, C. SELF SURVEY, ABS. NO. 994, A. NEWTON ABS. NO. 806
 LOCATION: CITY OF MIDLOTHIAN, ELLIS COUNTY, TEXAS
 ACQUISITION AREA: 215,557 SQUARE FEET OR 4.949 ACRES
 WHOLE PROPERTY ACREAGE: 893.101 ACRES (CALCULATED)

G&A JOB NO. B&V_1901.00 DRAWN BY: BM CAD FILE: P40_TCE_R02.DWG
 SEPTEMBER 27, 2022 EXHIBIT A SCALE: 1" = 200'

RICHARD KENNEDY
 REGISTERED PROFESSIONAL LAND SURVEYOR
 NO. 5527 TEXAS FIRM No. 10106900

EXHIBIT "A"

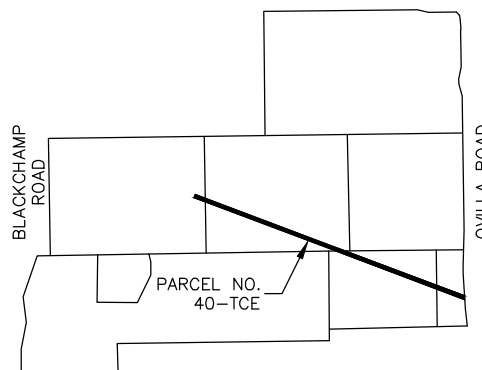
PARCEL No. 40-TCE

LEGEND

- ⊗ SET MONUMENTATION (SIZE AND TYPE NOTED)
- FND MONUMENTATION (SIZE AND TYPE NOTED)
- CALCULATED POINT
- — — — — PROPERTY/RIGHT-OF-WAY LINE
- - - - - EXISTING EASEMENT LINE
- - - - - PROPOSED EASEMENT LINE
- — — — — SURVEY/ABSTRACT LINE

CURVE TABLE					
CURVE	RADIUS	DELTA	CHORD BEARING	CHORD	ARC
C-1	1,670.00'	08°43'09"	N 06°49'33"W	253.89'	254.14'

LINE TABLE		
LINE	BEARING	DISTANCE
L-1	N 88°43'13"E	52.36'
L-2	N 03°22'14"W	141.28'
L-3	N 20°39'21"E	50.00'
L-4	S 03°22'14"E	54.74'



SUBJECT TRACT &
LOCATION OF EASEMENT

NOTES:

1. A LEGAL DESCRIPTION OF SAME DATE HEREWITH ACCOMPANIES THIS PLAT.
2. ALL BEARINGS AND COORDINATES ARE REFERENCED TO THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD-83(2011), NORTH CENTRAL ZONE (4202). ALL DISTANCES AND AREAS SHOWN ARE SURFACE UTILIZING A SURFACE ADJUSTMENT FACTOR OF 1.000072449.

REVISED: DECEMBER 11, 2023 REVISED: DECEMBER 20, 2023



Tarrant Regional Water District

800 E. NORTHSIDE DRIVE • FORT WORTH, TEXAS 76102

CEDAR CREEK SECTION 2 REPLACEMENT

PARCEL NO. 40-TCE TEMPORARY CONSTRUCTION EASEMENT

OWNER: FINCH FP, LTD, F/K/A RB FINCH FAMILY PARTNERSHIP, LTD.

SURVEY: B.F. BERRY SURVEY, ABS. NO. 98, C. SELF SURVEY, ABS. NO. 994, A. NEWTON ABS. NO. 806

LOCATION: CITY OF MIDLOTHIAN, ELLIS COUNTY, TEXAS

ACQUISITION AREA: 215,557 SQUARE FEET OR 4.949 ACRES

WHOLE PROPERTY ACREAGE: 893.101 ACRES (CALCULATED)

G&A JOB NO. B&V_1901.00 DRAWN BY: BM CAD FILE: P40_TCE_R02.DWG

SEPTEMBER 27, 2022 EXHIBIT A SCALE: 1" = 200'

RICHARD KENNEDY
REGISTERED PROFESSIONAL LAND SURVEYOR
NO. 5527 TEXAS FIRM No. 10106900

Lot Report

Lot File: \\gaines02\Active\Production\B&V_1901.00 - TRWD Cedar Creek\SURVEY\CAD\LOT\EASEMENTS.lot

Lot: P-40 TCE R01

Bearing Distance

N 69°20'39" W 4,322.28

N 20°39'21" E 50.00

S 69°20'39" E 4,299.99

S 03°22'14" E 54.74

Closure Error Distance> 0.0036 Error Bearing> S 17°46'03" E

Closure Precision> 1 in 2458064.9 Total Distance> 8727.02

215,557 SQ. FT.

4.949 ACRES

Bearing Distance

In addition, the General Manager of the District or his designee is authorized to take all steps which may be reasonably necessary to facilitate acquisition of the above-described properties for the Cedar Creek Pipeline Rehab Project, with title to be held in the name of TRWD, by purchase for the appraised value set forth above or through the commencement and prosecution of eminent domain proceedings, with title to be held in the name of TRWD, and in connection therewith to pay all reasonable and necessary costs incurred in connection with such acquisition, to deposit the amount of any special commissioners' award into the registry of the court in an eminent domain proceeding, and to institute and prosecute an appeal of any such award. Funding for this item is included in the Bond Fund. Director Team seconded the motion, and the votes were 5 in favor, 0 against.

13.

There were no future agenda items approved.

14.

The next board meetings were scheduled for July 25, 2024, at 9:00 a.m. (Board Budget Workshop); August 19, 2024 at 9:00 a.m. (Board Budget Workshop); and August 20, 2024 at 9:00 a.m.

15.

There being no further business before the Board of Directors, the meeting was adjourned.

President

Secretary

MINUTES OF A MEETING OF THE BOARD OF DIRECTORS OF
TARRANT REGIONAL WATER DISTRICT
HELD ON THE 25th DAY OF JULY 2024 AT 2:00 P.M.

The call of the roll disclosed the presence of the Directors as follows:

Present
Leah King
James Hill
Mary Kelleher
C.B. Team
Paxton Motheral

Also present were Dan Buhman, Alan Thomas, Darrel Andrews, Darrell Beason, Travis Bird, Linda Christie, Kelly Harper, Zach Hatton, Zachary Huff, Laramie LaRue, Wendy Lockhart, Mick Maguire, Jennifer Mitchell, Sandy Newby, Lupita Ornelas, Anne Sanchez, and Stephen Tatum of the Tarrant Regional Water District (District or TRWD).

President King convened the meeting with assurance from management that all requirements of the Texas Open Meetings Act had been met.

1.

All present were given the opportunity to join in reciting the Pledges of Allegiance to the U.S. and Texas flags.

2.

There were no requests from the public to address the Board of Directors during the Public Comment portion of the agenda.

3.

The Board of Directors discussed the proposed Fiscal Year 2025 Revenue Fund Budget.

4.

The Board of Directors did not meet in Executive Session.

5.

There were no future agenda items approved.

6.

The next board meeting was scheduled for August 19, 2024 at 9:00 a.m. (Board Budget Workshop); and August 20, 2024 at 9:00 a.m.

7.

There being no further business before the Board of Directors, the meeting was adjourned.

President

Secretary

TARRANT REGIONAL WATER DISTRICT

AGENDA ITEM 4

DATE: August 20, 2024

SUBJECT: Consider Approval of Consent Agenda

RECOMMENDATION:

Management recommends approval of the Consent Agenda.

Item: Consider Approval of Change in Calculation of Retainage for Richland-Chambers Lake Pump Station Backup Sodium Hypochlorite Feed Facility and Hydraulic Actuator Installation Project

Vendor: Archer Western Construction, LLC

Amount: Change in the calculation of the retainage being held to five percent of the contract price; the total current contract is \$4,408,350 with retainage to be held in the amount of \$220,417.50 / Bond Fund

Reviewed by: Construction and Operations Committee

In August 2023, the TRWD Board of Directors approved a contract with Archer Western Construction, LLC (Archer) for installation of a backup sodium hypochlorite feed facility and the installation of six hydraulic actuators on the pump discharge control valves at the Richland-Chambers Lake Pump Station. Archer has reached the 50 percent complete stage of the contract in July. All remaining contract payments are to be paid in full. However, any changes to the contract price by change order or alternate base bid work for the project will require adjustment to the retainage schedule.

Archer's performance has been satisfactory to date and has provided written Consent of Surety to the reduction in retainage. Management requests approval to cease retainage of future payments and hold retainage equal to five percent of the contract price. Management also requests that the General Manager or his designee be granted authority to execute all documents associated with the contract described herein.

Item: Consider Approval of Release of Retainage for ASR Well Demonstration Study - Well Drilling Project

Vendor: Hydro Resources Mid-Continent, Inc.

Amount: Release of retainage in the amount of \$172,664.50 / Bond Fund

Reviewed by: Construction and Operations Committee

Hydro Resources Mid-Continent, Inc. (Hydro Resources) successfully completed construction of the ASR Well Demonstration Study - Well Drilling Project on June 24, 2024 with no outstanding issues. As part of this contract, Hydro Resources drilled and installed the monitor well, drilled the ASR pilot hole, collected required groundwater samples and geotechnical cores, installed the ASR well, performed required testing and laboratory analyses, and completed necessary environmental and site work.

The next phase of the project is the surface facility construction package, which will include purchasing and installing downhole equipment. The next phase of the project must be completed before the ASR well can begin cycle testing, and ultimately become operational. Management plans to recommend future contracts and amendments to complete the next phase. For this reason, the contract with Hydro Resources will be left open for a potential amendment to complete some of the following phase work.

Consent of Surety to Reduction in or Partial Release of Retainage

OWNER
ARCHITECT
CONTRACTOR
SURETY
OTHER

AIA Document G707A -
Electronic Format

Bond No. 107847046

THIS DOCUMENT HAS IMPORTANT LEGAL CONSEQUENCES; CONSULTATION WITH AN ATTORNEY IS ENCOURAGED WITH RESPECT TO ITS COMPLETION OR MODIFICATION. AUTHENTICATION OF THIS ELECTRONICALLY DRAFTED AIA DOCUMENT MAY BE MADE BY USING AIA DOCUMENT D401.

TO OWNER:

(Name and address)

Tarrant Regional Water District
800 East North Side Drive
Fort Worth, TX 76102-1087

ARCHITECT'S PROJECT NO.:

CONTRACT FOR:

RC1 Backup Sodium Hypochlorite Feed Facility
and Hydraulic Actuator Installation

PROJECT:

(Name and address)

RC1 Backup Sodium Hypochlorite Feed
Facility and Hydraulic Actuator
Installation
CSP 23-145

CONTRACT DATED: August 15, 2023

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the

(Insert name and address of Surety)

Travelers Casualty and Surety Company
One Tower Square
Hartford, CT 06183

, SURETY,

on bond of

(Insert name and address of Contractor)

Archer Western Construction, LLC
1411 Greenway Drive
Irving, TX 75038

, CONTRACTOR,

hereby approves the reduction in or partial release of retainage to the Contractor as follows:

Reduction in Retainage at 50% Project Completion.

The Surety agrees that such reduction in or partial release of retainage to the Contractor shall not relieve the Surety of any of its obligations to

(Insert name and address of Owner)

Tarrant Regional Water District
800 East North Side Drive
Fort Worth, TX 76102-1087

, OWNER,

as set forth in said Surety's bond.

IN WITNESS WHEREOF, the Surety has hereunto set its hand on this date: July 26, 2024

(Insert in writing the month followed by the numeric date and year.)

Attest:

(Seal):

Travelers Casualty and Surety Company

(Surety)



AIA DOCUMENT G707A - CONSENT OF SURETY TO REDUCTION IN OR PARTIAL RELEASE OF RETAINAGE - 1994 EDITION - AIA - COPYRIGHT 1994 - THE AMERICAN INSTITUTE OF ARCHITECTS, 1735 NEW YORK AVENUE N.W., WASHINGTON D.C 20006-5292.. WARNING: Unlicensed photocopying violates U.S. copyright laws and is subject to legal prosecution. This document was electronically produced with permission of the AIA and can be reproduced without violation until the date of expiration as noted below.

Electronic Format G707A - 1994

User Document: G707A.CON -- 4/19/2000. AIA License Number 113522, which expires on 6/30/2000 -- Page #1

(Signature of authorized representative)

Joshua Smith, Attorney-in-Fact

(Printed name and title)

AIA DOCUMENT G707A - CONSENT OF SURETY TO REDUCTION IN OR PARTIAL RELEASE OF RETAINAGE - 1994 EDITION - AIA - COPYRIGHT 1994 - THE AMERICAN INSTITUTE OF ARCHITECTS, 1735 NEW YORK AVENUE N.W., WASHINGTON D.C 20006-5292.. WARNING; Unlicensed photocopying violates U.S. copyright laws and is subject to legal prosecution. This document was electronically produced with permission of the AIA and can be reproduced without violation until the date of expiration as noted below.

Electronic Format G707A - 1994

User Document: G707A.CON -- 4/19/2000. AIA License Number 113522, which expires on 6/30/2000 -- Page #2



**Travelers Casualty and Surety Company of America
Travelers Casualty and Surety Company
St. Paul Fire and Marine Insurance Company**

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **Joshua Smith** of **CHICAGO**, Illinois, their true and lawful Attorney(s)-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this **21st** day of **April**, 2021.



State of Connecticut

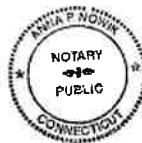
City of Hartford ss.

By: 
Robert L. Raney, Senior Vice President

On this the **21st** day of **April**, 2021, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of each of the Companies, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of said Companies by himself as a duly authorized officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission expires the **30th** day of **June**, 2026




Anna P. Nowik, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of each of the Companies, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, **Kevin E. Hughes**, the undersigned, Assistant Secretary of each of the Companies, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this **26th** day of **July**, 2024 .




Kevin E. Hughes, Assistant Secretary

**To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney(s)-in-Fact and the details of the bond to which this Power of Attorney is attached.**



Memo

TO: David Schroeder

FROM: Robert Allen

COPY: Coy Veach

DATE: August 07, 2024

SUBJECT: Consider Approval of Release of Retainage to Hydro-Resources Mid-Continent, Inc. for the ASR Well Demonstration Study – Well Drilling Project.

Hydro-Resources Mid-Continent, Inc. has successfully completed all of the work associated with the above-referenced project. The Consent of Surety to the release of retainage was presented when the project reached 50% completion.

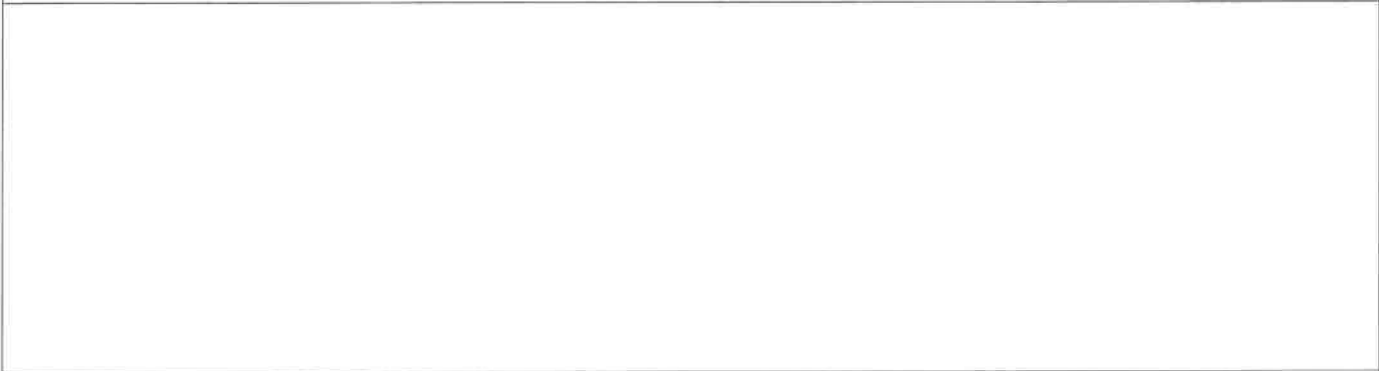
It is recommended that the current retainage in the amount of \$172,664.50 be released at this time.

Consent of Surety to Reduction in Retainage

Project:	<u>ASRW</u>	Project Number:	<u>5637</u>
Owner:	<u>Tarrant Regional Water District</u>		<u>MDC-R-25894</u>
Contractor:	<u>Hydro Resources Mid-Continent, Inc.</u>		<u>TCW18226</u>
Engineer:	<u>Freese and Nichols, Inc.</u>		

The Surety Company, on bond of the Contractor listed above for the referenced Project, in accordance with the Contract Documents, hereby approves a reduction of or partial release of retainage to the Contractor in the amount shown below and agrees that payment of this amount to the Contractor shall not relieve the Surety Company of any of its obligations to the Owner under the terms of the Contract, and as set forth in said Surety Company's bond.

Surety Company agrees to the reduction in retainage to \$ 0 . 0 0



Date: January 5, 2024

Name of Surety Company: Arch Insurance Company

Signature: 
Authorized Representative

Title: Rita G. Gulizo, Attorney-in-Fact

Address: Harborside 3, 210 Hudson St., Suite 300
Jersey City, NJ 07311-1107

Email: rgulizo@bmbinc.com
(Attach Power of Attorney and place surety seal below)

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated. Not valid for Note, Loan, Letter of Credit, Currency Rate, Interest Rate or Residential Value Guarantees.

POWER OF ATTORNEY

Know All Persons By These Presents:

That the Arch Insurance Company, a corporation organized and existing under the laws of the State of Missouri, having its principal administrative office in Jersey City, New Jersey (hereinafter referred to as the "Company") does hereby appoint:

Ashley Britt, Barry K. McCord, David T. Miclette, Jennifer Mitchell, Lacey Hitchcock, Lucas Lomax, Nikole Jeannette, Robert C. Davis, Robert M. Overbey, Jr., Stacey Bosley, Stacy Owens and Will Duke of Houston, TX (EACH) Norma Toups and Rita G. Gulizo of New Orleans, LA (EACH)

its true and lawful Attorney(s)-in-Fact, to make, execute, seal, and deliver from the date of issuance of this power for and on its behalf as surety, and as its act and deed: Any and all bonds, undertakings, recognizances and other surety obligations, in the penal sum not exceeding One Hundred Fifty Million Dollars (\$150,000,000.00). This authority does not permit the same obligation to be split into two or more bonds In order to bring each such bond within the dollar limit of authority as set forth herein.

The execution of such bonds, undertakings, recognizances and other surety obligations in pursuance of these presents shall be as binding upon the said Company as fully and amply to all intents and purposes, as if the same had been duly executed and acknowledged by its regularly elected officers at its principal administrative office in Jersey City, New Jersey.

This Power of Attorney is executed by authority of resolutions adopted by unanimous consent of the Board of Directors of the Company on August 31, 2022, true and accurate copies of which are hereinafter set forth and are hereby certified to by the undersigned Secretary as being in full force and effect:

"VOTED, That the Chairman of the Board, the President, or the Executive Vice President, or any Senior Vice President, of the Surety Business Division, or their appointees designated in writing and filed with the Secretary, or the Secretary shall have the power and authority to appoint agents and attorneys-in-fact, and to authorize them subject to the limitations set forth in their respective powers of attorney, to execute on behalf of the Company, and attach the seal of the Company thereto, bonds, undertakings, recognizances and other surety obligations obligatory in the nature thereof, and any such officers of the Company may appoint agents for acceptance of process."

This Power of Attorney is signed, sealed and certified by facsimile under and by authority of the following resolution adopted by the unanimous consent of the Board of Directors of the Company on August 31, 2022:

VOTED, That the signature of the Chairman of the Board, the President, or the Executive Vice President, or any Senior Vice President, of the Surety Business Division, or their appointees designated in writing and filed with the Secretary, and the signature of the Secretary, the seal of the Company, and certifications by the Secretary, may be affixed by facsimile on any power of attorney or bond executed pursuant to the resolution adopted by the Board of Directors on August 31, 2022, and any such power so executed, sealed and certified with respect to any bond or undertaking to which it is attached, shall continue to be valid and binding upon the Company. In Testimony Whereof, the Company has caused this instrument to be signed and its corporate seal to be affixed by their authorized officers, this 12th day of September, 2023.

Attested and Certified

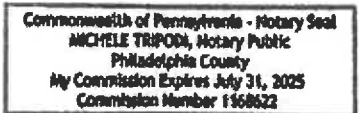
Regan A. Shulman, Secretary



Arch Insurance Company
Stephen C. Ruschak, Executive Vice President

STATE OF PENNSYLVANIA SS
COUNTY OF PHILADELPHIA SS

I, Michele Tripodi, a Notary Public, do hereby certify that Regan A. Shulman and Stephen C. Ruschak personally known to me to be the same persons whose names are respectively as Secretary and Executive Vice President of the Arch Insurance Company, a Corporation organized and existing under the laws of the State of Missouri, subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that they being thereunto duly authorized signed, sealed with the corporate seal and delivered the said instrument as the free and voluntary act of said corporation and as their own free and voluntary acts for the uses and purposes therein set forth.



Michele Tripodi, Notary Public
My commission expires 07/31/2025

CERTIFICATION

I, Regan A. Shulman, Secretary of the Arch Insurance Company, do hereby certify that the attached Power of Attorney dated September 12, 2023 on behalf of the person(s) as listed above is a true and correct copy and that the same has been in full force and effect since the date thereof and is in full force and effect on the date of this certificate; and I do further certify that the said Stephen C. Ruschak, who executed the Power of Attorney as Executive Vice President, was on the date of execution of the attached Power of Attorney the duly elected Executive Vice President of the Arch Insurance Company.

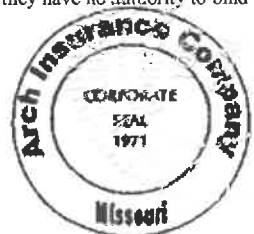
IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seal of the Arch Insurance Company on this 5th day of January, 2024.

Regan A. Shulman, Secretary

This Power of Attorney limits the acts of those named therein to the bonds and undertakings specifically named therein and they have no authority to bind the Company except in the manner and to the extent herein stated.

PLEASE SEND ALL CLAIM INQUIRIES RELATING TO THIS BOND TO THE FOLLOWING ADDRESS:

Arch Insurance - Surety Division
3 Parkway, Suite 1500
Philadelphia, PA 19102



To verify the authenticity of this Power of Attorney, please contact Arch Insurance Company at SuretyAuthentic@archinsurance.com
Please refer to the above named Attorney-In-Fact and the details of the bond to which the power is attached.

TARRANT REGIONAL WATER DISTRICT

AGENDA ITEM 5

DATE: August 20, 2024

SUBJECT: Consider Approval of Contract with Kennedy Jenks Consultants, Inc. for Design of 4.42 Miles of Cedar Creek Section 2 Phase 2 Pipeline Replacement in the Kennedale to Mansfield Area

FUNDING: Bond Fund

RECOMMENDATION:

Management recommends approval of a contract **in an amount not-to-exceed \$4,168,753** with Kennedy Jenks Consultants, Inc. for engineering design services for the removal and replacement of approximately 4.42 miles of the Cedar Creek Pipeline. These engineering services include preliminary design investigations, final design plans and specifications, and procurement phase services.

DISCUSSION:

Section 2 of the Cedar Creek pipeline conveys water from the Waxahachie Pump Station to the Kennedale Balancing Reservoir. It can also convey IPL water through the S2x12 Interconnect. Phase 2 of the Cedar Creek Section 2 Pipeline Replacement project will continue the replacement of the 50-year-old 72" prestressed concrete cylinder pipe with 102" welded steel pipe. In addition to the added water delivery capacity benefit, the 4.42 miles from Kennedale Balancing Reservoir to Mouser Way would replace several areas with high likelihood and consequence of failure. This section of pipeline has 125 out of 984 pipes with defects (13%), and 15 of those pipes are a repair priority 1, which means the pipe has the potential for failure based on risk analysis. This entire section of pipeline was installed in 1971 and is also approaching the end of its useful life. If a catastrophic failure should occur, the surrounding community would be negatively impacted, so executing this project will remove additional hazards and improve community safety. Moreover, the loss of this section of the pipeline due to a pipe failure would negatively impact the District's ability to deliver water to several primary customer cities fed directly from the pipeline.

The Request for Statement of Qualifications was solicited per statute (Texas Government Code Chapter 2254) and ten submittals were received. All ten submittals included in the attached list of submitting firms were reviewed and evaluated, and the top four scoring firms were interviewed in person. Kennedy Jenks was deemed to be the most qualified firm for this project.

Kennedy Jenks, is a prime, non-certified business. It has subcontracted portions of the contract resulting in an overall Diverse Business participation commitment of 21%.

These engineering services will take place through the next two and half years with construction planned to begin in the winter of 2027.

This item was reviewed by the Construction and Operations Committee on August 15, 2024.

Submitted By:

Jason Gehrig, P.E.
Infrastructure Engineering Director



List of Submitting Firms

RFSOQ No. 24-087

Engineering Services for Cedar Creek Section 2 Replacement, Cedar Creek Section 4 Replacement, Section 1D & 1E Pipelines and Arlington Outlet Improvements

Due Date and Time:	March 26, 2024, at 2:00 p.m. CT
---------------------------	---------------------------------

Name of Firm
Aurora Technical Services, LLC
Black & Veatch
Freese & Nichols
Garver
Hazen
HDR
Jacobs Engineering Group
Kennedy Jenks
Lockwood, Andrews, & Newman, Inc
STV Infrastructure

LIST OF SUBMITTING FIRMS

RFSOQ 24-087 ENGINEERING SERVICES FOR CEDAR CREEK SECTION 2 REPLACEMENT, CEDAR CREEK SECTION 4 REPLACEMENT, SECTION 1D & 1E PIPELINES AND ARLINGTON OUTLET IMPROVEMENTS

August 2, 2024

Courtney Jalbert
Infrastructure Integrity Manager
Tarrant Regional Water District
800 East Northside Drive
Fort Worth, Texas 76102

Subject: Proposal for Professional Engineering Services
Cedar Creek Section 2 Phase 2 Pipeline Replacement Project
K/J Proposal No.: B200561/33292

Dear Ms. Jalbert:

Kennedy Jenks Consultants (Kennedy Jenks) is pleased to present this proposal to Tarrant Regional Water District (TRWD) for providing professional engineering services for the Cedar Creek Section 2 Phase 2 Pipeline Replacement Project.

Background

The Cedar Creek 72-inch pre-stressed concrete cylinder pipeline (PCCP) is a 74-mile raw water line that begins at Cedar Creek and ends at the Rolling Hills Booster Pump Station owned by Tarrant Regional Water District (TRWD). TRWD identified various sections of the Cedar Creek pipeline to be replaced due to the distressed condition of the pipeline, risk of failure, and added water delivery capacity benefit. The project scope of services consists of the replacement of a portion of Section 2 of the Cedar Creek pipeline. Section 2 of the Cedar Creek pipeline conveys water from the Waxahachie Pump Station to the Kennedale Balancing Reservoir (KBR). The pipeline can also convey the Integrated Pipeline (IPL) water through the S2x12 Interconnect. The Cedar Creek Section 2 Phase 2 project consists of the replacement of approximately 4.42 miles of existing 72-inch raw water pipeline with a 102-inch diameter spiral welded steel pipe. The Cedar Creek Section 2 Phase 2 pipeline extends from Mouser Way in Mansfield to the Kennedale Balancing Reservoir (KBR). The existing pipeline is installed in a 130-foot-wide easement shared with the 90-inch Richland Chambers (RC) pipeline.

Scope of Services

The proposed scope of services is based on Kennedy Jenks' current understanding of the requirements. Kennedy Jenks will perform the following services:

Task 1: Project Management Services

The objective of Task 1 is to develop and implement management procedures and actions to facilitate the delivery of services and deliverables to TRWD. This task consists of project

monitoring, administration, and project quality assurance/quality control (QA/QC) activities as detailed below.

Task 1.1: Project Set-Up

Kennedy Jenks will set up the project within our accounting and filing systems and issue project initial internal documents to our design team, outlining the scope and budget.

Task 1.2: Project Management and Quality Assurance/Quality Control

Task 1.2.1: Project Management and Administration

Kennedy Jenks will provide project management services to execute the work. This will consist of project administration related to schedule control, budget control, scope management, and communication and coordination of project activities with TRWD and Kennedy Jenks' project team including subconsultants. Kennedy Jenks will also develop and maintain a major decisions log throughout the design phase of the Project. Kennedy Jenks will share, manage, and store all project related documents on TRWD's project portal site. All data transfers will take place within the TRWD project portal, not through email. All invoicing will be handled through the project site as well.

Task 1.2.2: Project Management Plan and Risk Register

Kennedy Jenks will develop a Project Management Plan (PMP) to define procedures and processes used to control the project through all phases. The Project Management Plan will be submitted at the beginning of the project. The Project Management Plan will include:

- Project Description
- Scope of Work (from contract)
- Work Plan
- Progress Evaluation
- Quality Control Plan (Task 1.3.1)
- Communications Plan
- Documentation Plan
- Change Management Plan
- Subcontractors
- Cost Estimates
- Schedule Management Plan

A Risk Register and Mitigation Plan (Risk Register) will be developed at the start of the project and will be updated as the preliminary and final design phases progress. The Risk Register will be updated on a monthly basis or as new risks are identified.

Deliverables:

1. Project Management Plan, draft and final, (Electronic, Adobe format).
2. Risk Register (Electronic, Adobe format).

Task 1.2.3: Project Schedule

Kennedy Jenks will prepare and submit a baseline of the project schedule and update the schedule on a monthly basis during the preliminary design and final design phases. Kennedy Jenks will prepare project schedules in Microsoft Project format. The schedule for design and procurement phase services is expected to be 29-month duration through the end of 2026. The baseline schedule will be used to develop a projected engineering expenditures curve. The schedule will include monthly meetings, 30% and 60% preliminary design, local permitting and utility coordination, coordination with environmental consultant (FNI) (which NWP-58 is assumed for environmental permitting), 90% and final design, procurement, construction, and startup. Kennedy Jenks will include two weeks for TRWD to review each deliverable. The schedule will include anticipated periods for land and temporary easement acquisition and environmental permit approvals.

Deliverables:

1. Project Baseline Schedule (Electronic, Adobe format).
2. Monthly Schedule Updates (Electronic, Adobe format).

Task 1.2.4: Monthly Status Report

Kennedy Jenks will submit a monthly status report with each invoice that provides a bulleted list of work completed and the estimated earned value of the work based upon the fee estimate. Kennedy Jenks will indicate upcoming tasks to be accomplished in the coming month, and include tasks needed to be accomplished by TRWD staff to assist with project progress.

Deliverables:

1. Monthly Status Report (Electronic, Adobe format).

Task 1.2.5: Project Accounting

Invoices will be prepared and submitted electronically on a monthly basis. Invoices will include:

- a detailed breakdown of staff effort by task;
- hours per day per person;
- a summary of expenditures to date;
- percent complete to date by task;
- budget amount remaining; and
- earned value per task.
- monthly status report.

Based on the fee and the proposed baseline schedule, Kennedy Jenks will submit a projected spending plan that can be compared to the earned value and actual cost to indicate the current status of the project. Kennedy Jenks will provide a monthly cash flow schedule to determine time frame for expected project expenditures.

Deliverables:

1. Monthly Invoices and Activity Summary (Electronic, Adobe format).
2. Spending Plan (Electronic, Adobe format)
3. Monthly Cash Flow Schedule

Task 1.2.6: Project Meetings

Kennedy Jenks will facilitate monthly progress meetings to review project status and upcoming milestones for the design and procurement phase services. Twenty-nine (29) monthly progress meetings with an expected duration of 1-hour each, attended by up to 3 Kennedy Jenks staff have been assumed through the design and procurement phases with meetings split evenly between in-person and virtually. A total of four (4) two-hour, in-person meetings attended by up to 3 Kennedy Jenks staff for Project Kick-off, design criteria review and confirmation, construction initiation and project close-out are included in this task.

In addition, Kennedy Jenks will facilitate meetings and workshops for seven (7) milestones and decision points. Milestone meetings will be held at TRWD offices. The meetings are anticipated to have a 3-hour duration with preparation of agenda and minutes and travel time for an additional 3 hours per milestone meeting. Each milestone meeting will be attended by up to 3 Kennedy Jenks staff. Kennedy Jenks will schedule meetings for the following milestones:

- Project Kick-Off
- Risk Review Workshop
- Preliminary Engineering Report and 30% Design Draft Submittal (included in Task 3.4)
- Preliminary Engineering Report and 30% Design Final Submittal (included in Task 3.4)
- 60%, 90%, and Issue for Bid (IFB)/ Final Design Submittals
- Construction Initiation
- Project Closeout

Kennedy Jenks will issue agendas at least two (2) business days in advance of the meeting. Kennedy Jenks will take notes, review action items, and distribute minutes within two (2) business days after each meeting.

Deliverables:

1. Agenda and meeting minutes (Electronic, Adobe format).

Task 1.2.7: Internal Coordination Kick-off and Weekly Calls

Kennedy Jenks will conduct one internal kick-off meeting to discuss internal roles and responsibilities, project scope, schedule, budget, data needs, and communication protocols. It is assumed the meeting will have a 1-hour duration and will be attended by up to four (4) Kennedy Jenks staff. Kennedy Jenks will conduct weekly internal coordination calls that will include a review of progress, discussion of items requiring feedback, list of outstanding issues requiring resolution, status of scope, schedule and budget, and review of risks. The progress meetings are anticipated to have a 1-hour duration and will be attended by up to four (4) Kennedy Jenks staff.

For the purposes of this proposal, a total of sixty (60) bi-weekly coordination calls are assumed over the assumed 27-month design schedule.

Task 1.3: Quality Assurance and Quality Control

Task 1.3.1: Quality Management Plan

Kennedy Jenks will develop and implement a Quality Assurance and Quality Control (QA/QC) plan that addresses how the quality of information will be managed before incorporating into the design, and how each deliverable will be reviewed. The QA/QC plan will be submitted early in the project.

Task 1.3.2: Quality Assurance/Quality Control Monitoring and Project Reviews

Kennedy Jenks will conduct an in-house Concept and Criterion (C&CR) meeting early in the project to obtain focused technical input from senior staff based on their experience from other similar projects. Kennedy Jenks uses experienced senior staff, familiar with, but not directly involved in the project work, to provide independent QA/QC review of work products and project deliverables. Each technical deliverable will receive a thorough QA/QC review by a senior Kennedy Jenks staff member not involved in the day-to-day execution of the project prior to submission to TRWD.

Deliverables:

1. QA/QC Plan (Electronic, Adobe format).

Task 1.4: Coordination Calls

Kennedy Jenks will provide coordination and communications between the TRWD Project Management staff and the Consultant staff to keep the project team informed of the Project's progress on key issues and decisions. Kennedy Jenks will inform TRWD of subconsultant activities and relay feedback from TRWD staff affecting their work. Kennedy Jenks will coordinate with TRWD staff and separately contracted specialized support services consultants, such as Cathodic Protection (HDR), Specialized Quality Assurance Inspections, Environmental (FNI), Specialized Pipeline Structural Analysis, and/or Hydraulic Modeling (Hazen & Sawyer). Two (2) meetings with each of the specialized support services consultants are anticipated for a total of ten (10) meetings. These meetings are expected to be held virtually via a Teams call.

Task 2: Data Collection and Field Investigations

The data collection and field investigations phase consist of the following tasks:

Task 2.1: Geotechnical Investigations and Report

HVJ Associates (HVJ) will be retained as a subconsultant to provide geotechnical services. HVJ will conduct geotechnical field investigations, perform laboratory testing on soil samples collected, and prepare a Geotechnical Report. Kennedy Jenks will obtain right of entry from public and private landowners to allow geotechnical investigations and inspections services to be performed. Kennedy Jenks will also coordinate the collection and shipping of soil samples obtained for the corrosion control engineering team (HDR).

Task 2.1.1: Geotechnical Investigations

Geotechnical borings will be conducted along the proposed pipeline alignment and potential trenchless crossing. A brief Boring Location Plan will be prepared by Kennedy Jenks and HVJ. Up to 12 borings will be drilled, as described below.

- Pipeline explorations will extend to a depth of thirty (30) feet in depth for six (6) bore hole locations where open-cut pipeline installation is anticipated, and fifty (50) feet in depth for six (6) bore hole locations in areas where tunneling is anticipated.
- Six (6) borings will be sent to laboratory of the cathodic protection consultant for testing.

Task 2.1.2: Laboratory Testing

The laboratory testing will be conducted on selected samples that are representative of the materials obtained during the field exploration. The tests will be used to evaluate and classify the soils, identify subsurface site characteristics, soil strength parameters, soil chemical characteristics and provide data for analysis. Laboratory tests will consist of the following:

- Moisture content,
- Percent passing No. 200 sieve,
- Atterberg Limits,
- Sieve and hydrometer analysis,
- Unconsolidated undrained (UU) triaxial tests,
- One -dimension Free swells
- Soil samples collected approximately every ½ mile will be sent to the cathodic protection consultant's (HDR) laboratory to perform chemical analysis for corrosion control:
 - Resistivity
 - pH
 - Electrical Conductivity
 - Chemical Analysis (Cations and Anions)
 - Ammonia
 - Nitrate
 - Sulfide and
 - Reducing Oxidation Potential (Redox)

All the field and laboratory tests will be performed according to ASTM standards, where applicable, or with other established procedures. Results of the field and laboratory data will be used to provide geotechnical recommendations for the project.

Task 2.1.3: Geotechnical Report

The Geotechnical Report will include information collected from rotary boreholes, site investigations, geologic reconnaissance, piezometers, and results of field and laboratory testing. The following items will be included in the Geotechnical Report:

- Plan of borings,
- Table of laboratory results,
- Boring logs,
- Generalized subsurface conditions and site geology,

- Groundwater level observations/monitoring results,
- Pipeline design and construction recommendations:
 - Open cut and tunnelling installation
 - Dewatering considerations
- Earthwork recommendations,
- Construction considerations,
- Pavement design

A draft Geotechnical Report will be prepared and submitted to TRWD for the review and comment. The final Geotechnical Report will incorporate changes that commensurate with comments received and a final version submitted.

Deliverables:

1. Draft Geotechnical Report (Electronic, Adobe format).
2. Final Geotechnical Report (Electronic, Adobe format).

Task 2.2: Topographic and Boundary Survey

Task 2.2.1: Topographic and Field Survey and Mapping

Spooner & Associates, Inc., as a subconsultant to Kennedy Jenks, will provide surveying and mapping for the project. Line-type and symbology will follow TRWD CAD Standards. All data will be provided with horizontal control tied to, and developed in Texas State Plane Coordinates, North Central Zone (4202) referenced to North American Datum (NAD) 1983 and North American Vertical Datum (NAVD) 1988. Provide surface adjustment factor. The Vertical control will be based GPS derived Ellipsoid Heights and adjusted to NAVD 88 elevations utilizing local NGS monumentation.

Task 2.2.2: Right-of Entry Services

Spooner & Associates, Inc. will obtain right of entry (ROE) from public and private landowners to allow surveying services to be performed. ROE permissions will be prepared and signed by the landowner prior to entry. Letters or other materials seeking ROE will contain explicit reference to the kinds of surveying activities being requested and an indication of the impacts (if any) that will result from performance of these services. The following will be performed for right of entry services.

- Research existing ownership for project affected property via the Central Appraisal District.
- Prepare ROE letters and send them via certified mail, including a return form from signed property access verification.
- Follow up with unresponsive owners and send second letters, where necessary.
- Prepare and maintain a spreadsheet and Google Earth file illustrating ROE status during the Surveying phase of the project.

Task 2.2.3: Property Boundary Survey

Kennedy Jenks subconsultant, Spooner & Associates, will conduct property boundary survey for all parcels adjacent to the Cedar Creek Section II pipeline within the project limits, and obtain copies of plats, easements, and deeds. Subconsultant will locate sufficient monumentation to establish boundary/right-of-way easement lines for all parcels along the project corridor and prepare a final property/ROW/control base map.

Task 2.3: Right-of-Way and Easement Instrument Services

Kennedy Jenks subconsultant, Spooner & Associates, Inc. will prepare metes and bounds descriptions with accompanying map exhibit for permanent and temporary instruments for up to 15 instruments. All documents will include NAD83 GRID coordinates for the point of beginning, horizontal scaling factors, and basis of bearing information.

Deliverables:

1. Draft and final signed and sealed legal descriptions and exhibits for up to fifteen (15) easements (Electronic, Adobe PDF format).
2. GIS data files of all right-of-way boundary files following TRWD's GIS standards (Electronic).

Task 2.4: Subsurface Utility Engineering

Kennedy Jenks subconsultant, Yellow Rose Mapping LLC, will perform Subsurface Utility Engineering (SUE) per ASCE standard 38-02. The following SUE services will be provided:

- SUE Quality Level A (QL "A"). QL "A" will be performed at thirty (30) locations. All test holes will be surveyed using project control point data. Pothole depths are as follows:
 - 20 will be a depth of 4 feet or less.
 - 10 will be a depth greater than 4 feet.
- SUE Quality Level B (QL "B"). Utilities to be designated include gas, telecommunications, electric, traffic signals, storm, water, and sanitary sewer. Designation will be performed 50' each side of the existing Cedar Creek Section 2 Pipeline alignment. Designating marks will be surveyed using project control point data.
- Sue Quality Level "C" and "D" (QL "C" and "D"). This consists of mapping utility information utilizing existing utility records and information obtained by surveying above-ground utility features.

Deliverables:

1. Yellow Rose Mapping LLC summary sheet of all test hole coordinate data and depth information (Electronic, Adobe format).
2. GIS data files for all collected SUE data following TRWD's GIS standards (Electronic).

Task 2.5: Soil Sampling

A plan for Environmental soil sampling will be developed and implemented to sample soils anticipated to have environmentally impacted soils to determine whether or not potential

contaminants have impacted the proposed pipe alignment and/or the lateral extent of impacts identified along the alignment. The sampling plan will consist of soil matrix to evaluate each site for the chemicals of concern identified/suspected. The plan will include Kennedy Jenks' Site-specific Health and Safety Plan for use by its employees during soil sampling activities. Kennedy Jenks will obtain up to five (5) soil samples at locations where chemicals of concern are suspected. Soil samples will be sent to a laboratory for testing and analysis of chemicals of concern.

A summary documenting the nature and extent of impacts identified for each site in relation to the trench area proposed for the piping alignment will be included in the Preliminary Engineering Report (PER). The summary will include results of the soil sampling, a summary table of chemicals of concern, and sample locations identified on a map with the estimated extent of contamination along the alignment identified.

Deliverables:

1. Summary and results will be included in PER Task 3.2, (Electronic, Adobe format).

Task 2.6: Data Collection and Review

Task 2.6.1: Data Collection and Review

Kennedy Jenks will review data provided by TRWD. Data that will be reviewed, as provided by TRWD, may include record drawings, GIS data, hydraulic modeling information and hydraulic calculations, and technical memoranda developed by others. Kennedy Jenks will utilize GIS data and hydraulic calculation and risk analysis models provided by TRWD for the purposes of review and recommendation of the proposed project scope and pipeline replacement plan.

Task 2.6.2: Site Visits

Kennedy Jenks will perform two (2) site visits of the project site to conduct field reconnaissance of the project site, review existing conditions and collect photographs of the overall site and in the areas of proposed improvements. One site visit will be performed between preliminary design and the 60% design submittal. A second site visit will be conducted during the preparation of the 90% design documents. Site visits are anticipated to have a 4-hour duration and will be attended by up to three (3) Kennedy Jenks staff and staff from Mott and Kimley Horn. Including travel time and preparation for site visits and site visit summary notes, each site visit is assumed to take 7-hours total.

Task 3: Preliminary Design

Task 3.1: Union Pacific Railroad (UPRR) Tunnel Condition Assessment Technical Memorandum

Kennedy Jenks will prepare this technical memorandum (TM) in conjunction with Mott MacDonald. Final draft of this TM will be included as an appendix to the Preliminary Engineering Report.

Kennedy Jenks will evaluate the condition of the existing tunnel crossing at the UPRR to determine the acceptability of re-use of the existing tunnel crossings. A TM will be prepared that

summarizes the results of the evaluation. The TM will include recommendations for construction requirements for re-use of existing crossings or recommendations for proposed tunnel construction methods for a new tunnel crossing. Kennedy Jenks will submit a draft of the UPRR Tunnel Condition Assessment TM for TRWD review. Kennedy Jenks will incorporate responses to comments from TRWD to develop a final UPRR Tunnel Condition Assessment TM, to be included as an appendix to the Preliminary Engineering Report.

Deliverables:

1. Draft UPRR Tunnel Condition Assessment TM (Electronic, Adobe format).
2. Final UPRR Tunnel Condition Assessment TM (Electronic Adobe format).

Task 3.2: Preliminary Engineering Report

Kennedy Jenks will prepare a Preliminary Engineering Report (PER) for the project. The PER will contain the following information:

- Pipeline design criteria consisting of:
 - Pipe size, pipe materials, lining, and coating requirements following TRWD standard design criteria. Pipe will be 102-in welded steel pipe, mortar lined and polyurethane coated.
 - Typical trench cross-section requirements
 - Preliminary pipe pressure, joint and fitting design
 - Corrosion protection design criteria provided by HDR
 - Geotechnical design criteria
- Evaluation of specific areas of concern that could impact the critical path of completing the proposed pipeline in the desired timeframe, including:
 - Identification and mitigation of any existing third-party utility crossings potentially conflicting with the pipe segments to be replaced with a larger diameter pipe frequently at increased depths to achieve desired minimum cover requirements.
 - Surface restoration requirements consistent with ISI guidelines.
- Preliminary plan and profile drawings (30% level). Profile drawings will show grade surface and pipeline depth but will not include detailed utility crossing information.
- Evaluation of project components to improve the sustainability of the project.
- Evaluation of normal and contingency operational requirements with TRWD for shutdowns during construction.
- Evaluation of easement needs for the construction of the project. Workshop with TRWD is recommended and included in Task 3.4 Preliminary Design Workshops.
- Traffic Control/Traffic Analysis requirements for the construction of the project. KJ will support Kimley Horn in evaluating and incorporate in PER.
- Trenchless construction methods for all areas with trenchless construction. KJ will support Mott MacDonald and incorporate in PER.
- Evaluate construction phasing approach, staging of pipe and imported materials, and handling and storage of existing 72-inch PCCP. Determine opportunities for operations

and maintenance (O&M) access and constructability improvements along ROW. Summaries and data collected will be included in PER.

- Evaluate all crossings and outline permitting requirements necessary for the construction of the project. Provide permitting requirements for TxDOT crossings, railroad crossings, oil/gas pipeline encroachments and crossings, and ONCOR overhead electric transmission encroachments and crossings.
- Evaluate haul routes, access roads, easements, and area impacts to identify potential staging areas, construction access and use of existing ROW, haul routes, and spoil sites necessary for construction. KJ will support Plus 6 Engineering in and incorporate into PER.
- Evaluate shutdown and sequencing for construction and determine requirements for normal and contingency operations.
- Preliminary Engineers Opinion of Probable Construction Cost (AAE Class 4).
- Design Specifications Table of Contents

Kennedy Jenks will submit a draft of the PER for TRWD review. Kennedy Jenks will incorporate responses to comments from TRWD to develop a final PER.

Deliverables:

1. Draft PER (Electronic, Adobe format)
2. Final PER (Electronic, Adobe format)

Task 3.3: Preliminary Design Inspection

Kennedy Jenks will conduct field inspections of existing tunnel crossings to evaluate the condition of the existing tunnel casings to determine the feasibility of reusing existing tunnels. Two tunneling locations will be evaluated at the UPRR and Business Highway 287 crossings. Kennedy Jenks will coordinate with TRWD to conduct two (2) field visits. Kennedy Jenks will coordinate permitting with UPRR to perform the inspection as necessary. The results of the inspection of the existing tunnels will be included in the Trenchless Construction and UPRR Tunnel Condition Assessment TMs. Site visits are anticipated to have a 4-hour duration and will be attended by up to two (2) Kennedy Jenks staff and representatives from Mott MacDonald. Including travel time and preparation for site visits and site visit summary notes, each site visit is assumed to take 7-hours total.

Task 3.4: Preliminary Design Workshops

Kennedy Jenks will facilitate workshops with TRWD to discuss preliminary design items and deliverables. Workshop meetings will be held at TRWD offices. The meetings are anticipated to have a 3-hour duration and will be attended by up to 3 Kennedy Jenks staff. Kennedy Jenks will schedule workshops to discuss the following preliminary design items:

1. Easements
2. Traffic Control
3. Trenchless Construction
4. Constructability Review Conferences with Contractors (4 separate meetings attended by 2 Kennedy Jenks staff)

5. Preliminary Engineering Report and 30% Design Draft Submittal
6. Preliminary Engineering Report and 30% Design Final Submittal

The Easements Workshop will be facilitated prior to the TM and Preliminary Engineering Report workshops. Kennedy Jenks will issue agendas at least two business days in advance of the meeting. Kennedy Jenks will take notes, review action items, and distribute minutes within two business days after each meeting.

Deliverables:

1. Agenda and meeting minutes (Electronic, Adobe format).

Task 4: Permitting and Permitting Coordination

Kennedy Jenks will determine required permits, attend pre-application meetings, and develop a permitting plan for the project. For the purpose of this scope of work, Kennedy Jenks has assumed the following permit coordination, and permits will be required:

- Coordination with TRWD PM, Environmental staff, and third-party Environmental Consultant (FNI) as needed to obtain all environmental permits for the project. Coordination includes providing GIS boundary files for the property and proposed pipe alignment to Environmental Consultant. Kennedy Jenks assumes that project meets NWP-58 criteria, and a formal review by US Army Corps of Engineers will not be required.
- Prepare and submit UPRR Permit applications for both inspecting the existing tunnel support system and for installation of new pipe in UPRR Right-of-Way.
- Obtain ROW Permit for the City of Mansfield and the City of Kennedale. The requirement to secure each of these permits will be based on the location of proposed replacement pipelines. For this scope of work, Kennedy Jenks has assumed this project will require permits to occupy the ROW from up to two (2) of the referenced jurisdictions.
- Obtain Texas Department of Transportation (TxDOT) crossing permits.
- Obtain Oil/Gas pipeline company encroachment agreements.
- Obtain Oncor overhead electric transmission encroachment agreement.

Task 5: Final Design Documents

Based on the design criteria established in the preliminary 30% design, Kennedy Jenks will advance the design drawings and specifications. Review of each submittal will utilize an excel spreadsheet tracking log for comment tracking. The reconciled log will be submitted with the subsequent design submittal. Additionally, the Kennedy Jenks team will utilize comment tracking log in Bluebeam Studio for all internal reviews. Kennedy Jenks will prepare the following final design submittals:

- 60% Design,
- 90% Design,
- Final Design (Not for Construction), and
- Issue for Bid.

Task 5.1: 60% Design Package

Task 5.1.1: 60% Design Drawings

Kennedy Jenks will continue development of the 30% design plan and profile drawings for the pipeline, develop connection details to existing 72-in PCCP, existing pipe protection details, preparation of various standard details, erosion and sedimentation control, tunneling and settlement monitoring details, KBR yard piping connection details, John F. Kubala WTP connection details, and incorporate cathodic protection details from corrosion control engineering design team. The drawings anticipated to be included in the Contract Documents are listed as Attachment A.

Drawings will be prepared using AutoCAD format. Kennedy Jenks will utilize TRWD's AutoCAD Civil 3D Project Standards Manual to prepare the drawings. Drawings will be set up with 22" x 34" format for reduction to half-scale 11" x 17" size for submittal and bidding purposes. Kennedy Jenks will also develop responses to comments received from TRWD's review of the 60% design.

Deliverables:

1. 60% Design Drawings (Electronic, Adobe pdf format).

Task 5.1.2: 60% Design Specifications

Kennedy Jenks will utilize technical specifications developed by TRWD and used for the recent IPL projects to determine if any additions or changes are needed to the specifications for this project. Kennedy Jenks will review the technical specification developed by TRWD and make modifications or additions, as necessary, for the design of the project.

Deliverables:

2. 60% Design Specifications added or modified for this project (Electronic, Adobe pdf format).

Task 5.1.3: 60% Design Opinion of Probable Construction Cost

Kennedy Jenks will perform quantity take-offs from the 60% design drawings and prepare an Engineer's Opinion of Probable Construction Cost (OPCC) for the 60% design. The OPCC will be projected to the anticipated midpoint of construction. The OPCC will be a Class 3 estimate in accordance with AACE International.

Deliverables:

3. Class 3 OPCC (Electronic, Adobe pdf format)

Task 5.2: 90% Design Package

Task 5.2.1: 90% Design Drawings

Kennedy Jenks will incorporate the responses to the comments from the 60% design review, and advance the 60% design drawings to 90% design, and develop additional drawings identified in Attachment A. Drawings will be prepared using AutoCAD format and set up with 22" x 34" format for reduction to half scale 11" x 17" size for submittal and bidding purposes. Kennedy Jenks will

also develop responses to comments received from TRWD's review of the 90% design. Kennedy Jenks will utilize TRWD's AutoCAD Civil 3D Project Standards Manual to prepare the drawings.

Deliverables:

1. 90% Design Drawings (Electronic, Adobe pdf format).

Task 5.2.2: 90% Design Specifications

Kennedy Jenks will incorporate the responses to comments on the 60% specifications from the 60% design review and prepare 90% design level specifications and front-end documents. Kennedy Jenks will utilize technical specifications developed by TRWD and used for the recent IPL project as the basis of design for the project. Kennedy Jenks will review the technical specification developed by TRWD and make modifications or additions, as necessary, for the design of the project.

The Contract Documents will be prepared using the TWRD's standard General Requirements and bidding forms and supplemental requirements.

Deliverables:

1. 90% Design Specifications (Electronic, Adobe pdf format)

Task 5.2.3: 90% Design Opinion of Probable Construction Cost

Kennedy Jenks will update the quantity take-offs from the 90% design drawings and prepare an Engineer's Opinion of Probable Construction Cost (OPCC) for the 90% design. The OPCC will be a Class 2 estimate in accordance with AACE International.

Deliverables:

1. Class 2 OPCC (Electronic, Adobe pdf format)

Task 5.3: Final Design, Not-For-Construction

Task 5.3.1: Final Design, Not-For-Construction Drawings

Kennedy Jenks will incorporate the responses to the comments from the 90% design review, and prepare final design, not-for-construction (NFC) drawings. Drawings will be prepared using AutoCAD format and set up with 22" x 34" format for reduction to half scale (11" x 17") size for submittal and bidding purposes. Kennedy Jenks will utilize TRWD's AutoCAD Civil 3D Project Standards Manual to prepare the drawings.

Deliverables:

1. Final Design NFC Drawings (Electronic – Adobe pdf formats).

Task 5.3.2: Final Design, Not-For-Construction Specifications

Kennedy Jenks will incorporate the responses to the comments from the 90% design review, and prepare final design, not for construction (NFC) specifications. Kennedy Jenks will utilize technical specifications developed by TRWD and used for the recent IPL project. The Contract Documents

will be updated using the TRWD's standard General Requirements and bidding forms and supplemental requirements.

Deliverables:

1. Final Design, NFC Specifications (Electronic - Adobe pdf formats).

Task 5.3.3: Final Design, Not-For-Construction Opinion of Probable Construction Cost

Kennedy Jenks will update the quantity take-offs from the final design drawings and prepare an Engineer's Opinion of Probable Construction Cost (OPCC) for the final design, not-for-construction. The OPCC will be a Class 2 estimate in accordance with AACE International.

Deliverables:

1. Class 2 OPCC (Electronic – Adobe pdf format)

Task 5.4: Issue for Bid Design

Task 5.4.1: Issue for Bid Drawings

Kennedy Jenks will incorporate the responses to the comments from the final design, NFC drawings and prepare issue for bid drawings. Drawings will be prepared using AutoCAD format and set up with 22" x 34" format for reduction to half-scale (11" x 17") size for submittal and bidding purposes. Kennedy Jenks will utilize TRWD's AutoCAD Civil 3D Project Standards Manual to prepare the drawings.

Deliverables:

1. Issue for Bid Drawings (Electronic – Adobe pdf formats).

Task 5.4.2: Issue for Bid Specifications

Kennedy Jenks will incorporate the responses to the comments from the final design, NFC specifications, and prepare issue for bid specifications. The Contract Documents will be updated using TRWD's standard General Requirements and bidding forms and supplemental requirements.

Deliverables:

1. Issue for Bid Specifications (Electronic - Adobe pdf formats).

Task 6: Procurement Phase Services

Construction procurement advertisement will be conducted through OpenGov Procurement. TRWD Buyer will be the central point of contact between the project team and potential vendors and contractors during the procurement phase. All questions will be directed to and answered through the Buyer. TRWD Purchasing will provide relevant front-end documents (Division 00) for the Competitive Sealed Proposal (CSP) process. Kennedy Jenks will perform the following services:

1. Attend 1 pre-proposal meeting. Provide presentation slides with an overview of the project and present the overview at the pre-proposal meeting. The pre-proposal meeting is anticipated to have a 2-hour duration and will be attended by up to three (3) Kennedy Jenks staff.
2. Assist TRWD in the preparation of technical responses to Contractors questions and issue up to four (4) addenda to clarify the design documents.
3. Attend procurement evaluation conference. Kennedy Jenks will review submitted bid proposals for technical input and project approach and provide input to advise the evaluation team in review of the bid proposals received. The procurement evaluation conference is anticipated to have a 3-hour duration and will be attended by up to three (3) Kennedy Jenks staff.
4. Review and evaluate bid proposals. If necessary, attend interviews with short-listed proposers and assist TRWD with final scoring.
5. Issue conformed sets of plans and specification for construction including any addenda from competitive sealed proposal (CSP) bidding process. In addition to an electronic copy, five half-scale and one full-size (22"x34") paper copies of the drawings, and 5 bound paper copies of the specifications will be provided.

Deliverables:

1. Addenda (up to 4) (Electronic, Adobe pdf format).
2. Conformed Design Drawings and Specifications (hard copy and Electronic - Adobe pdf formats).

Task 7: Construction Phase Services – To Be Negotiated at Construction

OPTIONAL SERVICES

The following services are optional and will not be accessed without obtaining the written approval of TRWD.

Task 2A: Contingency Geotechnical Investigation

Task 2.1A: Geotechnical Investigations and Report

HVJ Associates, as a subconsultant to Kennedy Jenks, will provide up to five (5) additional geotechnical borings and associated testing, as necessary. Pipeline explorations will extend to a depth of thirty (30) feet in depth. Results of the field and laboratory data will be used for the proposed pipeline design.

Task 2.2A: Laboratory Testing

The laboratory testing will be conducted on selected samples that are representative of the materials obtained during the field exploration. The tests will be used to evaluate and classify the soils, identify subsurface site characteristics, soil strength parameters, soil chemical characteristics and provide data for analysis. Laboratory tests will consist of the following:

- Moisture content,

- Percent passing No. 200 sieve,
- Atterberg Limits,
- sieve and hydrometer analysis,
- Unconsolidated undrained (UU) triaxial tests,
- One -dimension Free swells
- Chemical analysis for corrosion control:
 - Resistivity
 - pH
 - Electrical Conductivity
 - Chemical Analysis (Cations and Anions)
 - Ammonia
 - Nitrate
 - Sulfide and
 - Reducing Oxidation Potential (Redox)

All the field and laboratory tests will be performed according to ASTM standards, where applicable, or with other established procedures. Results of the field and laboratory data will be used to provide geotechnical recommendations for the project.

Task 2.3A: Geotechnical Report

The Geotechnical Report will be supplemented and revised to include information collected from additional contingency geotechnical investigations.

Deliverables:

1. Revised Draft Geotechnical Report (Electronic, Adobe format).
2. Revised Final Geotechnical Report (Electronic, Adobe format).

Task 3A Trenchless Construction – New Tunnels

Task 3.1A: Preliminary Design

This task includes additional preliminary design requirements for the construction of new tunnel crossings beneath the UPRR and Business Highway 287. This task includes the preparation of preliminary 30% plan and profile drawings for new tunnel crossings and the preparation of recommendations for proposed tunnel construction methods and development of OPCCs related to new tunnel crossings, to be included in the PER.

Task 3.2A: Final Design

This task includes additional final design requirements for the construction of new tunnels crossing beneath the UPRR and Business Highway 287. This task includes preparing progress plans, specifications, and contract documents at final design 60%, 90%, Final Design, Not-For-Construction, and Issue for Bid milestones related to the construction of new tunnel crossings.

ASSUMPTIONS AND EXCLUSIONS:

In addition to the assumptions and exclusions noted above in the scope tasks, the scope of services also assumes the following.

- All project related documents will be stored on TRWD's project portal site. A TRWD portal site specific to the project will be created online by TRWD staff and maintained by the TRWD project manager(s). Access to the site will be limited to the immediate project team members.
- Communications with the public, including coordination with private property owners, business groups and other groups impacted by this project will be coordinated by TRWD.
- AutoCAD Civil 3D 2024 will be used to prepare the drawings.
- Current technical specifications, details, and standards developed by TRWD and used for the recent IPL project will be used as the basis of design for the proposed replacement and/or new pipe.
- TRWD will provide the latest aerial imagery, lidar data/contours, and utility information from TRWD's database. If sufficient data is not available or data received is obscured supplemental topographic/design surveying along the route may be required to be authorized as Special Services.
- TRWD will provide HGLs for steady state analysis and their consultant (Hazen and Sawyer) will provide surge envelopes related to Kennedy Jenks' design for air valve placement.
- Environmental permitting will be contracted separately by TRWD. Kennedy Jenks will coordinate with TRWD project managers and environmental staff to support all environmental permits for the project.
- TRWD will provide adjudicated and consolidated review comments in a matrix format on Kennedy Jenks' deliverables within two weeks of receipt of deliverable, as indicated in the baseline schedule.
- TRWD is responsible for payment of all fees related to permit application(s) and municipal fees.
- Kennedy/Jenks will manage work hours between tasks and employee classifications, and/or utilize other employee classifications, provided that the project total fee is not exceeded without prior approval of TRWD. Given the changing nature of the tasks involved, it is acknowledged individual task budgets may change as work requirements dictate, but the total project budget will not be exceeded without TRWD's authorization.
- Acoustical analyses/noise study is not included in our scope of work.
- A Geotechnical Baseline Report (GBR) is not required.
- Front-end documents will be provided by the TRWD (except that Kennedy Jenks will provide bid items and quantities).
- A record of survey for any monuments that may be destroyed is not included in this scope of work.
- Existing utility relocations are not included in this scope of work.
- TRWD will sign easement agreements, pay easement compensation costs including fees for closing, Title Company, and recording.
- TRWD will provide Construction Management, inspection and materials testing.
- Services not specifically identified in the Scope of Work are not included in the Agreement for Professional Services.
- Shoring will be designed by the contractor.
- There will be one construction package.

Ms. Courtney Jalbert
Tarrant Regional Water District
August 2, 2024

- A re-bid is not required.
- TRWD will conduct the advertisement for bidding, reproduce and distribute plans, act as the point of contact for contractors, organize bid opening, award the construction contract, and arrange a pre-bid meeting.
- Design is assumed to be 29 months.
- TRWD will provide Construction Management, inspection, and materials testing under a separate contract and is not included in this scope of work.
- Construction surveying is not included in this scope of work.
- Materials testing is not included in the scope of work.
- TRWD will provide the most recent client CAD Standards Manual, drawing title block, front-end drawings, 2D drawing and 3D model file templates to be used as a basis for drawing production.
- KJ CAD Standards, front-end drawings, and template files will be used where client CAD Standards are not provided.
- Plan and Profile drawings will be 1"=50' Horizontal, 1"=10' Vertical.
- Erosion/Sedimentation Control Plan drawings will be 1"=50'.

Schedule

Kennedy Jenks anticipates completing the project in accordance with the attached preliminary schedule. The baseline schedule will be revised and finalized following notice to proceed.

Budget

The compensation for our services will be provided on a time and expense reimbursement basis at the rates shown in the enclosed Schedule of Rates dated June 2024. Payments shall be made monthly based on invoices which describe services and list actual costs and expenses.

Based on our estimate of services detailed in the attached budget spreadsheet, we propose a budget of \$3,931,436.00, which will not be exceeded without authorization by TRWD.

Very truly yours,

KENNEDY JENKS CONSULTANTS, INC.



Jonathan Shirk, PE
Principal, Sr. Project Manger

/Attachments

Cc: Aurora Gonzales, Kennedy Jenks
Nicole Conner, Kennedy Jenks

Task Description:	Total Labor + Subs + Expenses
	Fees
Task 1: Project Management Services	\$843,284
Task 2: Data Collection and Field Investigation	\$612,155
Task 3: Preliminary Design	\$829,065
Task 4: Permitting Coordination and Permitting	\$130,588
Task 5: Final Design Documents	\$1,376,032
Task 6: Procurement Phase Services	\$140,312
Basic Services - All Phases Total	\$3,931,436
Optional Tasks - Topographic Survey	
Task 2A: Contingency Geotechnical Investigations	\$33,733
Task 3A: Trenchless Construction (New Tunnels)	\$203,584
Optional Services - All Phases Total	\$237,317

TARRANT REGIONAL WATER DISTRICT

AGENDA ITEM 6

DATE: August 20, 2024

SUBJECT: Consider Approval of Contract with CP&Y, Inc. dba STV Infrastructure for Design of 8.6 Miles of Cedar Creek Section 4 Pipeline Replacement from the Trinity River to the Cedar Creek Lake Pump Station

FUNDING: Bond Fund

RECOMMENDATION:

Management recommends approval of a contract **in an amount not-to-exceed \$5,346,528** with CP&Y, Inc. dba STV Infrastructure (STV) for engineering design services for the removal and replacement of approximately 8.6 miles of the Cedar Creek Pipeline. These engineering services include preliminary design investigations, final design plans and specifications, and procurement phase services.

DISCUSSION:

Section 4 of the Cedar Creek pipeline conveys all water from the Cedar Creek reservoir to the Ennis Booster Pump Station. This 72-inch Cedar Creek pipeline is one of two conveyance methods from the Cedar Creek Reservoir since the IPL JCC1 lake pump station came online. The existing 1970s vintage Cedar Creek pipe segments in this flood prone region have historically encountered joint end failures not able to be detected by electromagnetic condition assessment technologies. If a pipe break occurred in this area during a major flood event, it could result in an extended pipeline operations shutdown spanning several months until flood waters recede, only after which time repairs could be made and the pipeline cleared of mud and debris. Given the history of pipe failures and past distressed pipe segment replacements in this area, coupled with a long-term plan to increase flow capacity of the Cedar Creek pipeline through upsizing the pipe, this Section 4 of the Cedar Creek pipeline has been prioritized for replacement.

This project will consider options to remove and replace approximately 8.6 miles of 72-inch pre-stressed concrete cylinder pipe with 90" mortar-lined welded steel pipe from the Trinity River to the Cedar Creek Lake Pump Station, versus abandoning the existing 72-inch in place and installing a new parallel 90-inch pipe along the same route. The project will improve the District's ability to deliver water supply to customers, both in terms of reliability and capacity as the Cedar Creek pipeline continues to be upsized over time,

The Request for Statement of Qualifications was solicited per statute (Texas Government Code Chapter 2254) and ten submittals were received. All ten submittals included in the attached list were reviewed and evaluated, and the top four scoring firms were interviewed in person. STV was deemed to be the most qualified for this project.

STV, is a prime, non-certified business. It has subcontracted portions of the contract resulting in an overall Diverse Business participation commitment of 19%.

These engineering services will take place over the next two years with construction planned to begin in the winter of 2027.

This item was reviewed by the Construction and Operations Committee on August 15, 2024.

Submitted By:

Jason Gehrig, P.E.
Infrastructure Engineering Director



List of Submitting Firms

RFSOQ No. 24-087

Engineering Services for Cedar Creek Section 2 Replacement, Cedar Creek Section 4 Replacement, Section 1D & 1E Pipelines and Arlington Outlet Improvements

Due Date and Time:	March 26, 2024, at 2:00 p.m. CT
---------------------------	---------------------------------

Name of Firm
Aurora Technical Services, LLC
Black & Veatch
Freese & Nichols
Garver
Hazen
HDR
Jacobs Engineering Group
Kennedy Jenks
Lockwood, Andrews, & Newman, Inc
STV Infrastructure

LIST OF SUBMITTING FIRMS

RFSOQ 24-087 ENGINEERING SERVICES FOR CEDAR CREEK SECTION 2 REPLACEMENT, CEDAR CREEK SECTION 4 REPLACEMENT, SECTION 1D & 1E PIPELINES AND ARLINGTON OUTLET IMPROVEMENTS



EXHIBIT A

SCOPE OF WORK – ENGINEERING SERVICES FOR CEDAR CREEK SECTION 4 PIPELINE REPLACEMENT

JULY 2024

Final

TABLE OF CONTENTS

1.0 DEFINITIONS	1-1
2.0 PROJECT DESCRIPTION AND OBJECTIVES	2-1
2.1 Roles and Responsibilities	2-3
3.0 BASIC SERVICES.....	3-1
3.1 Task 1: Project Management Services	3-1
3.2 Task 2: Design Criteria Confirmation (Pre-design Phase).....	3-3
3.3 Task 3: Preliminary Design	3-3
3.4 Task 4: Permitting	3-7
3.5 Task 5: Final Design Documents.....	3-7
3.6 Task 6: Procurement Phase Services	3-9
3.7 Task 7: Construction Phase Services – NOT INCLUDED IN THIS PHASE - Scope and fee to be negotiated during procurement phase services.....	3-9
3.8 Task 8: Resident Representative Duties – NOT INCLUDED IN THIS PHASE - Scope and fee to be negotiated during procurement phase services.....	3-9
3.9 Special Service 1– Topographic Survey, Boundary Survey, and Easement Services	3-9
3.10 Special Service 2– Geotechnical Investigation	3-11
3.11 Special Service 3– Subsurface Utility Engineering (SUE)	3-12
4.0 ADDITIONAL SERVICES	4-1
4.1 Task 4: Additional Services.....	4-1
4.2 Owner’s Responsibility	4-1
4.3 Out of Scope Services	4-2

1.0 DEFINITIONS

The following acronyms are used in this exhibit.

CC	Cedar Creek
FEA	Finite Element Analysis
IPL	Integrated Pipeline
ISI	Institute for Sustainable Infrastructure
MWBE	Minority/Woman-Owned Business Enterprise
PCCP	Prestressed Concrete Cylinder Pipe
QA	Quality Assurance
QC	Quality Control
QMP	Quality Management Plan (submitted by DDT)
RC	Richland Chambers
SUE	Subsurface Utility Engineering
TRWD	Tarrant Regional Water District

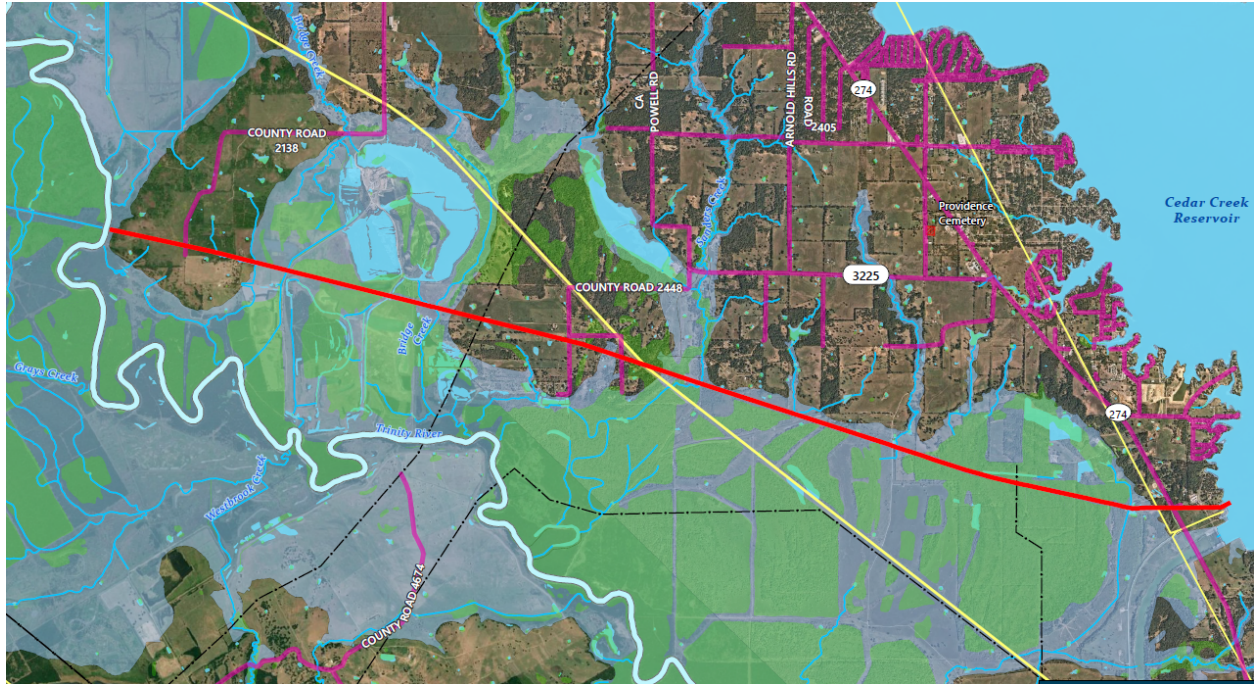
2.0 PROJECT DESCRIPTION AND OBJECTIVES

The Cedar Creek (CC) 72" pre-stressed concrete cylinder pipeline (PCCP) is TRWD's oldest raw water transmission main, dating back to the early 1970s. TRWD maintains a robust condition assessment and risk-based prioritization program for identifying and replacing approximately 15 to 20 segments of distressed PCCP pipe each year. TRWD's commitment to properly operating a galvanic cathodic protection system on its PCCP pipelines, along with pressure transient reduction measures in place since the mid 1990's, have greatly extended the remaining useful life of the CC pipeline. However, despite this effective pipeline integrity program, multiple areas of the CC pipeline continue to be at risk of failure, requiring a more substantial renewal program.

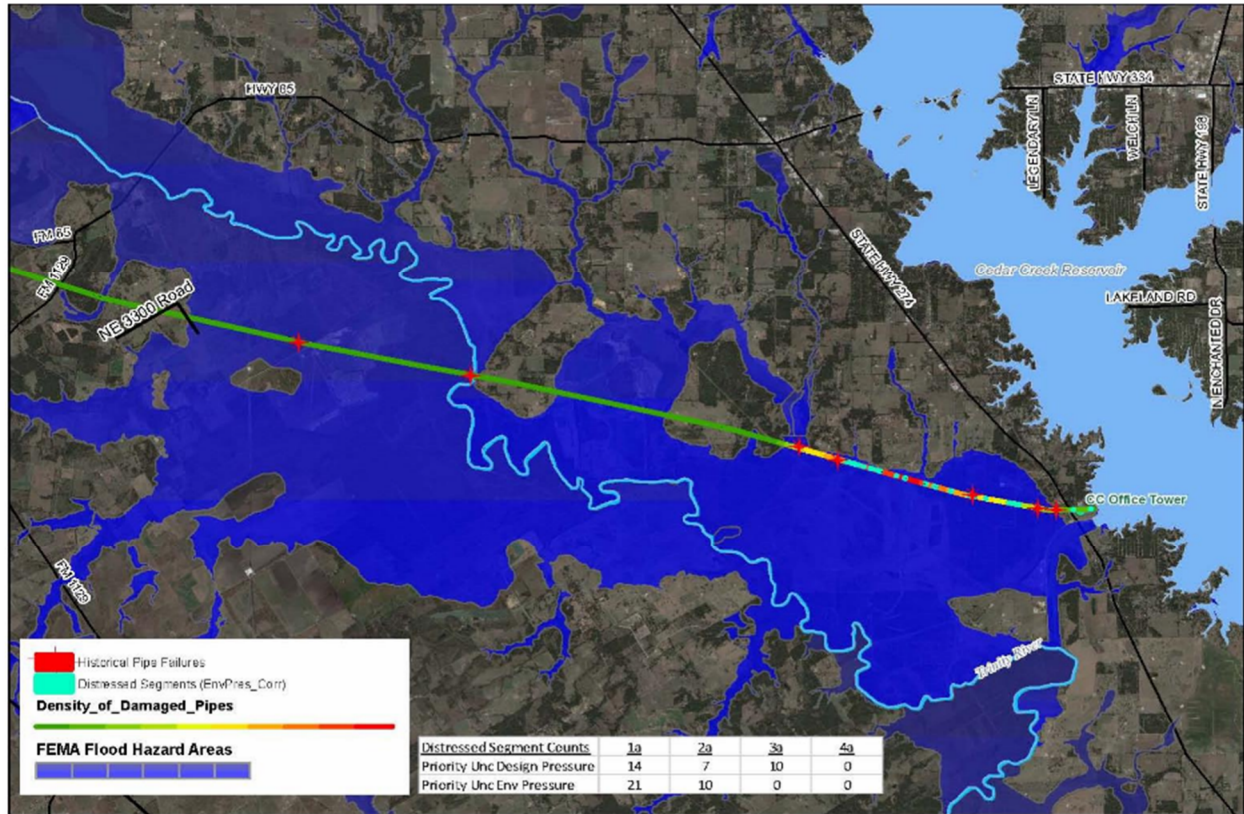
The pipeline from Cedar Creek reservoir is approximately 74 miles of primarily 72-inch diameter pre-stressed concrete cylinder pipe with a maximum carrying capacity of approximately 127 MGD. The pipeline begins at Cedar Creek, southeast of Dallas, and ends at Rolling Hills Booster Pump Station in southeast Fort Worth. Until 1986, this pipeline was the only raw water service line from East Texas to Tarrant County.

TRWD has organized the pipeline into sections to simplify areas of responsibility for operation and maintenance. The labels of the CC sections are in order of geographic location beginning with the closest to Fort Worth as Section 1 and ending with the section closest to the Cedar Creek Lake pump station as Section 4. The area of concern with this project is Section 4, located east of the Trinity River and extending east toward the Cedar Creek Lake pump station. Specifically, approximately 8.6 miles are identified in Section 4 as requiring replacement due to damage to the PCCP pipe in terms of excessive wire-break counts for the operating pressure required of the pipeline, and the associated risk as a result. The CC pipeline is particularly prone to the pre-stressing wire becoming embrittled due to the standards in place in the early 1970's for PCCP (since improved, as reflected in TRWD's much more robust Richland Chambers PCCP pipeline built in the mid 1980's). These manufacturing processes that were allowed to employ pre-stressing wire with excessive tensile strength have the negative consequence of increased susceptibility to hydrogen embrittlement.

The following exhibits present the limits of this proposed project in Section 4 of the Cedar Creek Pipeline. Due to the extent of the pipeline that is distressed, TRWD has determined that the pipeline should be replaced with a new 90-inch steel pipe. STV will prepare a high-level analysis of replacing the existing 72-inch pipeline within the same trench versus abandoning the 72-inch in place and installing a parallel line within the existing easement.



Cedar Creek Section IV Project Extents



Cedar Creek Section IV Pipe Failure Locations

Section IV of the CC Pipeline conveys all water from the Cedar Creek Reservoir to the Ennis Booster Pump Station, which is frequently in stand-by mode. This pipeline is one of two conveyance methods between the Cedar Creek Reservoir and TRWD's customers with the JCC1 lake pump station online. The CC pipeline is located within a 100' wide ROW in the Trinity Bottoms area with the CC pipeline centerline being approximately 25 feet offset from the northern edge of the ROW. The existing Section IV pipe is a 72-inch C301 (PCCP) pipe with operating pressures up to 225 psi in the Trinity River Bottoms area near the CC1 Lake PS. This section of pipeline was installed in 1971 with a galvanic cathodic protection system employing zinc anodes installed in the late 1990s.

TRWD is encountering joint end failures not able to be detected by electromagnetic condition assessment technologies in this flood prone area. If a pipe break occurs in this area during a major flood event, it could result in an extended CC pipeline operations shutdown spanning several months until flood waters recede, only after which time repairs could be made and the pipeline cleared of mud and debris. The total length of Cedar Creek pipe identified to be replaced in Section 4 totals approximately 45,408 feet or 8.6 miles.

Construction of CC Section 4 work for the 8.6 miles of pipe replacement is expected to be one continuous construction contract. Construction is expected to begin in 2027 and completed by 2028.

Refer to Cedar Creek Pipeline Renewal Plan prepared by TRWD Engineering dated May 2019 for more background information.

2.1 Roles and Responsibilities

Final Design Services deliverables shall be in accordance with the following documents adopted from the IPL Program, unless otherwise directed by TRWD:

- TRWD/IPL CAD Standards
- TRWD/IPL Design Criteria Manual (DCM)
- TRWD/IPL Standard Details
- TRWD/IPL Standard Specifications
- TRWD/IPL GIS Spatial Data Management Standards and Procedures

3.0 BASIC SERVICES

3.1 Task 1: Project Management Services

All project related documents will be stored and managed on the TRWD project portal site. A site specific to this project will be created online by TRWD staff and maintained by the TRWD project manager. Access to the site will be limited to the immediate project team members. All data transfers will take place within the TRWD project portal, not through email. When documents are uploaded or updated on the project portal site, project team members may get email notifications and links to documents to the appropriate project team members. A copy of the project schedule will reside on the project portal site and will be updated monthly by the selected consultant team's project manager (PM). All invoicing will be handled through the portal site as well.

STV will be providing project management services consistent with Project Management Institute guidelines, including but not limited to:

- A. STV will develop a Project Management Plan to set up and track the overall project. The project management plan will include the contract, scope, project team and work plan including decision logs, quality plans and planned value calculations.
- B. Quality Assurance and Quality Control (QA/QC) Plan: Develop and implement a QA/QC Plan to check, as a minimum, planning methods, design methods, calculations, cost estimates, field investigations, measurements, drawings, specifications, addenda, and other technical issues associated with the project planning and design and consistent with the CONSULTING TEAM's own internal QA/QC Plan. The PM will submit a signed copy of the QA/QC Plan at the beginning of the project to the project portal site and will submit signed and executed copies of the CONSULTING TEAM's internal QC checklist with each milestone project submittal.
- C. Project Schedule: Provide project schedule in MS Project format for approval. Submit a baseline project schedule at the onset of the project. Update schedule at all phases of the project (preliminary design, final design (all phases), procurement, construction, and closeout), include monthly progress meetings, milestone tasks (60% and 90% final design), and dates for TRWD internal review periods (typically 2 weeks). The schedule should include land & temporary easement acquisition and environmental permit approvals. The schedule should be based on proposed targets as established by TRWD. Consultant should indicate if the target dates are realistic given market conditions and other considerations. Activities will be included for the procurement phase and the construction phase at a summary level. The Baseline Schedule will be updated each month. In addition to the Baseline Project Schedule, a detailed preliminary construction schedule will be prepared for submission with the 60% and 90% final design packages to confirm the likely construction duration. A Basis of Schedule/Assumptions document will be developed to be submitted with the construction schedule.
- D. Monthly report submitted with invoice to TRWD project manager regarding the status of the project progress to date and upcoming tasks to be accomplished in the coming month, to include any tasks needed to be accomplished by TRWD staff to assist with project progress.
- E. Planned Value calculation describing scope of work accomplished to date along with budget spent, including expected project completion date and value.

-
- F. Prepare meeting agendas and issue to meeting participants at least 48 hours in advance of the upcoming meeting. Take meeting notes, review action items, and issue meeting minutes after each meeting.
 - G. Monthly or regularly scheduled progress meetings to review project status and upcoming milestones. It is estimated that the design and procurement phase will have a duration of 23 months. Identify and facilitate meetings and workshops for major milestones and decision points, including:
 - 1. Project kickoff – 1 meeting (Item 1a.A under Preliminary and General Services in Fee Spreadsheet)
 - 2. Design criteria review and confirmation – 2 meetings (Item 1a.E under Preliminary and General Services in Fee Spreadsheet)
 - 3. Preliminary Engineering Design draft submittal – 3 meetings (Item 1a.B under Preliminary and General Services in Fee Spreadsheet)
 - 4. Preliminary Engineering Design final submittal – 1 meeting (Item 1a.B under Preliminary and General Services in Fee Spreadsheet)
 - 5. Informal Meetings with TRWD – up to 10 mtgs. This includes the 4 meetings with contractors. (Item 1.a.D under Preliminary and General Services in Fee Spreadsheet)
 - 6. Monthly Design Meetings – 23 meetings (Item 1a.C. under Preliminary and General Services in the Fee Spreadsheet)
 - 7. 60% and 90% final design submittals – 2 meetings (Item 5a.P and 5b.T in the Fee Spreadsheet)
 - 8. Construction Bidding – 2- meetings (Item 6a.C under Construction and Equipment Package Bid)
 - 9. Construction Phase – (Not Included) To be developed as an amendment.
 - 10. Project closeout– (Not Included) To be developed as an amendment.
 - H. Construction Cost Estimates: Prepare an updated engineer’s opinion of probable construction cost for the project including consideration of engineering, administration, and construction management costs at time of each design milestone submittal (PER, 30, 60, 90, Final). Include contingencies as appropriate. Develop cost estimate in accordance with best practices. Identify the construction critical path. Also include a monthly cash flow schedule to determine time frame for expected project expenditures.
 - I. Project Closeout: To Be Negotiated as an amendment.
 - J. Risk Workshop: One day workshop between TRWD and Engineer to review identified project risks and perform a risk analysis of potential impacts to the project(s) and develop list of mitigation and management responses. Deliverable(s): Risk register and response plan.
 - K. Tracking Logs. Additional tracking logs will be used to plan and document project issues and will include change management, decision log, action item log, and permitting matrix.

3.2 Task 2: Design Criteria Confirmation (Pre-design Phase)

The CONSULTING TEAM will work with TRWD staff to review the work performed by TRWD staff to date as part of the investigation and analysis of the Cedar Creek Section 4 pipeline condition and risk assessment incorporated into the Cedar Creek Pipeline Renewal Plan. TRWD will provide the CONSULTING TEAM GIS data and any hydraulic calculations and risk analysis models for the purposes of review and recommendation of the proposed project scope and pipeline replacement plan.

- A. Review of TRWD condition assessment, hydraulic, and risk model data and analysis.
- B. Visit site, review data, and conduct interviews with District personnel.
- C. Coordination with TRWD staff and separately contracted specialized support services consultants. These consultants include:
 1. Cathodic Protection (HDR under current contract with TRWD)
 2. Deleted.
 3. Environmental Permitting (Terracon under current contract with TRWD)
 4. Hydraulic Surge Analysis (Hazen and Sawyer)
- D. Participate in Design Criteria Confirmation Workshop and prepare summary report.
 1. Note that TRWD fully expects to use its technical specifications and standard details employed with the IPL project and are subject to revisions based on lessons learned (while open to discussions on appropriate revisions).
 2. Two workshops are planned to allow for revisions as the design proceeds. Each workshop's duration is expected to be no more than a half day.
- E. Technical Memoranda addressing statement of concurrence with TRWD findings, innovative alternatives and/or recommended revisions of the TRWD Cedar Creek Pipeline Background Information provided in the RFP documents.
- F. Deliverables:
 1. Design Criteria Confirmation – technical memoranda (draft and final submittal)

3.3 Task 3: Preliminary Design

The CONSULTING TEAM will provide a Preliminary Engineer Report (PER) that shall include their own investigation and evaluation, including:

- A. Review and comment on TRWD's hydraulic analysis of the impacts the proposed improvements will have on the existing system. Review and comment on the surge analysis of the proposed pipeline. Surge analysis will be provided by TRWD's third party consultant (Hazen and Sawyer).

1. Prepare hydraulic gradeline sheet showing locations and sizes of surge critical air valves and air valves for normal hydraulic operation of the pipeline.
 2. Incorporate findings and design recommendations into PER.
- B. Evaluate the placement of new venturi meters on the existing pump station site, including size, location, and placement of new venturi meter(s) and vault size. Evaluate the size and configuration of analyzer building, and relocation of the existing sodium hydroxide injection line and any required valving.
- C. Contact pipe manufacturers to determine optimized timing and approach for payment for inspected steel coil on hand needed for Section 4 construction.
1. Will review TRWD provided technical memorandum from the Section II pipe procurement review.
- D. Develop a plan to specific areas of concern that could impact the critical path of completing the proposed Section 4 pipeline project in the desired timeframe, including:
1. Identification and acquisition of temporary construction easements.
 - a. Provide analysis of access and temporary construction easement needs for the project during construction. Recommendations for staging areas for contractor use will be included in the PER.
 2. Permitting considerations (working closely with TRWD's environmental team and permitting consultant).
 3. Identification and mitigation of any existing third-party utility crossings potentially conflicting with the Section 4 pipe to be replaced with a larger diameter pipe frequently at increased depths to achieve desired minimum cover requirements.
 - a. Coordinate with TXDOT and Henderson County for future road thoroughfare plans to incorporate into design. We anticipate two (2) agencies to coordinate with.
 - b. Includes existing non-cased crossings of CC pipeline under existing roads.
 4. Constructability review and sequencing analysis. Will participate in up to four (4) contractor meetings.
- E. Provide a Preliminary Engineering Report with recommendations for maximizing the existing 100-foot pipeline easement. Alternatives to be reviewed will include:
1. Installing a new 90" steel pipeline parallel to the existing 72" PCCP.
 2. Removing the existing 72" PCCP pipeline and installing the new 90" steel pipeline in the existing trench.
 3. Reviewing locations for conflicts within the existing easement.

-
4. Review the connections to the existing pipeline at the Trinity River crossing. This review will include a recommendation for the location of the connection based on existing condition assessment data provided by TRWD and structural analysis and leaving room for future river tunnel and tie-in.
 5. Review the connection to the existing pump station at the Cedar Creek Reservoir.
 6. Review placement of new venturi meter vault size, analyzer building, and relocation of the existing sodium hydroxide injection line and any required valving.
- F. If it is determined that portions of the existing 72" PCCP will be removed. STV will review the potential for recycling of the pipe joints to be removed. This should be in line with ISI's best management practices.
1. Deleted.
 2. Deleted.
 3. Provide recommendations for the recycling of unusable PCCP materials.
- G. Deleted
- H. Determine surface restoration requirements incorporating lessons learned from recent IPL projects.
1. Summarization of surface restoration requirements and best practices will be documented in the PER.
- I. Identify potential haul routes, spoil sites, staging areas and impact to surrounding areas.
1. Prepare recommendations for haul routes to be used during construction. This will also include evaluation of possible spoil sites and staging areas available to the contractor. Recommendations will be incorporated into the PER.
- J. Identify all permit requirements from local authorities, highway departments, railroads and other pipeline utilities (excluding environmental).
1. Provide summarization of all permitting requirements for the project in addition to the environmental permitting requirements. These include TxDOT crossing permits, coordination with oil/gas pipeline companies for encroachment agreements, overhead electric transmission encroachment agreement with Oncor. The summarization will be incorporated into the PER.
- K. Work with TRWD's environmental permitting consultant to identify environmental mitigation measures (if required) and take into consideration recommendations to minimize permitting effort.
- L. Recommend and assist with steps to engage and communicate with the public that are in the areas of imminent construction.
- M. Recommend and assist with steps to engage local businesses to provide their services for the implementation of the project.

-
- N. Deleted.
- O. Coordinate topographic feature survey supplement LIDAR and survey provided by TRWD. Spooner & Associates will be providing supplemental topographic survey and easement support for this project.
- P. Coordinate subsurface utility engineering (S.U.E. per ASCE Standard 38-02)
1. STV will be providing SUE Levels B, C, and D for the entire 8.6 miles of pipeline. SUE Level A will be performed as needed at locations to be determined once Level B, C, and D information is available.
- Q. Coordinate geotechnical field work (HVJ) and collection/shipping of soil samples obtained for the corrosion control engineering team (HDR).
- R. Coordinate with utility companies and private entities.
- S. Preparation of traffic control analysis, approach and recommendations.
- T. Prepare preliminary plan drawings (30% level) – Scale 1" =50', 22 sheets
- U. Preparation of Draft Preliminary Engineering Report
- V. Preparation of Final Preliminary Engineering Report
- W. Meet with potential contractors for feedback on construction plan. A one-page summary from each contractor meeting will be included in the PER as an appendix.
- X. Deliverables:
- Hydraulic Analysis Review – included in PER.
 - Deleted.
 - Working area and easement evaluation – included in PER.
 - Haul route – included in PER.
 - Permitting requirements – included in PER.
 - Deleted.
 - Deleted.
 - Traffic control analysis and approach – included in PER.
 - Draft Preliminary Engineering Design Report
 - Final PER with TRWD comments incorporated.

- Prepare preliminary plan and profile drawings - 30% design plans.
- Prepare Preliminary OPCC (30% level)

3.4 Task 4: Permitting

Coordinate and provide support to TRWD PMs and Environmental staff as needed to obtain all environmental permits for the project. Work to obtain permits is anticipated to include:

- Identification and tracking of permitting requirement in a management matrix. Research for the permits will include identification of all submittal requirements, review and approval timelines, fees required, design requirements and special exhibits needed.
- Provide GIS boundary files for the property and proposed pipe alignment to TRWD and the Environmental Consultant that encompass the project area of interest.
- Preparation of special figures and exhibits required to accompany the permit.
- Preliminary completion of any permit applications for review by TRWD. Applications will be revised based on review and transmitted to TRWD for submission to the permitting agency. Any fees, if necessary, will be paid by TRWD.
- Attend up to 6 meetings with permitting agencies to discuss the project and gain understanding of issues related to the project that need to be addressed in the final design and permit.
- It is anticipated that no more than 6 permits will be required for this project.
- Permits will be incorporated into the design schedule to ensure that they are submitted in a timely manner to minimize the impact on the overall project completion schedule.

3.5 Task 5: Final Design Documents

Final design to include:

- A. Coordinate with TRWD's Cathodic Protection (CP) team and TRWD's cathodic protection independent consultant to include CP in the final design.
- B. Design of connections between the new welded steel pipe and existing pre-stressed concrete cylinder pipe will properly meet all structural requirements to properly address forces transferred onto the existing PCCP.
- C. Design of pump station site improvements which include the sodium hydroxide line, venturi meters, and analyzer building. It is anticipated that the design will include a single venturi meter in a buried vault, a 15X10 analyzer building with water, sewer (drain), electricity and small HVAC unit.
- D. Make use of current technical specifications, details, and standards developed by TRWD for the IPL project as the basis of design for the proposed replacement pipe.

-
- E. Final design plans will be based on coordinate data that is consistent with TRWD GIS data and monuments. The final design will be provided to TRWD in a format that will be imported into the GIS model for updating the Cedar Creek pipeline information.
 - F. Consultant(s) shall provide services for general civil and structural engineering for pipeline design for the Cedar Creek Section 4 Pipeline Replacement Project. Contract design drawings shall be completed in AUTOCAD Civil 3D. Pipeline alignment, profile and appurtenances will also be translated into ESRI GIS mapping.
 - G. Contact pipe manufacturers directly to update estimated pricing at the different milestones and to determine capacity for production.
 - H. Prepare permit applications for all local authorities, highway departments, and other utilities. Environmental permitting is excluded from Consultants' scope.
 - I. Determine the most cost effective and operationally effective construction schedule. TRWD needs to be able to deliver water to customers without interruption of service and will need to minimize the time the Cedar Creek pipeline is out of service. However, JCC1 and IPL provide redundancy, so an aggressively condensed schedule is not necessary.
 - J. Prepare progress plans, specifications and contract documents and submit for review with the Owner at 60% and 90% milestones. Pipeline Plans will include: general sheets, plan/profile pipeline sheets, erosion & sediment control sheets, roadway crossing sheets, stream crossing sheets, utility crossing sheets, connection details, standard details, traffic control details, ESC details, and project specific details if needed. STV will utilize an excel tracking log to respond to comments for each milestone submittal. Conduct a review meeting with TRWD staff to facilitate comments and feedback before proceeding to the next milestone.
 - K. Prepare progress plans/specifications for the venturi meter, chemical injection point and analyzer building. Plans will be incorporated into the Pipeline Plan set and will be based on a maximum 15'x20' analyzer building with a small HVAC unit. The building will be a prefabricated building on a concrete slab. The venturi meter vault will be based on a below grade cast in place vault with ventilation fans and lighting.
 - L. TRWD/HDR will provide CP design drawings for incorporation into the plan set for each submittal milestone. HDR will also provide station numbering/GIS files so that the location of CP beds and test stations can be integrated into the pipeline plan and profile sheets.
 - M. Prepare a final design Not-For-Construction (NFC) submittal that incorporates TRWD's comments on the 90% set.
 - N. Prepare final "Issued for Bid" plans, specifications and contract documents that incorporate TRWD's comments on the NFC submittal.

Deliverables:

- Final Engineering Design Report – 1 PDF
- 60% design plans, specifications, and OPCC – 1 PDF

- 90% design plans, specifications, and OPCC – 1 PDF
- NFC design plans, specifications, and OPCC – 1 PDF
- Bid-ready plans, specifications, and OPCC – 1 Hard Copy, 1 PDF

3.6 Task 6: Procurement Phase Services

Construction procurement advertisement will be conducted through OpenGov. TRWD Buyer will be the central point of contact between the project team and potential vendors and contractors during the procurement phase. All questions will be directed to and answered through the Buyer. TRWD Purchasing will provide relevant front-end documents (Division 00) for the Competitive Sealed Proposal (CSP) process. The CONSULTING TEAM is expected to provide the following service during Procurement Phase:

- A. Assist TRWD in answering questions and, as necessary, issue addenda to clarify the design documents.
- B. Attend one pre-proposal meeting.
- C. Attend one procurement evaluation conference. Note Consultant is to review submitted proposals for technical input and project approach and provide input to advise evaluation team in their review of proposals. Consultant will not be a voting member of the proposal evaluation team.
- D. Review and evaluate bid tabulations.
- E. Make recommendation for construction contract award.
- F. Prepare a “Conformed” submittal that incorporates the changes made during the procurement phase.

Deliverables:

- Bid-ready documents – 1 Hard Copy, 1 PDF
- Response to bidders’ questions & addenda – Digital PDF
- Recommendation for construction contract award – Digital PDF
- Conformed Drawings and Specifications (Civil 3D CAD drawings in .DWG and .PDF formats) – 5 Hard Copy Sets, 1 PDF

3.7 Task 7: Construction Phase Services – NOT INCLUDED IN THIS PHASE - Scope and fee to be negotiated during procurement phase services

3.8 Task 8: Resident Representative Duties – NOT INCLUDED IN THIS PHASE - Scope and fee to be negotiated during procurement phase services

3.9 Special Service 1– Topographic Survey, Boundary Survey, and Easement Services

The following services are a part of Basic Services. The following surveying services are to be provided by Spooner & Associates.:

- A. Topographic/Design Surveying Services

1. Provide supplemental topographic/design survey to supplement the LIDAR and survey data provided by TRWD along the Cedar Creek Pipeline Section 4. The survey shall include, but not be limited to, locating all existing features X, Y & Z, such as buildings, water valves, water meters, curb & gutter, asphalt, sidewalks, fences, driveways, storm & sanitary sewer manholes with flow line elevations, inlets and storm drain outfalls with flow line elevations, trees 6" and larger, tops and toes of slope, power poles, mailboxes, gas lines, Utility markers, signs, telephone risers and any other visible features. The surveyor shall provide appropriate length adjustments for the earth's curvature, as well as a scale factor, where applicable. Tie in existing control shown, if applicable.
2. Spooner & Associates will obtain right of entry (ROE) from public and private landowners to allow survey services to be performed. TRWD needs the right of way boundary survey done to establish the exact footprint of the ROW.
3. Digital files will be provided in an ESRI File Geodatabase format using the following projection, coordinates, and units:
 - a. Projection: Lambert Conformal Conic
 - b. Coordinate System: State Plane, North Central Texas Zone (4202)
 - c. Unit: US Feet
 - d. Horizontal Datum: North American Datum 1983
 - e. Geodetic Vertical Datum: NAVD 1988
4. Contractor shall submit metadata with all digital GIS data. Metadata should comply with either ESRI metadata standards or FGDC Content Standards for Digital Geospatial Metadata. Unless otherwise indicated metadata must include the following information:
 - a. Summary, Description, Credits, and Use Limitations
 - b. Information documenting the Projection, Coordinate System, Datum, and Surface to Grid Scale Factor of the data.
 - c. Data that the information was compiled/mapped.
 - d. Source of information
 - e. Contact Person at Submitting Organization
5. Deliverables will include a digital file in dwg or dgn format and GIS format containing all features located in the field, one-foot interval contours and TIN. Other deliverables will include copies of all field notes and drawings, a point file of all points located in the survey and a LandXML file.
6. Survey services are capped at the dollar amount included in the Work Breakdown Structure.

B. Deliverables:

1. All deliverables shall meet the standards of TRWD Geospatial Services department and TRWD Real Property Division (for property boundary surveys).
 - Set temporary pins at property corners on site.
 - Provide copies of field notes
 - The Contractor shall provide an exhibit plat and metes-and-bounds legal description for the project area, if necessary. Plat and legal description shall be signed and sealed by a Registered Professional Land Surveyor, currently licensed to practice in the State of Texas. The legal descriptions and exhibits shall be in accordance with the following:
 - Legal descriptions shall include sufficient information to identify the location, boundaries, monumentation, and area of the described tract, as well as its relationship to the parent tract out of which it is surveyed. Each legal description shall be accompanied by an exhibit plat that depicts the worded description. Legal descriptions and exhibit plats shall be reproduced on 8-1/2"x11" sized paper.
 - Up to 40 exhibit plats have been assumed.

3.10 Special Service 2– Geotechnical Investigation

- A. A total of 30 borings up to 20 feet at selected locations along the alignment (spacing is approximately every 1,500 ft), A total of 10 bores up to 30 feet at major road, creek and gas pipeline crossings will be drilled. Samples will be collected intermittently using continuous flight augers and either split-spoon or tube samplers. Rock and rock-like materials will be sampled using an NX-size core barrel. Borings will be sampled continuously to a depth of 10 feet and within the tunnel zone of tunnel borings, and at 5-foot intervals otherwise, to determine site stratigraphy and to obtain samples for laboratory testing. Rock encountered will be cored.
- B. Up to 12 soil samples will be collected at a depth near the invert of the new pipe and sent to the TRWD third party Corrosion Engineer for corrosion testing. One-gallon samples from each boring shall be shipped to the Corrosion Engineer (HDR). Samples should be a representative mixture of the soils at various depths in the test hole. One-gallon samples shall be clearly marked with a bore location reference that is easily identifiable on the bore location map.
- C. Soil box resistivity will be tested in every boring within the pipeline zone.
- D. All the field and laboratory tests will be performed according to ASTM standards, where applicable, or with other well-established procedures.
- E. Results of the field and laboratory data will be used for the proposed pipeline. All borings will be backfilled with soil cuts after obtaining ground water measurements. The pavement cores will be patched at the surface, where applicable.
- F. The laboratory testing program will be developed once the field boring logs have been reviewed and the general site stratigraphy developed. The laboratory tests will include natural moisture contents, Atterberg Limits, percent passing the no. 200 sieve, one-dimensional swell, direct shear (CD), and unconfined compression strength tests.

-
- G. Soil Boring samples and rock cores will be kept in an air-conditioned storage unit for up to 15 months from the date of boring. Samples will be made available to the contractor for evaluation during the bidding phase.
- H. Reporting - A report of the study will be prepared by engineers specializing in soil mechanics after reviewing available structural, geological, boring, and laboratory data. In general, the following items will be included in the report:
- Site vicinity map,
 - Plan of borings
 - Boring logs,
 - Laboratory and field test results,
 - Regional and site geology,
 - Generalized groundwater and subsurface soil conditions, and
 - Pipeline design and construction recommendations.

3.11 Special Service 3– Subsurface Utility Engineering (SUE)

The following SUE services are to be provided by STV:

- A. SUE quality levels D, C, B, and A will be performed in general accordance with the recommended practices and procedures described in ASCE Publication CI/ASCE 38-02 (Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data). As described in the mentioned ASCE publication, four levels have been established to describe the quality of utility location and attribute information used on plans.
- B. STV personnel will scan the defined work area using electronic prospecting equipment to search for “unknown” utilities. However, STV is not responsible for designating and locating these “unknown” utilities. Utilities to be designated include gas, telecommunications, electric, traffic signals, storm, water and sanitary sewer. Designating will be performed within the 100 foot right of way of the existing 72” pipeline. 20 QL “A” test holes are included in the budget. Test hole locations will be determined by STV once the QL “B” SUE deliverable has been reviewed. STV will have all designating marks and test holes surveyed using project control point data provided by Spooner & Associates. Any necessary Right-of-Entry (ROE) will be provided by Spooner & Associates prior to the start of field work.
- C. Designating Procedures: Prior to beginning field designating activities, STV’s field manager will review the project scope of work and available utility records. Once these initial reviews are complete, the field manager and technicians will begin designating the approximate horizontal position of known subsurface utilities within the specified project limits. A suite of geophysical equipment (electromagnetic induction, magnetic) will be used to designate metallic/conductive utilities (e.g. steel pipe, electrical cable, telephone cable). STV will establish routine/ordinary traffic control (cones and free-standing signage, etc.) whenever required as part of our standard pricing. If non-routine

traffic control measures are required (barricades, flag person, changeable message board, etc.), these services will be considered extra.

- D. STV's field manager will produce detailed sketches depicting each utility as well as relevant surface features such as roadways, buildings, manholes, fire hydrants, utility pedestals, valves, meters, etc. Each utility will be labeled with a unique ID code. For example, if two different water lines exist on the project, one will be labeled W1 and the other W2. Paint and pin flags will be used to designate the utilities in the field. A labeled pin flag or paint mark will be used to mark each location where a survey shot is required. The locations will be numbered sequentially for each individual utility line. For example, if there are 10 shots required on water line W1, the points will be numbered W1-1 through W1-10.
- E. Locating Procedures - STV will utilize non-destructive vacuum excavation equipment to excavate test holes at the required locations. Due to the risk of damage, STV will not attempt to probe or excavate test holes on any AC water lines unless approval is obtained from the owner in advance. Once each utility is located, STV will record the utility type, size, material, depth to top, and general direction. Each test hole will be assigned a unique ID number and will be marked with a nail/disk. The test-hole ID number and other pertinent utility information will be painted at each test-hole location. We have assumed that all test holes will be in non-paved areas and are accessible to truck-mounted equipment, and that routine traffic control (cones and free-standing signage, etc.) will be required during the performance of the QL "A" SUE work.
- F. Deliverables - STV will produce a utility file, in AutoCAD and GIS format, depicting the type and horizontal location of the designated utilities. The size of each utility will be presented in the utility file if this information is indicated on available record drawings. STV will also provide a summary sheet of the test hole coordinate data and depth information. Spooner & Associates will provide STV with base map/topographic files for use in preparing the utility file.

4.0 ADDITIONAL SERVICES

4.1 Task 4: Additional Services

A maximum budget in the amount of \$300,000 is included to cover costs associated with out-of-scope effort to complete project tasks and is only available upon written approval by TRWD. If needed, the additional funding will be billed at the same rate as the Basic Services. These may include design services:

- Additional Easement documents if required at \$1,895 per easement.
- Additional cost estimating beyond that stated in the Basic Services
- Additional design meetings beyond that stated in the Basic Services.
- Environmental and cultural resource field work and permitting.
- Geophysical field work and report preparation.
- Additional geotechnical borings and soil studies exceeding what is described in Special Services
- Additional Venturi Meter Design
- Additional SUE beyond what is described in Special Services
- Project will be designed as one package using CSP method. Using a different delivery method such as Contract Manager At Risk (CMAR) may result in additional design services. Additional design services will be based on the level of additional scope that exceeds the current contract for CSP.
- Separating design into multiple packages (one package is budgeted)
- Installing piezometers to assess ground water levels and anticipated ground water pumping rates.
- Additional Manned survey
- Abstracting services – if abstractor services for property, easement and right of way research are necessary this will be an additional service.

4.2 Owner's Responsibility

The owner will be responsible to provide the following information to use for the design of this project:

- Standard details and design requirements
- Reports from previous investigations to include:
 - Any existing geotechnical information for Cedar Creek 4

- Any investigations on pipeline condition for Cedar Creek 4 that were not provided in the RFP but needed to address concerns with the two connection points.
- Any reports or studies regarding the installation of the proposed venturi meter at the Pump Station.
- Supplementary work is anticipated to be provided by other consultants engaged under contract directly with TRWD. These consultants will be expected to coordinate with and comply with the overall design schedule of this project and provide documents in a timely manner to maintain that schedule. STV has included time for reviewing reports and coordinating with these other consultants. In addition, STV will include these supplementary efforts in the overall project schedule and deliverable timeline so that efforts can be synced for successful delivery of the project. Support from other consultants to include:
 - Cathodic protection design (HDR)
 - Surge analysis – TRWD will provide HGLs for steady state analysis and their consultants (Hazen and Sawyer) will provide surge envelopes related to STV’s design for air valve placement.
 - Environmental Permitting (Terracon)

4.3 Out of Scope Services

There are many other services which may be beneficial for the completion of this but are not included in the scope of work and associated fee for the basic contract. Other services may be required as a result of events that occur in the course of the design due to factors beyond the control of TRWD or the Engineer. If these services become necessary, an amendment will be developed for review and execution by the TRWD. These services may include but are not limited to the following tasks:

- Legal representation for issues arising out of events from the public, landowners, or contractors outside the responsibility stated in the contract.
- Major delays to the design or construction periods of more than 10% of the overall schedule established in the contract.
- Major public opposition requiring significant rework or public engagement beyond the initial assessment identified in the scope of work.
- Permitting delays caused by any agency which requires more than one resubmittal, additional meetings, major re-design or additional investigations not identified in the scope of work.

Tarrant Regional Water District Cedar Creek Section 4 Raw Water Pipeline Section 4 Fee Estimate STV 7/23/2024		TASK FEE
		\$ 5,346,528
1	Project Management	\$515,531
1a	Preliminary and General Services	\$481,087
2a	Design Criteria Confirmation	\$246,667
3	Preliminary Design (30%)	\$560,476
4	Permitting	\$105,810
5a	Final Design Documents 60 % Design	\$1,176,044
5b	Final Design (90%, NFC, and Bid Documents)	\$1,079,418
6a	Construction and Equipment Package Bid	\$64,409
6b	Bid Processing	\$109,459
7	Construction Phase Services (To Be Developed Later)	\$0
SS1	Survey	\$339,661
SS2	Geotechnical	\$215,060
SS3	SUE	\$152,906
AS	Engineering Contingency	\$300,000

TARRANT REGIONAL WATER DISTRICT

AGENDA ITEM 7

DATE: August 20, 2024

SUBJECT: Consider Approval of Contract with HDR Engineering, Inc. for Corrosion Control Engineering Design Services for Cedar Creek Section 2 Phase 2 Pipeline Replacement in the Kennedale to Mansfield Area and Cedar Creek Section 4 Pipeline Replacement Project from the Trinity River to Cedar Creek Lake

FUNDING: Bond Fund

RECOMMENDATION:

Management recommends approval of a contract **in an amount not-to-exceed \$424,533** with HDR Engineering, Inc. for corrosion control engineering design services for approximately 4.42 miles of the Cedar Creek Section 2 Phase 2 pipeline replacement project along with the adjacent Richland-Chambers pipeline, and 8.6 miles of the Cedar Creek Section 4 pipeline replacement project. These corrosion control engineering services include project management, preliminary design investigations, final design plans and specifications, and procurement phase services.

DISCUSSION:

The District has identified the need to advance engineering design for the Cedar Creek Section 2 Phase 2 and Section 4 Pipeline Replacement Projects where significant amounts of distressed 72-inch diameter pre-stressed concrete cylinder pipe exist. This will improve the District's reliability to deliver water to customer cities, reduce the risk to surrounding rapidly urbanizing areas, and increase water delivery capacity with the planned increases in pipeline size.

The District recommends a contract with HDR Engineering to coordinate with the overall pipeline design engineering teams to design the cathodic protection of the new Cedar Creek pipelines and the parallel Richland-Chambers pipeline that is within the same right of way in Section 2. The current cathodic protection system is over 25 years old, exceeding its original expected useful life. It is in the District's interest to renew the galvanic anode cathodic protection system on the existing Richland Chambers pipeline at the same time the adjacent Cedar Creek pipeline is being replaced along with its new cathodic protection system. The corrosion control of the new 90-inch & 102-inch steel pipe to be installed, through proper exterior coating and cathodic protection, is key to achieving the expected one-hundred-year design life of these new pipelines.

The Request for Statement of Qualifications was solicited per statute (Texas Government Code Chapter 2254) and six submittals were received.. Attached is the list of submitting

firms that were evaluated. All six submittals were reviewed and evaluated, and the top three scoring firms were interviewed in person. HDR Engineering, Inc. was deemed to be the most qualified firm to perform the corrosion control design of these two projects.

HDR Engineering, Inc., is a prime, non-certified business. It has subcontracted portions of the contract resulting in an overall Diverse Business participation commitment of 36%.

These corrosion control engineering design and procurement services are expected to take place over the next two and half years, with construction planned to begin in the winter of 2027.

This item was reviewed by the Construction and Operations Committee on August 15, 2024.

Submitted By:

Jason Gehrig, P.E.
Infrastructure Engineering Director



List of Submitting Firms

RFSOQ 24-107

CORROSION CONTROL ENGINEERING SERVICES FOR CEDAR CREEK SECTION 2 REPLACEMENT (PHASE 2), CEDAR CREEK SECTION 4 REPLACEMENT, SECTION 1D & 1E PIPELINES AND ARLINGTON OUTLET IMPROVEMENTS

Due Date and Time:	APRIL 22, 2024, AT 2:00 PM CT
---------------------------	-------------------------------

Name of Firm
A-Line Corrosion Services LLC
Hazen and Sawyer
HDR
Lockwood, Andrews, and Newman, Inc.
M/S Sietricon
V&A Consulting Engineers, Inc.

LIST OF SUBMITTING FIRMS

RFSOQ 24-107 CORROSION CONTROL ENGINEERING SERVICES FOR CEDAR CREEK SECTION 2 REPLACEMENT (PHASE 2), CEDAR CREEK SECTION 4 REPLACEMENT, SECTION 1D & 1E PIPELINES AND ARLINGTON OUTLET IMPROVEMENTS

Exhibit A

Scope of Services Corrosion Control Engineering Services for the Cedar Creek Section 2 Phase 2 & Section 4 Pipeline Replacement Projects

BACKGROUND

HDR Engineering, Inc. (CONSULTANT) will provide Corrosion Control Engineering Services for the Cedar Creek Section 2 Phase 2 & Section 4 Pipeline Replacement Projects. The project consists of approximately 4.42 miles and 8.6 miles, respectively, of 102-inch and 90-inch diameter cement mortar-lined and polyurethane coated raw water transmission main.

Services are anticipated to include the following:

- Task 1 - Project Management and Support
- Task 2 – Preliminary Engineering
- Task 3 – Final Design Engineering
- Task 4 – Bid Phase Services

These services will require extensive coordination and collaboration by HDR Engineering, Inc. (HDR) with the two Pipeline Design Teams and other Project Consultants as follows:

- A. Project Geotechnical Engineer –HVJ is the Project Geotechnical Engineer for both Cedar Creek Section 2 Phase 2 and Section 4. HVJ is tasked with collection of screening level characterization borings and geophysical testing of the pipeline alignment. HVJ is providing soil for chemical testing by HDR’s lab of choice on various samples taken during the geotechnical exploration program. A full soil resistivity survey is not being conducted, however any soil box resistivity data collected by either design team will be provided to the ENGINEER.
- B. Pipeline Design Teams, Kennedy Jenks and STV, will provide engineering services for the design of pipeline sections 2 & 4, respectively, along the Cedar Creek pipeline. HDR will coordinate designs, studies, and recommendations with the design team. Tarrant Regional Water District (TRWD) will be the facilitator for this interface.

All project deliverables will be required to be submitted per the project schedule developed by TRWD and the Pipeline Design Teams.

ASSUMPTIONS

In developing the scope of work and associated task budgets discussed in this proposal, HDR Engineering, Inc. (CONSULTANT) has made the assumptions outlined below:

1. Provide all labor, equipment, supplies, transportation, services, deliveries, and incidentals, etc. necessary to accomplish the project Objective.
2. Identify, coordinate, and conform design of this project to meet legal and regulatory parameters/constraints, codes and applicable requirements set forth by agencies including but not limited to EPA, FEMA, COE, State of Texas, TCEQ, County government, local municipalities and any other local codes or agencies as required.
3. Address, evaluate and incorporate appropriate Professional, Technical and Industry trade organization's practices, and generally accepted design criteria.
4. Coordinate appropriate meetings with TRWD for the purpose of information transfer, resolution of issues, site visits, and product reviews. Conduct briefings as required.
5. Review and utilize existing information, reports, surveys, and data available and provided by TRWD.
6. Review and make necessary corrections to all reports (preliminary, intermediate, and final), status papers, technical memoranda, drawings, specifications, etc. prior to submitting to TRWD for review.
7. Provide services with regard to approved project Scope and Budget and incorporate appropriate TRWD comments into the reports, technical memoranda, drawings, specifications, etc.

SCOPE OF WORK

The Scope of Work that follows details the individual tasks and deliverables for the PROJECT.

Basic Services:

Basic services are as follows:

Task 1 – Project Management and Support

Provide information and documentation consistent with the Project requirements and coordinate efforts with TRWD, the Pipeline Design Teams and the Geotechnical Engineer. Provide monthly reports and updates until the conclusion of the work. A duration of approximately twenty-nine (29) months for the design and procurement phase of Section 2 Phase 2, and twenty-three (23) months for the Section 4. Neither duration includes construction services nor do they include startup and commissioning. Throughout the project, the following Project Management and Support services will be provided:

- A. Coordinate and attend two (2) separate Kick-Off Meetings with TRWD, the Pipeline Design Teams and the Project Geotechnical Engineer. Up to three (3) HDR staff will attend and participate in these meetings.
- B. Prepare a Project Management Plan (PMP) to include: relevant project criteria, project completion plan, communications protocol, quality management plan, project work schedule, schedule and description of deliverables, work breakdown structure, budget control plan, document control procedures, project team contact list, health and safety plan, contract, and scope of work attachments. PMP will be updated as required for schedule revisions and relevant project updates.
- C. Submit and implement a project Quality Assurance and Quality Control (QA/QC) Plan to check, as a minimum, planning methods, design methods, calculations, cost estimates, field investigations, measurements, drawings, specifications, addenda, and other technical issues associated with the project planning and design.
- D. Coordinate and participate in monthly progress meetings with TRWD, the Pipeline Design Teams, and Project Geotechnical Engineer for the duration of the project. Staff will attend up to twenty-nine (29) progress meetings for Section 2 Phase 2, and up to twenty-three (23) progress meetings for Section 4. Progress meetings will be conducted by conference call and video conferencing. Monthly meeting agendas will be planned accordingly, cover corrosion section early on, to prevent HDR from sitting through the entire progress meeting for the durations notes above.
- E. Provide monthly status reports, in support of invoice, which include a narrative summary of work completed, activities planned for the upcoming period, budget status, schedule status, items requiring resolution or decisions by the District and issues and concerns. Assume a duration of twenty-nine (29) months for Section 2 Phase 2, and up to twenty-three (23) months for Section 4..

Deliverables:

- Kickoff Meeting Agenda and Notes
- Updated Project Management and Quality Control Plan (includes Health and Safety)
- Monthly Progress Meeting Agendas and Notes
- Updated Project Schedule
- Monthly Invoices with Activity Report
 - Invoices to include hours per day per person.

Assumptions:

- HDR representatives will participate in monthly project meetings and coordinate with entities within and, as appropriate, outside the Project by conference call.
- Kick-Off meetings attendees include the Project Manager and Corrosion Engineering Staff are anticipated.

- All progress meetings by video and telephone conference calls. Project Manager and relevant support staff will participate in progress meetings via conference call. Up to forty-five (45), one-hour monthly coordination calls are anticipated.
- Four months of bidding stated above assumes two (2) months for Section 2 and two (2) months for Section 4.

Task 2 – Preliminary Engineering

Preliminary Engineering efforts will include reviewing available TRWD records and documents, performing soils analysis, coordinating other soil corrosivity data collection by TRWD, review and provide recommendations for existing Specifications and Details, coordinate planning of corrosion protection measures on existing CC and RC Pipelines, and evaluate possible AC Induction issues from overhead high voltage power transmission. Any encountered will be evaluated, and mitigation designed accordingly. Results of soils analysis will include the following:

- A. Coordinate collection of soils samples obtained by the Project Geotechnical Engineering Consultant and send them to HDR’s Laboratory for testing and analysis of the following properties:
 1. Resistivity
 2. pH
 3. Electrical Conductivity
 4. Chemical Analysis (Cations and Anions)
 5. Other Tests (Ammonia, Nitrate, Sulfide, and Reducing Oxidation Potential - Redox)
- B. Review existing soil corrosivity data and coordinate with TRWD to obtain Wenner 4-pin if changes or other spot testing is needed. Additionally, conduct deep Wenner 4-pin tests at up to three (3) sites selected for deep anode systems.
- C. Coordinate with the Pipeline Design Teams and TRWD to implement corrosion protection (CP) and monitoring that will be required for the existing Cedar Creek (CC) and Richland Chambers (RC) Pipelines during removal and demolition of the existing pipe and the construction of new parallel pipeline.
- D. Review and summarize previous work performed and noted along the pipeline route for high voltage transmission lines. Any High voltage transmission lines encountered will be considered in this evaluation. Provide recommendations for isolation measures and coordinate with relevant utility owners.
- E. Conduct feasibility study for impressed current corrosion protection system on Cedar Creek Section 4 replacement only. Final design of impressed current vs. galvanic system dependent on the ability to find ROW with adequate pipeline offset for remoteness, local geology, and stray-current to underground utilities.

Deliverables:

- Electronic version (.pdf) of HDR Laboratory soil analysis results.
- Summary of recommendations for specifications and details, CP measures for CC and RC, and AC Induction evaluation by memo or email.

Assumptions:

- HDR will coordinate the collection of the soil samples and their shipment to HDR’s laboratory with the Project Geotechnical Engineer.
- Up to thirteen (18) soil samples will be collected and analyzed. HDR assumed six (6) samples for Section 2 and twelve (12) samples for Section 4.
- During CP evaluation of existing CC and RC pipeline, HDR may require up to one (1) trip of three (3) days duration for one (1) HDR staff and hours for additional staff for review and collaboration per section thus a total of two (2) trips across six (6) days.

Task 3– Final Design Engineering Services (60%, 90%, 100%, and Final)

Based upon TRWD data and soil analysis results, develop final design documents, construction drawings, specifications, and Opinions of Probable Construction Costs (OPCCs).

Prior to each submittal to TRWD, HDR will conduct an internal QC review of the drawings, specifications, and OPCC to assure the application of industry design practices. Following the submittal of each set of design documents (60%, 90%, 100% and Final), HDR will coordinate design review workshops at TRWD’s offices for each submittal. Review comments will be compiled and reconciled in a comment tracking log. This approach will be applied with both projects, Section 2 Phase 2, and Section 4, respectively.

For the development of the Corrosion Protection Design Drawings, it is anticipated that HDR will provide the pipeline design engineer the Station numbering/GIS files so that the location for CP beds and test stations can be shown on the same pipeline plan and profile sheets. At each stage of design HDR will provide the pipeline design teams redlines of the proposed locations for the design teams to draw in and incorporate into their sheets. HDR will prepare the supporting tables, schedules, and details to be added to each of their respected final design drawings. The estimated Sheet Index for the Corrosion Protection Drawings is as follows:

No. Sheets	Title
Cedar Creek Section 2 Phase 2 (Galvanic Anode Cathodic Protection)	
1	Cedar Creek General Notes, Abbreviations and Schedules
6	Cedar Creek Standard Details I – VI
1	Cedar Creek Corrosion Equipment Schedule
1	Richland Chambers General Notes, Abbreviations and Schedules
6	Richland Chambers Standard Details I - VI
1	Richland Chambers Corrosion Equipment Schedule
Cedar Creek Section 4 (Impressed Current Cathodic Protection)	
1	General Notes, Abbreviations and Schedules
1	Standard Details I
2	Corrosion Equipment Schedule
1	Anode/Rectifier Enlarged Plan

1	Site Plan
1	Equipment Rack Elevation
1	One-Line Diagram
1	Panel Schedule
1	PLC Interface Diagram
26	Total Estimated Sheets
Notes:	<ol style="list-style-type: none"> HDR will markup test stations required on the pipeline design teams plan and profile sheets, so that the pipeline teams can incorporate the test station locations on their respective drawings. Should Section 4 require a Galvanic Anode Cathodic Protection design in lieu of the planned impressed current, then the sheet count for Section 4 should be revised to reflect a similar sheet count to Section 2.

The estimated Table of Contents for the Corrosion Protection System Technical Specifications is as follows:

Specification Section	Title
33 01 30.71	Cement Mortar Lining
33 05 24.36	Weld After Backfill
09 96 03	Protective Coating
09 96 06	Pipeline Coating
13 47 13	Galvanic Anode Cathodic Protection
13 47 14	Impressed Current Cathodic Protection, Deep Well Anode

A. 60% Design Documents:

60% Design Documents will be prepared and submitted to TRWD for review and comments. Following TRWD review, a 60% review workshop will be coordinated and conducted to review and discuss comments.

Deliverables:

- Electronic (.pdf) versions of 60% design submittal which will include Corrosion Protection System Drawings, Technical Specification Table of Contents (TOC), and OPCC.
- Specification TOC will be prepared using MS Word.
- OPCC will be prepared using MS Excel.
- Detail Drawings (not plan and profile) will be prepared in 11"x17" format, using the latest version of AutoCad.
- 60% Review Workshop Agenda, Review Comment Log, and Meeting Notes.

B. 90% Design Documents:

Comments from the 60% workshop will be incorporated and 90% Design Documents will be developed and submitted to TRWD for review. Following TRWD review, a 90% review workshop will be coordinated and conducted to review and discuss comments.

Deliverables:

- Electronic (.pdf) versions of 90% design submittal which will include Corrosion Protection System Drawings, Technical Specifications, and OPCC.
- Technical Specifications will be prepared using MS Word.
- OPCC will be prepared using MS Excel.
- Detail Drawings (not plan and profile) will be prepared in 11"x17" format, using the latest version of AutoCad.
- 90% Review Workshop Agenda, Review Comment Log, and Meeting Notes.

C. 100% Design Documents:

Comments from the 90% workshop will be incorporated and 100% Design Documents will be developed and submitted to TRWD for review. Following TRWD review, a 100% review workshop will be coordinated and conducted to review and discuss comments.

Deliverables:

- Electronic (.pdf) versions of 100% design submittal which will include Corrosion Protection System Drawings, Technical Specifications, and OPCC.
- Technical Specifications will be prepared using MS Word.
- OPCC will be prepared using MS Excel.
- Detail Drawings (not plan and profile) will be prepared in 11"x17" format, using the latest version of AutoCad.
- 100% Review Workshop Agenda, Review Comment Log, and Meeting Notes.

D. Final Design and Bidding Documents:

Following the 100% Design Workshop, HDR will incorporate all final comments and deliver signed and sealed electronic (.pdf) documents for incorporation into the Cedar Creek Section 2, Phase 2 and Cedar Creek Section 4 Pipeline Replacement Projects Bidding Documents which will be compiled by the Pipeline Design Teams.

Deliverables:

- Electronic (.pdf) versions of Final Bidding Documents which will include Corrosion Protection System Drawings, Technical Specifications, and OPCC.
- Technical Specifications will be prepared using MS Word.
- OPCC will be prepared using MS Excel.

- Detail Drawings (not plan and profile) will be prepared in 11'x17" format, using the latest version of AutoCad.

Assumptions:

- Constructability reviews will be provided and comments addressed and incorporated for both pipeline projects at 60%, 90%, and 100% prior to submitting to TRWD for review.
- The impressed current cathodic protection system will be designed by HDR. SUBCONSULTANT will design the power and remote monitoring to the rectifier, assist with installation details, and provide necessary drawings for power source, panels, meter, and equipment. These drawings will be incorporated into pipeline design team's drawings for Section 4 only.
- For the development of the Corrosion Protection Design Drawings, it is anticipated that the Pipeline Design Teams will provide the PDF electronic versions of the AutoCad pipeline Plan and Profiles for use by HDR to visualize the location of the appropriate Corrosion Protection facilities. HDR will
- Corrosion Protection System Drawings will be prepared assuming that they will be included in the Pipeline Design Team's Bidding and Contract Documents.
- Final Drawing number and Technical Specification coordination between the Pipeline Design Teams will be performed throughout the design process.
- The Pipeline Design Teams will be responsible for coordinating and assembling the Final Bidding Documents prior to Bid Advertisement.

Task 4 – Bidding Services

HDR will support the bid phase of the project as follows:

- A. Attend and participate in two (2) Pre-Bid Meetings, one for each replacement project.
- B. Assist TRWD and Pipeline Design Engineers in addressing Requests for Information (RFIs) and questions that may arise during the bidding periods.
- C. Assist with preparation of Addenda for the Corrosion Protection portion of the project.
- D. Incorporate addenda into the contract documents and issue a conformed set of Contract Documents for use during construction.

Deliverables:

- Written recommendations and associated Addenda support.
- Written responses to RFIs and questions that arise during bidding.
- Conformed Construction Documents with Addenda incorporated.

Assumptions:

- TRWD and the Pipeline Design Teams will administer and manage the Bidding Process.
- Bid phase for this pipeline is two (2) months per project for a total of four (4) months for HDR.
- Each project will be bid only once and be awarded to one contractor. This equates to two separate contractors on the two separate projects.
- Up to ten (10) RFI's will be addressed, assuming five (5) per project.
- Support for up to four (4) addendums will be provided, assuming two (2) per project

Services not included in this existing Scope of Services

The following services are beyond the Scope of Services described in the tasks above. However, HDR can provide these services, if needed, upon the TRWD's written request. Any additional amounts paid to HDR as a result of any material change to the Scope of the Project shall be agreed upon in writing by both parties before the services are performed. These additional services include the following:

- Services for Galvanic Anode Cathodic Protection design in lieu of impressed current if it is determined to not be feasible. (Section 4 only).
- Services to provide a radio study, radio signal design, or related SCADA communications improvements with the proposed impressed current system design on Cedar Creek Section 4.
- Services related to disputes over pre-qualification, bid protests, bid rejection and re-bidding of the contract for construction.
- Construction Phase Services
- Startup, Testing, and Commissioning Services
- Services necessary due to the default of the Contractor.
- Services related to damages caused by fire, flood, earthquake, or other acts of God.
- Services related to warranty claims, enforcement, and inspection after final completion.
- Performance of miscellaneous and supplemental services related to the project as requested by the TRWD.
- Additional travel days not included herein.

Compensation:

A summary of the Engineering Fee associated with the Cedar Creek Section 2 Phase 2 & Section 4 Pipeline Replacement Corrosion Protection Projects is as follows:

Task	Description	Fee
Basic Services for Section 2 Phase 2		
1	Project Management and Support	\$52,316
2	Preliminary Engineering Services	\$33,401
3	Final Engineering Services	\$87,978
4	Bidding Services	\$13,407
Total Basic Services Fee (Section 2 Phase 2)		\$187,102
Basic Services for Section 4		
1	Project Management and Support	\$40,154
2	Preliminary Engineering Services	\$49,202
3	Final Engineering Services	\$127,865
4	Bidding Services	\$20,210
Total Basic Services Fee (Section 4)		\$237,431
Total Corrosion Engineering Services Fee		\$424,533

Compensation will be made on a Time and Materials basis. Hourly rates and fees associated with these services are as illustrated on the not-to-exceed fee schedule to perform Basic Services as described in this scope of work is as follows:

2024 Rate Schedule

Classification	Hourly Rate Range
Project Principal	\$360 to \$380
Quality Control/ Quality Assurance	\$350 to \$395
Project Manager	\$200 to \$250
Sr. Project Engineer	\$225 to \$295
Project Engineer	\$150 to \$250
EIT	\$160 to \$200
Lab Manager	\$115 to \$125
Design Technician	\$125 to \$175
GIS Analyst	\$110 to \$135
Administrative Support	\$115 to \$175

- Technology Charges will be billed at \$5.00 per hour for each hour expended.
- Expenses for travel, equipment, technology, rental, and field expenses will be billed at cost plus a 6% markup.

- Outside services such as laboratory testing services shall be billed at cost plus a 6% markup.
- Basic Services will be billed on a salary cost as defined in the Compensation section of the contract times a 3.20 multiplier.

SCHEDULE

The effort described in this scope of services allows for a duration of twenty-nine (29) months for Section 2 Phase 2, and up to twenty-three (23) months for Section 4..

TARRANT REGIONAL WATER DISTRICT

AGENDA ITEM 8

DATE: August 20, 2024

SUBJECT: Consider Approval of Contract with Freese and Nichols, Inc. for Environmental and Permitting Services for Two Sections of the Cedar Creek Pipeline Replacement Project

FUNDING: Bond Fund

RECOMMENDATION:

Management recommends approval of a contract **in the amount of \$421,345** with Freese and Nichols, Inc. (FNI) for the environmental permitting of approximately 8 miles of the Cedar Creek pipeline replacement project. This contract covers both Section 2, Phase 2 at a cost of \$212,653 and Section 1D/1E at a cost of \$208,692. These professional services include conceptual analysis and desktop evaluation, environmental and archaeological evaluation, permitting preparation and submittal to receive a US Army Corps of Engineers (USACE) permit.

DISCUSSION:

The Cedar Creek 72" pipeline is the District's oldest raw water transmission main, dating back to the 1970's. An effective pipeline integrity program has extended the life of the pipe, however there are still multiple areas at risk of failure. A proactive effort has been started to replace the highest risk sections based on condition assessment.

This environmental permitting contract is tied to corresponding engineering design contracts for the prioritized sections.

The Section 2, Phase 2 stretch runs from Mansfield to the Kennedale Balancing Reservoir. The engineering design for this section will be done by Kennedy Jenks.

Section 1D & 1E are two new pipelines that will be installed in the existing right of way, parallel to the current CC and RC pipelines. This section runs between the Arlington Outlet and the Rolling Hills Water Treatment Plant. The engineering design for this section will be done by FNI.

Request for Statement of Qualifications was solicited per statute (Texas Government Code Chapter 2254) and four submittals were received. Three pipeline sections identified for replacement were included in the request. FNI was determined to be the most qualified firm to perform the permitting services in two of the three requested sections.

FNI, is a prime, non-certified business. It has subcontracted portions of the contract resulting in an overall Diverse Business participation commitment of 15%.

This item was reviewed by the Construction and Operations Committee on August 15, 2024.

Submitted By:

Darrel Andrews
Environmental Director



List of Submitting Firms

RFSOQ 24-118

Environmental Permitting Services for Cedar Creek Section 2 Replacement, Cedar Creek Section 4 Replacement, Section 1D & 1E Pipelines, and Arlington Outlet Improvements

Due Date and Time:	April 26, 2024 2:00 PM
---------------------------	-------------------------------

Name of Firm
Colliers Engineering & Design, Inc.
Eclipse Environmental Science Group, LLC
Freese and Nichols, Inc.
Terracon Consultants

List of Submitting Firms

RFSOQ 24-118 Environmental Permitting Services for Cedar Creek Section 2 Replacement, Cedar Creek Section 4 Replacement, Section 1D & 1E Pipelines, and Arlington Outlet Improvements

ATTACHMENT 1**Draft Scope of Services****Environmental and Permitting Services for Cedar Creek Section 2 and Section 1D & 1E, and Arlington Outlet Improvements****Freese and Nichols, Inc.****August 7, 2024****Basic Services:****Part 1. Cedar Creek Section 2 Phase 2 Replacement Project**

Project Understanding: Freese and Nichols, Inc. (FNI or Consultant) understands the Tarrant Regional Water District (TRWD or District) Cedar Creek Section 2 Phase 2 Replacement project includes the proposed construction of approximately 4.5 miles of large diameter pipe from the Kennedale Balancing Reservoir (KBR) to Mouser Way within existing right-of-way (R/W). FNI assumes this project can be permitted under Section 404 of the Clean Water Act as a single project.

Task 1: Project Management Services

Project deliverables will be stored and managed on TRWD's Project Portal. A communication plan will be submitted to determine what correspondence may be emailed. Project management tasks to be performed as part of this task are:

- a. Quality Assurance and Quality Control (QA/QC) Plan: FNI will develop and implement a QA/QC Plan to check, as a minimum, planning methods, design methods, calculations, cost estimates, field investigations, measurements, drawings, specifications, addenda, and other technical issues associated with the project planning and design.
- b. Project Schedule: FNI will submit a baseline project schedule at the onset of the project, and then update schedule at all phases of the project, including monthly progress meetings, milestone tasks and dates for TRWD internal review periods (typically 2 weeks).
- c. Monthly Status Report: FNI will send the TRWD project manager a monthly report regarding the status of the project progress to date and upcoming tasks to be accomplished in the coming month, including any tasks needed to be accomplished by TRWD staff to assist with project progress.
- d. Meeting Agendas and Summaries: FNI will prepare meeting agendas and send to meeting participants in advance of the upcoming meeting. FNI will take meeting notes, review action items, and issue meeting minutes after the meeting.

Task 2: Conceptual Analysis and Desktop Evaluation

FNI will perform a desktop analysis of the pipeline ROW and adjacent areas potentially needed for project construction. Tasks to be performed as part of this task are:

- a. Obtain and review existing records related to the project.
- b. Evaluate environmental considerations.
- c. Incorporate all existing data into GIS for use during this project.

Task 3: Environmental and Archeological Evaluation

FNI will perform an environmental permitting evaluation, including a cultural resources evaluation, of the complete project footprint. Tasks to be performed as part of the desktop analysis include:

- a. Gather and Review Existing Information: Prior to conducting a pedestrian survey within proposed project area, Consultant will assemble and review data such as aerial photographs,

USGS topographic maps, National Wetlands Inventory (NWI) maps, the USGS National Hydrography Dataset (NHD), and soils data within the proposed project area.

- b. **Conduct Pedestrian Survey:** Consultant will conduct a site visit/field review to make observations within the proposed project area to document existing environmental conditions and assess potential project impacts. The objective of this site visit is to identify permit issues and recommend adjustments to minimize or avoid impacts to waters of the U.S and other environmental conflicts and streamline the permitting effort. For Threatened and Endangered Species, Consultant will identify potential habitat and document any T&E species encountered. Emphasis will be on federally listed species for Federal permitting, but the Texas Parks and Wildlife Department T&E species database for the project site will be reviewed and documented. Right-of-entry will be provided by TRWD. The presence and locations of waters of the U.S., including wetlands, potential threatened/endangered species and critical habitat, and vegetation cover types will be identified within the proposed project area. In order to document an opinion on the jurisdictional status of waterbodies and wetlands, the Rapanos Guidance dated December 2, 2008, and publicly available guidance from the U.S. Army Corps of Engineers (USACE) following the 2023 Sackett vs Environmental Protection Agency (EPA) case are anticipated to be used during identification of potential waters of the U.S.
- c. **Cultural Resources Desktop Evaluation and Archeological Survey:** Consultant will render the following professional services with the development of the Project, as follows:
 - i. Review desktop-level datasets to assess the project’s potential for affecting significant archaeological resources. The results of the background review and interpretation will be summarized into a brief narrative letter report with supporting maps and other imagery for THC and/or USACE review. This letter report will inform the THC about the project and seek their comment about what further investigations (if any) would likely be required for future regulatory compliance.
 - ii. Assuming that an archeological survey is needed to assess project-related impacts to significant resources, a Texas Antiquities Permit will be acquired from the THC to conduct up to a 100 percent pedestrian survey of the project area per the published minimum survey standards for Texas. The specific locations requiring an intensive pedestrian survey will be defined following coordination with both the THC and/or USACE. Right-of-entry will be provided by TRWD.
 - iii. Prepare a professional report after field survey summarizing the results of the investigations and making management recommendations.
 - iv. Upon regulatory review and presumed concurrence, the final report will be printed, and administrative terms of the permit for project completion will be followed. The report and accompanying field documentation will be curated at a State-approved facility.

Task 4: Permitting Preparation and Submittal

FNI will prepare documents for completion of a Section 404 permit application (assumed to be a nationwide permit). FNI will deliver complete documents to TRWD for signature and submission.

- a. **Aquatic Resources Delineation Report:** FNI will prepare a Delineation Report in accordance with USACE guidance to document potential waters of the US, including wetlands. The Delineation Report will include the required data forms and maps for submission. The deliverable will include the report identifying jurisdictional waters within the proposed project limits and GIS mapping of jurisdictional waters and ordinary high water mark

- boundaries of non-wetland waterbodies in the proper format, to be delivered and stored on TRWD GIS database.
- b. Environmental Information Document (EID): FNI will prepare an EID that is consistent with the USACE requirement for National Environmental Policy Act (NEPA) documentation and the Texas Water Development Board's rules for Water Infrastructure Funding. The EID will be submitted to TRWD as a potential supporting document to a permit or funding application.
 - c. Pre-Construction Notice (PCN): Consultant will prepare a Section 404 PCN in accordance with the requirements of the USACE. The PCN will include the USACE's application, Aquatic Resources Delineation Report, and required supporting documentation and engineering drawings depicting the proposed impacts to waters of the US.

Part 2. Cedar Creek Section 1D & 1E, and Arlington Outfall Improvements

Project Understanding: Freese and Nichols, Inc. (FNI) understands the Cedar Creek Section 1D & 1E, and Arlington Outfall Improvements project includes the proposed construction of approximately 3 miles of large diameter pipe for the 1D component, approximately 3,000 feet of large diameter pipe for the 1E component, and improvements at the Arlington Outfall facility. FNI assumes this project can be permitted under Section 404 of the Clean Water Act as a single project.

Task 5: Project Management Services

Project deliverables will be stored and managed on TRWD's Project Portal. A communication plan will be submitted to determine what correspondence may be emailed. Project management tasks to be performed as part of this task are:

- a. Quality Assurance and Quality Control (QA/QC) Plan: FNI will develop and implement a QA/QC Plan to check, as a minimum, planning methods, design methods, calculations, cost estimates, field investigations, measurements, drawings, specifications, addenda, and other technical issues associated with the project planning and design.
- b. Project Schedule: FNI will submit a baseline project schedule at the onset of the project, and then update schedule at all phases of the project, including monthly progress meetings, milestone tasks and dates for TRWD internal review periods (typically 2 weeks).
- c. Monthly Status Report: FNI will send the TRWD project manager a monthly report regarding the status of the project progress to date and upcoming tasks to be accomplished in the coming month, including any tasks needed to be accomplished by TRWD staff to assist with project progress.
- d. Meeting Agendas and Summaries: FNI will prepare meeting agendas and send to meeting participants in advance of the upcoming meeting. FNI will take meeting notes, review action items, and issue meeting minutes after the meeting.

Task 6: Conceptual Analysis and Desktop Evaluation

FNI will perform a desktop analysis of the pipeline ROW and adjacent areas potentially needed for project construction. Tasks to be performed as part of this task are:

- a. Obtain and review existing records related to the project.
- b. Evaluate environmental considerations.
- c. Incorporate all existing data into GIS for use during this project.

Task 7: Environmental and Archeological Evaluation

FNI will perform an environmental permitting evaluation, including a cultural resources evaluation, of the complete project footprint. Tasks to be performed as part of the desktop analysis include:

- a. Gather and Review Existing Information: Prior to conducting a pedestrian survey within proposed project area, Consultant will assemble and review data such as aerial photographs, USGS topographic maps, National Wetlands Inventory (NWI) maps, the USGS National Hydrography Dataset (NHD), and soils data within the proposed project area.
- b. Conduct Pedestrian Survey: Consultant will conduct a site visit/field review to make observations within the proposed project area to document existing environmental conditions and assess potential project impacts. The objective of this site visit is to identify permit issues and recommend adjustments to minimize or avoid impacts to waters of the U.S and other environmental conflicts and streamline the permitting effort. For Threatened and Endangered Species, Consultant will identify potential habitat and document any T&E species encountered. Emphasis will be on federally listed species for Federal permitting, but the Texas Parks and Wildlife Department T&E species database for the project site will be reviewed and documented. Right-of-entry will be provided by TRWD. The presence and locations of waters of the U.S., including wetlands, potential threatened/endangered species and critical habitat, and vegetation cover types will be identified within the proposed project area. In order to document an opinion on the jurisdictional status of waterbodies and wetlands, the Rapanos Guidance dated December 2, 2008, and publicly available guidance from the U.S. Army Corps of Engineers (USACE) following the 2023 Sackett vs Environmental Protection Agency (EPA) case are anticipated to be used during identification of potential waters of the U.S.
- c. Cultural Resources Desktop Evaluation and Archeological Survey: Consultant will render the following professional services with the development of the Project, as follows:
 - v. Review desktop-level datasets to assess the project’s potential for affecting significant archaeological resources. The results of the background review and interpretation will be summarized into a brief narrative letter report with supporting maps and other imagery for THC and/or USACE review. This letter report will inform the THC about the project and seek their comment about what further investigations (if any) would likely be required for future regulatory compliance.
 - vi. Assuming that an archeological survey is needed to assess project-related impacts to significant resources, a Texas Antiquities Permit will be acquired from the THC to conduct up to a 100 percent pedestrian survey of the project area per the published minimum survey standards for Texas. The specific locations requiring an intensive pedestrian survey will be defined following coordination with both the THC and/or USACE. Right-of-entry will be provided by TRWD.
 - vii. Prepare a professional report after field survey summarizing the results of the investigations and making management recommendations.
 - viii. Upon regulatory review and presumed concurrence, the final report will be printed, and administrative terms of the permit for project completion will be followed. The report and accompanying field documentation will be curated at a State-approved facility.

Task 8: Permitting Preparation and Submittal

FNI will prepare documents for completion of a Section 404 permit application (assumed to be a nationwide permit). FNI will deliver complete documents to TRWD for signature and submission.

- a. Aquatic Resources Delineation Report: FNI will prepare a Delineation Report in accordance with USACE guidance to document potential waters of the US, including wetlands. The Delineation Report will include the required data forms and maps for submission. The deliverable will include the report identifying jurisdictional waters within the proposed

project limits and GIS mapping of jurisdictional waters and ordinary high water mark boundaries of non-wetland waterbodies in the proper format, to be delivered and stored on TRWD GIS database.

- b. Environmental Information Document (EID): FNI will prepare an EID that is consistent with the USACE requirement for National Environmental Policy Act (NEPA) documentation and the Texas Water Development Board's rules for Water Infrastructure Funding. The EID will be submitted to TRWD as a potential supporting document to a permit or funding application.
- c. Pre-Construction Notice (PCN): Consultant will prepare a Section 404 PCN in accordance with the requirements of the USACE. The PCN will include the USACE's application, Aquatic Resources Delineation Report, and required supporting documentation and engineering drawings depicting the proposed impacts to waters of the US.

Additional Services:

The following services are not included, but can be provided as an additional service:

1. Presence/absence surveys for protected species.
2. Preparation of an aquatic resource relocation plan.
3. Coordination with the U.S. Fish and Wildlife Service, Texas Parks and Wildlife Department, or other resource agency not specified under Basic Services tasks.
4. Phase I/II Environmental Site Assessment.
5. Preparation of a Storm Water Pollution Prevention Plan (SWPPP).
6. Other environmental services not specifically defined in this scope of services.

Services to be Provided by the Client

1. Designate in writing a person to act as Client's representative with respect to the services to be rendered under this project. Such person shall have contract authority to transmit instructions, receive information, and define Client's policies and decisions with respect to FNI's services for the Project.
2. Provide all criteria and full information as to Client's requirements for the Project, including design objectives and constraints, performance requirements, flexibility, and budgetary limitations.
3. Assist FNI by placing at FNI's disposal all available information pertinent to the Project including previous reports and any other data relative to the Project.
4. Coordinate and arrange for access to and make all provisions for FNI to enter upon public and private property as required for FNI to perform services.
5. Perform review and provide comments on draft deliverables as needed.

Time of Completion

FNI is authorized to commence work on the Project upon execution of this Agreement and agrees to complete the services in accordance with the following Table 1 below.

Table 1: Project Schedule

Desktop Evaluation	4 weeks from NTP
Begin Environmental Fieldwork	4 weeks from receiving right-of-entry
Submit Draft Cultural Resources Report to TRWD	12 weeks following receipt of Antiquities Permit
Submit Draft deliverables to TRWD	4 weeks from receipt of design plans

If FNI’s services are delayed through no fault of FNI, FNI shall be entitled to adjust contract schedule consistent with the number of days of delay. These delays may include but are not limited to delays in Client or regulatory reviews, delays on the flow of information to be provided to FNI (including project design plans needed for the Section 404 PCN submittal), governmental approvals, etc. These delays may result in an adjustment to compensation as outlined on the face of this Agreement.

Basic Services Fee

FNI proposes to provide the basic services (Tasks 1 through 8) described above for a not-to-exceed fee of \$421,345. The estimated budgets for each Task may not reflect the actual effort needed to complete each task. FNI assumes budget may be re-allocated between Tasks 1 through 8 as needed to cover actual effort.

Freese and Nichols, Inc. Fee Summary

Task Description:	Total Labor + Subs + Expenses
Cedar Creek Section 2 Phase 2	
Task 1 - PM Services	\$15,155
Task 2 - Conceptual Analysis and Desktop Eval	\$10,191
Task 3 - FNI Enviro Evaluation	\$43,304
Task 3 - AmaTerra Archeo Evaluation	\$58,090
Task 4 - Permitting Prep and Submittal	\$85,913
Cedar Creek Section 1D & 1E	
Task 5 - PM Services	\$15,155
Task 6 - Conceptual Analysis and Desktop Eval	\$10,191
Task 7 - FNI Enviro Evaluation	\$43,304
Task 7 - AmaTerra Archeo Evaluation	\$54,129
Task 8 - Permitting Prep and Submittal	\$85,913
Total:	\$421,345

TARRANT REGIONAL WATER DISTRICT

AGENDA ITEM 9

DATE: August 20, 2024

SUBJECT: Consider Approval of Contract with Terracon for Environmental and Permitting Services for Section 4 of the Cedar Creek Pipeline Replacement Project

FUNDING: Bond Fund

RECOMMENDATION:

Management recommends approval of a contract **in the amount of \$138,000** with Terracon for the environmental permitting of approximately 8 miles of the Cedar Creek pipeline replacement project. These professional services include conceptual analysis and desktop evaluation, environmental and archaeological evaluation, permitting preparation and submittal to receive a US Army Corps of Engineers (USACE) permit.

DISCUSSION:

The Cedar Creek 72" pipeline is TRWD's oldest raw water transmission main, dating back to the 1970's. An effective pipeline integrity program has extended the life of the pipe, however there are still multiple areas at risk of failure. A proactive effort has been started to replace the highest risk sections based on condition assessment.

This environmental permitting contract is tied to corresponding engineering design contracts for the prioritized sections. The Section 4 stretch runs from the Cedar Creek Lake Pump Station to the Trinity River. The engineering design for this section will be done by CP&Y, Inc. dba STV Infrastructure.

The Request for Statement of Qualifications was advertised per statute with qualifications received from four consulting firms. Three pipeline sections identified for replacement were included in the request. Terracon was determined to be the most qualified firm to perform the permitting services in one of the three requested sections.

Terracon, is a prime, non-certified business. It has subcontracted portions of the contract resulting in an overall Diverse Business participation commitment of 15%.

This item was reviewed by the Construction and Operations Committee on August 15, 2024.

Submitted By:

Darrel Andrews
Environmental Director



List of Submitting Firms

RFSOQ 24-118

Environmental Permitting Services for Cedar Creek Section 2 Replacement, Cedar Creek Section 4 Replacement, Section 1D & 1E Pipelines, and Arlington Outlet Improvements

Due Date and Time:	April 26, 2024 2:00 PM
---------------------------	-------------------------------

Name of Firm
Colliers Engineering & Design, Inc.
Eclipse Environmental Science Group, LLC
Freese and Nichols, Inc.
Terracon Consultants

List of Submitting Firms

RFSOQ 24-118 Environmental Permitting Services for Cedar Creek Section 2 Replacement, Cedar Creek Section 4 Replacement, Section 1D & 1E Pipelines, and Arlington Outlet Improvements



1801 Handley Ederville Road
Fort Worth, TX 76118
P 817-626-7067
Terracon.com

June 24, 2024

Tarrant Regional Water District
804 E Northside Dr
Fort Worth, Texas 76102-1016

Attn: Jennifer Owens
Phone: 817-720-4713
Email: jennifer.owens@trwd.com

RE: Proposal for Environmental Permitting Services

Cedar Creek Section 4 Replacement
Henderson County, Texas
Terracon Proposal Number P94247423

Dear Ms. Owens:

Terracon Consultants, Inc. (Terracon) appreciates the opportunity to submit this proposal to Tarrant Regional Water District (TRWD) (Client) to conduct Environmental Permitting Services for the Cedar Creek Section 4 Replacement Project.

1.0 PROJECT INFORMATION

We understand the site is an approximately eight-mile long 72-inch diameter pipeline that will be replaced with a 96-inch diameter pipeline located in Henderson County between the TRWD pump station at Cedar Creek Reservoir and just east of the Trinity River (Figure 1 below). It is understood that the pipeline will be replaced within the current easement. If this is not accurate, or if you have additional useful information, please inform us as soon as possible.

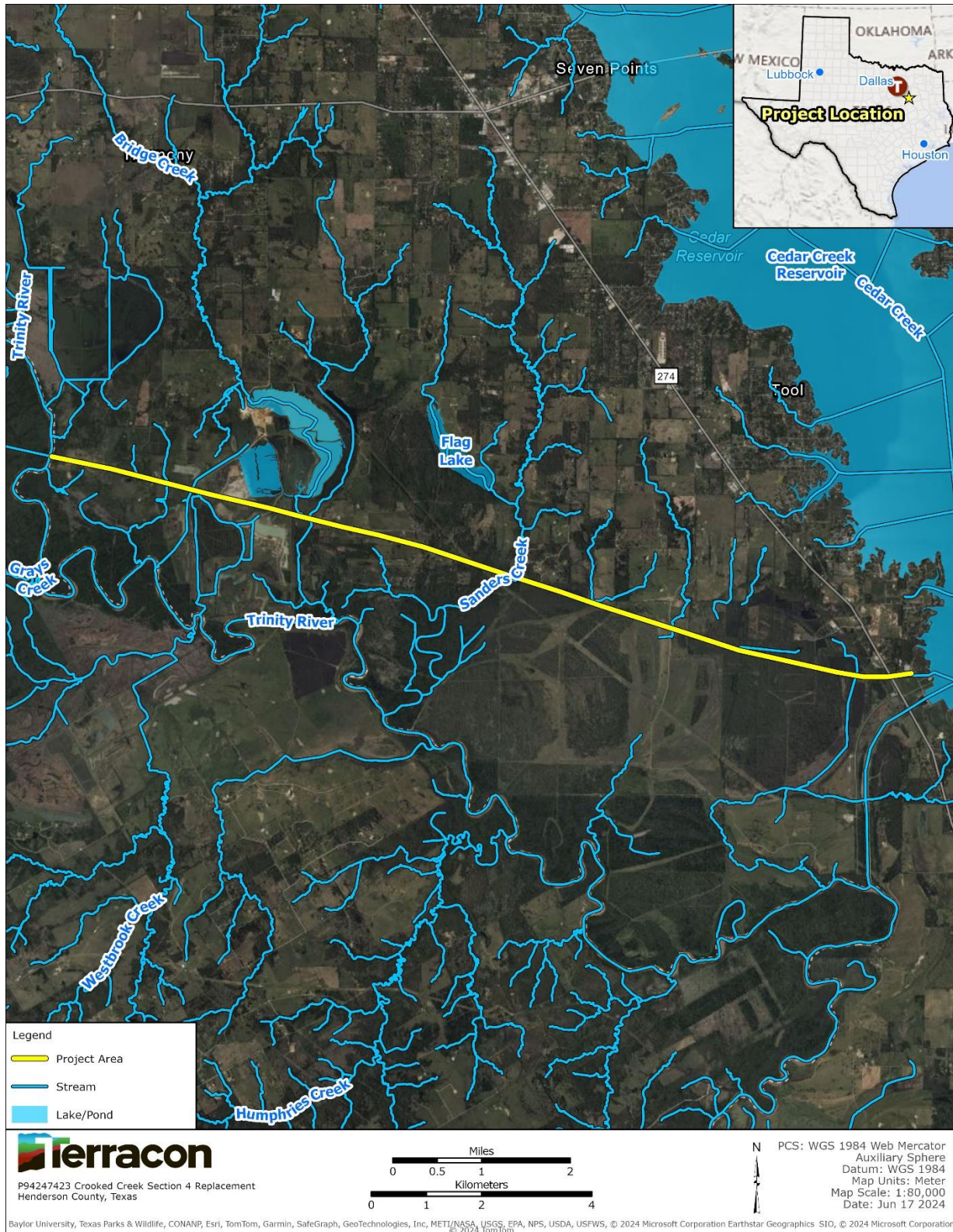


Figure 1. Project extents map.

2.0 PROPOSED SCOPE OF WORK

2.1 Task 1 – Project Management Services

For this task Terracon will provide project management services that would implement the following services:

Quality Assurance and Quality Control (QA/QC) Plan: Terracon will develop and implement a QA/QC Plan which will outline the methodology and process to review, at a minimum, planning methods, design methods, calculations, cost estimates, field investigations, measurements, drawings, and specifications. The plan will also include communication structure internally and externally to ensure the consistent and accurate movement of information.

Schedule: Terracon will prepare a project schedule in Microsoft Project format with pdf versions available of the schedule. The schedule will be based on dates in the RFSOQ, and project milestones provided by TRWD. At a minimum, the schedule will include: monthly meetings, agency coordination meetings, durations for fieldwork activities, draft and final submittals for permit applications, key permitting milestones, and construction support milestones. Terracon will update the schedule at all phases of the project, and conduct monthly progress meetings, milestone meetings, and provide updates for TRWD internal review periods. Terracon will consult with TRWD at critical junctures with findings from studies to discuss implications to project schedules to discuss the best path forward for permitting strategies, and update project schedules accordingly.

Communication and Meetings: Terracon will provide, at the least, monthly project update report delivered to TRWD project managers regarding the status of the project. The project updates will include the project progress to date and upcoming tasks to be accomplished in the coming month, to include any tasks needed to be accomplished by TRWD staff to assist with project progress. The monthly status report will be provided with an invoice that indicates work completed and the value of the work completed based upon the fee estimate.

Terracon will hold meetings as needed to interact with TRWD and subconsultants. At a minimum a kickoff meeting; review meetings for each submittal; and monthly meetings will be held. Consultant coordination meetings, will be scheduled as needed. Terracon will prepare and issue agendas at least two business days in advance of meetings. Terracon will prepare notes, compile and review action items, and distribute minutes and action items log within two business days after each meeting.

Data Management: All project related documents will be stored and managed on the TRWD project portal site. A portal site specific to this project will be created online by TRWD staff and maintained by the TRWD project manager. All data transfers will take place within the TRWD project portal, not through email. At project kickoff, Terracon will meet with TRWD staff to discuss portal management procedures to determine file structure, file naming conventions, GIS file requirements, and other data management requirements. GIS data would include all data collected for desktop reviews, and all GIS field data. At project closeout a final meeting will be held to review and compile documents to ensure all project documentation is processed and filed according to TRWD standards.

2.2 Task 2 – Conceptual Analysis and Desktop Evaluation

Terracon will perform desktop evaluations of the proposed project area to determine the level of on-site investigations that will be needed and potential preliminary design and siting issues that may be avoided. This preliminary desktop evaluation will parallel the project scoping process, and will be included in preliminary design and permitting documentation. Desktop reports for the permitting subject areas will be prepared to summarize findings.

This desktop evaluation will include obtaining and reviewing existing records related to the project, and evaluating environmental publicly available considerations. Terracon will provide GIS data obtained during the desktop evaluation to TRWD for preliminary design considerations and utilize the GIS data for field evaluations of the study area. The desktop evaluation may include the following items:

- **Aquatic Resources Delineation (ARD):** Aerial photographs, USGS topographic maps, publicly available LIDAR datasets, National Wetlands Inventory (NWI) maps, USGS National Hydrography Dataset (NHD), Soils data, and past permitting documents if available.
 - A letter report summarizing resources identified in the project area and figures showing the resources will be provided.
- **Biological Studies:** State and Federal lists of protected species that may occur in the project area, State and Federal land use maps, state waterway biological evaluation studies, state and local wildlife occurrence databases, available studies in the project areas.
 - A letter report summarizing resources identified in the project area and figures showing the resources will be provided.
- **Cultural Resources Studies:** Desktop resources include, but are not limited to USGS geologic and soils data, Texas Department of Transportation (TxDOT) Potential Archeological Liability Map (PALM) Texas Archeological Sites Atlas, National Register of Historic Places (NRHP)-listed properties and districts, State Antiquities Landmarks (SALs), Recorded Texas Historic Landmarks, Official Texas Historical Markers, historic trails, recorded archeological sites, and cemeteries, historical aerial images, topographic maps, and the TxDOT Historic Resources Aggregator, and the Texas Freedom Colonies.
 - A letter report summarizing resources identified in the project area and figures showing the resources will be provided.

2.3 Task 3 – Aquatic Resources Delineation

The proposed ARD scope is presented to assist the Client in remaining in compliance with Section 404 of the Clean Water Act (CWA) and/or Section 10 of the Rivers and Harbors Act (RHA) during possible future construction activities onsite. The results of this task may dictate the appropriate level of USACE permitting effort (if any). To accomplish this scope, Terracon will perform tasks that include a desktop review, a site visit, and report preparation as described below.

2.3.1 Desktop Evaluation

Utilizing items obtained in Task 2, Terracon will review all available background information, including previously completed reports, aerial photographs U.S. Geological Survey (USGS) quadrangle maps, Natural Resource Conservation Service (NRCS) soil surveys, plant species data, U.S. Fish and Wildlife Service (USFWS), National Wetland Inventory (NWI) maps, Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM), and other relevant data necessary for a thorough review of current site conditions. Terracon will review this background information to assess any federally mapped changes within the site or areas that could potentially be categorized as Waters of the U.S. (WOTUS) and those that may not be subject to regulation under Section 404. Appropriate sections of the USGS maps, aerial photographs, soil surveys, floodplain maps, and proposed project boundaries will be assembled in a Geographic Information System (GIS) database to assist in the fieldwork, mapping, and report preparation for the reassessment of the proposed project.

2.3.2 Field Study

Immediately following the completion of the desktop evaluations and consultation with design engineers to confirm the final project scope, Terracon will perform an ARD field study to identify and delineate potential waters of the United States. The objective of this site visit is to identify permit issues and recommend adjustments to minimize or avoid impacts to waters of the U.S and other environmental conflicts and streamline the permitting effort. Resources that would be identified includes wetlands on the project site assessed according to the USACE 1987 Wetland Delineation Manual and the Great Plains regional supplement to the USACE 1987 USACE Wetland Delineation Manual. Terracon will identify potential waters of the United States, which may include traditional navigable waters, relatively permanent waters, non-relatively permanent waters, and wetlands that are adjacent, abutting, or isolated to these waters, and ponds and impoundments. The field study will include completion of USACE wetland determination data forms with plant identification, notation of hydrologic indicators, and excavation of shallow soil profiles, as appropriate within each different vegetative community throughout the riparian area within the project site. All aquatic resources will be identified by the presence of the ordinary high-water mark of the surface tributary system and the presence of wetland indicators, where applicable. All aquatic resources identified will be mapped using a sub-meter global positioning system (GPS) and then analyzed in the GIS database. Aquatic features identified during the field study may be delineated using aerial photographs and/or LIDAR data in areas that are inaccessible or pose a safety concern. Following the field study, exhibits showing the boundaries (polygons) and acreage and/or linear footage (if applicable) of all aquatic resources identified onsite during the field study will be prepared. Terracon will provide a professional opinion regarding the likelihood for the identified aquatic resources to be considered waters of the United States and thus subject to Section 404 regulation by the USACE.

2.3.3 Report Preparation

A report will be prepared for the project documenting the results of the field study. Terracon's comprehensive reports typically address the applicable framework, describe the assessment methodology, limitations and findings, and provide site-specific conclusions and recommendations as appropriate. The waters of the United States delineation\ determination report will include the following information, as applicable:

- A preliminary determination and description of the jurisdictional waters of the U.S. on the project site;

- Brief description of the project, methods/sampling procedures, and results as required by the USACE;
- Acreage of the project area investigated with boundaries indicated;
- Location of each observation point/data point/soil station;
- Data forms completed in accordance with USACE guidelines;
- Acreage of each aquatic feature including polygons of jurisdictional areas (mapped by GPS) shown on an exhibit;
- Historical information (including USGS quad maps, aerial photography, Federal Emergency Management Agency maps, and soil surveys) to document the limits of USACE jurisdiction for isolated and adjacent waters of the U.S.; and
- Professional opinion providing a preliminary jurisdictional determination of each identified aquatic resource with supporting documentation and rationale. Opinion of jurisdiction will be based on pre and post-Sackett definitions of jurisdictional waters.
- Based upon knowledge of proposed project activities, Terracon will also provide suggested permitting requirements, if required.

Deliverable: Prior to issuing the report, Terracon will contact the client to provide a summary of field observations. Draft electronic copies of the ARD Report will be provided to the client for review. Following the client review, an electronic copy of the final draft of the ARD Report will be submitted to the client. The ARD report will be prepared in a manner to be easily attached and serve as a supplement to additional documentation which can be submitted to the USACE for review, concurrence, and authorization if required.

The deliverable will include the report identifying jurisdictional waters within the proposed project limits and GIS mapping of jurisdictional waters and ordinary high water mark boundaries of non-wetland water bodies in the proper format, to be delivered and stored on TRWD GIS database.

2.4 Task 4 – Threatened and Endangered Species Habitat Assessment

To provide the information necessary to determine potential project impacts to protected species and demonstrate compliance with the Endangered Species Act (ESA) and relevant agency permitting conditions, Terracon proposes to conduct a Threatened and Endangered Species Habitat Assessment. To accomplish this scope, Terracon will perform tasks which include a desktop review, a field verification survey, and report preparation, as described below.

Desktop Review

Prior to a field study, qualified biologists will conduct a comprehensive desktop review of best available data, acquired in Task 2, to evaluate the presence (both historically and contemporarily) of potentially suitable habitat for threatened and endangered species (including migratory bird and bat species and plants) in the site. The review will be conducted within the context of the specific project location, and

will include an assessment at the state, county, and local (i.e., United States Geological Survey (USGS) quadrangle) scale.

Field Study

This field study will employ data collected during the desktop review to focus efforts on surveying for the presence of habitat types associated with species having the potential to occur within the project site. Habitat will be assessed via a pedestrian survey. During this survey, available habitat will be characterized, and vegetative communities will be mapped utilizing GPS equipment. In addition, incidental observations of protected species will be recorded.

Including field study efforts within a protected species habitat assessment allows biologists to ground truth the extent of protected species habitats on-site and facilitate more accurate and confident determinations of the project's potential effects on protected species. In addition, state and/or federal regulatory agencies often require an in-person assessment should agency coordination and/or consultation be required as part of the project permitting process.

Report Preparation

Biologists will produce a Threatened and Endangered Species Habitat Assessment Report, including a series of maps summarizing the compiled data and identifying regions of the site presenting potentially suitable habitat for regulated species. Biologists will provide taxa-specific preliminary determinations of the potential for the project to have an adverse effect on regulated species. This report will also include information regarding compliance with the Migratory Bird Treaty Act (MBTA) and Bald and Golden Eagle Protection Act (BGEPA). Lastly, biologists will provide recommendations for future studies (e.g., presence-absence surveys) should findings of the assessment indicate a need for further investigation.

Deliverable

The draft report will be provided to the client for review. Upon incorporation of revisions, Terracon will provide an electronic copy of the final report to the client.

Limitations

Readily available resources do not typically include comprehensive records of documented sightings as such information is generally not made available to the public. No determination based on limited habitat and field assessments can wholly eliminate uncertainty regarding project effects on listed species due to wildlife mobility. The determinations, findings, and conclusions provided in this task would be based on the most current agency protocols, data, and regulatory guidance and will be utilized for agency coordination if required. However, agencies have the final authority over compliance issues and findings. This task does not include formal presence-absence surveys, which may be requested upon agency submittal. Presence-absence surveys for potential species of concern in the area are included as optional tasks in this proposal.

2.5 Task 5 – Cultural Resource Services

Cultural Resources comprise both historic structures and archaeological materials. Therefore, cultural resources can vary a great deal and may include such diverse items as buried artifacts of previous cultures and historic buildings or objects. In Texas, cultural resources are protected under the federal

National Historic Preservation Act (NHPA) of 1966, as amended, and the state Antiquities Code of Texas (ACT). The Texas Historical Commission (THC) is responsible for enforcing cultural resource compliance in Texas. As the project is crossing a jurisdictional waterway, the project will require federal permitting through the US Army Corps of Engineers (USACE). Therefore, compliance with Section 106 of the NHPA, as administered by the THC is required.

Under the ACT, projects that are undertaken by a "political subdivision" require THC coordination if the project affects a cumulative area larger than five acres or disturbs a cumulative area of more than 5,000 cubic yards, whichever measure is triggered first, or if the project is inside a designated historic district or recorded archeological site. A "political subdivision" is defined as a local governmental entity created and operating under the laws of this state, including a city, county, school district, or special district created under Article III, Section 52(b)(1) or (2), or Article XVI, Section 59, of the Texas Constitution. Projects undertaken by State agencies or public universities are not limited by size and require THC coordination before any ground disturbances. The professional archeologist conducting the survey is required to receive a permit before any archeological investigations may proceed.

2.5.1 Task 5.1 - Cultural Resources Desktop Review and Agency Consultation

Task 5.1 consists of a desktop-level review of available resources that contain information about the presence or probable presence of cultural resources within a 1-kilometer radius of the project area to assist the Client in evaluating and complying with applicable cultural resource protections.

The desktop review will include resources collected in Task 2 and the following: 1) a project description and definition of the project area; 2) a review of geologic and soil data and Texas Department of Transportation (TxDOT) Potential Archeological Liability Map (PALM) as they relate to the occurrence and the depositional context of potential prehistoric archeological sites; 3) a review of the Texas Archeological Sites Atlas as it relates to previous investigations, National Register of Historic Places (NRHP)-listed properties and districts, State Antiquities Landmarks (SALs), Recorded Texas Historic Landmarks, Official Texas Historical Markers, historic trails, recorded archeological sites, and cemeteries; 4) a review of historical aerial images, topographic maps, and the TxDOT Historic Resources Aggregator in regard to the probability of encountering historic-age structures; 5) the Texas Freedom Colonies Atlas as it relates to the locations of historical settlements, schools and cemeteries; and 6) Terracon's professional opinion about the need for additional work, if warranted. No fieldwork is associated with this task.

Terracon will prepare a letter report that includes the results of the cultural resources desktop review for the project area with appropriate illustrations and tabulated data summaries. Upon review and acceptance of the assessment by TRWD, Terracon will coordinate with the USACE and THC as applicable to determine whether the project has the potential to impact significant cultural resources. Please note, regulatory agencies (e.g., THC, USACE) will determine the level of effort needed to comply with federal and state regulations.

2.5.2 Task 5.2 - Cultural Resources Survey

Task 5.2 consists of a cultural resources survey, which includes an ACT permit application and research design, and a pedestrian survey, supplemented by shovel testing of the project area. The purpose of the survey is to locate sites that may be present within the project area and make recommendations (as possible) regarding the sites' eligibility for listing in the NRHP or designation as a SAL.

Antiquities Code of Texas Permit Application and Research Design

As this undertaking falls under Section 106 and the ACT, qualified cultural resources personnel will prepare a permit application and associated research design. The project sponsor will need to review and sign the permit. Once signatures have been collected, the application and research design will be submitted to TRWD for review and submitted to the USACE and THC for approval. Upon approval, a permit number will be issued, and the archeological survey can commence.

Intensive Pedestrian Archaeological Survey

Qualified cultural resources personnel will perform an intensive pedestrian survey of the project area following minimum survey standards set forth by the Council of Texas Archeologists (CTA) and adopted by the THC. Per CTA standards, linear projects require one survey transect per 30-meter (approximately 98-foot) of width, and one shovel test per 100-linear meters (m; approximately 328 feet) of project length. Based on information from the Client, Terracon understands the project area consists of an approximately 8.6-mile alignment with an established 100-ft ROW. This translates to a total of 139 shovel tests.

Terracon assumes that no more than 6 new sites will be recorded and that these sites can be delineated within the project area by no more than 54 additional shovel tests. The total survey effort is estimated to be no more than 191 shovel tests. Should it become apparent during the pedestrian survey that mechanical testing is necessary, Terracon will contact the Client to discuss further scoping and fee, as mechanical excavation is not included in this Scope of Services. The THC and/or lead federal agency will make the ultimate decision on the appropriate level of effort. If the required level of effort exceeds what is proposed here, Terracon will submit a change order to the client.

The pedestrian survey will include inspection and documentation of ground surface exposures, erosional profiles, and areas of previous ground disturbance. Shovel testing will aim to identify subsurface archeological deposits. Each shovel test will be at least 30 centimeters in diameter and excavated in 20-centimeter arbitrary levels to a maximum depth of 80 centimeters below the ground surface. Soil from shovel tests will be screened through ¼-inch wire mesh and shovel tests will be backfilled following documentation.

Information regarding each shovel test location, depth, soil texture and color, environment, presence or absence of cultural materials (by level), and reason for termination will be recorded on standardized forms. The coordinates of shovel tests will be recorded with a Global Positioning System (GPS) unit capable of 1-meter resolution. Field photography will record the general nature of the project area, specifically including terrain and other features that may affect or influence the presence or distribution of cultural resources.

Artifacts recorded during the survey will be documented in the field and then returned to their original locations. Sites found will be delineated so that their horizontal extent is known, and their vertical extent is approximated to the degree feasible within the limits of the project area. Archeological sites encountered will be recorded with the Texas Archeological Research Laboratory (TARL) and be assessed for eligibility for inclusion in NRHP or designation as a SAL, as appropriate. It is estimated that 5 days of field time will be required to complete the survey with four staff.

Mechanical Prospection

Environmental Permitting Services

TRWD Cedar Creek Section 4 Replacement |
Henderson County, Texas |
June 24, 2024 | Terracon Proposal No. P94247423



Following CTA guidelines and a brief review of the project alignment, an estimated eight to ten trenches would be necessary to evaluate the project for deeply buried cultural deposits. This number may be reduced or increased at the discretion of the supervising archeologist dependent on number of shovel tests and/or other observed field conditions. Trenches will be placed no more than 200 meters apart for linear sections (i.e., sections longer than they are wide) or at a density of one trench per acre for sections that are wider than they are long.

Backhoe trenches will be excavated by carefully peeling layers of sediment with a smooth-bladed bucket. Per CTA guidelines, Terracon will perform screening/troweling through one five-gallon bucket of sediment from every third backhoe bucket of sediment to determine if artifacts or other cultural deposits are present. Mechanical excavation will be continued to the lesser of: a) the project's vertical depth of impacts; b) bedrock; c) deposits that represent facies beneath which archeological potential is minimal, such as thick (50 cm+) channel gravels; d) deposits that substantially predate the Holocene; or e) to the maximum depth that can be reached by an appropriately scaled and powered machine (i.e., 4–5 m below ground surface for trenches). Trenches will be backfilled upon completion.

A positive trench will be considered a trench that yields more than five (>5) pre-contact or historic-age artifacts recovered through screening or in profile. Trenches with cultural materials encountered within three feet in depth will be delineated with shovel tests excavated off the positive trench wall or in cardinal directions if materials are recovered from screened sediment. For trenches with materials encountered at depths greater than three feet, a change in scope and an additional fee would be negotiated prior to the initiation of services.

Delineation efforts will continue at intervals not to exceed 15-meters apart until two negative shovel tests are reached or four shovel tests have been excavated, whichever is achieved first. Site delineation efforts will be constrained by the project boundaries; landforms and natural exposures will be employed to identify and constrain the boundaries of deeply buried sites, if practical. Archeological sites encountered through trenching will be defined as 1) a positive trench and one or more positive shovel test; 2) a positive trench with an archeological feature; and/or 3) a trench with datable material (e.g., charcoal) in association with pre-Contact cultural materials. This scope of work includes up to four delineating shovel tests and/or auger tests.

Limitations for Mechanical Prospection

This scope of work assumes that the project does not anticipate cultural resources associated services for Section 404 permitting, monitoring, testing, or data recovery levels of effort, and should such efforts be required by regulatory agencies, a separate proposal would be prepared by Terracon at the Client's request. This scope of work also does not anticipate the collection or curation of artifacts, and should such services be required, then the cost would be incurred by the Client. The scope includes the fees associated with contracting a backhoe and operator for five (5) days of mechanical prospection and two mobilizations. The cost for mechanical trenching assumes the project area is accessible to a backhoe and that no vegetation clearing will be needed. Terracon will complete a Texas 811 One-Call to identify, and mark buried utilities. Terracon is not responsible for repair/replacement should utility lines be encountered and damaged. Similarly, Terracon is not responsible for repairing/replacing paved or improved surfaces or vegetation/trees.

Site Definition and Documentation

Activities and resources (e.g., structures, features, isolated finds, sites, artifact scatters, etc.) will be documented by a handheld Global Positioning System/Global Navigation Satellite System (GPS/GNSS) device. Shovel tests and trenches will be recorded through field notes, photography, and standardized forms. Trench profiles may be drawn at the discretion of the supervising archeologist in the field.

There is a “no-collection” policy for this survey; therefore, artifacts (if encountered) will be documented in the field following CTA guidelines and returned to their approximate origin. In the case that non-diagnostic, redundant artifacts are encountered a representative sample of materials would be described, counted, and photographed in the field.

New archeological sites, if encountered, will be recorded with the Texas Archeological Research Laboratory (TARL) and minimally assessed for eligibility for inclusion in the National Register of Historic Places (NRHP) or listing as a State Antiquities Landmark (SAL) as appropriate. Additional delineation efforts may be required by agencies to determine the boundaries and/or significance of archeological sites, which would require an additional fee to be negotiated with the Client prior to the initiation of that work. Records will be curated by the Center for Archaeological Studies (CAS) at Texas State University (TXST) upon completion of the project.

Above-Ground Historic-Age Resources

The cut-off date for historic-age resources is assumed to be 45 years from the project let date, or those resources constructed prior to 1979. In the event historic age standing structures are encountered within the project area or within the area of visual effects (i.e., one kilometer), these structures and/or features may require additional background archival research. Should such sites or structures be encountered during the archeological survey, they will be photographed, marked by GPS, and noted for potential further investigation and/or avoidance.

Should resources be identified that require documentation and/or further assessment (field or intensive archival research) professional staff meeting the Secretary of the Interior’s (SOI’s) Professional Qualifications in History and Architectural History would be required to conduct a reconnaissance-level historic resources survey of historic-age buildings, structures, and site features within the project APE, which is defined as, “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties,” per 36 CFR § 800.16 (d). Additional archival or other documentation may be required by agencies to determine the significance of potentially eligible historic resources, which would require an additional fee to be negotiated with the Client prior to the initiation of that work.

Reporting and Curation

Upon completion of the fieldwork described above, observations made about the nature or character of sites encountered or cultural deposits that are noted will be summarized in a professional report that meets the current Standards for Archeological Reporting established by the CTA and adopted by the THC. The draft will be submitted to the Client for review and comment. Comments on the draft report will be addressed to the satisfaction of the Client before submission to the THC and federal agencies for review. Terracon will provide one printed copy of the report at the request of the client. Upon concurrence from the federal and state agencies, records and the final report will be curated at a state-certified curatorial facility in compliance with THC requirements.

2.6 Task 6 –Aquatic Resources Permitting Preparation and Submittal

At the 30% design completion stage a meeting between Terracon, TRWD, and the design team will be held to review potential impacts to delineated aquatic resources, and the potential Section 404 compliance implications. Following the internal meeting, and as authorized by TRWD, Terracon may schedule a pre-application meeting with USACE staff to discuss project elements and timelines, jurisdictional issues with delineated features, and permit documentation requirements if needed.

If a Section 404 Permit is required, it is anticipated that the project would be approved under a Nationwide Permit (NWP). If a NWP is required, Terracon would prepare a Pre-construction Notification (PCN) at the request of TRWD. A PCN submittal prepared by Terracon would include the ARD report, T&E Species Habitat Assessment report, design drawings, cultural resources documentation, and other supporting information. The PCN would be submitted to the USACE using the appropriate PCN forms and submittal procedures. After PCN submittal, regular correspondence would be kept with the USACE staff to ensure all documentation is complete and to notify them of any project changes. Terracon will coordinate and attend up to two in-person site visits with USACE staff if requested by USACE and authorized by TRWD staff.

Limitations

The determinations, findings, and conclusions developed in the ARD would be based on the most current agency protocols, data, and regulatory guidance and will be utilized for agency coordination. However, official authority to make a jurisdictional determination regarding a given aquatic feature rests solely with the EPA; with delegated authority to the USACE. AJD are made by the USACE upon request and may make use of certain information at its disposal (such as other permits in the local area) that may not be readily available to the public. Therefore, the ARD may not wholly eliminate uncertainty regarding the limits of USACE jurisdiction for a given area. Terracon's ARD findings would be utilized and defended as an accurate representative of conditions in the project area.

2.7 Task 7 – Environmental Information Document (Optional Additional Service)

At the request of TRWD, Terracon will prepare an Environmental Information Document (EID) to support NEPA compliance under Texas Water Development Board's Water Infrastructure Funding program. Terracon proposes to prepare an EID in general accordance with the TWDB guidance and document template TWDB-0801, Federal Environmental Review, Environmental Information Document dated May 22, 2015.

Terracon will provide the following services related to preparing the EID:

- Review the most current proposed project schematics
- Contact the client, and/or other entities (as applicable) to collect data for the study as appropriate to complete the EID
- Compile resources obtained for other Tasks for this project for use in the EID

Obtain a hazardous materials database search to perform a regulatory records review for the project area and conduct informal site assessment¹

In accordance with the TWDB guidance presented on June 3, 2015, Terracon will prepare the document proposing the following table of contents:

Section 1: General Information

Section 2: List of Attachments

Section 3: Project Description

Preferred Action Alternative

Section 4: Alternative Analysis

No-Action Alternative

Alternative Not Selected

Selection of the Preferred Action Alternative

Section 5: Environmental Settings, Impacts and Mitigation

5.1: Land Use

5.2: Geology

5.3: Soils & Prime and Important Farmland

5.4: Water Resources

5.5: Topography and Floodplains

5.6: Wetlands, Streams, and Waters of the United States

5.7: Biological Elements

5.8: Cultural Resources

5.9: Hazardous Materials

¹ Please note that the Regulatory Records Review and Site and Adjoining/Surrounding Property Reconnaissance inquiries described below will not meet the scope of a Phase I ESA as per the procedures included in ASTM E1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Assessment Process*. Rather, the proposed inquiries are considered an informal site assessment as deemed acceptable in the TWDB Federal Environmental Review Environmental Information Document (EID) (TWDB-0801) dated May 22, 2015. The purpose of these inquiries is to obtain information so that Terracon can complete Section 5.9: Hazardous Materials of the EID. In addition to the database review, an attempt will be made to review reasonably ascertainable and useful local lists or records such as Brownfield sites, landfill/solid waste disposal sites, registered storage tanks, land records, emergency release reports, contaminated public wells, petroleum exploration/production activities, and pipelines. A reasonable attempt will also be made to interview at least one staff member of any one of the following types of local government agencies: fire department, health agency, planning department, building department, or environmental department. As an alternative, a written request for information may be submitted to the local agencies. The reconnaissance will consist of visual observations of the site from the site boundaries and selected interior portions of the site. In addition, Terracon will perform an interview with site personnel who the client has identified as having knowledge of the uses and physical characteristics of the site. The adjoining property reconnaissance will consist of visual observations of the adjoining/surrounding properties from the site boundaries and accessible public right-of-ways.

- 5.10: Social Implications & Environmental Justice
- 5.11: Other Potential Impacts or Requirements
- 5.12: Secondary and Cumulative Impacts
- 5.13: Standard Mitigation, Precautionary Measures and Best Management Practices
- 5.14: Mitigation Measures
- 5.15: References

Section 6: Public Participation

Terracon understands that this task will not include any public notice or meeting components. This section will serve as a place holder in the event that TWDB funding is implemented.

Section 7: Agency Coordination

Terracon understands that this task will not include any Agency Coordination outside of what is necessary to satisfy Section 404 CWA permitting, and Section 106 NHP and Antiquity Code of Texas requirements, and any USFWS coordination required relating to threatened and endangered species. This section will document agency coordination conducted to satisfy other Tasks in this proposal. Agency coordination includes consulting with federal agencies and TWDB, as indicated in TWDB template document TWDB-0801, by submitting electronic and if requested copies of the draft EID for review and comment,

Section 8: Certification

Section 9: Appendices

Deliverable

The draft EID will be provided to the client for review. Upon incorporation of revisions, Terracon will provide an electronic copy of the final EID to the client.

2.8 Task 8 – Protected Species Presence / Absence Surveys (Optional/as Needed)

As a result of the Threatened and Endangered Species Habitat Assessment, potential project impacts, and potential permitting requirements, protected species presence / absence surveys may be needed. In preliminary review of potential protected species in the project area, Terracon is providing the following presence / absence survey scopes for aquatic mussels and the Tricolored bat that could be located in the project area.

Subtask 8.1 – Aquatic Mussel Presence / Absence Surveys

Terracon's permitted biologists will provide freshwater mussel reconnaissance and aquatic resource relocation services to aid in project compliance with applicable freshwater mussel regulations from the TPWD and USFWS. The area requiring survey would include perennial streams in the study area identified in the ARD. All survey efforts will follow procedural guidelines outlined in the *Texas Freshwater Mussel Survey Protocol* (USFWS and TPWD, 2021) or USFWS approved survey methods for federally listed species. The approach and extent of these efforts will vary based on the presence of suitable

freshwater mussel habitat and the presence of state or federal listed species within the project area. To account for this, the proposed scope and costs have been organized into three sequential tasks. Please note, the need for each task is contingent upon findings from the preceding task.

Freshwater Mussel Reconnaissance and Presence / Absence Survey

Permitted biologists will assess the project area via a desktop analysis and mussel reconnaissance survey to determine if suitable habitat and/or evidence of freshwater mussels are present during Tasks 2, 3, and 4 of this proposal. A Mussel Reconnaissance Survey Report, including findings of this assessment, site photos, and aerial imagery with associated annotations and delineations will be sent to the Client for coordination with TPWD. If suitable habitat or evidence of freshwater mussels is identified during the reconnaissance, permitted biologists will conduct qualitative presence/absence surveys within the project area to inform the drafting of an Aquatic Resource Relocation Plan (ARRP). If suitable freshwater mussel habitat is not present within the project area and no mussels are observed during the presence-absence survey, Terracon will submit the appropriate documentation to TPWD or USFWS to obtain agency concurrence that further mussel coordination within the project area is not required. Should freshwater mussels be present within the footprint of the proposed project or associated buffer areas, Terracon will notify the Client of the need for the completion of an ARRP, and a Permit to Introduce Fish, Shellfish, or Aquatic Plants into Public Waters (AIP) application.

Aquatic Resource Relocation (Without State-listed Mussels)

If state or federal listed species are encountered during presence/absence surveys or relocation efforts, TPWD requires that quantitative survey methodology be implemented. Data collected from these surveys are used to provide species-specific density estimates for the calculation of direct or indirect impacts. In this case, Terracon will coordinate with TPWD or USFWS to determine the specific survey methodology to be applied. Generally, these quantitative surveys will employ quadrat sampling within the delineated salvage area (ADI) of the project. Per TPWD freshwater mussel protocol for quantitative surveys, the cost estimate provided for this task assumes surveys will employ quadrat sampling at the rate of 1 quadrat per m² of the salvage area. This effort will be performed by biologists from Terracon as well as qualified biologists provided by a HUB subcontractor (ZARA Environmental LLC).

Terracon recommends the preparation and submittal of relevant documents (i.e., ARRP and AIP) occur at least one month prior to the onset of construction activities to allow time for TPWD and USFWS review and permit approval. Field deployment cost estimates include effort related to properly cleaning gear between drainages to avoid introduction of aquatic invasive species. It is understood that certain components of the survey effort may be refined to meet the project budget and anticipated efforts.

Subtask 8.2 – Tricolored Bat Presence / Absence Surveys

This subtask would evaluate potential roosting sites and conduct presence/probable absence acoustic surveys for the Tricolored Bat (TCB; *Perimyotis subflavus*). The work will be conducted according to the Range-wide Indiana Bat & Northern Long-eared Bat Survey Guidelines (U.S. Fish and Wildlife Service [USFWS] 2023), which includes guidance for conducting TCB surveys.

Fieldwork

In accordance with USFWS TCB survey protocols, Terracon and subcontractors will prepare and submit a USFWS Study Plan Form for Bat Surveys and Monitoring for approval prior to conducting the acoustic

survey. Upon USFWS approval, acoustic surveys can be conducted during reasonable weather conditions between March 1 – November 15.

The level of effort detailed for acoustic surveys detailed in the USFWS TCB survey protocols requires a minimum of four detector-nights over at least two calendar nights per kilometer (km) of suitable habitat for linear projects. The proposed project alignment is approximately 13 km long, resulting in 52 detector-nights required for the entire alignment. It may be found that only portions of the alignment would provide suitable habitat resulting in fewer detector-nights being required. To fully survey the entire alignment, To ensure that USFWS due diligence standards are appropriately met as well as to account for the possibility of detector malfunctions or site access issues, Terracon would deploy seven acoustic survey stations for two calendar nights, per 3 km segment, which may result in up to 52 detector-nights of data.

Surveyors will identify appropriate acoustic monitoring station locations based on each site's apparent suitability for recording high-quality bat calls. Monitoring station locations will be proposed via desktop evaluation of aerial photography and may be established at alternative locations identified in the field. Characteristics of suitable monitoring sites may include areas that provide openings in the tree canopy, are near a water source, areas that provide travel corridors (such as fence rows, rows, or stream corridors connecting larger blocks of suitable habitat), recently logged areas with remaining potential roost trees, or woodland edges. Once stations are set up, they will be visited at least once daily to determine if there has been any vandalism, check battery life, confirm the timestamps are correct, download data from the previous night, and troubleshoot any issues with the stations. After at least 2 successful detector-nights of data are collected per stations, stations can be dismantled. Fieldwork includes an evaluation of potential roosting sites and conducting acoustic surveys, and may be conducted over as many as four consecutive or non-consecutive days.

Data Analysis

Bat calls will be analyzed using a combination of SonoBat and Kaleidoscope Pro (KaPRO). KaPRO is approved by the USFWS for use in presence/probable absence surveys for endangered bats. Recorded files will be scrubbed for noise using SonoBat Data Wizard with the noise scrubber set to a high grade/thorough setting prior to being analyzed in KaPRO. After removing scrubbed noise files, KaPRO analysis will run on the remaining files with Bats of North America 5.4.0 classifiers at -1 ("More Sensitive [Liberal]" setting). The resulting files, including KaPRO's embedded metadata and auto IDs, will be further attributed using the SonoBat Data Wizard to create timestamped file names and embed site names and notes. Files will then be batch classified to embed the SonoBat ID while preserving metadata from KaPRO and SonoBat.

Once the files are auto-ID'd and attributed by both programs as described above, the combined SonoBat and KaPRO output will be viewed and manually vetted. Manual vetting involves reviewing each call to look for species-specific call patterns within a sequence (time between calls, consistency of frequency for each call related to other calls in the sequence, indications of approach-phase calls or feeding buzzes) as well as looking at characteristics of individual calls within the sequence (characteristic frequency, presence of harmonics, location of call knee). Low quality recordings or call sequences that could not be confidently identified to species were classified as high-frequency or low-frequency bats, as appropriate.

Deliverables

Acoustic data will be provided to the Client and must be maintained for a period of seven years and made available to the USFWS upon request. Additional deliverables include an acoustic survey technical report and an Excel spreadsheet of the results. Deliverables will be provided to the Client electronically and in accordance with the timeline below.

3.0 Reliance

Reports will be prepared for the exclusive use and reliance of TRWD and the TWDB, reliance by any other party is prohibited without the written authorization of the client and Terracon.

If the client is aware of additional parties that will require reliance on the reports, the names, addresses, and relationship of these parties should be provided for Terracon approval prior to the time of authorization to proceed. Terracon may grant reliance upon receipt of a fully executed Reliance Agreement, requested information and receipt of an additional minimum fee of \$250 per relying party.

Reliance on the reports by the client and all authorized parties will be subject to the terms, conditions, and limitations stated in the Contract, sections of this proposal incorporated therein, the Reliance Agreement, and reports. The limitation of liability defined in the Contract is the aggregate limit of Terracon's liability to the client and all relying parties.

3.1 Scope and Report Limitations

3.1.1 Site Access and Safety

Client shall secure all necessary site-related approvals, permits, licenses, and consents necessary to commence and complete the Services and will execute any necessary site access agreement. Terracon will be responsible for supervision and site safety measures for its own employees and subcontractors, but shall not be responsible for the supervision or health and safety precautions for any third parties, including Client's contractors, subcontractors, or other parties present at the site. In addition, Terracon retains the right to stop work without penalty at any time Terracon believes it is in the best interests of Terracon's employees or subcontractors to do so in order to reduce the risk of injury or exposure to hazardous conditions.

The fee is valid for 90 days from the date of this proposal and is based on the assumption that only one field study will be made by Terracon personnel. The lump sum fee is based on the assumptions and conditions provided at the time of this proposal.

The findings and conclusions presented in the final report will be based on the site's current utilization, the anticipated future use of the site, if provided to Terracon, and the information collected as discussed in this proposal. Please note that we do not warrant database or third-party information or regulatory agency information used in the compilation of reports.

4.0 Schedule

Services will be initiated upon receipt of authorization. Schedule will be dependent to a degree by engineering design services schedules. An estimated schedule is included in the following.

Task / Deliverable	Schedule
Task 1: Project Management Services	Within 10 business days upon receipt of authorization and a written NTP.
Task 2: Conceptual Analysis and Desktop Evaluation	Within 10 business days upon receipt of authorization and a written NTP.
Task 3: Aquatic Resources Delineation	Fieldwork scheduled within 10 business upon NTP and confirmed site access from Client on the task. Draft report will be emailed to the Client for review and/or approval within 20 business days of the completion of fieldwork.
Task 4: Threatened and Endangered Species Habitat Assessment	Draft report will be emailed to the Client for review and/or approval within 20 business days of the completion of fieldwork.
Task 5.1: Cultural Resource Desktop Review and Agency Consultation	Within 20 business days upon receipt of authorization and a written NTP. Upon completion of the desktop review, a copy will be sent to the Client for review. After receipt of the Client's comments, Terracon will submit the desktop to the THC, who will review the deliverable and issue their opinion regarding concurrence with Terracon's recommendations. The THC can take up to 30 days to complete their review of submitted deliverables. Additional time may be required by other reviewing agencies
Task 5.2: Cultural Resource Survey	<p>Fieldwork will be scheduled within 20 business days after THC review of desktop assessment, and receipt of authorization and a written NTP. If trenching is necessary, it is possible an additional 20 business days may be required to complete field work.</p> <p>The draft report will be completed within 30 business days of completion of fieldwork. Upon receipt of Client comments, the report will be submitted to the THC and other appropriate agencies for regulatory review. The THC will have 30 days to comment on the draft report.</p> <p>The final report will be sent to the Client within 15 days of receiving THC comments or concurrence (i.e., 45 days from draft report submission). All remaining deliverables will be completed within 90 days of THC concurrence with the draft report, and Terracon will proceed with curation and project close-out.</p>
Task 6: Permitting Preparation and Submittal	Material to initiate the pre-application meeting will be submitted within 5 business days of NTP. Following the meeting, permitting materials will be prepared and submitted within 10 business days of NTP and receipt of necessary design drawings and other material from client.

Task / Deliverable	Schedule
Task 7: Environmental Information Document	A draft document will be prepared within 30 business days of NTP from client and completion of field surveys.
Task 8 – Protected Species Presence / Absence Surveys (Optional/as Needed)	. Each task’s timeline begins after the completion of the preceding task. When possible, tasks will occur simultaneously to reduce the proposed timeline.
Task 8.1 – Aquatic Mussel Presence / Absence Survey and Relocation (6 Sites)	Fieldwork to begin within 20 business days of approval of the plan. Field work will occur over approximately 2 days and be completed per the project construction schedule and between the months of April and November of 2024. A draft report will be provided electronically to the client within 15 days following the conclusion of field work. A final report will be submitted within five business days following receipt of Client’s comments. ARRP drafting and submittal will occur within 15 business days of NTP. Field work will be initiated within 15 days following ARRP review and approval (approximately 30 days). Field work is estimated to require 3.5 days to complete. A draft report detailing the results of the aquatic resource relocation will be submitted electronically to the client within 20 days following completion of field work. A final report will be submitted within five business days following receipt of Client’s comments.
Task 8.2 – Tricolored Bat Presence / Absence Survey	Study Plan drafted and submitted to USFWS within 2 weeks of NTP. Acoustic Data Analysis to be conducted within 4 weeks of plan approval and between March 1 – November 15. Acoustic Survey Technical Report within 3 weeks upon completion of the surveys.

5.0 Compensation

Terracon’s compensation for the above services is proposed as time and materials with not to exceed amounts shown in the table below, to be invoiced monthly based on percent complete. If, because of these services, additional work is required outside the scope of this proposal, the Client will be contacted, and upon request, proposed costs for additional work will be provided. Client authorization will be obtained prior to commencement of additional work outside the scope of this proposal. A table of billing rates by classification of employee is attached to this document.

Task	Not to Exceed Fee and Materials)	Authorization
Task 1: Project Management Services	\$11,000	<input type="checkbox"/> Yes <input type="checkbox"/> No
Task 2: Conceptual Analysis and Desktop Evaluation	\$6,300	<input type="checkbox"/> Yes <input type="checkbox"/> No
Task 3: Aquatic Resources Delineation	\$19,000	<input type="checkbox"/> Yes <input type="checkbox"/> No



Task 4: Threatened and Endangered Species Habitat Assessment	\$6,000	<input type="checkbox"/> Yes <input type="checkbox"/> No
Task 5.1: Cultural Resource Desktop Review and Agency Consultation	\$3,700	<input type="checkbox"/> Yes <input type="checkbox"/> No
Task 5.2: Cultural Resource Survey	\$65,000	<input type="checkbox"/> Yes <input type="checkbox"/> No
Task 6: Permitting Preparation and Submittal	\$10,000	<input type="checkbox"/> Yes <input type="checkbox"/> No
Task 7: Environmental Information Document (Optional)	\$17,000	<input type="checkbox"/> Yes <input type="checkbox"/> No
Total for all Services	\$138,000	
Task 8 – Protected Species Presence - Absence Surveys (Optional/as Needed)		
Task 8.1 – Aquatic Mussel Presence - Absence Survey and Relocation (6 Sites)	\$250,000	<input type="checkbox"/> Yes <input type="checkbox"/> No
Task 8.2 – Tricolored Bat Presence - Absence Survey	\$240,000	<input type="checkbox"/> Yes <input type="checkbox"/> No

Prior to authorization of Optional Tasks 8.1, and 8.2, Terracon will provide a cost estimate based on the scope of studies required to satisfy agency requirements.

This fee is valid for 90 days from the date of this proposal. The fee is based on the assumptions and conditions provided at the time of this proposal and does not include fees for additional analysis services beyond base study evaluations described herein. Terracon will contact the Client immediately if it becomes apparent that specialty investigation, sampling, or other study efforts are required to provide adequate input and discuss additional fees as necessary.

6.0 AUTHORIZATION

If this Scope of Services meets with your approval, work may be initiated by issuing a TRWD services agreement or other agreement document by email to timothy.capps@terracon.com. Services will be initiated upon receipt of the signed Task Order or by email notification followed up with the signed Task Order.

We look forward to working with you on this project. If you have questions or require additional information, please feel free to contact Tim Capps at 817-268-8600 or timothy.capps@terracon.com.

Sincerely,
Terracon Consultants, Inc.

Jennifer Trombley Peters
 NEPA Program Manager

Tim Capps
 Group Manager



Fee Estimate

Environmental Services

Tarrant Regional Water District (24-118) Environmental Permitting

Terracon Proposal No. P94247423

DESCRIPTION	RATE
Project Management	
Meetings	
Administrative Staff I	\$ 74.88
Administrative Staff II	\$ 81.33
Administrative Staff III	\$ 89.99
Field Scientist	\$ 94.51
Staff Scientist	\$ 109.25
Senior Staff Scientist	\$ 119.72
Archaeological Technician	\$ 57.75
Staff Archaeologist	\$ 105.91
Group Manager	\$ 152.72
Department Manager I	\$ 164.46
Department Manager II	\$ 194.60

Terracon Fee Summary

Task Description:	Total Labor + Subs + Expenses
Cedar Creek Section 4	
Task 1 - PM Services	\$11,000
Task 2 - Conceptual Analysis and Desktop Eval	\$6,300
Task 3 - Aquatic Resources Delineation	\$19,000
Task 4 - Threatened and Endangered Species Habitat Assessment	\$6,000
Task 5.1 - Cultural Resource Desktop Review and Agency Consultation	\$3,700
Task 5.2 - Cultural Resources Survey	\$65,000
Task 6 - Permitting Preparation and Submittal	\$10,000
Task 7 - Environmental Information Document (Optional)	\$17,000
Total:	\$138,000

TARRANT REGIONAL WATER DISTRICT

AGENDA ITEM 10

DATE: August 20, 2024

SUBJECT: Consider Approval of Local Budget Reallocation for Central City Flood Control Project

FUNDING: N/A

RECOMMENDATION:

Management recommends approval of the reallocation of \$46 million of the local Central City Flood Control Project budget, from non-essential to essential flood control project purposes.

DISCUSSION:

The current Central City Flood Control Project budget was established in 2017. The non-federal share of the budget includes both items that are required for the US Army Corps (USACE) to advance construction, such as land acquisitions and utility relocations, and components of the Trinity River Vision Masterplan that are not related to USACE construction activities.

Due to market escalations, estimated costs for the remaining local project components are higher than 2017 estimates and the remaining budget is not sufficient to fund all essential and non-essential program components. The District and City staff worked together to identify and recommend the reallocation of \$46 million of available local budget from non-essential to essential flood control project elements in order to avoid delays to the USACE construction schedule. Non-essential project elements can be deferred or funded differently.

The proposed budget reallocation was presented to the TRVA Board of Directors on April 25, 2024; they recommend the TRWD Board of Directors approve the reallocation.

This item was reviewed by the Finance Committee on August 13, 2024.

Submitted By:

Kate Beck, PE, AICP
Central City Flood Control Program Director

TARRANT REGIONAL WATER DISTRICT

AGENDA ITEM 11

DATE: August 20, 2024

SUBJECT: Consider Approval of Contract Amendment with Freese and Nichols, Inc. for Value Engineering Services for Technical Evaluation of the Stormwater Canal Structures

FUNDING: Fiscal Year 2024 Special Projects/Contingency Fund Budget - \$3,000,000

RECOMMENDATION:

Management recommends approval of a contract amendment **in an amount not-to-exceed \$110,123** with Freese and Nichols, Inc. (FNI) to add Fort Worth Central City and Panther Island Canals into the Regional Flood Plan as Flood Mitigation Projects.

DISCUSSION:

FNI will prepare an amendment package for the Fort Worth Central City and Panther Island's canal system that meets Trinity Regional Flood Planning Group (RFPG) standards for consideration as an amendment to the 2023 Regional Flood Plan (RFP) and ultimately the 2024 State Flood Plan (SFP). Once adopted into the State Flood Plan, the District can apply for Flood Infrastructure Funding for the 2026-2027 state fiscal year.

When possible, FNI will leverage existing data to complete the amendment packages. Submittal to the RFP will require a benefit-cost analysis for the Panther Island Canals project. FNI will develop a hydraulic model of the Panther Island Canals to determine pre- and post-project flood impacts to aid in the development of the benefit-cost analysis. FNI will assist District staff with RFPG and Texas Water Development Board coordination throughout the amendment process.

FNI, is a prime, non-certified business. It has subcontracted portions of the contract resulting in an overall Diverse Business participation commitment of 15%.

This item was reviewed by the Construction and Operations Committee on August 15, 2024.

Submitted By:

Kate Beck
Central City Flood Control Program Director

Exhibit A
FORT WORTH CENTRAL CITY AND PANTHER ISLAND CANALS
REGIONAL FLOOD PLANNING FMP
SCOPE OF WORK

Throughout the execution of the project, FNI will work to the benefit of Tarrant Regional Water District (TRWD) to prepare an application for the Fort Worth Central City and Panther Island’s canal system (the Projects) as Flood Mitigation Projects (FMPs) via amendment to the 2023 Trinity Regional Flood Plan. FMPs are projects with non-zero capital costs and mitigate flood hazards to life or property. Each project will be listed separately as an individual FMP. Incorporation into the 2023 Trinity Regional Flood Plan will allow the project to become eligible for the 2026-2027 FIF.

Execution of this Scope of Work will adhere to the following main objectives:

- Review and assess existing models and project information.
- Perform modeling as needed to conduct an impact analysis and benefit-cost analysis for the Panther Island Canals.
- Prepare technical memo to document modeling and analysis effort.
- Prepare application and submit package to Trinity Regional Flood Planning Group (RFPG) for incorporation into the 2023 Regional Flood Plan.

The Scope of Work is as follows:

Task A – Panther Island Canals

Subtask A.1 – Project Management

i. Internal and External Team Management

FNI will manage the work outlined in this scope to provide efficient and effective use of time and resources. FNI will manage change, communicate effectively, coordinate internally and externally as needed, and proactively address issues with the TRWD project manager and others as necessary to make progress on the work. Monthly status reports will be provided to keep TRWD informed of Project progress and activities.

ii. Project Meetings

FNI will coordinate and attend meetings with the TRWD project team, including a project kickoff and review meeting.

ASSUMPTIONS:

1. Project duration is not to exceed four (4) months from notice to proceed.

2. A total of three (3) virtual 30-minute meetings are assumed to occur monthly.
3. A total of two (2) additional meetings are assumed to occur. One for project kickoff and another for review.

DELIVERABLES:

1. FNI will provide monthly progress reports.
2. FNI will provide a baseline project design schedule and updates as needed.

Subtask A.2 – Data Collection

The main objective of this task is to collect previously developed models and assess the extent of additional data required for the Project.

i. Document & Modeling Review

FNI will collect relevant data provided by TRWD, including prior studies and hydrologic/hydraulic models, prior plans and record drawings, and available GIS data such as topographic maps, LiDAR, zoning maps, storm drain system mapping, roadways, property lines, future land use maps, and aerial imagery.

The primary effort associated with this task is updating the models previously developed by FNI to the current software version and ready for further analysis.

ASSUMPTIONS:

1. No survey will be performed with this project.

Subtask A.3 – Modeling Analysis

The main objective of this task is to develop detailed hydraulic modeling for approximately 10,000 LF of the proposed Panther Island Canals in InfoWorks ICM.

i. Modeling Analysis

FNI will develop an InfoWorks ICM model for hydraulic analysis of the Panther Island Canals. The models previously developed by FNI for the Trinity River Vision Storm Drain Master Plan will be used as a basis for the Panther Island Canals modeling, and the canals will be added as elements within the model. The model shall be used to determine the existing and fully-developed flooding conditions for the 2-, 5-, 10-, 25-, 50-, and 100-year storm events.

This task will include an impact analysis, including the identification of impacted properties, flood-prone areas, and structural flooding potential under existing and fully-developed conditions. This

task will also include performance of a benefit-cost analysis (BCA) and preparation of required information necessary for submittal as an FMP.

ASSUMPTIONS:

1. The watershed is considered fully developed in the existing condition.
2. Models previously developed by FNI for the Trinity River Vision Storm Drain Master Plan will be utilized for this modeling effort.

DELIVERABLES:

1. InfoWorks ICM model and associated files

Subtask A.4 – Technical Memorandum

The main objective of this task will be to prepare and submit a memorandum to document the modeling efforts and analyses performed in Task 3. The memorandum will include exhibits of the existing and proposed conditions and a discussion of the benefits provided by the proposed canal improvements. FNI will present these draft findings to TRWD. FNI will document the discussion and address comments from the meeting with TRWD before proceeding.

i. Technical Memorandum

FNI will prepare a technical memorandum documenting the modeling analysis, impact analysis, and benefit-cost analysis performed in Task 3. The memorandum will include concept exhibits of the modeled existing and proposed conditions and a discussion of the findings of the various analyses. Submittal will include digital deliverables such as GIS information and hydrologic and hydraulic models. The memorandum will be submitted in digital format for TRWD review.

ii. Review Meeting

After TRWD has completed their review, a meeting will be held to discuss any comments and revisions to be made to the submittal. Up to one (1) round of revisions to the memorandum will be performed after receiving feedback.

ASSUMPTIONS:

1. Assumed two (2) week review period for TRWD. Scope includes addressing one (1) round of comments.

DELIVERABLES:

1. Electronic copy in pdf format of the draft memorandum.
2. Electronic copy in pdf format of the Final Technical Memorandum.

Subtask A.5- Regional Flood Planning Amendment Preparation

i. Panther Island Canals FMP

FNI will prepare an amendment package for the Trinity Regional Flood Planning Group for Panther Island Canals as an FMP. FNI will utilize the following information for the FMP application:

- Hydraulic Model: Developed by FNI in Task 3
- No-Negative Impact Analysis: Developed by FNI in Task 3
- Benefit Cost Analysis: Developed by FNI in Task 3
- Project Benefitting Area: Developed by FNI in Task 3

ii. Coordination

FNI will prepare submittal packages for the Regional Flood Plan Amendment process. Coordination will be performed with RFPG and TWDB as needed throughout the process.

Task B – Fort Worth Central City

Subtask B.1 – Project Management

i. Internal and External Team Management

FNI will manage the work outlined in this scope to provide efficient and effective use of time and resources. FNI will manage change, communicate effectively, coordinate internally and externally as needed, and proactively address issues with the TRWD project manager and others as necessary to make progress on the work. Monthly status reports will be provided to keep TRWD informed of Project progress and activities.

ii. Project Meetings

FNI will coordinate and attend meetings with the TRWD project team, including a project kickoff and review meeting.

ASSUMPTIONS:

1. Project duration is not to exceed four (4) months from notice to proceed.
4. A total of three (3) virtual 30-minute meetings are assumed to occur monthly.

DELIVERABLES:

1. FNI will provide monthly progress reports.
2. FNI will provide a baseline project design schedule and updates as needed.

Subtask B.2 – Data Collection

The main objective of this task is to collect previously developed models and assess the extent of additional data required for the Project.

i. Document & Modeling Review

FNI will collect relevant data provided by TRWD, including prior studies and hydrologic/hydraulic models, prior plans and record drawings, and available GIS data such as topographic maps, LiDAR, zoning maps, storm drain system mapping, roadways, property lines, future land use maps, and aerial imagery.

The primary effort associated with this task is updating the models previously developed by FNI to the current software version and ready for further analysis.

ASSUMPTIONS:

1. No survey will be performed with this project.

Subtask B.3 – Regional Flood Planning Amendment Preparation

i. Fort Worth Central City FMP

FNI will prepare an amendment package for the Trinity Regional Flood Planning Group for Fort Worth Central City as an FMP. FNI will utilize the following information for the FMP application:

- Hydraulic Model: Most current FWCC HEC-RAS model (existing conditions and with-project)
- No-Negative Impact Analysis: As presented in Supplemental EIS or documented by FNI from hydraulic model review (if necessary)
- Benefit Cost Analysis: 2014 UNT Economic Benefits Study
- Project Benefitting Area: 2400 acres defined by USACE study

ii. Coordination

FNI will prepare submittal packages for the Regional Flood Plan Amendment process. Coordination will be performed with RFPG and TWDB as needed throughout the process.

Additional Services

Any services performed by FNI that are not included in the Scope of Work described above are Additional Services. Additional Services to be performed by FNI, if authorized by Client, are described as follows:

1. Providing design services for canal features.
2. Attending meetings in excess of those specified in the Scope of Work.

3. Making property, boundary and right-of-way surveys, preparation of easement and deed descriptions, including title search and examination of deed records.
4. Provide Geotechnical investigations, studies and reports.
5. Performing sediment transport modeling.
6. Consulting with contractors for pricing or constructability.
7. Providing renderings and mock-ups requested by the Client.
8. Preparing data and reports for assistance to Client in preparation for hearings before regulatory agencies, courts, arbitration panels or any mediator, giving testimony, personally or by deposition, and preparations therefore before any regulatory agency, court, arbitration panel or mediator.
9. Assisting Client in preparing for, or appearing at litigation, mediation, arbitration, dispute review boards, or other legal and/or administrative proceedings.

Time of Completion

FNI is authorized to commence work on the Project upon execution of this agreement and agrees to complete the services within four months. Depending on the proposed RFP Amendment timeline established by the Trinity RFPG, Task B – Fort Worth Central City may be given priority to amend the 2023 plan. In the event of this, Task A – Panther Island Canals will be done afterwards and submitted to the Trinity RFP for the 2028 plan. If FNI's services are delayed through no fault of FNI, FNI shall be entitled to adjust contract schedule consistent with the number of days of delay. These delays may result in an adjustment to compensation.

Fee Summary

		Project Fee Summary	
Panther Island Canals and Fort Worth Central City FMPs 7/22/2024 Detailed Cost Breakdown	Basic Services	\$	110,123
	Special Services	\$	-
	Total Project	\$	110,123
	Labor Multiplier		3.25

Tasks		Labor					Expenses		Total		
Task	Task Description	Principal	PM	PE	EIT	GIS	Total Hours	Total Labor Effort	Tech Charge	Total Expense Effort	Total Effort
		\$326	\$252	\$172	\$123	\$140					
A.1	Project Management							\$ -		\$ -	\$ -
	Internal Meetings	2	4	6	4		16	\$ 3,187	16	\$ 136	\$ 3,323
	Monthly PM Meetings (3)	1	1	2	2		6	\$ 1,169	6	\$ 51	\$ 1,220
	Kickoff and Review Meeting (2)	2	2	4	4		12	\$ 2,337	12	\$ 102	\$ 2,439
	PM Tasks		4	10			14	\$ 2,735	14	\$ 119	\$ 2,854
								\$ -		\$ -	\$ -
A.2	Data Collection							\$ -		\$ -	\$ -
	Data Collection - Canals			8	20		28	\$ 3,832	28	\$ 238	\$ 4,070
								\$ -		\$ -	\$ -
A.3	Modeling Analysis							\$ -		\$ -	\$ -
	ICM Modeling			40	100		140	\$ 19,158	140	\$ 1,190	\$ 20,348
	Impact Analysis			8	16		24	\$ 3,341	24	\$ 204	\$ 3,545
	BCA Analysis			8	16		24	\$ 3,341	24	\$ 204	\$ 3,545
	QA/QC	4	8				12	\$ 3,323	12	\$ 102	\$ 3,425
	Address TRWD Comments			8	20		28	\$ 3,832	28	\$ 238	\$ 4,070
								\$ -		\$ -	\$ -
A.4	Technical Memo							\$ -		\$ -	\$ -
	Tech memo			16	40	16	72	\$ 9,900	72	\$ 612	\$ 10,512
	QA/QC	4	8				12	\$ 3,323	12	\$ 102	\$ 3,425
	Address TRWD Comments		2	8	20		30	\$ 4,337	30	\$ 255	\$ 4,592
								\$ -		\$ -	\$ -
A.5	RFP Amendment Preparation							\$ -		\$ -	\$ -
	Panther Island Canals FMP Application	4		20	24	16	64	\$ 9,932	64	\$ 544	\$ 10,476
	RFPG Coordination	2		2	2		6	\$ 1,242	6	\$ 51	\$ 1,293
								\$ -		\$ -	\$ -
B.1	Project Management							\$ -		\$ -	\$ -
	Internal Meetings	2	4	6	4		16	\$ 3,187	16	\$ 136	\$ 3,323
	Monthly PM Meetings (3)	1	1	2	2		6	\$ 1,169	6	\$ 51	\$ 1,220
	Kickoff and Review Meeting (2)	2	2	4	4		12	\$ 2,337	12	\$ 102	\$ 2,439
	PM Tasks		4	10			14	\$ 2,735	14	\$ 119	\$ 2,854
								\$ -		\$ -	\$ -
B.2	Data Collection							\$ -		\$ -	\$ -
	Data Collection - FW CC			8	20		28	\$ 3,832	28	\$ 238	\$ 4,070
								\$ -		\$ -	\$ -
B.3	RFP Amendment Preparation							\$ -		\$ -	\$ -
	FW CC FMP Application	4		20	60	20	104	\$ 14,905	104	\$ 884	\$ 15,789
	RFPG Coordination	2		2	2		6	\$ 1,242	6	\$ 51	\$ 1,293
	Total Hours / Quantity	30	40	192	360	52	674		674		
	Total Effort	\$ 9,779	\$ 10,097	\$ 33,116	\$ 44,132	\$ 7,269		\$ 104,394	\$ 5,729	\$ 5,729	\$ 110,123

TARRANT REGIONAL WATER DISTRICT

AGENDA ITEM 12

DATE: August 20, 2024

SUBJET: Consider Approval of Facilities Extension Agreement with Oncor Electric Delivery Company LLC, for High Voltage Electric Service to the Integrated Pipeline Lake Palestine Pump Station

FUNDING: Dallas Bond Fund

RECOMMENDATION:

Management recommends approval of a Facilities Extension Agreement (FEA) in an amount not to exceed \$21,500,000 with Oncor Electric Delivery Company LLC (Oncor) for design and construction of a 138-kilovolt (kV) electrical transmission line and metering substation for high voltage electric service to the Lake Palestine Pump Station (LP1).

DISCUSSION:

The purpose of this FEA is to authorize Oncor to complete right-of-way acquisition, design, and construction of the 138 kV electrical transmission line to serve LP1. Total project cost is \$21,500,000. On December 12, 2023, the Board of Directors approved the Discretionary Services Agreement (DSA) with Oncor and authorized up to \$2,000,000 for the multi-route Certificate of Convenience and Necessity (CCN) Application with the Public Utility Commission of Texas (PUC). The FEA requires purchasing long-lead-time equipment that will take up to 2 years to fabricate and deliver. The remaining FEA fee will be due by May 15, 2025.

The cost breakdown is as follows:

Description	Cost	Status
DSA Security	\$2,000,000	Paid (approved December 2023 TRWD Board Meeting)
Contribution in Aid of Construction (CIAC) [Mobilization]	\$199,042	Receipt of Invoice
Long-Lead-Time Item Procurement	\$4,486,950	Due December 1, 2024
Remaining FEA Fee	\$14,814,008	Due May 15, 2025
Total Fee	\$21,500,000	

The FEA is based on a preferred route and is subject to change based on the final alignment that will be approved by the PUC.

Management requests the Board of Directors grant authority to the General Manager or his designee to execute all documents associated with the contract described herein.

The Facilities Extension Agreement is attached.

This item was reviewed by the Construction and Operations Committee on August 15, 2024.

Submitted By:

Zach Huff
Water Resources Engineering Director

Transmission / Substation Facility Extension Agreement

TRWD LP1 – Berryville, Texas

This Transmission / Substation Facility Extension Agreement (“Agreement”) is made between Tarrant Regional Water District, a Texas Water Control and Improvement District, hereinafter called “Customer” and Oncor Electric Delivery Company LLC, a Delaware limited liability company, hereinafter called “Company”, for the extension of Company Delivery System transmission / substation facilities, as hereinafter described. As used herein, the term “extension” shall mean the construction of new facilities or modification of existing facilities. Customer and Company will hereinafter be individually referred to as a “Party” and collectively referred to as the “Parties”.

Customer has requested that Company construct the following Company-owned Delivery System facilities in [HendersonAnderson](#) County, Texas (“Company Facilities”) to serve the following Customer-owned substation facilities located at the approximate coordinates: latitude 32.065858 and longitude -95.443614 (“Customer Facilities”).

The service to be provided by Company hereunder shall be provided through one (1) 138 kV point of delivery (“Point of Delivery” or “POD”) which will be located in the Customer [SubstationFacilities](#) and shall be defined as the electrical points where Company’s jumpers connect from Company’s 138 kV bus NEMA 4-hole pads in the Company metering station (“Company Metering Station”) to Customer’s 138 kV bus NEMA 4-hole pads in the Customer Substation near the separation fence between the Company Metering Station and the Customer Substation.

“Standard Facilities” as used herein shall mean those overhead Company Facilities determined by Company, for engineering, reliability and/or economic reasons, to be necessary to transport Electric Power and Energy to the Customer Facilities from a single Point of Delivery (defined below) using standard Company-owned metering equipment.

Company Facilities:

The Company Facilities will include, but not be limited to, the following metering station (“Company Metering Station”) and transmission line (“Company Transmission Line”) facilities [\(collectively the Company Metering Station and the Company Transmission Line are the “Company Facilities”\)](#): (See Attachment 1, One Line Diagram).

(a) Company Metering Station facilities:

- (3 ea.) 138 kV metering current transformers (CTs)
- (3 ea.) 138 kV metering voltage transformers (VTs)
- (2 ea.) 138 kV, 2000 A, manual-operated air switch
- (1 ea.) 138kV-120/240V station service voltage transformer (“SSVT”), associated fuses
- (6 ea.) Surge arresters, 138 kV
- (1 ea.) Transclosure, complete with station battery, battery charger, control panel, remote terminal unit (RTU) and associated electrical equipment
- (1 lot) Associated bus, conductor, connectors, grounding, conduit, control cable, foundations, grading, fencing and appurtenances
- (1 lot) Associated galvanized steel structures, including, but not limited to, dead-end, switch stand(s), surge arrester support(s), SSVT support, and bus supports
- (1 lot) Outdoor metering and telemetry enclosures and associated communication equipment

(b) Company Transmission Line facilities:

- (1 ea.) 138 kV single circuit transmission line to be constructed from the Company Metering Station dead-end structure to Company's self-supporting full tension dead-end structure located adjacent to Rayburn's Frankston Switching Station located at approximate coordinates: latitude 32.0609222, longitude -95.4742667

Customer Facilities:

The Customer Facilities will include, but not be limited to, a two (2) transformer, 138 kV–12.47 kV substation ("Customer Substation") (See Attachment 1, One Line Diagram).

(a) Customer Substation:

- (2 ea.) 138 kV circuit breaker
- (2 ea.) 138 kV motor-operated air switch
- (6 ea.) 138 kV station class surge arrester
- (2 ea.) 138/4.16 kV Power Transformer
- (1 lot) 4.16 kV facilities
- (1 lot) control center complete with protective relaying equipment
- (1 lot) Metering, Telemetry, and Communications Equipment
- (1 lot) Associated property, structures, buswork, conductor, connectors, grounding, conduit, control cable, foundation work, perimeter fencing, grading/dirt work and appurtenances

(b) Customer shall at all times have complete ownership and control over the Customer Facilities.

Rayburn Country Electric Cooperative ("Rayburn") Facilities:

In order for Company to provide the extension of Company Delivery System transmission / substation facilities, as herein described, it will be necessary for Rayburn to design, procure, and construct the following facilities ("Rayburn Facilities"):

- (a) Frankston Switching Station, a 138 kV three (3) breaker ring bus switching station, including, but not limited to, (i) the following associated switchyard facilities: circuit breakers, switches, system protection equipment, station service voltage transformers, surge arresters, communications equipment, supervisory equipment, SCADA RTU, associated buswork, conductor, connectors, grounding, conduit, control cable, foundation work, grading/dirt work, galvanized steel structures, including, but not limited to, dead-ends, switch stands, surge arrester supports, SSVT supports, bus supports, and access drives.
- (b) Modifications to Rayburn's Coffee - Blackburn 138 kV Transmission Line necessary to connect to Frankston Switching Station.
- (c) One (1) 138 kV transmission line slack span to be constructed by Rayburn from the Frankston Switching Station dead-end structure to Company's self-supporting full tension dead-end structure located adjacent to Frankston Switching Station.

Design and Operation of the Customer Facilities – The Customer Facilities shall meet all applicable national, state, and local construction, operation, and safety codes. The design of the Customer Facilities is subject to Company's review as to suitability for safe, compatible, and

reliable operation with the Company Facilities, and Company shall not be required to serve such Customer Facilities until it has made such suitability determination. Customer shall comply with Company's Standard 520-106, Guideline - Facility Interconnection Requirements for Points of Interconnection at Transmission Voltages with Retail Customers, revision date November 21, 2023 ("Facility Interconnection Requirements"), including, but not limited to, the installation of a breaker or other fault interrupting device and motor-operated visible disconnect switch on the high-voltage side of each power transformer located in the Customer Substation. Customer acknowledges having received a copy of this Standard or a link to the Company website containing the Standard. Customer is responsible for the protection of equipment owned by Customer on Customer's side of the POD, as specified in Company's Tariff for Retail Delivery Service and Facility Interconnection Requirements. Customer's relaying and protection schemes shall coordinate with Company's relaying and protection schemes. Prior to Customer finalizing the Customer Facilities design, Customer shall provide to Company for review its final one-line relay functional diagram showing all Customer relaying and protection schemes. Customer shall submit, for review by Company, prior to actual modification, any proposed change in the electrical design of the Customer Facilities that may impact the POD to permit Company to determine any resulting effect on the Company Facilities. Notwithstanding the termination provisions of this Agreement, the provisions of this paragraph will remain in effect as long as the Company Facilities are connected to the Customer Facilities.

The extension of Company Facilities provided for in this Agreement is contingent upon, among other contingencies specified in this Agreement, Customer's completion of the construction of the Customer Facilities, as specified herein, and any required cooperation and collaboration of Customer, third parties, and duly constituted regulatory authorities having jurisdiction. Company will design, procure, construct, own, maintain, test and commission the Company Facilities and Customer will design, procure, construct, own, maintain, test and commission the Customer Facilities.

The Company Facilities authorized hereunder shall be constructed pursuant to plans and specifications (the "Plans") to be submitted to Customer prior to the commencement of construction. No operations relating to the construction of the Company Facilities shall be commenced until the Plans therefor have been submitted to Customer. Customer shall promptly review the plans submitted by Company and, if necessary, shall provide comments as to what additional information or changes are required to obtain Customer's approval. Customer's approval of the Plans shall not be unreasonably withheld, delayed, or conditioned. Customer shall not assume any responsibility or liability with respect to such Plans.

ARTICLE I - PAYMENT BY CUSTOMER

1. As payment for Customer's portion of the cost of the extension of the Company Facilities in accordance with this Agreement, Customer will pay to Company the amount(s) shown below, such payment(s) to be and remain the property of Company.

A Contribution in Aid of Construction (a "CIAC") is required from Customer for the estimated cost of the extension of any Standard Facilities in excess of the standard allowance for the extension of Standard Facilities in Company's Tariff for Retail Delivery Service. The CIAC hereunder will be calculated in accordance with Section 6.1.2.2.6.1 of Company's Tariff for Retail Delivery Service as follows: Company's Direct Cost – Company's Standard Allowance + Company's Tax Liability + Applicable Franchise Fees. Company's Direct Cost will include Company's overhead, general and administrative fees and normal loadings Company applies to construction projects. Company's current Tax Liability is a gross-up factor of 9.665%. Franchise Fees are not applicable to the CIACs calculation under this Agreement.

(a) CIAC associated with Standard Facilities: revenue metering equipment for the POD

(i) The CIAC associated with Standard Facilities necessary to provide revenue metering for the POD is calculated as follows. Company's estimated Direct Cost is **\$226,500**. Company's Standard Allowance is **\$45,000** based on Company's current Standard Allowance Factor of \$3/kW times Customer's Maximum Demand (as defined below) of **15,000 kW** projected new electric demand (kW) at the Point of Delivery at the end of four (4) years after the Customer Operations Date (defined in Article VII hereof), as shown in Attachment 2, Customer Projected Load Ramp (the "Projected Maximum Demand"). When used in this Agreement, "Maximum Demand" shall mean the highest (i.e., peak) electric demand (kW) measured during any fifteen (15) minute interval by Company's meter at the Point of Delivery. Applying the CIAC calculation specified above yields a CIAC associated with the installation of standard revenue metering for the POD in the amount of **\$199,042**. Such CIAC shall be due and payable pursuant to the terms of Texas Government Code Chapter 2251.

(ii) Company will conduct a review of Customer's actual Maximum Demand (kW) to determine the accuracy of the Projected Maximum Demand supplied by Customer. If, within four (4) years after the Customer Operations Date, the actual Maximum Demand at the Point of Delivery has not reached **15,000 kW**, Company will re-calculate the CIAC based on the actual Maximum Demand. Customer will pay to Company a non-utilization charge in an amount equal to the difference between the re-calculated CIAC amount and the amount paid by Customer under this section. Company's invoice to Customer for such CIAC shall be due and payable within thirty (30) days after the date of receipt of Company's invoice.

(b) Company and Customer acknowledge and agree that Company's ability to construct the Company Facilities is contingent upon the timely payment of the CIAC specified herein and that failure by Customer to make such payment when due may impact the Company In-Service Date (defined in Article VII hereof).

2. If the Customer Facilities have not achieved the level of operation specified below by the date specified below, then Customer shall pay to Company those costs as described below to compensate Company for costs it has incurred associated with the Company Facilities. Company may require a security payment in advance of constructing facilities to cover such costs. The following will also address the details of any security required associated with such payment obligation.

Required Level of Operation. The level of operation required under this Agreement shall hereinafter be referred to as the "Required Level of Operation, which term shall mean that the following has been achieved:

(a) the Company In-Service Date (defined below);

(b) the Customer Operations Date (defined below); and

(c) the Customer Facilities have attained an electric load level of operation that has met or exceeded a Maximum Demand of **12,000 kW**.

Required Level of Operation Date: The latter of **11/05/2027** or one (1) year after the Company In-Service Date. The required level of operation date specified herein shall hereinafter be referred to as the "Required Level of Operation Date".

Description of Costs: The cost under this section shall be as follows: Company's Actual Costs specified in Article I, Section 3 as further defined in Article VII, Section 17 of this Agreement, reduced by the amount of any prior CIAC payment(s) made by Customer under this Agreement.

Security: Customer shall deposit a security payment to cover the costs described above in accordance with Article VII, Section 12 hereof.

3. Upon termination pursuant to the provisions of Article III, Paragraph 2 below, Customer shall pay to Company all of: (a) the costs that Company has incurred prior to the date of termination for engineering, procuring equipment and materials, construction, and any other costs related to the Company Facilities; (b) the costs that Company has committed to incur prior to the date of termination that it is unable to avoid using commercially reasonable steps; and (c) such costs incurred by Company after the date of termination to return the Delivery System to a condition consistent with Company's construction standards and Company's Tariff for Retail Delivery Service. Any cost obligations incurred by Customer under this paragraph will be reduced by any payments made by Customer under Paragraph 1 above. The provisions of this paragraph shall survive termination of this Agreement.
4. In calculating the costs Company has incurred (or committed to be incurred), such costs shall include the normal loadings Company applies to construction projects of this nature and shall be increased by an adder to cover the effects of a Customer payment on the Company's tax liability and shall include an amount to recover franchise fees where applicable.

ARTICLE II - TITLE AND OWNERSHIP

Company at all times shall have title to and complete ownership and control over the Company Facilities extended under this Agreement.

Once any rights-of-way or easements have been procured, regardless of the passage of time and the level of activity, the Company never intends to abandon any rights-of-way or easements unless the Company specifically states, in writing, the intention to do so, and the Company then takes additional specific affirmative action to effectuate the abandonment.

ARTICLE III - TERM AND TERMINATION

1. This Agreement becomes effective on the date of execution by both Parties and may be executed in two or more counterparts, each of which is deemed an original, but all constitute one and the same instrument.
2. Customer may terminate this Agreement at any time prior to completion of the Company Facilities by providing Company with seven (7) days advanced written notice.

ARTICLE IV - GENERAL CONDITIONS

1. Customer understands that, as a result of the installation provided for in this Agreement, the Delivery of Electric Power and Energy by Company to the specified location will be provided in accordance with Rate Schedule 6.1.1.1.7 – Transmission Service of Company's Tariff for Retail Delivery Service, which may from time to time be amended or succeeded.

2. This Agreement supersedes all previous agreements or representations, either written or oral, between Company and Customer made with respect to the matters herein contained, and when duly executed constitutes the agreement between the parties hereto and is not binding upon Company unless and until signed by one of its duly authorized representatives.
3. The services covered by this Agreement will be provided by Company, and accepted by Customer, in accordance with applicable Substantive Rules of the Public Utility Commission of Texas ("PUCT") and Company's Retail Delivery Tariff (including the Service Regulations contained therein), as it may from time to time be fixed and approved by the PUCT. Company's Retail Delivery Tariff is part of this Agreement to the same extent as if fully set out herein. Unless otherwise expressly stated in this Agreement, the terms used herein have the meanings ascribed within Company's Retail Delivery Tariff.
4. This Agreement may be amended only upon mutual agreement of the Parties, which amendment will not be effective until reduced to writing and executed by the Parties. Changes to applicable PUCT Substantive Rules and Company's Tariff for Retail Delivery Service are applicable to this Agreement upon their effective date and do not require an amendment of this Agreement.
5. The failure of a party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered to waive the obligations, rights, or duties imposed upon the Parties.
6. Customer may not assign the Agreement without Company's prior written consent.
7. This Agreement was executed in the State of Texas and must in all respects be governed by, interpreted, construed, and enforced in accordance with the laws thereof. This Agreement is subject to all valid, applicable federal, state, and local laws, ordinances, and rules and regulations of duly constituted regulatory authorities having jurisdiction.

ARTICLE V – DISCLOSURE

Customer has disclosed to Company all underground facilities owned by Customer or any other party that is not a public utility or governmental entity, that are located within real property owned by Customer. In the event that Customer has failed to do so, or in the event of the existence of such facilities of which Customer has no knowledge, Company, its agents and contractors, shall have no liability, of any nature whatsoever, to Customer, or Customer's agents or assignees, for any actual or consequential damages resulting directly or indirectly from damage to such undisclosed or unknown facilities.

ARTICLE VI – PROHIBITION ON AGREEMENTS WITH CERTAIN FOREIGN-OWNED COMPANIES IN CONNECTION WITH CRITICAL INFRASTRUCTURE

Customer represents and warrants that it does not meet any of the ownership, control, or headquarters criteria listed in Lone Star Infrastructure Protection Act, Chapter 117 of the Texas Business and Commerce Code (relating to China, Iran, North Korea, Russia, and any other country designated by the Texas governor as a threat to critical infrastructure).

ARTICLE VII - OTHER SPECIAL CONDITIONS

1. In-Service Date: The date that Company has completed the construction of the Company Facilities and the Company Facilities are ready to be connected to and energize the

Customer Facilities will be hereinafter referred to as the “**Company In-Service Date**”. The date that Customer has completed the construction of the Customer Facilities, and the Customer Facilities are energized from the Company Facilities will be hereinafter referred to as the “**Customer Operations Date**”. Customer’s targeted Customer Operations Date is **11/05/2026**. Company shall use “Good Utility Practice” (as defined in the Company’s Tariff for Retail Delivery Service) to endeavor to achieve the Company In-Service Date on or before the targeted Customer Operations Date set forth in this paragraph, provided that if Customer has not completed construction of the Customer Facilities or the Customer Facilities are not ready (as determined by Company in its sole discretion) to be energized by the Company Facilities by such date, the Company In-Service Date may, in Company’s sole discretion, be extended until such date that Customer has completed construction of the Customer Facilities and the Customer Facilities are ready to be energized by the Company Facilities in accordance with this paragraph. Customer understands that Customer’s failure to timely provide financial security, pay any CIAC amounts when due hereunder, or perform any of its other obligations hereunder may delay the Company In-Service Date. In addition, Customer acknowledges that Company’s ability to complete the Company Facilities by the Company In-Service Date is subject to the timing of receipt of required regulatory approvals. Company shall not be liable to Customer for any damages of any nature whatsoever for failure to meet the Company In-Service Date.

Notwithstanding the foregoing, Company’s obligation to meet Company’s In Service Date shall be subject to fire, flood, tornado, earthquake, elements of nature or acts of God, acts of war, terrorism, riots, civil disorders, supply chain shortages, labor shortages, epidemics, rebellions, revolutions, delay in land right acquisition, delay of approvals or other requirements from PUCT, ERCOT, or local governmental authorities, actions or failure to act by governmental or regulatory authorities to which Company is subject, or the actions or failure to act by Customer (each, a “Force Majeure Event”), and in the event of the occurrence of a Force Majeure Event, Company’s In Service Date shall be delayed as may be reasonably necessary for Company to respond to such Force Majeure Event.

2. Notice to Proceed: Upon receipt of payment in accordance with Article I and financial security in accordance with Article VII, Section 12, Company will proceed with the services contemplated under this Agreement.
3. Land Rights:

Customer shall provide Suitable Space for the installation of Company Facilities in accordance with Section 6.1.2.2.1.4 of Company’s Tariff for Retail Delivery Service by providing, at no cost to Company, all land rights on property owned or controlled by Customer, as reasonably required by Company, to construct the Company Facilities in such locations as are mutually agreed upon by the Parties (“Land Rights”). Such Land Rights from Customer will be conveyed to Company as easement(s) using the easement form(s) in Attachment 3, attached hereto and made a part hereof. Customer shall convey all Land Rights required for the Company Facilities on or before **March 16, 2026** (the “Customer Land Rights Conveyance Date”). Customer shall also provide Company access to Customer’s premises in accordance with and for the purposes provided for in Section 5.4.8 of Company’s Tariff for Retail Delivery Service. Customer acknowledges that Company’s ability to carry out its obligations under this Agreement is contingent upon Customer conveying to Company the Land Rights specified in this paragraph by the Customer Land Rights Conveyance Date. If the service to be provided by Company under this Agreement requires Company to acquire Land Rights from third parties, Customer acknowledges that Company’s ability to carry out its obligations under this Agreement is contingent upon Company’s ability to obtain such Land Rights on or before **March 16, 2026** (the “Third

Party Land Rights Acquisition Date”) at a cost, and under terms and conditions, that Company deems to be acceptable in accordance with its standard practices. If, at any time, Company is unable to acquire all Land Rights from third parties at a cost, and under terms and conditions, that Company deems to be acceptable in accordance with its standard practices, Company may notify Customer, and Customer shall have the option to contribute additional funds towards the acquisition of third party Land Rights. Company has no obligation to pay more to acquire the Land Rights than Company deems to be acceptable in accordance with its standard practices

4. Other Land Rights. Customer acknowledges that Company’s ability to carry out its obligations under this Agreement is contingent upon Company’s ability to acquire all necessary zoning and specific use permit(s) from the City of Berryville, Texas and all approvals necessary under existing restrictive covenants, if any. Customer will provide information reasonably requested by Company associated with, and will have the right but not the obligation to participate in, the acquisition of such zoning, permit(s), and allowance, if any.
5. Joint Access Plan. Before Company begins any work on Customer’s site, Customer and Company shall work together, in good faith, to develop an access plan for the site that (1) identifies Company’s employees and/or contractors need to access the site; (2) identifies the points of ingress and egress to the site that Company and/or its contractors will use; (3) identifies routes and areas of the site that Company and/or its contractors will access; and (4) identifies safety and environmental policies applicable to Company’s employees and/or contractors that are necessary for the purposes of this Agreement. Customer acknowledges that Company’s ability to carry out its obligations under this Agreement might be delayed or otherwise affected as a result of restrictions on Company’s employees’ and/or contractors’ access to the site.
6. Non-Interference with Other Party’s Construction. Each Party’s construction of its respective facilities must not unreasonably interfere with the other Party’s construction of the facilities it is installing in connection with this Agreement. If either Party’s activities do interfere with the other Party’s activities, the interfering Party must take all reasonable steps necessary to stop the interference and remedy it so that the other Party’s construction activities can continue without conflict.
7. Underground Facilities. Unless otherwise mutually agreed upon by Company and Customer, on property owned by Customer, Customer will, to the extent allowed by law, remove, at its cost, any underground facilities from the area(s) in which Company will construct the Company Facilities.
8. Metering Measurement Adjustment. The meter measurement adjustments specified in section 6.2.3.2 of Company’s Tariff for Retail Delivery Service are not applicable to the service provided hereunder in accordance with Rate Schedule 6.1.1.1.7 – Transmission Service.
9. Regulatory Approvals. If Company is required to obtain regulatory approvals to provide the service under this Agreement, including ERCOT and PUCT approvals, and any other regulatory approvals that Company may determine are necessary, the provision of service hereunder and the date by which such service will be provided is contingent upon the receipt of such approvals. Company and Customer acknowledge that, in order for Company to serve the Customer Facilities, the PUCT must approve an amendment to Company’s certificate of convenience and necessity (“CCN”). Company will submit to the

PUCT an application to amend its CCN for the construction of the Company Transmission necessary to serve the Customer Facilities in accordance with the DSA.

10. Billing Address. The billing address for the Customer is as follows:

Tarrant Regional Water District
Attn: Ed Weaver
800 E Northside Dr.
Fort Wort, Texas 76102

11. Formal Notices. Any formal notice, demand, or request provided for in this Agreement shall be in writing and shall be deemed properly served, given or made if delivered in person, or sent by either registered or certified mail, postage prepaid, or overnight mail to the address identified below:

If to Customer:

Tarrant Regional Water District
Attn: Devin Taylor
800 E Northside Dr.
Fort Worth, Texas 76102
Email: Devin.Taylor@trwd.com

If to Company:

Oncor Electric Delivery Company LLC
Attn. Robert Holt
777 Main Street, Suite 707
Fort Worth, Texas 76102
Phone: 817-215-5812
Email: Robert.Holt@oncor.com

12. Security Arrangement Details.

(a) In conjunction with Customer's payment obligations to Company pursuant to this Agreement, on or before the dates and in the amounts set forth in subsection (c) below, and at all times through the earlier of:

- (i) Company's release of all financial security provided under this Agreement in accordance with Section 13 of this Article VII; or
- (ii) the date that Customer has paid in full Company's Actual Costs that are due under this Agreement, or
- (iii) the date Customer has fully paid and performed its obligations under the Agreement ("Expiration Date"),

Customer shall cause to be maintained in full force and effect financial security in the form of a cash deposit.

(b) Repayment of a cash deposit shall include interest at a rate applicable to customer deposits as established from time to time by the PUCT or other governmental authority.

Subject to the terms of the security arrangement, Company may draw upon the financial security to satisfy any payment obligation to Company arising under this Agreement if Customer fails to make such payment when due.

- (c) Company and Customer entered into a Discretionary Service Agreement dated 10/04/2022, as amended on 01/08/2024 (“DSA”) pursuant to which Company will perform and Rayburn is financially securitized to perform discretionary services necessary for Company to prepare and submit an application to the PUCT to amend Company’s CCN and obtain PUCT approval to construct the Company Transmission Line. Discretionary services under the DSA which Company will perform and Rayburn is financially securitized to perform includes all activities that Company and Rayburn deem necessary to prepare, submit, and support a multi-route CCN Application necessary to support and obtain regulatory approval for the construction of the Company Transmission Line. In accordance with the DSA, Customer provided Company with financial security in the amount of **\$2,000,000** in the form of a cash deposit to provide security for Company and Rayburn to perform the discretionary services specified therein (“DSA Security”). On the date specified below, Company will apply the DSA Security to the financial security requirement under this Agreement. The financial security to be provided hereunder shall secure Company’s and Rayburn’s actual costs associated with (i) all discretionary services formerly secured under the DSA, (ii) the design, procurement, and construction of the Rayburn Facilities and (iii) the design, procurement, and construction of the Company Facilities in accordance with this Agreement (thereby releasing Customer from its obligation to maintain security for the benefit of Company and Rayburn under the DSA).

<u>Timing of financial security deposit</u>	<u>Amount of financial security</u>
DSA Security to be applied to this Agreement on the date that the PUCT approves the amendment to Company’s CCN.	\$2,000,000.00
On or before December 1, 2024	Additional: \$4,486,950
On or before May 15, 2025	Additional: \$14,814,008
Total financial security deposit by May 15, 2025	\$21,300,958

- (d) The final amount of financial security due under this Agreement will be determined during detailed design and construction of the Company Facilities. If during the detailed design and construction process Company determines that the financial security required for the services hereunder is estimated to be more than the amount of financial security specified above in Section 12(c) of this Article VII, the Parties agree to amend this Agreement to include, and Customer agrees to provide, the additional financial security required to cover Company’s and Rayburn’s estimated costs associated with the service to be provided by Company hereunder. The Parties acknowledge that any delay in amending this Agreement or the provision of such additional financial security may delay the Company In-Service Date.
- (e) Company and Customer acknowledge and agree that Company’s ability to design, procure, and construct the Company Facilities is contingent upon Customer establishing and maintaining the financial security specified herein and that failure by Customer to establish and maintain such security may impact Company’s ability to meet the Company In-Service Date. Company shall have no obligation to perform its obligations

hereunder until the financial security is delivered to Company.

13. **Security Release.** Financial security deposited by Customer in accordance with this Agreement will be released within thirty (30) days after Company verifies that Customer has achieved the Required Level of Operation, provided that the Required Level of Operation is achieved by the Required Level of Operation Date.
14. **Non-Utilization Clause.** Company will conduct a review of Customer's Maximum Demand to determine the accuracy of the Projected Maximum Demand (kW) as provided by Customer and specified within Attachment 2, "Customer Projected Load Ramp". If, by one year after the Company In-Service Date, the Maximum Demand has not reached **15,000 kW**, Company will, at its sole reasonable discretion, allocate capacity above the Maximum Demand in accordance with Company's processes, procedures and guides.
15. Company and Customer agree that neither Article VI of this Agreement, nor the statutory provisions cited therein, apply to this Agreement, and by signing this Agreement Customer is making no representations or warranties under Article VI.
16. **Other Termination Provisions:** In addition to the termination provision specified in Article III, Paragraph 2, the follow termination provisions shall apply to this Agreement:
 - (a) Either Party may terminate this Agreement if the other Party (a) breaches this Agreement and, if it can be cured, does not cure such breach within thirty (30) days' written notice, or (b) becomes or is declared insolvent, is the subject of any proceedings relating to its liquidation or insolvency or for the appointment of a receiver, conservator or similar officer, or makes an assignment for the benefit of all or substantially all of its creditors or enters into any agreement for the composition, extension, or readjustment of all or substantially all of its obligations. The termination right herein shall be in addition to and not in limitation of any rights or remedies existing hereunder or at law or in equity.
 - (b) Upon the termination of this Agreement, in accordance with its terms, prior to Customer achieving the Required Level of Operation, Customer shall be responsible for Company's Actual Costs.
 - (c) In the event of termination of this Agreement, both Parties shall use commercially reasonable efforts to mitigate the charges that they may incur as a consequence of termination.
17. **Other Payment Obligations:**
 - (a) In addition to those costs described in Article I, Section 3 of this Agreement, Company's Actual Costs shall include the following costs incurred or committed to be incurred by Rayburn related to the Rayburn Facilities (a) the costs that Rayburn has incurred for engineering, procuring equipment and materials, construction, and any other costs related to the Rayburn Facilities; (b) the costs that Rayburn has committed to incur that it is unable to avoid using commercially reasonable steps; and (c) such costs incurred by Rayburn to return it's delivery system to a condition consistent with its construction standards and its applicable tariff (collectively, the costs described in Article I, Section 3 of this Agreement and the costs described in this Article VII, Section 17(a) shall be referred to herein as "**Company's Actual Costs**") . The provisions of this paragraph shall survive termination of this Agreement.

(b) If Company requests payment of Company's Actual Costs in accordance with this Agreement, Company may invoice Customer and Customer shall pay such costs within thirty (30) days after the date of receipt of Company's invoice. Notwithstanding the foregoing, Company reserves the right to draw upon the financial security hereunder to satisfy all or part of Customer's payment obligations under this Agreement. If Company draws upon the financial security hereunder to satisfy the payment of Company's Actual Costs under this Agreement, any excess financial security will be returned to Customer within thirty (30) days thereafter.

(c) Notwithstanding anything to the contrary in this Agreement, if this Agreement is terminated for any reason, the financial security in excess of the Company's Actual Costs will be returned to Customer within thirty (30) days following the date of termination of this Agreement. The provisions of this paragraph shall survive termination of this Agreement.

18. Notwithstanding Article IV, Section 2, Company and Customer agree that the DSA is not superseded by this Agreement and remains in full effect until it is terminated in accordance with the terms thereof.

19. Payment Default. Payment default, other than the delivery of the financial security described in Article VII, Section 12 hereof, including disputes and interest, shall be governed by the provisions of Texas Government Code Chapter 2251.

20. Confidentiality. The Parties acknowledge that this Agreement contains confidential information. The Parties are required to maintain the confidential nature of this Agreement and any confidential information contained in this Agreement in accordance with applicable law, as may be amended from time to time. Notwithstanding the foregoing, the Parties hereby agree that Company will not be in breach of confidentiality hereunder if Company provides a copy of this Agreement or otherwise shares any confidential information contained in this Agreement with any duly constituted federal, state, or local regulatory authority having jurisdiction, including, but not limited to the ERCOT and the PUCT.

21. Nothing in this Agreement shall be interpreted to constitute a waiver of Customer's sovereign or governmental immunity.

22. Should Customer seek Company consent to assign this Agreement pursuant to Article IV, Section 6 hereof, Company's consent shall not be unreasonably withheld, conditioned or delayed.

ACCEPTED BY COMPANY:

Oncor Electric Delivery Company LLC

Signature

Name

Title

Date

ACCEPTED BY CUSTOMER:

Tarrant Regional Water District

Signature

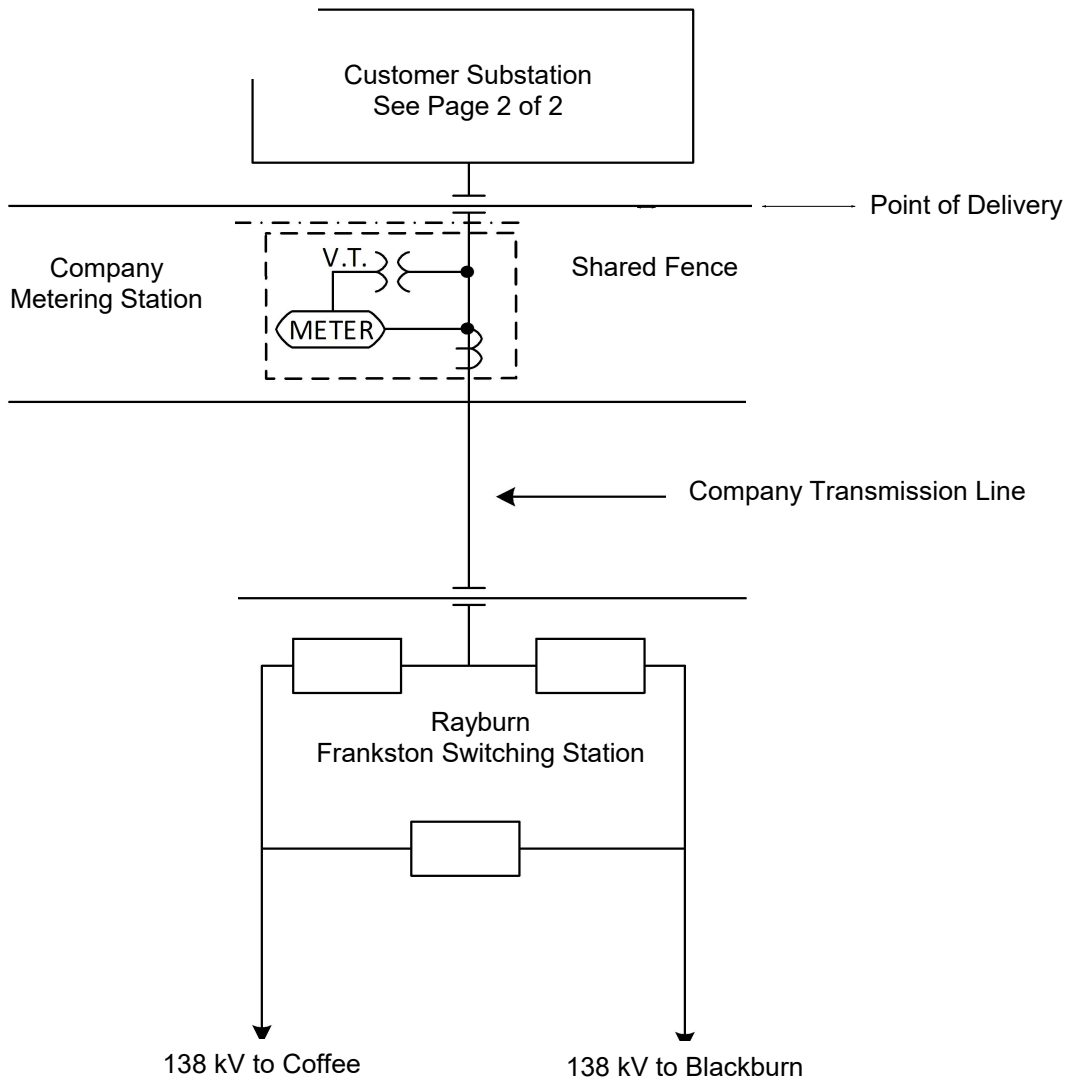
Name

Title

Date

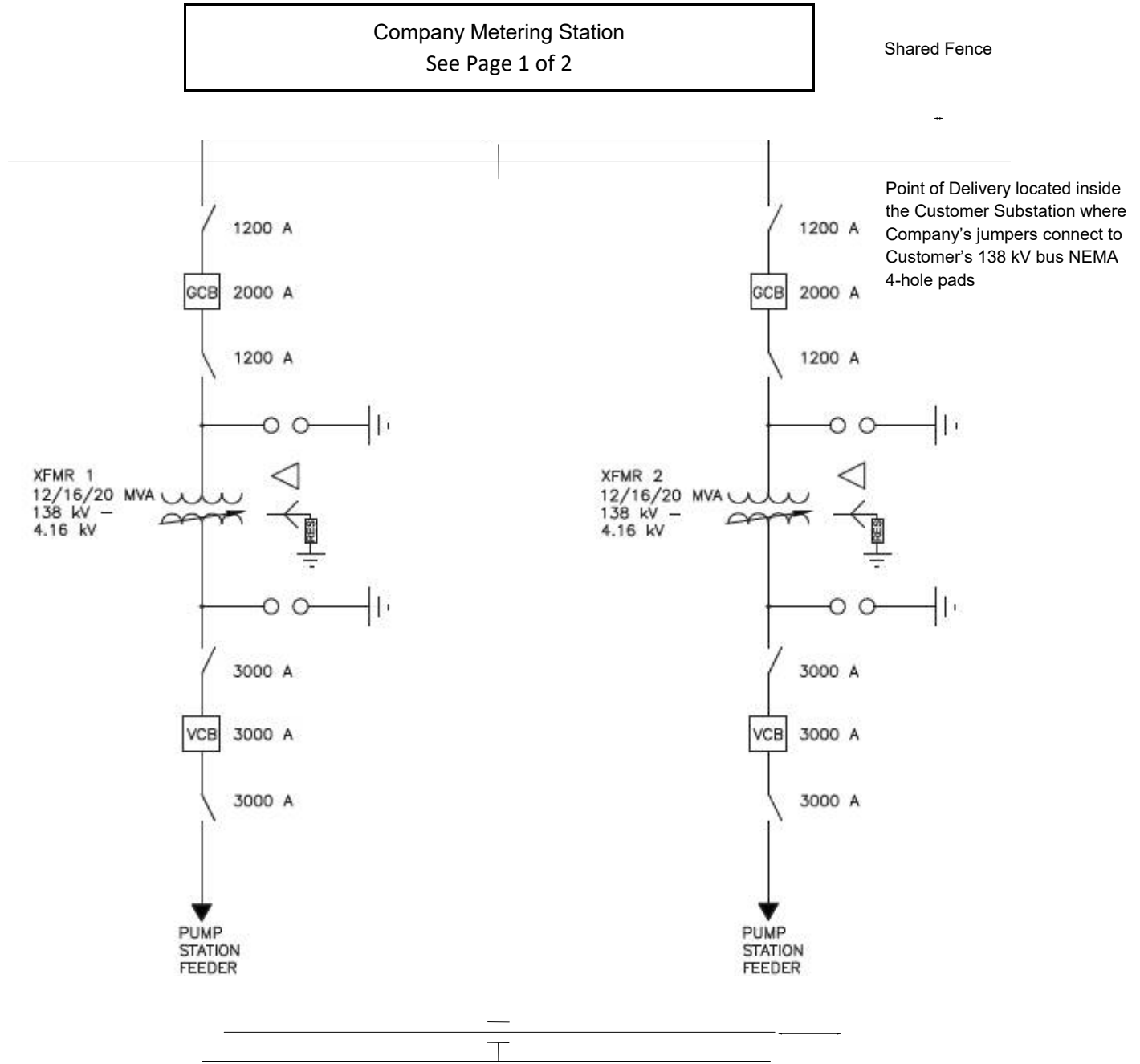
ATTACHMENT 1

Page 1 of 2
COMPANY FACILITIES AND RAYBURN FACILITIES
SIMPLIFIED ONE LINE DIAGRAM



Note: This Simplified One Line Diagram is for illustration purposes only and shall not be relied on for design, procurement, construction or any other purpose. The final one line diagram may be different from the one line diagram illustrated in this Attachment.

ATTACHMENT 1
Page 2 of 2
CUSTOMER SUBSTATION
SIMPLIFIED ONE LINE DIAGRAM



Note: This One Line Diagram is for information only and shall not be relied on for design, procurement, construction or any other purpose. The actual diagram may be different from the one illustrated in this Attachment.

Customer Substation

**ATTACHMENT 2
CUSTOMER PROJECTED LOAD RAMP**

YEAR	PEAK DEMAND (kW)
2026	15,000
2027	15,000
2028	15,000
2029	15,000
2030	15,000
2031	15,000

Note: The load ramp specified above is the Customer's Projected Load Ramp and is subject to the terms and conditions specified in this Agreement.

TARRANT REGIONAL WATER DISTRICT

AGENDA ITEM 13

DATE: August 20, 2024

SUBJECT: **Vote to Place a Proposal to Adopt a Tax Year 2024 Tax Rate on the Agenda for the September 17, 2024, Board of Directors Meeting**

Establish a Date for a Public Hearing to be Held September 12, 2024, at 11:00am on the Proposed Tax Year 2024 Tax Rate

FUNDING: N/A

RECOMMENDATION:

Management recommends the Board vote to place a proposal to adopt a tax year 2024 tax rate on the agenda of the September 17, 2024, Board of Directors Meeting.

Management also recommends establishing the date for a public hearing to be held September 12, 2024, at 11:00am on the proposed tax year 2024 tax rate.

DISCUSSION:

In accordance with both the Texas Water Code and the Texas Tax Code, the Board must vote to place a proposal to adopt the tax year 2024 tax rate on the agenda of the September 17, 2024, Board Meeting.

Prior to the adoption of the tax rate, the District is required to establish a public hearing date, publish a notice titled "Water District Notice of Public Hearing on Tax Rate", and conduct a public hearing.

The District's proposed timeline is attached for your review.

This item was reviewed by the Finance Committee on August 13, 2024.

Submitted By:

Sandy Newby
Chief Financial Officer

TARRANT REGIONAL WATER DISTRICT

2024 Timeline for Setting Budgets and Tax Rate

August 20, 2024 (Regularly scheduled Board Meeting)

1. Vote to propose a tax rate at the September 17, 2024, Board Meeting
2. Vote to set the date for a Public Hearing on the Tax Rate on September 12, 2024, at 11:00am
3. Schedule the vote to adopt the tax rate for the Board Meeting on September 17, 2024

September 4, 2024

Publish "Water District Notice of Public Hearing on Tax Rate"
Must be published at least seven days before the hearing

September 12, 2024

Public Hearing
Record intention to adopt a tax rate at the September 17, 2024, Board Meeting

September 17, 2024

1. Vote to adopt the General Fund Annual Budget
2. Vote to adopt a tax rate
3. Vote to adopt the Revenue Fund Annual Budget
4. Provide Tarrant County with the written order of adoption

TARRANT REGIONAL WATER DISTRICT

AGENDA ITEM 15

DATE: August 20, 2024

SUBJECT: Executive Session

FUNDING: N/A

RECOMMENDATION:

Section 551.071 of the Texas Government Code, for Private Consultation with its Attorney about Pending or Contemplated Litigation or on a Matter in which the Duty of the Attorney to the Governmental Body under the Texas Disciplinary Rules of Professional Conduct of the State Bar of Texas Clearly Conflicts with this Chapter; and

Section 551.072 of the Texas Government Code, to Deliberate the Purchase, Exchange, Lease or Value of Real Property Concerning the Richland-Chambers Wetlands Project and the Panther Island/Central City Flood Control Project

DISCUSSION:

- Pending litigation
- Real property issues

Submitted By:

Stephen Tatum
General Counsel

TARRANT REGIONAL WATER DISTRICT

AGENDA ITEM 16

DATE: August 20, 2024

SUBJECT: Consider Approval of Sale of Land in the R. Ybarbo Survey, Abstract No. 606, Kaufman County, Texas

DISCUSSION:

This agenda item is pending negotiations and is subject to review and approval by the TRWD Board of Directors.

TARRANT REGIONAL WATER DISTRICT

AGENDA ITEM 17

DATE: August 20, 2024

SUBJECT: Consider Approval of Authorization to Acquire Real Property Interests by Purchase for the Construction of the Richland-Chambers Wetlands Project

DISCUSSION:

This agenda item is pending negotiations and is subject to review and approval by the TRWD Board of Directors.

Next Scheduled Board Meetings

September 12, 2024 at 11:00 AM

September 17, 2024 at 9:00 AM