



AGENDA
WATAUGA CITY COUNCIL
SPECIAL MEETING
MONDAY, AUGUST 6, 2018
CITY HALL COUNCIL CHAMBER, 7105 WHITLEY ROAD
6:00 PM

CALL TO ORDER

INVOCATION

PLEDGE TO THE FLAG

PLEDGE TO THE TEXAS FLAG - "Honor the Texas Flag: I pledge allegiance to Thee, Texas, one state under God, one and indivisible"

DISCUSSION AND APPROVAL OF MEETING AGENDA

1. Discussion and action on approval of meeting agenda

PUBLIC HEARING

1. Public Hearing on the Proposed Budget for the Watauga Crime Control and Prevention District for Fiscal Year 2018-2019
 - a. Open Public Hearing-allow for staff comments
 - b. Public Comments
 - c. Close Public Hearing

NEW BUSINESS

1. Discussion on the City Manager's Proposed Budget for Fiscal Year 2018-2019 with possible Council action to change by adding or deleting items to the proposed budget prior to formal adoption on September 5, 2018
Sandra Gibson, Director of Finance
Andrea Gardner, City Manager
2. Discussion and action to place an action item for a proposal to adopt a Tax Rate of \$0.601788 per \$100.00 valuation for Fiscal Year 2018-2019 on the September 5, 2018, Regular City Council Meeting Agenda
Sandra Gibson, Director of Finance
Andrea Gardner, City Manager

3. Discussion and action on setting the public hearings on a proposed tax rate of \$0.601788 per \$100.00 valuation for Fiscal Year 2018-2019 on August 20, 2018 during the Regular Meeting of the City Council and on August 27, 2018 during a Special Meeting of the City Council; with both meetings to be held at 6:00 p.m., in the City Council Chamber at 7105 Whitley Road, Watauga, Texas, 76148
Sandra Gibson, Director of Finance
Andrea Gardner, City Manager
4. Discussion and action on approval of a proposed resolution authorizing the City of Watauga to submit an application for Local Grant Program through the Texas Parks and Wildlife Department
Sal Torres, Parks and Community Services Director
Paul Hackleman, P.E., CFM, Director of Public Works
Andrea Gardner, City Manager
5. Discussion and action on approval to authorize the City of Watauga to enter into a Construction Contract with Reytech Services in the amount of \$871,739.43 for the construction of Starnes Road 16" Water Main from Indian Springs Road to Rufe Snow Drive pursuant to Bid # 18-027
Paul Hackleman, P.E., CFM, Director of Public Works
Sandra Gibson, Director of Finance
Deby Woodard, Assistant Director of Finance
Andrea Gardner, City Manager
6. Discussion and action on approval of the Letter of Engagement for Whitley Penn, LLP to perform the Fiscal Year 2017-2018 City of Watauga Independent Audit in an amount not to exceed \$52,000, representing the third renewal term for Proposal # 15-024
Sandra Gibson, Director of Finance
Deby Woodard, Assistant Director of Finance
Andrea Gardner, City Manager

ADJOURNMENT

NOTICE

THIS FACILITY IS WHEELCHAIR ACCESSIBLE AND ACCESSIBLE PARKING SPACES ARE AVAILABLE. REQUESTS FOR ACCOMMODATIONS OR INTERPRETIVE SERVICES MUST BE MADE 48 HOURS PRIOR TO THIS MEETING. PLEASE CONTACT THE CITY SECRETARY'S OFFICE AT (817) 514-5825, OR FAX (817) 514-3625.

I, Zolaina R. Parker, City Secretary for the City of Watauga, hereby certify that this agenda was posted on the bulletin boards at City Hall, 7105 Whitley Road, Watauga, Texas, on August 2, 2018, before 6:00 p.m., in accordance with Chapter 551 of the Texas Government Code.

Zolaina R. Parker
Zolaina R. Parker, City Secretary, TRMC





AGENDA MEMORANDUM

DATE: July 16, 2018

TO: Honorable City Council Members

FROM: Zolaina Parker, City Secretary, TRMC

SUBJECT: Public Hearing on the Proposed Budget for the Watauga Crime Control and Prevention District for Fiscal Year 2018-2019

BACKGROUND/INFORMATION:

The Public Hearing for the proposed Watauga Crime Control and Prevention District Budget for Fiscal Year 2018-2019 was duly posted and published in the Fort Worth Star Telegram by the City Secretary's Office.

FINANCIAL IMPLICATIONS:

N/A

RECOMMENDATION/ACTION DESIRED:

Respectfully recommend allowing for public input as advertised.

ATTACHMENTS/ SUPPORTING DOCUMENTATION:

1. Public Hearing Notice

REVIEWED BY:

Zolaina Parker, City Secretary, TRMC

Final Approval - 08/02/2018



NOTICE OF PUBLIC HEARING

**WATAUGA CITY COUNCIL
CITY HALL COUNCIL CHAMBER
7105 WHITLEY ROAD, WATAGUA, TEXAS 76148
MONDAY, AUGUST 6, 2018
6:00 P.M.**

Notice is hereby given that the City Council of the City of Watauga, Texas will hold a Public Hearing on the proposed budget for the Watauga Crime Control and Prevention District for the 2018-2019 Fiscal Year on Monday, August 6, 2018, during the Special City Council Meeting, which begins at 6:00 p.m. in the Council Chamber at City Hall, 7105 Whitley Road, Watauga, Texas, 76148.

Published on Friday, July 20, 2018 in the Fort Worth Star Telegram, Legal Notices Section.

I, Zolaina R. Parker, City Secretary for the City of Watauga, Texas, hereby certify that this notice was posted on the official bulletin board at City Hall, 7105 Whitley Road, Watauga, Texas 76148, on Thursday, June 28, 2018 before 6:00 p.m.



Zolaina R. Parker
Zolaina R. Parker, City Secretary



AGENDA MEMORANDUM

DATE: July 16, 2018

TO: Honorable City Council Members

FROM: Andrea Gardner, City Manager

SUBJECT: Discussion on the City Manager's Proposed Budget for Fiscal Year 2018-2019 with possible Council action to change by adding or deleting items to the proposed budget prior to formal adoption on September 5, 2018

BACKGROUND/INFORMATION:

As required by the City Charter, the City Manager's Proposed Budget was submitted to the City Council on or before August 1, 2018, and represents the proposed financial plan for Fiscal Year 2018-2019.

FINANCIAL IMPLICATIONS:

Council action to increase or decrease revenues and/or expenditures may result in a change in fund balances and/or change in services provided.

RECOMMENDATION/ACTION DESIRED:

Review the City Manager's Proposed Budget for Fiscal Year 2018-2019, by reference.

ATTACHMENTS/ SUPPORTING DOCUMENTATION:

None

REVIEWED BY:

Sandra Gibson, Director of Finance
Andrea Gardner, City Manager
Zolaina Parker, City Secretary, TRMC

Approved - 07/30/2018
Approved - 07/30/2018
Final Approval - 08/01/2018



AGENDA MEMORANDUM

DATE: July 16, 2018

TO: Honorable City Council Members

FROM: Andrea Gardner, City Manager

SUBJECT: Discussion and action to place an action item for a proposal to adopt a Tax Rate of \$0.601788 per \$100.00 valuation for Fiscal Year 2018-2019 on the September 5, 2018, Regular City Council Meeting Agenda

BACKGROUND/INFORMATION:

The City Manager's Proposed Fiscal Year 2018-2019 Budget recommends adoption of a tax rate at \$0.601788 per \$100.00 valuation. This is the same tax rate in place for Fiscal Year 2017-2018.

The adoption of the proposed tax rate of \$0.601788 per \$100.00 valuation will produce more revenue from property taxes than last year's budget by an amount of approximately \$519,597 which is a 7.49 percent levy increase from the Fiscal Year 2017-2018 Budget Year. This levy will be used for funding increases in cost of services, employee compensation, purchases of equipment, debt service for capital projects such as street improvements, park enhancements, and funding capital equipment, as well as other expenses relating to meeting the community needs.

FINANCIAL IMPLICATIONS:

The proposed tax rate of \$0.601788 per \$100 valuation would provide a tax levy increase of approximately \$519,597 in the FY2018-2019 Proposed Budget.

RECOMMENDATION/ACTION DESIRED:

Consideration of a proposal to place an action item to adopt a Tax Rate of \$0.601788 per \$100.00 valuation for Fiscal Year 2018-2019 on the September 5, 2018, Regular City Council Meeting Agenda

ATTACHMENTS/ SUPPORTING DOCUMENTATION:

1. WORKSHEET FOR CALCULATION OF TAX INCREASE

REVIEWED BY:

Sandra Gibson, Director of Finance
Andrea Gardner, City Manager

Approved - 07/30/2018
Approved - 07/31/2018



AGENDA MEMORANDUM

Zolaina Parker, City Secretary, TRMC

Final Approval - 08/01/2018

Worksheet for Calculation of Tax Increase City of Watauga

Date: 07/29/2018 11:35 AM

1. 2017 taxable value, adjusted for court-ordered reductions. Enter Line 6 of the Effective Tax Rate Worksheet.	\$1,150,299,287
2. 2017 total tax rate. Enter Line 4 of the Effective Tax Rate Worksheet.	\$0.601788/\$100
3. 2017 tax levy. Multiply line 1 times line 2 and divide by 100. To the result, add ETR line 13.	\$6,937,680
4. 2018 total taxable value. Enter line 19 of the Effective Tax Rate Worksheet.	\$1,239,186,641
5. 2018 proposed tax rate. Enter the proposed tax rate approved by the Governing Body.	\$0.601788/\$100
6. 2018 tax levy. Multiply line 4 times line 5 and divide by 100.	\$7,457,277
7. Tax levy increase (decrease). Subtract line 3 from line 6.	\$519,597
8. Percentage levy increase (decrease). Divide line 7 by line 3. Multiply by 100.	7.49%
9. Notice & hearing limit. Enter the lower of the effective tax rate or the rollback tax rate.	\$0.558786
10. Percentage tax increase (decrease)*. Subtract Line 9 from Line 5. Divide result by Line 9. Multiply by 100.	7.70%

*Amount by which the proposed tax rate exceed the lower of the rollback tax rate or the effective tax rate. This figure was previously published in the Notice of Public Hearing on Tax Increase and the Notice of Tax Revenue Increase.



AGENDA MEMORANDUM

DATE: July 16, 2018

TO: Honorable City Council Members

FROM: Andrea Gardner, City Manager

SUBJECT: Discussion and action on setting the public hearings on a proposed tax rate of \$0.601788 per \$100.00 valuation for Fiscal Year 2018-2019 on August 20, 2018 during the Regular Meeting of the City Council and on August 27, 2018 during a Special Meeting of the City Council; with both meetings to be held at 6:00 p.m., in the City Council Chamber at 7105 Whitley Road, Watauga, Texas, 76148

BACKGROUND/INFORMATION:

The tax rate of \$0.601788 per \$100.00 valuation is recommended in the City Manager's Proposed Budget for Fiscal Year 2018-2019 which was presented to Council and available for public view on August 1, 2018.

It is recommended that the City Council conduct two (2) public hearings on the proposed tax rate on August 20, 2018 and August 27, 2018 at 6:00 p.m. in the City Council Chambers at 7105 Whitley Road, Watauga, Texas 76148.

FINANCIAL IMPLICATIONS:

Failure to hold the public hearings could jeopardize the City's ability to collect taxes for funding during Fiscal Year 2018-2019.

RECOMMENDATION/ACTION DESIRED:

Selection of August 20, 2018 and August 27, 2018 as the dates to hold the public hearings of the proposed tax rate of \$0.601788 per \$100.00 valuation for Fiscal Year 2018-2019.

ATTACHMENTS/ SUPPORTING DOCUMENTATION:

None

REVIEWED BY:

Sandra Gibson, Director of Finance
Andrea Gardner, City Manager
Zolaina Parker, City Secretary, TRMC

Approved - 07/30/2018
Approved - 07/30/2018
Final Approval - 08/01/2018



AGENDA MEMORANDUM

DATE: July 23, 2018

TO: Honorable City Council Members

FROM: Andrea Gardner, City Manager

SUBJECT: Discussion and action on approval of a proposed resolution authorizing the City of Watauga to submit an application for Local Grant Program through the Texas Parks and Wildlife Department

BACKGROUND/INFORMATION:

In the Fall of 2017, the City submitted a Local Parks Non-Urban Outdoor Grant Application to the Texas Parks & Wildlife Department for funding consideration of a Splash Pad to be located at Capp Smith Park. In March 2018, the City was informed its grant application was not approved. Since the disaster of hurricane Harvey caused tremendous damage to the Texas gulf coast areas, a majority of the available funds were awarded to communities directed impacted by Harvey.

Part of our Strategic Planning includes incorporating grants into City Projects when available. The TPWD Grant is one opportunity to pursue in achieving this goal. If we pursue the TPWD Grant, the splash pad project construction completion would be delayed until approximately summer of 2020. Most Splash Pads operate from Memorial Day to Labor Day.

In April 2018, staff received direction from the City Council to continue pursuing grant opportunities for the funding of the splash pad project. Thus, attached is a Resolution to designate a City Official, (i.e. Mayor Patrick Shelbourne) for the purpose of being responsible for and to act on behalf of the City of Watauga in dealing with the Texas Parks and Wildlife Department to participate in the Local Parks Grant Application process for the splash pad project and to continue with future applications with Texas Parks and Wildlife.

FINANCIAL IMPLICATIONS:

Future	Construction	Cost	Splash	Pad	\$700,000
Other	Park	Projects	-	Amenities	\$100,000
Improvements	(Parking,	sidewalks,	drainage)		\$350,000
Total Estimated Cost	\$1,150,000				

Possible Future TPWD Grant Funding \$400,000



AGENDA MEMORANDUM

RECOMMENDATION/ACTION DESIRED:

The recommendation by staff is to adopt the Resolution appointing a City Official to represent the City of Watauga for the purpose of dealing with the Texas Parks and Wildlife Department in the grant application process.

ATTACHMENTS/ SUPPORTING DOCUMENTATION:

1. Resolution Local Parks
2. Local_Parks_Applicants_Certification__Program_Assurances_fillable

REVIEWED BY:

Paul Hackleman, P.E., CFM, Director of Public Works
Andrea Gardner, City Manager
Zolaina Parker, City Secretary, TRMC

Approved - 08/01/2018
Approved - 08/01/2018
Final Approval - 08/02/2018



Local Park Grant Program Resolution Authorizing Application

A resolution of the _____ as hereinafter referred to as "Applicant," designating certain officials as being responsible for, acting for, and on behalf of the Applicant in dealing with the Texas Parks & Wildlife Department, hereinafter referred to as "Department," for the purpose of participating in the Local Park Grant Program, hereinafter referred to as the "Program"; certifying that the Applicant is eligible to receive program assistance; certifying that the Applicant matching share is readily available; and dedicating the proposed site for permanent (or for the term of the lease for leased property) public park and recreational uses.

WHEREAS, the Applicant is fully eligible to receive assistance under the Program; and

WHEREAS, the Applicant is desirous of authorizing an official to represent and act for the Applicant in dealing with the Department concerning the Program;

BE IT RESOLVED BY THE APPLICANT:

SECTION 1: That the Applicant hereby certifies that they are eligible to receive assistance under the Program, and that notice of the application has been posted according to local public hearing requirements.

SECTION 2: That the Applicant hereby certifies that the matching share for this application is readily available at this time.

SECTION 3: That the Applicant hereby authorizes and directs the _____ to act for the Applicant in dealing with the Department for the purposes of the Program, and that _____ is hereby officially designated as the representative in this regard.

SECTION 4: The Applicant hereby specifically authorizes the official to make application to the Department concerning the site to be known as _____ in the _____ of _____ or use as a park site and is hereby dedicated (or will be dedicated upon completion of the proposed acquisition) for public park and recreation purposes in perpetuity (or for the lease term, if legal control is through a lease). Projects with federal monies may have differing requirements.

Introduced, read and passed by an affirmative vote of the "Applicant" on this _____ day of _____, 20____.

Signature of Local Government Official

Typed Name and Title

ATTEST:

Signature

Typed Name and Title



Local Park Grant Program Applicant's Certification & Program Assurances

As the duly authorized representative of the sponsor designated in the Resolution Section 3, ***I certify that the Applicant:***

1. Has complied with all pertinent local and state laws, and Local Parks Grants Program requirements regarding public hearings, including floodplain development, if appropriate.
2. Has the required proportionate share of funds available and sufficient for the project as required by Section 13.309 of the Parks and Wildlife Code.
3. Will maintain and operate areas acquired or developed with program assistance at sponsor expense as required by Section 13.309 of the Parks & Wildlife Code.
4. Will permanently dedicate for public park and recreation use all project area(s) which receive program assistance, as required by Chapter 640.1.2 of the *Local Park Grant Program Manual*.
5. Has the legal authority to apply for program assistance and the institutional, managerial and financial capability to ensure proper planning, management and completion of the project described in this application.
6. Will give the State of Texas, hereafter referred to as "State," through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the assistance; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
7. Will not dispose of, modify the use of, or change the terms of the real property title or other interest in the site and facilities without permission and instructions from the Texas Parks & Wildlife Department, and will record any federal interest in the title of real property in accordance with U. S. Department of Interior directives.
8. Will dedicate and permanently maintain any property designated as a natural area, wetland, or open space to meet program guidelines.
9. Will comply with all provisions of the "Summary of Guidelines for Administration of Local Park Grant Acquisition & Development Projects."
10. Will comply with the requirements of the Department with regard to the drafting, review and approval of construction plans and specifications.
11. Will obtain all required state and/or federal permits related to project development.
12. Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the completed work conforms to the approved plans and specifications.
13. Will furnish quarterly progress reports and such other information as may be required by the Department.
14. Will initiate and complete the work within the applicable time frame after receipt of approval from the Department.
15. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest or personal gain.

Applicant's Certification & Program Assurances - Continued

16. Will comply with all State and Federal statutes relating to non-discrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§ 1681-1686) which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794) which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§ 6101-6107) which prohibits discrimination on the basis of age; (e) any other non-discrimination provisions in the specific statute(s) under which application for program assistance is being made, and (f) the requirements of any other non-discrimination statute(s) which may apply to the application.
17. Will comply with the flood insurance purchase requirements of Section 4012(a) of the Flood Disaster Protection Act of 1973 which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance in an amount at least equal to its development or project cost.
18. Will comply with environmental standards which may be prescribed to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplain in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S. C. §§ 1451 et seq.); (f) conformity of Federal actions to State (Clear Air) Implementation Plans under Section 176(c) of the Clear Air Act of 1955, as amended (42 U.S.C. § 7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended, (P.L. 93-523); and (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
19. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§ 1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
20. Will assist the Department in assuring compliance with the Texas Antiquities Code.
21. Will cause to be performed the required financial and compliance audits in accordance with the state or federal Single Audit requirements.
22. Will comply with all applicable requirements of all other State and Federal laws, regulations and policies governing this program.

Sponsor/ Project Name

Signature of Official Authorized in Resolution

Print Name and Title of Official

Date



AGENDA MEMORANDUM

DATE: July 25, 2018

TO: Honorable City Council Members

FROM: Andrea Gardner, City Manager

SUBJECT: Discussion and action on approval to authorize the City of Watauga to enter into a Construction Contract with Reytech Services in the amount of \$871,739.43 for the construction of Starnes Road 16" Water Main from Indian Springs Road to Rufe Snow Drive pursuant to Bid # 18-027

BACKGROUND/INFORMATION:

The Starnes Road 16" Water Main is listed as one of the 2017-18 Capital Improvement Plan (CIP) Projects and included in the 2015/16 thru 2020/21 CIP Plan. The City of Watauga receives water from North Richland Hills from four (4) water main feeds. Starnes Road 16" Water Main is one of the four (4) water main feeds for the City.

On September 6, 2017, the City Council amended the Burgess Niple contract to include the design and construction administration for this project. The City advertised the construction project for bidding in the Star Telegram, as required by State statute, on May 23rd and 30th, 2018 and opened the sealed bids on Wednesday, June 20th, 2018. The original bid opening date of Wednesday, June 13th, 2018 was postponed by Addendum No. 1.

Bids were received from Reytech Services, JRB Pipeline Services, LLC, Cidrax Texas, LLC, Atkins Bros., Jackson Construction, LTD, Wilson Contractor Services, LLC, Canary Construction, Woody Contractors, Inc., Gomez Brothers Construction, Inc., Gra-Tex Utilities, Inc., ANA Site Construction, LLC, KIK Underground, LLC, SYB Construction Company, Inc., Muniz Construction, Inc., Mountain Cascade, R&D Burns Brothers, Inc., Tex Global, SJ Louis Construction, Rumsey Construction, Ark Contracting Services, Joe Funk Construction, Inc., and Dickerson Construction Company, Inc. Each contractor also bid a number of calendar days to complete the project ranging from 120 to 300 days. Reytech Services submitted the lowest responsible bid for the construction. References have been checked for Reytech Services and they are qualified to perform the work on this project. Reytech Services was the contractor for the City of Watauga on the CDBG 42nd Year Wastewater Project on Lalagray Lane.



AGENDA MEMORANDUM

The project limits are Starnes Road from Indian Springs Road to Rufe Snow Drive. It consist of abandoning the existing 16" water main on the north side of Starnes Road in the grass parkway area and placing a new 16" water main in the northern quarter point of the existing paved street. There shall be miscellaneous sidewalk, sidewalk ramp, water service meters, water valves, pavement markings, sod, and driveway repairs included with the construction.

The 2017 Certificates of Obligation are providing funding this project. The project would be awarded to Reytech Services. Construction start date should be in mid-October of this year. The contractor bid 145 calendar days to complete the project which should be complete in March 2019 pending weather delays or miscellaneous allowance revisions. Starnes Road shall be open to through traffic during construction. Staff is recommending award of the bid in the amount of \$871,739.43.

FINANCIAL IMPLICATIONS:

Construction Cost \$871,739.43 Funding: 2017 Certificates of Obligation

RECOMMENDATION/ACTION DESIRED:

Authorize the City to enter into a Construction Contract with Reytech Services in the amount of \$871,739.43 for the construction of Starnes Road 16" Water Main from Indian Springs Road to Rufe Snow Drive.

ATTACHMENTS/ SUPPORTING DOCUMENTATION:

1. Bid Tabulation - Starnes Road Water Line
2. Location Map - Starnes Road 16 Water Main
3. Bid Documents - Starnes Road Water Line
4. Addendum 1 - Starnes Road 16 Water Main
5. Addendum 2 - Starnes Road 16 Water
6. Recommendation Letter - Engineer - Starnes 16 Water
7. Agenda PP - Construction - Starnes Road 16 Water - CIP 2017
8. BID ADVERTISEMENT - CONSTRUCTION - Starnes Road 16
9. Attorney Approval Letter

REVIEWED BY:

Sandra Gibson, Director of Finance
Deby Woodard, Assistant Director of Finance
Andrea Gardner, City Manager
Zolaina Parker, City Secretary, TRMC

Approved - 07/30/2018
Approved - 07/30/2018
Approved - 07/30/2018
Final Approval - 08/01/2018



STARNES ROAD 16" WATER LINE BID TABULATION

Bids Opened
June 20, 2018
2:00 PM

					Engineer's Estimate		#1 Reytech Services			#2 JRB Pipeline Services, LLC.		
ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	UNIT PRICE	COST	UNIT PRICE	AMOUNT	Ratio to Engineer	UNIT PRICE	AMOUNT	Ratio to Engineer	
1	Prepare and Restore Right-of-Way	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 45,028.48	\$ 45,028.48	0.90	\$ 4,500.00	\$ 4,500.00	0.09	
2	Remove Existing 16" Dia. Water Line	LF	126	\$ 50.00	\$ 6,300.00	\$ 21.17	\$ 2,667.42	0.42	\$ 10.00	\$ 1,260.00	0.20	
3	Remove Existing 12" Dia. Water Line	LF	20	\$ 10.00	\$ 200.00	\$ 13.34	\$ 266.80	1.33	\$ 10.00	\$ 200.00	1.00	
4	Remove Existing 8/6" Dia. Water Line	LF	150	\$ 10.00	\$ 1,500.00	\$ 9.33	\$ 1,399.50	0.93	\$ 10.00	\$ 1,500.00	1.00	
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ 120.00	\$ 394,080.00	\$ 63.21	\$ 207,581.64	0.53	\$ 80.00	\$ 262,720.00	0.67	
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	18	\$ 90.00	\$ 1,620.00	\$ 40.08	\$ 721.44	0.45	\$ 80.00	\$ 1,440.00	0.89	
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ 72.00	\$ 29,520.00	\$ 25.95	\$ 10,639.50	0.36	\$ 49.00	\$ 20,090.00	0.68	
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ 70.00	\$ 2,310.00	\$ 21.45	\$ 707.85	0.31	\$ 48.00	\$ 1,584.00	0.69	
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ 1,000.00	\$ 50,000.00	\$ 278.25	\$ 13,912.50	0.28	\$ 315.00	\$ 15,750.00	0.32	
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ 225.00	\$ 13,500.00	\$ 183.95	\$ 11,037.00	0.82	\$ 275.00	\$ 16,500.00	1.22	
11	16" Gate Valve and Box	EA	6	\$ 8,800.00	\$ 52,800.00	\$ 7,645.64	\$ 45,873.84	0.87	\$ 5,750.00	\$ 34,500.00	0.65	
12	12" Gate Valve and Box	EA	2	\$ 2,900.00	\$ 5,800.00	\$ 2,818.96	\$ 5,637.92	0.97	\$ 2,300.00	\$ 4,600.00	0.79	
13	8" Gate Valve and Box	EA	9	\$ 1,600.00	\$ 14,400.00	\$ 1,728.23	\$ 15,554.07	1.08	\$ 1,250.00	\$ 11,250.00	0.78	
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftg, 6" Pipe	EA	6	\$ 6,500.00	\$ 39,000.00	\$ 7,092.51	\$ 42,555.06	1.09	\$ 5,200.00	\$ 31,200.00	0.80	
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ 5,000.00	\$ 25,000.00	\$ 5,013.72	\$ 25,068.60	1.00	\$ 3,900.00	\$ 19,500.00	0.78	
16	Ductile Iron Fittings	TONS	7.5	\$ 7,000.00	\$ 52,500.00	\$ 6,184.62	\$ 46,384.65	0.88	\$ 3,000.00	\$ 22,500.00	0.43	
17	2" Combination Air Release Valve & Vault with Offset	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 6,477.49	\$ 6,477.49	1.85	\$ 4,000.00	\$ 4,000.00	1.14	
18	Temporary 2" Blow Off /Sample point	EA	2	\$ 1,500.00	\$ 3,000.00	\$ 2,540.05	\$ 5,080.10	1.69	\$ 1,900.00	\$ 3,800.00	1.27	
19	Salvage Existing Fire Hydrant	EA	3	\$ 400.00	\$ 1,200.00	\$ 1,623.88	\$ 4,871.64	4.06	\$ 500.00	\$ 1,500.00	1.25	
20	Abandon Existing Water Valve	EA	15	\$ 200.00	\$ 3,000.00	\$ 199.87	\$ 2,998.05	1.00	\$ 350.00	\$ 5,250.00	1.75	
21	Connect to Existing 16" Water Line	EA	2	\$ 8,900.00	\$ 17,800.00	\$ 2,066.74	\$ 4,133.48	0.23	\$ 4,000.00	\$ 8,000.00	0.45	
22	Connect to Existing 12" Water Line	EA	3	\$ 4,300.00	\$ 12,900.00	\$ 1,978.79	\$ 5,936.37	0.46	\$ 2,500.00	\$ 7,500.00	0.58	
23	Connect to Existing 6/8" Water Line	EA	8	\$ 2,300.00	\$ 18,400.00	\$ 1,651.81	\$ 13,214.48	0.72	\$ 1,700.00	\$ 13,600.00	0.74	
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ 400.00	\$ 6,800.00	\$ 1,032.98	\$ 17,560.66	2.58	\$ 1,200.00	\$ 20,400.00	3.00	
25	Long Double Water Service	EA	13	\$ 1,000.00	\$ 13,000.00	\$ 1,741.00	\$ 22,633.00	1.74	\$ 1,100.00	\$ 14,300.00	1.10	
26	Short Double Water Service	EA	25	\$ 750.00	\$ 18,750.00	\$ 1,373.67	\$ 34,341.75	1.83	\$ 1,050.00	\$ 26,250.00	1.40	
27	Short Single Water Service	EA	3	\$ 700.00	\$ 2,100.00	\$ 1,157.93	\$ 3,473.79	1.65	\$ 1,000.00	\$ 3,000.00	1.43	
28	Water Service Transfer	EA	41	\$ 500.00	\$ 20,500.00	\$ 117.22	\$ 4,806.02	0.23	\$ 100.00	\$ 4,100.00	0.20	
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ 250.00	\$ 12,500.00	\$ 227.76	\$ 11,388.00	0.91	\$ 150.00	\$ 7,500.00	0.60	
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ 2,000.00	\$ 2,000.00	\$ 1,092.39	\$ 1,092.39	0.55	\$ 1,400.00	\$ 1,400.00	0.70	
31	Remove and Replace Existing Mono Curb	LF	163	\$ 5.00	\$ 815.00	\$ 25.96	\$ 4,231.48	5.19	\$ 55.50	\$ 9,046.50	11.10	
32	Remove and Replace Existing Concrete Sidewalk	SF	1,996	\$ 10.00	\$ 19,960.00	\$ 4.17	\$ 8,323.32	0.42	\$ 8.00	\$ 15,968.00	0.80	
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ 10.00	\$ 4,420.00	\$ 5.85	\$ 2,585.70	0.59	\$ 11.00	\$ 4,862.00	1.10	
34	Remove and Replace Existing Curb Ramps	EA	10	\$ 2,500.00	\$ 25,000.00	\$ 1,485.17	\$ 14,851.70	0.59	\$ 1,600.00	\$ 16,000.00	0.64	
35	Remove and Replace Existing Concrete Pavement	LF	3,467	\$ 50.00	\$ 173,350.00	\$ 41.26	\$ 143,048.42	0.83	\$ 57.00	\$ 197,619.00	1.14	
36	Temporary Pavement Replacement	LF	3,467	\$ 20.00	\$ 69,340.00	\$ 5.15	\$ 17,855.05	0.26	\$ 4.50	\$ 15,601.50	0.23	
37	Solid Sodding incl. 4" Thick Topsoil	SY	432	\$ 6.00	\$ 2,592.00	\$ 5.66	\$ 2,445.12	0.94	\$ 9.50	\$ 4,104.00	1.58	
38	Trench Safety	LF	3,292	\$ 1.00	\$ 3,292.00	\$ 0.93	\$ 3,061.56	0.93	\$ 1.50	\$ 4,938.00	1.50	
39	Traffic Control Plan and Implementation	LS	1	\$ 20,000.00	\$ 20,000.00	\$ 4,446.25	\$ 4,446.25	0.22	\$ 4,700.00	\$ 4,700.00	0.24	
40	Erosion Control Plan	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 4,224.07	\$ 4,224.07	1.69	\$ 3,200.00	\$ 3,200.00	1.28	
41	Project Signs	EA	2	\$ 750.00	\$ 1,500.00	\$ 523.71	\$ 1,047.42	0.70	\$ 800.00	\$ 1,600.00	1.07	
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	1.00	\$ 50,000.00	\$ 50,000.00	1.00	
43	24" Wide White Thermoplastic Stop Bar	LF	303	\$ 10.00	\$ 3,030.00	\$ 1.17	\$ 354.51	0.12	\$ 12.00	\$ 3,636.00	1.20	
44	12" Wide White Thermoplastic Cross Walk Bar	LF	1,213	\$ 5.00	\$ 6,065.00	\$ 1.00	\$ 1,213.00	0.20	\$ 7.00	\$ 8,491.00	1.40	
45	12" Wide White Thermoplastic School Zone Bar	LF	40	\$ 5.00	\$ 200.00	\$ 1.28	\$ 51.20	0.26	\$ 7.00	\$ 280.00	1.40	
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	2	\$ 300.00	\$ 600.00	\$ 235.87	\$ 471.74	0.79	\$ 170.00	\$ 340.00	0.57	
47	4" Dia. Type "Y" Yellow Buttons	EA	32	\$ 7.50	\$ 240.00	\$ 4.67	\$ 149.44	0.62	\$ 10.00	\$ 320.00	1.33	
48	4" Dia. Type "W" White Buttons	EA	40	\$ 7.50	\$ 300.00	\$ 4.11	\$ 164.40	0.55	\$ 10.00	\$ 400.00	1.33	
49	Type "1C" or "1A" Reflective Buttons	EA	2	\$ 15.00	\$ 30.00	\$ 7.18	\$ 14.36	0.48	\$ 10.00	\$ 20.00	0.67	
50	Type "11AA" Reflective Buttons	EA	10	\$ 15.00	\$ 150.00	\$ 15.72	\$ 157.20	1.05	\$ 10.00	\$ 100.00	0.67	
TOTAL AMOUNT BID						\$ 1,257,364.00		871,739.43		\$ 910,920.00	0.72	

NUMBER OF CONSTRUCTION DAYS:

180 CONSECUTIVE CALENDAR DAYS

150 CONSECUTIVE CALENDAR DAYS

240 CALENDAR DAYS

BURGESS & NIPLE
Engineers ■ Planners



STARNES ROAD 16" WATER LINE BID TABULATION

Bids Opened
June 20, 2018
2:00 PM

					Engineer's Estimate		#3 Cidrax Texas, LLC			#4 Atkins Bros.		
ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	UNIT PRICE	COST	UNIT PRICE	AMOUNT	Ratio to Engineer	UNIT PRICE	AMOUNT	Ratio to Engineer	
1	Prepare and Restore Right-of-Way	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 12,019.80	\$ 12,019.80	0.24	\$ 10,000.00	\$ 10,000.00	0.20	
2	Remove Existing 16" Dia. Water Line	LF	126	\$ 50.00	\$ 6,300.00	\$ 42.00	\$ 5,292.00	0.84	\$ 20.00	\$ 2,520.00	0.40	
3	Remove Existing 12" Dia. Water Line	LF	20	\$ 10.00	\$ 200.00	\$ 35.00	\$ 700.00	3.50	\$ 20.00	\$ 400.00	2.00	
4	Remove Existing 8/6" Dia. Water Line	LF	150	\$ 10.00	\$ 1,500.00	\$ 20.00	\$ 3,000.00	2.00	\$ 10.00	\$ 1,500.00	1.00	
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ 120.00	\$ 394,080.00	\$ 78.00	\$ 256,152.00	0.65	\$ 91.00	\$ 298,844.00	0.76	
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	18	\$ 90.00	\$ 1,620.00	\$ 78.00	*\$ 1,404.00	0.87	\$ 90.00	\$ 1,620.00	1.00	
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ 72.00	\$ 29,520.00	\$ 72.00	\$ 29,520.00	1.00	\$ 85.00	\$ 34,850.00	1.18	
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ 70.00	\$ 2,310.00	\$ 68.00	\$ 2,244.00	0.97	\$ 80.00	\$ 2,640.00	1.14	
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ 1,000.00	\$ 50,000.00	\$ 275.00	\$ 13,750.00	0.28	\$ 410.00	\$ 20,500.00	0.41	
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ 225.00	\$ 13,500.00	\$ 150.00	\$ 9,000.00	0.67	\$ 460.00	\$ 27,600.00	2.04	
11	16" Gate Valve and Box	EA	6	\$ 8,800.00	\$ 52,800.00	\$ 15,000.00	\$ 90,000.00	1.70	\$ 13,000.00	\$ 78,000.00	1.48	
12	12" Gate Valve and Box	EA	2	\$ 2,900.00	\$ 5,800.00	\$ 3,600.00	\$ 7,200.00	1.24	\$ 3,000.00	\$ 6,000.00	1.03	
13	8" Gate Valve and Box	EA	9	\$ 1,600.00	\$ 14,400.00	\$ 2,500.00	\$ 22,500.00	1.56	\$ 1,500.00	\$ 13,500.00	0.94	
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftg, 6" Pipe	EA	6	\$ 6,500.00	\$ 39,000.00	\$ 8,250.00	\$ 49,500.00	1.27	\$ 3,300.00	\$ 19,800.00	0.51	
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ 5,000.00	\$ 25,000.00	\$ 5,300.00	\$ 26,500.00	1.06	\$ 3,000.00	\$ 15,000.00	0.60	
16	Ductile Iron Fittings	TONS	7.5	\$ 7,000.00	\$ 52,500.00	\$ 4,800.00	\$ 36,000.00	0.69	\$ 3,000.00	\$ 22,500.00	0.43	
17	2" Combination Air Release Valve & Vault with Offset	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 6,500.00	\$ 6,500.00	1.86	\$ 3,500.00	\$ 3,500.00	1.00	
18	Temporary 2" Blow Off /Sample point	EA	2	\$ 1,500.00	\$ 3,000.00	\$ 2,300.00	\$ 4,600.00	1.53	\$ 1,500.00	\$ 3,000.00	1.00	
19	Salvage Existing Fire Hydrant	EA	3	\$ 400.00	\$ 1,200.00	\$ 1,600.00	\$ 4,800.00	4.00	\$ 100.00	\$ 300.00	0.25	
20	Abandon Existing Water Valve	EA	15	\$ 200.00	\$ 3,000.00	\$ 450.00	\$ 6,750.00	2.25	\$ 50.00	\$ 750.00	0.25	
21	Connect to Existing 16" Water Line	EA	2	\$ 8,900.00	\$ 17,800.00	\$ 2,000.00	\$ 4,000.00	0.22	\$ 6,000.00	\$ 12,000.00	0.67	
22	Connect to Existing 12" Water Line	EA	3	\$ 4,300.00	\$ 12,900.00	\$ 1,800.00	\$ 5,400.00	0.42	\$ 5,000.00	\$ 15,000.00	1.16	
23	Connect to Existing 6/8" Water Line	EA	8	\$ 2,300.00	\$ 18,400.00	\$ 1,500.00	\$ 12,000.00	0.65	\$ 3,000.00	\$ 24,000.00	1.30	
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ 400.00	\$ 6,800.00	\$ 400.00	\$ 6,800.00	1.00	\$ 1,000.00	\$ 17,000.00	2.50	
25	Long Double Water Service	EA	13	\$ 1,000.00	\$ 13,000.00	\$ 2,000.00	\$ 26,000.00	2.00	\$ 1,500.00	\$ 19,500.00	1.50	
26	Short Double Water Service	EA	25	\$ 750.00	\$ 18,750.00	\$ 1,800.00	\$ 45,000.00	2.40	\$ 900.00	\$ 22,500.00	1.20	
27	Short Single Water Service	EA	3	\$ 700.00	\$ 2,100.00	\$ 1,450.00	\$ 4,350.00	2.07	\$ 700.00	\$ 2,100.00	1.00	
28	Water Service Transfer	EA	41	\$ 500.00	\$ 20,500.00	\$ 350.00	\$ 14,350.00	0.70	\$ 50.00	\$ 2,050.00	0.10	
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ 250.00	\$ 12,500.00	\$ 350.00	\$ 17,500.00	1.40	\$ 300.00	\$ 15,000.00	1.20	
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ 2,000.00	\$ 2,000.00	\$ 800.00	\$ 800.00	0.40	\$ 1,800.00	\$ 1,800.00	0.90	
31	Remove and Replace Existing Mono Curb	LF	163	\$ 5.00	\$ 815.00	\$ 32.50	\$ 5,297.50	6.50	\$ 60.00	\$ 9,780.00	12.00	
32	Remove and Replace Existing Concrete Sidewalk	SF	1,996	\$ 10.00	\$ 19,960.00	\$ 6.00	\$ 11,976.00	0.60	\$ 9.00	\$ 17,964.00	0.90	
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ 10.00	\$ 4,420.00	\$ 12.00	\$ 5,304.00	1.20	\$ 12.00	\$ 5,304.00	1.20	
34	Remove and Replace Existing Curb Ramps	EA	10	\$ 2,500.00	\$ 25,000.00	\$ 1,750.00	\$ 17,500.00	0.70	\$ 3,000.00	\$ 30,000.00	1.20	
35	Remove and Replace Existing Concrete Pavement	LF	3,467	\$ 50.00	\$ 173,350.00	\$ 30.00	\$ 104,010.00	0.60	\$ 31.00	\$ 107,477.00	0.62	
36	Temporary Pavement Replacement	LF	3,467	\$ 20.00	\$ 69,340.00	\$ 10.00	\$ 34,670.00	0.50	\$ 15.00	\$ 52,005.00	0.75	
37	Solid Sodding incl. 4" Thick Topsoil	SY	432	\$ 6.00	\$ 2,592.00	\$ 11.00	\$ 4,752.00	1.83	\$ 13.00	\$ 5,616.00	2.17	
38	Trench Safety	LF	3,292	\$ 1.00	\$ 3,292.00	\$ 1.10	\$ 3,621.20	1.10	\$ 1.00	\$ 3,292.00	1.00	
39	Traffic Control Plan and Implementation	LS	1	\$ 20,000.00	\$ 20,000.00	\$ 8,000.00	\$ 8,000.00	0.40	\$ 10,000.00	\$ 10,000.00	0.50	
40	Erosion Control Plan	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 8,000.00	\$ 8,000.00	3.20	\$ 5,000.00	\$ 5,000.00	2.00	
41	Project Signs	EA	2	\$ 750.00	\$ 1,500.00	\$ 450.00	\$ 900.00	0.60	\$ 500.00	\$ 1,000.00	0.67	
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	1.00	\$ 50,000.00	\$ 50,000.00	1.00	
43	24" Wide White Thermoplastic Stop Bar	LF	303	\$ 10.00	\$ 3,030.00	\$ 21.50	\$ 6,514.50	2.15	\$ 12.00	\$ 3,636.00	1.20	
44	12" Wide White Thermoplastic Cross Walk Bar	LF	1,213	\$ 5.00	\$ 6,065.00	\$ 11.00	\$ 13,343.00	2.20	\$ 10.00	\$ 12,130.00	2.00	
45	12" Wide White Thermoplastic School Zone Bar	LF	40	\$ 5.00	\$ 200.00	\$ 11.00	\$ 440.00	2.20	\$ 500.00	\$ 20,000.00	100.00	
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	2	\$ 300.00	\$ 600.00	\$ 400.00	\$ 800.00	1.33	\$ 500.00	\$ 1,000.00	1.67	
47	4" Dia. Type "Y" Yellow Buttons	EA	32	\$ 7.50	\$ 240.00	\$ 4.75	\$ 152.00	0.63	\$ 75.00	\$ 2,400.00	10.00	
48	4" Dia. Type "W" White Buttons	EA	40	\$ 7.50	\$ 300.00	\$ 4.75	\$ 190.00	0.63	\$ 70.00	\$ 2,800.00	9.33	
49	Type "1C" or "1A" Reflective Buttons	EA	2	\$ 15.00	\$ 30.00	\$ 6.50	\$ 13.00	0.43	\$ 100.00	\$ 200.00	6.67	
50	Type "11AA" Reflective Buttons	EA	10	\$ 15.00	\$ 150.00	\$ 6.50	\$ 65.00	0.43	\$ 10.00	\$ 100.00	0.67	
TOTAL AMOUNT BID					\$ 1,257,364.00		*\$ 999,180.00	0.79		1,033,478.00	0.82	

*BID CONTAINED A MATH ERROR (CORRECTED)

NUMBER OF CONSTRUCTION DAYS:

180 CONSECUTIVE CALENDAR DAYS

130 CONSECUTIVE CALENDAR DAYS

150 CONSECUTIVE CALENDAR DAYS

BURGESS & NIPL
Engineers ■ Planners



STARNES ROAD 16" WATER LINE BID TABULATION

Bids Opened
June 20, 2018
2:00 PM

				Engineer's Estimate		#5 Jackson Construction, Ltd.			#6 Wilson Contractor Services, LLC.		
ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	UNIT PRICE	COST	UNIT PRICE	AMOUNT	Ratio to Engineer	UNIT PRICE	AMOUNT	Ratio to Engineer
1	Prepare and Restore Right-of-Way	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 20,000.00	\$ 20,000.00	0.40	\$ 60,222.00	\$ 60,222.00	1.20
2	Remove Existing 16" Dia. Water Line	LF	126	\$ 50.00	\$ 6,300.00	\$ 21.00	\$ 2,646.00	0.42	\$ 119.05	\$ 15,000.30	2.38
3	Remove Existing 12" Dia. Water Line	LF	20	\$ 10.00	\$ 200.00	\$ 12.00	\$ 240.00	1.20	\$ 150.00	\$ 3,000.00	15.00
4	Remove Existing 8/6" Dia. Water Line	LF	150	\$ 10.00	\$ 1,500.00	\$ 10.00	\$ 1,500.00	1.00	\$ 70.00	\$ 10,500.00	7.00
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ 120.00	\$ 394,080.00	\$ 75.00	\$ 246,300.00	0.63	\$ 80.96	\$ 265,872.64	0.67
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	18	\$ 90.00	\$ 1,620.00	\$ 153.00	\$ 2,754.00	1.70	\$ 117.25	\$ 2,110.50	1.30
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ 72.00	\$ 29,520.00	\$ 69.00	\$ 28,290.00	0.96	\$ 67.21	\$ 27,556.10	0.93
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ 70.00	\$ 2,310.00	\$ 56.00	\$ 1,848.00	0.80	\$ 224.18	\$ 7,397.94	3.20
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ 1,000.00	\$ 50,000.00	\$ 530.00	\$ 26,500.00	0.53	\$ 456.00	\$ 22,800.00	0.46
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ 225.00	\$ 13,500.00	\$ 130.00	\$ 7,800.00	0.58	\$ 327.00	\$ 19,620.00	1.45
11	16" Gate Valve and Box	EA	6	\$ 8,800.00	\$ 52,800.00	\$ 6,700.00	\$ 40,200.00	0.76	\$ 7,150.00	\$ 42,900.00	0.81
12	12" Gate Valve and Box	EA	2	\$ 2,900.00	\$ 5,800.00	\$ 2,400.00	\$ 4,800.00	0.83	\$ 2,925.00	\$ 5,850.00	1.01
13	8" Gate Valve and Box	EA	9	\$ 1,600.00	\$ 14,400.00	\$ 1,300.00	\$ 11,700.00	0.81	\$ 1,525.00	\$ 13,725.00	0.95
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftg, 6" Pipe	EA	6	\$ 6,500.00	\$ 39,000.00	\$ 3,000.00	\$ 18,000.00	0.46	\$ 5,415.00	\$ 32,490.00	0.83
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ 5,000.00	\$ 25,000.00	\$ 5,000.00	\$ 25,000.00	1.00	\$ 3,485.00	\$ 17,425.00	0.70
16	Ductile Iron Fittings	TONS	7.5	\$ 7,000.00	\$ 52,500.00	\$ 6,500.00	\$ 48,750.00	0.93	\$ 5,840.00	\$ 43,800.00	0.83
17	2" Combination Air Release Valve & Vault with Offset	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 8,500.00	\$ 8,500.00	2.43	\$ 4,985.00	\$ 4,985.00	1.42
18	Temporary 2" Blow Off /Sample point	EA	2	\$ 1,500.00	\$ 3,000.00	\$ 600.00	\$ 1,200.00	0.40	\$ 2,380.00	\$ 4,760.00	1.59
19	Salvage Existing Fire Hydrant	EA	3	\$ 400.00	\$ 1,200.00	\$ 500.00	\$ 1,500.00	1.25	\$ 1,000.00	\$ 3,000.00	2.50
20	Abandon Existing Water Valve	EA	15	\$ 200.00	\$ 3,000.00	\$ 150.00	\$ 2,250.00	0.75	\$ 500.00	\$ 7,500.00	2.50
21	Connect to Existing 16" Water Line	EA	2	\$ 8,900.00	\$ 17,800.00	\$ 9,000.00	\$ 18,000.00	1.01	\$ 1,800.00	\$ 3,600.00	0.20
22	Connect to Existing 12" Water Line	EA	3	\$ 4,300.00	\$ 12,900.00	\$ 2,000.00	\$ 6,000.00	0.47	\$ 3,100.00	\$ 9,300.00	0.72
23	Connect to Existing 6/8" Water Line	EA	8	\$ 2,300.00	\$ 18,400.00	\$ 1,500.00	\$ 12,000.00	0.65	\$ 2,100.00	\$ 16,800.00	0.91
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ 400.00	\$ 6,800.00	\$ 500.00	\$ 8,500.00	1.25	\$ 500.00	\$ 8,500.00	1.25
25	Long Double Water Service	EA	13	\$ 1,000.00	\$ 13,000.00	\$ 2,500.00	\$ 32,500.00	2.50	\$ 1,500.00	\$ 19,500.00	1.50
26	Short Double Water Service	EA	25	\$ 750.00	\$ 18,750.00	\$ 1,700.00	\$ 42,500.00	2.27	\$ 1,250.00	\$ 31,250.00	1.67
27	Short Single Water Service	EA	3	\$ 700.00	\$ 2,100.00	\$ 1,600.00	\$ 4,800.00	2.29	\$ 950.00	\$ 2,850.00	1.36
28	Water Service Transfer	EA	41	\$ 500.00	\$ 20,500.00	\$ 400.00	\$ 16,400.00	0.80	\$ 175.00	\$ 7,175.00	0.35
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ 250.00	\$ 12,500.00	\$ 250.00	\$ 12,500.00	1.00	\$ 105.00	\$ 5,250.00	0.42
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ 2,000.00	\$ 2,000.00	\$ 950.00	\$ 950.00	0.48	\$ 1,700.00	\$ 1,700.00	0.85
31	Remove and Replace Existing Mono Curb	LF	163	\$ 5.00	\$ 815.00	\$ 50.00	\$ 8,150.00	10.00	\$ 35.00	\$ 5,705.00	7.00
32	Remove and Replace Existing Concrete Sidewalk	SF	1,996	\$ 10.00	\$ 19,960.00	\$ 9.00	\$ 17,964.00	0.90	\$ 12.10	\$ 24,151.60	1.21
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ 10.00	\$ 4,420.00	\$ 11.00	\$ 4,862.00	1.10	\$ 15.26	\$ 6,744.92	1.53
34	Remove and Replace Existing Curb Ramps	EA	10	\$ 2,500.00	\$ 25,000.00	\$ 1,500.00	\$ 15,000.00	0.60	\$ 1,650.00	\$ 16,500.00	0.66
35	Remove and Replace Existing Concrete Pavement	LF	3,467	\$ 50.00	\$ 173,350.00	\$ 70.00	\$ 242,690.00	1.40	\$ 58.00	\$ 201,086.00	1.16
36	Temporary Pavement Replacement	LF	3,467	\$ 20.00	\$ 69,340.00	\$ 14.00	\$ 48,538.00	0.70	\$ 8.40	\$ 29,122.80	0.42
37	Solid Sodding incl. 4" Thick Topsoil	SY	432	\$ 6.00	\$ 2,592.00	\$ 12.00	\$ 5,184.00	2.00	\$ 10.20	\$ 4,406.40	1.70
38	Trench Safety	LF	3,292	\$ 1.00	\$ 3,292.00	\$ 1.00	\$ 3,292.00	1.00	\$ 0.75	\$ 2,469.00	0.75
39	Traffic Control Plan and Implementation	LS	1	\$ 20,000.00	\$ 20,000.00	\$ 12,000.00	\$ 12,000.00	0.60	\$ 1,900.00	\$ 1,900.00	0.10
40	Erosion Control Plan	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 3,000.00	\$ 3,000.00	1.20	\$ 5,825.00	\$ 5,825.00	2.33
41	Project Signs	EA	2	\$ 750.00	\$ 1,500.00	\$ 400.00	\$ 800.00	0.53	\$ 700.00	\$ 1,400.00	0.93
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	1.00	\$ 50,000.00	\$ 50,000.00	1.00
43	24" Wide White Thermoplastic Stop Bar	LF	303	\$ 10.00	\$ 3,030.00	\$ 6.00	\$ 1,818.00	0.60	\$ -	\$ -	0.00
44	12" Wide White Thermoplastic Cross Walk Bar	LF	1,213	\$ 5.00	\$ 6,065.00	\$ 4.00	\$ 4,852.00	0.80	\$ -	\$ -	0.00
45	12" Wide White Thermoplastic School Zone Bar	LF	40	\$ 5.00	\$ 200.00	\$ 4.00	\$ 160.00	0.80	\$ -	\$ -	0.00
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	2	\$ 300.00	\$ 600.00	\$ 200.00	\$ 400.00	0.67	\$ -	\$ -	0.00
47	4" Dia. Type "Y" Yellow Buttons	EA	32	\$ 7.50	\$ 240.00	\$ 4.00	\$ 128.00	0.53	\$ -	\$ -	0.00
48	4" Dia. Type "W" White Buttons	EA	40	\$ 7.50	\$ 300.00	\$ 4.00	\$ 160.00	0.53	\$ -	\$ -	0.00
49	Type "1C" or "1A" Reflective Buttons	EA	2	\$ 15.00	\$ 30.00	\$ 4.00	\$ 8.00	0.27	\$ -	\$ -	0.00
50	Type "11AA" Reflective Buttons	EA	10	\$ 15.00	\$ 150.00	\$ 4.00	\$ 40.00	0.27	\$ -	\$ -	0.00
	TOTAL AMOUNT BID				\$ 1,257,364.00		1,072,974.00	0.85			0.00

ERROR - INCOMPLETE BID
180 CONSECUTIVE CALENDAR DAYS
180 CALENDAR DAYS
135 CALENDAR DAYS

NUMBER OF CONSTRUCTION DAYS:

180 CONSECUTIVE CALENDAR DAYS

180 CALENDAR DAYS

135 CALENDAR DAYS

BURGESS & NIPL
Engineers ■ Planners



STARNES ROAD 16" WATER LINE BID TABULATION

Bids Opened
June 20, 2018
2:00 PM

ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	Engineer's Estimate		#7 Canary Construction			#8 Woody Contractors, Inc.		
				UNIT PRICE	COST	UNIT PRICE	AMOUNT	Ratio to Engineer	UNIT PRICE	AMOUNT	Ratio to Engineer
1	Prepare and Restore Right-of-Way	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 45,000.00	\$ 45,000.00	0.90	\$ 31,495.00	\$ 31,495.00	0.63
2	Remove Existing 16" Dia. Water Line	LF	126	\$ 50.00	\$ 6,300.00	\$ 25.00	\$ 3,150.00	0.50	\$ 2.00	\$ 252.00	0.04
3	Remove Existing 12" Dia. Water Line	LF	20	\$ 10.00	\$ 200.00	\$ 25.00	\$ 500.00	2.50	\$ 2.00	\$ 40.00	0.20
4	Remove Existing 8/6" Dia. Water Line	LF	150	\$ 10.00	\$ 1,500.00	\$ 25.00	\$ 3,750.00	2.50	\$ 2.00	\$ 300.00	0.20
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ 120.00	\$ 394,080.00	\$ 85.00	\$ 279,140.00	0.71	\$ 88.00	\$ 288,992.00	0.73
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	18	\$ 90.00	\$ 1,620.00	\$ 80.00	\$ 1,440.00	0.89	\$ 75.00	\$ 1,350.00	0.83
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ 72.00	\$ 29,520.00	\$ 75.00	\$ 30,750.00	1.04	\$ 58.00	\$ 23,780.00	0.81
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ 70.00	\$ 2,310.00	\$ 70.00	\$ 2,310.00	1.00	\$ 55.00	\$ 1,815.00	0.79
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ 1,000.00	\$ 50,000.00	\$ 320.00	\$ 16,000.00	0.32	\$ 385.00	\$ 19,250.00	0.39
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ 225.00	\$ 13,500.00	\$ 240.00	\$ 14,400.00	1.07	\$ 110.00	\$ 6,600.00	0.49
11	16" Gate Valve and Box	EA	6	\$ 8,800.00	\$ 52,800.00	\$ 7,000.00	\$ 42,000.00	0.80	\$ 7,100.00	\$ 42,600.00	0.81
12	12" Gate Valve and Box	EA	2	\$ 2,900.00	\$ 5,800.00	\$ 2,500.00	\$ 5,000.00	0.86	\$ 2,300.00	\$ 4,600.00	0.79
13	8" Gate Valve and Box	EA	9	\$ 1,600.00	\$ 14,400.00	\$ 1,550.00	\$ 13,950.00	0.97	\$ 1,300.00	\$ 11,700.00	0.81
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftg, 6" Pipe	EA	6	\$ 6,500.00	\$ 39,000.00	\$ 8,000.00	\$ 48,000.00	1.23	\$ 6,600.00	\$ 39,600.00	1.02
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ 5,000.00	\$ 25,000.00	\$ 4,500.00	\$ 22,500.00	0.90	\$ 5,600.00	\$ 28,000.00	1.12
16	Ductile Iron Fittings	TONS	7.5	\$ 7,000.00	\$ 52,500.00	\$ 8,000.00	\$ 60,000.00	1.14	\$ 6,000.00	\$ 45,000.00	0.86
17	2" Combination Air Release Valve & Vault with Offset	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 4,500.00	\$ 4,500.00	1.29	\$ 9,750.00	\$ 9,750.00	2.79
18	Temporary 2" Blow Off /Sample point	EA	2	\$ 1,500.00	\$ 3,000.00	\$ 3,000.00	\$ 6,000.00	2.00	\$ 1,800.00	\$ 3,600.00	1.20
19	Salvage Existing Fire Hydrant	EA	3	\$ 400.00	\$ 1,200.00	\$ 500.00	\$ 1,500.00	1.25	\$ 300.00	\$ 900.00	0.75
20	Abandon Existing Water Valve	EA	15	\$ 200.00	\$ 3,000.00	\$ 450.00	\$ 6,750.00	2.25	\$ 100.00	\$ 1,500.00	0.50
21	Connect to Existing 16" Water Line	EA	2	\$ 8,900.00	\$ 17,800.00	\$ 950.00	\$ 1,900.00	0.11	\$ 10,100.00	\$ 20,200.00	1.13
22	Connect to Existing 12" Water Line	EA	3	\$ 4,300.00	\$ 12,900.00	\$ 900.00	\$ 2,700.00	0.21	\$ 5,075.00	\$ 15,225.00	1.18
23	Connect to Existing 6/8" Water Line	EA	8	\$ 2,300.00	\$ 18,400.00	\$ 850.00	\$ 6,800.00	0.37	\$ 2,450.00	\$ 19,600.00	1.07
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ 400.00	\$ 6,800.00	\$ 520.00	\$ 8,840.00	1.30	\$ 100.00	\$ 1,700.00	0.25
25	Long Double Water Service	EA	13	\$ 1,000.00	\$ 13,000.00	\$ 1,700.00	\$ 22,100.00	1.70	\$ 2,350.00	\$ 30,550.00	2.35
26	Short Double Water Service	EA	25	\$ 750.00	\$ 18,750.00	\$ 1,500.00	\$ 37,500.00	2.00	\$ 1,790.00	\$ 44,750.00	2.39
27	Short Single Water Service	EA	3	\$ 700.00	\$ 2,100.00	\$ 900.00	\$ 2,700.00	1.29	\$ 1,380.00	\$ 4,140.00	1.97
28	Water Service Transfer	EA	41	\$ 500.00	\$ 20,500.00	\$ 300.00	\$ 12,300.00	0.60	\$ 425.00	\$ 17,425.00	0.85
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ 250.00	\$ 12,500.00	\$ 200.00	\$ 10,000.00	0.80	\$ 180.00	\$ 9,000.00	0.72
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	1.00	\$ 2,050.00	\$ 2,050.00	1.03
31	Remove and Replace Existing Mono Curb	LF	163	\$ 5.00	\$ 815.00	\$ 55.00	\$ 8,965.00	11.00	\$ 39.50	\$ 6,438.50	7.90
32	Remove and Replace Existing Concrete Sidewalk	SF	1,996	\$ 10.00	\$ 19,960.00	\$ 7.00	\$ 13,972.00	0.70	\$ 6.25	\$ 12,475.00	0.63
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ 10.00	\$ 4,420.00	\$ 9.00	\$ 3,978.00	0.90	\$ 10.25	\$ 4,530.50	1.03
34	Remove and Replace Existing Curb Ramps	EA	10	\$ 2,500.00	\$ 25,000.00	\$ 1,500.00	\$ 15,000.00	0.60	\$ 2,350.00	\$ 23,500.00	0.94
35	Remove and Replace Existing Concrete Pavement	LF	3,467	\$ 50.00	\$ 173,350.00	\$ 60.00	\$ 208,020.00	1.20	\$ 70.00	\$ 242,690.00	1.40
36	Temporary Pavement Replacement	LF	3,467	\$ 20.00	\$ 69,340.00	\$ 5.00	\$ 17,335.00	0.25	\$ 7.50	\$ 26,002.50	0.38
37	Solid Sodding incl. 4" Thick Topsoil	SY	432	\$ 6.00	\$ 2,592.00	\$ 8.00	\$ 3,456.00	1.33	\$ 5.00	\$ 2,160.00	0.83
38	Trench Safety	LF	3,292	\$ 1.00	\$ 3,292.00	\$ 1.00	\$ 3,292.00	1.00	\$ 1.00	\$ 3,292.00	1.00
39	Traffic Control Plan and Implementation	LS	1	\$ 20,000.00	\$ 20,000.00	\$ 3,900.00	\$ 3,900.00	0.20	\$ 15,000.00	\$ 15,000.00	0.75
40	Erosion Control Plan	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 2,600.00	\$ 2,600.00	1.04	\$ 2,000.00	\$ 2,000.00	0.80
41	Project Signs	EA	2	\$ 750.00	\$ 1,500.00	\$ 650.00	\$ 1,300.00	0.87	\$ 500.00	\$ 1,000.00	0.67
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	1.00	\$ 50,000.00	\$ 50,000.00	1.00
43	24" Wide White Thermoplastic Stop Bar	LF	303	\$ 10.00	\$ 3,030.00	\$ 50.00	\$ 15,150.00	5.00	\$ 6.00	\$ 1,818.00	0.60
44	12" Wide White Thermoplastic Cross Walk Bar	LF	1,213	\$ 5.00	\$ 6,065.00	\$ 25.00	\$ 30,325.00	5.00	\$ 4.00	\$ 4,852.00	0.80
45	12" Wide White Thermoplastic School Zone Bar	LF	40	\$ 5.00	\$ 200.00	\$ 25.00	\$ 1,000.00	5.00	\$ 4.00	\$ 160.00	0.80
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	2	\$ 300.00	\$ 600.00	\$ 350.00	\$ 700.00	1.17	\$ 175.00	\$ 350.00	0.58
47	4" Dia. Type "Y" Yellow Buttons	EA	32	\$ 7.50	\$ 240.00	\$ 25.00	\$ 800.00	3.33	\$ 4.00	\$ 128.00	0.53
48	4" Dia. Type "W" White Buttons	EA	40	\$ 7.50	\$ 300.00	\$ 25.00	\$ 1,000.00	3.33	\$ 4.00	\$ 160.00	0.53
49	Type "1C" or "1A" Reflective Buttons	EA	2	\$ 15.00	\$ 30.00	\$ 25.00	\$ 50.00	1.67	\$ 4.00	\$ 8.00	0.27
50	Type "11AA" Reflective Buttons	EA	10	\$ 15.00	\$ 150.00	\$ 25.00	\$ 250.00	1.67	\$ 4.00	\$ 40.00	0.27
TOTAL AMOUNT BID					\$ 1,257,364.00		1,094,573.00	0.87		1,122,368.50	0.89

NUMBER OF CONSTRUCTION DAYS:

180 CONSECUTIVE CALENDAR DAYS

250 CONSECUTIVE CALENDAR DAYS

210 CONSECUTIVE CALENDAR DAYS

BURGESS & NIPLE
Engineers ■ Planners



STARNES ROAD 16" WATER LINE BID TABULATION

Bids Opened
June 20, 2018
2:00 PM

				Engineer's Estimate		#9 Gomez Brothers Construction, Inc.			#10 Gra-Tex Utilities, Inc.		
ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	UNIT PRICE	COST	UNIT PRICE	AMOUNT	Ratio to Engineer	UNIT PRICE	AMOUNT	Ratio to Engineer
1	Prepare and Restore Right-of-Way	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 6,000.00	\$ 6,000.00	0.12	\$ 30,000.00	\$ 30,000.00	0.60
2	Remove Existing 16" Dia. Water Line	LF	126	\$ 50.00	\$ 6,300.00	\$ 35.00	\$ 4,410.00	0.70	\$ 25.00	\$ 3,150.00	0.50
3	Remove Existing 12" Dia. Water Line	LF	20	\$ 10.00	\$ 200.00	\$ 25.00	\$ 500.00	2.50	\$ 25.00	\$ 500.00	2.50
4	Remove Existing 8/6" Dia. Water Line	LF	150	\$ 10.00	\$ 1,500.00	\$ 20.00	\$ 3,000.00	2.00	\$ 25.00	\$ 3,750.00	2.50
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ 120.00	\$ 394,080.00	\$ 130.00	\$ 426,920.00	1.08	\$ 75.00	\$ 246,300.00	0.63
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	18	\$ 90.00	\$ 1,620.00	\$ 120.00	\$ 2,160.00	1.33	\$ 70.00	\$ 1,260.00	0.78
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ 72.00	\$ 29,520.00	\$ 50.00	\$ 20,500.00	0.69	\$ 60.00	\$ 24,600.00	0.83
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ 70.00	\$ 2,310.00	\$ 50.00	\$ 1,650.00	0.71	\$ 60.00	\$ 1,980.00	0.86
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ 1,000.00	\$ 50,000.00	\$ 500.00	\$ 25,000.00	0.50	\$ 425.00	\$ 21,250.00	0.43
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ 225.00	\$ 13,500.00	\$ 400.00	\$ 24,000.00	1.78	\$ 120.00	\$ 7,200.00	0.53
11	16" Gate Valve and Box	EA	6	\$ 8,800.00	\$ 52,800.00	\$ 10,000.00	\$ 60,000.00	1.14	\$ 6,350.00	\$ 38,100.00	0.72
12	12" Gate Valve and Box	EA	2	\$ 2,900.00	\$ 5,800.00	\$ 2,500.00	\$ 5,000.00	0.86	\$ 2,300.00	\$ 4,600.00	0.79
13	8" Gate Valve and Box	EA	9	\$ 1,600.00	\$ 14,400.00	\$ 1,300.00	\$ 11,700.00	0.81	\$ 1,300.00	\$ 11,700.00	0.81
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftg, 6" Pipe	EA	6	\$ 6,500.00	\$ 39,000.00	\$ 5,000.00	\$ 30,000.00	0.77	\$ 3,450.00	\$ 20,700.00	0.53
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ 5,000.00	\$ 25,000.00	\$ 4,500.00	\$ 22,500.00	0.90	\$ 5,600.00	\$ 28,000.00	1.12
16	Ductile Iron Fittings	TONS	7.5	\$ 7,000.00	\$ 52,500.00	\$ 4,000.00	\$ 30,000.00	0.57	\$ 5,050.00	\$ 37,875.00	0.72
17	2" Combination Air Release Valve & Vault with Offset	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 9,000.00	\$ 9,000.00	2.57	\$ 5,900.00	\$ 5,900.00	1.69
18	Temporary 2" Blow Off /Sample point	EA	2	\$ 1,500.00	\$ 3,000.00	\$ 2,500.00	\$ 5,000.00	1.67	\$ 3,700.00	\$ 7,400.00	2.47
19	Salvage Existing Fire Hydrant	EA	3	\$ 400.00	\$ 1,200.00	\$ 250.00	\$ 750.00	0.63	\$ 250.00	\$ 750.00	0.63
20	Abandon Existing Water Valve	EA	15	\$ 200.00	\$ 3,000.00	\$ 50.00	\$ 750.00	0.25	\$ 500.00	\$ 7,500.00	2.50
21	Connect to Existing 16" Water Line	EA	2	\$ 8,900.00	\$ 17,800.00	\$ 4,500.00	\$ 9,000.00	0.51	\$ 5,250.00	\$ 10,500.00	0.59
22	Connect to Existing 12" Water Line	EA	3	\$ 4,300.00	\$ 12,900.00	\$ 2,000.00	\$ 6,000.00	0.47	\$ 3,400.00	\$ 10,200.00	0.79
23	Connect to Existing 6/8" Water Line	EA	8	\$ 2,300.00	\$ 18,400.00	\$ 1,800.00	\$ 14,400.00	0.78	\$ 2,750.00	\$ 22,000.00	1.20
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ 400.00	\$ 6,800.00	\$ 500.00	\$ 8,500.00	1.25	\$ 1,900.00	\$ 32,300.00	4.75
25	Long Double Water Service	EA	13	\$ 1,000.00	\$ 13,000.00	\$ 1,600.00	\$ 20,800.00	1.60	\$ 2,350.00	\$ 30,550.00	2.35
26	Short Double Water Service	EA	25	\$ 750.00	\$ 18,750.00	\$ 1,100.00	\$ 27,500.00	1.47	\$ 1,850.00	\$ 46,250.00	2.47
27	Short Single Water Service	EA	3	\$ 700.00	\$ 2,100.00	\$ 1,000.00	\$ 3,000.00	1.43	\$ 2,100.00	\$ 6,300.00	3.00
28	Water Service Transfer	EA	41	\$ 500.00	\$ 20,500.00	\$ 100.00	\$ 4,100.00	0.20	\$ 85.00	\$ 3,485.00	0.17
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ 250.00	\$ 12,500.00	\$ 1,000.00	\$ 50,000.00	4.00	\$ 110.00	\$ 5,500.00	0.44
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ 2,000.00	\$ 2,000.00	\$ 2,200.00	\$ 2,200.00	1.10	\$ 2,500.00	\$ 2,500.00	1.25
31	Remove and Replace Existing Mono Curb	LF	163	\$ 5.00	\$ 815.00	\$ 30.00	\$ 4,890.00	6.00	\$ 40.00	\$ 6,520.00	8.00
32	Remove and Replace Existing Concrete Sidewalk	SF	1,996	\$ 10.00	\$ 19,960.00	\$ 4.50	\$ 8,982.00	0.45	\$ 6.00	\$ 11,976.00	0.60
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ 10.00	\$ 4,420.00	\$ 6.50	\$ 2,873.00	0.65	\$ 7.00	\$ 3,094.00	0.70
34	Remove and Replace Existing Curb Ramps	EA	10	\$ 2,500.00	\$ 25,000.00	\$ 2,500.00	\$ 25,000.00	1.00	\$ 1,250.00	\$ 12,500.00	0.50
35	Remove and Replace Existing Concrete Pavement	LF	3,467	\$ 50.00	\$ 173,350.00	\$ 30.00	\$ 104,010.00	0.60	\$ 82.00	\$ 284,294.00	1.64
36	Temporary Pavement Replacement	LF	3,467	\$ 20.00	\$ 69,340.00	\$ 15.00	\$ 52,005.00	0.75	\$ 22.50	\$ 78,007.50	1.13
37	Solid Sodding incl. 4" Thick Topsoil	SY	432	\$ 6.00	\$ 2,592.00	\$ 8.50	\$ 3,672.00	1.42	\$ 15.00	\$ 6,480.00	2.50
38	Trench Safety	LF	3,292	\$ 1.00	\$ 3,292.00	\$ 1.00	\$ 3,292.00	1.00	\$ 2.00	\$ 6,584.00	2.00
39	Traffic Control Plan and Implementation	LS	1	\$ 20,000.00	\$ 20,000.00	\$ 9,000.00	\$ 9,000.00	0.45	\$ 25,000.00	\$ 25,000.00	1.25
40	Erosion Control Plan	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 4,000.00	\$ 4,000.00	1.60	\$ 2,500.00	\$ 2,500.00	1.00
41	Project Signs	EA	2	\$ 750.00	\$ 1,500.00	\$ 1,000.00	\$ 2,000.00	1.33	\$ 750.00	\$ 1,500.00	1.00
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	1.00	\$ 50,000.00	\$ 50,000.00	1.00
43	24" Wide White Thermoplastic Stop Bar	LF	303	\$ 10.00	\$ 3,030.00	\$ 25.00	\$ 7,575.00	2.50	\$ 17.00	\$ 5,151.00	1.70
44	12" Wide White Thermoplastic Cross Walk Bar	LF	1,213	\$ 5.00	\$ 6,065.00	\$ 12.00	\$ 14,556.00	2.40	\$ 10.00	\$ 12,130.00	2.00
45	12" Wide White Thermoplastic School Zone Bar	LF	40	\$ 5.00	\$ 200.00	\$ 20.00	\$ 800.00	4.00	\$ 10.00	\$ 400.00	2.00
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	2	\$ 300.00	\$ 600.00	\$ 600.00	\$ 1,200.00	2.00	\$ 300.00	\$ 600.00	1.00
47	4" Dia. Type "Y" Yellow Buttons	EA	32	\$ 7.50	\$ 240.00	\$ 25.00	\$ 800.00	3.33	\$ 5.00	\$ 160.00	0.67
48	4" Dia. Type "W" White Buttons	EA	40	\$ 7.50	\$ 300.00	\$ 25.00	\$ 1,000.00	3.33	\$ 5.00	\$ 200.00	0.67
49	Type "1C" or "1A" Reflective Buttons	EA	2	\$ 15.00	\$ 30.00	\$ 40.00	\$ 80.00	2.67	\$ 6.00	\$ 12.00	0.40
50	Type "11AA" Reflective Buttons	EA	10	\$ 15.00	\$ 150.00	\$ 40.00	\$ 400.00	2.67	\$ 6.00	\$ 60.00	0.40
TOTAL AMOUNT BID					\$ 1,257,364.00		1,130,475.00	0.90		1,179,268.50	0.94

NUMBER OF CONSTRUCTION DAYS:

180 CONSECUTIVE CALENDAR DAYS

145 CONSECUTIVE CALENDAR DAYS

270 CONSECUTIVE CALENDAR DAYS

BURGESS & NIPLE
Engineers ■ Planners



STARNES ROAD 16" WATER LINE BID TABULATION

Bids Opened
June 20, 2018
2:00 PM

				Engineer's Estimate		#11 ANA Site Construction, LLC.			#12 KIK Underground, LLC.		
ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	UNIT PRICE	COST	UNIT PRICE	AMOUNT	Ratio to Engineer	UNIT PRICE	AMOUNT	Ratio to Engineer
1	Prepare and Restore Right-of-Way	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,515.00	\$ 50,515.00	1.01	\$ 20,000.00	\$ 20,000.00	0.40
2	Remove Existing 16" Dia. Water Line	LF	126	\$ 50.00	\$ 6,300.00	\$ 45.00	\$ 5,670.00	0.90	\$ 16.00	\$ 2,016.00	0.32
3	Remove Existing 12" Dia. Water Line	LF	20	\$ 10.00	\$ 200.00	\$ 120.00	\$ 2,400.00	12.00	\$ 12.00	\$ 240.00	1.20
4	Remove Existing 8/6" Dia. Water Line	LF	150	\$ 10.00	\$ 1,500.00	\$ 35.00	\$ 5,250.00	3.50	\$ 10.00	\$ 1,500.00	1.00
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ 120.00	\$ 394,080.00	\$ 87.00	\$ 285,708.00	0.73	\$ 108.00	\$ 354,672.00	0.90
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	18	\$ 90.00	\$ 1,620.00	\$ 90.00	\$ 1,620.00	1.00	\$ 90.00	\$ 1,620.00	1.00
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ 72.00	\$ 29,520.00	\$ 47.00	\$ 19,270.00	0.65	\$ 75.00	\$ 30,750.00	1.04
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ 70.00	\$ 2,310.00	\$ 80.00	\$ 2,640.00	1.14	\$ 75.00	\$ 2,475.00	1.07
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ 1,000.00	\$ 50,000.00	\$ 488.00	\$ 24,400.00	0.49	\$ 120.00	\$ 6,000.00	0.12
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ 225.00	\$ 13,500.00	\$ 405.00	\$ 24,300.00	1.80	\$ 245.00	\$ 14,700.00	1.09
11	16" Gate Valve and Box	EA	6	\$ 8,800.00	\$ 52,800.00	\$ 8,150.00	\$ 48,900.00	0.93	\$ 6,350.00	\$ 38,100.00	0.72
12	12" Gate Valve and Box	EA	2	\$ 2,900.00	\$ 5,800.00	\$ 3,575.00	\$ 7,150.00	1.23	\$ 2,400.00	\$ 4,800.00	0.83
13	8" Gate Valve and Box	EA	9	\$ 1,600.00	\$ 14,400.00	\$ 2,320.00	\$ 20,880.00	1.45	\$ 1,300.00	\$ 11,700.00	0.81
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftg, 6" Pipe	EA	6	\$ 6,500.00	\$ 39,000.00	\$ 7,010.00	\$ 42,060.00	1.08	\$ 6,500.00	\$ 39,000.00	1.00
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ 5,000.00	\$ 25,000.00	\$ 5,295.00	\$ 26,475.00	1.06	\$ 4,200.00	\$ 21,000.00	0.84
16	Ductile Iron Fittings	TONS	7.5	\$ 7,000.00	\$ 52,500.00	\$ 5,270.00	\$ 39,525.00	0.75	\$ 5,600.00	\$ 42,000.00	0.80
17	2" Combination Air Release Valve & Vault with Offset	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 5,930.00	\$ 5,930.00	1.69	\$ 4,550.00	\$ 4,550.00	1.30
18	Temporary 2" Blow Off /Sample point	EA	2	\$ 1,500.00	\$ 3,000.00	\$ 3,430.00	\$ 6,860.00	2.29	\$ 1,735.00	\$ 3,470.00	1.16
19	Salvage Existing Fire Hydrant	EA	3	\$ 400.00	\$ 1,200.00	\$ 885.00	\$ 2,655.00	2.21	\$ 300.00	\$ 900.00	0.75
20	Abandon Existing Water Valve	EA	15	\$ 200.00	\$ 3,000.00	\$ 530.00	\$ 7,950.00	2.65	\$ 150.00	\$ 2,250.00	0.75
21	Connect to Existing 16" Water Line	EA	2	\$ 8,900.00	\$ 17,800.00	\$ 4,945.00	\$ 9,890.00	0.56	\$ 11,500.00	\$ 23,000.00	1.29
22	Connect to Existing 12" Water Line	EA	3	\$ 4,300.00	\$ 12,900.00	\$ 3,200.00	\$ 9,600.00	0.74	\$ 3,000.00	\$ 9,000.00	0.70
23	Connect to Existing 6/8" Water Line	EA	8	\$ 2,300.00	\$ 18,400.00	\$ 1,655.00	\$ 13,240.00	0.72	\$ 2,000.00	\$ 16,000.00	0.87
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ 400.00	\$ 6,800.00	\$ 1,065.00	\$ 18,105.00	2.66	\$ 400.00	\$ 6,800.00	1.00
25	Long Double Water Service	EA	13	\$ 1,000.00	\$ 13,000.00	\$ 3,140.00	\$ 40,820.00	3.14	\$ 1,300.00	\$ 16,900.00	1.30
26	Short Double Water Service	EA	25	\$ 750.00	\$ 18,750.00	\$ 1,945.00	\$ 48,625.00	2.59	\$ 1,232.00	\$ 30,800.00	1.64
27	Short Single Water Service	EA	3	\$ 700.00	\$ 2,100.00	\$ 1,720.00	\$ 5,160.00	2.46	\$ 915.00	\$ 2,745.00	1.31
28	Water Service Transfer	EA	41	\$ 500.00	\$ 20,500.00	\$ 340.00	\$ 13,940.00	0.68	\$ 500.00	\$ 20,500.00	1.00
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ 250.00	\$ 12,500.00	\$ 1,105.00	\$ 55,250.00	4.42	\$ 625.00	\$ 31,250.00	2.50
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ 2,000.00	\$ 2,000.00	\$ 6,250.00	\$ 6,250.00	3.13	\$ 900.00	\$ 900.00	0.45
31	Remove and Replace Existing Mono Curb	LF	163	\$ 5.00	\$ 815.00	\$ 51.00	\$ 8,313.00	10.20	\$ 15.00	\$ 2,445.00	3.00
32	Remove and Replace Existing Concrete Sidewalk	SF	1,996	\$ 10.00	\$ 19,960.00	\$ 9.00	\$ 17,964.00	0.90	\$ 6.55	\$ 13,073.80	0.66
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ 10.00	\$ 4,420.00	\$ 16.00	\$ 7,072.00	1.60	\$ 8.00	\$ 3,536.00	0.80
34	Remove and Replace Existing Curb Ramps	EA	10	\$ 2,500.00	\$ 25,000.00	\$ 1,310.00	\$ 13,100.00	0.52	\$ 2,000.00	\$ 20,000.00	0.80
35	Remove and Replace Existing Concrete Pavement	LF	3,467	\$ 50.00	\$ 173,350.00	\$ 36.75	\$ 127,412.25	0.74	\$ 68.00	\$ 235,756.00	1.36
36	Temporary Pavement Replacement	LF	3,467	\$ 20.00	\$ 69,340.00	\$ 14.00	\$ 48,538.00	0.70	\$ 20.00	\$ 69,340.00	1.00
37	Solid Sodding incl. 4" Thick Topsoil	SY	432	\$ 6.00	\$ 2,592.00	\$ 15.00	\$ 6,480.00	2.50	\$ 12.00	\$ 5,184.00	2.00
38	Trench Safety	LF	3,292	\$ 1.00	\$ 3,292.00	\$ 2.00	\$ 6,584.00	2.00	\$ 1.00	\$ 3,292.00	1.00
39	Traffic Control Plan and Implementation	LS	1	\$ 20,000.00	\$ 20,000.00	\$ 19,000.00	\$ 19,000.00	0.95	\$ 6,200.00	\$ 6,200.00	0.31
40	Erosion Control Plan	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 14,000.00	\$ 14,000.00	5.60	\$ 1,200.00	\$ 1,200.00	0.48
41	Project Signs	EA	2	\$ 750.00	\$ 1,500.00	\$ 1,400.00	\$ 2,800.00	1.87	\$ 650.00	\$ 1,300.00	0.87
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	1.00	\$ 50,000.00	\$ 50,000.00	1.00
43	24" Wide White Thermoplastic Stop Bar	LF	303	\$ 10.00	\$ 3,030.00	\$ 11.00	\$ 3,333.00	1.10	\$ 8.00	\$ 2,424.00	0.80
44	12" Wide White Thermoplastic Cross Walk Bar	LF	1,213	\$ 5.00	\$ 6,065.00	\$ 6.00	\$ 7,278.00	1.20	\$ 8.00	\$ 9,704.00	1.60
45	12" Wide White Thermoplastic School Zone Bar	LF	40	\$ 5.00	\$ 200.00	\$ 6.00	\$ 240.00	1.20	\$ 8.00	\$ 320.00	1.60
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	2	\$ 300.00	\$ 600.00	\$ 275.00	\$ 550.00	0.92	\$ 250.00	\$ 500.00	0.83
47	4" Dia. Type "Y" Yellow Buttons	EA	32	\$ 7.50	\$ 240.00	\$ 6.00	\$ 192.00	0.80	\$ 4.50	\$ 144.00	0.60
48	4" Dia. Type "W" White Buttons	EA	40	\$ 7.50	\$ 300.00	\$ 6.00	\$ 240.00	0.80	\$ 4.50	\$ 180.00	0.60
49	Type "1C" or "1A" Reflective Buttons	EA	2	\$ 15.00	\$ 30.00	\$ 6.00	\$ 12.00	0.40	\$ 4.50	\$ 9.00	0.30
50	Type "11AA" Reflective Buttons	EA	10	\$ 15.00	\$ 150.00	\$ 6.00	\$ 60.00	0.40	\$ 4.50	\$ 45.00	0.30
TOTAL AMOUNT BID					\$ 1,257,364.00		1,184,206.25	0.94		1,184,290.80	0.94

NUMBER OF CONSTRUCTION DAYS:

180 CONSECUTIVE CALENDAR DAYS

210 CALENDAR DAYS

150 CONSECUTIVE CALENDAR DAYS

BURGESS & NIPL
Engineers ■ Planners



STARNES ROAD 16" WATER LINE BID TABULATION

Bids Opened
June 20, 2018
2:00 PM

				Engineer's Estimate		#13 SYB Construction Company, Inc.			#14 Muniz Construction, Inc.		
ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	UNIT PRICE	COST	UNIT PRICE	AMOUNT	Ratio to Engineer	UNIT PRICE	AMOUNT	Ratio to Engineer
1	Prepare and Restore Right-of-Way	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 6,576.00	\$ 6,576.00	0.13	\$ 7,000.00	\$ 7,000.00	0.14
2	Remove Existing 16" Dia. Water Line	LF	126	\$ 50.00	\$ 6,300.00	\$ 25.00	\$ 3,150.00	0.50	\$ 55.00	\$ 6,930.00	1.10
3	Remove Existing 12" Dia. Water Line	LF	20	\$ 10.00	\$ 200.00	\$ 40.00	\$ 800.00	4.00	\$ 50.00	\$ 1,000.00	5.00
4	Remove Existing 8 1/2" Dia. Water Line	LF	150	\$ 10.00	\$ 1,500.00	\$ 35.00	\$ 5,250.00	3.50	\$ 65.00	\$ 9,750.00	6.50
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ 120.00	\$ 394,080.00	\$ 147.00	\$ 482,748.00	1.23	\$ 143.00	\$ 469,612.00	1.19
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	18	\$ 90.00	\$ 1,620.00	\$ 106.00	\$ 1,908.00	1.18	\$ 90.00	\$ 1,620.00	1.00
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ 72.00	\$ 29,520.00	\$ 90.00	\$ 36,900.00	1.25	\$ 65.00	\$ 26,650.00	0.90
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ 70.00	\$ 2,310.00	\$ 88.00	\$ 2,904.00	1.26	\$ 55.00	\$ 1,815.00	0.79
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ 1,000.00	\$ 50,000.00	\$ 246.00	\$ 12,300.00	0.25	\$ 620.00	\$ 31,000.00	0.62
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ 225.00	\$ 13,500.00	\$ 351.00	\$ 21,060.00	1.56	\$ 400.00	\$ 24,000.00	1.78
11	16" Gate Valve and Box	EA	6	\$ 8,800.00	\$ 52,800.00	\$ 6,750.00	\$ 40,500.00	0.77	\$ 8,500.00	\$ 51,000.00	0.97
12	12" Gate Valve and Box	EA	2	\$ 2,900.00	\$ 5,800.00	\$ 2,350.00	\$ 4,700.00	0.81	\$ 3,100.00	\$ 6,200.00	1.07
13	8" Gate Valve and Box	EA	9	\$ 1,600.00	\$ 14,400.00	\$ 1,325.00	\$ 11,925.00	0.83	\$ 1,700.00	\$ 15,300.00	1.06
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftg, 6" Pipe	EA	6	\$ 6,500.00	\$ 39,000.00	\$ 6,150.00	\$ 36,900.00	0.95	\$ 15,000.00	\$ 90,000.00	2.31
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ 5,000.00	\$ 25,000.00	\$ 4,100.00	\$ 20,500.00	0.82	\$ 6,000.00	\$ 30,000.00	1.20
16	Ductile Iron Fittings	TONS	7.5	\$ 7,000.00	\$ 52,500.00	\$ 5,250.00	\$ 39,375.00	0.75	\$ 5,000.00	\$ 37,500.00	0.71
17	2" Combination Air Release Valve & Vault with Offset	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 6,500.00	\$ 6,500.00	1.86	\$ 7,000.00	\$ 7,000.00	2.00
18	Temporary 2" Blow Off /Sample point	EA	2	\$ 1,500.00	\$ 3,000.00	\$ 1,950.00	\$ 3,900.00	1.30	\$ 6,500.00	\$ 13,000.00	4.33
19	Salvage Existing Fire Hydrant	EA	3	\$ 400.00	\$ 1,200.00	\$ 300.00	\$ 900.00	0.75	\$ 650.00	\$ 1,950.00	1.63
20	Abandon Existing Water Valve	EA	15	\$ 200.00	\$ 3,000.00	\$ 200.00	\$ 3,000.00	1.00	\$ 600.00	\$ 9,000.00	3.00
21	Connect to Existing 16" Water Line	EA	2	\$ 8,900.00	\$ 17,800.00	\$ 8,625.00	\$ 17,250.00	0.97	\$ 2,000.00	\$ 4,000.00	0.22
22	Connect to Existing 12" Water Line	EA	3	\$ 4,300.00	\$ 12,900.00	\$ 2,500.00	\$ 7,500.00	0.58	\$ 1,800.00	\$ 5,400.00	0.42
23	Connect to Existing 6/8" Water Line	EA	8	\$ 2,300.00	\$ 18,400.00	\$ 1,800.00	\$ 14,400.00	0.78	\$ 1,820.00	\$ 14,560.00	0.79
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ 400.00	\$ 6,800.00	\$ 900.00	\$ 15,300.00	2.25	\$ 1,000.00	\$ 17,000.00	2.50
25	Long Double Water Service	EA	13	\$ 1,000.00	\$ 13,000.00	\$ 1,425.00	\$ 18,525.00	1.43	\$ 1,800.00	\$ 23,400.00	1.80
26	Short Double Water Service	EA	25	\$ 750.00	\$ 18,750.00	\$ 1,200.00	\$ 30,000.00	1.60	\$ 1,500.00	\$ 37,500.00	2.00
27	Short Single Water Service	EA	3	\$ 700.00	\$ 2,100.00	\$ 800.00	\$ 2,400.00	1.14	\$ 1,050.00	\$ 3,150.00	1.50
28	Water Service Transfer	EA	41	\$ 500.00	\$ 20,500.00	\$ 100.00	\$ 4,100.00	0.20	\$ 180.00	\$ 7,380.00	0.36
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ 250.00	\$ 12,500.00	\$ 150.00	\$ 7,500.00	0.60	\$ 1,300.00	\$ 65,000.00	5.20
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ 2,000.00	\$ 2,000.00	\$ 4,100.00	\$ 4,100.00	2.05	\$ 1,500.00	\$ 1,500.00	0.75
31	Remove and Replace Existing Mono Curb	LF	163	\$ 5.00	\$ 815.00	\$ 15.00	\$ 2,445.00	3.00	\$ 21.00	\$ 3,423.00	4.20
32	Remove and Replace Existing Concrete Sidewalk	SF	1,996	\$ 10.00	\$ 19,960.00	\$ 7.50	\$ 14,970.00	0.75	\$ 6.00	\$ 11,976.00	0.60
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ 10.00	\$ 4,420.00	\$ 9.45	\$ 4,176.90	0.95	\$ 9.00	\$ 3,978.00	0.90
34	Remove and Replace Existing Curb Ramps	EA	10	\$ 2,500.00	\$ 25,000.00	\$ 2,700.00	\$ 27,000.00	1.08	\$ 1,600.00	\$ 16,000.00	0.64
35	Remove and Replace Existing Concrete Pavement	LF	3,467	\$ 50.00	\$ 173,350.00	\$ 100.00	\$ 346,700.00	2.00	\$ 66.00	\$ 228,822.00	1.32
36	Temporary Pavement Replacement	LF	3,467	\$ 20.00	\$ 69,340.00	\$ 11.25	\$ 39,003.75	0.56	\$ 6.00	\$ 20,802.00	0.30
37	Solid Sodding incl. 4" Thick Topsoil	SY	432	\$ 6.00	\$ 2,592.00	\$ 7.00	\$ 3,024.00	1.17	\$ 20.00	\$ 8,640.00	3.33
38	Trench Safety	LF	3,292	\$ 1.00	\$ 3,292.00	\$ 1.00	\$ 3,292.00	1.00	\$ 2.00	\$ 6,584.00	2.00
39	Traffic Control Plan and Implementation	LS	1	\$ 20,000.00	\$ 20,000.00	\$ 23,000.00	\$ 23,000.00	1.15	\$ 10,000.00	\$ 10,000.00	0.50
40	Erosion Control Plan	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 4,000.00	\$ 4,000.00	1.60	\$ 8,000.00	\$ 8,000.00	3.20
41	Project Signs	EA	2	\$ 750.00	\$ 1,500.00	\$ 500.00	\$ 1,000.00	0.67	\$ 900.00	\$ 1,800.00	1.20
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	1.00	\$ 50,000.00	\$ 50,000.00	1.00
43	24" Wide White Thermoplastic Stop Bar	LF	303	\$ 10.00	\$ 3,030.00	\$ 9.50	\$ 2,878.50	0.95	\$ 25.00	\$ 7,575.00	2.50
44	12" Wide White Thermoplastic Cross Walk Bar	LF	1,213	\$ 5.00	\$ 6,065.00	\$ 5.00	\$ 6,065.00	1.00	\$ 20.00	\$ 24,260.00	4.00
45	12" Wide White Thermoplastic School Zone Bar	LF	40	\$ 5.00	\$ 200.00	\$ 6.00	\$ 240.00	1.20	\$ 18.00	\$ 720.00	3.60
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	2	\$ 300.00	\$ 600.00	\$ 450.00	\$ 900.00	1.50	\$ 20.00	\$ 40.00	0.07
47	4" Dia. Type "Y" Yellow Buttons	EA	32	\$ 7.50	\$ 240.00	\$ 6.00	\$ 192.00	0.80	\$ 50.00	\$ 1,600.00	6.67
48	4" Dia. Type "W" White Buttons	EA	40	\$ 7.50	\$ 300.00	\$ 6.00	\$ 240.00	0.80	\$ 50.00	\$ 2,000.00	6.67
49	Type "1C" or "1A" Reflective Buttons	EA	2	\$ 15.00	\$ 30.00	\$ 7.00	\$ 14.00	0.47	\$ 50.00	\$ 100.00	3.33
50	Type "11AA" Reflective Buttons	EA	10	\$ 15.00	\$ 150.00	\$ 7.00	\$ 70.00	0.47	\$ 50.00	\$ 500.00	3.33
TOTAL AMOUNT BID					\$ 1,257,364.00		1,392,082.15	1.11		1,426,037.00	1.13

NUMBER OF CONSTRUCTION DAYS:

180 CONSECUTIVE CALENDAR DAYS

210 CONSECUTIVE CALENDAR DAYS

200 CONSECUTIVE CALENDAR DAYS

BURGESS & NIPL
Engineers ■ Planners



STARNES ROAD 16" WATER LINE BID TABULATION

Bids Opened
June 20, 2018
2:00 PM

				Engineer's Estimate		#15 Mountain Cascade			#16 R & D Burns Brothers, Inc.		
ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	UNIT PRICE	COST	UNIT PRICE	AMOUNT	Ratio to Engineer	UNIT PRICE	AMOUNT	Ratio to Engineer
1	Prepare and Restore Right-of-Way	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 60,000.00	\$ 60,000.00	1.20	\$ 70,000.00	\$ 70,000.00	1.40
2	Remove Existing 16" Dia. Water Line	LF	126	\$ 50.00	\$ 6,300.00	\$ 20.00	\$ 2,520.00	0.40	\$ 75.00	\$ 9,450.00	1.50
3	Remove Existing 12" Dia. Water Line	LF	20	\$ 10.00	\$ 200.00	\$ 16.00	\$ 320.00	1.60	\$ 25.00	\$ 500.00	2.50
4	Remove Existing 8 1/2" Dia. Water Line	LF	150	\$ 10.00	\$ 1,500.00	\$ 12.00	\$ 1,800.00	1.20	\$ 25.00	\$ 3,750.00	2.50
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ 120.00	\$ 394,080.00	\$ 115.00	\$ 377,660.00	0.96	\$ 105.00	\$ 344,820.00	0.88
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	18	\$ 90.00	\$ 1,620.00	\$ 100.00	\$ 1,800.00	1.11	\$ 75.00	\$ 1,350.00	0.83
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ 72.00	\$ 29,520.00	\$ 80.00	\$ 32,800.00	1.11	\$ 50.00	\$ 20,500.00	0.69
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ 70.00	\$ 2,310.00	\$ 60.00	\$ 1,980.00	0.86	\$ 40.00	\$ 1,320.00	0.57
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ 1,000.00	\$ 50,000.00	\$ 750.00	\$ 37,500.00	0.75	\$ 450.00	\$ 22,500.00	0.45
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ 225.00	\$ 13,500.00	\$ 90.00	\$ 5,400.00	0.40	\$ 125.00	\$ 7,500.00	0.56
11	16" Gate Valve and Box	EA	6	\$ 8,800.00	\$ 52,800.00	\$ 8,760.00	\$ 52,560.00	1.00	\$ 8,500.00	\$ 51,000.00	0.97
12	12" Gate Valve and Box	EA	2	\$ 2,900.00	\$ 5,800.00	\$ 3,900.00	\$ 7,800.00	1.34	\$ 2,500.00	\$ 5,000.00	0.86
13	8" Gate Valve and Box	EA	9	\$ 1,600.00	\$ 14,400.00	\$ 2,650.00	\$ 23,850.00	1.66	\$ 1,500.00	\$ 13,500.00	0.94
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftg, 6" Pipe	EA	6	\$ 6,500.00	\$ 39,000.00	\$ 8,000.00	\$ 48,000.00	1.23	\$ 9,000.00	\$ 54,000.00	1.38
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ 5,000.00	\$ 25,000.00	\$ 5,000.00	\$ 25,000.00	1.00	\$ 7,250.00	\$ 36,250.00	1.45
16	Ductile Iron Fittings	TONS	7.5	\$ 7,000.00	\$ 52,500.00	\$ 7,000.00	\$ 52,500.00	1.00	\$ 7,500.00	\$ 56,250.00	1.07
17	2" Combination Air Release Valve & Vault with Offset	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 4,700.00	\$ 4,700.00	1.34	\$ 8,500.00	\$ 8,500.00	2.43
18	Temporary 2" Blow Off /Sample point	EA	2	\$ 1,500.00	\$ 3,000.00	\$ 2,800.00	\$ 5,600.00	1.87	\$ 5,000.00	\$ 10,000.00	3.33
19	Salvage Existing Fire Hydrant	EA	3	\$ 400.00	\$ 1,200.00	\$ 400.00	\$ 1,200.00	1.00	\$ 500.00	\$ 1,500.00	1.25
20	Abandon Existing Water Valve	EA	15	\$ 200.00	\$ 3,000.00	\$ 350.00	\$ 5,250.00	1.75	\$ 250.00	\$ 3,750.00	1.25
21	Connect to Existing 16" Water Line	EA	2	\$ 8,900.00	\$ 17,800.00	\$ 7,000.00	\$ 14,000.00	0.79	\$ 8,500.00	\$ 17,000.00	0.96
22	Connect to Existing 12" Water Line	EA	3	\$ 4,300.00	\$ 12,900.00	\$ 5,500.00	\$ 16,500.00	1.28	\$ 5,000.00	\$ 15,000.00	1.16
23	Connect to Existing 6/8" Water Line	EA	8	\$ 2,300.00	\$ 18,400.00	\$ 4,200.00	\$ 33,600.00	1.83	\$ 2,500.00	\$ 20,000.00	1.09
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ 400.00	\$ 6,800.00	\$ 1,400.00	\$ 23,800.00	3.50	\$ 500.00	\$ 8,500.00	1.25
25	Long Double Water Service	EA	13	\$ 1,000.00	\$ 13,000.00	\$ 2,450.00	\$ 31,850.00	2.45	\$ 2,100.00	\$ 27,300.00	2.10
26	Short Double Water Service	EA	25	\$ 750.00	\$ 18,750.00	\$ 1,760.00	\$ 44,000.00	2.35	\$ 1,650.00	\$ 41,250.00	2.20
27	Short Single Water Service	EA	3	\$ 700.00	\$ 2,100.00	\$ 1,100.00	\$ 3,300.00	1.57	\$ 1,550.00	\$ 4,650.00	2.21
28	Water Service Transfer	EA	41	\$ 500.00	\$ 20,500.00	\$ 300.00	\$ 12,300.00	0.60	\$ 200.00	\$ 8,200.00	0.40
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ 250.00	\$ 12,500.00	\$ 930.00	\$ 46,500.00	3.72	\$ 500.00	\$ 25,000.00	2.00
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ 2,000.00	\$ 2,000.00	\$ 2,600.00	\$ 2,600.00	1.30	\$ 2,500.00	\$ 2,500.00	1.25
31	Remove and Replace Existing Mono Curb	LF	163	\$ 5.00	\$ 815.00	\$ 16.00	\$ 2,608.00	3.20	\$ 45.00	\$ 7,335.00	9.00
32	Remove and Replace Existing Concrete Sidewalk	SF	1,996	\$ 10.00	\$ 19,960.00	\$ 9.00	\$ 17,964.00	0.90	\$ 8.00	\$ 15,968.00	0.80
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ 10.00	\$ 4,420.00	\$ 15.00	\$ 6,630.00	1.50	\$ 15.00	\$ 6,630.00	1.50
34	Remove and Replace Existing Curb Ramps	EA	10	\$ 2,500.00	\$ 25,000.00	\$ 2,200.00	\$ 22,000.00	0.88	\$ 2,600.00	\$ 26,000.00	1.04
35	Remove and Replace Existing Concrete Pavement	LF	3,467	\$ 50.00	\$ 173,350.00	\$ 80.00	\$ 277,360.00	1.60	\$ 90.00	\$ 312,030.00	1.80
36	Temporary Pavement Replacement	LF	3,467	\$ 20.00	\$ 69,340.00	\$ 13.00	\$ 45,071.00	0.65	\$ 15.00	\$ 52,005.00	0.75
37	Solid Sodding incl. 4" Thick Topsoil	SY	432	\$ 6.00	\$ 2,592.00	\$ 4.00	\$ 1,728.00	0.67	\$ 15.00	\$ 6,480.00	2.50
38	Trench Safety	LF	3,292	\$ 1.00	\$ 3,292.00	\$ 1.00	\$ 3,292.00	1.00	\$ 2.00	\$ 6,584.00	2.00
39	Traffic Control Plan and Implementation	LS	1	\$ 20,000.00	\$ 20,000.00	\$ 18,000.00	\$ 18,000.00	0.90	\$ 25,000.00	\$ 25,000.00	1.25
40	Erosion Control Plan	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 2,400.00	\$ 2,400.00	0.96	\$ 15,000.00	\$ 15,000.00	6.00
41	Project Signs	EA	2	\$ 750.00	\$ 1,500.00	\$ 900.00	\$ 1,800.00	1.20	\$ 1,000.00	\$ 2,000.00	1.33
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	1.00	\$ 50,000.00	\$ 50,000.00	1.00
43	24" Wide White Thermoplastic Stop Bar	LF	303	\$ 10.00	\$ 3,030.00	\$ 9.00	\$ 2,727.00	0.90	\$ 15.00	\$ 4,545.00	1.50
44	12" Wide White Thermoplastic Cross Walk Bar	LF	1,213	\$ 5.00	\$ 6,065.00	\$ 4.00	\$ 4,852.00	0.80	\$ 10.00	\$ 12,130.00	2.00
45	12" Wide White Thermoplastic School Zone Bar	LF	40	\$ 5.00	\$ 200.00	\$ 4.00	\$ 160.00	0.80	\$ 15.00	\$ 600.00	3.00
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	2	\$ 300.00	\$ 600.00	\$ 225.00	\$ 450.00	0.75	\$ 1,000.00	\$ 2,000.00	3.33
47	4" Dia. Type "Y" Yellow Buttons	EA	32	\$ 7.50	\$ 240.00	\$ 5.00	\$ 160.00	0.67	\$ 15.00	\$ 480.00	2.00
48	4" Dia. Type "W" White Buttons	EA	40	\$ 7.50	\$ 300.00	\$ 5.00	\$ 200.00	0.67	\$ 15.00	\$ 600.00	2.00
49	Type "1C" or "1A" Reflective Buttons	EA	2	\$ 15.00	\$ 30.00	\$ 5.00	\$ 10.00	0.33	\$ 15.00	\$ 30.00	1.00
50	Type "11AA" Reflective Buttons	EA	10	\$ 15.00	\$ 150.00	\$ 5.00	\$ 50.00	0.33	\$ 15.00	\$ 150.00	1.00
TOTAL AMOUNT BID					\$ 1,257,364.00		1,434,152.00	1.14		1,436,407.00	1.14

NUMBER OF CONSTRUCTION DAYS:

180 CONSECUTIVE CALENDAR DAYS

120 CALENDAR DAYS

300 CONSECUTIVE CALENDAR DAYS

BURGESS & NIPL
Engineers ■ Planners



STARNES ROAD 16" WATER LINE BID TABULATION

Bids Opened
June 20, 2018
2:00 PM

ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	Engineer's Estimate		#17 Tex Global			#18 SJ Louis Construction		
				UNIT PRICE	COST	UNIT PRICE	AMOUNT	Ratio to Engineer	UNIT PRICE	AMOUNT	Ratio to Engineer
1	Prepare and Restore Right-of-Way	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 100,000.00	\$ 100,000.00	2.00	\$ 50,000.00	\$ 50,000.00	1.00
2	Remove Existing 16" Dia. Water Line	LF	126	\$ 50.00	\$ 6,300.00	\$ 85.00	\$ 10,710.00	1.70	\$ 10.00	\$ 1,260.00	0.20
3	Remove Existing 12" Dia. Water Line	LF	20	\$ 10.00	\$ 200.00	\$ 65.00	\$ 1,300.00	6.50	\$ 10.00	\$ 200.00	1.00
4	Remove Existing 8/6" Dia. Water Line	LF	150	\$ 10.00	\$ 1,500.00	\$ 50.00	\$ 7,500.00	5.00	\$ 10.00	\$ 1,500.00	1.00
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ 120.00	\$ 394,080.00	\$ 98.00	\$ 321,832.00	0.82	\$ 200.00	\$ 656,800.00	1.67
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	18	\$ 90.00	\$ 1,620.00	\$ 100.00	\$ 1,800.00	1.11	\$ 186.00	\$ 3,348.00	2.07
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ 72.00	\$ 29,520.00	\$ 40.13	\$ 16,453.30	0.56	\$ 177.00	\$ 72,570.00	2.46
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ 70.00	\$ 2,310.00	\$ 45.00	\$ 1,485.00	0.64	\$ 174.00	\$ 5,742.00	2.49
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ 1,000.00	\$ 50,000.00	\$ 635.00	\$ 31,750.00	0.64	\$ 701.00	\$ 35,050.00	0.70
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ 225.00	\$ 13,500.00	\$ 635.00	\$ 38,100.00	2.82	\$ 200.00	\$ 12,000.00	0.89
11	16" Gate Valve and Box	EA	6	\$ 8,800.00	\$ 52,800.00	\$ 8,250.00	\$ 49,500.00	0.94	\$ 6,900.00	\$ 41,400.00	0.78
12	12" Gate Valve and Box	EA	2	\$ 2,900.00	\$ 5,800.00	\$ 6,250.00	\$ 12,500.00	2.16	\$ 2,000.00	\$ 4,000.00	0.69
13	8" Gate Valve and Box	EA	9	\$ 1,600.00	\$ 14,400.00	\$ 1,750.00	\$ 15,750.00	1.09	\$ 1,200.00	\$ 10,800.00	0.75
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftg, 6" Pipe	EA	6	\$ 6,500.00	\$ 39,000.00	\$ 7,500.00	\$ 45,000.00	1.15	\$ 1,700.00	\$ 10,200.00	0.26
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ 5,000.00	\$ 25,000.00	\$ 4,565.00	\$ 22,825.00	0.91	\$ 4,700.00	\$ 23,500.00	0.94
16	Ductile Iron Fittings	TONS	7.5	\$ 7,000.00	\$ 52,500.00	\$ 4,634.53	\$ 34,758.98	0.66	\$ 1.00	\$ 7.50	0.00
17	2" Combination Air Release Valve & Vault with Offset	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 7,817.61	\$ 7,817.61	2.23	\$ 7,000.00	\$ 7,000.00	2.00
18	Temporary 2" Blow Off /Sample point	EA	2	\$ 1,500.00	\$ 3,000.00	\$ 2,785.00	\$ 5,570.00	1.86	\$ 3,000.00	\$ 6,000.00	2.00
19	Salvage Existing Fire Hydrant	EA	3	\$ 400.00	\$ 1,200.00	\$ 1,250.00	\$ 3,750.00	3.13	\$ 100.00	\$ 300.00	0.25
20	Abandon Existing Water Valve	EA	15	\$ 200.00	\$ 3,000.00	\$ 600.00	\$ 9,000.00	3.00	\$ 100.00	\$ 1,500.00	0.50
21	Connect to Existing 16" Water Line	EA	2	\$ 8,900.00	\$ 17,800.00	\$ 2,803.00	\$ 5,606.00	0.31	\$ 2,900.00	\$ 5,800.00	0.33
22	Connect to Existing 12" Water Line	EA	3	\$ 4,300.00	\$ 12,900.00	\$ 1,404.00	\$ 4,212.00	0.33	\$ 1,300.00	\$ 3,900.00	0.30
23	Connect to Existing 6/8" Water Line	EA	8	\$ 2,300.00	\$ 18,400.00	\$ 750.00	\$ 6,000.00	0.33	\$ 900.00	\$ 7,200.00	0.39
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ 400.00	\$ 6,800.00	\$ 650.00	\$ 11,050.00	1.63	\$ 200.00	\$ 3,400.00	0.50
25	Long Double Water Service	EA	13	\$ 1,000.00	\$ 13,000.00	\$ 3,850.00	\$ 50,050.00	3.85	\$ 2,500.00	\$ 32,500.00	2.50
26	Short Double Water Service	EA	25	\$ 750.00	\$ 18,750.00	\$ 3,325.00	\$ 83,125.00	4.43	\$ 2,200.00	\$ 55,000.00	2.93
27	Short Single Water Service	EA	3	\$ 700.00	\$ 2,100.00	\$ 3,250.00	\$ 9,750.00	4.64	\$ 1,500.00	\$ 4,500.00	2.14
28	Water Service Transfer	EA	41	\$ 500.00	\$ 20,500.00	\$ 900.00	\$ 36,900.00	1.80	\$ 520.00	\$ 21,320.00	1.04
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ 250.00	\$ 12,500.00	\$ 400.00	\$ 20,000.00	1.60	\$ 500.00	\$ 25,000.00	2.00
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ 2,000.00	\$ 2,000.00	\$ 3,250.00	\$ 3,250.00	1.63	\$ 800.00	\$ 800.00	0.40
31	Remove and Replace Existing Mono Curb	LF	163	\$ 5.00	\$ 815.00	\$ 18.50	\$ 3,015.50	3.70	\$ 30.00	\$ 4,890.00	6.00
32	Remove and Replace Existing Concrete Sidewalk	SF	1,996	\$ 10.00	\$ 19,960.00	\$ 9.00	\$ 17,964.00	0.90	\$ 6.80	\$ 13,572.80	0.68
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ 10.00	\$ 4,420.00	\$ 12.00	\$ 5,304.00	1.20	\$ 9.00	\$ 3,978.00	0.90
34	Remove and Replace Existing Curb Ramps	EA	10	\$ 2,500.00	\$ 25,000.00	\$ 2,000.00	\$ 20,000.00	0.80	\$ 1,800.00	\$ 18,000.00	0.72
35	Remove and Replace Existing Concrete Pavement	LF	3,467	\$ 50.00	\$ 173,350.00	\$ 48.50	\$ 168,149.50	0.97	\$ 60.00	\$ 208,020.00	1.20
36	Temporary Pavement Replacement	LF	3,467	\$ 20.00	\$ 69,340.00	\$ 38.90	\$ 134,866.30	1.95	\$ 5.00	\$ 17,335.00	0.25
37	Solid Sodding incl. 4" Thick Topsoil	SY	432	\$ 6.00	\$ 2,592.00	\$ 38.00	\$ 16,416.00	6.33	\$ 9.00	\$ 3,888.00	1.50
38	Trench Safety	LF	3,292	\$ 1.00	\$ 3,292.00	\$ 0.90	\$ 2,962.80	0.90	\$ 0.01	\$ 32.92	0.01
39	Traffic Control Plan and Implementation	LS	1	\$ 20,000.00	\$ 20,000.00	\$ 17,500.00	\$ 17,500.00	0.88	\$ 3,000.00	\$ 3,000.00	0.15
40	Erosion Control Plan	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 5,500.00	\$ 5,500.00	2.20	\$ 5,000.00	\$ 5,000.00	2.00
41	Project Signs	EA	2	\$ 750.00	\$ 1,500.00	\$ 1,000.00	\$ 2,000.00	1.33	\$ 500.00	\$ 1,000.00	0.67
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	1.00	\$ 50,000.00	\$ 50,000.00	1.00
43	24" Wide White Thermoplastic Stop Bar	LF	303	\$ 10.00	\$ 3,030.00	\$ 18.00	\$ 5,454.00	1.80	\$ 8.00	\$ 2,424.00	0.80
44	12" Wide White Thermoplastic Cross Walk Bar	LF	1,213	\$ 5.00	\$ 6,065.00	\$ 14.00	\$ 16,982.00	2.80	\$ 4.00	\$ 4,852.00	0.80
45	12" Wide White Thermoplastic School Zone Bar	LF	40	\$ 5.00	\$ 200.00	\$ 14.00	\$ 560.00	2.80	\$ 4.00	\$ 160.00	0.80
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	2	\$ 300.00	\$ 600.00	\$ 600.00	\$ 1,200.00	2.00	\$ 175.00	\$ 350.00	0.58
47	4" Dia. Type "Y" Yellow Buttons	EA	32	\$ 7.50	\$ 240.00	\$ 32.00	\$ 1,024.00	4.27	\$ 3.75	\$ 120.00	0.50
48	4" Dia. Type "W" White Buttons	EA	40	\$ 7.50	\$ 300.00	\$ 32.00	\$ 1,280.00	4.27	\$ 3.75	\$ 150.00	0.50
49	Type "1C" or "1A" Reflective Buttons	EA	2	\$ 15.00	\$ 30.00	\$ 32.00	\$ 64.00	2.13	\$ 4.00	\$ 8.00	0.27
50	Type "11AA" Reflective Buttons	EA	10	\$ 15.00	\$ 150.00	\$ 32.00	\$ 320.00	2.13	\$ 4.00	\$ 40.00	0.27
TOTAL AMOUNT BID					\$ 1,257,364.00		1,437,906.99	1.14		1,439,418.22	1.14

NUMBER OF CONSTRUCTION DAYS:

180 CONSECUTIVE CALENDAR DAYS

180 CONSECUTIVE CALENDAR DAYS

180 CONSECUTIVE CALENDAR DAYS

BURGESS & NIPLE
Engineers ■ Planners



STARNES ROAD 16" WATER LINE BID TABULATION

Bids Opened
June 20, 2018
2:00 PM

ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	Engineer's Estimate		#19 Rumsey Construction			#20 Ark Contracting Services		
				UNIT PRICE	COST	UNIT PRICE	AMOUNT	Ratio to Engineer	UNIT PRICE	AMOUNT	Ratio to Engineer
1	Prepare and Restore Right-of-Way	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 32,667.00	\$ 32,667.00	0.65	\$ 60,000.00	\$ 60,000.00	1.20
2	Remove Existing 16" Dia. Water Line	LF	126	\$ 50.00	\$ 6,300.00	\$ 28.00	\$ 3,528.00	0.56	\$ 35.00	\$ 4,410.00	0.70
3	Remove Existing 12" Dia. Water Line	LF	20	\$ 10.00	\$ 200.00	\$ 28.00	\$ 560.00	2.80	\$ 24.00	\$ 480.00	2.40
4	Remove Existing 8/6" Dia. Water Line	LF	150	\$ 10.00	\$ 1,500.00	\$ 28.00	\$ 4,200.00	2.80	\$ 18.00	\$ 2,700.00	1.80
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ 120.00	\$ 394,080.00	\$ 60.00	\$ 197,040.00	0.50	\$ 177.00	\$ 581,268.00	1.48
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	18	\$ 90.00	\$ 1,620.00	\$ 46.00	\$ 828.00	0.51	\$ 160.00	\$ 2,880.00	1.78
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ 72.00	\$ 29,520.00	\$ 37.00	\$ 15,170.00	0.51	\$ 115.00	\$ 47,150.00	1.60
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ 70.00	\$ 2,310.00	\$ 34.00	\$ 1,122.00	0.49	\$ 100.00	\$ 3,300.00	1.43
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ 1,000.00	\$ 50,000.00	\$ 464.00	\$ 23,200.00	0.46	\$ 550.00	\$ 27,500.00	0.55
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ 225.00	\$ 13,500.00	\$ 60.00	\$ 3,600.00	0.27	\$ 400.00	\$ 24,000.00	1.78
11	16" Gate Valve and Box	EA	6	\$ 8,800.00	\$ 52,800.00	\$ 6,703.00	\$ 40,218.00	0.76	\$ 12,000.00	\$ 72,000.00	1.36
12	12" Gate Valve and Box	EA	2	\$ 2,900.00	\$ 5,800.00	\$ 2,563.00	\$ 5,126.00	0.88	\$ 3,000.00	\$ 6,000.00	1.03
13	8" Gate Valve and Box	EA	9	\$ 1,600.00	\$ 14,400.00	\$ 1,580.00	\$ 14,220.00	0.99	\$ 1,500.00	\$ 13,500.00	0.94
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftg, 6" Pipe	EA	6	\$ 6,500.00	\$ 39,000.00	\$ 6,417.00	\$ 38,502.00	0.99	\$ 5,000.00	\$ 30,000.00	0.77
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ 5,000.00	\$ 25,000.00	\$ 5,037.00	\$ 25,185.00	1.01	\$ 4,000.00	\$ 20,000.00	0.80
16	Ductile Iron Fittings	TONS	7.5	\$ 7,000.00	\$ 52,500.00	\$ 3,810.00	\$ 28,575.00	0.54	\$ 5,000.00	\$ 37,500.00	0.71
17	2" Combination Air Release Valve & Vault with Offset	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 5,238.00	\$ 5,238.00	1.50	\$ 9,000.00	\$ 9,000.00	2.57
18	Temporary 2" Blow Off /Sample point	EA	2	\$ 1,500.00	\$ 3,000.00	\$ 4,138.00	\$ 8,276.00	2.76	\$ 2,500.00	\$ 5,000.00	1.67
19	Salvage Existing Fire Hydrant	EA	3	\$ 400.00	\$ 1,200.00	\$ 1,307.00	\$ 3,921.00	3.27	\$ 500.00	\$ 1,500.00	1.25
20	Abandon Existing Water Valve	EA	15	\$ 200.00	\$ 3,000.00	\$ 392.00	\$ 5,880.00	1.96	\$ 600.00	\$ 9,000.00	3.00
21	Connect to Existing 16" Water Line	EA	2	\$ 8,900.00	\$ 17,800.00	\$ 2,193.00	\$ 4,386.00	0.25	\$ 6,000.00	\$ 12,000.00	0.67
22	Connect to Existing 12" Water Line	EA	3	\$ 4,300.00	\$ 12,900.00	\$ 1,394.00	\$ 4,182.00	0.32	\$ 3,000.00	\$ 9,000.00	0.70
23	Connect to Existing 6/8" Water Line	EA	8	\$ 2,300.00	\$ 18,400.00	\$ 1,234.00	\$ 9,872.00	0.54	\$ 2,000.00	\$ 16,000.00	0.87
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ 400.00	\$ 6,800.00	\$ 1,288.00	\$ 21,896.00	3.22	\$ 1,200.00	\$ 20,400.00	3.00
25	Long Double Water Service	EA	13	\$ 1,000.00	\$ 13,000.00	\$ 1,689.00	\$ 21,957.00	1.69	\$ 1,600.00	\$ 20,800.00	1.60
26	Short Double Water Service	EA	25	\$ 750.00	\$ 18,750.00	\$ 1,583.00	\$ 39,575.00	2.11	\$ 1,200.00	\$ 30,000.00	1.60
27	Short Single Water Service	EA	3	\$ 700.00	\$ 2,100.00	\$ 1,186.00	\$ 3,558.00	1.69	\$ 1,000.00	\$ 3,000.00	1.43
28	Water Service Transfer	EA	41	\$ 500.00	\$ 20,500.00	\$ 532.00	\$ 21,812.00	1.06	\$ 300.00	\$ 12,300.00	0.60
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ 250.00	\$ 12,500.00	\$ 1,477.00	\$ 73,850.00	5.91	\$ 300.00	\$ 15,000.00	1.20
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ 2,000.00	\$ 2,000.00	\$ 4,104.00	\$ 4,104.00	2.05	\$ 1,200.00	\$ 1,200.00	0.60
31	Remove and Replace Existing Mono Curb	LF	163	\$ 5.00	\$ 815.00	\$ 46.00	\$ 7,498.00	9.20	\$ 20.00	\$ 3,260.00	4.00
32	Remove and Replace Existing Concrete Sidewalk	SF	1,996	\$ 10.00	\$ 19,960.00	\$ 26.00	\$ 51,896.00	2.60	\$ 12.00	\$ 23,952.00	1.20
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ 10.00	\$ 4,420.00	\$ 26.00	\$ 11,492.00	2.60	\$ 16.00	\$ 7,072.00	1.60
34	Remove and Replace Existing Curb Ramps	EA	10	\$ 2,500.00	\$ 25,000.00	\$ 1,562.00	\$ 15,620.00	0.62	\$ 2,400.00	\$ 24,000.00	0.96
35	Remove and Replace Existing Concrete Pavement	LF	3,467	\$ 50.00	\$ 173,350.00	\$ 106.00	\$ 367,502.00	2.12	\$ 75.00	\$ 260,025.00	1.50
36	Temporary Pavement Replacement	LF	3,467	\$ 20.00	\$ 69,340.00	\$ 65.00	\$ 225,355.00	3.25	\$ 25.00	\$ 86,675.00	1.25
37	Solid Sodding incl. 4" Thick Topsoil	SY	432	\$ 6.00	\$ 2,592.00	\$ 17.00	\$ 7,344.00	2.83	\$ 12.00	\$ 5,184.00	2.00
38	Trench Safety	LF	3,292	\$ 1.00	\$ 3,292.00	\$ 2.00	\$ 6,584.00	2.00	\$ 1.00	\$ 3,292.00	1.00
39	Traffic Control Plan and Implementation	LS	1	\$ 20,000.00	\$ 20,000.00	\$ 13,440.00	\$ 13,440.00	0.67	\$ 20,000.00	\$ 20,000.00	1.00
40	Erosion Control Plan	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 3,920.00	\$ 3,920.00	1.57	\$ 7,000.00	\$ 7,000.00	2.80
41	Project Signs	EA	2	\$ 750.00	\$ 1,500.00	\$ 800.00	\$ 1,600.00	1.07	\$ 1,000.00	\$ 2,000.00	1.33
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	1.00	\$ 50,000.00	\$ 50,000.00	1.00
43	24" Wide White Thermoplastic Stop Bar	LF	303	\$ 10.00	\$ 3,030.00	\$ 12.00	\$ 3,636.00	1.20	\$ 20.00	\$ 6,060.00	2.00
44	12" Wide White Thermoplastic Cross Walk Bar	LF	1,213	\$ 5.00	\$ 6,065.00	\$ 10.00	\$ 12,130.00	2.00	\$ 15.00	\$ 18,195.00	3.00
45	12" Wide White Thermoplastic School Zone Bar	LF	40	\$ 5.00	\$ 200.00	\$ 10.00	\$ 400.00	2.00	\$ 14.00	\$ 560.00	2.80
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	2	\$ 300.00	\$ 600.00	\$ 450.00	\$ 900.00	1.50	\$ 300.00	\$ 600.00	1.00
47	4" Dia. Type "Y" Yellow Buttons	EA	32	\$ 7.50	\$ 240.00	\$ 25.00	\$ 800.00	3.33	\$ 6.00	\$ 192.00	0.80
48	4" Dia. Type "W" White Buttons	EA	40	\$ 7.50	\$ 300.00	\$ 25.00	\$ 1,000.00	3.33	\$ 6.00	\$ 240.00	0.80
49	Type "1C" or "1A" Reflective Buttons	EA	2	\$ 15.00	\$ 30.00	\$ 55.00	\$ 110.00	3.67	\$ 6.00	\$ 12.00	0.40
50	Type "11AA" Reflective Buttons	EA	10	\$ 15.00	\$ 150.00	\$ 75.00	\$ 750.00	5.00	\$ 7.00	\$ 70.00	0.47
TOTAL AMOUNT BID					\$ 1,257,364.00		1,444,225.00	1.15		1,615,277.00	1.28

NUMBER OF CONSTRUCTION DAYS:

180 CONSECUTIVE CALENDAR DAYS

180 WORKING DAYS

210 CONSECUTIVE CALENDAR DAYS

BURGESS & NIPLE
Engineers ■ Planners



STARNES ROAD 16" WATER LINE BID TABULATION

Bids Opened
June 20, 2018
2:00 PM

				Engineer's Estimate		#21 Joe Funk Construction, Inc.			#22 Dickerson Construction Company, Inc.		
ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	UNIT PRICE	COST	UNIT PRICE	AMOUNT	Ratio to Engineer	UNIT PRICE	AMOUNT	Ratio to Engineer
1	Prepare and Restore Right-of-Way	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 65,000.00	\$ 65,000.00	1.30	\$ 15,000.00	\$ 15,000.00	0.30
2	Remove Existing 16" Dia. Water Line	LF	126	\$ 50.00	\$ 6,300.00	\$ 32.50	\$ 4,095.00	0.65	\$ 250.00	\$ 31,500.00	5.00
3	Remove Existing 12" Dia. Water Line	LF	20	\$ 10.00	\$ 200.00	\$ 23.40	\$ 468.00	2.34	\$ 200.00	\$ 4,000.00	20.00
4	Remove Existing 8/6" Dia. Water Line	LF	150	\$ 10.00	\$ 1,500.00	\$ 19.50	\$ 2,925.00	1.95	\$ 200.00	\$ 30,000.00	20.00
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ 120.00	\$ 394,080.00	\$ 123.50	\$ 405,574.00	1.03	\$ 145.00	\$ 476,180.00	1.21
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	18	\$ 90.00	\$ 1,620.00	\$ 162.50	\$ 2,925.00	1.81	\$ 150.00	\$ 2,700.00	1.67
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ 72.00	\$ 29,520.00	\$ 62.40	\$ 25,584.00	0.87	\$ 125.00	\$ 51,250.00	1.74
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ 70.00	\$ 2,310.00	\$ 49.40	\$ 1,630.20	0.71	\$ 125.00	\$ 4,125.00	1.79
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ 1,000.00	\$ 50,000.00	\$ 370.50	\$ 18,525.00	0.37	\$ 450.00	\$ 22,500.00	0.45
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ 225.00	\$ 13,500.00	\$ 344.50	\$ 20,670.00	1.53	\$ 350.00	\$ 21,000.00	1.56
11	16" Gate Valve and Box	EA	6	\$ 8,800.00	\$ 52,800.00	\$ 15,600.00	\$ 93,600.00	1.77	\$ 8,150.00	\$ 48,900.00	0.93
12	12" Gate Valve and Box	EA	2	\$ 2,900.00	\$ 5,800.00	\$ 5,200.00	\$ 10,400.00	1.79	\$ 3,500.00	\$ 7,000.00	1.21
13	8" Gate Valve and Box	EA	9	\$ 1,600.00	\$ 14,400.00	\$ 2,535.00	\$ 22,815.00	1.58	\$ 2,000.00	\$ 18,000.00	1.25
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftg, 6" Pipe	EA	6	\$ 6,500.00	\$ 39,000.00	\$ 6,136.00	\$ 36,816.00	0.94	\$ 7,000.00	\$ 42,000.00	1.08
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ 5,000.00	\$ 25,000.00	\$ 7,150.00	\$ 35,750.00	1.43	\$ 4,500.00	\$ 22,500.00	0.90
16	Ductile Iron Fittings	TONS	7.5	\$ 7,000.00	\$ 52,500.00	\$ 6,175.00	\$ 46,312.50	0.88	\$ 8,000.00	\$ 60,000.00	1.14
17	2" Combination Air Release Valve & Vault with Offset	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 5,327.40	\$ 5,327.40	1.52	\$ 7,000.00	\$ 7,000.00	2.00
18	Temporary 2" Blow Off /Sample point	EA	2	\$ 1,500.00	\$ 3,000.00	\$ 3,607.50	\$ 7,215.00	2.41	\$ 4,000.00	\$ 8,000.00	2.67
19	Salvage Existing Fire Hydrant	EA	3	\$ 400.00	\$ 1,200.00	\$ 585.00	\$ 1,755.00	1.46	\$ 1,000.00	\$ 3,000.00	2.50
20	Abandon Existing Water Valve	EA	15	\$ 200.00	\$ 3,000.00	\$ 325.00	\$ 4,875.00	1.63	\$ 500.00	\$ 7,500.00	2.50
21	Connect to Existing 16" Water Line	EA	2	\$ 8,900.00	\$ 17,800.00	\$ 6,175.00	\$ 12,350.00	0.69	\$ 8,250.00	\$ 16,500.00	0.93
22	Connect to Existing 12" Water Line	EA	3	\$ 4,300.00	\$ 12,900.00	\$ 1,950.00	\$ 5,850.00	0.45	\$ 2,000.00	\$ 6,000.00	0.47
23	Connect to Existing 6/8" Water Line	EA	8	\$ 2,300.00	\$ 18,400.00	\$ 1,625.00	\$ 13,000.00	0.71	\$ 1,250.00	\$ 10,000.00	0.54
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ 400.00	\$ 6,800.00	\$ 1,592.50	\$ 27,072.50	3.98	\$ 1,250.00	\$ 21,250.00	3.13
25	Long Double Water Service	EA	13	\$ 1,000.00	\$ 13,000.00	\$ 3,672.50	\$ 47,742.50	3.67	\$ 2,500.00	\$ 32,500.00	2.50
26	Short Double Water Service	EA	25	\$ 750.00	\$ 18,750.00	\$ 3,120.00	\$ 78,000.00	4.16	\$ 2,250.00	\$ 56,250.00	3.00
27	Short Single Water Service	EA	3	\$ 700.00	\$ 2,100.00	\$ 2,535.00	\$ 7,605.00	3.62	\$ 2,000.00	\$ 6,000.00	2.86
28	Water Service Transfer	EA	41	\$ 500.00	\$ 20,500.00	\$ 1,040.00	\$ 42,640.00	2.08	\$ 250.00	\$ 10,250.00	0.50
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ 250.00	\$ 12,500.00	\$ 1,820.00	\$ 91,000.00	7.28	\$ 750.00	\$ 37,500.00	3.00
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ 2,000.00	\$ 2,000.00	\$ 5,850.00	\$ 5,850.00	2.93	\$ 7,500.00	\$ 7,500.00	3.75
31	Remove and Replace Existing Mono Curb	LF	163	\$ 5.00	\$ 815.00	\$ 26.00	\$ 4,238.00	5.20	\$ 35.00	\$ 5,705.00	7.00
32	Remove and Replace Existing Concrete Sidewalk	SF	1,996	\$ 10.00	\$ 19,960.00	\$ 9.10	\$ 18,163.60	0.91	\$ 9.00	\$ 17,964.00	0.90
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ 10.00	\$ 4,420.00	\$ 9.75	\$ 4,309.50	0.98	\$ 15.00	\$ 6,630.00	1.50
34	Remove and Replace Existing Curb Ramps	EA	10	\$ 2,500.00	\$ 25,000.00	\$ 2,860.00	\$ 28,600.00	1.14	\$ 3,500.00	\$ 35,000.00	1.40
35	Remove and Replace Existing Concrete Pavement	LF	3,467	\$ 50.00	\$ 173,350.00	\$ 58.50	\$ 202,819.50	1.17	\$ 125.00	\$ 433,375.00	2.50
36	Temporary Pavement Replacement	LF	3,467	\$ 20.00	\$ 69,340.00	\$ 23.40	\$ 81,127.80	1.17	\$ 15.00	\$ 52,005.00	0.75
37	Solid Sodding incl. 4" Thick Topsoil	SY	432	\$ 6.00	\$ 2,592.00	\$ 13.00	\$ 5,616.00	2.17	\$ 10.00	\$ 4,320.00	1.67
38	Trench Safety	LF	3,292	\$ 1.00	\$ 3,292.00	\$ 5.20	\$ 17,118.40	5.20	\$ 5.00	\$ 16,460.00	5.00
39	Traffic Control Plan and Implementation	LS	1	\$ 20,000.00	\$ 20,000.00	\$ 34,775.00	\$ 34,775.00	1.74	\$ 27,500.00	\$ 27,500.00	1.38
40	Erosion Control Plan	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 20,475.00	\$ 20,475.00	8.19	\$ 5,000.00	\$ 5,000.00	2.00
41	Project Signs	EA	2	\$ 750.00	\$ 1,500.00	\$ 1,235.00	\$ 2,470.00	1.65	\$ 1,000.00	\$ 2,000.00	1.33
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	1.00	\$ 50,000.00	\$ 50,000.00	1.00
43	24" Wide White Thermoplastic Stop Bar	LF	303	\$ 10.00	\$ 3,030.00	\$ 13.00	\$ 3,939.00	1.30	\$ 15.00	\$ 4,545.00	1.50
44	12" Wide White Thermoplastic Cross Walk Bar	LF	1,213	\$ 5.00	\$ 6,065.00	\$ 10.40	\$ 12,615.20	2.08	\$ 8.00	\$ 9,704.00	1.60
45	12" Wide White Thermoplastic School Zone Bar	LF	40	\$ 5.00	\$ 200.00	\$ 10.40	\$ 416.00	2.08	\$ 8.00	\$ 320.00	1.60
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	2	\$ 300.00	\$ 600.00	\$ 260.00	\$ 520.00	0.87	\$ 700.00	\$ 1,400.00	2.33
47	4" Dia. Type "Y" Yellow Buttons	EA	32	\$ 7.50	\$ 240.00	\$ 5.20	\$ 166.40	0.69	\$ 8.00	\$ 256.00	1.07
48	4" Dia. Type "W" White Buttons	EA	40	\$ 7.50	\$ 300.00	\$ 5.20	\$ 208.00	0.69	\$ 8.00	\$ 320.00	1.07
49	Type "1C" or "1A" Reflective Buttons	EA	2	\$ 15.00	\$ 30.00	\$ 7.80	\$ 15.60	0.52	\$ 15.00	\$ 30.00	1.00
50	Type "11AA" Reflective Buttons	EA	10	\$ 15.00	\$ 150.00	\$ 7.80	\$ 78.00	0.52	\$ 15.00	\$ 150.00	1.00
TOTAL AMOUNT BID					\$ 1,257,364.00		1,631,043.10	1.30		1,758,589.00	1.40

NUMBER OF CONSTRUCTION DAYS:

180 CONSECUTIVE CALENDAR DAYS

120 CONSECUTIVE CALENDAR DAYS

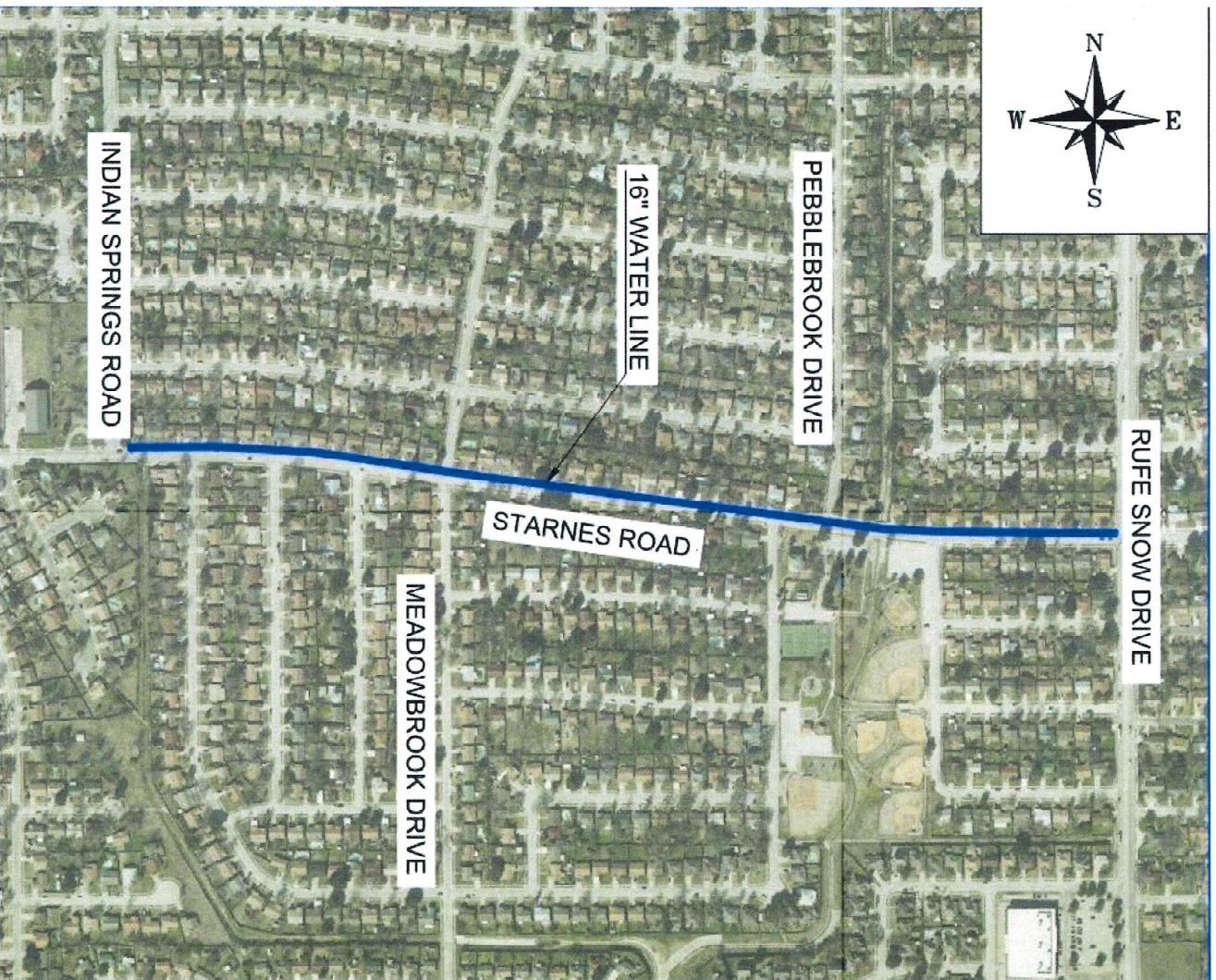
270 CONSECUTIVE CALENDAR DAYS

BURGESS & NIPLE
Engineers ■ Planners

EXHIBIT A
SCOPE OF SERVICES

Starnes Road 16-Inch Water Line

Location Map



SPECIFICATIONS AND CONTRACT DOCUMENTS

CITY PROJECT NO. 18-027 for

**STARNES ROAD 16" WATER LINE
From Indian Springs Road to Rufe Snow Drive
2018**



OWNER

City of Watauga
7105 Whitley Rd.
Watauga, TX 76148



William D. Wendland

05/16/2018

BURGESS & NIPLE
Engineers ■ Planners

3950 Fossil Creek Blvd., Suite 210
Fort Worth, Texas 76137
(817) 306-1444 fax (817) 306-1555
TBPE FIRM REGISTRATION NO. F-10834

Burgess & Niple Project Number 55991

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00 52 00	Agreement
00 56 00	Legal and Fiscal Officers
00 61 13.13	Performance Bond
00 61 13.16	Payment Bond
00 61 13.19	Maintenance Bond
00 62 16	Certificate of Insurance (Sample Form)
00 70 00	General Conditions
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01 11 01	Line Item Description of Proposed work
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30 00 00	Technical Site Civil
30 00 01	City of Watauga Specifications for the Installation of Water and Sewer Mains



NOTICE INVITATION TO BID

Sealed Bids for the Starnes Road 16" Water Line will be received in the City of Watauga Purchasing Office located at City Hall, 7105 Whitley Road, Watauga, Texas 76148 until Wednesday, June 13, 2018 at 2:00 PM (Central Time) at which time they will be publicly opened and read aloud. Bids received after the closing date and time will not be considered.

Bid # 18-027 Starnes Road 16" Water Line
Opening Date: Wednesday, June 13, 2018 at 2:00 PM (Central Time)

The work covered by the Contract Documents includes the following: Installing a 16" diameter water line along Starnes Road from Indian Springs Road to Rufe Snow Drive in the City of Watauga, Texas, together with the necessary appertaining work.

Complete Contract Documents may be examined without charge or deposit from the engineer, William D. Wendland, P.E. at Burgess & Niple, 3950 Fossil Creek Blvd., Suite 210, Fort Worth, Texas 76137. The Contract Documents may be purchased at the same location for a non-refundable cost of \$100.00. Make checks payable to "BURGESS & NIPLE". Complete Contract Documents have also been provided to CivCast USA for immediate download. Please go to <http://www.civcastusa.com/>. The Project ID is "19463-55991". Prospective bidders shall address written inquiries through the project's CivCast website.

Attention to the Bidders is called to the Instructions to Bidders, which are included in the proposed Contract Documents.

A non-mandatory pre-bid conference will be held Wednesday, June 6, 2018 at 10:00 AM (Central Time) at City of Watauga Council Chambers, 7105 Whitley Road, Watauga, Texas 76148.

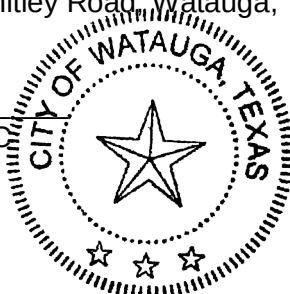
Successful Bidders shall be required to comply with all laws pertaining to minimum wage and discrimination of persons. Minimum rates of pay to all laborers and mechanics on the project must not be less than as provided in the Wage Rate Schedule, and wage provisions must particularly comply with all other applicable wage laws of the State of Texas.

The City reserves the right to reject any and all Bids or to increase or decrease or omit any item or items and/or award to the lowest responsive and responsible Bidder. The City of Watauga also reserves the right to waive any informalities or irregularities in the Bidding.

PUBLISHED: **Wednesday, May 23, 2018**
Wednesday, May 30, 2018

I, Zolaina R. Parker, City Secretary for the City of Watauga, hereby certify that this notice was posted on the bulletin boards at City Hall, 7105 Whitley Road, Watauga, Texas, in accordance with the Texas Local Government Code Chapter 252.


Zolaina R. Parker, City Secretary, TRMC



ADDENDA TO CONTRACT

All addenda that are posted for this project shall be filed behind this cover sheet and acknowledged on Section 00 41 00, "Bid Form," and Section 00 52 00, "Agreement."

INSTRUCTIONS TO BIDDERS

I-1. DEFINED TERMS

Terms used in these Instructions to Bidders which are defined in the Standard General Conditions of the Construction Contract (EJCDC C-700, Copyright © 2007) have the meanings assigned to them in the General Conditions. The term "Bidder" means one that submits a bid directly to Owner, as distinct from a sub-bidder, who submits a bid to a Bidder. The term "Successful Bidder" means the lowest, qualified, responsible and responsive Bidder to whom Owner (on the basis of Owner's evaluation as hereinafter provided) makes an award. The term "Bidding Documents" includes the Advertisement or Invitation to Bid, Instructions to Bidders, the Bid Form, and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids).

I-2. COPIES OF BIDDING DOCUMENTS

2.1 Complete sets of the Bidding Documents in the number and for the deposit sum, if any, stated in the advertisement or invitation to bid may be obtained from the Issuing Office.

2.2 Complete sets of Bidding Documents must be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.3 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids on the Work and do not confer a license or grant for any other use.

I-3. QUALIFICATIONS OF BIDDERS

To demonstrate qualifications to perform Work, each Bidder must be prepared to submit within five (5) days of Owner's request written evidence, such as financial data, previous experience, present commitments and other such data as may be called for below (or in the Supplementary Instructions). Each Bid must contain evidence of Bidder's qualification to do business in the jurisdiction where the Project is located or covenant to obtain such qualification prior to award of the contract.

I-4. EXAMINATION OF CONTRACT DOCUMENTS AND SITE

4.1 It is the responsibility of each Bidder before submitting a Bid to (a) examine the Contract Documents thoroughly, (b) visit the site to become familiar with local conditions that may affect cost, progress, performance or furnishing of the Work, (c) consider federal, state and local Laws and Regulations that may affect cost, progress, performance or furnishing of the Work, (d) study and carefully correlate Bidder's observations with the Contract Documents, and (e) notify Engineer of all conflicts, errors or discrepancies in the Contract Documents.

4.2 Reference is made to the Supplementary Conditions for identification of:

4.2.1 Those reports of explorations and tests of subsurface conditions at the site which have been utilized by Engineer in preparation of the Contract Documents. Bidder may rely upon the accuracy of technical data contained in such reports but not upon nontechnical data, interpretations or

INSTRUCTIONS TO BIDDERS

opinions contained therein or for the completeness thereof for the purposes of bidding or construction.

4.2.2 Those drawings of physical conditions in or relating to existing surface and subsurface conditions (except Underground Facilities) which are at or contiguous to the site which have been utilized by Engineer in preparation of the Contract Documents. Bidder may rely upon the accuracy of the technical data contained in such drawings but not upon the completeness thereof for the purposes of bidding or construction.

4.2.3 Copies of such reports and drawings will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the technical data contained therein upon which Bidder is entitled to rely as provided in Paragraphs 4.2.1 and 4.2.2 are incorporated therein by reference. Such technical data has been identified and established in the Supplementary Conditions.

4.3 Information and data reflected in the Contract Documents with respect to Underground Facilities at or contiguous to the site is based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities or others, and Owner does not assume responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Supplementary Conditions.

4.4 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders on subsurface conditions, Underground Facilities and other physical conditions, and possible changes in the Contract Documents due to differing conditions appear in Paragraphs 4.2 and 4.3 of the General Conditions.

4.5 Before submitting a Bid, each Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests and studies and obtain any additional information and data which pertain to the physical conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the Work and which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price and other terms and conditions of the Contract Documents.

4.6 On request in advance, Owner will provide each Bidder access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a Bid. Bidder shall fill all holes, clean up and restore the site to its former condition upon completion of such explorations.

4.7 The lands upon which the Work is to be performed, rights-of-way and easements for access thereto and other lands designated for use by Contractor in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by Contractor. Easements for permanent structures or permanent changes in existing structures are to be obtained and paid for by Owner unless otherwise provided in the Contract Documents.

4.8 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is

INSTRUCTIONS TO BIDDERS

premised upon performing and furnishing the Work required by the Contract Documents and such means, methods, techniques, sequences or procedures of construction as may be indicated in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

I-5. INTERPRETATIONS AND ADDENDA

5.1 All questions about the meaning or intent of the Contract Documents are to be directed to Engineer. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than five (5) days prior to the date for opening of Bids may not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

5.2 Addenda may also be issued to modify the Bidding Documents as deemed advisable by Owner or Engineer.

I-6. CONTRACT TIME

The time for Substantial Completion is to be inserted in the Bid Form by the Bidder.

I-7. LIQUIDATED DAMAGES

Provisions for liquidated damages, if any, are set forth in the Agreement.

I-8. SUBSTITUTE OR "OR-EQUAL" ITEMS

The Contract, if awarded, will be on the basis of materials and equipment described in the Drawings or specified in the Specifications without consideration of possible substitute or "or equal" items. Whenever it is indicated in the Drawings or specified in the Specifications that a substitute or "or- equal" item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the Effective Date of the Agreement. The procedure for submission of any such application by Contractor and consideration by Engineer is set forth in Paragraphs 6.7.1, 6.7.2 and 6.7.3 of the General Conditions and may be supplemented in the General Requirements.

I-9. SUBCONTRACTORS, SUPPLIERS AND OTHERS

9.1 In contracts where the Contract Price is on the basis of Cost-of-the-Work Plus a Fee, the apparent Successful Bidder, prior to the Notice of Award, shall identify in writing to Owner those portions of the Work that such Bidder proposes to subcontract and after the Notice of Award may only subcontract other portions of the Work with Owner's written consent.

9.2 No Contractor shall be required to employ any Subcontractor, Supplier, other person or organization against whom Contractor has reasonable objection.

INSTRUCTIONS TO BIDDERS

I-10. BID FORM

10.1 The Bid Form is included with the Bidding Documents; additional copies may be obtained from Engineer (or the issuing office).

10.2 All blanks on the Bid Form must be completed electronically and printed.

10.3 Bids by corporations must be executed in the corporate name and signed by a partner or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation must be shown below the signature.

10.4 Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature.

10.5 All names must be typed or printed below the signature.

10.6 The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which must be filled in on the Bid Form).

10.7 The address and telephone number for communications regarding the Bid must be shown.

I-11. SUBMISSION OF BIDS

Bids are to be submitted to the City of Watauga City Hall, Purchasing Department, 7105 Whitley Road, Watauga, Texas 76148 and shall be enclosed in an opaque sealed envelope, marked with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted) and name and address of the Bidder and accompanied by other required documents. If the Bid is sent through the mail or other delivery system the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face of it.

I-12. MODIFICATION AND WITHDRAWAL OF BIDS

12.1 Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

I-13. OPENING OF BIDS

Bids will be opened as indicated in the Advertisement to Bid. An abstract of the amounts of the base Bids and major alternates (if any) will be made available to Bidders after the opening of Bids.

INSTRUCTIONS TO BIDDERS

I-14. BIDS TO REMAIN SUBJECT TO ACCEPTANCE

All bids will remain subject to acceptance for sixty (60) days after the day of the Bid opening, but Owner may, in its sole discretion, release any Bid prior to that date.

I-15. AWARD OF CONTRACT

15.1 Owner reserves the right to reject any and all Bids, to waive any and all informalities not involving price, time or changes in the Work, and the right to disregard all nonconforming, nonresponsive, unbalanced or conditional Bids. Also, Owner reserves the right to reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by Owner. Discrepancies in the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

15.2 In evaluating Bids, Owner will consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

15.3 Owner may consider the qualifications and experience of Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work as to which the identity of Subcontractors, Suppliers, and other persons and organizations must be submitted as provided in the Supplementary Conditions. Owner also may consider the operating costs, maintenance requirements, performance data and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to the Notice of Award.

15.4 Owner may conduct such investigations as Owner deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of Bidders, proposed Subcontractors, Suppliers and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to Owner's satisfaction within the prescribed time.

15.5 If the contract is to be awarded, it will be awarded to the lowest responsive and responsible Bidder whose evaluation by Owner indicates to Owner that the award will be in the best interests of the Project and the City.

15.6 If the contract is to be awarded, Owner will give the Successful Bidder a Notice of Award within sixty (60) days after the day of the Bid opening.

INSTRUCTIONS TO BIDDERS

I-16. SIGNING OF AGREEMENT

When Owner gives a Notice of Award to the Successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement with all other written Contract Documents attached. Within fifteen (15) days thereafter Contractor shall sign and deliver the required number of counterparts of the Agreement. Within ten (10) days thereafter Owner shall deliver one (1) fully signed counterpart to Contractor. Each counterpart is to be accompanied by a complete set of the Drawings with appropriate identification.

I-17. BID SECURITY

A bid security is required.

Each Contractor submitting a Bid shall accompany his Bid with either a certified or cashier's check payable to the City of Watauga, upon a national or state bank, or a Bid Bond from a reliable surety company authorized to do business in the State of Texas, in an amount of not less than five (5) percent of the total amount bid, payable without recourse to the City of Watauga, as a guarantee that the selected Bidder will comply with the terms set forth in the Bid and as stated in the Invitation to Bid and in the Supplementary Conditions.

The bid security of the successful Bidder will be retained until the Bidder has executed the Agreement and furnished the required Contract Security, whereupon checks furnished as bid security will be returned; if the Bidder fails to execute and deliver the Agreement and furnish the required Contract Security within ten (10) days of the Notice of Award, Owner may annul the Notice of Award and the bid security of that Bidder will be forfeited. The bid security of any Bidder whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the seventh (7th) day after the executed Agreement is delivered by Owner to Contractor and the required Contract Security is furnished but not to exceed sixty (60) days after the Bid opening. Checks furnished as bid security by other Bidders will be returned within sixty (60) days of the Bid opening.

I-18. STANDARD TERMS AND CONDITIONS

18.1 The City of Watauga requires that the following standard terms and conditions pertain to this project. These may only be superseded, in whole or in part, by the General Instructions and Information, Scope of Work, or data contained herein.

18.2 **Agreement:** this Bid, when properly accepted by the City, shall constitute a contract equally binding between the successful Bidder and the City. No different or additional terms shall become a part of this contract with the exception of change orders issued by the City.

18.3 **Contract Administration:** under this contract, the City of Watauga may appoint a Contract Administrator with designated responsibility to insure compliance with contract requirements. This includes, but is not limited to, acceptance, inspection, actual performance testing, and delivery. Actual performance testing shall be accomplished with the assistance and resources of the vendor. The Contract Administrator shall serve as liaison between the using

INSTRUCTIONS TO BIDDERS

department and the successful Bidder. Purchasing shall be kept informed of any adverse situations relating to the award of this Bid.

18.4 Alternate Award: The City of Watauga reserves the right to award a Bidder as an “alternate award”. The alternate Bidder’s Bid shall remain in effect for the term of the awarded contract. Should the primary Bidder become unable or unwilling to complete the contract term; the alternate Bidder will be notified in writing of their official contract and start date. All terms and conditions of the original Bid will remain in effect.

18.5 Identical Bids: in the event of two or more identical low Bids, the contract shall be awarded as prescribed by Texas Local Government Code Chapter 271, subchapter Z, Section 271.901.

18.6 Pricing: price(s) bid must be held firm for sixty (60) days to allow for evaluation and approval unless otherwise noted in the bid documents.

18.7 Payment: will be made upon receipt of goods/completion of services and acceptance by the City and receipt of valid invoice. All payment terms shall be net 30, and shall be made on approved invoices in accordance with the Texas Prompt Payment Act.

18.8 Delivery or Contract Completion Date: Bidder shall provide a delivery or contract completion date if requested on Bid Response Form. This date may, where time is of the essence, determine the award. If the successful Bidder accepts the City’s order, but does not deliver in the specified time, thereby causing penalties, fees or other actual expenses to the City, the City reserves the right to pass along these expenses to Bidder. Consistent failure to meet delivery promises without valid reason may be cause for removal from the Bidder’s list. When delivery delays can be foreseen, the Bidder shall give prior notice to Purchasing which shall have the right to extend the delivery due date if reasons for delay appear acceptable. Default in promised delivery, without acceptable reasons, or failure to meet specifications, authorizes the City to purchase the goods elsewhere, and charge any increase in cost and handling to the defaulting Bidder.

18.9 Correspondence: the Bid Number must appear on all correspondence, inquiries, etc., pertaining to the Bid.

18.10 Funding: the City of Watauga is a home-rule, municipal, government operated and funded on October 1st to September 30th fiscal year; accordingly, the City reserves the right to terminate, without liability to the City, any contract for which funding is not available.

18.11 Assignment: the successful Bidder shall not assign, sell, transfer, or convey this contract in whole or in part, without the prior written consent of the City of Watauga. Such consent shall not relieve the assignor of liability in the event of default by the assignee.

18.12 Liens: the successful Bidder agrees to and shall indemnify and save harmless the City against any and all liens and encumbrances for all labor, goods, and services which may be provided under the City’s request, by seller or seller’s vendor(s). Upon request, a proper release for all liens, or satisfactory evidence of freedom from liens, shall be delivered to the City.

INSTRUCTIONS TO BIDDERS

18.13 **Audit:** the City of Watauga reserves the right to audit the records, as it pertains to this Bid, and performance of the successful Bidder during the term of the contract and for three (3) years after the contract is completed.

18.14 **Insurance:** the City of Watauga requires Bidder(s) to carry the minimum insurance as required by state law.

18.15 **Protest:**

18.15.1 All protests regarding the Bid solicitation process must be submitted in writing to the City Purchasing Office within five (5) working days following the opening of Bids. This includes all protests relating to advertising of bid notices, deadlines, bid opening, and all other related procedures under the Local Government Code, as well as any protest relating to alleged improprieties with the bidding process.

18.15.2 This limitation does not include protests relating to staff recommendations as to award of this Bid. Protests relating to staff recommendations may be directed to the City Council by contacting the City Secretary.

18.15.3 Failure to protest within the time allotted shall constitute a waiver of any protest.

18.16 **Late Bids:** Bids will not be accepted after the date and time indicated. The City of Watauga is not responsible for the lateness of mail, carrier, courier, or any other form of delivery service chosen by the bidder.

18.17 **Altering Bids:** Bid cannot be altered or amended after submission deadline. Any interlineations, alteration, or erasure made before submission deadline, must be initialed by the signer of the Bid, guaranteeing authenticity.

18.18 **Presentation of Bids:** no oral, telegraphic, telephonic, or facsimile Bids will be considered unless otherwise noted.

18.19 **Modifications and Amendments:** the City shall have the right to modify this order subject to adjustment(s) in the price in accordance with the applicable provisions of the purchase order, if any, or pursuant to mutual agreements. No agreement or understanding to modify this order shall be binding on the City unless it is in writing and signed by the authorized representative of the City.

18.20 **Exceptions, Substitutions and Deviations:** Bidders taking exception to the specifications indicated herein must be clearly stated on attached sheets. The absence of such exceptions shall indicate that Bidder has not taken exceptions and items offered are in strict compliance with the specifications and successful Bidder(s) will be held responsible thereof. The City reserves the right to accept any and/or all of the exception(s), substitution(s), or deviation(s) as deemed to be in the best interest of the City. Bidders will not be allowed to make unauthorized substitutions after award is made.

INSTRUCTIONS TO BIDDERS

18.21 Bidder Shall: defend, indemnify, and save harmless the City, and all its officers, agents, and employees from all suits, actions, or other claims of any character, name, and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property because of any negligent act or fault of the bidder, or of any agent, employee, subcontractor, or supplier in the execution of, or performance under, any contract which may result from proposed award. Bidder indemnifies and will indemnify and save harmless the City from liability, claim, or demand on their part, agents, servants, customers, and/or employees whether such liability, claim, or demand arise from event or casualty happening or within the occupied premises themselves or happening upon or in any of the halls, elevators, entrances, stairways, or approaches of or to the facilities within which the occupied premises are located. Bidder shall pay any judgment with costs that may be obtained against the City growing out of such injury or damages.

18.22 Compliance with Laws: Bidder shall give all notices and comply with all federal, state, and local laws, ordinances, rules and regulations, and lawful orders of any public authority bearing on the performance of the services. This agreement and the rights and obligations of the parties hereto shall be interpreted, construed and enforces in accordance with the laws of the State of Texas. The Bidder warrants and covenants to the City that all services will be performed in compliance with all applicable federal, state, county, and city health and safety codes, rules and ordinances including, but not limited to, the Texas Industrial Safety and Health Act, and the Workers Right to Know Law.

18.23 Historically Underutilized Businesses (HUB): HUB businesses are strongly encouraged to participate in all purchasing activities of the City. While this is an important goal of the City, it may not necessarily be a determining factor in the award criteria, except where required by state or city laws, ordinances, statutes, etc. If an HUB goal has been established for the Bid, the applicable documents must be submitted within five business days after the Bid opening date, exclusive of the Bid opening date.

18.24 Payment, Performance, and Maintenance Bonds: When Payment, Performance, and/or Maintenance Bonds are required, the Bidder must provide the bonds, in the amounts and on the conditions required, within fourteen (14) business days after notification of award, or as otherwise required by the specifications.

18.25 Wages: Bidder shall comply with all applicable provisions of the Federal Fair Labor Standards Act (FLSA), and shall indemnify, defend, and hold harmless the City, its officers, employees, and agents from any and all liability, including but not limited to, wages, overtime pay, Social Security, unemployment, Federal Income Withholding Taxes, liquidated damages, penalties, court costs, and attorney's fees arising under any wage and hour law, including but not limited to, FLSA, for work performed by bidder employees for which the City may be found jointly or solely liable. In the advent of a Public Works project, the City and the contract are also governed by the Davis-Bacon prevailing wage rate.

18.26 Termination of Contract: this contract shall remain in effect until contract expires, delivery and acceptance of products and/or performance of services ordered. The contract may also be terminated by either party with thirty (30) days written notice prior to any cancellation. The

INSTRUCTIONS TO BIDDERS

City reserves the right to award the canceled contract to next lowest Bidder as it deems to be in the best interest of the City.

18.27 **Termination for Default:**

18.27.1 The City of Watauga reserves the right to enforce the performance of this contract in any manner prescribed by law or deemed to be in the best interest of the City in the event of breach or default of this contract. The City reserves the right to terminate the contract immediately in the event the successful Bidder fails to do any of the following:

- Meet schedules
- Make payment of any fees
- Perform in accordance with these specifications
- Keep equipment functional

18.27.2 In the event the successful Bidder shall fail to perform, keep, or observe any of the terms and conditions, the City shall give the Bidder written notice of such default. If said default is not remedied to the satisfaction and approval of the City within ten (10) working days of receipt of such notice by Bidder, default shall be declared and all the Bidder's rights shall terminate. The Bidder, in submitting this Bid, agrees that the City shall not be liable to persecution for damages in the event that the City declares the Bidder in default.

18.28 **Termination for Convenience:** this contract may be cancelled or terminated at any time by giving vendor thirty (30) days written notice. Bidder may be entitled to payment for services actually performed; to the extent said services are satisfactory.

18.29 **Termination for Insolvency:** the City may terminate this contract/agreement forthwith if any of the following occur:

- Insolvency of Bidder: Bidder shall be deemed to be insolvent if it has ceased to pay its debts for at least sixty (60) days in the ordinary course of business, whether or not a petition has been filed under the Federal Bankruptcy Code and whether or not is insolvent within the meaning of such laws.
- The filing of a voluntary or involuntary petition regarding Bidder under the Federal Bankruptcy Code
- The appointment of a receiver or trustee for Bidder
- The execution by Bidder of a general assignment for the benefit of creditor

18.30 **Termination Without Cause:** the City shall have the right to terminate the contract, in whole or in part, without cause any time upon thirty (30) days prior written notice. Upon receipt of a notice of termination, the Bidder shall promptly cease placing orders and all further work pursuant to the contract, with such exceptions, if any, specified in the notice of termination. The City shall pay the Bidder, to the extent funds are appropriated or otherwise legally available for such purposes, for all goods delivered and services performed, and obligations incurred prior to the date of termination in accordance with the terms hereof.

18.31 **Waiver:** no waiver by either party of any breach or any provision of this contract shall constitute a waiver of any other breach or of such provision. Failure of either party to enforce at

INSTRUCTIONS TO BIDDERS

any time, or from time to time, any provision of this contract shall not be construed as a waiver thereof.

18.32 **Severability:** if any provision of the contract or the applicable thereof to any person or circumstances is held invalid, the remainder of this contract and the application of such provision to other persons or circumstances shall not be affected.

18.33 **Testing:** the City of Watauga reserves the right to test equipment, supplies, material, and goods for quality, compliance with specifications, and ability to meet the needs of the user. Demonstration units must be available for review upon request. Should the goods or services fail to meet requirements and/or be unavailable for evaluation, the bid is subject to rejection.

18.34 **Remedies:** the successful Bidder and the City of Watauga agree that each party have all rights, duties, and remedies available as stated in the Uniform Commercial Code.

18.35 **Venue:** this agreement will be governed and construed according to the laws of the State of Texas. This agreement is performable in the City of Watauga, Tarrant County, Texas.

18.36 **Silence of Specifications:** the apparent silence of specifications as to any detail, or the apparent omission from it of a detailed description concerning any point, shall be regarded as meaning that only the best commercial products and practices are to prevail and that only material and workmanship of the finest quality are to be used. All interpretations of the specifications in this bid shall be made on the basis of this statement. The items furnished under this contract shall be new, unused, of the latest product in production to commercial trade, and shall be of the highest quality as to materials used and workmanship. Manufacturer furnishing these shall be experienced in design and construction of such items and shall be an established supplier of the item bid.

18.37 **No Bids:** if Bidder does not wish to bid at this time but wishes to remain on the bid list for this product/service, please submit a “no bid” form by the same time and at the same location as stated for bidding. If response is not received in the form of a “bid” or “no bid” for three consecutive requests, vendor shall be removed from the bid list. If however, you choose to “no bid” this product and/or service and wish to remain on bid list for other commodities and/or services, please state particular product and/or service under which you wish to be classified. The City of Watauga is very conscious and extremely appreciative of the time and effort you have expended to submit a bid. We would appreciate you indicating on your “no bid” response any requirements of this bid request, which may have influenced your decision to “no bid”.

18.38 **F.O.B. / Damage:** Bids shall be F.O.B. inside delivery and shall include all delivery and packaging costs. The City of Watauga assumes no liability for goods delivered in damaged or unacceptable condition. The successful Bidder shall handle all claims with carriers, and in case of damaged goods, shall ship replacement goods immediately upon notification of damage by the City.

18.39 **Destination Charges:** all products offered shall be F.O.B. City of Watauga. All applicable freight and delivery charges (if applicable) shall be a separate line item and included in the total bid price.

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18.40 Packaging: unless otherwise indicated, items will be new, unused, and in first class condition in containers suitable for damage-free delivery and storage. The cost of all special packaging, box crating, or cartage shall be included in the pricing specified on the response unless otherwise specifically stated in the City's request. All packaging, crating, or other debris resulting from delivery or set-up of the commodity purchased shall be removed and properly disposed of by the successful Bidder.

18.41 Bid Openings

18.41.1 All Bids submitted will be read or acknowledged at the City's regularly scheduled opening for the designated project. However, the reading of a Bid at Bid Opening should not be construed as a comment on the responsiveness of such Bid or as any indication that the City accepts such Bid as responsive.

18.41.2 The City will make a determination as to the responsiveness of Bids submitted based upon compliance with all applicable laws, City of Watauga purchasing guidelines, and project documents, including but not limited to, the project specifications and contract documents. The City will notify the successful Bidder upon award of the contract and, according to state law all Bids received will be available for inspection at that time.

18.42 Terms: the terms and conditions of the Bid will be considered when evaluating for award. The City will compute and consider prompt payment discounts, if any, offered by a Bidder in determining the low Bid.

18.43 Pre-Printed Terms and Conditions / Bidders Contract Documents: Bidders pre-printed terms and conditions or restrictions commonly appearing or attached with the Bid and/or Bidder's specification material and contract documents will be disregarded in the absence of a noticeable written statement from Bidder that all or a particular portion of such writing are in addition to or supersede the City terms and conditions. Even with a written statement from Bidder, City's terms and conditions may prevail.

18.44 Right of Inspection: City shall have the right to inspect the goods upon delivery before accepting them. Bidder shall be responsible for all charges for the return to Bidder of any goods rejected as being nonconforming under the specifications.

18.45 Products: supplied under this contract shall be subject to the City's approval. Product(s) found defective or not meeting specifications shall be picked up and replaced by the Bidder within ten (10) working days at no expense to the City. If product is not picked up within twenty (20) working days after notification, the item shall become a donation to the City of Watauga for disposition.

18.46 Warranty: guarantees and warranties shall be attached as a part of the Bid as they shall be a consideration in awarding the contract. The successful Bidder shall warrant that all products/services shall conform to the proposed specifications and/or all warranties as stated in the Uniform Commercial Code and be free from all defects in material, workmanship, and title. If any of the work in accordance with this Bid is found to not be in accordance with the requirements of

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the documents, the Bidder shall correct such work promptly after receipt of written notice from the City, Architect, Engineer, or other entity as the Bid documents may provide. This obligation shall survive acceptance of the work under the contract and termination of this contract. If supplier fails within a reasonable time after written notice, to correct defective work, to remove and replace rejected work, or supplier fails to comply with any provision in the contract document, either the City or its designee may, after ten (10) days written notice to Bidder, correct and remedy any such deficiency and bill said Bidder for actual expenses incurred.

18.47 Manufacturer's Standard Warranty: will be required in writing with delivery of product. If this Bid involves the lease or purchase of machinery and equipment that may be subject to future recalls, the supplier agrees to notify the City of any such recall.

18.48 Design, Strength, and Quality: of materials must conform to the highest standards of manufacturing practice.

18.49 Purchase Order: the City of Watauga shall generate a purchase order to the successful Bidder. The purchase order number must appear on all itemized packing slips and invoices. The City will not be responsible for any orders placed and/or delivered without a valid purchase order.

18.50 Packing Slips: or other suitable documents shall accompany the commodity(s) and shall show:

- Name and billing address of company
- Name and address of receiving department and/or delivery location
- City of Watauga purchase order number
- Descriptive information as to the item(s) delivered, including product code, item number, quantity, number of units, etc.

18.51 Change Orders: no oral statement of any person shall modify or otherwise change, or effect the terms, conditions, or specifications stated in the resulting contract. All change orders to the contract will be made by the City of Watauga in writing. Purchasing shall be informed at all times of any change orders.

18.52 Title and Risk of Loss: the title and risk of loss of goods shall not pass to the City of Watauga until the City actually receives and takes possession of the goods at the point(s) of delivery, after inspection and the acceptance of goods.

18.53 Conflict of Interest: no public official shall have interest in this contract, in accordance with the Texas Local Government Code Subtitle C, Chapter 171. Bidders will be required to submit a Conflict of Interest Questionnaire, stating that no officer or employee of the City has, or will have; during the said term of this contract any prohibited interest as defined. The Bidder understands that any existence of a prohibited interest at any time during the term of contract will render the contract voidable.

18.54 Disclosure of Interest: Pursuant to Chapter 176 of the Texas Local Government Code, a person, or agent of a person, who contracts or seeks to contract for the sale or purchase of property, goods, or services with the City of Watauga must file a completed Conflict of Interest Questionnaire which is included in this solicitation or available at www.ethics.state.tx.us The

INSTRUCTIONS TO BIDDERS

Conflict of Interest Questionnaire must be filed with the City of Watauga no later than the seventh business day after the person or agent begins contract discussions or negotiations with the City or submits to the City an application, response to a Request for Proposal or Bid, correspondence, or writing related to a potential agreement. An updated Conflict of Interest Questionnaire must be filed in accordance with Chapter 176 of the Local Government Code. An offense under Chapter 176 is a Class C misdemeanor.

18.55 **Certificate of Interested Parties:**

18.55.1 In 2015 the Texas Legislature adopted House Bill 1295, which added section 2252.908 of the Government Code and applies to all contracts entered into on or after January 1, 2016. The law states that a governmental entity may not enter into certain contracts with a business entity unless the business entity submits a disclosure of interested parties to the governmental entity at the time the business entity submits the signed contract to the governmental entity. The law applies to all contracts/purchases of a governmental entity that require action or vote by the governing body of the entity.

18.55.2 With regards to the City of Watauga, a Bidder that is awarded a contract or purchase that is greater than \$50,000 is required to electronically create a Form 1295 through the Texas Ethics Commission website (<https://www.ethics.state.tx.us>) and submit a signed declaration copy of the form to the City. A contract, including City-issued purchase order, will not be enforceable or legally binding until the City receives and acknowledges receipt of the properly completed Form 1295 from the vendor.

18.56 **Prohibition of Boycott of Israel:**

18.56.1 House Bill 89, effective September 1, 2017, amended the Texas Government Code to add Chapter 2270, Prohibition on contracts with companies boycotting Israel. Effective September 1, 2017, a state agency and a political subdivision (which includes a city) may not enter a contract with a company for goods or services unless the contract contains a written verification from the company that (a) it does not boycott Israel, and (b) will not boycott Israel during the term of the contract.

18.56.2 “Boycott Israel” is defined to mean refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business with Israel or in an Israel-controlled territory, but does not include an action made for ordinary business purposes.

18.56.3 “Company” is defined to mean a for-profit sole proprietorship, or limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company, or affiliate of those entities or business associations that exists to make a profit.

18.57 **Senate Bill 252:**

18.57.1 Senate Bill 252, effective September 1, 2017, prohibits governmental contracts with a company doing business with Iran, Sudan, or a foreign terrorist

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organization. Senate Bill 252 amended the Texas Government Code to add Chapter 2252, Prohibition on contracts with certain companies. This Bill prohibits state agencies from contracting with or investing in companies that do business with Iran or designated foreign terrorist organizations.

18.57.2 “Foreign terrorist organization” means an organization designated as a foreign terrorist organization by the United States Secretary of State as authorized by 8 U.S.C. Section 1189.

18.57.3 “Government contracts” means a contract awarded by a governmental entity for general construction, an improvement, a service, or a public works project or for a purchase of supplies, materials, or equipment. The term includes a contract to obtain a professional or consulting service subject to Chapter 2254.

18.58 **Ethics:** Bidder shall not offer or accept gifts or anything of value nor enter into any business arrangement with any employee, official, or agent of the City. The City may, by written notice to the successful Bidder, cancel this contract without liability to the Bidder if it is determined by the City that gratuities or bribes in the form of entertainment, gifts, or otherwise, were offered or given by the Bidder, its agents, or its representatives to any City officer, employee, or elected representative with respect to the performance of this contract. In addition, the successful Bidder shall be subject to penalties as stated in Title 8 of the Texas Penal Code.

18.59 **Disability:** in accordance with the provisions of the Americans With Disabilities Act of 1990 (ADA), Bidder warrants that it and any and all of its subcontractors will not unlawfully discriminate on the basis of disability in the provision of services to general public, nor in the availability, terms, and/or conditions of employment for applicants for employment with, or employees of vendor or any of its subcontractors. Bidder warrants it will fully comply with ADA’s provisions and any other applicable federal, state, and local laws concerning disability and will defend, indemnify and hold the City harmless against any claims or allegations asserted by third parties or subcontractors against the City arising out of Bidder’s and/or its subcontractor’s alleged failure to comply with the above-referenced laws concerning disability discrimination in the performance of this contract.

18.60 **Employment Eligibility Verification:** Bidder warrants that it fully complies with all federal, state, county, and/or city statutes and regulations regarding the employment of aliens and others, and that all its employees performing work with the City meet the citizenship, or alien status requirements set forth in federal, state, county, and/or city statutes and regulations. Bidder shall indemnify, defend, and hold harmless the City, its officers, agents, and employees from and against any other liability which may be assessed against vendor or City in connection with any alleged violation of any federal, state, county, and/or city statutes or regulations pertaining to the eligibility for employment of any persons performing work hereunder.

18.61 **Nondiscrimination:** Bidder certifies and agrees that all persons employed by it, its affiliates, subsidiaries, or holding companies are and will be treated equally without regard to or because of race, color, religion, ancestry, national origin, sex, age, physical or mental handicap, in compliance with all applicable federal and state anti-discrimination laws and regulations. Bidders shall certify to and comply with EEO regulations.

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18.62 No Third-party Beneficiary: for purposes of this contract, including its intended operation and effect, the parties to this contract specifically agree and contract that: (1) the agreement only affects matters/disputes between the parties to this contract, and is in no way intended by the parties to benefit or otherwise affect any third person or entity, notwithstanding the fact that such third person or entity may be in a contractual relationship with the City or Bidder or both; and (2) the terms of this contract are not intended to release either by contract or operation of law, any third person or entity from obligations owing by them to either the City or Bidder.

18.63 Minimum Standards for Responsible Prospective Bidders: a perspective Bidder must affirmatively demonstrate a Bidder's responsibility. The City of Watauga may request representation and other information sufficient to determine Bidder's ability to meet these minimum standards including but not limited to:

- Have adequate financial resources, or the ability to obtain such resources as required
- Be able to comply with the required or proposed delivery schedule
- Have satisfactory record of performance
- Have a satisfactory record of integrity and ethics
- Not have any outstanding taxes, child support, or other indebtedness to the State of Texas or the City
- Be otherwise qualified and eligible to receive an award

18.64 Award:

18.64.1 The City may award contract to either the lowest responsible Bidder or to the Bidder who provides goods or services at the Best Value. Until final award of the contract, the City reserves the right to reject any or all Bids, to waive technicalities, or propose to do the work otherwise in the best interest of the City.

18.64.2 The City will award contract(s) for goods or services to the lowest responsible bidder that represents the "best value" to the City, price and other factors considered. When determining the best value the City may consider the following per Local Government Code Chapter 252.043:

- The purchase price
- Reputation of the bidder and of the bidder's goods or services
- Quality of the bidder's goods or services
- Extent to which the goods or services meet the City's needs
- Bidder's past relationship with the City
- Impact on the ability of the City to comply with laws and rules relating to contracting with Historically Underutilized Businesses and non-profit organizations employing persons with disabilities
- Total long-term cost to the City to acquire the bidder's goods or services
- Any relevant criteria specifically listed in the request for bid or proposal

18.65 Non-resident Bidders: Texas Government Code, chapter 2252: non-resident Bidders. Texas law prohibits cities and governmental entities from awarding contracts to a non-resident unless the amount of such Bid is lower than the lowest Bid by a Texas resident by the amount a Texas resident would be required to underbid in the non-resident Bidder's state.

INSTRUCTIONS TO BIDDERS

18.66 Withdrawal: A Bid may not be withdrawn or cancelled by the Bidder without permission of the City for a period of sixty (60) days following the date designated for receipt of Bids, and Bidder so agrees upon submittal of their Bid.

18.67 Review of Documents: Bidders are expected to examine, making all necessary investigations required to be fully and thoroughly informed as to all difficulties that may be encountered in the complete execution of all work in accordance with the contract documents. Each Bidder shall examine all specifications, requirements and other data or instructions pertaining to the work. Bidders shall promptly notify the City of Watauga of any omission, ambiguity, inconsistency or error that they may discover upon examination of the documents. The City assumes no responsibility for any errors or misrepresentations that result from incomplete Bids. No plea of ignorance of conditions that exist, or difficulties or conditions concerning the work to be performed, or execution of the work shall be accepted as an excuse for any failure or omission on the part of specifications documents governing the work. The Bidder(s) awarded the contract shall not be allowed any extra compensation by reason of any matter or aspect prior to the bidding.

18.68 Ownership of Documents: Original documents, including plans, designs, and notes developed in connection with services or commodities provided hereunder belong to, and shall remain the property of the City. The vendor may receive reproducible copies of such documents upon request. Some of these documents, if patented, trade secrets or proprietary in any way, and are so noted in the proposal, may not be a subject to the Texas Open Records Act, Chapter 252, Subchapter C, Section 252.048 (Vernon's Texas Codes Annotated).

18.69 Proprietary Information: All material submitted to the City of Watauga becomes public property and is subject to the Texas Open Records Act upon receipt. If a Bidder does not desire proprietary information in the Bid to be disclosed, each page must be identified and marked proprietary at the time of submittal. The City will, to the extent allowed by law, endeavor to protect such information from disclosure. The final decision as to what information must be disclosed, however, lies with the Texas Attorney General. Failure to identify proprietary information will result in all unmarked sections being deemed non-proprietary and available upon public request.

18.70 Default:

18.70.1 The City of Watauga reserves the right to enforce the performance of the contract in any manner prescribed by law or deemed to be in the best interest of the City in the event of breach or default of this contract. The City of Watauga reserves the right to terminate the contract immediately in the event the successful Bidder fails to:

1. Substantially meet delivery or completion schedules
2. Otherwise, substantially perform in accordance with the accepted proposal

18.70.2 Breach of contractor or default authorizes the City to award to another Bidder, purchase elsewhere and charge the full increase in cost and handling to the defaulting party.

INSTRUCTIONS TO BIDDERS

18.71 **Addendum:**

18.71.1 Any interpretations, corrections, changes or any other clarifications to this Bid document will be issued in the form of written addenda. The City, its agents and employees shall not be responsible for any information given by way of verbal communication.

18.71.2 Addenda shall be sent to all who are known to have received a copy of the Bid. Bidders shall acknowledge receipt of all addenda. Interpretations, corrections, or changes to the Bid made in any other manner are not binding upon the City of Watauga, and Bidders shall not rely upon such interpretations, corrections, or changes.

18.71.3 Oral explanations or instructions given before the award of the contract are not binding. It is the sole responsibility of the Bidder to ensure that all available information has been received prior to submission. The City will not be held liable for any addenda information not received by Bidder.

18.72 **Tax Exempt:** The City of Watauga is exempt from Federal Excise and State Sales Tax; therefore, tax must not be added to Bid. A tax-exempt form shall be furnished to the successful Bidder upon request. Under no circumstances shall the City of Watauga be liable to pay taxes for which the City has an exemption.

18.73 **Price Fixing/Collusion:** In submitting a Bid to this request, the Bidder thereby certifies that the Bidder has not participated in nor been party to any collusion, price fixing, or any other agreements with any company, firm, or person concerning the pricing on the enclosed Bidder.

18.74 **Bid Ambiguity:** Any ambiguity in the Bid as a result of omission, error, lack of clarity or non-compliance by the Bidder with the specifications, instructions, and all conditions of Bidder shall be construed in the favor of the City. The City reserves the right to request additional information or clarification from Bidders, or to allow corrections of errors or omissions.

18.75 **Force Majeure:** Neither party shall be required to perform any term, condition or covenant in this contract so long as such performances are delayed or prevented by force majeure, which shall mean acts of God, strikes, lockouts, material or labor performance restrictions by any governmental authority, civil riots, floods, and any other cause not reasonably within the control of the party required to perform and which by the exercise of due diligence said party is unable, wholly or in part, to prevent or overcome.

18.76 **Taxes, Unemployment Benefits, Etc.:** The successful Bidder hereby accepts exclusive liability for, and agrees to indemnify the City against liability for the payment of any and all contributions or taxes for unemployment insurance, old age pensions or annuities or other purposes now or hereafter imposed by the Government of the United States and/or by the Government of any State of the United States, which are in whole or in part measured by and/or based upon the wages, salaries, or other remuneration paid to persons employed by the successful Bidder on work in connection with this contract.

BID FORM

TO: City of Watauga
Purchasing Department
7105 Whitley Road
Watauga, Texas 76148
817-514-5833

FOR: Starnes Road 16" Water Line
Watauga, Texas

The undersigned, as bidder, declares that the only person or parties interested in this bid as principals are those named herein, that this bid is made without collusion with any other person, firm, or corporation; that he has carefully examined the form of Contract, Notice to Bidders, Specifications, and the Plans therein referred to, and has carefully examined the locations, conditions and classes of materials of the proposed work; and agrees that he will provide all the necessary labor, machinery, tools, apparatus, and other items incidental to construction, and will do all the work and furnish all the materials called for in the Contract and Specifications in the manner prescribed therein and according to the requirements of the Engineer as therein set forth.

It is understood that the following quantities of work to be done at unit prices are approximate only, and are intended principally to serve as a guide in evaluating bids.

It is further agreed that the quantities of work to be done and materials to be furnished may be increased or diminished as may be considered necessary, in the opinion of the Engineer, to complete the work fully as planned and contemplated, and that all quantities of work, whether increased or decreased are to be performed at agreed prices set forth except as provided for in the Specifications.

It is further agreed that the contract is a unit price contract and unit prices are provided to allow for additional work. Prices may be increased to cover additional work ordered by the Engineer, but not shown on the plans or required by the Specifications, in accordance with the provisions of the General Conditions. Similarly, they may be decreased to cover deletion of work so ordered.

The contractor shall bid an amount of time for the work to be substantially complete on page 2 of the Bid Form.

The Contractor, as bidder, hereby proposes and agrees to furnish the work on a unit price Contract based on the construction plans for the following stipulated amounts:

BID FORM

ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	UNIT PRICE	COST
1	Prepare and Restore Right-of-Way	LS	1	\$ -	\$ -
2	Remove Existing 16" Dia. Water Line	LF	126	\$ -	\$ -
3	Remove Existing 12" Dia. Water Line	LF	20	\$ -	\$ -
4	Remove Existing 8/6" Dia. Water Line	LF	150	\$ -	\$ -
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ -	\$ -
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	8	\$ -	\$ -
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ -	\$ -
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ -	\$ -
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ -	\$ -
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ -	\$ -
11	16" Gate Valve and Box	EA	6	\$ -	\$ -
12	12" Gate Valve and Box	EA	2	\$ -	\$ -
13	8" Gate Valve and Box	EA	9	\$ -	\$ -
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftgs, 6" Pipe	EA	6	\$ -	\$ -
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ -	\$ -
16	Ductile Iron Fittings	TONS	7.1	\$ -	\$ -
17	2" Combination Air Release Valve & Vault with Offset	EA	1	\$ -	\$ -
18	Temporary 2" Blow Off /Sample point	EA	2	\$ -	\$ -
19	Salvage Existing Fire Hydrant	EA	3	\$ -	\$ -
20	Abandon Existing Water Valve	EA	15	\$ -	\$ -
21	Connect to Existing 16" Water Line	EA	4	\$ -	\$ -
22	Connect to Existing 12" Water Line	EA	1	\$ -	\$ -
23	Connect to Existing 6/8" Water Line	EA	8	\$ -	\$ -
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ -	\$ -
25	Long Double Water Service	EA	13	\$ -	\$ -
26	Short Double Water Service	EA	25	\$ -	\$ -
27	Short Single Water Service	EA	4	\$ -	\$ -
28	Water Service Transfer	EA	42	\$ -	\$ -
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ -	\$ -
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ -	\$ -
31	Remove and Replace Existing Mono Curb	LF	347	\$ -	\$ -
32	Remove and Replace Existing Concrete Sidewalk	SF	1,096	\$ -	\$ -
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ -	\$ -
34	Remove and Replace Existing Curb Ramps	EA	10	\$ -	\$ -
35	Remove and Replace Existing Concrete Pavement	LF	4,064	\$ -	\$ -
36	Temporary Asphalt Pavement Replacement incl. Services	LF	4,064	\$ -	\$ -
37	Solid Sodding incl. 4" Thick Topsoil	SY	302	\$ -	\$ -
38	Trench Safety	LF	3,292	\$ -	\$ -
39	Traffic Control Plan and Implementation	LS	1	\$ -	\$ -
40	Erosion Control Plan	LS	1	\$ -	\$ -
41	Project Signs	EA	2	\$ -	\$ -
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ -
	TOTAL				\$ -

NUMBER OF CONSTRUCTION DAYS:

ENTER DAYS

BID FORM

Bidder agrees that the Work will be substantially complete within the amount of calendar days bid on Page 2 of the Bid Form after the date when the Contract Times commence to run as provided in Paragraph 2.03 of the General Conditions, and will be completed and ready for final payment in accordance with Paragraph 14.07B of the General Conditions within an additional thirty (30) calendar days after the date of substantial completion.

It is understood that the Owner reserves the right to reject any and all bids.

The work proposed to be done shall be accepted when fully completed and finished in accordance with the Plans and Specifications to the satisfaction of the City of Watauga, Texas.

The undersigned certifies that the bid prices contained in this proposal have been carefully checked and are submitted as correct and final.

Receipt is hereby acknowledged of the following addenda to the contract documents:

Addendum No. 1 dated _____
Addendum No. 2 dated _____
Addendum No. 3 dated _____

Received _____
Received _____
Received _____

Respectfully submitted,

(SEAL)

If Bidder is Corporation

Date:

(Contractor)
By: _____
Title: _____
Address: _____

Phone: _____

NOTICE OF AWARD

Project: Starnes Road 16" Water Line from Indian Springs Road to Rufe Snow Drive

Owner: City of Watauga

Owner's Contract No.: 18-027

Bidder:

Bidder's Address:

The OWNER has considered the Bid submitted by you on June 13, 2018 (Bid Date) for the above-described work in response to its Advertisement for Bids and Instructions to Bidders.

You are hereby notified that your Base Bid has been accepted for items in the amount of

Seven (7) copies of the proposed Contract Documents, including two (2) copies of the Drawings, accompany this Notice of Award.

Up to Five (5) additional sets of the Drawings will be delivered to you at the Pre-Construction Meeting.

You must comply with the following conditions precedent within 15 days of the date you receive this Notice of Award.

1. Deliver to the Engineer seven (7) fully executed counterparts of the Contract Documents.
2. Deliver with the executed Contract Documents the Contract Bonds and Insurance as specified in the Instructions to Bidders (Paragraph 16) and General Conditions (Article 2).

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Contract Documents.

City of Watauga

Owner

By: _____

Authorized Signature

Engineer

Title

AGREEMENT

THIS AGREEMENT is dated as of the _____ day of _____ in the year 2018 by and between The City of Watauga (hereinafter called OWNER) and _____(hereinafter called CONTRACTOR).

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1 WORK

1.01 CONTRACTOR shall complete all work as specified or indicated in the Contract Documents. The work is generally described as follows:

City Project No. 18-027 Starnes Road 16" Water Line – From Indian Springs Road to Rufe Snow Drive.

ARTICLE 2 ENGINEER

For this agreement, the ENGINEER
is designated as:

Burgess & Niple

3950 Fossil Creek Blvd., Suite 210

Fort Worth, Texas 76137

817-306-1444 Fax 817-306-1555

who is hereinafter called ENGINEER and who is to act as OWNER's representative, assume all duties and responsibilities, and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with completion of the work in accordance with the Contract Documents.

ARTICLE 3 CONTRACT TIME

3.01 All time limits for milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

3.02 The Work will be substantially completed within the amount of calendar days bid on the bid form after the date when the Contract Times commence to run as provided in Paragraph 2.03 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 14.97 of the General Conditions within an additional thirty (30) calendar days after the date of substantial completion.

3.03 LIQUIDATED DAMAGES

- A. OWNER and CONTRACTOR recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the work is not completed within the time specified in paragraph 3.01 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions.
- B. They also recognize the delays, expense, and difficulties involved in proving the actual loss suffered by OWNER if the work is not completed on time.

- C. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty), CONTRACTOR shall pay OWNER the sum of \$500 for each consecutive calendar day that expires after the time specified in paragraph 3.01, or any proper extension thereof granted by OWNER for completion and readiness for final payment.

ARTICLE 4 CONTRACT PRICE

- 4.01 OWNER shall pay CONTRACTOR for completion of the work in accordance with the Contract Documents in current funds of _____ in accordance with the Bid Schedule as awarded by the OWNER as included herein, subject to additions and deductions by Change Order and quantities actually performed.

ARTICLE 5 PAYMENT PROCEDURES

- 5.01 APPLICATION FOR PAYMENT.
A. CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by ENGINEER as provided in the General Conditions.
- 5.02 PROGRESS PAYMENTS.
A. OWNER shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment as recommended by ENGINEER monthly during construction as provided in the General Conditions. All progress payments will be on the basis of the progress of the work measured by the schedule of values established in paragraph 2.07 of the General Conditions (and in the case of Unit Price work based on the number of units completed).
- 5.03 FINAL PAYMENT.
A. Upon final completion and acceptance of the work in accordance with paragraphs 14.07.B and 14.07.C of the General Conditions, OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER as provided in said paragraphs 14.07.B and 14.07.C.

ARTICLE 6 INTEREST

- 6.01 All monies not paid when due as provided in Article 14 of the General Conditions shall bear interest at the rate provided by law at the place of the project.

ARTICLE 7 CONTRACTOR'S REPRESENTATIONS

- 7.01 In order to induce OWNER to enter into this Agreement, CONTRACTOR makes the following representations:
- A. CONTRACTOR has examined and carefully studied the Contract Documents (including the Addenda listed in paragraph 8) and the other related data identified in the Bidding Documents including "technical data."
- B. CONTRACTOR has visited the site and become familiar with and is satisfied as to the general, local, and site conditions that may affect cost, progress, performance, or furnishing of the work.
- C. CONTRACTOR is familiar with and is satisfied as to all federal, state, and local laws and regulations that may affect cost, progress, performance, and furnishing of the work.

- D. CONTRACTOR has examined and agreed with provisions concerning responsibilities for the adequacy of data furnished to prospective BIDDERS with respect to subsurface conditions, other physical conditions and underground facilities, and possible changes in the Contract Documents due to differing or unanticipated conditions appear in paragraphs 4.02, 4.03, and 4.04 of Section 00 70 00, "General Conditions," and Section 00 73 00, "Supplementary Conditions".
- E. CONTRACTOR has obtained and carefully studied (or assumes responsibility for having done so) all such additional supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance, or furnishing of the work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto.
- F. CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the site that relates to the work as indicated in the Contract Documents.
- G. CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.
- H. CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that CONTRACTOR has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 8 CONTRACT DOCUMENTS

- 8.01 The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR concerning the work consist of the following:
 - A. This Agreement.
 - B. Exhibits to this Agreement.
- 8.02 Procurement and Contracting Requirements, Specifications and Supplemental Specifications as listed in Section 00 01 10, "Table of Contents," prepared or issued by Burgess & Niple, dated May 16, 2018.
- 8.03 Drawings prepared by Burgess & Niple, numbered 1 through 18, dated May 16, 2018.
- 8.04 ADDENDUM:

- 8.05 All completed forms including procurement forms and contract forms as listed in Section 00 01 10, "Table of Contents".
- 8.06 The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto: All Written Amendments and other documents amending, modifying, or supplementing the Contract Documents pursuant to paragraphs 3.04.A and 3.04.B of the General Conditions.

There are no Contract Documents other than those listed above in this Article 8. The Contract Documents may only be amended, modified, or supplemented as provided in paragraph 3.04.A or 3.04.B of the General Conditions.

ARTICLE 9 MISCELLANEOUS

- 9.01 Terms used in this Agreement which are defined in Article 1 of the General Conditions will have the meanings indicated in the General Conditions.
- 9.02 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, monies that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.
- 9.03 OWNER and CONTRACTOR each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect of all covenants, agreements, and obligations contained in the Contract Documents.
- 9.04 Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and CONTRACTOR, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- 9.05 The Contract, or any agreement subsidiary thereto, shall not be binding or of any force unless the Finance Director of the City shall endorse thereon a certificate (similar to the legal and Fiscal Officers from, Section 00 56 00) that there remains unexpended or in the process of collection and unapplied, an appropriation or fund applicable thereto and sufficient to pay the estimated expenses of completing this Contract or subsidiary agreement, as certified by the officers making the same.

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed seven (7) copies of this Agreement. Counterparts have been delivered to OWNER, CONTRACTOR, and ENGINEER.

The effective date of this Agreement shall be _____, 2018.

OWNER:

City of Watauga _____

By _____

Name Patrick Shelbourne

Title Mayor

(SEAL)

ATTEST:

By _____

Name _____

(Please Type or Print)

Title _____

Address for giving notices

CONTRACTOR:

By _____

Name _____

Title _____

Address _____

Telephone _____

Employer Identification No. _____

Contractor's License No. _____

(If a corporation, a second officer must sign.)

By _____

Name _____

(Please Type or Print)

Title _____

(SEAL)

ATTEST:

By _____

Name _____

(Please Type or Print)

Title _____

Address for giving notices

(If CONTRACTOR is a corporation, attach
evidence of authority to sign.)

LEGAL AND FISCAL OFFICERS

_____, 2018
Date

The foregoing Agreement is approved as to form

By _____

Name Mark G. Daniel

Title City Attorney, City of Watauga, Texas

I, Patrick Shelbourne, Mayor, hereby certify that I am the qualified and acting fiscal officer of the
City of Watauga, Texas, and that the amount of money to wit _____

_____ required to meet the cost of the attached Agreement between City of Watauga, Texas
and _____, has been lawfully appropriated for the purpose of said Agreement and the money
so appropriated is on deposit (in process of collection) to the credit of the appropriate fund free from any
previous encumbrances.

_____, 2018
Date

By _____

Name Patrick Shelbourne

(SEAL)

Title Mayor

PERFORMANCE BOND

STATE OF TEXAS

§

§

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF TARRANT

§

THAT _____, a corporation organized and existing under the laws of the State of _____, and fully authorized to transact business in the State of Texas, whose address is _____ of the City of _____, County of _____, State of _____, (hereinafter referred to as "Principal"), and (hereinafter referred to as "Surety"), a corporation organized under the laws of the State of _____ and authorized under the laws of the State of Texas to act as Surety on bonds for principals, are held and firmly bound unto City of Watauga (hereinafter referred to as "OWNER") in the penal sum of \$_____ (not less than 100% of the approximate total amount of the Contract as evidenced in the proposal plus 10-percent of the stated penal sum as an additional sum of money representing additional court expenses, attorneys' fees, and liquidated damages arising out of or connected with the below identified Contract) in lawful money of the United States, for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors, and assigns, jointly and severally, firmly by these presents:

WHEREAS, the Principal has entered into a certain written Contract with the OWNER, dated the _____ day of _____, 20____, to which said Contract is hereby referred to and made a part hereof and as fully and to the same extent as if copied at length herein for the construction of Starnes Road 16" Water Line from Indian Springs Road to Rufe Snow Drive.

NOW, THEREFORE, the condition of this obligation is such, that if the said Principal fully and faithfully executes the work and performance of the Contract in accordance with the Plans, Specifications, and Contract Documents, including any extensions thereof which may be granted with or without notice to Surety, during the original term thereof, and during the life of any guaranty required under the Contract, and according to the true intent and meaning of said Contract and the Plans and Specifications hereto annexed, if the Principal shall repair and/or replace all defects due to faulty materials or workmanship that appear within a period of two (2) years from the date of final completion and final acceptance of the work by OWNER; and if the Principal shall fully indemnify and save harmless the OWNER from all costs and damages which OWNER may suffer by reason of failure to so perform herein and shall fully reimburse and repay OWNER all outlay and expense which the OWNER may incur in making good any default or deficiency, then this obligation shall be void; otherwise, to remain in full force and effect; and in case said CONTRACTOR shall fail to do so, it is agreed that the OWNER may do said work and supply such materials and charge the same against said CONTRACTOR and Surety on this obligation. Provided further, that if any legal action be filed on this Bond, venue shall lie in Tarrant County, Texas. PROVIDED, HOWEVER, that this Bond is executed pursuant to the provisions Texas Government Code, Chapter 2253, as amended, and Article 7.19-1 of the Insurance Code, as amended, and all liabilities on this bond shall be determined in accordance with the provisions of said articles to the same extent as if they were fully copied at length herein. Surety, for value received, stipulates and agrees that the bond shall automatically be increased by the amount of any change order or supplemental agreement which increases the Contract price with or without notice to the Surety, but in no event shall a Change Order or Supplemental Agreement which reduces the Contract price decrease the penal sum of this Bond. And further that no change, extension of time, alteration, or addition to the terms of the Contract, or to the work performed thereunder, or the Plans, Specifications, or Drawings accompanying the same shall in

PERFORMANCE BOND

any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Contract or to the work to be performed thereunder. Surety agrees that the bond provides for the repairs and/or replacement of all defects due to faulty materials and workmanship that appear within a period of two (2) years from the date of completion and acceptance of the improvement by the OWNER.

The undersigned and designated agent is hereby designated by Surety herein as the agent resident to whom any requisite notice may be delivered and on whom service of process may be had in matters arising out of such suretyship.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument on this the day of _____, 20____.

WITNESS

PRINCIPAL

Printed/Typed Name: _____

Title: _____

Company: _____

Address: _____

WITNESS

SURETY

Printed/Typed Name: _____

Title: _____

Company: _____

Address: _____

The Resident Agent of the Surety for delivery of notice and service of process is:

Name: _____

Address: _____

Phone number: _____

Note: Date of Bond must NOT be
prior to date of Contract.

PAYMENT BOND

STATE OF TEXAS

§

§

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF TARRANT

§

THAT _____, a corporation organized and existing under the laws of the State of _____, and fully authorized to transact business in the State of Texas, whose address is _____

of the City of _____, County of _____, State of _____,

(hereinafter referred to as "Principal"), and (hereinafter referred to as "Surety"), a corporation organized under the laws of the State of _____ and authorized under the laws of the State of

Texas to act as Surety on bonds for principals, are held and firmly bound unto City of Watauga

(hereinafter referred to as "OWNER") and unto all persons, firms and corporations who may furnish materials for or perform labor upon the buildings, structures or improvements referred to in the attached

Contract, in the penal sum of \$_____ (not less than 100% of the

approximate total amount of the Contract as evidenced in the proposal) in lawful money of the United

States, for the payment whereof, the said Principal and Surety bind themselves, and their heirs,

administrators, executors, successors, and assigns, jointly and severally, firmly by these presents:

WHEREAS, the Principal has entered into a certain written Contract with the OWNER, dated the _____ day of _____, 20_____, to which said Contract is hereby referred to and made a part

hereof and as fully and to the same extent as if copied at length herein for the construction of

Starnes Road 16" Water Line from Indian Springs Road to Rufe Snow Drive.

NOW, THEREFORE, the condition of this obligation is such, that the bond guarantees the full and proper protection of all claimants supplying labor and material in the prosecution of the work provided for in

said Contract and for the use of each claimant, and that conversely should the Principal faithfully perform

said Contract and in all respects duly and faithfully observe and perform all and singular the covenants,

conditions, and agreements in and by said Contract, agreed to by the Principal, and according to the true

intent and meaning of said Contract and the claims and Specifications hereto annexed, and any and all

duly authorized modifications of said Contract that may hereafter be made, notice of which modification

to Surety being hereby waived, then this obligation shall be void; otherwise, to remain in full force and

effect. Provided further, that if any legal action be filed on this Bond, venue shall lie in Tarrant County,

Texas.

PROVIDED, HOWEVER, that this Bond is executed pursuant to the provisions Texas Government Code,

Chapter 2253, as amended, and Article 7.19-1 of the Insurance Code, as amended, and all liabilities on

this bond shall be determined in accordance with the provisions of said articles to the same extent as if

they were fully copied at length herein. Surety, for value received, stipulates and agrees that the bond

shall automatically be increased by the amount of any Change Order or supplemental agreement which

increases the Contract price with or without notice to the Surety and that no change, extension of time,

alteration, or addition to the terms of the Contract, or to the work performed thereunder, or the Plans,

Specifications, or Drawings accompanying the same shall in any way affect its obligation on this bond,

and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms

of the Contract or to the work to be performed thereunder.

PAYMENT BOND

The undersigned and designated agent is hereby designated by Surety herein as the agent resident to whom any requisite notice may be delivered and on whom service of process may be had in matters arising out of such suretyship.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument on this the day of _____, 20____.

WITNESS

PRINCIPAL

Printed/Typed Name: _____

Title: _____

Company: _____

Address: _____

WITNESS

SURETY

Printed/Typed Name: _____

Title: _____

Company: _____

Address: _____

The Resident Agent of the Surety for delivery of notice and service of process is:

Name: _____

Address: _____

Phone number: _____

Note: Date of Bond must NOT be
prior to date of Contract.

MAINTENANCE BOND

STATE OF TEXAS

§

§

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF TARRANT

§

THAT _____, a corporation organized and existing under the laws of the State of _____, and fully authorized to transact business in the State of Texas, whose address is _____ of the City of _____, County of _____, State of _____, (hereinafter referred to as "Principal"), and (hereinafter referred to as "Surety"), a corporation organized under the laws of the State of _____ and authorized under the laws of the State of Texas to act as Surety on bonds for principals, are held and firmly bound unto City of Watauga (hereinafter referred to as "OWNER") in the penal sum of \$_____ in lawful money of the United States, for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors, and assigns, jointly and severally, firmly by these presents:

WHEREAS, the Principal has entered into a certain written Contract with the OWNER, dated the _____ day of _____, 20____, to which said Contract is hereby referred to and made a part hereof and as fully and to the same extent as if copied at length herein for the construction of Starnes Road 16" Water Line from Indian Springs Road to Rufe Snow Drive.

NOW, THEREFORE, the condition of this obligation is such, that the bond guarantees the full and proper maintenance and repair of the work herein contracted to be done and performed for a period of two (2) years from the date of acceptance and Principal will do all necessary backfilling that may arise on account of sunken conditions in ditches, or otherwise, and do and perform all necessary work and repair any defective condition growing out of or arising from the improper laying or construction of same, or on account of any breaking of same caused by said CONTRACTOR in construction of same, or on account of any defect arising in any of said work laid or constructed by said CONTRACTOR or on account of improper excavation or backfilling, it being understood that the purpose of this section is to cover all defective conditions arising by reason of defective materials, work or labor performed by said CONTRACTOR, then this obligation shall be void; otherwise, to remain in full force and effect; and in case said CONTRACTOR shall fail to do so, it is agreed that the OWNER may do said work and supply such materials and charge the same against said CONTRACTOR and Surety on this obligation. Provided further, that if any legal action be filed on this Bond, venue shall lie in Tarrant County, Texas.

PROVIDED, HOWEVER, that said Surety, for value received, stipulates and agrees the bond shall automatically be increased by the amount of any Change Order or supplemental agreement which increases the Contract price with or without notice to the Surety and that no change, extension of time, alteration, or addition to the terms of the Contract, or to the work performed thereunder, or the Plans, Specifications, or Drawings accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Contract or to the work to be performed thereunder.

MAINTENANCE BOND

The undersigned and designated agent is hereby designated by Surety herein as the agent resident to whom any requisite notice may be delivered and on whom service of process may be had in matters arising out of such suretyship.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument on this the day of _____, 20____.

WITNESS

PRINCIPAL

Printed/Typed Name: _____

Title: _____

Company: _____

Address: _____

WITNESS

SURETY

Printed/Typed Name: _____

Title: _____

Company: _____

Address: _____

The Resident Agent of the Surety for delivery of notice and service of process is:

Name: _____

Address: _____

Phone number: _____

Note: Date of Bond must NOT be
prior to date of Contract.

(SAMPLE FORM)

CERTIFICATE OF INSURANCE

TO:

DATE: _____

PROJECT NO. _____

OWNER

TYPE OF: _____

ADDRESS

PROJECT: _____

THIS IS TO CERTIFY THAT _____
(Name and Address of Insured)

is, at the date of this certificate, insured by this Company with respect to the business operations hereinafter described, for the types of Insurance and in accordance with the provisions of the standard policies used by this Company, and further hereinafter described. Exceptions to standard policy noted on reverse side hereof.

TYPE OF INSURANCE

	Policy No.	Effective	Expires	Limits of Liability
Workmen's Compensation				
Public Liability				1 Person \$ 1 Accident \$
Contingent Liability				1 Person \$ 1 Accident \$
Property Damage				
Builder's Risk				
Automobile				
Other				

The foregoing Policies (do) (do not) cover all sub-contractors.

Locations Covered: _____

Descriptions of Operations Covered: _____

The above policies either in the body thereof or by appropriate endorsement provide that they may not be changed or canceled by the insurer in less than five days after the insured has received written notice of such change or cancellation.

Where applicable local laws or regulations require more than five days actual notice of change or cancellation to the assured, the above policies contain such special requirements, either in the body thereof or by appropriate endorsement thereto attached.

(Name of Insurer)

By: _____

Title: _____

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly by



AMERICAN COUNCIL OF ENGINEERING COMPANIES

ASSOCIATED GENERAL CONTRACTORS OF AMERICA

AMERICAN SOCIETY OF CIVIL ENGINEERS

PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
A Practice Division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.
 3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 6. *Bidder*—The individual or entity who submits a Bid directly to Owner.
 7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).
 8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.
 9. *Change Order*—A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.
 10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
 11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.
13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.
15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.
16. *Cost of the Work*—See Paragraph 11.01 for definition.
17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
19. *Engineer*—The individual or entity named as such in the Agreement.
20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
21. *General Requirements*—Sections of Division 1 of the Specifications.
22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.
23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.
27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
28. *Notice to Proceed*—A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.
29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
30. *PCBs*—Polychlorinated biphenyls.
31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
32. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.
37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
39. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
41. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
43. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.
44. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.
45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.
46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
47. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.
48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable

television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

49. *Unit Price Work*—Work to be paid for on the basis of unit prices.

50. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives:*

1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day:*

1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective:*

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide:*

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

- A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which

Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

- A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
2. No provision of any such standard, specification, manual, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

- a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); or
- b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.
- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:
 1. A Field Order;
 2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or
 3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

- A. Contractor and any Subcontractor or Supplier shall not:
 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions; or
 2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
 - 1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is

identified in the Supplementary Conditions. Except for such reliance on such “technical data,” Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor’s purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
3. any Contractor interpretation of or conclusion drawn from any “technical data” or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

1. is of such a nature as to establish that any “technical data” on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
2. is of such a nature as to require a change in the Contract Documents; or
3. differs materially from that shown or indicated in the Contract Documents; or
4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer’s Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner’s obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer’s findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor’s cost of, or time required for, performance of the Work; subject, however, to the following:

- a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
 - a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
 - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph 4.03.A.
3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

- A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
 1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and
 2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all such information and data;

- b. locating all Underground Facilities shown or indicated in the Contract Documents;
- c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and
- d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. Not Shown or Indicated:

- 1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- 2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the “technical data” contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such “technical data” is identified in the Supplementary Conditions. Except for such reliance on such “technical data,” Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
1. the completeness of such reports and drawings for Contractor’s purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any “technical data” or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.
- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and

Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

- F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all

of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

- B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

- A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.
- C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.04 *Contractor's Insurance*

- A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 - 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 - 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 - 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:
 - a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - b. by any other person for any other reason;
 - 5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
 - 6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.
- B. The policies of insurance required by this Paragraph 5.04 shall:
 - 1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the

insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);
5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
6. include completed operations coverage:
 - a. Such insurance shall remain in effect for two years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

- A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
 1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;

2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.
 3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
 4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
 5. allow for partial utilization of the Work by Owner;
 6. include testing and startup; and
 7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.
- B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.
- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.
- D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

- E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:
1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers,

directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

- A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.
- B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

- A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase, or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

- A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property

insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 – CONTRACTOR’S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

6.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner’s written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.
- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and “Or-Equals”*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or “or-equal” item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.
 - 1. *“Or-Equal” Items:* If in Engineer’s sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an “or-equal” item, in which case review and approval of the proposed item may, in Engineer’s sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and
 - 3) it has a proven record of performance and availability of responsive service.

- b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items:*

- a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
- b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.
- c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.
- d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - 1) shall certify that the proposed substitute item will:
 - a) perform adequately the functions and achieve the results called for by the general design,
 - b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;
 - 2) will state:
 - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,
 - b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
 - c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

- 3) will identify:
 - a) all variations of the proposed substitute item from that specified, and
 - b) available engineering, sales, maintenance, repair, and replacement services; and
 - 4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.
- B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.
- C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.
- D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. *Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- F. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection.

Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.
- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
 - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor
 - 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such

agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all

governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. Limitation on Use of Site and Other Areas:

- 1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
- 2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by

negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
 1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

- A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

- a. Submit number of copies specified in the General Requirements.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:*

- a. Submit number of Samples specified in the Specifications.
- b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

- B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. Submittal Procedures:

1. Before submitting each Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.
3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review:

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor

has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 *Continuing the Work*

- A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 1. observations by Engineer;
 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;
5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;
6. any inspection, test, or approval by others; or
7. any correction of defective Work by Owner.

6.20 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .
- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.
- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 *Related Work at Site*

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
 - 1. written notice thereof will be given to Contractor prior to starting any such other work; and
 - 2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
 - 1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
 - 2. the specific matters to be covered by such authority and responsibility will be itemized; and
 - 3. the extent of such authority and responsibilities will be provided.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.

- C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

- A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

- A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

- A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents.

8.12 *Compliance with Safety Program*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed pursuant to Paragraph 6.13.D.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents.

9.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

- A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

- A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

- B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work there under. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to

Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:
 - 1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
 - 2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
 - 3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

- A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.
- B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to

- substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).
- C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
1. deny the Claim in whole or in part;
 2. approve the Claim; or
 3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the

Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

- c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The cost of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.
- C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.
- D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances:*
1. Contractor agrees that:
 - a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. *Contingency Allowance:*
1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 *Unit Price Work*

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
 - 1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).
- C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:
1. a mutually acceptable fixed fee; or
 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
 - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the

party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.
- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.
- D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

- A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
 - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
 - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and
 - 3. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.
- C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.
- D. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

- A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. repair such defective land or areas; or
 - 2. correct such defective Work; or
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct, or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

- C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

- A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. *Applications for Payments:*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. Review of Applications:

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

- c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
 - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due:

- 1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment:

- 1. Owner may refuse to make payment of the full amount recommended by Engineer because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
 - b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - c. there are other items entitling Owner to a set-off against the amount recommended; or

- d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.
3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.
- E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

14.05 *Partial Utilization*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 - 1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 14.04.A through D for that part of the Work.
 - 2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 - 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
 - 4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor

and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. Application for Payment:

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;
 - b. consent of the surety, if any, to final payment;
 - c. a list of all Claims against Owner that Contractor believes are unsettled; and
 - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. Engineer's Review of Application and Acceptance:

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for

payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due:

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

- A. The making and acceptance of final payment will constitute:
 1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
 2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will justify termination for cause:
 - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
 - 2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
 - 3. Contractor's repeated disregard of the authority of Engineer; or
 - 4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
 - 1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);
 - 2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and
 - 3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of

or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.
- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
 - 3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
 - 4. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 – DISPUTE RESOLUTION

16.01 *Methods and Procedures*

- A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.
- B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:
 - 1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or
 - 2. agrees with the other party to submit the Claim to another dispute resolution process; or

3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
 1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or
 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

- A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SUPPLEMENTARY CONDITIONS

TO STANDARD GENERAL CONDITIONS - SECTION 00 70 00 EJCDC C-700 (2007 EDITION)

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SUPPLEMENTARY CONDITIONS

Supplementary Conditions. These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (C-700, 2007 Edition) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

Article 1 Definitions and Terminology. The terms used in these Supplementary Conditions which are defined in the Standard General Conditions of the Construction Contract (C-700, 2007 Edition) have the meanings assigned to them in the General Conditions.

1.01.17 Drawings. Add the following sentence to the definition.

"Drawings may also be described as Plans."

1.01.44 Substantial Completion. Add the following to the first sentence.

"and a Certificate of Substantial Completion has been completed."

Add the following to the end of definition.

"In order for the work or a specific part thereof to be substantially complete, training requirements must have been met and all work shall have been demonstrated to be in compliance with operational requirements for 30 continuous days."

1.01.52 Final Completion. Add the following term and definition.

"52. Final Completion – The project will be complete when all work is complete including all punch list items and all documents are completed and submitted to the OWNER. These include, but are not limited to, Letters of Approval from various regulatory agencies, inspection certificates, and all other items as required in paragraph 14.07."

1.01.53 Written Notice. Add the following term and definition.

"53. Written Notice – Any notice to any party of the Contract relative to any part of this Contract shall be in writing, and considered delivered and the service thereof completed once posted by certified or registered mail to the said party at his last given address or delivered in person to said party or his authorized representative on the work."

1.02 Terminology. Add the following paragraphs G, H, and I.

"G. Imperative Mood. These specifications are written to the BIDDER before the award of the Contract and to the CONTRACTOR after award of the Contract. The sentences that direct the CONTRACTOR to perform work are mostly written as commands. For example, a requirement to provide cold-weather protection would be expressed as, 'Provide cold-weather protection for concrete,' rather than 'The Contractor shall provide cold-weather protection for concrete.' In the imperative mood, the subject 'the Bidder' or 'the Contractor' is understood.

"H. Engineer Interpretations. In order to avoid cumbersome and confusing repetition of expressions in these specifications, it is provided that whenever anything is, or is to be, done, if, as, or, when, or where 'demonstrated, contemplated, required, determined, directed, specified, authorized, ordered, given, designated, indicated, considered necessary, deemed necessary, permitted, reserved, suspended, established, approval, approved, disapproved, acceptable, unacceptable, suitable, satisfactory, unsatisfactory, sufficient, insufficient, rejected, or condemned,' it shall be understood as if the expression were followed by the words 'by the Engineer or 'to the Engineer.'

"I. 'Shown.' When this term is used in the specifications, it means 'shown on the drawings' unless stated otherwise."

2.02 Copies of Documents. Amend the first sentence of paragraph 2.02 so it shall read as follows:

"The OWNER shall furnish the CONTRACTOR two copies of Contract Documents. . . ."

2.03 Commencement of Contract Times; Notice to Proceed. Revise paragraph A to read as follows:

"A. The Contract Times will begin on the day indicated in the Notice to Proceed. The date for the Contract Times may be extended by mutual agreement between the OWNER and the CONTRACTOR."

2.05 Before Starting Construction. Revise paragraph A to read as follows:

"A. Preliminary Schedules: Within fifteen days after Notice of Award, CONTRACTOR shall submit to ENGINEER for its timely review:"

Add the following paragraphs after 2.05.A.1:

"a. A preliminary progress schedule, as a minimum shall be defined as a bar chart schedule that indicates dates for starting and completing the various stages of the work, including a minimum of:

- On-site mobilization.
- Submittal dates by specification division - starting and ending.
- Major structure excavations.
- Structural completion of major structures.
- Substantial completion of structures.
- Operational demonstration (phases if proposed).
- Project substantial completion.
- Major equipment installations.

The preliminary progress schedule shall become the basis on which the required CPM schedule shall be developed. Schedule must incorporate and indicate compliance with any Contract Milestone dates including Substantial and/or Final Completion dates."

Revise paragraph 2.05.A.2 to read as follows:

"2. A preliminary schedule of submittals in accordance with paragraph 1.4 A of Section 01 33 00, 'Submittals' and "

3.02 Reference Standards. Revise paragraph A.1 to read as follows:

"1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, whether such references be specific or by implication, shall mean the latest standard or specification in effect 60 days prior to the date of taking Bids. All laws, codes, or regulations of governmental authority shall be the latest at the time of opening of Bids."

4.02 Subsurface and Physical Conditions. Replace paragraph 4.02 with the following:

"4.02 Subsurface and Physical Conditions

"A. Reports and Drawings: The Supplementary Conditions identify:

"1. Those reports of explorations and tests of subsurface conditions at or contiguous to the Site that ENGINEER has used in preparing the Contract Documents and they are included in the Appendix of the Contract Documents. These reports and tests are not Contract Documents and are to be considered 'technical data.'

"2. CONTRACTOR may not rely upon or make any claim against OWNER or ENGINEER, or any of their Related Entities with respect to:

"a. The completeness of such reports and drawings for CONTRACTOR's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR, and safety precautions and programs incident thereto; or

"b. Other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

"c. Any CONTRACTOR interpretation of or conclusion drawn from any 'technical data' or any such other data, interpretations, opinions or information. "

4.03 Differing Subsurface or Physical Conditions. Replace paragraph 4.03.A with the following:

"A. Notice: If CONTRACTOR believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

"1. Is of such nature as to require a change in the Contract Documents; or

"2. Differs materially from that shown or indicated in the Contract Drawings; or

"3. Is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent on work of the character provided for in the Contract Documents;

"then CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any work in connection therewith (except in an emergency as required by paragraph 6.16.A), notify OWNER and ENGINEER in writing about such condition. CONTRACTOR shall not further disturb such condition or perform any work in connection therewith (except as aforesaid) until receipt of written order to do so."

4.04 Underground Facilities. Add the following new paragraphs immediately after paragraph 4.04.A.2.

"4.04.A.3 Location of Subsurface Utilities.

"a. The location of subsurface utilities is shown on the plans from information furnished by the utility owners.

"b. The CONTRACTOR shall, at least two (2) working days, excluding Saturdays, Sundays, and legal holidays, prior to construction in the area of the subsurface utility, notify the subsurface utility Owner in writing, by telephone, or in person. The marking or locating shall be coordinated to stay approximately two (2) days ahead of the planned construction.

"c. The CONTRACTOR shall alert immediately the occupants of nearby premises as to any emergency that he may create or discover at or near such premises.

"d. The CONTRACTOR shall have full responsibility for coordination of the work with owners of such underground facilities during construction, for the safety and protection thereof as provided in paragraph 6.13 and repairing any damage thereto resulting from the work, the cost of all of which will be considered as having been included in the Contract Price.

"4.04.A.4 Where existing utilities and structures are indicated as being in the line of the proposed improvement, the CONTRACTOR shall expose them sufficiently in advance of the construction operations to permit adjustments in line or grade, if required, to eliminate interferences.

"4.04.A.5 Existing pipes or conduits crossing the trench, or otherwise exposed, shall be adequately braced and supported to prevent movement during construction.

"4.04.A.6 Broken Utility Services.

"a. Utility services broken or damaged shall be repaired at once to avoid inconvenience to customers and utility owners.

"b. Temporary arrangements, as approved by the ENGINEER, may be used until any damaged items can be permanently repaired.

"c. All items damaged or destroyed by construction and subsequently repaired must be properly maintained by the CONTRACTOR.

"d. CONTRACTOR must work 24 hours a day until service is restored to damaged utility.

"4.04.A.7 Existing Utility Relocation.

"a. Where it is necessary to relocate an existing utility or structure, the work shall be done in such manner as is necessary to restore it to a condition equal to that of the original facility.

"b. No such relocation shall be done until approval is received from the authority responsible for the utility or structure being changed."

4.05 Reference Points. Add the following sentence to paragraph 4.05.A.

"Copies of a Registered Surveyor's notes on location of facilities shall be supplied to the ENGINEER."

4.06 Hazardous Environmental Condition at Site. Delete paragraph 4.06.G in its entirety.

5.02 Licensed Sureties and Insurers. Add the following sentence after paragraph 5.02.A.

"Insurance companies shall carry a rating of at least A- by A. M. Best Company, Inc.
<http://www.ambest.com/>"

5.03 Certificates of Insurance – Deleted in its entirety and replaced with the following:

A. Prior to commencing Work, CONTRACTOR shall furnish OWNER with an ACORD Forms 24 and 25, Certificates of Property and Liability Insurance, executed by a duly authorized representative of each insurer, setting out compliance with the insurance requirements set forth in Section 5.04.

B. Failure of OWNER to demand such certificate or other evidence of full compliance with these insurance requirements or failure of OWNER to identify a deficiency from evidence that is provided shall not be construed as a waiver of CONTRACTOR's obligation to maintain such insurance.

C. OWNER shall have the right, but not the obligation, to prohibit CONTRACTOR or any lower-tier subcontractor from entering the Project site until such certificates or other evidence that insurance has been placed in complete compliance with these requirements is received and approved by OWNER.

D. Failure to maintain the insurance required in Section 5.04 shall constitute an event of default pursuant to Section 15.02 A.4. of the Standard General Conditions of the

Construction Contract, and shall allow OWNER to terminate this Agreement at OWNER'S option. If CONTRACTOR fails to maintain the insurance set forth herein, OWNER shall have the right, but not the obligation, to purchase said insurance at CONTRACTOR's expense.

E. With respect to insurance maintained after final payment in compliance with a requirement above, an additional certificate(s) evidencing such coverage shall be promptly provided to OWNER when requested.

F. OWNER reserves the right to review at any time insurance policies maintained by CONTRACTOR to confirm that CONTRACTOR has complied with the provisions of the General and Supplementary Conditions. CONTRACTOR shall provide certified copies of all insurance policies required above within 10 days of OWNER's written request. If policies have not yet been issued by carrier, CONTRACTOR shall provide the insurance carrier binders specifically evidencing coverage as required above.

5.04 CONTRACTOR's Insurance

The limits of liability for the insurance required by paragraph 5.04 shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations. This coverage may be primary or a combination of primary and umbrella excess liability. The General Aggregate Limit shall apply specifically to this project by providing a Designated Construction Project General Aggregate Limit endorsement.

Workers' Compensation, etc., under paragraphs 5.04.A.1 and 5.04.A.2:

- | | | |
|----|--|-----------|
| 1. | State: | Statutory |
| 2. | Applicable Federal (e.g., Longshoreman's): | Statutory |
| 3. | Employer's Liability: | \$500,000 |

Commercial General Liability (under paragraphs 5.04.A.3 through 5.04.A.5 [including completed operations, products liability, and contractual liability]):

- | | | |
|----|---|--------------|
| 1. | General Aggregate (per occurrence) | \$ 2,000,000 |
| | Products/Completed Operations | |
| | Aggregate | \$ 2,000,000 |
| | Personal & Advertising Injury | \$ 2,000,000 |
| | Each Occurrence | \$ 1,000,000 |
| | Fire Damage (any one fire) | \$ 50,000 |
| | Medical Expense (any one person) | \$ 5,000 |
| 2. | Property Damage liability insurance will provide Explosion, Collapse, and Underground coverages where applicable. | |

Comprehensive Automobile Liability (under paragraph 5.04.A.6):

Combined Single Limit of	\$1,500,000
--------------------------	-------------

5.04.B.1. Additional insured shall include the officers and employees of the OWNER, ENGINEER, and the ENGINEER's Consultants.

5.04.B.7 Add the following paragraphs after paragraph 5.04.B:

"7. The CONTRACTOR shall also purchase and maintain such insurance as will protect him from claims set forth below which arise out of or result from the CONTRACTOR's execution of the work, whether such execution be by himself or by any Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone of whose acts any of them may be liable:

"a. Claims for damages because of flooding;

"b. Claims arising from property damage to wires, conduits, pipes, mains, sewers, tanks tunnels, any similar property, and any apparatus in connection therewith beneath the surface of the ground or water, caused by and occurring during the use of mechanical equipment for the purpose of grading land, paving, excavating, drilling, borrowing, filling, backfilling, tunneling, or pile driving; and

"c. Claims for property damage arising out of collapse of or structural injury to any building or structure due to grading of land, excavating, borrowing, filling, backfilling, tunneling, pile driving, cofferdam work, or caisson work.

"8. In addition, the following coverages shall be provided if the work contemplated by the Contract involves such operations.

"a. Claims for damage to property arising from operations directly or indirectly incident to blasting or explosion, however caused; and

"b. Claims for damage to property arising out of moving, shoring, underpinning, raising or demolition of any building or structure, or removal or rebuilding of any structural support thereof."

5.06 Property Insurance. Revise paragraph A to read as follows:

"A. CONTRACTOR shall purchase and maintain property insurance upon the Work at the Site in the amount of full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:"

In paragraph A.2, delete the phrase, "(other than caused by flood)".

In paragraph B, revise sentence 1 to read "CONTRACTOR shall purchase and maintain. . ."

Delete paragraph E in its entirety.

5.07 Waiver of Rights. In paragraph A, revise sentence 1 to read "CONTRACTOR intends that all policies. . . ."

5.08 Receipt and Application of Insurance Proceeds. Revise paragraph A to read as follows:

"A. Any insured loss under the policies of insurance required by paragraph 5.06 will be paid directly to the CONTRACTOR. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order or Written Amendment."

Revise paragraph B to read as follows:

"B. CONTRACTOR as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within fifteen (15) days after the occurrence of loss to CONTRACTOR's exercise of this power. If such objection be made, CONTRACTOR as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, CONTRACTOR as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, CONTRACTOR as fiduciary shall give bond for the proper performance of such duties."

6.01 Supervision and Superintendence. Add the following sentence after the first sentence of paragraph 6.01.A.

"The OWNER, the ENGINEER, and related entities expressly disclaim any responsibilities for the means, methods, techniques, safety, sequence, and procedures of construction."

6.02 Labor; Working Hours. Add the following paragraphs after paragraph 6.02.B.

"C. The CONTRACTOR agrees that in the hiring of employees for the performance of Work under this Agreement or any sub agreement, neither the CONTRACTOR, nor any Subcontractor, nor any person acting on behalf of either, shall by reason of race, creed, sex, disability, national origin, or color, discriminate against any citizen in the employment of labor or workers who are qualified and available to perform the work to which the employment relates; nor shall the CONTRACTOR, or any Subcontractor, or any person acting on the behalf of either, in any manner discriminate against or intimidate any employee hired for the performance of work under this Agreement on account of race, creed, sex, disability, national origin, or color."

"D. Prevailing Rates of Wages"

NONFEDERAL PROJECTS.

- a. This Contract shall be based upon payment by CONTRACTOR and his SUBCONTRACTORS of wage rates not less than the general prevailing rate of

per diem wages for Work of a similar character in the locality in which the Work is performed, and not less than the general prevailing rate of per diem wages for legal holiday and overtime work.

- b. CONTRACTOR shall comply with all requirements of the prevailing wage law of the State of Texas, Texas Revised Civil Statutes, Article 5159a, including the latest amendments thereto.
- c. The prevailing wage law does not prohibit payment of more than the general prevailing rate of wages.

6.04 Progress Schedule. Revise paragraph A.1 to read as follows:

"CONTRACTOR shall submit to ENGINEER for acceptance (as part of the application for progress payment, at least quarterly) proposed adjustments in the progress schedule."

6.05 Substitutes and "Or-Equals." Add the following paragraph A.2.e.

"If a proposed substitute item is accepted, all incidental costs associated with the use of the substitute including, but not limited to, redesign, claims of other Contractors, changes to electrical supply equipment, additional equipment or material required for the installation, etc., shall be at the expense of the Contractor proposing the substitute unless otherwise agreed to by the Owner."

6.06 Concerning Subcontractors, Suppliers, and Other. Add the following to the end of paragraph 6.06.A.

"The CONTRACTOR shall not award work to the Subcontractor(s) in excess of fifty (50) percent of the Contract price without prior written approval by the OWNER. The CONTRACTOR shall require all subcontractors to be licensed, where required, and shall provide license number of all subcontractors to the OWNER."

6.07 Patent Fees and Royalties. Delete paragraph 6.07.B in its entirety.

6.09 Laws and Regulations. Add the following paragraphs after paragraph 6.09.C.

"D. If CONTRACTOR observes that the specifications or drawings are at a variance with any laws or regulations, the CONTRACTOR shall give ENGINEER prompt written notice thereof and any necessary changes will be authorized by one of the methods indicated in paragraph 3.04.

"E. Violating Facilities. The CONTRACTOR agrees to comply with all applicable standards, orders, or requirements under Section 306 of the Clean Air Act, 42 USC 1857(h), Section 508 of the Clean Water Act, 33 USC 1368, Executive Order 11738, and EPA regulations, 40 CFR Part 32, which prohibit the use under nonexempt federal contracts, grants, or loans of facilities included on the EPA List of Violating Facilities."

6.10 State Sales Tax. Materials to be incorporated in this work may be purchased by the CONTRACTOR free of state sales tax.

6.19 Contractor's General Warranty and Guarantee. Add the following paragraph after paragraph 6.19.C:

"D. The CONTRACTOR shall guarantee all materials and equipment furnished and work performed for a period of two (2) years from the date of Substantial Completion. *During this warranty period*, the CONTRACTOR warrants and guarantees that the completed project is free from all defects due to faulty materials or workmanship.

"1. CONTRACTOR shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects.

"2. The OWNER will give notice of observed defects with reasonable promptness.

"3. In the event that the CONTRACTOR should fail to make such repairs, adjustments, or other Work that may be made necessary by such defects, the OWNER may do so and charge the CONTRACTOR the cost thereby incurred.

"4. The Bid Guaranty and Contract Bond or Contract Bond shall remain in full force and effect as required in 5.01.A."

7.02 Coordination. Revise paragraph A to read as follows:

"If OWNER intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth:"

7.04 Separate Contractor Claims. Add the following paragraphs to Article 7.

"A. Should CONTRACTOR, its subcontractors, or its suppliers cause damage to the work or property of any separate contractor at the site, or should any claim arising out of CONTRACTOR's, its Subcontractors', or its suppliers' performance of the work at the site be made by any separate contractor against CONTRACTOR, OWNER, ENGINEER, or any other person, CONTRACTOR shall promptly attempt to settle with such other contractor by agreement, or to otherwise resolve the dispute by arbitration or at law.

"B. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold OWNER and ENGINEER harmless from and against all claims, damages, losses, and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals, and court and arbitration costs) arising directly, indirectly, or consequentially out of any action, legal or equitable, brought by any separate contractor against OWNER or ENGINEER to the extent based on a claim arising out of CONTRACTOR's performance of the work.

"C. Should a separate contractor cause damage to the work or property of CONTRACTOR or should the performance of work by any separate contractor at the site give rise to any other claim, CONTRACTOR shall not institute any action, legal or equitable, against OWNER or ENGINEER or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter

which seeks to impose liability on or to recover damages from OWNER or ENGINEER on account of any such damage or claim.

"D. If CONTRACTOR is delayed at any time in performing or furnishing work by any act or neglect of a separate contractor and OWNER and CONTRACTOR are unable to agree as to the extent of any adjustment in Contract Time attributable thereto, CONTRACTOR may make a claim for an extension of time in accordance with Article 12. An extension of the Contract Time shall be CONTRACTOR's exclusive remedy with respect to OWNER and ENGINEER for any delay, disruption, interference, or hindrance caused by any separate contractor. The CONTRACTOR's exclusive remedy for recovery of damages under this section is against such other contractor causing the damage."

9.03 Project Representative. Add the following paragraphs after paragraph 9.03.A.

"B. In conjunction with the requirements of paragraph 9.03.A, the Resident Project Representative's duties, responsibilities, and limitations of authority are as follows:

"1. Resident Project Representative is ENGINEER's agent at the site, will act as directed by and under the supervision of ENGINEER, and will confer with ENGINEER regarding Resident Project Representative's actions. Resident Project Representative's dealings in matters pertaining to the on-site work shall in general be with ENGINEER and CONTRACTOR keeping OWNER advised as necessary. Resident Project Representative's dealings with subcontractors shall only be with the approval of CONTRACTOR. Resident Project Representative shall generally communicate with OWNER with the knowledge of and under the direction of ENGINEER.

"2. Conduct on site observations of the work in progress to assist ENGINEER in determining if the work is proceeding in accordance with the Contract Documents.

"3. Report to ENGINEER whenever Resident Project Representative believes that any work is unsatisfactory, faulty, or defective or does not conform to the Contract Documents, or has been damaged or does not meet the requirements of any inspection, test, or approval required to be made by others; and advise ENGINEER of work that Resident Project Representative believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection, or approval by others.

"4. Verify that tests, equipment, and system start-ups and operating and maintenance training are conducted in the presence of appropriate personnel and that CONTRACTOR maintains adequate records thereof; and observe, record, and report to ENGINEER appropriate details relative to the test procedures and start-ups.

"5. Interpretation of Contract Documents. Report to ENGINEER when clarifications and interpretations of the Contract Documents are needed and transmit to CONTRACTOR clarifications and interpretations as issued by ENGINEER."

10.01 Authorized Changes in the Work. Add the following paragraphs immediately following paragraph 10.01.B.

"C. The OWNER is the only party who shall have authority to direct changes in the work. Such authority shall not be waived, transferred, or expanded without his written authority."

12.03 Delays. Add the following paragraphs to Article 12.03.C.

"1. Abnormal Weather Conditions. For the purpose of this Contract, the CONTRACTOR agrees that it may expect inclement weather for the number of calendar days in accordance with the following table.

Inclement Weather Table

	0.10 Inch Precipitation, or More	32 Degrees F., or Less
January	4	2
February	4	2
March	5	0
April	5	0
May	6	0
June	5	0
July	3	0
August	4	0
September	4	0
October	5	0
November	5	0
December	5	1

"2. Also, the CONTRACTOR agrees that the measure of extreme weather during the period covered by this Contract shall be the number of days in excess of those shown for each month in the table above, in which precipitation exceeds 0.10 inch, or in which the highest temperature was 32 degrees F., or less from nearest weather station's records over the same period of time."

13.02 Access to Work. Add the following paragraph immediately following paragraph 13.02.A.

"13.02.B Authorized representatives and agents of any federal or state agency shall be permitted to inspect all work so far as facilities, materials, payrolls, records of personnel, invoices of material, and other relevant data and records."

13.03 Tests and Inspections. Add paragraph G which shall read:

"G. Contractor shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:"

14.02 Progress Payment. Replace paragraph 14.02.A.3 with the following:

"3. The amount of retainage with respect to progress payments is as follows:

Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below, but, in each case, less the aggregate of payments previously made and less such amounts as ENGINEER shall determine, or OWNER may withhold, in accordance with paragraph 14.7 of the General Conditions.

95 % of Work completed (90% of Work completed for contracts less than \$400,000).

0 % of materials and equipment not incorporated in the Work (but delivered, suitable stored and accompanied by documentation satisfactory to OWNER as provided in paragraph 14.2 of the General Conditions).

Revise paragraph 14.02.C.1 to read as follows:

"Thirty days after presentation of the Application for Payment to OWNER with ENGINEER's recommendation, the amount recommended will (subject to the provisions of paragraph 14.02.D) become due, and when due will be paid by OWNER to CONTRACTOR."

14.04 Substantial Completion. Add the following sentence immediately after the last sentence of paragraph 14.04.B.

"CONTRACTOR shall accompany ENGINEER on all inspections to help itemize punch list items."

14.06 Final Inspection. Add the following sentence immediately after the last sentence of paragraph 14.06.A.

"B. CONTRACTOR shall accompany ENGINEER on all inspections to help itemize punch list."

15.02.A.5 OWNER May Terminate for Cause. Add the following paragraphs immediately following paragraph 15.02.A.4.

"5. If CONTRACTOR commences a voluntary case under any chapter of the bankruptcy code (Title 11, United States Code) as now or hereafter in effect or if the CONTRACTOR takes any equivalent or similar action by filing a petition or otherwise under any federal or state law in effect at such time relating to bankruptcy or insolvency.

"6. If a petition is filed against CONTRACTOR under chapter of the bankruptcy code, as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against CONTRACTOR under any other federal or state law in effect at the time relating to bankruptcy or insolvency.

"7. If CONTRACTOR makes a general assignment for the benefit of Creditors.

"8. If a trustee, receiver, custodian, or agent of CONTRACTOR is appointed under applicable law or under Contract whose appointment or authority to take charge of the property of CONTRACTOR is for the purpose of enforcing a lien against such property or for the purpose of general administration of such property for the benefit of CONTRACTOR's creditors, if CONTRACTOR admits in writing an inability to pay its debt generally as they become due."

16.01 Methods and Procedures. Add the following to paragraph 16.01.A. at the beginning of the second sentence:

"If the parties mutually agree to mediate the disputed claim,"

Add the following sentence to paragraph 16.01.C.3 at the end of the last sentence:

"within the state in which the OWNER is located."

Add the following paragraph to Article 16.

"16.02 The CONTRACTOR will carry on the work and maintain the progress schedule during any arbitration or court proceedings, unless otherwise mutually agreed in writing."

17.07 Assignments. Add this new section following paragraph 17.06.

"17.07 Assignments

"A. Neither the Contractor nor the Owner shall sell, transfer, assign, or otherwise dispose of the Contract or any portion thereof, or of his right, title, or interest therein, or his obligations thereunder, without written consent of the other party."

17.08 Disinfection. Add the following paragraphs to Article 17.

"17.08.A Pipelines, reservoirs, clear water basins, and all structures designed to carry or hold water that is for domestic consumption shall be thoroughly cleaned and flushed and disinfected before being put in service and before acceptance by the OWNER. See Division 1 section 'Leakage Test and Disinfection' for more information and requirements.

"17.08.A.1 The CONTRACTOR shall supply all water for testing structures. The CONTRACTOR shall provide all materials, piping, valving, fuel, electricity, and all other items necessary to transport the water to the structures."

17.09 Watertight Structures. Add the following paragraphs to Article 17 of the General Conditions.

"17.09.A All structures to be used for holding water shall be made watertight and shall be tested by filling with water before they are accepted.

"17.09.A.1 The Contractor shall supply all water for testing structures. The CONTRACTOR shall provide all materials, piping, valving, fuel, electricity, and all other items necessary to transport the water to the structures."

DAVIS-BACON WAGE RATES

General Decision Number: TX180036 01/05/2018 TX36

Superseded General Decision Number: TX20170036

State: Texas

Construction Type: Heavy

Counties: Johnson, Parker and Tarrant Counties in Texas.

Heavy Construction Projects (Including Water and Sewer Lines)

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.35 for calendar year 2018 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.35 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2018. The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/05/2018

* PLUM0146-002 05/01/2016

	Rates	Fringes
PLUMBER/PIPEFITTER.....	\$ 29.48	8.30

SUTX1990-041 06/01/1990		

	Rates	Fringes
CARPENTER.....	\$ 10.40	\$3.64

DAVIS-BACON WAGE RATES

Concrete Finisher.....\$ 9.81

ELECTRICIAN.....\$ 13.26

Form Setter.....\$ 7.86

Laborers:

Common.....\$ 7.25

Utility.....\$ 8.09

PAINTER.....\$ 10.89

Pipelayer.....\$ 8.43

Power equipment operators:

Backhoe.....\$ 11.89 3.30

Bulldozer.....\$ 10.76

Crane.....\$ 13.16 3.30

Front End Loader.....\$ 10.54

Mechanic.....\$ 10.93

Scraper.....\$ 10.00

Reinforcing Steel Setter.....\$ 10.64

TRUCK DRIVER.....\$ 7.34

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic

DAVIS-BACON WAGE RATES

violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average

DAVIS-BACON WAGE RATES

rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

DAVIS-BACON WAGE RATES

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

LINE ITEM DESCRIPTION OF PROPOSED WORK

PAY ITEM NO. 1: PREPARE AND RESTORE RIGHT-OF-WAY: The work in this pay item includes the removal, disposal and /or relocation of items in the right-of-way which will interfere with normal grading operations where removal of such obstructions is not otherwise provided for in the plans and specifications. This item will include, but not necessarily be limited to the removal of tree stumps, trees and/or shrubs within the right-of-way unless specified for preservation; the removal, preservation and relocation of those trees and/or shrubs specifically designated on the plans; the removal and disposal of limbs, miscellaneous stone, rock, brick, rubbish or debris; the regrading of the right-of-way area; and all other work identified by the Owner's Project Representative.

As construction operations proceed, the Contractor will disturb areas outside the limits of the streets (i.e. parkways and possibly some yards). Areas to receive block sodding shall be fine-graded with clean imported topsoil 4" thick. Topsoil shall also be placed as necessary to bring low areas to grade and shall be per NCTCOG Item 202, "Top Soil".

Measurement and payment for this item shall be made in accordance with the lump sum bid price and shall be full compensation for all labor, materials, equipment and other incidentals deemed necessary to restore the disturbed yard and parkway areas to a condition equal to or better than the condition which existed prior to construction, to the satisfaction of both the City and the Property Owner.

PAY ITEM NOS. 2 THROUGH 4: REMOVE EXISTING WATER LINE: The 16", 12", 8" and 6" dia. water line to be removed under this item shall be full compensation for excavation, removing the existing water line where indicated on the plans, disposal of, backfilling, cleanup, labor, materials and appurtenances required to complete the work as shown on the Plans and as specified herein. Measurement and payment for this item shall be made on the basis of price bid per linear foot.

PAY ITEM NOS. 5 THROUGH 8: 16", 12", 8" AND 6" DIA. (C-900-16, DR-18) PVC WATER LINE BY OPEN CUT INCLUDING: The 16", 12", 8" and 6" PVC water line furnished under this item shall meet the requirements of AWWA C-900-16, DR-18 water line as well as the applicable portions of NCTCOG Item 501.14 & Item 506, the City of Watauga Standard Details and the details shown in the Plans. The water pipe covered by this Item shall be embedded in accordance with the details shown in the plans. Joint restraints and concrete for thrust blocking at bends, tees and plug ends is included in this item. Each line shall be filled, hydrostatically tested, sterilized and flushed in accordance with the requirements of Item 506 of NCTCOG. The ten (10) gauge copper tracer wire as detailed in the plans is included in this item.

The price bid per linear foot in the Bid for this water line will be full compensation for excavation, embedment, pipe laying, tracer wire, joint restraints, thrust blocking, backfilling, connections, filling with water, sterilizing, testing, flushing, cleanup, labor, materials and appurtenances required to complete the work as shown on the Plans and as specified herein.

PAY ITEM NO. 9: 24" 3/8" THICK DIA. WELDED STEEL CASING BY OTHER THAN OPEN CUT: The 24" diameter Welded Steel Casing by Other Than Open Cut is included in this project for the purpose of crossing beneath the existing box culvert at sta. 25+26 at the

LINE ITEM DESCRIPTION OF PROPOSED WORK

locations shown on the Plans. This Item includes the installation of the 16" PVC water pipe in the Casing, but not the PVC pipe itself.

The casing pipe material shall be welded steel pipe with a wall thickness of 3/8" (0.375") and shall conform to AWWA C200 and shall be equipped for pressure grouting. This Item shall meet all applicable requirements of NCTCOG Item No. 503. The casing pipe shall be welded in accordance with The American Welding Society Standard B2.1-1-206-96 or equivalent.

Construction shall be made in such a manner that will not interfere with the operation of Watauga Road traffic, street or other facility. During construction operations, barricades and lights to safeguard traffic and pedestrians shall be furnished and maintained, as required, until such time as the backfill has been completed and then shall be removed from the site.

The Contractor shall take proper precautions to avoid excavating earth or rock or shattering rock beyond the limits of excavation. All damages caused by excavating or blasting, either to surface or subsurface structures, shall be repaired or replaced by the Contractor at his own cost and expense. The use of explosives will not be permitted except with written permission from the controlling Company or Agency.

The removal of any obstruction that may be found to conflict with the placing of this pipe will not be measured for payment or paid for as a separate contract pay item. The removal of any such obstruction will be included in such contract pay items as are provided in the proposal and contract.

The boring shall be performed with equipment designed specifically for that purpose, and shall be operated by mechanics skilled in this particular work. The length of each boring required shall be as shown on the Plans or as determined by field conditions and approved by the Owner's Project Representative. The method of accomplishment may be by first boring through and swabbing the hole before pulling in the casing, or it may be by boring with the auger inside the smooth steel casing which is jacked through as the bore progresses. The choice between these two methods will be left to Contractor's option unless specifically shown otherwise on the Plans or in the Project Specifications.

If the grade of the ends of the casing pipe is below the ground surface, suitable pits or trenches shall be excavated for the purpose of conducting the boring operations. The pits and trenches shall be securely shored and braced in a satisfactory manner.

The boring shall proceed from the pit provided for the boring equipment and workmen. The holes are to be bored mechanically. The boring shall be done using a pilot hole. By this method an approximate 2-inch pilot hole shall be bored the entire length of the crossing and shall be checked for line and grade on the opposite end of the bore from the work pit. This pilot hole shall serve as the centerline of the larger diameter hole to be bored. Excavated material will be placed near the top of the working pit and disposed of as required. The use of water or other fluids in connection with the boring operation will be permitted only to the extent to lubricate cuttings. Jetting will not be permitted.

LINE ITEM DESCRIPTION OF PROPOSED WORK

In unconsolidated soil formations, a gel-forming colloidal drilling fluid consisting of at least 10% of high grade carefully processed bentonite may be used to consolidate cuttings of the bit, seal the walls of the hole, and furnish lubrication for subsequent removal of cuttings and installation of the pipe immediately thereafter.

Lateral or vertical variations in the final position of the casing pipe from the exact grade or alignment established by the Engineer will be permitted only to the extent of 1 inch per 100 ft of length, unless the Engineer determines from an evaluation of the specific situation that a greater variation will not diminish the functioning of the completed installation. After completion of the installation of the casing pipe, all voids around the outside surface of the casing shall be filled by concrete pressure grouting. The pits or trenches excavated to facilitate the boring operations shall be backfilled immediately after the grouting of the voids and the installation of the carrier pipe.

Measurement and payment for 24" Steel Casing by Other Than Open Cut shall be made at the price bid per linear foot, measured along the centerline of the completed bore for furnishing and installing the steel casing including all materials, labor, tools and appurtenances to complete the installation of the steel casing including all fittings and spacers necessary, complete in place. This Item includes the installation of the 16" PVC Water Line in the Casing utilizing spacers between the water pipe and the casing as required. **The 16" Water Line shall be paid for separately, under Bid Item No. 10.**

PAY ITEM NO. 10: 16" DIA. C-900-16 DR-18 PVC WATER LINE BY OTHER THAN OPEN CUT: The 16" PVC Water line by Other Than Open Cut is included to provide a method of installing the water line beneath an existing storm drain pipe in Starnes Road without casing and under existing box culverts with casing. This Item shall meet the requirements of NCTCOG Item No. 503 as well as the City of Watauga Standards. **When used, the casing shall be paid for separately, under Bid Item No. 9.**

The price bid per linear foot in the Proposal for these water lines will be full compensation for excavation, embedment, pipe, pipe laying, thrust blocking, grouting, backfilling, connections, filling with water, sterilizing, testing, flushing, cleanup, labor, materials and appurtenances required to complete the work as shown on the Plans and as specified herein.

PAY ITEM NOS. 11 THROUGH 13: 16", 12" AND 8" GATE VALVE AND BOX:

This Item shall be furnished and installed in accordance with the details shown in the Plans, applicable provisions of NCTCOG Item 502.6, and as hereinafter specified. All valves used for fire hydrant connections shall have M J fittings on both sides and include "Mega Lug" restraints.

The 16-inch (vertical), 12-inch and 8-inch gate valves shall conform to the latest revision of AWWA Standard C509 or C515. All gate valves shall be resilient seat with a non-rising stem and shall open by turning counterclockwise. All valves shall be equipped with a 2-inch square wrench nut for operations unless otherwise specified. Valves shall be designed for a minimum working pressure of 150 psi and shall comply in all respects with the latest applicable AWWA specifications. All valves shall be installed as indicated in the Plans. For each gate valve, the Contractor shall furnish and install valve boxes as required.

LINE ITEM DESCRIPTION OF PROPOSED WORK

The following manufacturer listings shall be approved by Owner for this project.

Waterous Series 500

CLOW

Valve boxes including concrete blocks and rain stoppers shall be installed as detailed in the Plans. Valves shall be carefully handled and lowered into position in such a manner as to prevent damage to any parts of the valve. Valves shall be placed in such positions as indicated in the Plans with the stem in a vertical position and securely held until all connections have been made. All valves and tapping devices shall be manufactured by Waterous (Series 500) or CLOW unless the Contractor obtains written permission from the Owner's Director of Utilities to the contrary.

If the valve nut is deeper than three (3') feet below finished grade, an extension rod shall be provided and installed by the Contractor at no extra cost to the Owner. Top of extension rod shall be within three (3') feet of finished grade.

The price bid per each in the Proposal will be full compensation for furnishing all materials, labor, tools and appurtenances required to complete the installation of gate valves, and tapping sleeves and valves, with valve boxes including concrete blocks.

PAY ITEM NO. 14: 6" DIA. BY-PASS ASSEMBLY INCLUDING 6" GATE VALVE AND BOX, D.I.P. FITTINGS AND 6" PVC PIPE: This Item shall be furnished and installed in accordance with the details shown in the Plans, applicable provisions of NCTCOG Item 502.6, and as hereinafter specified. All valves used for the by-pass shall have M J fittings on both sides and include "Mega Lug" restraints.

The 6-inch gate valves shall conform to AWWA C509 and shall be resilient seat. Valves shall have a non rising stem and shall open by turning counterclockwise. All valves shall be equipped with a 2-inch square wrench nut for operations unless otherwise specified. Valves shall be designed for a minimum working pressure of 150 psi and shall comply in all respects with the latest applicable AWWA specifications. All valves shall be installed as indicated in the Plans. For each gate valve, the Contractor shall furnish and install valve boxes as required. The following manufacturer listings shall be approved by Owner for this project.

Waterous Series 500

Valve boxes including concrete blocks and rain stoppers shall be installed as detailed in the Plans. Valves shall be carefully handled and lowered into position in such a manner as to prevent damage to any parts of the valve. Valves shall be placed in such positions as indicated in the Plans with the stem in a vertical position and securely held until all connections have been made. All valves and tapping devices shall be manufactured by Waterous, (series 500) unless the Contractor obtains written permission from the Owner's Director of Utilities to the contrary.

If the valve nut is deeper than three (3') feet below finished grade, an extension rod shall be provided and installed by the Contractor at no extra cost to the Owner. Top of extension rod shall be within three (3') feet of finished grade.

LINE ITEM DESCRIPTION OF PROPOSED WORK

Ductile iron fittings indicated in the Proposal shall be furnished and installed in accordance with NCTCOG Item 502.5 with further provision that push-on fittings may be used instead of mechanical joint fittings where applicable. Wrapping of the fittings with polyethylene shall also be included under this Item. All fittings, such as tees and bends connected to valves at fire hydrants, shall have M J fittings and include "Mega Lug" restraints; transition gaskets shall be installed with PVC pipe. All ductile iron fittings shall conform to ASNI/AWWA C110/A21.11 Standard (latest edition), i.e., they shall be full body fittings. Fittings can be either domestic or import.

The price bid per each in the Proposal will be full compensation for furnishing all materials, labor, tools, and appurtenances required to complete the installation of the by-pass, in place, at the locations indicated in the Plans.

PAY ITEM NO. 15: FIRE HYDRANT ASSEMBLY, INCLUDING 6" GATE VALVE: Fire hydrants shall be furnished and installed in accordance with NCTCOG Item 502.3. No separate pay will be allowed for the thrust block behind the elbow, the base slab under the fire hydrant, 6" gate valve and furnishing barrel and stem extensions required to accommodate site grade adjustments.

The following manufacturer listings shall be approved by the Owner for this project.

Mueller Super Model A-423 (Centurion 200)
Waterous Model WB-67DDP-635
American Darling Model B-84-B
Clow Model 2546-5-B (Medallion)

Trace line test points installed adjacent to each fire hydrant in accordance with the Plans shall be subsidiary to this Bid Item.

The price bid per each in the Proposal will be full compensation for furnishing all materials, labor, tools, and appurtenances required to complete the installation of the fire hydrant, in place, including the 6" gate valve, at the locations indicated in the Plans.

PAY ITEM NO. 16: DUCTILE IRON FITTINGS: Ductile iron fittings indicated in the Proposal shall be furnished and installed in accordance with NCTCOG Item 502.5 with further provision that push-on fittings may be used instead of mechanical joint fittings where applicable. Wrapping of the fittings with polyethylene shall also be included under this Item. All fittings, such as tees and bends connected to valves at fire hydrants, shall have M J fittings and include "Mega Lug" restraints; transition gaskets shall be installed with PVC pipe. All ductile iron fittings shall conform to ASNI/AWWA C110/A21.11 Standard (latest edition), i.e., they shall be full body fittings. Fittings can be either domestic or import.

The price bid per ton in the Bid will be full compensation for furnishing all ductile iron fittings, materials, labor, tools and appurtenances required to install the fittings as shown in the Plans and specified herein. The Contractor shall furnish invoices to verify the weights of all fittings installed which are covered by this Bid Item.

LINE ITEM DESCRIPTION OF PROPOSED WORK

PAY ITEM NO. 17: 2" COMBINATION AIR RELEASE VALVE AND VAULT WITH OFFSET: The 2" Air Release Valve and Vault shall be furnished and installed in accordance with the Plans and Specifications and shall meet the requirements of all applicable specifications of NCTCOG Item 502.6.3 and 502.6.6.2. The Air Release Valves furnished shall be 2" and shall be the "Combination" type" as noted in the details.

The price bid for each in the Proposal will be full compensation for furnishing all materials, labor, tools and appurtenances required to complete the installation of the Air Release Valves and valve vaults including all fittings necessary, complete in place.

PAY ITEM NO. 18: TEMPORARY 2" BLOW OFF/SAMPLE POINT: This Item shall be full compensation for all labor and materials required to furnish and install new or replacement water blow off in accordance with details in the Plans, at the location indicated or as directed by the Owner's Project Representative.

The price bid per each shall include all excavation, embedment, and backfill, furnishing and installing all materials including new corporation stop on new water main, installation of new 2" copper line, ball valves, couplings, meter and meter box at the location shown in the Plans or as directed by the Owner's Project Representative.

PAY ITEM NOS. 19: SALVAGE EXISTING FIRE HYDRANT: The Contractor shall be responsible for salvaging existing fire hydrants, including box and appurtenances. Contractor shall deliver salvaged materials, if not incorporated into the project, to the Public Works facility on North Park Drive.

The abandoned pipe shall be plugged with concrete at a cost subsidiary to these Items.

Payment will be made on the basis of the unit price bid per each, salvaged.

PAY ITEM NOS. 20: ABANDON EXISTING WATER VALVE: The Contractor shall be responsible for abandoning existing water valves, including the box and appurtenances, as noted on the plans or as directed by the owner's project representative. Existing water valves to be abandoned shall have the riser, box, cover, stem and any concrete pad removed. The trench shall be compacted to 95% standard proctor density.

Payment will be made on the basis of the unit price bid per each, salvaged.

PAY ITEM NOS. 21 THROUGH 23: CONNECT TO EXISTING 16", 12", 8", AND 6" WATER LINE: The Contractor shall determine the exact location, elevation, configuration and angulations of the existing water line prior to manufacturing of any connecting pieces. Any differences in size, locations, elevation, configuration, and/or angulations of existing lines between the contract drawings and what may be encountered in the said work shall be considered as incidental to construction. Where it is required to shut down existing mains in order to make proposed connections, such down time shall be coordinated with the Engineer, and all efforts shall be made to keep this down time to a minimum. In case of shutting down an existing main, the Contractor shall notify the OWNER, at least 48-hours prior to the required shut down time.

LINE ITEM DESCRIPTION OF PROPOSED WORK

Measurement and payment for this item shall be made on the price bid per each for all sizes for all connections including all materials, tools, labor, equipment, and all incidentals necessary to complete this work.

This Item shall be full compensation for all labor and materials required to provide new or replacement water service in accordance with details in the Plans, at the location indicated or as directed by the Owner's Project Representative.

PAY ITEM NO. 24: CUT AND PLUG EXISTING WATER LINE (ALL SIZES): The Contractor shall be responsible for all materials and labor to completely cut, plug, cap, restrain, and block existing water lines at the locations shown in the Plans and as indicated in the Proposal.

Payment shall be made on the basis of price bid per each for all sizes, complete and in place.

PAY ITEM NO. 25 THROUGH 27: LONG DOUBLE, SHORT DOUBLE AND SHORT SINGLE WATER SERVICE: This Item shall be full compensation for all labor and materials required to furnish and install new or replacement water services in accordance with details in the Plans, at the location indicated or as directed by the Owner's Project Representative.

The price bid per each shall include all excavation, embedment, and backfill, locating existing service on existing water main, closing of corporation stop on existing water main, cutting and crimping of existing service line to be abandoned near the existing meter box, furnishing and installing all materials including new corporation stop on new water main, installation of new service line, ball valves, couplings, meter and meter box at the location shown in the Plans or as directed by the Owner's Project Representative.

PAY ITEM NO. 28: WATER SERVICE TRANSFER: This Item shall cover the transfer of water services from the existing water line to the proposed water line. This Item includes the furnishing and installation of materials in accordance with the details shown in the Plans and the applicable provisions of NCTCOG Item 502.10. The number of transfers is intended to be per location. Therefore, double service locations will be paid for at the same unit price as single service locations.

This Item shall be measured and paid for per each and shall include all labor, tools, 1" poly pipe, and all materials, including appurtenances, necessary to transfer the water service connection, complete in place.

PAY ITEM NO. 29 AND 30: 4" DIA. PVC SEWER SERVICE (TRENCH WIDTH), 4" DIA. PVC SEWER SERVICE (FULL STREET WIDTH): The 4" sewer pipe by open cut covered by this item shall be furnished and installed in accordance with the City standards. The Contractor shall furnish SDR-35 Polyvinyl Chloride (PVC) Sewer Pipe as bid and as herein specified.

The unclassified trench excavation, embedment, and backfill covered by this item shall be performed in accordance with the applicable portions of NCTCOG Item 504, "Open Cut-Backfill".

LINE ITEM DESCRIPTION OF PROPOSED WORK

This item shall include the removal of the existing 4" sewer service line as indicated on the Plans. The line designated to be removed shall be removed in its entirety. All materials to be removed shall be disposed of at a location approved by the City.

All sewer pipes shall be ball tested as specified in the City Standards.

The Contractor shall be solely responsible for trench safety provisions meeting the requirements of the United States Department of Labor Occupational Safety and Health Administration and the guidelines provided in the Plans. The Contractor's trench safety system shall include all shoring and/or bracing necessary to adequately provide a safe trench situation for all sewer installation on this project. The Contractor shall have a trench safety plan prepared, signed, and sealed by a registered professional engineer in the State of Texas, for acceptance by the Owner's Project Representative and Engineer.

This item shall be measured and paid for per each complete in place, including testing, excavation, embedment, clamps, fittings, backfill and the removal of the existing pipe, if not paid for separately.

PAY ITEM NO. 31 THROUGH 35: REMOVE AND REPLACE EXISTING MONO CURB, REMOVE AND REPLACE EXISTING CONCRETE SIDEWALK, REMOVE AND REPLACE EXISTING CONCRETE DRIVEWAYS, REMOVE AND REPLACE EXISTING CURB RAMP AND REMOVE AND REPLACE EXISTING CONCRETE PAVEMENT: These Items include saw cut, removal, disposal of existing concrete monolithic curbs, concrete sidewalks, concrete driveways, concrete wheelchair ramps and concrete pavement shall be in accordance with details shown in the Plans and applicable provisions of NCTCOG Items 303.2, 303.3, 305.1, 305.2, 302.2, 302.9, 402.3, and 402.4.

Concrete mono curbs will be measured and paid for at the unit price per linear foot, complete, as provided in the Proposal and shall be total compensation, for the complete removal and replacement of same, furnishing of all labor, materials, tools, equipment, finish, backfill, including all saw cuts, expansion joint filler, earth excavation and disposal of surplus materials in accordance with details shown in the Plans and applicable provisions of NCTCOG Item 302.1, 303.9 and 403.4.

Concrete sidewalks will be measured and paid for at the unit price per square foot, complete, as provided in the Proposal and shall be total compensation, for the complete removal and replacement of same, furnishing of all labor, materials, tools, equipment, finish, backfill, including all saw cuts, expansion joint filler, earth excavation and disposal of surplus materials in accordance with details shown in the Plans and applicable provisions of NCTCOG Item 302.1, 303.9 and 403.4.

Concrete driveways will be measured and paid for at the unit price per square foot, complete, as provided in the Proposal and shall be total compensation, for the complete removal and replacement of same, furnishing of all labor, materials, tools, equipment, finish, backfill, including all saw cuts, expansion joint filler, earth excavation and disposal of surplus materials in

LINE ITEM DESCRIPTION OF PROPOSED WORK

accordance with details shown in the Plans and applicable provisions of NCTCOG Item 302.1, 303.9 and 403.4.

Payment for the curb ramps shall be made on the basis of price bid per each, complete and in place.

Concrete Pavement replacement shall be constructed in accordance with details shown in the Plans and applicable provisions of NCTCOG Items 303.2, 303.3, 305.1, 305.2, 302.2, 302.9, 402.3, and 402.4. Concrete pavement includes removal and complete replacement, including the 6" Thk. 2:27 backfill, in accordance with the details shown in the Plans.

Concrete pavement replacement will be measured and paid for per linear foot measured horizontally along the centerline of the proposed waterlines and service lines, which price shall cover the furnishing of all materials, labor and tools required to complete the replacement at the locations indicated in the Plans or at such other locations as directed by the Owner's Project Representative.

PAY ITEM NO. 36: TEMPORARY ASPHALT PAVEMENT REPLACEMENT INCL. SERVICES: Temporary Asphalt Pavement replacement including service lines shall be constructed in accordance with details shown in the Plans and applicable provisions of NCTCOG Items 301 and 302.

Temporary Asphalt Pavement replacement will be measured and paid for per linear foot measured horizontally along the centerline of the proposed waterlines and service line, which price shall cover the furnishing of all materials, labor and tools required to complete the replacement at the locations indicated in the Plans or at such other locations as directed by the Owner's Project Representative.

PAY ITEM NO. 37: SOLID SODDING INCLUDING 4" THICK TOPSOIL: Sodding shall consist of providing and planting St. Augustine or Bermuda grass at such areas where directed by the Owner's Project Representative and in accordance with the specification requirements outlined herein. The sod shall consist of live, growing St. Augustine or Bermuda grass secured from sources where the soil is fertile. The St. Augustine or Bermuda sod shall have a healthy, virile root system of dense, thickly matted roots throughout the soil of the sod for a minimum thickness of one-inch (1"). The Contractor shall not use sod from areas where the grass is thinned out, nor where the grass roots have been dried out by exposure to the air and sun to such an extent as to damage its ability to grow when transplanted. The sod shall be free from noxious weeds or other grasses and shall not contain any matter deleterious to its growth or which might affect its subsistence or hardiness when transplanted. Care shall be taken at all times to retain the native soil on the roots of the sod during the process of excavating, hauling and planting. Sod material shall be kept moist from the time it is dug until planted. When so directed by the Owner's Project Representative, the sod existing at the source shall be watered to the extent required prior to excavating. All planting shall be done between the date of the last freeze in the spring and six (6) weeks prior to the first freeze in the fall except as directed by the Owner. See NCTCOG Items 202.5 and 202.2.

LINE ITEM DESCRIPTION OF PROPOSED WORK

At the locations where directed by the Owner's Project Representative, sod blocks shall be carefully placed on the areas disturbed by construction. When sufficiently dry, the sodded area shall be rolled or tamped to form a thoroughly compacted, solid mat. Any voids left in the block sodding shall be filled with additional sod and tamped. Surfaces of block sod, which, in the opinion of the Owner's Project Representative, may slide due to the height and slope of the surface or nature of the soil, shall, upon direction of the Owner's Project Representative, be pegged with wooden pegs driven through the solid blocks into firm earth sufficiently close to hold the block sod firmly in place. Edges along curbs, drives, walkways, etc., shall be carefully trimmed and maintained until accepted.

The price bid for solid sodding will be paid for at the contract unit price per square yard for the solid sodding operations and 4" thick topsoil which payment shall be full compensation for furnishing, handling, and applying fertilizer used in solid sodding, 4" thick topsoil, excavating, tilling, and furnishing, stripping, hauling, handling, and storing the sod and watering; and for all other work incidental to solid sodding operations.

PAY ITEM NO. 38: TRENCH SAFETY: On this project, where the trench excavation is in excess of five feet in depth, Trench Excavation Safety Protection under this bid item shall be accomplished in accordance with the Occupation Safety and Health Administration's (OSHA) Standards for trench safety that will be in effect during the period of construction of the project and in accordance with the provisions of Item No. 107.19 "Protection Of Work And Of Persons And Property". The Contractor is required to receive from OSHA such OSHA Standards for trench safety. The contractor shall employ all competent persons and registered professional engineers required to comply with all the provisions of the OSHA Standard for trench safety.

Trench Excavation Safety Protection covered by this bid item shall be measured and paid for per linear foot and shall be full compensation for all labor, materials, designs, inspections equipment and necessary appurtenances required to complete the work and for taking all other measures required to comply with the OSHA Standards for trench safety that will be in effect during the period of construction of the project.

PAY ITEM NO 39: TRAFFIC CONTROL PLAN AND IMPLEMENTATION: The Contractor is responsible for reviewing the site and work required and submitting a Traffic Control Plan to the engineer for approval. This plan must detail the order of construction, and the traffic control that will be in place during every phase.

The Contractor shall have the responsibility to provide and maintain all warning devices and take all precautionary measures required by law or otherwise to protect persons and property while said persons or property are approaching, leaving or within the work site or any area adjacent to said work site. Minimum standards for safeguarding pedestrian and vehicular traffic are contained in the "Texas Manual on Uniform Traffic Control Devices" by Texas State Department of Highways and Public Transportation.

Starnes Road **cannot** be closed between Indian Springs Road and Rufe Snow Drive during the duration of the construction. Homeowners who live in the construction area shall have access to their homes. Temporary Asphalt Pavement shall be provided and maintained by the contractor to

LINE ITEM DESCRIPTION OF PROPOSED WORK

allow all weather access to the homeowners driveways. "Plating" may be required as directed by the owner's project representative.

Measurement and payment for this item shall be made in accordance with the lump sum bid price and shall be full compensation for all labor, materials, equipment and other incidentals deemed necessary to implement a traffic control plan. This includes design, furnishing of all flagmen, barricades, lighting, signs, etc. required under this item. No additional compensation shall be paid to the Contractor for the installation or maintenance of any warning devices, barricades, lights, signs or any other precautionary measures required by law or otherwise for the protection of persons or property.

PAY ITEM NO. 40: EROSION CONTROL PLAN: Prior to the start of construction, the Contractor shall submit to the Owner's Project Representative for acceptance, schedules for accomplishment of the Erosion Control measures in accordance with the erosion and settlement control plan.

The purpose of the Erosion Control is to minimize the potential release of pollutants directly or indirectly into the storm water collection system or waters of the United States. To achieve this objective, the permittee(s) will be required to implement the TCEQ TPDES policies and procedures presented in this Erosion Control Plan.

Measurement and payment for this item shall be made by the lump sum method for the work described in the Erosion Control Plan, complete in place and maintained throughout the project.

PAY ITEM NO. 41: PROJECT SIGNS: This Item shall be full compensation for all labor and materials required to furnish and install project signs in accordance with details in the Plans, at the location indicated or as directed by the Owner's Project Representative.

The price bid per each shall include installation, furnishing and installing all materials including posts, signs, footings at the location shown in the Plans or as directed by the Owner's Project Representative.

PAY ITEM NO. 42: MISCELLANEOUS ALLOWANCE : This item is provided to cover the cost of miscellaneous repairs, replacements, adjustments and relocations at each location within this contract as ordered by the owner but not included in any other Bid Item. Owner reserves the right to delete any or all of this item from the Contract if it is not needed.

Contractor shall furnish all invoices and other documentation required for determining actual field cost of miscellaneous work covered under this item. Payment shall be made at cost plus ten percent (10%).

LINE ITEM DESCRIPTION OF PROPOSED WORK

CONSTRUCTION NON-PAY ITEMS: No direct payment will be made for the following non-pay items or any other item of work required for the completion of this project but which is not specifically itemized in the bid. These items will be considered subsidiary to the contract and the cost of same shall be included in the prices for the various construction pay items in the bid.

NON-PAY ITEM: TESTING OF CONCRETE/MATERIALS: Contractor will pay for and be responsible for hiring a testing lab FOR CONCRETE AND MATERIALS TESTING. The testing lab shall take two (2) sets of cylinders per twenty-five (25) cubic yards, or per each day pour, whichever is greater. Should any tests report a failure, Contractor shall be responsible for retesting. No separate payment shall be made for testing, retesting, trench compaction density, subgrade compaction density, Atterberg/lime series, and embedment testing. Contractor shall include the costs for concrete and other material retests in the price bid for their respective pay items in the Bid.

The Contractor will be responsible for testing and retesting of materials. The Owner will only pay for the Bac-T testing of any new water lines.

NON-PAY ITEM: SAW CUTS: All saw cutting required for the construction and/or removal of asphalt pavement, concrete pavement, driveways, curb & gutter, valley gutters, etc. shall be included in the price bid for the respective pay item.

NON-PAY ITEM: CONSTRUCTION LAYOUT: The Contractor shall be responsible for the complete layout of the work and for establishing lines and elevations as needed during construction. The Contractor shall furnish at his own expense labor, including the services of competent personnel, equipment, including accurate surveying instruments, stakes, templates, platforms, tools, and materials as may be required for laying out any and all parts of the work. All work associated with construction layout shall be subsidiary to the various construction pay items in the Contract.

SUBMITTALS

PART 1 - GENERAL

- 1.1 **RELATED DOCUMENTS.** Drawings and general provisions of the Contract, including General and Supplementary Conditions, Division 1, and all related specification sections, apply to this section.

1.2 **DESCRIPTION OF WORK**

- A. **Scope of Work.** Provide all labor and materials necessary to furnish the following submittals as required by each individual section of the specifications.

1. Shop drawings.
2. Product data.
3. Samples/mock-ups.
4. Operation and Maintenance (O&M) manuals.
5. Personnel qualifications.
6. Training documents.
7. Source quality control documents.
8. Material field test reports.
9. Start-up documents.
10. Operational demonstration documents.
11. Product/material certifications.
12. Special warranties.
13. Project record documents.
14. Others (as specified in the individual technical specifications).

1.3 **QUALITY ASSURANCE** (Not used)

1.4 **SUBMITTALS**

- A. **General.** Submit all submittals in accordance with the requirements within this specification section.

B. **Submittal Package No. 1 – Submittal Schedule**

1. Submit a submittal schedule according to paragraph 2.05 of Section 00 70 00, "General Conditions."
 - a. This schedule shall include all submittals (including all Prime Contractors' submittals) that are required to be used on the project, and the date of submittal to the Engineer.
 - b. Include in schedule a milestone for notification of the Engineer prior to field-verifying operation and maintenance manuals.
 - c. Submittals requiring multiple submissions shall include multiple listings on the documents.
 - d. The Engineer will review the list and make any necessary comments.

SUBMITTALS

- e. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.
- f. Coordinate transmittal of different types of submittals for related elements of the work so processing will not be delayed by the need to review submittals concurrently.
- g. Multiple Prime Contracts. Allow time in schedule for all submittals to go through the Prime General Contractor for coordination purposes before they are forwarded to the Engineer.
- h. Processing. Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for resubmittals, depending upon the complexity of the submittal.
 - 1) Allow two (2) weeks for processing each submittal.
 - 2) No extension of the Contract Time will be authorized because of failure to transmit submittals to the Engineer sufficiently in advance of the work to permit processing.

1.5 JOB CONDITIONS (Not used)

1.6 DELIVERY, STORAGE, AND HANDLING

- A. **Store and protect large samples and mock-ups** until the Project is completed, then properly dispose of off-site.
- B. **Maintain and make available** to the Engineer, at the job site, a complete file of all approved submittals as part of the project record documents.

1.7 SPECIAL WARRANTY (Not used)

PART 2 - PRODUCTS

2.1 SUBMITTAL TRANSMITTAL

- A. **Transmit each submittal** from the Contractor to Engineer/Architect using a transmittal form. Include the following on the transmittal form.
 - 1. Relevant information and requests for data.
 - 2. Deviations from Contract Document requirements, including minor variations and limitations..
 - 3. Other pertinent information to identify the items being submitted.

2.2 GENERAL REQUIREMENTS FOR SUBMITTALS

- A. **Originals**
 - 1. The Contractor, the subcontractors, or suppliers shall generate submittal information.

SUBMITTALS

2. No reproductions of partial (or complete) versions of the plans, sections, details, schematics, specification pages, etc., from the Contract Documents are acceptable.
- B. **Complete Submittals.** Clearly describe the equipment to be furnished with complete and detailed submittal information.
- C. **Identification.** Properly identify all submittal-related documents and arrange in a logical order to best present the information. Provide an index that includes the following on every submittal.
 1. Manufacturer's name and address.
 2. Submittal date and revision number, if applicable.
 3. Contract identification and specification section.
 4. Drawing scale and orientation.
 5. Submittal page number or sequence of pages.
 6. Drawing number.
- D. **Verification**
 1. Where existing conditions or structures exist, field-verify dimensions, elevations, clearances, etc.
 2. The submittal shall not be accepted for review until such verified data is clearly indicated.
- E. **Legends**
 1. All submittal diagrams, drawings, schematics, etc., shall include complete keys, legends or similar explanation as to the graphics, and symbols and abbreviations used.
 2. In general, all graphics, symbols, abbreviations, and equipment nomenclature used for a submittal shall duplicate those used on the Contract Drawings.
- F. **Approvals.** Provide the following on each submittal.
 1. A space approximately 4" x 5" on to record the Contractor's review and approval markings and the action taken. These shall include the Contractor's:
 - a. Approval stamp.
 - b. Signature.
 - c. Date of approval.
 - d. Deviations from the Contract Documents.
 2. An equal area beside the Contractor's review and approval markings for the Engineer review stamp.
- G. **One Section per Submittal.** Each submittal shall pertain to only one specification section.

SUBMITTALS

H. **All submittal information shall be:**

1. Neatly arranged.
2. Legible.
3. Not distorted or faded.
4. English.
5. In United States standard units.
6. Typed.

I. **All letters, certifications, and similar documents** shall be submitted in their entirety. Single pages of multiple-page letters, or letters with deleted passages will not be acceptable for submittal purposes.

J. **"Generic" letters, test reports**, material certifications, or similar documents which do not specifically address the requirements of the Contract Documents for the actual materials being furnished will not be acceptable.

K. **Mark all submittals** to clearly indicate the full extent of the equipment to be furnished.

1. Indicate all options to be provided, materials of construction, dimensions, and other information pertinent to the submittal.
2. Options, materials, and dimensions which do not pertain to the materials or equipment to be furnished shall be neatly marked out so as to avoid confusion and doubt during review, delivery, and installation.

L. **Resubmittals must clearly identify** all changes and revisions.

1. The drawing shall be marked "revised" with the revision date indicated.
2. Each resubmittal shall reference the previous submittal by the Engineer's log number.

M. **"By Others"**

1. All submittals are reviewed as if prepared by the Prime Contractor.
2. The term "By Others" is appropriate to indicate supply by the Owner or another Prime Contractor.
3. Where a subcontractor or supplier uses the term "By Others" to indicate work by the Prime Contractor or another subcontractor or supplier, the Prime Contractor shall change "By Others" to indicate the actual source.

N. **Deviations from Contract.** Highlight, encircle, or otherwise indicate deviations from the Contract Documents in all submittals.

2.3 SPECIFIC SUBMITTAL-TYPE REQUIREMENTS

A. **Shop Drawings.** The following paragraphs detail the general requirements for shop drawings and specific requirements for specific types of shop drawings.

1. General Requirements.

SUBMITTALS

- a. A shop drawing is a detailed representation of the work to be performed to demonstrate compliance with the Contract Drawings including:
 - 1) Material and equipment layout.
 - 2) Fabrication drawings.
 - 3) System and electrical schematic diagrams.
 - 4) Equipment and material schedules.
 - 5) Installation details.
 - b. Submit newly prepared information, drawn to accurate scale.
 - c. Standard information prepared without specific reference to the project is not considered shop drawings.
2. Equipment/Material Layout Drawings.
- a. Include:
 - 1) Plot plans.
 - 2) Plant site maps.
 - 3) Equipment location plans.
 - 4) Equipment and material layout plans and sectional views.
 - 5) Connection detail drawings.
 - 6) Similar drawings showing the incorporation of materials and equipment into the work.
 - 7) The physical layout to scale, including elevations, plant grid coordinates, dimensions to new/existing structures, and other items of the work.
 - 8) Dimensions.
 - 9) Labeling.
 - 10) Notes.
 - 11) Legends.
 - 12) Bills of materials.
 - 13) All other information required to graphically describe the proposed work.
- B. **Product Data.** Product data is submittal information that fully describes the item to be incorporated into the work. Product data shall include when applicable:
1. Manufacturer name.
 2. Catalog cut-sheets.
 3. General descriptive bulletins/brochures/specifications.
 4. Materials of construction data and parts list.
 5. Finish/treatment data.
 6. Equipment/material weight/loading data.
 7. Power/utility requirements.
 8. Engineering design data, calculations, and system analyses.
 9. Digital system documentation.
 10. Any deviations from the contract documents.

SUBMITTALS

11. Material Certifications. These include signed certificates or declarations by the Contractor, supplier, manufacturer, testing laboratory, or recognized certification agency which document that materials and product composition or construction comply with specified requirements and stated reference standards.
12. Manufacturer's printed recommendations.
13. Compliance with recognized trade association and testing agency standards.
14. Application of testing agency labels and seals.
15. Notation of dimensions verified by field measurement.
16. Notation of coordination requirements.
17. Specific response to detailed specification requirements.
18. Maximum operating pressure and temperature ratings.

C. Personnel Qualifications

1. General. These qualification statements and information pertain to personnel and entities employed in the prosecution of the work.
2. Specific Information. Provide the following information regarding the proposed personnel or entity.
 - a. Education/training.
 - b. Company employment history.
 - c. Professional experience.
 - d. References.
 - e. Certifications or licenses.

Stated qualifications shall be pertinent to the specific task for which qualifications are requested.

D. Source Quality Control Documents

1. Inspection.
 - a. Inspection data includes inspection procedures and results of factory inspections of products, equipment, or systems.
 - b. Within this type of submittal information are factory witness test procedures, schedules and reports, and similar data.
2. Testing.
 - a. Test data is the information leading to or resulting from tests performed on materials, equipment, or systems at the manufacturer's facilities or in testing laboratories.
 - b. This also includes data on testing equipment.
 - c. Examples of test data include all information, test arrangement, drawings, illustrations, diagrams, curve plots, graphs, and other data which substantiates or establishes a material or product characteristic, quality, or other trait as a result of test required by the Contract Documents.

SUBMITTALS

E. Material Field Test Reports

1. Report Data. Written reports of each inspection, test, or similar service shall include, but not be limited to:
 - a. Date of issue.
 - b. Project title and number.
 - c. Name, address, and telephone number of testing agency.
 - d. Dates and locations of samples and tests or inspections.
 - e. Names of individuals making the inspection or test.
 - f. Designation of the work and test method.
 - g. Identification of product and specification section.
 - h. Complete inspection or test data.
 - i. Test results and interpretations of test results.
 - j. Ambient conditions at the time of sample taking and testing.
 - k. Comments or professional opinion as to whether inspected or tested work complies with Contract Document requirements.
 - l. Name and signature of laboratory inspector.
 - m. Recommendations on testing.
2. Example reports covered by this paragraph include compaction tests and concrete, leakage, and disinfection tests.

F. Special Warranties

1. There are two (2) general types of warranties covered by this specification.
 - a. Manufacturer's Express Warranties.
 - 1) These are formal statements of certifications by manufacturers which warrant to the Owner that products and equipment are free from defects in material and workmanship.
 - 2) These are standard warranties issued with products and equipment which supplement the Contractor's warranty and may also extend coverage past the expiration of the Contractor's warranty.
 - 3) Include with the manufacturer's warranty data shall be a notification of the availability of an extension to the standard warranty including terms.
 - b. Special Express Warranties.
 - 1) The form, format, and conditions of special warranties are described in the various specification sections of the Contract Documents.
 - 2) These are formal warranties above and beyond the Contractor's warranty and manufacturer's standard warranties.

SUBMITTALS

- 3) These warranties may be based on performance, power consumption, maintenance projects, or other operating parameters.
 - 4) Extended warranties, service contracts, and performance bonds are also included under this category.
2. Term or Period. Unless otherwise established by individual sections in Divisions 2 through 44, all Contractor express warranties shall extend for one (1) calendar year from the date of substantial completion of the project or acceptance date of the product or portion of work thereof, whichever is the later date.
 3. Content of Warranty. The warranty shall contain, as applicable:
 - a. Effective starting date of the warranty period.
 - b. Statement of the terms and conditions of the warranty, if any.

G. Project Record Documents

1. Project record documents are to be in accordance with paragraph 6.12 of Section 00 70 00, "General Conditions."
2. Record Contract Drawings. Legibly mark contract drawings to record actual construction including:
 - a. Depths of various elements of foundation in relation to data.
 - b. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.
 - c. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure.
 - d. Field changes of dimension and detail.
 - e. Changes made by change order or field order.

H. Extra Materials/Spare Parts

1. Coat or package extra materials to prevent corrosion or deterioration during long-term indoor storage.
2. Clearly label all packaging with:
 - a. Part name.
 - b. Part number.
 - c. Associated equipment name and number.
 - d. Manufacturer's name and address.
 - e. The required storage environment for the materials.

- I. **Other.** These include special tools/repair parts list, photographs, videos, certificates, construction schedules, drawings, reports, meeting minutes, data, and information required by the Contract Documents which do not logically fall into the submittal types defined above.

SUBMITTALS

PART 3 - EXECUTION

3.1 SUBMITTAL PREPARATION AND TRANSMITTAL

A. Coordination

1. Coordinate preparation and processing of submittals with performance of construction activities.
2. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay and in accordance with the submittal schedule.
3. The General Contractor is responsible for resolving any disputes between Prime Contractors over submittals.

B. Verification

1. Verify the correctness and completeness of all submittals prior to forwarding same for review.
2. All submittals shall comply with the Contract Documents.

C. **Package each submittal** appropriately for transmittal and handling including a transmittal form.

D. **The Prime General Contractor shall submit** the minimum number of submittals as listed in paragraph 3.3 of this specification or a single pdf.

E. **Submittals received from sources** other than the Prime General Contractor will be returned without action.

F. **Other Prime Contractors shall submit** all submittals through the Prime General Contractor.

3.2 ENGINEER'S REVIEW AND ACTION

A. General

1. Except for submittals for record, information, or similar purposes where action and return is not required or requested, the Engineer will review each submittal, mark to indicate action taken, and return promptly.
2. Cost to review any submittal more than twice will be deducted from Contractor's monthly estimates and final payments.
3. The Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

B. **Action Stamp.** The Engineer will stamp each submittal with a uniform, self-explanatory action stamp. The stamp will be appropriately marked, as follows, to indicate action taken.

1. Final Unrestricted Release. Where submittals are marked "Approved" or "No Exceptions Taken," that part of the work covered by the submittal may proceed provided it complies with requirements of the Contract Documents; final acceptance will depend upon that compliance.

SUBMITTALS

2. Final-but-Restricted Release. When submittals are marked "Approved as Noted," that part of the work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents; final acceptance will depend on that compliance.
3. Returned for Resubmittal.
 - a. When submittal is marked "Not Approved" and/or "Revise and Resubmit," do not proceed with that part of the work covered by the submittal, including purchasing, fabrication, delivery, or other activity.
 - b. Revise or prepare a new submittal in accordance with the notations; resubmit without delay. Repeat if necessary to obtain a different action mark.
 - c. Do not permit submittals marked "Not Approved" and/or "Revise and Resubmit" to be used at the project site or elsewhere where work is in progress.

3.3 MINIMUM NUMBER OF SUBMITTALS AND DISTRIBUTION

- A. **After a submittal has been approved**, the Engineer will make the following distribution in hard copy or pdf format:

Submittal	Minimum No. of Submittals	Distribution		
		Owner	Contractor	Engineer
1. Shop Drawings	3	1	1	1
2. Product Data	3	1	1	1
3. Samples/Mock-Ups	2	1	0	1
4. Personnel Qualifications	3	1	1	1
5. Material Field Test Reports	3	1	1	1
6. Special Warranties	3	1	1	1
7. Project Record Documents	1	1	0	0

B. **Multiprime Contract Distribution.**

1. The Engineer will forward all reviewed submittals to the Prime General Contractor only.
2. The Prime General Contractor is then responsible to send each submittal to every Prime Contractor that it affects for their use.

END OF SECTION

November 13, 2017

Burgess & Niple, Inc.

3950 Fossil Creek Boulevard, Suite 210
Fort Worth, Texas 76137

Attention: Mr. Steven Sanders

Re: Geotechnical Exploration
Starnes Road 16-Inch Water Line
Off Starnes Road
Watauga, Texas
ALPHA Report No. W172788

ALPHA TESTING, Inc. performed geotechnical drilling at selected locations along Starnes Road, between Evergreen Drive and Village Park Drive in Watauga, Texas. Laboratory tests were performed on selected samples retrieved from the borings. This study was authorized by Mr. Steven Sanders using the Agreement for Subconsultant Services between Burgess and Niple, Inc., and ALPHA TESTING, Inc. dated September 29, 2017 and performed in accordance with ALPHA Proposal No. 61126 dated October 13, 2017.

The scope of work provided herewith consists of drilling and laboratory testing only. Engineering analyses and recommendations are outside the scope of the services proposed and provided.

A total of three (3) borings were drilled to a depth of about 15 ft each at locations selected by the Client. The borings were performed in general accordance with ASTM D 420 using standard rotary drilling equipment. The location of the test boring is shown on Figure 1, the Boring Location Plan, attached to this report. The boring locations are approximate.

Subsurface conditions encountered in Borings 1 and 2 generally consisted of clay, sandy clay and shaly clay soils extending to the 15 ft termination depth of the borings. A layer of clayey sand, about 2 ft thick, was encountered in Boring 1 at a depth of about 4 ft below the ground surface. Subsurface conditions encountered in Boring 3 generally consisted of clay and sandy clay soils extending to a depth of about 11 ft below the ground surface underlain by limestone extending to the 15 ft termination depth of the boring. About 8½ inches of concrete pavement was encountered at the ground surface in the borings. The upper 2 ft to 6 ft of clayey soils encountered in the borings were visually classified as fill material. Groundwater was encountered on drilling tools during drilling at a depth of about 10 ft below the ground surface in Boring 3. Free groundwater was not encountered in the remaining borings.

Representative samples were evaluated and classified by a qualified member of the Geotechnical Division and the boring logs were edited as necessary. To aid in classifying the subsurface materials natural moisture content tests (ASTM D 2216), Atterberg-limit tests (ASTM D 4318), percent material passing the No. 200 sieve tests (ASTM D 1140) and dry unit weight determinations were conducted on selected samples. In addition, unconfined compressive strength tests (ASTM D 2166) and pocket-penetrometer tests were conducted on selected soil samples. Results of the laboratory tests described above are provided on the Log of Boring sheets.



Please note; engineering analyses and recommendations are outside the scope of this study, and ALPHA is not responsible for interpretation of the data provided herewith by others. ALPHA appreciates the opportunity to be of service on this project. Please contact our office if you have any questions.

Sincerely,

ALPHA TESTING, INC.

Mahsa Hedayati, Ph.D., P.E.
Geotechnical Project Manager

Brian J. Hoyt, P.E.
Geotechnical Department Manager

BJH/MH/on
Enclosures:

Boring Location Plan (Figure 1)
Log of Borings (Borings 1, 2 and 3)
Key to Soil Symbols and Classifications

Client: Burgess & Niple - Fort Worth

Location: Watauga, Texas

Project: Starnes Road 16-Inch Water Line

Surface Elevation:

Start Date: 10/31/2017 End Date: 10/31/2017

West:

Drilling Method: CONTINUOUS FLIGHT AUGER

North:

Hammer Drop (lbs / in):

Depth, feet	Graphic Log	GROUND WATER OBSERVATIONS												Sample Type	Recovery % RQD	TX Cone or Std. Pen. (blows/ft.in)	Pocket Penetrometer (tsf)	Unconfined Comp. Strength (tsf)	% Passing No. 200 Sieve	Unit Dry Weight (pcf)	Water Content, %	Liquid Limit	Plastic Limit	Plasticity Index	
		▽ On Rods (ft): ▼ After Drilling (ft): ▼ After _____ Hours (ft):	NONE DRY _____																						
		MATERIAL DESCRIPTION																							
		8.5" CONCRETE	0.8																						
		Tannish Brown CLAY - possible fill					4.5+					17													
							3.75					19													
			4.0																						
5		Tan and Brown SANDY CLAY					4.0			45		17													
			6.0																						
		Tan and Gray SANDY CLAY with calcareous deposits and gravel					4.5+	4.4	69	128	11	32	14	18											
							4.5+				13														
10			10.0																						
		Tan and Gray SHALY CLAY																							
							4.5+				23														
15			15.0																						
		TEST BORING TERMINATED AT 15 FT																							

Client: Burgess & Niple - Fort Worth

Location: Watauga, Texas

Project: Starnes Road 16-Inch Water Line

Surface Elevation: _____

Start Date: 10/31/2017 End Date: 10/31/2017

West: _____

Drilling Method: CONTINUOUS FLIGHT AUGER

North: _____

Hammer Drop (lbs / in): _____

Depth, feet	Graphic Log	GROUND WATER OBSERVATIONS												Sample Type	Recovery % RQD	TX Cone or Std. Pen. (blows/ft.in)	Pocket Penetrometer (tsf)	Unconfined Comp. Strength (tsf)	% Passing No. 200 Sieve	Unit Dry Weight (pcf)	Water Content, %	Liquid Limit	Plastic Limit	Plasticity Index
		▽ On Rods (ft): ▼ After Drilling (ft): ▼ After _____ Hours (ft):	NONE DRY _____																					
MATERIAL DESCRIPTION																								
		8.5" CONCRETE	0.8																					
		Brown SANDY CLAY - possible fill	2.0				4.5+				28													
		Tan CLAY with calcareous deposits	8.0				4.0				13													
5							4.5+				13													
							4.0	2.9		116	17	49	22	27										
		Tan and Gray SHALY CLAY	15.0				4.5+	3.3		110	19													
10																								
							4.5+				19													
15																								
		TEST BORING TERMINATED AT 15 FT																						

Client: Burgess & Niple - Fort Worth

Location: Watauga, Texas

Project: Starnes Road 16-Inch Water Line

Surface Elevation: _____

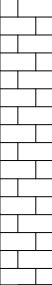
Start Date: 10/31/2017 End Date: 10/31/2017

West: _____

Drilling Method: CONTINUOUS FLIGHT AUGER

North: _____

Hammer Drop (lbs / in): 140 / 30

Depth, feet	Graphic Log	GROUND WATER OBSERVATIONS			Sample Type	Recovery % RQD	TX Cone or Std. Pen. (blows/ft.in)	Pocket Penetrometer (tsf)	Unconfined Comp. Strength (tsf)	% Passing No. 200 Sieve	Unit Dry Weight (pcf)	Water Content, %	Liquid Limit	Plastic Limit	Plasticity Index
		▽ On Rods (ft): 10	▼ After Drilling (ft): DRY	▼ After Hours (ft):											
MATERIAL DESCRIPTION															
		8.5" CONCRETE	0.8												
		Dark Brown CLAY - possible fill					2.0					19			
							4.5+					25			
5							2.25					16			
		Brown CLAY	6.0				2.25					27			
			8.0												
		Tan and Gray SANDY CLAY with gravel					3.25	2.2	64	116	20	54	21	33	
10	▽														
		Tan LIMESTONE with clay seams and layers	11.0												
15			15.0			100/ 4"						12			
		TEST BORING TERMINATED AT 15 FT													

KEY TO SOIL SYMBOLS AND CLASSIFICATIONS

SOIL & ROCK SYMBOLS

	(CH), High Plasticity CLAY
	(CL), Low Plasticity CLAY
	(SC), CLAYEY SAND
	(SP), Poorly Graded SAND
	(SW), Well Graded SAND
	(SM), SILTY SAND
	(ML), SILT
	(MH), Elastic SILT
	LIMESTONE
	SHALE / MARL
	SANDSTONE
	(GP), Poorly Graded GRAVEL
	(GW), Well Graded GRAVEL
	(GC), CLAYEY GRAVEL
	(GM), SILTY GRAVEL
	(OL), ORGANIC SILT
	(OH), ORGANIC CLAY
	FILL

SAMPLING SYMBOLS

	SHELBY TUBE (3" OD except where noted otherwise)
	SPLIT SPOON (2" OD except where noted otherwise)
	AUGER SAMPLE
	TEXAS CONE PENETRATION
	ROCK CORE (2" ID except where noted otherwise)

RELATIVE DENSITY OF COHESIONLESS SOILS (blows/ft)

VERY LOOSE	0 TO 4
LOOSE	5 TO 10
MEDIUM	11 TO 30
DENSE	31 TO 50
VERY DENSE	OVER 50

SHEAR STRENGTH OF COHESIVE SOILS (tsf)

VERY SOFT	LESS THAN 0.25
SOFT	0.25 TO 0.50
FIRM	0.50 TO 1.00
STIFF	1.00 TO 2.00
VERY STIFF	2.00 TO 4.00
HARD	OVER 4.00

RELATIVE DEGREE OF PLASTICITY (PI)

LOW	4 TO 15
MEDIUM	16 TO 25
HIGH	26 TO 35
VERY HIGH	OVER 35

RELATIVE PROPORTIONS (%)

TRACE	1 TO 10
LITTLE	11 TO 20
SOME	21 TO 35
AND	36 TO 50

PARTICLE SIZE IDENTIFICATION (DIAMETER)

BOULDERS	8.0" OR LARGER
COBBLES	3.0" TO 8.0"
COARSE GRAVEL	0.75" TO 3.0"
FINE GRAVEL	5.0 mm TO 3.0"
COURSE SAND	2.0 mm TO 5.0 mm
MEDIUM SAND	0.4 mm TO 5.0 mm
FINE SAND	0.07 mm TO 0.4 mm
SILT	0.002 mm TO 0.07 mm
CLAY	LESS THAN 0.002 mm

TECHNICAL SITE CIVIL

All construction shall be in accordance with the current Specifications for the installation of Water and Sewer Mains in the City of Watauga (attached following this page for reference), the City of Watauga Standard Details, the 5th edition of the North Texas Council of Governments Public Works Construction Standards, or the Texas Department of Transportation as applicable.

CITY OF WATAUGA
SPECIFICATIONS FOR THE INSTALLATION
OF WATER AND SEWER MAINS

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EXHIBIT "A"

CITY OF WATAUGA SPECIFICATIONS FOR THE INSTALLATION OF WATER AND SEWER MAINS

I. Trenching and Backfill

- A. GENERAL: This work shall include the furnishing of all labor, materials, tools, equipment, and machinery necessary for clearing and removing stumps, brush, vegetation, debris, all earth, rock and other materials to be excavated; the stripping or removal of topsoil or sod to be piled separately from other excavated materials and later to be restored to its original place after backfilling is completed; the furnishing, placing and maintaining of all sheeting, shoring and bracing necessary to protect the work and adjacent properties; all pumping, bailing and drainage necessary to keep the excavation free from seepage water, water from sewers, drains, ditches, creeks and other sources; provision for the uninterrupted flow of sewers and surface waters during progress of the construction; the removal, after completion of the work, of all sheeting, shoring and bracing not necessary to support the sides of the excavation; the satisfactory disposal of excess and unsuitable materials not required or which cannot be used for backfilling, tamping compacting, and refilling after settlement of all excavated areas; the restoring of all streets, alleys, fences, right-of-way, and other land or structures private or public, damaged or occupied by the contractor in the performance of the work, to as good a condition as they were prior to the beginning of the work.

In general, the lines will be laid in the parkway, or with permission of the Public Works Director, may be laid in the easements. Where ever lines are to be installed on private property, the Developer will secure the necessary easements in the name of the City of Watauga. The Contractor must use due care to protect the property over which the project extends. Where the lines are to be constructed across or in streets that have been dedicated and not yet opened, the Contractor shall clear the right-of-way to a width necessary for the trenching and pipe laying operations. All trees, brush, stumps, and other debris removed in this process shall be disposed of by the Contractor.

Burning shall be allowed only by written permission from the Public Works Director and permission from the fire department. Where necessary, the Contractor shall level the ditch line before trenching operations with a bulldozer, maintainer, or by other means so that the tracks or wheels of the ditching machine are level with each other and the ditch is cut with vertical sides. Where it is not practical to level the right-of-way, the Contractor shall block up the tracks on the low side of the ditching machine with timbers or otherwise to keep the bucket line and the side of the trench vertical. The Contractor shall take down fences on or crossing the right-of-way for such periods of time only as necessary for clearing and leveling the right-of-way. The Contractor shall construct temporary gates in all such fences to permit his operations, and shall be strictly responsible for keeping such temporary gates closed at all times. The Contractor shall be responsible for any stock lost through any temporary gate in any fence. After the construction work is completed, the Contractor shall repair or replace all fences he has taken down or made temporary gates in, so that they are in "equal to" or "better than" type condition before being disturbed. The Contractor shall make his own arrangements with each property owner for the right of entry across the property, if he desires entry other than along the easement. If the Contractor fails to make such arrangements, he shall limit his entry to along the easement, and shall maintain the easement right-of-way in such condition that the entire length of the line can be traversed in a pick-up until final inspection.

- B. CONSTRUCTION METHODS: Trenches shall be excavated by a trenching machine where possible, but may be excavated by other machines or by hand where conditions will not permit a trenching machine to work. The banks of the trenches shall be vertical as possible. Trenches will be excavated to the lines and grades or as shown on the plans as submitted to and approved by the City Engineer or his approved representative.

The width of the trench shall be six (6) inches minimum and eight (8) inches maximum on each side of the pipe bell. The excavation shall not advance more than three hundred (300) linear feet ahead of the completed backfilled lines. Pipe shall be laid in all trenches that has been opened at the end of each day's work, unless the Contractor secures written permission to do otherwise.

If the bottom of the trench becomes an unstable foundation for the pipe through the neglect of the Contractor to adequately shore or de-water, the Contractor will be required to remove the unstable material and backfill the trench to the proper grade with approved compacted gravel or crushed rock. If the trench is inadvertently excavated deeper than necessary it shall be backfilled to the proper grade with approved compacted gravel, crushed rock or fill. If the undisturbed material encountered at the grade depth constitutes, in the opinion of the Public Works Director or his representative an unstable foundation for the pipe, the Contractor will be required to remove such unstable material and backfill the trench to the proper grade with approved compacted fill. The Contractor shall remove any water which collects in the trenches while water or sewer pipes are being laid. In no case shall water be allowed to run over the invert or foundation or through the sewer without permission from the Public Works Director or his representative. Water encountered shall be disposed of by the Contractor in a manner satisfactory to the Public Works Director or representative. The bottoms of the trenches for all sewers shall be carefully and truly graded, formed, and lined according to the grades and dimensions furnished the Contractor. They shall be approved by the Engineer or his representative before any pipes are laid therein. Bell holes shall be excavated by hand.

It shall be the Contractor's responsibility to locate, with a pipe locator, contact the utility company, or otherwise, all existing utilities and to save same from all harm.

In the event the Contractor damages an existing utility line during construction such damage shall be repaired immediately in a permanent manner satisfactory to the Engineer or his representative. The Contractor shall excavate all trenches, including work necessary in working around existing pipe lines or other obstructions. The Contractor shall give notice to the owners of any such lines or obstructions in order that they may have time to take the necessary precautions for protecting their property. The Contractor shall be responsible for protecting the owner from any damage from his operations in such work.

In rock, excavation shall be carried six (6) inches below the bottom of the

pipe and loose earth or other material, thoroughly tamped, shall be used for backfilling to grade.

- C. SHEETING: In wet, saturated, or flowing materials, when it is necessary to install tight sheeting or cofferdams, wood or steel sheet piling of a design and type approved by the Engineer or his representative shall be used. All sheet piling, shoring and bracing shall have sufficient strength and rigidity to withstand the pressure exerted and maintain the sides of the excavation properly in place and protect all persons or property from injury or damage. When excavations are made adjacent to existing building or other structures or in paved streets, particular care shall be taken to adequately sheet, shore and brace the sides of the excavations to prevent undermining of or settlement beneath the structure or pavement. Underpinning of adjacent structures or pavement shall be done by the Contractor in a manner satisfactory to the Engineer or his representative and when required by the Engineer. The pavement shall be removed, the void satisfactorily refilled and compacted, and the pavement replaced by the Contractor. Sheeting, shoring or bracing shall not be left in place unless authorized by the Engineer or his representative. The removal of sheeting, shoring and bracing shall be done in such a manner as not to endanger or damage either new or existing structures, private or public properties, and so as to avoid cave-ins or sliding of the banks. All holes or voids left by the removal of the sheeting, shoring or bracing shall be immediately and completely filled and compacted with suitable materials.
- D. PUMPING, BAILING AND DRAINING: The Contractor shall immediately remove all surface or seepage water from sewers, drains, or ditches and other sources which may accumulate during the excavation and construction work by providing the necessary underdrains or otherwise and by doing the necessary pumping, bailing or draining. The Contractor shall have available at all times sufficient equipment in proper working order for doing the work herein required. All water removed from excavations shall be disposed of in an approved manner so as to create unsanitary conditions nor to interfere unduly with the use of streets, private driveways or entrances.
- E. SUPPORT OF EXISTING PIPES ACROSS TRENCHES: It shall be the

responsibility of the Contractor to protect and support all water, gas, phone and electrical conduits crossed by the excavation or work to be performed by the Contractor or to arrange for their temporary removal and subsequent replacement.

- F. DISPOSAL OF EXCAVATED MATERIAL: Excavated materials, so far as needed and of a suitable character, shall be piled adjacent to the work to be used for backfilling as required. Excavated materials unsuitable for backfilling shall be disposed of in an approved manner at locations designated or approved by the Engineer or Public Works Director. Desirable topsoil, sod, etc., shall be carefully piled separately and replaced in its original position when required. Excavated materials shall be handled at all times in such a manner as to cause a minimum of inconvenience to public travel and to permit safe and convenient access to private and public adjacent to or along the line of work.
- G. PROTECTION OF TREES, PLANTS, SHRUBBERY: Where trees, plants and shrubbery are not to be removed or replaced, the Contractor may be required to protect such trees, plants and shrubbery, by substantial wooden boxes and guards and shall not permit machinery or employees to scrape, tear the limbs from or damage or attach guy cables to them, and if, in the opinion of the Public Works Director, or his representative, such trees, plants and shrubbery would be damaged by machinery, etc., hand excavation may be required.
- H. TUNNELING AND CASING: Tunneling under highways, streets or railroads, shall be accomplished by means of jacking, boring and tunneling equipment which has been approved by the Public Works Director or his representative prior to starting tunneling operations. Tunnels shall be backfilled as completely as practicable with selected materials and compacted by means of mechanical tampers. The remainder of the tunnel backfill shall be of coarse sand, gravel or crushed rock hydraulically placed in such a manner that no voids remain between the backfilled materials and the roof of the tunnel.
- I. ENCASEMENT CARRIER PIPE: Carrier pipe will be pressured grouted.

- J. CROSSING TO BE KEPT OPEN: At such street, railroad and other crossings as may be designated by the Engineer or his representative, the trenches are to be filled in such a manner as to prevent any serious interruptions of traffic upon the roadway or sidewalks. The cost thereof shall be borne by the Contractor.
- K. PROTECTION OF UNFINISHED WORK: Before leaving work for the night, during a storm, or at other times, care will be taken to protect and securely close the unfinished end of the pipe. Any earth or other materials that may find entrance into the pipe through any such open or unplugged end of the pipe must be removed.
- L. LIGHTS AND GUARDS: The Contractor must provide and maintain adequate detours around the work under construction; the Contractor must provide sufficient lights, warning signs and watchman to provide adequately for the safety of the public.
- M. BACKFILL: Backfilling shall be done with good sound earth. Broken concrete, rock, bituminous pavement or other lumpy material shall not be used in the backfill except as the lumps are small and their dispersal in the backfill is made in the upper section in a manner satisfactory to the Engineer or his representative. Materials of a perishable, spongy or otherwise improper nature shall not be used in backfilling. Where good sound earth is not available from the excavated material, concrete backfill material will be used for the initial backfill operation to a point twelve (12) above the top of the pipe. Concrete backfill material will not be required when concrete encasement is specified or used around the pipe. No backfill shall be made until it is authorized by the Public Works Director or his representative and shall be done immediately when so ordered by the Public Works Director or his representative. All debris shall be removed. Sheeting, shoring and bracing shall be pulled and removed during the progress of the backfilling in a manner satisfactory to the Public Works Director or his representative. If, on account of special condition, backfill compaction by flushing, flooding or ponding and jetting with water may float or otherwise damage the structure, this

method shall be used only upon the written permission and authority of the Engineer, Director of Public Works or an approved representative of the City of Watauga, and shall be performed according to an under his or her supervision.

Backfilling shall be brought up to an elevation slightly above the original ground level to allow for subsequent settlement.

Concrete cushion and backfill shall be composed of a free flowing material consisting of small stone, pea gravel, limestone chat, or pit run sand and gravel and shall always consist of at least 60 percent sand. The material shall all pass a 3/4" screen and be free from sticks, lumps, stones and organic matter. The material shall be mixed with Portland Cement in the proportions of one (1) part cement to twelve (12) of the above described granular material, by volume measurement. Concrete cushion or concrete backfill shall be poured either wet or dry as may be directed the Engineer, Public Works Director or his approved representative. When concrete cushion or concrete backfill is specified or ordered by the Engineer to be poured dry, the Contractor shall place this material on each side of the pipe for the full width of the trench using shovels to cut the material back under the pipe and shall be tamped to a height of twelve (12") inches above the pipe to receive final backfill. Care must be exercised not to dislocate or disturb the grade of alignment of the pipe. If ordered by the Engineer to be poured wet, caution and care must be used not to float the pipe out of place. In the event pipes are floated out of the proper position they shall be removed and relayed. When in the opinion of the Engineer, Public Works Director or his representative, the sub-grade material encountered at grade is soft, spongy and unsatable, it shall be removed to such a depth that the replacement thereof with firmly tamped gravel or crushed rock will provide an unyielding, stable foundation. The gravel used in cushion or backfill shall be free from silt, loam or vegetable matter and shall be of a gradation suitable to the Engineer or his representative.

After pipe has been laid to such an extent that it will not be damaged by the backfilling operation, good sound earth from the spoil bank shall be brought up by mechanical tamped layers not exceeding eight (8) inches in thickness of loose fill approximately equal on each side of the pipe to a height of twelve (12) inches over the top of the pipe. The first layer cannot

extend above the spring line of the pipe. The tamping shall be carefully and thoroughly done in such a manner so as not to displace the pipe from its original position. When necessary in the opinion of the Engineer, or his representative, the backfill shall be moistened to facilitate compaction by tamping. Tamping will be performed by mechanical means. The final backfilling operation shall be one of the following:

1. The remainder of the backfill material may be placed in uniformly compacted layers not exceeding one (1) foot in loose depth and mechanically tamp the area until approved by the Engineer or his representative.
2. Where utility lines lie within the limits of a proposed street the backfill shall be a selected granular material and placed on both sides of the line equally in uniform layers not to exceed two (2) feet in depth (loose measurement), wetted and thoroughly compacted across the proposed street and three (3) feet past the street limits. This granular material is to be brought to within twelve (12) inches of finished sub-grade.
3. Where the asphalt or concrete street has been cut, the following procedure is to be used in backfilling and replacing the pavement:
Concrete backfill material will be tamped or poured into place over the pipe as necessary to bring the concrete backfill within six (6) inches of the finished grade. After the concrete backfill material has been brought within six (6) inches of the finished surface the material on either side of the trench shall be removed for a horizontal distance or twelve (12) inches and a depth of six (6) inches. Six (6) inches of 227 or 2500 pound concrete is then placed on top of this shoulder and the concrete backfill material. As soon as the 227 or 2500 pound concrete has obtained its set, the asphalt or concrete shall be neatly saw cut with a concrete saw to true lines, the existing asphalt will be saw cut twelve (12) inches outside the repair or tie in area. The surface will be tacked with RC-MC-or MS emulsion or cut back asphalt,

and surfaced with a minimum of two (2) inches of H.M.A.C. type D surface. Prior to completion and final acceptance of the project, the Contractor will be required to re-fill and recrown all trenches which have sunk below ground level.

N. PROTECTION OF EXISTING CURB AND GUTTER: If the Contractor places water or sewer services under curb and gutter that is already in place, the contractor shall insure that no damage is done to the curb and gutter. Water services shall be placed under existing curb and gutter by driving a steel rod under the curb and gutter to bore a small hole and then pushing the service pipe through the hole. When placing water or sewer services after the curb and gutter is in place, the Contractor shall not excavate an open ditch closer than six (6) inches to the curb and gutter section either from the front or back. Before any water or sewer services are placed under the curb and gutter section, the City's inspector shall inspect the curb and gutter and mark all broken places. After the water and sewer services are in place then the curb and gutter shall be inspected again and all broken curb and gutter marked. All curb and gutter broken by the Contractor shall be replaced at his expense.

O. UNLOADING OF PIPE: All water and sewer pipe to be used in the City of Watauga shall be unloaded by hand or mechanical means. Pipe rolled or dropped from the truck shall be immediately rejected for any type use in the City of Watauga System.

II. A. WATER PIPE AND APPURTENANCES: The material and labor required under this item shall constitute the construction of the water distribution system, or extensions to the existing system, as shown on the plans. Included are mains, laterals, valves, valve boxes and appurtenances. Where the work is across maintained lawn, the Contractor shall save, protect, care for, or replace the lawn grass with block sodding of the same kind and restore the yard back to an equal or better than condition. In making connections to existing mains or the removal of existing water lines, the Contractor shall make every effort to remove pipe, valves, valve boxes, fittings, etc., without damage to the same unless required for reinstallation shall clean and deliver same to the material yard of the City

of Watauga. All salvaged material remains the property of the City of Watauga and such materials which is destroyed or damaged in its removal by the Contractor due to his negligence shall be replaced by the Contractor with new material of equal or better quality. Retaining glands shall be required on all fittings. The Contractor shall not operate any valves or fire hydrants in the existing City of Watauga Works system without the express permission of the Public Works Director, Superintendent, or the inspectors. The required operation of valves and hydrants will be done only when an authorized representative of the City of Watauga Water or Engineering Department is present.

B. POLYVINYL CHLORIDE (PVC) PIPE FOR WATER:

- (1) Unplasticized polyvinyl chloride (PVC) pipe with INTEGRAL thickened wall bells may be used in the water main distribution system. Such pipe will be a minimum of Class 150 unless otherwise indicated on approved plans. The pressure classification of 150 pounds per square inch with a minimum thickness of DR-18 and 200 pounds per square inch with a minimum thickness of DR-14 refers to the maximum hydrostatic pressure to which the pipe would be subjected to during normal operation.
- (2) PVC pipe shall be DR-18 or DR-14 and shall meet (Class 150) AWWA-C-900 requirements for PVC pipe. Rigid sealed rubber gaskets installed at the factory shall be required. PVC water pipe shall be listed by underwriter's laboratories and be approved for use in cities and towns of Texas by the State Board of Insurance. The rigid PVC pipe shall bear the seal of approval (or "NSF" mark) of the National Sanitation Foundation testing laboratory for potable water pipe. Provisions must be made for contraction and expansion at each joint with a rubber ring and an integral thickened bell as part of each joint. Pipe and pipe fittings must be assembled with a non-toxic lubricant. Laying lengths shall be twenty (20) feet plus or minus one inch.

Service connections- ¾" inch, 1 inch or 1 ½ inch, service line connections shall be made by using a Double Strap Bronze Saddle, Ford 202B, Romac 202B or approved equal. Two (2) inch service line connections shall be made using JCM418 Tapping Sleeve or approved equal. All services larger than two (2) inches shall be

made with the proper tapping sleeve and valve. All 1 ½ inch and two (2) inch water services shall include a two (2) inch cast iron gate valve with a two (2) inch square operating nut with a valve box lid and cover. All services larger than two (2) inches shall include gate valves the same size as the service line. No direct tapping will be allowed. All taps will be made with an approved tapping machine. Service lines shall be Type K copper and shall be located at the centerline of each lot. The water service shall terminate in a polyethylene meter box (with cast iron lid) 2 to 3 feet behind the curb grade. Service taps shall be made after the mains have been laid, tested and the main is under pressure. Minimum cover of all services shall be 18" with 24" of cover the standard. The curb shall be stamped with letter "W" in good quality at the point where the service pipe passes under the curb. If the curb is not in place or will not be installed for at least 30 days, or if new services are installed in a sub-division, a 2' x 4' stake painted blue and white shall be placed over the end of the service line. The stake shall be driven into firm earth at least twelve (12) inches and shall extend at least eighteen (18) inches above the surface of the ground. Corporation cocks shall be Mueller No. H-15000 with straight coupling nut or approved.

C. CAST IRON PIPE, FITTINGS AND DUCTILE IRON:

1. Design pressure and loads- Cast iron and ductile pipe shall be designed to withstand internal working pressures of one hundred fifty pounds (150) per square inch water pressure. For external loads, provisions shall be made for truck loads on streets and roads as specified in the American Standards Association Manual A21.1, with the wall thickness of the pipe being adequate for the depth of bury of the various sections of the pipe as shown on the plans. Cast iron shall comply in all respects with Federal Specifications WW-P-421a, Types I, II, or III, except for wall thickness and weight of barrels as described- Centrifugal cast pipe shall be designed in accordance with the Manual for the Computation of Strength and Thickness of Cast Iron Pipe (A21.1-1939) as approved by American Standards Association. The Cast iron pipe may be Tykton, Bell-Tite, or other approved type rubber-gasketed pipe.
2. COATING AND LINING: All cast iron pipe and fittings shall

have an inside cement mortar lining conforming with American Standards Association Specifications for cement lining. Fittings for cast iron pipe shall be cast iron, suitable for one hundred fifty pounds (150) per square inch working pressure, AWWA class "D" fittings.

3. REINFORCED CONCRETE WATER PIPE- STEEL CYLINDER TYPE, MODIFIED (PRETENSIONED): Concrete cylinder pipe modified pre-stressed (or pre-tensional reinforcement) shall consist of a welded sheet steel cylinder lined with a dense concrete lining and around which there is placed reinforcing bars would helical under measured tension, with a dense concrete coating covering the cylinder and the bars, and with joint rings of the bell and spigot type for rubber gaskets. Pipe shall be in approximately thirty two (32) foot nominal lengths except for shorter lengths as required by special conditions. The pipe and pipe fittings shall comply with the Federal Specifications SS-PO-381 entitled "Pipe, Pressure, Reinforced Concrete, Pre-tensioned Reinforcement (Steel Cylinder Type)" with such modifications as set forth herein. The pipe manufacturer shall have had successful experience record in the design and manufacture of concrete cylinder pipe and shall have had a substantial footage of pipe or similar size and with the same joint as offered for this project in successful operation for at least five (5) years. All pipe, fittings, outlets, etc., shall meet the requirement of the Underwriters Laboratories, Inc. and shall be acceptable to the National Board of Fire Underwriters. All pipe shall be Class 150 designed for a working pressure of one hundred fifty pounds (150) per square inch. The Contractor shall furnish the Engineer with shop drawings showing the pipe and fittings to be furnished and shall include a location-profile and a tabulated layout schedule if required by the City Engineer. Such drawings shall be subject to the approval of the City Engineer and fabrication of pipe and fittings shall not be commenced until such drawings have been approved by the Engineer or Public Works Director.

- D. GATE VALVES AND INSTALLATION: Gate valves shall be the resilient seat gate design which conforms to the latest applicable AWWA C509 Standard. Gate valves shall be cast iron body. Valves shall have a non-rising stem and shall be equipped with two (2) inch operating unit and shall open by turning counter-

clockwise, unless otherwise specified. Valves shall be designed for a minimum working pressure of one hundred fifty pounds (150) per square inch. All gate valves and appurtenances shall be held in place by the use of retaining glands. Valve boxes shall be three (3) piece screw type cast iron of the extension and shall be similar to Mueller No. H-10360 or an approved equal. The three (3) pieces shall consist of the top section, bottom section, and cover. Extensions shall be ductile steel- PVC pipe extensions are not allowed. Valves shall be carefully handled and lowered into position in such a manner as to prevent damage to any parts of the valve. Valves shall be placed in such positions as indicated on the plans with the stem in a vertical position and securely held until all connections have been made. All connections to existing lines that are eighteen (18) inches and smaller shall be made by installing a tapping sleeve on the existing line, installing a tapping valve on the tapping sleeve, and tapping the line with a machine made for the purpose. Interruption of water service will not be allowed unless approved by the Public Works Director or his approved representative. The tapping sleeve shall be rated at one hundred fifty pounds (150) per square inch working pressure or greater, meeting AWWA specification and shall be equipped with the necessary flange connections for attaching the valve to the tapping sleeve and shall meet AWWA specifications. The following is a list of City of Watauga approved resilient gate valves and tapping valve manufacturers:

1. Mueller Model A-2370
2. Waterous Series 500
3. Clow Model F-6100
4. American Darling Model CRS-80-NRS

E. FIRE HYDRANTS: All fire hydrants shall be a standard traffic model three (3) way, with a mechanical joint inlet, 5 ¼ inch main valve opening and shall conform to AWWA standard, C-502 Standard. The body of the hydrants between the elbow and the top shall be made in two (2) parts connected by a flange to permit facing of the nozzle in any direction. Hydrants shall be designed that all working parts along with the main valve and waste valve, may be removed for inspection and or repair without excavating or disturbing the ground. Hydrants shall be provided

with an automatic and positive operating non-corrodible drain valve so as to drain the hydrant completely when the main valve is shut. Outlets for drainage of the barrel shall be made bronze or uncorrodible material, or bushed therewith, completely from the valve to the outside. The operating nut shall be a standard five-sided nut. Operating stems whose threads are located in the barrel of waterway shall be of maganese, Everdur, or other high quality non-corrodible metal, all working parts in the waterway shall be bronze to bronze. Operating stems whose threads are not located in the barrel or waterway must be sealed against contact with the water at all times regardless of open or closed position of the main valve. Each hydrant shall have a resilient seated gated valve installed between it and the main; such gate valve shall have flanged and mechanical joint ends. The length of the barrel of the fire hydrant shall be sufficient for the depth of bury at the particular location in which the hydrant is to be installed, and so that the pumper nozzle is at least eighteen (18) inches above the finished curb adjacent to the hydrant. The hydrant barrels should be of the proper length for 3 ½ foot bury, but longer barrel hydrants shall be installed there the main line is more than three (3) feet deep. The standard depth bury of fire hydrants shall be forty two (42) inches. The "break off" flange shall be no higher than six (6) inches above the natural ground level. The Contractor shall paint the exterior (above ground) with two (2) coats of aluminum color paint, Glidden series 592 or approved equal. Fire hydrants shall be shipped from the factory to the contractor supplier with two (2) coats of flat red or yellow primer, non-enamel. Fire hydrants shall be held in place by the use of either retaining glands or anchor couplings. The following is a list of approved City of Watauga fire hydrants:

1. Mueller Super Model A-423 (Centurion 200)
2. Waterous Model WB-67DDP, 635
3. American Darling Model B-84-B
4. Clow Model 2546-5-B (Medallion)

F. INSPECTIONS: During the process of unloading, all pipe and accessories shall be inspected by the Contractor for loss or damage in transit, if shipped to the job site or development. The Contractor shall make notations of loss, or damaged fittings or pipe. All pipe and accessories shall be laid, jointed and tested for defects and leakage with pressure, and chlorinated in the manner herein specified in the presence of the Public Works Director or his approved representative, and subject to their approval. All material found during the progress of the work to have

cracks, flaws, or other defects will be rejected by the Public Works Director or his approved representative, and the Contractor shall promptly remove from the site of the work such defective material. The Contractor shall be responsible for all material furnished to him or by him and shall replace all such material that is found to be defective in manufacturing or that has become damaged in handling after delivery by the manufacturer. The Contractor shall be responsible for the safe storage of material furnished by or to him until the material has been installed and incorporated into the completed project.

Project fittings, valves and other accessories shall be unloaded at the point of delivery, hauled to and distributed at the site of the project by the Contractor. They shall, at all times, be handled with care to avoid damage. Under no circumstances should fittings or valves be dropped. Pipe shall be handled in a manner that a minimum amount of damage to the coating and gaskets will result. Damaged gasket or coating of the pipe shall be replaced in a manner satisfactory to the Engineer, Public Works Director, or his representative. Pipe shall be placed on the site work and parallel with the trench alignment and with bell ends facing the direction on which the work will proceed unless otherwise directed. The interior of all pipe, fittings, and other accessories shall be kept free from dirt and foreign matter at all times.

- G. PIPE HANDLING: Proper implements, tools and facilities shall be provided and used by the Contractor for the safe and convenient prosecution of the work. All pipe, fittings and valves shall be carefully lowered into the trench using straps or derrick ropes to prevent damage to the pipe. Under no circumstances shall pipe or fittings be dropped into the trench. At all times when pipe laying is not in progress, the open ends of the pipe shall be closed by approved means. No trench water shall be permitted to enter the pipe. All foreign matter or dirt shall be removed from the pipe, and it shall be kept clean by approved means during and after laying. No pipe shall be laid in water or when the trench conditions are insuitable for such work. Cutting of pipe for inserting valves, fittings or closure pieces shall be done in a neat workmanlike manner without damage to the pipe. Concrete pressure pipe shall not be cut on the job site without the approval of the Engineer or Director of Public Works.

- H. CAST IRON AND DUCTILE PIPE LAYING AND JOINTING: The interior of the pipe shall be cleaned of all dirt, trash, leaves, and other

debris before the pipe is laid. The pipe shall be lowered into the trench with machinery or ropes in such a manner that the pipe will not be damaged. Before the pipe is placed in the trench, the ends of the pipe and couplings, spigots, and bells shall be thoroughly inspected for cracks and gasket damage before it is installed. The method for making joints shall be recommended by the manufacturer. The Contractor shall be responsible for the measurement of all connections. Flanged piping shall be erected in accordance with the controlling dimensions on the plans. Each piece of flanged pipe shall be thoroughly cleaned to remove dirt, rust, grease and other foreign matter. Flanged faces shall be thoroughly wire brushed to insure even bearing for gaskets and mating flanges. Gaskets for flanged joints shall be composition sheet packing full faced, 1/16 inch thickness, "Granite", or approved equal. Flange bolts shall be installed with bolts in one direction. Flange bolts shall be tightened, each in turn, at a uniform rate around the joint.

- I. CONCRETE CYLINDER PIPE LAYING AND JOINTING: Concrete cylinder pipe, fittings, specials and valves are to be installed at locations shown on the plans. Unless otherwise indicated, pipe in trenches shall be laid to the grade shown on an even grade from point to point for which elevations are furnished. Pipe, fittings, valves and other accessories shall be hauled to and distributed at the site of the project by the Contractor; they shall at all times be handled by hoists or cranes as specified below or rolled on skidways in such manner as to avoid shock. Under no circumstances shall pipe be dropped. Pipe handled on skidways must not be skidded or rolled against pipe already on the ground. Pipe shall be placed on the site of the work parallel with the trench alignment and with bell ends facing the direction which the work will proceed unless otherwise directed. Proper implements, tools, equipment and facilities shall be provided and used by the Contractor for the safe and convenient prosecution of the work. All pipe, fittings, specials, valves, etc., shall be lowered into the trench by means of a "Side Boom", crane or other suitable machine and shall not be rolled or dumped into the trench. The "Side Boom" crane, etc., shall be of a sufficient size for handling the pipe, shall lift and lower the pipe at a slow rate of speed, and shall be capable of stopping the lifting operation at any point without producing a shock or otherwise jerking or vibrating the pipe. The hoisting cable clamp shall be connected to the pipe in such a manner so as to prevent damage to the coating. Damaged pipe will be rejected. The pipe shall be kept clean during laying operations and free of all sticks, dirt and trash, open ends of

pipe shall be closed at the end of each day to prevent entrance of trash and water. Where it becomes necessary to make deflections in the line of the pipe, sections of pipe with beveled ends or fabricated fittings shall be used. Sections of pipe shall be used. Sections of the pipe shall be tightly fitted together, and care shall be exercised to secure true alignment and grade. Before laying each joint of pipe, the bell and spigot rings shall be thoroughly cleaned with wire brushing and wiped until clean and dry. Where pipe is being laid the gasket shall be placed on the spigot ring, and the spigot end of the pipe shall then be entered into the bell of the adjoining pipe and forced into position. The gasket and the inside surface of the bell shall be lubricated with a suitable solution (flax soap) which will facilitate the telescoping of the joint. The inside joint recess between ends of the pipe sections shall have a maximum and minimum width of one (1) inch and one quarter (1/4) inch respecting. No "Blocking Up" or pipe joints will be permitted. The exterior joint shall be made by placing a cloth joint wrapper around the pipe which will be held in place with two (2) strands of wire. The cloth wrapper shall be seven (7) inches wide and hemmed on each side so that the wire "ties" may be inserted to hold the wrapper in place. The cloth shall be of such length that it will encircle the pipe, leaving enough opening between the ends to allow the mortar to be poured inside the wrapper. The wire tee's shall be sixteen (16) gauge black annealed wire, or approved equal, and shall be of such length as to encircle the pipe and overlap at the ends about eight (8) inches for tying. The wire wrapper shall be securely fastened before the joint is poured. The wire wrapper shall be similar and equal to the wrappers (Diapers) as made by Mar-Mac Manufacturing Company. The grout used for pouring the joint shall consist of one (1) part Portland Cement (Type I) to two (2) parts of clean, fine, sharp plaster sand and mixed to the consistency of thick cream. The joint shall be filled with the grout from one side in one continuous operation until the grout has flowed entirely around the pipe. During the filling of the joint it shall be rodded with flexible wire to settle the grout. Upon completion of backfilling of the pipe trench the inside recess shall be filled with a Portland Cement mortar consisting of one (1) part cement to two (2) parts sand. Careful inspection shall be made of each joint to insure a smooth continuous interior surface. The interior of the pipe shall be thoroughly cleaned and any obstructions that may reduce its carrying capacity removed. Patch repair of cuts, nicks, etc., will be authorized by the Engineer or Public Works Director. Concrete cylinder pipe must be laid on grade to insure proper jointing of the pipe. Water pipes shall be laid, so far as possible ten (10) feet above the elevation of

nearby sewers at crossover points and at least ten (1) laterally from the sanitary sewers. Where this requirement for vertical clearance cannot be met because of physical condition, the water mains shall be placed so that no water pipe joints will exist with ten (10) feet of the crossover point.

- J. CONNECTION TO EXISTING WATER MAINS: Where indicated on the plans and approved by the Engineer, the Contractor shall connect the new main with existing mains or lines. The Contractor shall furnish all labor, material, equipment and services required for locating and uncovering of the existing line, the making of cuts in the existing line, the removal relocation, and lowering of existing lines as required, dewatering of the trench, connecting of the existing line into the new main and all appurtenant work required for a complete connection. Relocated mains or lines shall be laid so that all valves so relocated or installed shall be set vertically. Only such connections to existing mains as are necessary to load, test and sterilize mains under construction with water from the City mains will be permitted prior to the sterilization of new mains. All other connections to existing mains from a new main being constructed shall be made only after the new main has been adequately and satisfactorily sterilized and the inspector has authorized the connections to be made. Contractors will be required to cut, plug and block lines, crosses or tees or other fittings installed in the new main to permit testing and sterilization prior to making connections. Such plugs and blocking shall be adequate to withstand a test pressure of one hundred fifty (150) pounds per square inch. Where cut-ins are made immediately adjacent to valves which are under pressure, the Contractor shall take all necessary precautions to brace such valves with temporary blocking and bracing which shall be of ample size and properly placed to prevent movement or blowing off of any pipe valves, or fittings due to water pressure on the main. Connections to existing water mains shall be made at the locations shown, as specified and/or as directed by the Engineer, Public Works Director or his representative, all such connections shall be made in a most expeditious and workmanlike manner to cause the least inconvenience to water customers and to traffic. The detailed schedule of operations for making each connection shall be approved by the Public Works Director or his representative before any work thereupon is commenced.
- K. REQUIRED PRESSURE TESTS: A leakage test of one hundred fifty (150) pounds per square inch for a period of thirty (30) minutes will be required on all mains, no pressure loss will be allowed. If a service

connection is not available near the end of the main a $\frac{3}{4}$ tap is required using an approved saddle and corporation. This tap will be for disinfecting, testing and blowing out the main.

- L. **STERILIZATION:** After completion of each line, and before acceptance or use of each line, the water main shall be sterilized with Chlorine solution to destroy any organisms present. This shall be done by introducing Chlorine solutions into the water in the line so that all parts of the line contain not less than fifty (50) parts per million of chlorine. The chlorine may be introduced in the form of a solution of gaseous chlorine, or may be obtained from the use of chlorinated lime. The chlorine solution shall be introduced into the line with a pump after the line has been filled with water and thoroughly flushed out. Due precautions shall be taken to be sure that the entire line receives the chlorine solution. This can be done by installing a $\frac{3}{4}$ inch tap on the end of the line and allowing the water to flow out of the corporation cock. Chlorine solution shall then be pumped into the line at the beginning of the new section, where the water is entering the section. The rate of chlorine application shall be at a measured rate in proportion to the rate of flow of the water through the pipe.

As the chlorine solution flows through the pipe, the fire hydrants and various other outlets shall be opened until the chlorine solution comes out the outlet. When the chlorine solution reaches the far end of the pipe, all outlets are to be closed, and the chlorine solution pumps stopped, and the line allowed to remain with the chlorine solution undisturbed for twenty-four (24) hours.

The Contractor shall provide the taps in the top of the line with at least one (1) every one thousand (1,000) feet of the line. The Contractor shall equip these with corporation cocks and a short copper line. After the chlorine solution has remained in the line for a minimum of twenty-four (24) hours, the Contractor shall take a water sample form at least every one thousand (1,000) linear feet of pipe. The Contractor shall provide the materials and make a test of the chlorine residual with orthotolidine solution by the standard method. If every sample contains a residual of one (1) part per million free chlorine, the line will be accepted as having been sterilized. If otherwise, the Contractor shall repeat the chlorination of the line and testing until all samples contain the free chlorine.

The City of Watauga reserves the right to use any portion of the line that has been completed, so the Contractor shall make the required pressure test, sterilization, and bacteriological tests as soon as practical of each section of the line that the Owner desires to put into service.

M. BACTERIOLOGICAL TEST: When the entire pipe line or certain selected sections thereof have been completed, the pressure tested, sterilized and made ready for turning over to the City of Watauga for use, the line or section of line shall be tested according to the following procedure:

1. The line shall be flushed out, completely replacing its entire volume with water from the City of Watauga water mains.
2. A sample of water from the sterilized main shall be taken (not through a fire hydrant) from a suitable tap under the supervision of the Public Works Superintendent, inspector, or an approved representative, and be submitted to the Texas Health Department for analysis.
3. After the test shows a satisfactory quality of water, the line so sterilized may then be placed in service. If the sample shows unsatisfactory quality of water, the process of sterilization shall be repeated until satisfactory water is obtained.

NOTE: The Contractor shall "torch" the brass corporation prior to all test and no tests will be allowed during rain or when the wind is in excess of fifteen (15) miles per hour, without the consent of the Public Works Director or his approved representative.

N. CONCRETE BLOCKING: Concrete having compressive strength of not less than twenty five hundred (2500) pounds per square inch shall be used as a cradle or blocking where shown on the plans or specifications or where directed by the Engineer. All materials including aggregates, cement and water, as well as the mixing and placing of the concrete, shall be approved by the Engineer or his representative. Bends of 22 ½ degrees or greater, plugs, tees, crosses, etc., shall be blocked with concrete as a thrust blocking. Blocking shall be placed between solid ground and the fitting to be anchored; the area of bearing on the pipe and on the ground in each distance shall be that required by the Engineer or his representative. The blocking shall, unless otherwise directed, be placed so that the pipe and fitting joints will be accessible for repair. Concrete shall be composed

of normal Portland Cement, coarse aggregate, fine aggregate, and water proportioned and mixed properly in a concrete mixer. Transit mix concrete will be allowed. Portland Cement shall be Type I and shall be fully protected until incorporated in this work. Gravel to be used for coarse aggregate shall consist of clean, hard, durable grains, and shall be free from excess of salt or alkali and foreign materials. Concrete shall have a compressive strength of not less than twenty five hundred (2500) pounds per square inch at twenty-eight (28) days and shall have not less than four (4) sacks of cement nor more than six and three quarters (6 $\frac{3}{4}$) gallons of water per cubic yard of concrete.

- O. CLEAN-UP: During construction, the Contractor shall maintain the premises in an orderly, neat and presentable manner. Scraps and debris shall not be left scattered, but shall be assembled together and such as are unusable shall be moved from the premises or disposed of to the satisfaction of the inspector. When construction has been otherwise completed, the Contractor shall remove all leftover construction materials, equipment, scraps, debris and rubbish. Earth work shall be smoothed and graded to the lines shown on the plans.
- P. BACKFILL: Overall trenches shall be left in uniform neat condition and to an equal to or better than condition.
- Q. FINAL INSPECTION: Whenever the work has been satisfactorily completed, and the final inspection completed, the Public Works Director or the Engineer, will issue a letter of acceptance to the developer with a copy to the contractor.

SEWER

II. SEWER PIPE AND STRUCTURES:

A. GENERAL: These specifications are an attempt to standardize material specifications, method of installing sewer lines and appurtenance and general methods of procedure. All sewer lines shall constructed at the lowest point on the sewer line, and installing the pipe in the up-grade direction. Laying part of a sewer line and moving to another, before completion, will not be permitted.

B. 1. CAST IRON AND DUCTILE PIPE: Cast iron or Class 52 ductile iron pipe shall be used where shown on plans for steam crossings and for installation on plans for steam crossings and for installation in bore holes under highways and railroads and where the sewer line is installed in a very shallow location for sewer line twelve (12) inches or less. The cast iron pipe shall be Class 150 or class 52 water pressure pipe. It shall be bell and spigot pipe with rubber gasket joint, or mechanical joint.

2. JOINT MATERIALS: The joint material for rubber gasket or mechanical joint shall be furnished by the pipe manufacturing with the pipe.

3. MANHOLES: Manholes may be poured in place, or pre-cast manholes, with manhole frame and twenty-four (24) inch diameter cover with the City of Watauga logo as manufactured by the Vulcan Foundry, Inc., Catalog No. V-1342, Bass & Hays Foundry, Catalog No. 300-24 or equal. Manhole rings and covers shall be smooth close grained cast iron, free of blisters, blow holes and other imperfections. Mortar for the manholes shall consist of three (3) parts of Portland Cement, six (6) parts of mortar sand, and one (1) part hydrated lime. Manholes shall be four (4) diameter for sewer pipe up to twenty-one (21) inch diameter, five (5) foot diameter from twenty-four (24) inch to thirty-nine (39) inch diameter. Six (6) inch thick walls for four (4) foot diameter, eight (8) inch thick walls for five (5) foot diameter manholes, six (6) inch walls for pre-cast concrete manholes will be required. All concrete will be Class "A" (3000 PSI-28 day) concrete, where manholes are in the street they shall be Class "C" (2600 PSI-28 day) concrete. For pre-cast manholes the jointing of sections shall be sealed by the use of one (1) O-Ring Gasket, two (2) "Ram-Neck", or three (3)

Master joint compound. Monolithis A.S.T.M. c-478 pre-cast manholes or approved equal is required.

4. PVC PIPE: Unplasticized polyvinyl Chloride (PVC) plastic gravity sewer pipe with integral wall bell and spigot joints may be used for the conveyance of domestic sewer. All pipe and fittings shall meet the extra strength requirements of A.S.T.M. specifications D3034, SDR35 (SDR is arrived at by dividing the pipe outside diameter by wall thickness). Joints and fittings shall be compression rubber gasket joints. The bell shall consist of an integral wall section with a factory installed ring securely locked in bell groove to provide positive seal under all installation conditions. Fittings and accessories shall have bell and/or spigot configurations identical to that of pipe. Minimum pipe stiffness at five percent (5%) deflection shall be forty-six (46) for all sizes when calculated in accordance with ASTM D2412. Bedding specifications shall be chat or limestone to the spring line of the pipe.

SDR-35 Pipe Dimensions shall be as follows:

<u>PIPE SIZE</u>	<u>OUTSIDE DIAMETER</u>	<u>MINIMUM</u>	<u>WALL</u>
<u>THICKNESS</u>			
4"	4.211" + 0.007		0.125
6"	6.275 + 0.009		0.180
8"	8.400 + 0.010		0.240
10"	10.500 + 0.013		0.300
12"	12.500 + 0.016		0.360
15"	15.300 + 0.021		0.440

- C. PIPE BEDDING: The bottom of the trench shall be graded and prepared by hand so the pipe, when laid, will be on the proper grade. This may be done by machine where the control of the depth of cut of the machine is sufficiently close so that the grade is exact. If the machine cannot cut to grade accurately enough, the machine excavation shall be slightly less, and the final excavation made by

hand. The bottom of the finished trench shall be exactly smooth and to grade, so that the "Barrel" of each joint of pipe is uniformly supported along its entire length. Bell holes shall be dug in the trench bottom of sufficient depth and width to allow the joints to be made properly. If the trench is undercut either intentionally or accidentally, the trench shall be refilled to the proper grade with selected sand backfill material that is free from rocks or large clods. Pipe shall be bedded with "chat" or limestone to the spring line of the pipe.

D. LAYING PIPE: Pipe shall be laid in the trench so that the interior surface of the bottom side of the pipe shall conform accurately to the flow line on profile. Pipes shall be laid accurately to the line and grade with the spigot end downstream, and entering the barrels to full depth. Any adjustment necessary to obtain the correct line and grade shall be accomplished by tamping in or removing of soil, and in no case, by wedging or blocking up.

E. MANHOLE CONSTRUCTION: Manholes shall be constructed at points shown on the plans or where ever ordered by the Engineer. Each manhole is to be completely built as the work progresses, and as each manhole is reached. They shall have the forms and dimensions as shown on the plans, and shall be finished in a workmanlike manner.

Foundations for manholes shall be constructed of concrete as specified in the materials specification. Flow channels shall be smoothly formed and of the same dimensions as the connecting pipes. The depth of the flow channel shall not be less than the outside diameter of the pipe. Where flow lines connect at angles, smooth, curved connections shall be formed, and wherever possible, half sewer pipes shall be used to form the channel or invert.

Floors of manhole bottoms shall be sloped towards the channel or invert with a fall of one (1) inch per foot. Where pipes are laid through the manhole locations and the manhole installed later, the top half of the pipe shall be cut out.

The walls shall be of pre-cast or poured in place Portland Cement minimum of five (5) sacks 3000 PSI, and shall be water tight throughout. Rings for covers shall be installed, and securely mortared into place and covers placed in position. Any grade adjustments shall be made using two (2) inch grade rings. A two (2) inch grade ring will be the minimum, and not to exceed twenty-four (24) inch maximum. Grade rings will conform to A.S.T.M. C-478 standard. Manholes will be "rubbed out" and backfilled as soon as possible, but should be completed as the work proceeds.

- F. HOUSE CONNECTIONS: At points designated by the Engineer, four (4) inch outlet Wyes or tees shall be laid with the branch, tilted up at an angle of thirty (30) or forty-five (45) degrees. This outlet shall be closed with a vitrified clay stopper tightly set with asphaltic jointing compound.
1. STANDARD SEWER SERVICE CONNECTIONS: Standard sewer service connections will consist of the service tee. The service tee will be encompassed and cradled in 2500 PSI concrete with the tee tilted up at an angle of thirty (30) or forty-five (45) degrees. Four (4) inch sewer service pipe will be extended from the main (tee) to a point three (3) feet behind the curb (minimum) and to the property line if possible. The sewer service shall then be "plugged" or "capped off". Standard sewer service connections will be made where the sewer main is less than six (6) feet deep and will be made as indicated on the plans or as directed by the Engineer or his representative.
 2. EXTRA DEPTH SEWER CONNECTIONS: Extra depth service connections will consist of a service tee encompassed in 2500 PSI concrete, the necessary bends required shall also be cradled and incased. A four (4) inch service line necessary to run from the sewer main (tee) to a minimum of three (3) feet behind the curb and to the property line if possible, will be installed and "plugged" or "capped off".
Extra depth sewer service connections shall be placed at locations where the depth of the sewer main exceeds six (6) feet as called for on the plans or as directed by the Engineer or his representative. The service tees shall be installed tilted up at an angle of thirty (30) or forty-five (45) degrees.
 3. MAKING LOCATIONS ON ALL SEWER SERVICES: The curb shall be marked with the letter "S" in good quality at the point where the service passes under the curb, the marked area will also be sprayed with florescent green paint. A 2' x 4' stake painted white and florescent green shall be placed over the end of the service line. This stake shall be driving into good firm earth at least twelve (12) inches and shall extend at least eighteen (18) inches above the ground surface.
All markings, either on the stake or on the curb, shall be clear and legible and shall be done as soon as the services are in place.

G. INSPECTION AND TESTING OF COMPLETED LINES:

1. All sanitary sewer lines shall be air tested to four (4) PSI pressure for a minimum of five (5) minutes without any pressure drop.

2. All sanitary sewer lines shall be tested by use of a Mandrel put into each manhole and pulled through each line to (1) clean out debris (2) check the deflection of the pipe.

The mandrel should be pulled by the use of rope, float strings or wire and should be connected on both ends of the mandrel in case the mandrel "hangs" up the additional line can be used to pull the mandrel out. A mandrel test will be considered as passing if the mandrel does not hang up and pulls evenly with little resistance. The Public Works Superintendent or inspector will okay the test.

3. FLOW OR BALL FLOW TESTS: Upon the completion of laying each sewer line, the Contractor shall thoroughly flush each sewer line with a sufficient quantity of fresh water at a sufficiently high velocity to clean each line. The Contractor shall continue his flushing until the water from each sewer line runs clear and clean. After this has been completed, the Contractor shall make a test of the cleanliness and flow through each line, by running a large quantity of clean fresh water through the lines. This may be applied from a fire hydrant near the end of the line which must be metered through the City, or may have to be hauled by water trucks. In any event, the flow through each line during this test shall be not less than two hundred (200) gallons per minute. For the purpose of the test, the Contractor shall furnish rubber balls which shall be run through each line in the presence of the Public Works Water and Sewer Superintendent's, inspector, or approved representative.

The size of the rubber balls shall be as follows:

<u>6" lines</u>	<u>8" lines</u>	<u>10" lines</u>	<u>12"</u>
<u>lines</u>			
Ball 4 1/4" to 5"	6" to 7"	8" to 9"	10"
Diameter			

The ball shall be inserted at the high point of each line and flushed

through the entire length of each line and flushed through the entire length of the line with inspection made of each manhole as the ball passes through it. Every sewer line on the project is designed so that the minimum velocity through the sewer lines exceed two (2) feet per second. During the ball test, the ball shall travel from manhole at not less than one-half this velocity or one (1) foot per second.

4. FINAL INSPECTION OF THE LINE-TELEVISIONING: Every sanitary water line within the City of Watauga, city limits, shall be televised after the air test, mandrel, and flow ball tests have passed. Televising will be from manhole to manhole for the entire length of line, and will serve as the final acceptance to insure that no gaskets have been "rolled", separations are present, or other flaws exist. It shall be the Contractor's responsibility to provide all tag lines, and all pull lines, as well as the televising of the main. The cost of all televising will be the Contractor's responsibility unless otherwise directed by the Engineer, Public Works Director, or the Public Works Water and Sewer Superintendent. The Contractor will furnish a copy of the VCR tape to the City of Watauga and upon approval by the Public Works Director or his approved representative, a letter of acceptance will be given to the Engineer and the Contractor for the acceptance of the sewer line.

- H. FINAL INSPECTION: After all testing has been completed and has been accepted, the Contractor shall dress up all ditches, remove all debris, install top soil or sod if required. The clean up will be accepted by the Public Works Water and Sewer Superintendent or Public Works Inspector.

Whenever the work has been satisfactorily completed and the final inspection completed, the City Engineer or Public Works Director, will issue a letter of acceptance to the developer with a copy to the Contractor.

ADDENDUM NO. 1
to the
CONTRACT DOCUMENTS
for
STARNES ROAD 16" WATER LINE
CITY PROJECT NO. 18-027

CITY OF WATAUGA, TEXAS

This addendum MODIFIES the project bid date.

Previously, bids were due June 13, 2018 but the bid due date is hereby changed as follows: Sealed Bids will be received in the City of Watauga Purchasing Office until Wednesday, June 20, 2018 at 2:00 P.M. (Central Time) at which time they will be publicly opened and read aloud in the Council Chambers.

This Addendum, issued pursuant to the provisions of the Instructions to Bidders of the Contract Documents identified by heading above, is hereby made a part of said Documents and should be acknowledged in the space provided on Section 00 41 00 - Page 3 of 3 on the Bid Form by all persons submitting bids on the Project. Such acknowledgement also constitutes certification by the bidder that he has obtained corresponding acknowledgement of receipt by all of his subcontractors and suppliers.

CivCast questions and their answers from the project advertisement website were handed out at the pre-bid conference held on Wednesday, June 06, 2018 regarding this project. The handout is attached to this addendum.

A brief description of the project was given by William Wendland and then questions were taken from the audience. Following are the questions and answers as we were able to record them at the pre-bid conference. Questions are in **bold**, answers or statements made at the meeting are in *italics* and clarifications are underlined.

1. **The Traffic Control Plan shows the project to be closed to all traffic. Is this true?**
No. Starnes Road will be closed to through traffic but local traffic will need access to their homes.

2. **The temporary asphalt pavement section needs to be revised.**
Agreed. Revised temporary and permanent pavement sections will be provided in a future addendum.

3. **What material is the existing 16" water line?**
The existing 16" water line is reinforced concrete cylinder pipe. The material of the 6" and 8" branch lines are probably asbestos-cement.

ADDENDUM NO. 1
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CONTRACT DOCUMENTS
for
STARNES ROAD 16" WATER LINE
CITY PROJECT NO. 18-027

4. **The fittings for asbestos-cement pipe are expensive. Can you confirm the pipe material?**
Yes. We will confirm this in a future addendum.
5. **What are the testing requirements?**
*See the back of the specifications under Non-Pay Items.
Trench compaction density shall be 95% Standard Proctor density. Tests shall be conducted in maximum 8" lifts starting at 12" above the pipe. The Contractor can slope or bench the test area.
Water lines shall be pressure tested at 150 psi for 30 minutes with no pressure loss.*
6. **Is General Note 15 on sheet 15 regarding mailboxes necessary?**
In the meeting we said, "No. It is not necessary." However, we have reconsidered that response. We are editing the note in case there is a circumstance where a mailbox is to be relocated. See the PLANS section, below, for the change to General Note 15.
7. **Can we missile the water services?**
We will allow the contractor to missile the water services. However, the contractor will be fully responsible for damages to other utilities or to the surface. In locations where the water service is within 10' of a sewer service or a storm drain, we will require the contractor to confirm the sewer service or storm drain is not damaged by using a small camera probe and providing video documentation of the other utility at no extra cost.
8. **At the 16" water line tie-in at Rufe Snow, what is the condition of the tee?**
*It was repaired about 3 years ago.
Would you consider replacing the tee with this project?
*Yes. We will address this in a later addendum.**
9. **Will the contract be awarded to the lowest bidder or the one who bids the best value, i.e., cost and time?**
At the meeting, we said that we would recommend award to the bidder who provides the best value. However, this response needs to be revised as follows: Per Local Government Code 252.043, the contract must be awarded to the lowest responsible bidder. We will recommend award to the lowest responsible bidder.
10. **Can we print the bid form on our letterhead and submit that? Or do we need to use your Excel file?**
No. You must use the Excel file downloaded from the CivCast project website.

ADDENDUM NO. 1
to the
CONTRACT DOCUMENTS
for
STARNES ROAD 16" WATER LINE
CITY PROJECT NO. 18-027

11. **We will damage some pavement marking and there isn't a bid item for it. Will that be subsidiary to the other work or will you add a bid item?**
In the meeting, we said, "It will be subsidiary to the pipe bid items." However, we will identify the locations that striping will need to be replaced and add a bid item for this work. This will be completed in a future addendum.
12. **Regarding cut-in plugs, do you want us to cap the line or just use concrete?**
We want you to cap the lines. We believe the existing lines are asbestos cement but we will investigate and let you know pipe material in a future addendum.
13. **What is the anticipated start date?**
Once the contract is awarded by Council in July and the contracts are executed, you can start construction. That will probably be sometime in August. The City of Watauga will require the contract start date to be on or after October 15, 2018. After contract award, if the Contractor requests an earlier start date, it will be up to the City to grant. The Contractor should plan on starting this project on October 15, 2018.
14. **Regarding the 2" blow-off. The detail shows it to be metered and in a meter box.**
The blow-off does not need to be metered but it needs to be in a meter box.
15. **Will you provide the sign-in list?**
Yes. It will be in the addendum.

The Attendance list from the pre-bid meeting is attached to this Addendum.

SPECIFICATIONS

1. There are no changes to the specifications.

PLANS

1. Sheet 15
Replace General Note 15 with the following:
CONTRACTOR SHALL PRESERVE AND PROTECT EXISTING MAILBOXES. IF ANY MAILBOXES CONFLICT WITH THE WORK, CONTRACTOR SHALL REMOVE AND REPLACE THOSE MAILBOXES THAT ARE IN CONFLICT & PROVIDE TEMPORARY MAILBOXES DURING THE DURATION OF CONSTRUCTION. ALL REPLACED MAILBOXES ARE TO BE RESET TO PROPER HEIGHT AND SET-BACK IN ACCORDANCE WITH USPS RECOMMENDATIONS.

ADDENDUM NO. 1
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CONTRACT DOCUMENTS
for
STARNES ROAD 16" WATER LINE
CITY PROJECT NO. 18-027

FOUNDATIONS FOR BRICK MAILBOXES SHALL BE RE-POURED WITH 6"-
THICK CONCRETE. NO SEPARATE PAY.

This Addendum issued:

BURGESS & NIPLE, INC.
TBPE FIRM REGISTRATION NO. F-10834



William D. Wendland

William D. Wendland, P.E.

June 7, 2018

Attachments

END OF ADDENDUM NO. 1



Answers to CivCast Questions

Date: June 6, 2018 RE: Starnes Road 16" Water Line - 2018, Pre-Bid Conference
Time: 10:00 AM City Project No. 18-027

No.	Date	Question	Answer
1	5/24/2018	Is the pre-bid meeting mandatory?	No. The pre-bid meeting is not mandatory per the Invitation to Bid.
2	5/24/2018	Is a geotechnical report available? If so, in which month and year was the geotechnical field investigation performed?	Yes. The report is dated 11/13/2017 and is in the Specs. See Section 02 31 01.
3	5/24/2018	Regarding the length for pavement replacement, are bidding contractors to replace the full width of road, concrete panel sections, or just the ditch line?	Only the ditch line is being replaced with permanent concrete pavement - see Spec Section 01 11 02 for Bid Item 35.
4	5/24/2018	Can we pressure test against valves?	Yes. You are allowed to pressure test against valves.
5	5/24/2018	Who pays for Construction Material Testing? Owner or Contractor?	The Contractor pays - see Spec Section 01 11 02, page 12.
6	5/24/2018	Are working hours restricted on this project? Can we work on Saturday's or Sunday's?	Allowable working hours are 7AM ndash; 7PM, Monday ndash; Friday. First hour is to be quiet. The City Inspector works 8AM-5PM. Overtime inspection and/or weekend work hours only allowed with 48-hours notice.
7	5/24/2018	If this project bids on 6/13, when will it go before the Council?	It is anticipated that this project will be awarded at the June 25 Council meeting.
8	5/24/2018	Would like to request to have JS Resilient Seat Gate Valves to be added as approved gate valve manufacture on this project.	We are not making changes to the list of approved manufacturers at this time.
9	6/6/2018	Is there a domestic requirement (Di Fittings/Castings) on this project ?	This is answered in the specifications. See Section 01 11 01 page 5 for Bid Items and 14 and 16, where it states twice "Fittings can be either domestic or import".



PRE-BID MEETING
18-027 STARNES ROAD 16" WATER LINE
WEDNESDAY, JUNE 6, 2018
10:00AM

NAME	COMPANY	TELEPHONE	Email Address
Deby Woodard	City of Watauga	817-514-5833	dwoodard@cowtx.org
Billy Wendland	Burgess Niple	817-306-1444	Billy.Wendland@BurgessNiple.com
Ray Hackleman	City	817-514-5837	phackleman@cowtx.org
Randy Richards	City	817-514-5840	rrichards@cowtx.org
DANNY JACKSON	EXCEL TEACHING	334-328-4490	DANNY JACKSON @ EXCELTEACHING.COM
Danndan Case	City	XXX-5851	bdanndan@cowtx.org
Zach Irwin	Woody Contractors, Inc.	817-483-4787	zirwin24@gmail.com
Jim Blum	Gra-Tex Utilities	825-301-5462	gtrtex@sbccglobal.net
Eric Ginther	Truck Rental Co	817-357-7735	eginther@trcco.com
DEBBIE BREON	Canner Construction	469-464-3823	debbie@canneryconstruction.com
Mike Gutierrez	KIK Underground	956-739-0534	Mike@kikunderground.com
Chris Windsor	Mountain Cascade & TS	972-765-5711	ChrisW@mountaincascade.com

ADDENDUM NO. 2
to the
CONTRACT DOCUMENTS
for
STARNES ROAD 16" WATER LINE
CITY PROJECT NO. 18-027

CITY OF WATAUGA, TEXAS
to be bid June 20, 2018

This addendum does not modify the project bid date.

This Addendum, issued pursuant to the provisions of the Instructions to Bidders of the Contract Documents identified by heading above, is hereby made a part of said Documents and should be acknowledged in the space provided on Section 00 41 00 - Page 3 of 3 on the Bid Form by all persons submitting bids on the Project. Such acknowledgement also constitutes certification by the bidder that he has obtained corresponding acknowledgement of receipt by all of his subcontractors and suppliers.

In the Pre-Bid Conference, we said that we would identify the material of the branch water lines. The bidder shall assume they are asbestos-cement.

SPECIFICATIONS

1. Section 00 41 00, Bid Form: The Bid Form is hereby replaced, see attached. Bidder shall utilize the new Bid Form spreadsheet, which must be accessed from the project's CivCast website.
2. Section 01 11 01, Line Item Description of Proposed Work: **PAY ITEM NO. 31 THROUGH 35: REMOVE AND REPLACE EXISTING MONO CURB, REMOVE AND REPLACE EXISTING CONCRETE SIDEWALK, REMOVE AND REPLACE EXISTING CONCRETE DRIVEWAYS, REMOVE AND REPLACE EXISTING CURB RAMP AND REMOVE AND REPLACE EXISTING CONCRETE PAVEMENT:** Replace the last sentence in paragraph 6, which reads: "Concrete pavement includes removal and complete replacement, including the 6" Thk. 2:27 backfill, in accordance with the details shown in the Plans" with "Concrete pavement includes removal and complete replacement, in accordance with the details shown in the Plans".
3. Section 01 11 01, Line Item Description of Proposed Work: **PAY ITEM NO. 36: TEMPORARY ASPHALT PAVEMENT REPLACEMENT INCL. SERVICES:** Revise this to read: **PAY ITEM NO. 36: TEMPORARY PAVEMENT REPLACEMENT.**
4. Contractor shall restripe all crosswalks, stop bars and school zone bars as well as replace traffic buttons as shown on the reissued Plan Sheets 17 and 18. Add the following pay

ADDENDUM NO. 2
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CONTRACT DOCUMENTS
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CITY PROJECT NO. 18-027

item descriptions to the end of Section 01 11 01, Line Item Description of Proposed Work:

PAY ITEMS NOS. 43 THROUGH 46: PAVEMENT MARKINGS AND

SIGNAGE: The Contractor shall be responsible for furnishing all labor, materials and equipment necessary for the construction of the reflective thermoplastic pavement markings including Type I/II twelve-inch (12") thermoplastic white arrows, twenty-four inch (24") thermoplastic white stop bars, Type I/II twelve-inch (12") thermoplastic white school zone bars and Type I/II twelve-inch (12") thermoplastic white crosswalk bars. All pavement markings shall be applied in accordance with applicable provisions of the Texas Department of Transportation (TxDOT) Item 666, Type I thermoplastic pavement markings, comply with City of Watauga Standards and be provided at locations shown in the Plans or as directed by the Owner's Project Representative. All existing signage, e.g., stop signs, school zone signs, etc., shall be protected during construction as part of these Pay Items. Where existing marking or striping are to be removed from the pavement surface prior to applying the new markings, the Contractor shall use whatever methods or means approved by the Owner's Project Representative and this work shall be considered a part of these bid items. The materials and workmanship shall be guaranteed against defects by the Contractor for a minimum period of two (2) years after final acceptance of the Project by the Owner.

Payment for the Type I/II twelve-inch (12") thermoplastic white arrows shall be paid for per each.

Payment for the twenty-four inch (24") thermoplastic white stop bars shall be paid for by the linear foot.

Payment for the twelve-inch (12") thermoplastic white school zone bars and twelve-inch (12") thermoplastic white cross walk bars shall be paid for by the linear foot.

These markings shall include curing, glass beads, traffic protection and pavement surface preparation.

PAY ITEMS NOS. 47 THROUGH 50: PAVEMENT BUTTONS AND MARKERS:

Pavement buttons and markers of various types and shapes as indicated in the Bid Form, shall be furnished and installed in accordance with details shown in the Plans and with applicable provisions of the Texas Department of Transportation (TxDOT), Standard Specifications Item 672, "Raised Pavement Markers", latest edition and also comply with the City of Watauga Standards or as otherwise directed by the Owner's Project Representative. The materials and workmanship shall be guaranteed against defects by the Contractor for a minimum period of two (2) years after final acceptance of the project by the Owner.

ADDENDUM NO. 2
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CITY PROJECT NO. 18-027

Pavement buttons and markers of the various types, sizes and shapes specified and called for in the Bid Form, shall be measured and paid for per each, installed complete in place.

PLANS

1. Plan Sheet 3 is hereby reissued due to revised quantities in the new Bid Form.
2. Plan Sheets 4 – 10: The Contractor shall missile the water services instead of using open cut. Any and all references on these plan sheets to curb repairs, temporary pavement replacement or permanent pavement replacement for the water services shall be removed. These plan sheets are not being reissued. Quantities for these bid items have been adjusted within the new Bid Form.
3. Plan Sheet 10: The tee identified to remain within the note callout for STA. 33+05.62 shall instead be replaced with a 12"x12"x16" bullhead tee. An additional 10 LF of 12" PVC is added to the Bid Form for this operation. See the attached exhibit.
4. Plan Sheet 15 is hereby reissued to delete General Note 19 and to replace the temporary and permanent trench repair details.
5. Plan Sheets 17 and 18 are hereby reissued to add thermoplastic pavement markings and pavement buttons to the contract.

ADDENDUM NO. 2
to the
CONTRACT DOCUMENTS
for
STARNES ROAD 16" WATER LINE
CITY PROJECT NO. 18-027

This Addendum issued:

BURGESS & NIPLE, INC.
TBPE FIRM REGISTRATION NO. F-10834



June 15, 2018

William D. Wendland

William D. Wendland, P.E.

Attachments

END OF ADDENDUM NO. 2

BID FORM

ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	UNIT PRICE	COST
1	Prepare and Restore Right-of-Way	LS	1	\$ -	\$ -
2	Remove Existing 16" Dia. Water Line	LF	126	\$ -	\$ -
3	Remove Existing 12" Dia. Water Line	LF	20	\$ -	\$ -
4	Remove Existing 8/6" Dia. Water Line	LF	150	\$ -	\$ -
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ -	\$ -
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	18	\$ -	\$ -
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ -	\$ -
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ -	\$ -
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ -	\$ -
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ -	\$ -
11	16" Gate Valve and Box	EA	6	\$ -	\$ -
12	12" Gate Valve and Box	EA	2	\$ -	\$ -
13	8" Gate Valve and Box	EA	9	\$ -	\$ -
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftgs, 6" Pipe	EA	6	\$ -	\$ -
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ -	\$ -
16	Ductile Iron Fittings	TONS	7.5	\$ -	\$ -
17	2" Combination Air Release Valve & Vault with Offset	LS	1	\$ -	\$ -
18	Temporary 2" Blow Off /Sample point	EA	2	\$ -	\$ -
19	Salvage Existing Fire Hydrant	EA	3	\$ -	\$ -
20	Abandon Existing Water Valve	EA	15	\$ -	\$ -
21	Connect to Existing 16" Water Line	EA	2	\$ -	\$ -
22	Connect to Existing 12" Water Line	EA	3	\$ -	\$ -
23	Connect to Existing 6/8" Water Line	EA	8	\$ -	\$ -
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ -	\$ -
25	Long Double Water Service	EA	13	\$ -	\$ -
26	Short Double Water Service	EA	25	\$ -	\$ -
27	Short Single Water Service	EA	3	\$ -	\$ -
28	Water Service Transfer	EA	41	\$ -	\$ -
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ -	\$ -
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ -	\$ -
31	Remove and Replace Existing Mono Curb	LF	163	\$ -	\$ -
32	Remove and Replace Existing Concrete Sidewalk	SF	1,996	\$ -	\$ -
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ -	\$ -
34	Remove and Replace Existing Curb Ramps	EA	10	\$ -	\$ -
35	Remove and Replace Existing Concrete Pavement	LF	3,467	\$ -	\$ -
36	Temporary Pavement Replacement	LF	3,467	\$ -	\$ -
37	Solid Sodding incl. 4" Thick Topsoil	SY	432	\$ -	\$ -
38	Trench Safety	LF	3,292	\$ -	\$ -
39	Traffic Control Plan and Implementation	LS	1	\$ -	\$ -
40	Erosion Control Plan	LS	1	\$ -	\$ -
41	Project Signs	EA	2	\$ -	\$ -
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ -
43	24" Wide White Thermoplastic Stop Bar	LF	303	\$ -	\$ -
44	12" Wide White Thermoplastic Cross Walk Bar	LF	1,213	\$ -	\$ -
45	12" Wide White Thermoplastic School Zone Bar	LF	40	\$ -	\$ -
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	2	\$ -	\$ -
47	4" Dia. Type "Y" Yellow Buttons	EA	32	\$ -	\$ -
48	4" Dia. Type "W" White Buttons	EA	40	\$ -	\$ -
49	Type "1C" or "1A" Reflective Buttons	EA	2	\$ -	\$ -
50	Type "11AA" Reflective Buttons	EA	10	\$ -	\$ -
TOTAL					\$ -

NUMBER OF CONSTRUCTION DAYS:

ENTER DAYS

ITEM NO.	DESCRIPTION OF UNIT	UNIT	Water 4	Water 5	Water 6	Water 7	Water 8	Water 9	Water 10	EC1 17	EC2 18	TOTAL QUANTITY
1	Prepare and Restore Right-of-Way	LS	~	~	~	~	~	~	~	~	~	1
2	Remove Existing 16" Dia. Water Line	LF	15	~	~	~	~	~	111	~	~	126
3	Remove Existing 12" Dia. Water Line	LF	20	~	~	~	~	~	~	~	~	20
4	Remove Existing 8/6" Dia. Water Line	LF	10	40	40	5	30	25	~	~	~	150
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	413	500	500	500	500	450	421	~	~	3,284
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	8	~	~	~	~	~	10	~	~	18
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	70	118	85	~	77	60	~	~	~	410
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	5	3	5	17	~	3	~	~	~	33
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	~	~	~	~	~	50	~	~	~	50
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	10	~	~	~	~	50	~	~	~	60
11	16" Gate Valve and Box	EA	2	~	1	~	1	~	2	~	~	6
12	12" Gate Valve and Box	EA	1	~	~	~	~	~	1	~	~	2
13	8" Gate Valve and Box	EA	1	2	3	~	2	1	~	~	~	9
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftgs, 6" Pipe	EA	2	~	1	~	1	~	2	~	~	6
15	Fire Hydrant Assembly, including 6" GV	EA	1	1	1	1	~	1	~	~	~	5
16	Ductile Iron Fittings	TONS	1.8	1.1	1.0	0.3	0.8	1.2	1.3	~	~	7.5
17	2" Combination Air Release Valve & Vault with Offset	LS	~	~	1	~	~	~	~	~	~	1
18	Temporary 2" Blow Off /Sample point	EA	1	~	~	~	~	~	1	~	~	2
19	Salvage Existing Fire Hydrant	EA	~	1	~	1	~	1	~	~	~	3
20	Abandon Existing Water Valve	EA	2	3	2	1	3	3	1	~	~	15
21	Connect to Existing 16" Water Line	EA	1	~	~	~	~	~	1	~	~	2
22	Connect to Existing 12" Water Line	EA	1	~	~	~	~	~	2	~	~	3
23	Connect to Existing 6/8" Water Line	EA	1	2	2	~	2	1	~	~	~	8
24	Cut and Plug Existing Water Line (all sizes)	EA	6	6	2	~	1	1	1	~	~	17
25	Long Double Water Service	EA	~	1	2	4	2	1	3	~	~	13
26	Short Double Water Service	EA	3	4	3	5	3	4	3	~	~	25
27	Short Single Water Service	EA	~	~	2	~	~	1	~	~	~	3
28	Water Service Transfer	EA	3	5	7	9	5	6	6	~	~	41
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	5	9	7	8	7	8	6	~	~	50
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	~	~	~	~	~	~	~	~	1
31	Remove and Replace Existing Mono Curb	LF	10	20	23	5	10	10	85	~	~	163
32	Remove and Replace Existing Concrete Sidewalk	SF	276	320	240	220	200	240	500	~	~	1,996
33	Remove and Replace Existing Concrete Driveways	SF	197	65	~	~	~	~	180	~	~	442
34	Remove and Replace Existing Curb Ramps	EA	2	2	2	~	2	1	1	~	~	10
35	Remove and Replace Existing Concrete Pavement	LF	472	582	557	506	545	487	318	~	~	3,467
36	Temporary Pavement Replacement	LF	472	582	557	506	545	487	318	~	~	3,467
37	Solid Sodding incl. 4" Thick Topsoil	SY	55	67	67	46	43	50	104	~	~	432
38	Trench Safety	LF	421	500	500	500	500	450	421	~	~	3,292
39	Traffic Control Plan and Implementation	LS	~	~	~	~	~	~	~	~	~	1
40	Erosion Control Plan	LS	~	~	~	~	~	~	~	~	~	1
41	Project Signs	EA	1	~	~	~	~	~	1	~	~	2
42	Miscellaneous Allowance	LS	~	~	~	~	~	~	~	~	~	1
43	24" Wide White Thermoplastic Stop Bar	LF	~	~	~	~	~	~	~	145	158	303
44	12" Wide White Thermoplastic Cross Walk Bar	LF	~	~	~	~	~	~	~	814	399	1,213
45	12" Wide White Thermoplastic School Zone Bar	LF	~	~	~	~	~	~	~	40	~	40
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	~	~	~	~	~	~	~	~	2	2
47	4" Dia. Type "Y" Yellow Buttons	EA	~	~	~	~	~	~	~	~	32	32
48	4" Dia. Type "W" White Buttons	EA	~	~	~	~	~	~	~	~	40	40
49	Type "1C" or "1A" Reflective Buttons	EA	~	~	~	~	~	~	~	~	2	2
50	Type "11AA" Reflective Buttons	EA	~	~	~	~	~	~	~	~	10	10

1

1

NO.

Δ

REVISIONS

ADDITIONAL NO. 2

DATE

6/13/18

BY

WDW

CHK.

WDW

DESIGNED BY:

TEN

DRAWN BY:

TEN

APPROVED BY:

WDW

CHECKED BY:

SDS

DATE:

05/16/2018

SCALE:

N/A

SHEET NUMBER:

3

OF

18

QUANTITY SUMMARY

STARNES ROAD 16" WATER LINE

FROM INDIAN SPRINGS ROAD TO RUFE SNOW DRIVE

CITY OF WATAUGA, TEXAS

BURGESS & NIPLÉ

3950 FOSSIL CREEK BLVD., SUITE 210

FORT WORTH, TEXAS 76137

PHONE: (817) 306-1444

TBPE FIRM REGISTRATION NO. F-10834

STATE OF TEXAS

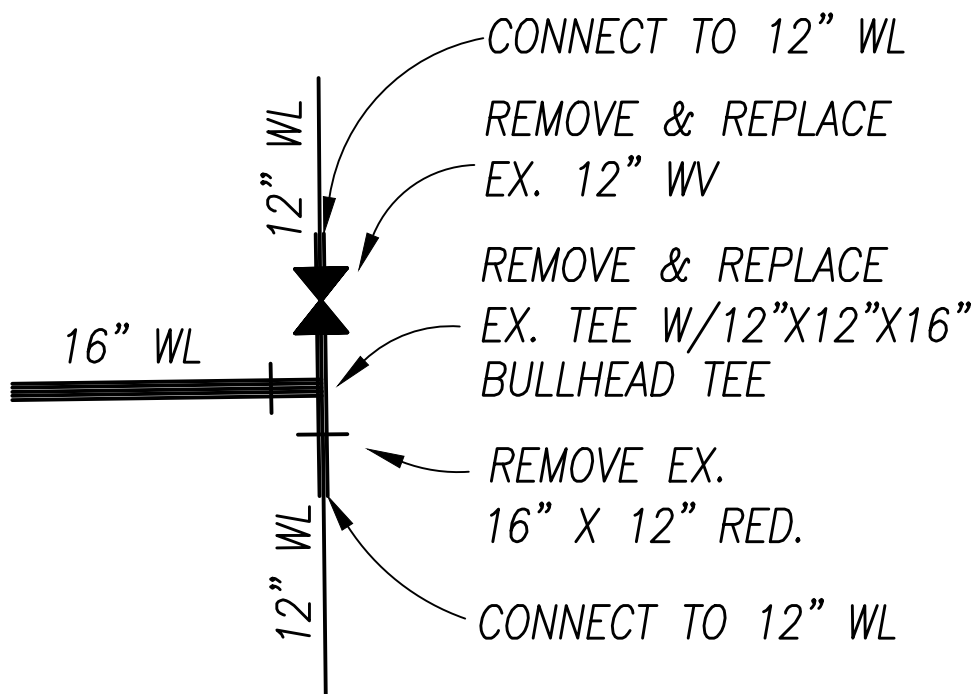
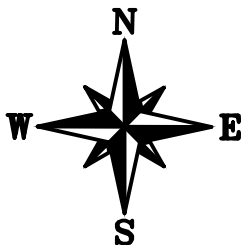
REGISTERED PROFESSIONAL ENGINEER

67958

WILLIAM D. WENDLAND

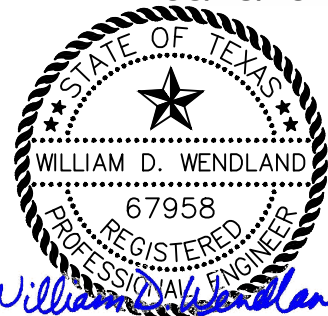
William D. Wendland

ELECTRONICALLY SEALED



DETAIL AT STA. 33+07.1

**ELECTRONICALLY
SEALED 06/15/2018**



ADDENDUM NO. 2

STA. 33+07.1
STARNES ROAD 16" WATER LINE
CITY OF WATAUGA, TEXAS

SHEET 10
EXHIBIT A

BURGESS & NIPLE

3050 FOSSIL CREEK BLVD., SUITE 210
FORT WORTH, TEXAS 76137
PHONE: (817) 308-1444
TYPE FIRM REGISTRATION NO. F-10034



N-STREET LOCATIONS, USE 12" LONG #3 DOWELS DRILLED 6" DEEP AND EPOXY GROUTED.

CL UTILITY LINE

REPLACEMENT CONCRETE SHALL BE 4,000 PSI @ 28 DAYS AND HAVE A MIN. THICKNESS OF 7" PLUS 3".

FINAL SAW CUT MADE IMMEDIATELY PRIOR TO PAVING. (TYP)

EXISTING CONCRETE PAVEMENT

7" + 3"

8"

12" MIN.

12" MIN.

EXISTING BASE MATERIAL

NATIVE TRENCH MATERIAL (NO ROCKS OVER 3" IN DIA.)

6" MIN.

6" MIN.

6" MIN.

6" MIN.

TRACER WIRE

SEE TRENCH EMBEDMENT AND BACKFILL DETAIL

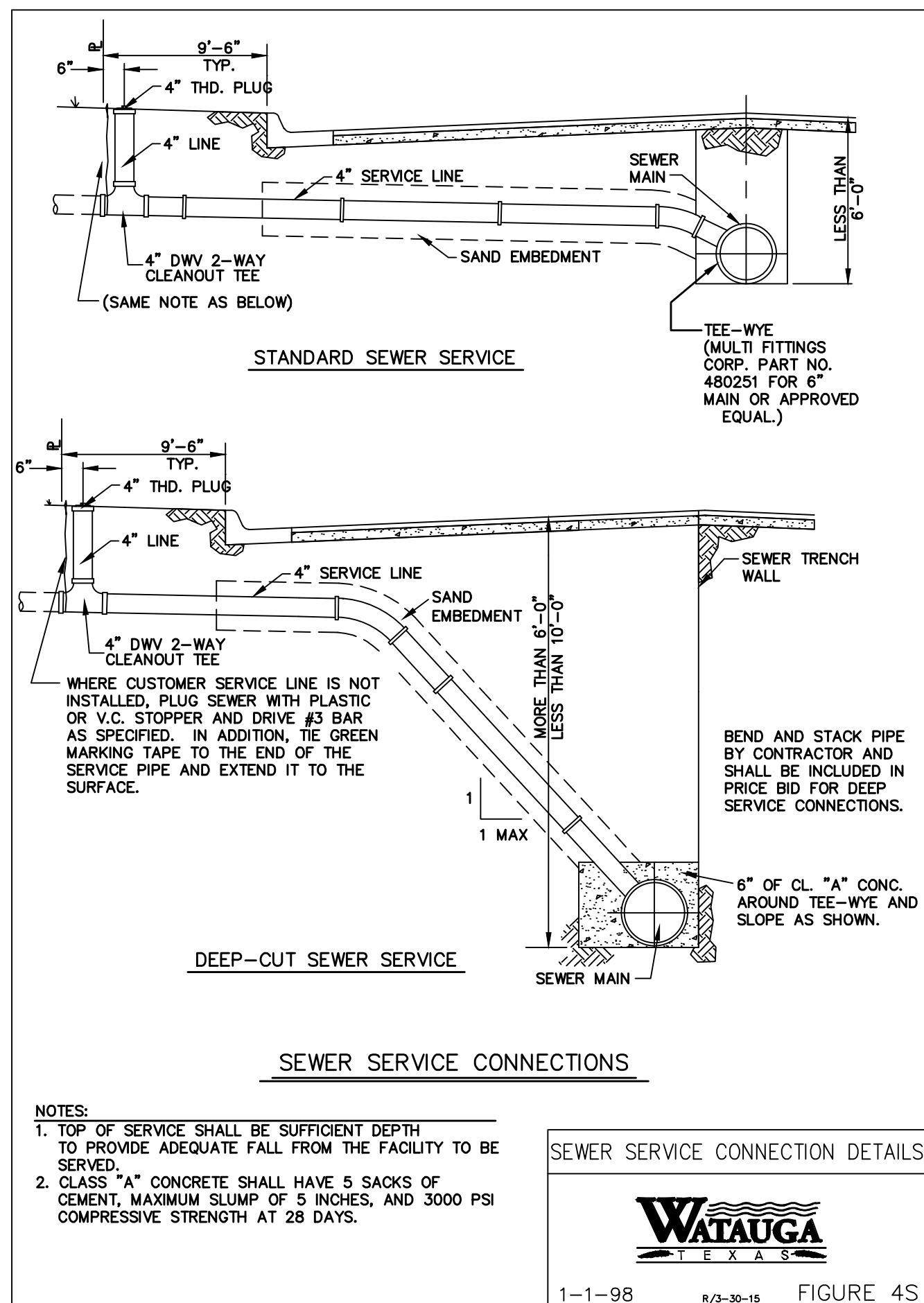
UTILITY LINE

GENERAL NOTES:

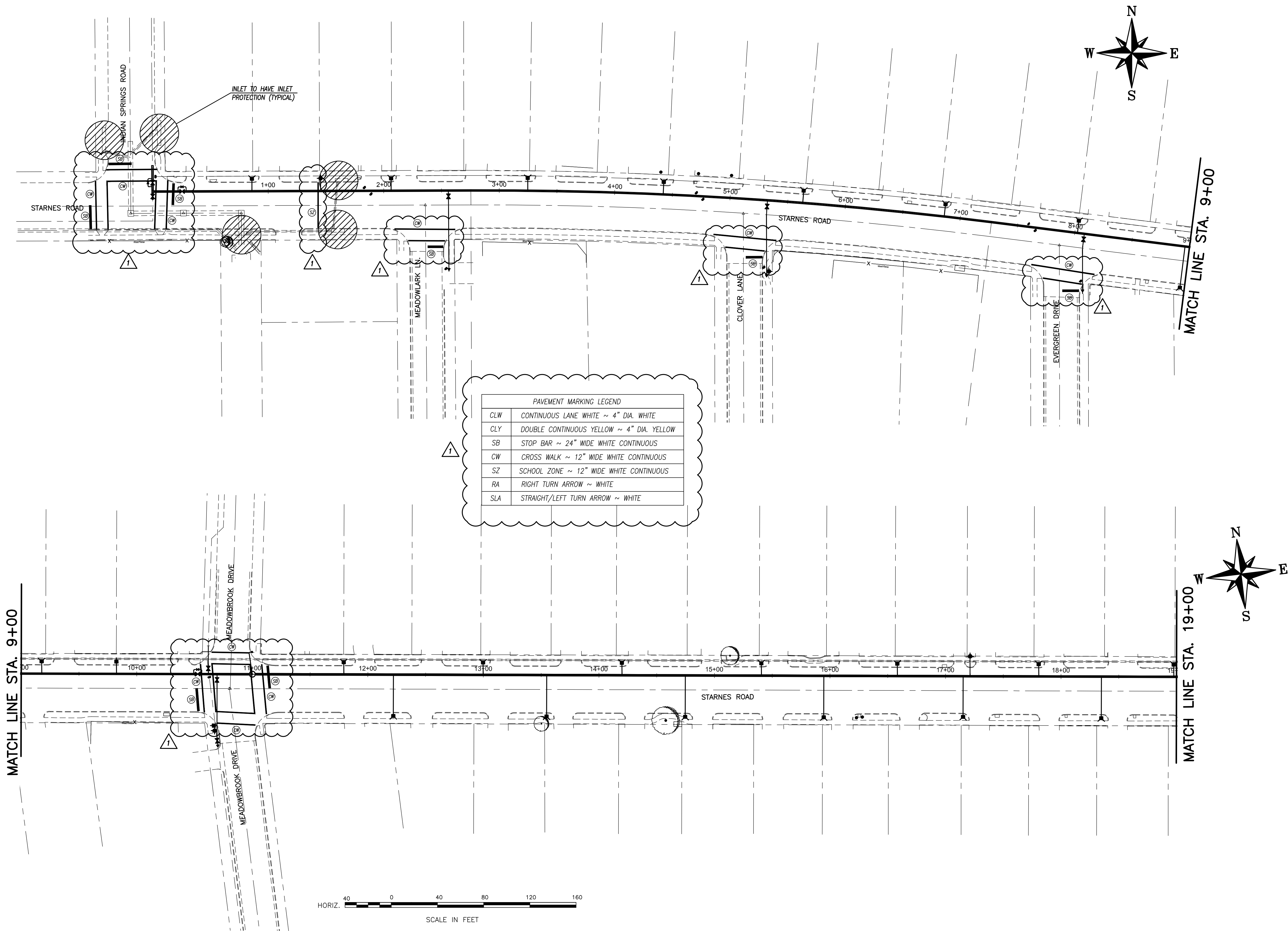
1. ALL TRENCH BACKFILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DRY DENSITY.
- 2.

PERMANENT PAVEMENT REPLACEMENT
NOT TO SCALE

- GENERAL NOTES:**
1. ALL TRENCH BACKFILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DRY DENSITY (ASTM D-698).
 2. MECHANICALLY COMPACTED TRENCH BACKFILL SHALL BE PLACED IN NO GREATER THAN 6" LIFTS. TESTING SHALL BE AT THE RATE OF ONE TEST PER LIFT PER 300 FEET OF TRENCH.



- CITY OF WATAUGA
- * GENERAL NOTES *
1. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE CITY OF WATAUGA STANDARDS AND SPECIFICATIONS.
 2. UTILITY CONTRACTOR AND STREET CONTRACTOR ARE TO NOTIFY A CITY TECHNICAL CONSTRUCTION INSPECTOR, AT (817) 514-5753, AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
 3. ALL SANITARY SEWER PIPE SHALL BE SDR 26 PVC (ASTM D-3034).
 4. ALL STORM DRAINAGE PIPE SHALL BE ASTM C-76, CLASS III REINFORCED CONCRETE, UNLESS NOTED OTHERWISE.
 5. ALL WATER MAINS SHALL BE PVC AWWA-C900 OR AWWA-C905, DR18, CLASS 150 (FACTORY INSTALLED GASKETS).
 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF A MAXIMUM NUMBER OF PASSING FIELD DENSITY TESTS ON LIME STABILIZED SUBGRADE EQUAL TO THE RATIO OF 1 PER 300 LINEAR FEET OF STREET AND ALL FAILING DENSITY TESTS AND REQUIRED MOISTURE-DENSITY CURVES.
 7. ALL FILL SHALL BE COMPACTED TO 95% (+ OR - 2% O.M.) OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR METHOD (ASTM D-698).
 8. ROUTE WATER LINES AROUND STORM DRAIN INLETS WITH A MINIMUM OF 12" CLEARANCE OUT-TO-OUT.
 9. "CURB RAMPS" ARE TO BE CONSTRUCTED ON ALL PERMANENT CURB RETURNS AT INTERSECTIONS OF ALL STREETS OR AS DIRECTED BY THE PUBLIC WORKS DEPARTMENT.
 10. ALL CONSTRUCTION BARRICADING TO BE IN ACCORDANCE WITH CURRENT "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" GUIDELINES AND SHALL BE LIGHTED.
 11. GATE VALVES SHALL CONFORM TO ANSI/AWWA C509-87 R.S. VALVE.
 12. MATERIAL DISPOSAL FOR CITY PROJECTS- THE CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS DIRECTOR IN WRITING OF PROPOSED MATERIAL DISPOSAL SITES TO BE UTILIZED WITHIN THE CITY OF WATAUGA. THE NOTIFICATION SHALL INCLUDE THE LEGAL LOT/BLOCK, ADDITION DESCRIPTION AND ADDRESS OF THE PROPOSED SITE. THE PUBLIC WORKS DIRECTOR SHALL BE NOTIFIED TWO (2) WEEKS IN ADVANCE OF ANY MATERIAL BEING DEPOSITED.
 13. EBAA IRON "MEGALUG" SERIES RESTRAINTS SHALL BE USED AT ALL MECHANICAL JOINT FITTINGS AND ON PIPE JOINTS WHERE INSUFFICIENT LENGTH OF STRAIGHT PIPE IS SUPPORTED IN TRENCH.
 14. ALL SAW CUTS ARE NO SEPARATE PAY.
 15. CONTRACTOR SHALL PRESERVE AND PROTECT EXISTING MAILBOXES. IF ANY MAILBOXES CONFLICT WITH THE WORK, CONTRACTOR SHALL REMOVE AND REPLACE THOSE MAILBOXES THAT ARE IN CONFLICT & PROVIDE TEMPORARY MAILBOXES DURING THE DURATION OF CONSTRUCTION. ALL REPLACED MAILBOXES ARE TO BE RESET TO PROPER HEIGHT AND SET-BACK IN ACCORDANCE WITH USPS RECOMMENDATIONS. FOUNDATIONS FOR BRICK MAILBOXES SHALL BE RE-POURED WITH 6"-THICK CONCRETE. NO SEPARATE PAY.
 16. CONTRACTOR TO REMOVE AND REPLACE EXISTING SPRINKLER HEADS, SPRINKLER PIPE AND VALVES AS NECESSARY. THE EXISTING LINE WHEN FOUND SHALL BE CUT OFF FLUSH AND PLUGGED TEMPORARILY SO THE HOMEOWNER MAY CONTINUE TO USE THE SYSTEM. AFTER CONSTRUCTION IS COMPLETE THE SPRINKLER SYSTEM SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THAT EXISTED PRIOR TO CONSTRUCTION. NO SEPARATE PAY.
 17. THE RIGHT-OF-WAY AREA DISTURBED BY CONSTRUCTION SHALL HAVE FOUR-INCHES (4") OF TOPSOIL APPLIED THEN TOPPED WITH BERMUDA SOLID SOD, ST. AUGUSTINE SOLID SOD OR HYDRO MULCH, AS SHOWN ON THE PLANS. AREAS OUTSIDE THE RIGHT-OF-WAY THAT ARE DISTURBED BY CONSTRUCTION SHALL BE TOPPED WITH BERMUDA SOLID SOD, ST. AUGUSTINE SOLID SOD OR HYDRO MULCH, AS SHOWN ON THE PLANS. WATERING OF THE SOLID SOD SHALL BE THE CONTRACTOR'S RESPONSIBILITY UNTIL PROJECT IS ACCEPTED.
 18. NO TREE SHALL BE REMOVED WITHOUT THE PERMISSION OF THE OWNER'S PROJECT REPRESENTATIVE. ALL EFFORT SHALL BE MADE TO PROTECT EXISTING TREES. THE PROPOSED SIDEWALKS SHALL BE ROUTED AROUND EXISTING TREES WHERE NEEDED.
 19. PRESERVE AND PROTECT THE EXISTING WATER SERVICES. IN THE EVENT THE EXISTING SERVICE HAS BEEN DAMAGED THE CONTRACTOR SHALL REPLACE AT HIS EXPENSE. A BID ITEM HAS BEEN SET UP TO ADJUST THE EXISTING WATER SERVICE METER BOX.
 20. ALL STORM DRAIN INLETS AND JUNCTION BOXES SHALL BE POURED IN PLACE. NO PRE-CAST INLET BOXES OR JUNCTION BOXES ARE ALLOWED.
 21. SMOKING IS NOT PERMITTED ON SITE WHEN CITY PERSONNEL ARE PRESENT.



NO.

1

REVISIONS

APPENDIX NO. 2

DATE

6/13/18

BY

WDW

CHK.

WDW

STATE OF TEXAS

REGISTERED PROFESSIONAL ENGINEER

WILLIAM D. WENDLAND

67958

JOB NUMBER:

55991

DESIGNED BY:

TEN

DRAWN BY:

TEN

APPROVED BY:

WDW

CHECKED BY:

SDS

DATE:

05/16/2018

SCALE:

1"=40'

SHEET NUMBER:

17

OF

18

EROSION CONTROL PLAN AND PAVEMENT MARKINGS

STA. 0+00 TO STA. 19+00

STARNES ROAD 16" WATER LINE

FROM INDIAN SPRINGS ROAD TO RUFE SNOW DRIVE

CITY OF WATAUGA, TEXAS

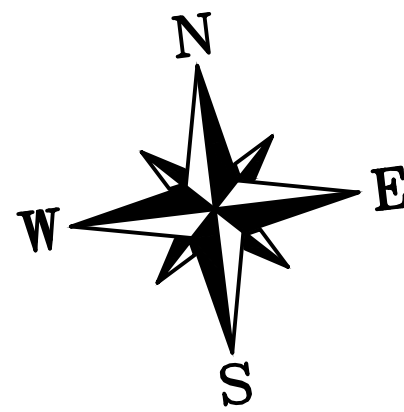
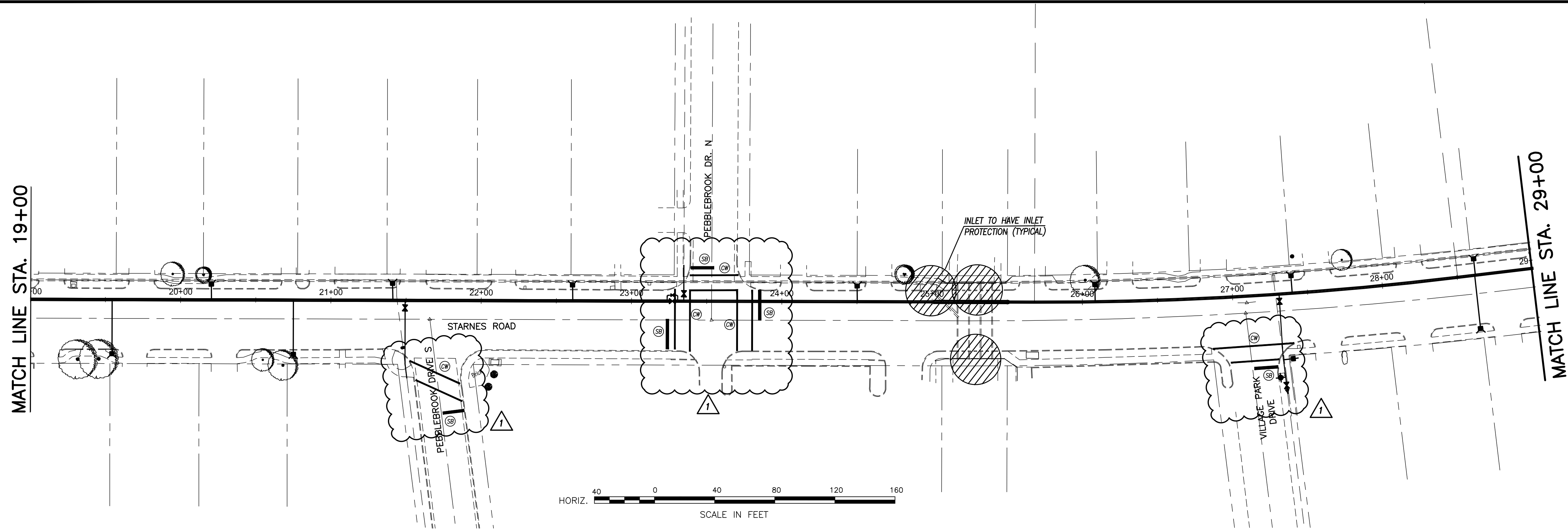
BURGESS & NIPLÉ

3950 FOSSIL CREEK BLVD., SUITE 210

FORT WORTH, TEXAS 76137

PHONE: (817) 306-1444

TBPE FIRM REGISTRATION NO. F-10834



BURGESS & NIPLE
3950 FOSSIL CREEK BLVD., SUITE 210
FORT WORTH, TEXAS 76137
PHONE: (817) 306-1444
TYPE FIRM REGISTRATION NO. F-10894

EROSION CONTROL PLAN AND PAVEMENT MARKINGS
STA. 19+00 TO STA. 33+05.62

STARNES ROAD 16" WATER LINE
FROM INDIAN SPRINGS ROAD TO RUFE SNOW DRIVE
CITY OF WATAUGA, TEXAS

[illegible]

BURGESS & NIPLE

3950 Fossil Creek Blvd., Suite 210 | Fort Worth, TX 76137 | 817.306.1444

July 6, 2018

Mr. Paul Hackleman, P.E.
Public Works Director
City of Watauga
7800 Virgil Anthony Blvd.
Watauga, TX 76148-2456

Re: **CITY PROJECT NO. 18-027**
STARNES ROAD 16" WATER LINE
FROM INDIAN SPRINGS ROAD TO RUFÉ SNOW DRIVE
RECOMMENDATION OF CONSTRUCTION CONTRACT AWARD
PR55991

Dear Mr. Hackleman:

In accordance with the contract documents, we received twenty-two (22) bids for the construction of the referenced project at 2:00 P.M., Wednesday, June 20, 2018, at the City of Watauga City Council Chambers. For your reference, we enclose a complete tabulation of the bids received at that time.

This project removes an existing 16" diameter water line from service along Starnes Road from Indian Springs Road to Rufe Snow Drive. It then installs a new 16" diameter water line along the same project limits. See the enclosed project location map. We requested that Contractors bid the number of construction days in the Bid Form. The lowest seven (7) bids received are as follows:

Contractor	Total Amount Bid	Days Bid
Reytech Services, LLC	\$871,739.43	150
JRB Pipeline Services, LLC.	\$910,920.00	240
Cidrax Texas, LLC	\$999,180.00	130
Atkins Bros.	\$1,033,478.00	150
Jackson Construction, Ltd.	\$1,072,974.00	180
Wilson Contractor Services, LLC.	Incomplete Bid	135
Canary Construction	\$1,094,573.00	250

CITY PROJECT NO. 18-027
STARNES ROAD 16" WATER LINE
FROM INDIAN SPRINGS ROAD TO RUFÉ SNOW DRIVE
RECOMMENDATION OF CONSTRUCTION CONTRACT AWARD
Page 2

Reytech Services, LLC of Grand Prairie, Texas, submitted the lowest responsive bid for construction of the project. We have determined that **Reytech Services'** bid is within the City's budget and we have spoken to several of **Reytech Services'** references. In my opinion, Reytech Services is qualified to perform this contract and I recommend that the City of Watauga award this construction contract to **Reytech Services, LLC** in the amount of **\$871,739.43**.

Please call if we may provide additional assistance or information in this regard.

Respectfully submitted,

BURGESS & NIPLE, INC.

TBPE FIRM REGISTRATION NO. F-10834



William D. Wendland, P.E.

Associate

Director, Fort Worth Public Sector

Attachments



STARNES ROAD 16" WATER LINE BID TABULATION

Bids Opened
June 20, 2018
2:00 PM

						#1			#2		
				Engineer's Estimate		Reytech Services			JRB Pipeline Services, LLC.		
ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	UNIT PRICE	COST	UNIT PRICE	AMOUNT	Ratio to Engineer	UNIT PRICE	AMOUNT	Ratio to Engineer
1	Prepare and Restore Right-of-Way	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 45,028.48	\$ 45,028.48	0.90	\$ 4,500.00	\$ 4,500.00	0.09
2	Remove Existing 16" Dia. Water Line	LF	126	\$ 50.00	\$ 6,300.00	\$ 21.17	\$ 2,667.42	0.42	\$ 10.00	\$ 1,260.00	0.20
3	Remove Existing 12" Dia. Water Line	LF	20	\$ 10.00	\$ 200.00	\$ 13.34	\$ 266.80	1.33	\$ 10.00	\$ 200.00	1.00
4	Remove Existing 8/6" Dia. Water Line	LF	150	\$ 10.00	\$ 1,500.00	\$ 9.33	\$ 1,399.50	0.93	\$ 10.00	\$ 1,500.00	1.00
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ 120.00	\$ 394,080.00	\$ 63.21	\$ 207,581.64	0.53	\$ 80.00	\$ 262,720.00	0.67
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	18	\$ 90.00	\$ 1,620.00	\$ 40.08	\$ 721.44	0.45	\$ 80.00	\$ 1,440.00	0.89
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ 72.00	\$ 29,520.00	\$ 25.95	\$ 10,639.50	0.36	\$ 49.00	\$ 20,090.00	0.68
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ 70.00	\$ 2,310.00	\$ 21.45	\$ 707.85	0.31	\$ 48.00	\$ 1,584.00	0.69
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ 1,000.00	\$ 50,000.00	\$ 278.25	\$ 13,912.50	0.28	\$ 315.00	\$ 15,750.00	0.32
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ 225.00	\$ 13,500.00	\$ 183.95	\$ 11,037.00	0.82	\$ 275.00	\$ 16,500.00	1.22
11	16" Gate Valve and Box	EA	6	\$ 8,800.00	\$ 52,800.00	\$ 7,645.64	\$ 45,873.84	0.87	\$ 5,750.00	\$ 34,500.00	0.65
12	12" Gate Valve and Box	EA	2	\$ 2,900.00	\$ 5,800.00	\$ 2,818.96	\$ 5,637.92	0.97	\$ 2,300.00	\$ 4,600.00	0.79
13	8" Gate Valve and Box	EA	9	\$ 1,600.00	\$ 14,400.00	\$ 1,728.23	\$ 15,554.07	1.08	\$ 1,250.00	\$ 11,250.00	0.78
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftg, 6" Pipe	EA	6	\$ 6,500.00	\$ 39,000.00	\$ 7,092.51	\$ 42,555.06	1.09	\$ 5,200.00	\$ 31,200.00	0.80
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ 5,000.00	\$ 25,000.00	\$ 5,013.72	\$ 25,068.60	1.00	\$ 3,900.00	\$ 19,500.00	0.78
16	Ductile Iron Fittings	TONS	7.5	\$ 7,000.00	\$ 52,500.00	\$ 6,184.62	\$ 46,384.65	0.88	\$ 3,000.00	\$ 22,500.00	0.43
17	2" Combination Air Release Valve & Vault with Offset	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 6,477.49	\$ 6,477.49	1.85	\$ 4,000.00	\$ 4,000.00	1.14
18	Temporary 2" Blow Off /Sample point	EA	2	\$ 1,500.00	\$ 3,000.00	\$ 2,540.05	\$ 5,080.10	1.69	\$ 1,900.00	\$ 3,800.00	1.27
19	Salvage Existing Fire Hydrant	EA	3	\$ 400.00	\$ 1,200.00	\$ 1,623.88	\$ 4,871.64	4.06	\$ 500.00	\$ 1,500.00	1.25
20	Abandon Existing Water Valve	EA	15	\$ 200.00	\$ 3,000.00	\$ 199.87	\$ 2,998.05	1.00	\$ 350.00	\$ 5,250.00	1.75
21	Connect to Existing 16" Water Line	EA	2	\$ 8,900.00	\$ 17,800.00	\$ 2,066.74	\$ 4,133.48	0.23	\$ 4,000.00	\$ 8,000.00	0.45
22	Connect to Existing 12" Water Line	EA	3	\$ 4,300.00	\$ 12,900.00	\$ 1,978.79	\$ 5,936.37	0.46	\$ 2,500.00	\$ 7,500.00	0.58
23	Connect to Existing 6/8" Water Line	EA	8	\$ 2,300.00	\$ 18,400.00	\$ 1,651.81	\$ 13,214.48	0.72	\$ 1,700.00	\$ 13,600.00	0.74
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ 400.00	\$ 6,800.00	\$ 1,032.98	\$ 17,560.66	2.58	\$ 1,200.00	\$ 20,400.00	3.00
25	Long Double Water Service	EA	13	\$ 1,000.00	\$ 13,000.00	\$ 1,741.00	\$ 22,633.00	1.74	\$ 1,100.00	\$ 14,300.00	1.10
26	Short Double Water Service	EA	25	\$ 750.00	\$ 18,750.00	\$ 1,373.67	\$ 34,341.75	1.83	\$ 1,050.00	\$ 26,250.00	1.40
27	Short Single Water Service	EA	3	\$ 700.00	\$ 2,100.00	\$ 1,157.93	\$ 3,473.79	1.65	\$ 1,000.00	\$ 3,000.00	1.43
28	Water Service Transfer	EA	41	\$ 500.00	\$ 20,500.00	\$ 117.22	\$ 4,806.02	0.23	\$ 100.00	\$ 4,100.00	0.20
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ 250.00	\$ 12,500.00	\$ 227.76	\$ 11,388.00	0.91	\$ 150.00	\$ 7,500.00	0.60
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ 2,000.00	\$ 2,000.00	\$ 1,092.39	\$ 1,092.39	0.55	\$ 1,400.00	\$ 1,400.00	0.70
31	Remove and Replace Existing Mono Curb	LF	163	\$ 5.00	\$ 815.00	\$ 25.96	\$ 4,231.48	5.19	\$ 55.50	\$ 9,046.50	11.10
32	Remove and Replace Existing Concrete Sidewalk	SF	1,996	\$ 10.00	\$ 19,960.00	\$ 4.17	\$ 8,323.32	0.42	\$ 8.00	\$ 15,968.00	0.80
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ 10.00	\$ 4,420.00	\$ 5.85	\$ 2,585.70	0.59	\$ 11.00	\$ 4,862.00	1.10
34	Remove and Replace Existing Curb Ramps	EA	10	\$ 2,500.00	\$ 25,000.00	\$ 1,485.17	\$ 14,851.70	0.59	\$ 1,600.00	\$ 16,000.00	0.64
35	Remove and Replace Existing Concrete Pavement	LF	3,467	\$ 50.00	\$ 173,350.00	\$ 41.26	\$ 143,048.42	0.83	\$ 57.00	\$ 197,619.00	1.14
36	Temporary Pavement Replacement	LF	3,467	\$ 20.00	\$ 69,340.00	\$ 5.15	\$ 17,855.05	0.26	\$ 4.50	\$ 15,601.50	0.23
37	Solid Sodding incl. 4" Thick Topsoil	SY	432	\$ 6.00	\$ 2,592.00	\$ 5.66	\$ 2,445.12	0.94	\$ 9.50	\$ 4,104.00	1.58
38	Trench Safety	LF	3,292	\$ 1.00	\$ 3,292.00	\$ 0.93	\$ 3,061.56	0.93	\$ 1.50	\$ 4,938.00	1.50
39	Traffic Control Plan and Implementation	LS	1	\$ 20,000.00	\$ 20,000.00	\$ 4,446.25	\$ 4,446.25	0.22	\$ 4,700.00	\$ 4,700.00	0.24
40	Erosion Control Plan	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 4,224.07	\$ 4,224.07	1.69	\$ 3,200.00	\$ 3,200.00	1.28
41	Project Signs	EA	2	\$ 750.00	\$ 1,500.00	\$ 523.71	\$ 1,047.42	0.70	\$ 800.00	\$ 1,600.00	1.07
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	1.00	\$ 50,000.00	\$ 50,000.00	1.00
43	24" Wide White Thermoplastic Stop Bar	LF	303	\$ 10.00	\$ 3,030.00	\$ 1.17	\$ 354.51	0.12	\$ 12.00	\$ 3,636.00	1.20
44	12" Wide White Thermoplastic Cross Walk Bar	LF	1,213	\$ 5.00	\$ 6,065.00	\$ 1.00	\$ 1,213.00	0.20	\$ 7.00	\$ 8,491.00	1.40
45	12" Wide White Thermoplastic School Zone Bar	LF	40	\$ 5.00	\$ 200.00	\$ 1.28	\$ 51.20	0.26	\$ 7.00	\$ 280.00	1.40
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	2	\$ 300.00	\$ 600.00	\$ 235.87	\$ 471.74	0.79	\$ 170.00	\$ 340.00	0.57
47	4" Dia. Type "Y" Yellow Buttons	EA	32	\$ 7.50	\$ 240.00	\$ 4.67	\$ 149.44	0.62	\$ 10.00	\$ 320.00	1.33
48	4" Dia. Type "W" White Buttons	EA	40	\$ 7.50	\$ 300.00	\$ 4.11	\$ 164.40	0.55	\$ 10.00	\$ 400.00	1.33
49	Type "1C" or "1A" Reflective Buttons	EA	2	\$ 15.00	\$ 30.00	\$ 7.18	\$ 14.36	0.48	\$ 10.00	\$ 20.00	0.67
50	Type "11AA" Reflective Buttons	EA	10	\$ 15.00	\$ 150.00	\$ 15.72	\$ 157.20	1.05	\$ 10.00	\$ 100.00	0.67
TOTAL AMOUNT BID					\$ 1,257,364.00		\$ 871,739.43	0.69		\$ 910,920.00	0.72

NUMBER OF CONSTRUCTION DAYS:

180 CONSECUTIVE CALENDAR DAYS

150 CONSECUTIVE CALENDAR DAYS

240 CALENDAR DAYS

BURGESS & NIPLE
Engineers ■ Planners



STARNES ROAD 16" WATER LINE BID TABULATION

Bids Opened
June 20, 2018
2:00 PM

					Engineer's Estimate		#3 Cidrax Texas, LLC			#4 Atkins Bros.		
ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	UNIT PRICE	COST	UNIT PRICE	AMOUNT	Ratio to Engineer	UNIT PRICE	AMOUNT	Ratio to Engineer	
1	Prepare and Restore Right-of-Way	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 12,019.80	\$ 12,019.80	0.24	\$ 10,000.00	\$ 10,000.00	0.20	
2	Remove Existing 16" Dia. Water Line	LF	126	\$ 50.00	\$ 6,300.00	\$ 42.00	\$ 5,292.00	0.84	\$ 20.00	\$ 2,520.00	0.40	
3	Remove Existing 12" Dia. Water Line	LF	20	\$ 10.00	\$ 200.00	\$ 35.00	\$ 700.00	3.50	\$ 20.00	\$ 400.00	2.00	
4	Remove Existing 8/6" Dia. Water Line	LF	150	\$ 10.00	\$ 1,500.00	\$ 20.00	\$ 3,000.00	2.00	\$ 10.00	\$ 1,500.00	1.00	
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ 120.00	\$ 394,080.00	\$ 78.00	\$ 256,152.00	0.65	\$ 91.00	\$ 298,844.00	0.76	
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	18	\$ 90.00	\$ 1,620.00	\$ 78.00	\$ 1,404.00	0.87	\$ 90.00	\$ 1,620.00	1.00	
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ 72.00	\$ 29,520.00	\$ 72.00	\$ 29,520.00	1.00	\$ 85.00	\$ 34,850.00	1.18	
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ 70.00	\$ 2,310.00	\$ 68.00	\$ 2,244.00	0.97	\$ 80.00	\$ 2,640.00	1.14	
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ 1,000.00	\$ 50,000.00	\$ 275.00	\$ 13,750.00	0.28	\$ 410.00	\$ 20,500.00	0.41	
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ 225.00	\$ 13,500.00	\$ 150.00	\$ 9,000.00	0.67	\$ 460.00	\$ 27,600.00	2.04	
11	16" Gate Valve and Box	EA	6	\$ 8,800.00	\$ 52,800.00	\$ 15,000.00	\$ 90,000.00	1.70	\$ 13,000.00	\$ 78,000.00	1.48	
12	12" Gate Valve and Box	EA	2	\$ 2,900.00	\$ 5,800.00	\$ 3,600.00	\$ 7,200.00	1.24	\$ 3,000.00	\$ 6,000.00	1.03	
13	8" Gate Valve and Box	EA	9	\$ 1,600.00	\$ 14,400.00	\$ 2,500.00	\$ 22,500.00	1.56	\$ 1,500.00	\$ 13,500.00	0.94	
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftg, 6" Pipe	EA	6	\$ 6,500.00	\$ 39,000.00	\$ 8,250.00	\$ 49,500.00	1.27	\$ 3,300.00	\$ 19,800.00	0.51	
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ 5,000.00	\$ 25,000.00	\$ 5,300.00	\$ 26,500.00	1.06	\$ 3,000.00	\$ 15,000.00	0.60	
16	Ductile Iron Fittings	TONS	7.5	\$ 7,000.00	\$ 52,500.00	\$ 4,800.00	\$ 36,000.00	0.69	\$ 3,000.00	\$ 22,500.00	0.43	
17	2" Combination Air Release Valve & Vault with Offset	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 6,500.00	\$ 6,500.00	1.86	\$ 3,500.00	\$ 3,500.00	1.00	
18	Temporary 2" Blow Off /Sample point	EA	2	\$ 1,500.00	\$ 3,000.00	\$ 2,300.00	\$ 4,600.00	1.53	\$ 1,500.00	\$ 3,000.00	1.00	
19	Salvage Existing Fire Hydrant	EA	3	\$ 400.00	\$ 1,200.00	\$ 1,600.00	\$ 4,800.00	4.00	\$ 100.00	\$ 300.00	0.25	
20	Abandon Existing Water Valve	EA	15	\$ 200.00	\$ 3,000.00	\$ 450.00	\$ 6,750.00	2.25	\$ 50.00	\$ 750.00	0.25	
21	Connect to Existing 16" Water Line	EA	2	\$ 8,900.00	\$ 17,800.00	\$ 2,000.00	\$ 4,000.00	0.22	\$ 6,000.00	\$ 12,000.00	0.67	
22	Connect to Existing 12" Water Line	EA	3	\$ 4,300.00	\$ 12,900.00	\$ 1,800.00	\$ 5,400.00	0.42	\$ 5,000.00	\$ 15,000.00	1.16	
23	Connect to Existing 6/8" Water Line	EA	8	\$ 2,300.00	\$ 18,400.00	\$ 1,500.00	\$ 12,000.00	0.65	\$ 3,000.00	\$ 24,000.00	1.30	
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ 400.00	\$ 6,800.00	\$ 400.00	\$ 6,800.00	1.00	\$ 1,000.00	\$ 17,000.00	2.50	
25	Long Double Water Service	EA	13	\$ 1,000.00	\$ 13,000.00	\$ 2,000.00	\$ 26,000.00	2.00	\$ 1,500.00	\$ 19,500.00	1.50	
26	Short Double Water Service	EA	25	\$ 750.00	\$ 18,750.00	\$ 1,800.00	\$ 45,000.00	2.40	\$ 900.00	\$ 22,500.00	1.20	
27	Short Single Water Service	EA	3	\$ 700.00	\$ 2,100.00	\$ 1,450.00	\$ 4,350.00	2.07	\$ 700.00	\$ 2,100.00	1.00	
28	Water Service Transfer	EA	41	\$ 500.00	\$ 20,500.00	\$ 350.00	\$ 14,350.00	0.70	\$ 50.00	\$ 2,050.00	0.10	
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ 250.00	\$ 12,500.00	\$ 350.00	\$ 17,500.00	1.40	\$ 300.00	\$ 15,000.00	1.20	
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ 2,000.00	\$ 2,000.00	\$ 800.00	\$ 800.00	0.40	\$ 1,800.00	\$ 1,800.00	0.90	
31	Remove and Replace Existing Mono Curb	LF	163	\$ 5.00	\$ 815.00	\$ 32.50	\$ 5,297.50	6.50	\$ 60.00	\$ 9,780.00	12.00	
32	Remove and Replace Existing Concrete Sidewalk	SF	1,996	\$ 10.00	\$ 19,960.00	\$ 6.00	\$ 11,976.00	0.60	\$ 9.00	\$ 17,964.00	0.90	
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ 10.00	\$ 4,420.00	\$ 12.00	\$ 5,304.00	1.20	\$ 12.00	\$ 5,304.00	1.20	
34	Remove and Replace Existing Curb Ramps	EA	10	\$ 2,500.00	\$ 25,000.00	\$ 1,750.00	\$ 17,500.00	0.70	\$ 3,000.00	\$ 30,000.00	1.20	
35	Remove and Replace Existing Concrete Pavement	LF	3,467	\$ 50.00	\$ 173,350.00	\$ 30.00	\$ 104,010.00	0.60	\$ 31.00	\$ 107,477.00	0.62	
36	Temporary Pavement Replacement	LF	3,467	\$ 20.00	\$ 69,340.00	\$ 10.00	\$ 34,670.00	0.50	\$ 15.00	\$ 52,005.00	0.75	
37	Solid Sodding incl. 4" Thick Topsoil	SY	432	\$ 6.00	\$ 2,592.00	\$ 11.00	\$ 4,752.00	1.83	\$ 13.00	\$ 5,616.00	2.17	
38	Trench Safety	LF	3,292	\$ 1.00	\$ 3,292.00	\$ 1.10	\$ 3,621.20	1.10	\$ 1.00	\$ 3,292.00	1.00	
39	Traffic Control Plan and Implementation	LS	1	\$ 20,000.00	\$ 20,000.00	\$ 8,000.00	\$ 8,000.00	0.40	\$ 10,000.00	\$ 10,000.00	0.50	
40	Erosion Control Plan	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 8,000.00	\$ 8,000.00	3.20	\$ 5,000.00	\$ 5,000.00	2.00	
41	Project Signs	EA	2	\$ 750.00	\$ 1,500.00	\$ 450.00	\$ 900.00	0.60	\$ 500.00	\$ 1,000.00	0.67	
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	1.00	\$ 50,000.00	\$ 50,000.00	1.00	
43	24" Wide White Thermoplastic Stop Bar	LF	303	\$ 10.00	\$ 3,030.00	\$ 21.50	\$ 6,514.50	2.15	\$ 12.00	\$ 3,636.00	1.20	
44	12" Wide White Thermoplastic Cross Walk Bar	LF	1,213	\$ 5.00	\$ 6,065.00	\$ 11.00	\$ 13,343.00	2.20	\$ 10.00	\$ 12,130.00	2.00	
45	12" Wide White Thermoplastic School Zone Bar	LF	40	\$ 5.00	\$ 200.00	\$ 11.00	\$ 440.00	2.20	\$ 500.00	\$ 20,000.00	100.00	
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	2	\$ 300.00	\$ 600.00	\$ 400.00	\$ 800.00	1.33	\$ 500.00	\$ 1,000.00	1.67	
47	4" Dia. Type "Y" Yellow Buttons	EA	32	\$ 7.50	\$ 240.00	\$ 4.75	\$ 152.00	0.63	\$ 75.00	\$ 2,400.00	10.00	
48	4" Dia. Type "W" White Buttons	EA	40	\$ 7.50	\$ 300.00	\$ 4.75	\$ 190.00	0.63	\$ 70.00	\$ 2,800.00	9.33	
49	Type "1C" or "1A" Reflective Buttons	EA	2	\$ 15.00	\$ 30.00	\$ 6.50	\$ 13.00	0.43	\$ 100.00	\$ 200.00	6.67	
50	Type "11AA" Reflective Buttons	EA	10	\$ 15.00	\$ 150.00	\$ 6.50	\$ 65.00	0.43	\$ 10.00	\$ 100.00	0.67	
TOTAL AMOUNT BID					\$ 1,257,364.00		\$ 999,180.00	0.79		\$ 1,033,478.00	0.82	

*BID CONTAINED A MATH ERROR (CORRECTED)

NUMBER OF CONSTRUCTION DAYS:

180 CONSECUTIVE CALENDAR DAYS

130 CONSECUTIVE CALENDAR DAYS

150 CONSECUTIVE CALENDAR DAYS

BURGESS & NIPL
Engineers ■ Planners



STARNES ROAD 16" WATER LINE BID TABULATION

Bids Opened
June 20, 2018
2:00 PM

				Engineer's Estimate		#5 Jackson Construction, Ltd.			#6 Wilson Contractor Services, LLC.		
ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	UNIT PRICE	COST	UNIT PRICE	AMOUNT	Ratio to Engineer	UNIT PRICE	AMOUNT	Ratio to Engineer
1	Prepare and Restore Right-of-Way	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 20,000.00	\$ 20,000.00	0.40	\$ 60,222.00	\$ 60,222.00	1.20
2	Remove Existing 16" Dia. Water Line	LF	126	\$ 50.00	\$ 6,300.00	\$ 21.00	\$ 2,646.00	0.42	\$ 119.05	\$ 15,000.30	2.38
3	Remove Existing 12" Dia. Water Line	LF	20	\$ 10.00	\$ 200.00	\$ 12.00	\$ 240.00	1.20	\$ 150.00	\$ 3,000.00	15.00
4	Remove Existing 8/6" Dia. Water Line	LF	150	\$ 10.00	\$ 1,500.00	\$ 10.00	\$ 1,500.00	1.00	\$ 70.00	\$ 10,500.00	7.00
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ 120.00	\$ 394,080.00	\$ 75.00	\$ 246,300.00	0.63	\$ 80.96	\$ 265,872.64	0.67
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	18	\$ 90.00	\$ 1,620.00	\$ 153.00	\$ 2,754.00	1.70	\$ 117.25	\$ 2,110.50	1.30
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ 72.00	\$ 29,520.00	\$ 69.00	\$ 28,290.00	0.96	\$ 67.21	\$ 27,556.10	0.93
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ 70.00	\$ 2,310.00	\$ 56.00	\$ 1,848.00	0.80	\$ 224.18	\$ 7,397.94	3.20
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ 1,000.00	\$ 50,000.00	\$ 530.00	\$ 26,500.00	0.53	\$ 456.00	\$ 22,800.00	0.46
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ 225.00	\$ 13,500.00	\$ 130.00	\$ 7,800.00	0.58	\$ 327.00	\$ 19,620.00	1.45
11	16" Gate Valve and Box	EA	6	\$ 8,800.00	\$ 52,800.00	\$ 6,700.00	\$ 40,200.00	0.76	\$ 7,150.00	\$ 42,900.00	0.81
12	12" Gate Valve and Box	EA	2	\$ 2,900.00	\$ 5,800.00	\$ 2,400.00	\$ 4,800.00	0.83	\$ 2,925.00	\$ 5,850.00	1.01
13	8" Gate Valve and Box	EA	9	\$ 1,600.00	\$ 14,400.00	\$ 1,300.00	\$ 11,700.00	0.81	\$ 1,525.00	\$ 13,725.00	0.95
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftg, 6" Pipe	EA	6	\$ 6,500.00	\$ 39,000.00	\$ 3,000.00	\$ 18,000.00	0.46	\$ 5,415.00	\$ 32,490.00	0.83
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ 5,000.00	\$ 25,000.00	\$ 5,000.00	\$ 25,000.00	1.00	\$ 3,485.00	\$ 17,425.00	0.70
16	Ductile Iron Fittings	TONS	7.5	\$ 7,000.00	\$ 52,500.00	\$ 6,500.00	\$ 48,750.00	0.93	\$ 5,840.00	\$ 43,800.00	0.83
17	2" Combination Air Release Valve & Vault with Offset	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 8,500.00	\$ 8,500.00	2.43	\$ 4,985.00	\$ 4,985.00	1.42
18	Temporary 2" Blow Off /Sample point	EA	2	\$ 1,500.00	\$ 3,000.00	\$ 600.00	\$ 1,200.00	0.40	\$ 2,380.00	\$ 4,760.00	1.59
19	Salvage Existing Fire Hydrant	EA	3	\$ 400.00	\$ 1,200.00	\$ 500.00	\$ 1,500.00	1.25	\$ 1,000.00	\$ 3,000.00	2.50
20	Abandon Existing Water Valve	EA	15	\$ 200.00	\$ 3,000.00	\$ 150.00	\$ 2,250.00	0.75	\$ 500.00	\$ 7,500.00	2.50
21	Connect to Existing 16" Water Line	EA	2	\$ 8,900.00	\$ 17,800.00	\$ 9,000.00	\$ 18,000.00	1.01	\$ 1,800.00	\$ 3,600.00	0.20
22	Connect to Existing 12" Water Line	EA	3	\$ 4,300.00	\$ 12,900.00	\$ 2,000.00	\$ 6,000.00	0.47	\$ 3,100.00	\$ 9,300.00	0.72
23	Connect to Existing 6/8" Water Line	EA	8	\$ 2,300.00	\$ 18,400.00	\$ 1,500.00	\$ 12,000.00	0.65	\$ 2,100.00	\$ 16,800.00	0.91
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ 400.00	\$ 6,800.00	\$ 500.00	\$ 8,500.00	1.25	\$ 500.00	\$ 8,500.00	1.25
25	Long Double Water Service	EA	13	\$ 1,000.00	\$ 13,000.00	\$ 2,500.00	\$ 32,500.00	2.50	\$ 1,500.00	\$ 19,500.00	1.50
26	Short Double Water Service	EA	25	\$ 750.00	\$ 18,750.00	\$ 1,700.00	\$ 42,500.00	2.27	\$ 1,250.00	\$ 31,250.00	1.67
27	Short Single Water Service	EA	3	\$ 700.00	\$ 2,100.00	\$ 1,600.00	\$ 4,800.00	2.29	\$ 950.00	\$ 2,850.00	1.36
28	Water Service Transfer	EA	41	\$ 500.00	\$ 20,500.00	\$ 400.00	\$ 16,400.00	0.80	\$ 175.00	\$ 7,175.00	0.35
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ 250.00	\$ 12,500.00	\$ 250.00	\$ 12,500.00	1.00	\$ 105.00	\$ 5,250.00	0.42
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ 2,000.00	\$ 2,000.00	\$ 950.00	\$ 950.00	0.48	\$ 1,700.00	\$ 1,700.00	0.85
31	Remove and Replace Existing Mono Curb	LF	163	\$ 5.00	\$ 815.00	\$ 50.00	\$ 8,150.00	10.00	\$ 35.00	\$ 5,705.00	7.00
32	Remove and Replace Existing Concrete Sidewalk	SF	1,996	\$ 10.00	\$ 19,960.00	\$ 9.00	\$ 17,964.00	0.90	\$ 12.10	\$ 24,151.60	1.21
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ 10.00	\$ 4,420.00	\$ 11.00	\$ 4,862.00	1.10	\$ 15.26	\$ 6,744.92	1.53
34	Remove and Replace Existing Curb Ramps	EA	10	\$ 2,500.00	\$ 25,000.00	\$ 1,500.00	\$ 15,000.00	0.60	\$ 1,650.00	\$ 16,500.00	0.66
35	Remove and Replace Existing Concrete Pavement	LF	3,467	\$ 50.00	\$ 173,350.00	\$ 70.00	\$ 242,690.00	1.40	\$ 58.00	\$ 201,086.00	1.16
36	Temporary Pavement Replacement	LF	3,467	\$ 20.00	\$ 69,340.00	\$ 14.00	\$ 48,538.00	0.70	\$ 8.40	\$ 29,122.80	0.42
37	Solid Sodding incl. 4" Thick Topsoil	SY	432	\$ 6.00	\$ 2,592.00	\$ 12.00	\$ 5,184.00	2.00	\$ 10.20	\$ 4,406.40	1.70
38	Trench Safety	LF	3,292	\$ 1.00	\$ 3,292.00	\$ 1.00	\$ 3,292.00	1.00	\$ 0.75	\$ 2,469.00	0.75
39	Traffic Control Plan and Implementation	LS	1	\$ 20,000.00	\$ 20,000.00	\$ 12,000.00	\$ 12,000.00	0.60	\$ 1,900.00	\$ 1,900.00	0.10
40	Erosion Control Plan	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 3,000.00	\$ 3,000.00	1.20	\$ 5,825.00	\$ 5,825.00	2.33
41	Project Signs	EA	2	\$ 750.00	\$ 1,500.00	\$ 400.00	\$ 800.00	0.53	\$ 700.00	\$ 1,400.00	0.93
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	1.00	\$ 50,000.00	\$ 50,000.00	1.00
43	24" Wide White Thermoplastic Stop Bar	LF	303	\$ 10.00	\$ 3,030.00	\$ 6.00	\$ 1,818.00	0.60	\$ -	\$ -	0.00
44	12" Wide White Thermoplastic Cross Walk Bar	LF	1,213	\$ 5.00	\$ 6,065.00	\$ 4.00	\$ 4,852.00	0.80	\$ -	\$ -	0.00
45	12" Wide White Thermoplastic School Zone Bar	LF	40	\$ 5.00	\$ 200.00	\$ 4.00	\$ 160.00	0.80	\$ -	\$ -	0.00
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	2	\$ 300.00	\$ 600.00	\$ 200.00	\$ 400.00	0.67	\$ -	\$ -	0.00
47	4" Dia. Type "Y" Yellow Buttons	EA	32	\$ 7.50	\$ 240.00	\$ 4.00	\$ 128.00	0.53	\$ -	\$ -	0.00
48	4" Dia. Type "W" White Buttons	EA	40	\$ 7.50	\$ 300.00	\$ 4.00	\$ 160.00	0.53	\$ -	\$ -	0.00
49	Type "1C" or "1A" Reflective Buttons	EA	2	\$ 15.00	\$ 30.00	\$ 4.00	\$ 8.00	0.27	\$ -	\$ -	0.00
50	Type "11AA" Reflective Buttons	EA	10	\$ 15.00	\$ 150.00	\$ 4.00	\$ 40.00	0.27	\$ -	\$ -	0.00
TOTAL AMOUNT BID					\$ 1,257,364.00		1,072,974.00	0.85			0.00

ERROR - INCOMPLETE BID
180 CONSECUTIVE CALENDAR DAYS
180 CALENDAR DAYS
135 CALENDAR DAYS

NUMBER OF CONSTRUCTION DAYS:

180 CONSECUTIVE CALENDAR DAYS

180 CALENDAR DAYS

135 CALENDAR DAYS

BURGESS & NIPL
Engineers ■ Planners



STARNES ROAD 16" WATER LINE BID TABULATION

Bids Opened
June 20, 2018
2:00 PM

ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	Engineer's Estimate		#7 Canary Construction			#8 Woody Contractors, Inc.		
				UNIT PRICE	COST	UNIT PRICE	AMOUNT	Ratio to Engineer	UNIT PRICE	AMOUNT	Ratio to Engineer
1	Prepare and Restore Right-of-Way	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 45,000.00	\$ 45,000.00	0.90	\$ 31,495.00	\$ 31,495.00	0.63
2	Remove Existing 16" Dia. Water Line	LF	126	\$ 50.00	\$ 6,300.00	\$ 25.00	\$ 3,150.00	0.50	\$ 2.00	\$ 252.00	0.04
3	Remove Existing 12" Dia. Water Line	LF	20	\$ 10.00	\$ 200.00	\$ 25.00	\$ 500.00	2.50	\$ 2.00	\$ 40.00	0.20
4	Remove Existing 8/6" Dia. Water Line	LF	150	\$ 10.00	\$ 1,500.00	\$ 25.00	\$ 3,750.00	2.50	\$ 2.00	\$ 300.00	0.20
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ 120.00	\$ 394,080.00	\$ 85.00	\$ 279,140.00	0.71	\$ 88.00	\$ 288,992.00	0.73
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	18	\$ 90.00	\$ 1,620.00	\$ 80.00	\$ 1,440.00	0.89	\$ 75.00	\$ 1,350.00	0.83
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ 72.00	\$ 29,520.00	\$ 75.00	\$ 30,750.00	1.04	\$ 58.00	\$ 23,780.00	0.81
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ 70.00	\$ 2,310.00	\$ 70.00	\$ 2,310.00	1.00	\$ 55.00	\$ 1,815.00	0.79
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ 1,000.00	\$ 50,000.00	\$ 320.00	\$ 16,000.00	0.32	\$ 385.00	\$ 19,250.00	0.39
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ 225.00	\$ 13,500.00	\$ 240.00	\$ 14,400.00	1.07	\$ 110.00	\$ 6,600.00	0.49
11	16" Gate Valve and Box	EA	6	\$ 8,800.00	\$ 52,800.00	\$ 7,000.00	\$ 42,000.00	0.80	\$ 7,100.00	\$ 42,600.00	0.81
12	12" Gate Valve and Box	EA	2	\$ 2,900.00	\$ 5,800.00	\$ 2,500.00	\$ 5,000.00	0.86	\$ 2,300.00	\$ 4,600.00	0.79
13	8" Gate Valve and Box	EA	9	\$ 1,600.00	\$ 14,400.00	\$ 1,550.00	\$ 13,950.00	0.97	\$ 1,300.00	\$ 11,700.00	0.81
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftg, 6" Pipe	EA	6	\$ 6,500.00	\$ 39,000.00	\$ 8,000.00	\$ 48,000.00	1.23	\$ 6,600.00	\$ 39,600.00	1.02
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ 5,000.00	\$ 25,000.00	\$ 4,500.00	\$ 22,500.00	0.90	\$ 5,600.00	\$ 28,000.00	1.12
16	Ductile Iron Fittings	TONS	7.5	\$ 7,000.00	\$ 52,500.00	\$ 8,000.00	\$ 60,000.00	1.14	\$ 6,000.00	\$ 45,000.00	0.86
17	2" Combination Air Release Valve & Vault with Offset	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 4,500.00	\$ 4,500.00	1.29	\$ 9,750.00	\$ 9,750.00	2.79
18	Temporary 2" Blow Off /Sample point	EA	2	\$ 1,500.00	\$ 3,000.00	\$ 3,000.00	\$ 6,000.00	2.00	\$ 1,800.00	\$ 3,600.00	1.20
19	Salvage Existing Fire Hydrant	EA	3	\$ 400.00	\$ 1,200.00	\$ 500.00	\$ 1,500.00	1.25	\$ 300.00	\$ 900.00	0.75
20	Abandon Existing Water Valve	EA	15	\$ 200.00	\$ 3,000.00	\$ 450.00	\$ 6,750.00	2.25	\$ 100.00	\$ 1,500.00	0.50
21	Connect to Existing 16" Water Line	EA	2	\$ 8,900.00	\$ 17,800.00	\$ 950.00	\$ 1,900.00	0.11	\$ 10,100.00	\$ 20,200.00	1.13
22	Connect to Existing 12" Water Line	EA	3	\$ 4,300.00	\$ 12,900.00	\$ 900.00	\$ 2,700.00	0.21	\$ 5,075.00	\$ 15,225.00	1.18
23	Connect to Existing 6/8" Water Line	EA	8	\$ 2,300.00	\$ 18,400.00	\$ 850.00	\$ 6,800.00	0.37	\$ 2,450.00	\$ 19,600.00	1.07
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ 400.00	\$ 6,800.00	\$ 520.00	\$ 8,840.00	1.30	\$ 100.00	\$ 1,700.00	0.25
25	Long Double Water Service	EA	13	\$ 1,000.00	\$ 13,000.00	\$ 1,700.00	\$ 22,100.00	1.70	\$ 2,350.00	\$ 30,550.00	2.35
26	Short Double Water Service	EA	25	\$ 750.00	\$ 18,750.00	\$ 1,500.00	\$ 37,500.00	2.00	\$ 1,790.00	\$ 44,750.00	2.39
27	Short Single Water Service	EA	3	\$ 700.00	\$ 2,100.00	\$ 900.00	\$ 2,700.00	1.29	\$ 1,380.00	\$ 4,140.00	1.97
28	Water Service Transfer	EA	41	\$ 500.00	\$ 20,500.00	\$ 300.00	\$ 12,300.00	0.60	\$ 425.00	\$ 17,425.00	0.85
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ 250.00	\$ 12,500.00	\$ 200.00	\$ 10,000.00	0.80	\$ 180.00	\$ 9,000.00	0.72
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	1.00	\$ 2,050.00	\$ 2,050.00	1.03
31	Remove and Replace Existing Mono Curb	LF	163	\$ 5.00	\$ 815.00	\$ 55.00	\$ 8,965.00	11.00	\$ 39.50	\$ 6,438.50	7.90
32	Remove and Replace Existing Concrete Sidewalk	SF	1,996	\$ 10.00	\$ 19,960.00	\$ 7.00	\$ 13,972.00	0.70	\$ 6.25	\$ 12,475.00	0.63
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ 10.00	\$ 4,420.00	\$ 9.00	\$ 3,978.00	0.90	\$ 10.25	\$ 4,530.50	1.03
34	Remove and Replace Existing Curb Ramps	EA	10	\$ 2,500.00	\$ 25,000.00	\$ 1,500.00	\$ 15,000.00	0.60	\$ 2,350.00	\$ 23,500.00	0.94
35	Remove and Replace Existing Concrete Pavement	LF	3,467	\$ 50.00	\$ 173,350.00	\$ 60.00	\$ 208,020.00	1.20	\$ 70.00	\$ 242,690.00	1.40
36	Temporary Pavement Replacement	LF	3,467	\$ 20.00	\$ 69,340.00	\$ 5.00	\$ 17,335.00	0.25	\$ 7.50	\$ 26,002.50	0.38
37	Solid Sodding incl. 4" Thick Topsoil	SY	432	\$ 6.00	\$ 2,592.00	\$ 8.00	\$ 3,456.00	1.33	\$ 5.00	\$ 2,160.00	0.83
38	Trench Safety	LF	3,292	\$ 1.00	\$ 3,292.00	\$ 1.00	\$ 3,292.00	1.00	\$ 1.00	\$ 3,292.00	1.00
39	Traffic Control Plan and Implementation	LS	1	\$ 20,000.00	\$ 20,000.00	\$ 3,900.00	\$ 3,900.00	0.20	\$ 15,000.00	\$ 15,000.00	0.75
40	Erosion Control Plan	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 2,600.00	\$ 2,600.00	1.04	\$ 2,000.00	\$ 2,000.00	0.80
41	Project Signs	EA	2	\$ 750.00	\$ 1,500.00	\$ 650.00	\$ 1,300.00	0.87	\$ 500.00	\$ 1,000.00	0.67
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	1.00	\$ 50,000.00	\$ 50,000.00	1.00
43	24" Wide White Thermoplastic Stop Bar	LF	303	\$ 10.00	\$ 3,030.00	\$ 50.00	\$ 15,150.00	5.00	\$ 6.00	\$ 1,818.00	0.60
44	12" Wide White Thermoplastic Cross Walk Bar	LF	1,213	\$ 5.00	\$ 6,065.00	\$ 25.00	\$ 30,325.00	5.00	\$ 4.00	\$ 4,852.00	0.80
45	12" Wide White Thermoplastic School Zone Bar	LF	40	\$ 5.00	\$ 200.00	\$ 25.00	\$ 1,000.00	5.00	\$ 4.00	\$ 160.00	0.80
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	2	\$ 300.00	\$ 600.00	\$ 350.00	\$ 700.00	1.17	\$ 175.00	\$ 350.00	0.58
47	4" Dia. Type "Y" Yellow Buttons	EA	32	\$ 7.50	\$ 240.00	\$ 25.00	\$ 800.00	3.33	\$ 4.00	\$ 128.00	0.53
48	4" Dia. Type "W" White Buttons	EA	40	\$ 7.50	\$ 300.00	\$ 25.00	\$ 1,000.00	3.33	\$ 4.00	\$ 160.00	0.53
49	Type "1C" or "1A" Reflective Buttons	EA	2	\$ 15.00	\$ 30.00	\$ 25.00	\$ 50.00	1.67	\$ 4.00	\$ 8.00	0.27
50	Type "11AA" Reflective Buttons	EA	10	\$ 15.00	\$ 150.00	\$ 25.00	\$ 250.00	1.67	\$ 4.00	\$ 40.00	0.27
TOTAL AMOUNT BID					\$ 1,257,364.00		1,094,573.00	0.87		1,122,368.50	0.89

NUMBER OF CONSTRUCTION DAYS:

180 CONSECUTIVE CALENDAR DAYS

250 CONSECUTIVE CALENDAR DAYS

210 CONSECUTIVE CALENDAR DAYS

BURGESS & NIPLE
Engineers ■ Planners



STARNES ROAD 16" WATER LINE BID TABULATION

Bids Opened
June 20, 2018
2:00 PM

				Engineer's Estimate		#9 Gomez Brothers Construction, Inc.			#10 Gra-Tex Utilities, Inc.		
ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	UNIT PRICE	COST	UNIT PRICE	AMOUNT	Ratio to Engineer	UNIT PRICE	AMOUNT	Ratio to Engineer
1	Prepare and Restore Right-of-Way	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 6,000.00	\$ 6,000.00	0.12	\$ 30,000.00	\$ 30,000.00	0.60
2	Remove Existing 16" Dia. Water Line	LF	126	\$ 50.00	\$ 6,300.00	\$ 35.00	\$ 4,410.00	0.70	\$ 25.00	\$ 3,150.00	0.50
3	Remove Existing 12" Dia. Water Line	LF	20	\$ 10.00	\$ 200.00	\$ 25.00	\$ 500.00	2.50	\$ 25.00	\$ 500.00	2.50
4	Remove Existing 8 1/2" Dia. Water Line	LF	150	\$ 10.00	\$ 1,500.00	\$ 20.00	\$ 3,000.00	2.00	\$ 25.00	\$ 3,750.00	2.50
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ 120.00	\$ 394,080.00	\$ 130.00	\$ 426,920.00	1.08	\$ 75.00	\$ 246,300.00	0.63
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	18	\$ 90.00	\$ 1,620.00	\$ 120.00	\$ 2,160.00	1.33	\$ 70.00	\$ 1,260.00	0.78
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ 72.00	\$ 29,520.00	\$ 50.00	\$ 20,500.00	0.69	\$ 60.00	\$ 24,600.00	0.83
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ 70.00	\$ 2,310.00	\$ 50.00	\$ 1,650.00	0.71	\$ 60.00	\$ 1,980.00	0.86
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ 1,000.00	\$ 50,000.00	\$ 500.00	\$ 25,000.00	0.50	\$ 425.00	\$ 21,250.00	0.43
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ 225.00	\$ 13,500.00	\$ 400.00	\$ 24,000.00	1.78	\$ 120.00	\$ 7,200.00	0.53
11	16" Gate Valve and Box	EA	6	\$ 8,800.00	\$ 52,800.00	\$ 10,000.00	\$ 60,000.00	1.14	\$ 6,350.00	\$ 38,100.00	0.72
12	12" Gate Valve and Box	EA	2	\$ 2,900.00	\$ 5,800.00	\$ 2,500.00	\$ 5,000.00	0.86	\$ 2,300.00	\$ 4,600.00	0.79
13	8" Gate Valve and Box	EA	9	\$ 1,600.00	\$ 14,400.00	\$ 1,300.00	\$ 11,700.00	0.81	\$ 1,300.00	\$ 11,700.00	0.81
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftg, 6" Pipe	EA	6	\$ 6,500.00	\$ 39,000.00	\$ 5,000.00	\$ 30,000.00	0.77	\$ 3,450.00	\$ 20,700.00	0.53
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ 5,000.00	\$ 25,000.00	\$ 4,500.00	\$ 22,500.00	0.90	\$ 5,600.00	\$ 28,000.00	1.12
16	Ductile Iron Fittings	TONS	7.5	\$ 7,000.00	\$ 52,500.00	\$ 4,000.00	\$ 30,000.00	0.57	\$ 5,050.00	\$ 37,875.00	0.72
17	2" Combination Air Release Valve & Vault with Offset	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 9,000.00	\$ 9,000.00	2.57	\$ 5,900.00	\$ 5,900.00	1.69
18	Temporary 2" Blow Off /Sample point	EA	2	\$ 1,500.00	\$ 3,000.00	\$ 2,500.00	\$ 5,000.00	1.67	\$ 3,700.00	\$ 7,400.00	2.47
19	Salvage Existing Fire Hydrant	EA	3	\$ 400.00	\$ 1,200.00	\$ 250.00	\$ 750.00	0.63	\$ 250.00	\$ 750.00	0.63
20	Abandon Existing Water Valve	EA	15	\$ 200.00	\$ 3,000.00	\$ 50.00	\$ 750.00	0.25	\$ 500.00	\$ 7,500.00	2.50
21	Connect to Existing 16" Water Line	EA	2	\$ 8,900.00	\$ 17,800.00	\$ 4,500.00	\$ 9,000.00	0.51	\$ 5,250.00	\$ 10,500.00	0.59
22	Connect to Existing 12" Water Line	EA	3	\$ 4,300.00	\$ 12,900.00	\$ 2,000.00	\$ 6,000.00	0.47	\$ 3,400.00	\$ 10,200.00	0.79
23	Connect to Existing 6/8" Water Line	EA	8	\$ 2,300.00	\$ 18,400.00	\$ 1,800.00	\$ 14,400.00	0.78	\$ 2,750.00	\$ 22,000.00	1.20
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ 400.00	\$ 6,800.00	\$ 500.00	\$ 8,500.00	1.25	\$ 1,900.00	\$ 32,300.00	4.75
25	Long Double Water Service	EA	13	\$ 1,000.00	\$ 13,000.00	\$ 1,600.00	\$ 20,800.00	1.60	\$ 2,350.00	\$ 30,550.00	2.35
26	Short Double Water Service	EA	25	\$ 750.00	\$ 18,750.00	\$ 1,100.00	\$ 27,500.00	1.47	\$ 1,850.00	\$ 46,250.00	2.47
27	Short Single Water Service	EA	3	\$ 700.00	\$ 2,100.00	\$ 1,000.00	\$ 3,000.00	1.43	\$ 2,100.00	\$ 6,300.00	3.00
28	Water Service Transfer	EA	41	\$ 500.00	\$ 20,500.00	\$ 100.00	\$ 4,100.00	0.20	\$ 85.00	\$ 3,485.00	0.17
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ 250.00	\$ 12,500.00	\$ 1,000.00	\$ 50,000.00	4.00	\$ 110.00	\$ 5,500.00	0.44
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ 2,000.00	\$ 2,000.00	\$ 2,200.00	\$ 2,200.00	1.10	\$ 2,500.00	\$ 2,500.00	1.25
31	Remove and Replace Existing Mono Curb	LF	163	\$ 5.00	\$ 815.00	\$ 30.00	\$ 4,890.00	6.00	\$ 40.00	\$ 6,520.00	8.00
32	Remove and Replace Existing Concrete Sidewalk	SF	1,996	\$ 10.00	\$ 19,960.00	\$ 4.50	\$ 8,982.00	0.45	\$ 6.00	\$ 11,976.00	0.60
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ 10.00	\$ 4,420.00	\$ 6.50	\$ 2,873.00	0.65	\$ 7.00	\$ 3,094.00	0.70
34	Remove and Replace Existing Curb Ramps	EA	10	\$ 2,500.00	\$ 25,000.00	\$ 2,500.00	\$ 25,000.00	1.00	\$ 1,250.00	\$ 12,500.00	0.50
35	Remove and Replace Existing Concrete Pavement	LF	3,467	\$ 50.00	\$ 173,350.00	\$ 30.00	\$ 104,010.00	0.60	\$ 82.00	\$ 284,294.00	1.64
36	Temporary Pavement Replacement	LF	3,467	\$ 20.00	\$ 69,340.00	\$ 15.00	\$ 52,005.00	0.75	\$ 22.50	\$ 78,007.50	1.13
37	Solid Sodding incl. 4" Thick Topsoil	SY	432	\$ 6.00	\$ 2,592.00	\$ 8.50	\$ 3,672.00	1.42	\$ 15.00	\$ 6,480.00	2.50
38	Trench Safety	LF	3,292	\$ 1.00	\$ 3,292.00	\$ 1.00	\$ 3,292.00	1.00	\$ 2.00	\$ 6,584.00	2.00
39	Traffic Control Plan and Implementation	LS	1	\$ 20,000.00	\$ 20,000.00	\$ 9,000.00	\$ 9,000.00	0.45	\$ 25,000.00	\$ 25,000.00	1.25
40	Erosion Control Plan	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 4,000.00	\$ 4,000.00	1.60	\$ 2,500.00	\$ 2,500.00	1.00
41	Project Signs	EA	2	\$ 750.00	\$ 1,500.00	\$ 1,000.00	\$ 2,000.00	1.33	\$ 750.00	\$ 1,500.00	1.00
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	1.00	\$ 50,000.00	\$ 50,000.00	1.00
43	24" Wide White Thermoplastic Stop Bar	LF	303	\$ 10.00	\$ 3,030.00	\$ 25.00	\$ 7,575.00	2.50	\$ 17.00	\$ 5,151.00	1.70
44	12" Wide White Thermoplastic Cross Walk Bar	LF	1,213	\$ 5.00	\$ 6,065.00	\$ 12.00	\$ 14,556.00	2.40	\$ 10.00	\$ 12,130.00	2.00
45	12" Wide White Thermoplastic School Zone Bar	LF	40	\$ 5.00	\$ 200.00	\$ 20.00	\$ 800.00	4.00	\$ 10.00	\$ 400.00	2.00
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	2	\$ 300.00	\$ 600.00	\$ 600.00	\$ 1,200.00	2.00	\$ 300.00	\$ 600.00	1.00
47	4" Dia. Type "Y" Yellow Buttons	EA	32	\$ 7.50	\$ 240.00	\$ 25.00	\$ 800.00	3.33	\$ 5.00	\$ 160.00	0.67
48	4" Dia. Type "W" White Buttons	EA	40	\$ 7.50	\$ 300.00	\$ 25.00	\$ 1,000.00	3.33	\$ 5.00	\$ 200.00	0.67
49	Type "1C" or "1A" Reflective Buttons	EA	2	\$ 15.00	\$ 30.00	\$ 40.00	\$ 80.00	2.67	\$ 6.00	\$ 12.00	0.40
50	Type "11AA" Reflective Buttons	EA	10	\$ 15.00	\$ 150.00	\$ 40.00	\$ 400.00	2.67	\$ 6.00	\$ 60.00	0.40
TOTAL AMOUNT BID					\$ 1,257,364.00		1,130,475.00	0.90		1,179,268.50	0.94

NUMBER OF CONSTRUCTION DAYS:

180 CONSECUTIVE CALENDAR DAYS

145 CONSECUTIVE CALENDAR DAYS

270 CONSECUTIVE CALENDAR DAYS

BURGESS & NIPLE
Engineers ■ Planners



STARNES ROAD 16" WATER LINE BID TABULATION

Bids Opened
June 20, 2018
2:00 PM

				Engineer's Estimate		#11 ANA Site Construction, LLC.			#12 KIK Underground, LLC.		
ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	UNIT PRICE	COST	UNIT PRICE	AMOUNT	Ratio to Engineer	UNIT PRICE	AMOUNT	Ratio to Engineer
1	Prepare and Restore Right-of-Way	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,515.00	\$ 50,515.00	1.01	\$ 20,000.00	\$ 20,000.00	0.40
2	Remove Existing 16" Dia. Water Line	LF	126	\$ 50.00	\$ 6,300.00	\$ 45.00	\$ 5,670.00	0.90	\$ 16.00	\$ 2,016.00	0.32
3	Remove Existing 12" Dia. Water Line	LF	20	\$ 10.00	\$ 200.00	\$ 120.00	\$ 2,400.00	12.00	\$ 12.00	\$ 240.00	1.20
4	Remove Existing 8/6" Dia. Water Line	LF	150	\$ 10.00	\$ 1,500.00	\$ 35.00	\$ 5,250.00	3.50	\$ 10.00	\$ 1,500.00	1.00
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ 120.00	\$ 394,080.00	\$ 87.00	\$ 285,708.00	0.73	\$ 108.00	\$ 354,672.00	0.90
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	18	\$ 90.00	\$ 1,620.00	\$ 90.00	\$ 1,620.00	1.00	\$ 90.00	\$ 1,620.00	1.00
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ 72.00	\$ 29,520.00	\$ 47.00	\$ 19,270.00	0.65	\$ 75.00	\$ 30,750.00	1.04
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ 70.00	\$ 2,310.00	\$ 80.00	\$ 2,640.00	1.14	\$ 75.00	\$ 2,475.00	1.07
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ 1,000.00	\$ 50,000.00	\$ 488.00	\$ 24,400.00	0.49	\$ 120.00	\$ 6,000.00	0.12
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ 225.00	\$ 13,500.00	\$ 405.00	\$ 24,300.00	1.80	\$ 245.00	\$ 14,700.00	1.09
11	16" Gate Valve and Box	EA	6	\$ 8,800.00	\$ 52,800.00	\$ 8,150.00	\$ 48,900.00	0.93	\$ 6,350.00	\$ 38,100.00	0.72
12	12" Gate Valve and Box	EA	2	\$ 2,900.00	\$ 5,800.00	\$ 3,575.00	\$ 7,150.00	1.23	\$ 2,400.00	\$ 4,800.00	0.83
13	8" Gate Valve and Box	EA	9	\$ 1,600.00	\$ 14,400.00	\$ 2,320.00	\$ 20,880.00	1.45	\$ 1,300.00	\$ 11,700.00	0.81
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftg, 6" Pipe	EA	6	\$ 6,500.00	\$ 39,000.00	\$ 7,010.00	\$ 42,060.00	1.08	\$ 6,500.00	\$ 39,000.00	1.00
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ 5,000.00	\$ 25,000.00	\$ 5,295.00	\$ 26,475.00	1.06	\$ 4,200.00	\$ 21,000.00	0.84
16	Ductile Iron Fittings	TONS	7.5	\$ 7,000.00	\$ 52,500.00	\$ 5,270.00	\$ 39,525.00	0.75	\$ 5,600.00	\$ 42,000.00	0.80
17	2" Combination Air Release Valve & Vault with Offset	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 5,930.00	\$ 5,930.00	1.69	\$ 4,550.00	\$ 4,550.00	1.30
18	Temporary 2" Blow Off /Sample point	EA	2	\$ 1,500.00	\$ 3,000.00	\$ 3,430.00	\$ 6,860.00	2.29	\$ 1,735.00	\$ 3,470.00	1.16
19	Salvage Existing Fire Hydrant	EA	3	\$ 400.00	\$ 1,200.00	\$ 885.00	\$ 2,655.00	2.21	\$ 300.00	\$ 900.00	0.75
20	Abandon Existing Water Valve	EA	15	\$ 200.00	\$ 3,000.00	\$ 530.00	\$ 7,950.00	2.65	\$ 150.00	\$ 2,250.00	0.75
21	Connect to Existing 16" Water Line	EA	2	\$ 8,900.00	\$ 17,800.00	\$ 4,945.00	\$ 9,890.00	0.56	\$ 11,500.00	\$ 23,000.00	1.29
22	Connect to Existing 12" Water Line	EA	3	\$ 4,300.00	\$ 12,900.00	\$ 3,200.00	\$ 9,600.00	0.74	\$ 3,000.00	\$ 9,000.00	0.70
23	Connect to Existing 6/8" Water Line	EA	8	\$ 2,300.00	\$ 18,400.00	\$ 1,655.00	\$ 13,240.00	0.72	\$ 2,000.00	\$ 16,000.00	0.87
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ 400.00	\$ 6,800.00	\$ 1,065.00	\$ 18,105.00	2.66	\$ 400.00	\$ 6,800.00	1.00
25	Long Double Water Service	EA	13	\$ 1,000.00	\$ 13,000.00	\$ 3,140.00	\$ 40,820.00	3.14	\$ 1,300.00	\$ 16,900.00	1.30
26	Short Double Water Service	EA	25	\$ 750.00	\$ 18,750.00	\$ 1,945.00	\$ 48,625.00	2.59	\$ 1,232.00	\$ 30,800.00	1.64
27	Short Single Water Service	EA	3	\$ 700.00	\$ 2,100.00	\$ 1,720.00	\$ 5,160.00	2.46	\$ 915.00	\$ 2,745.00	1.31
28	Water Service Transfer	EA	41	\$ 500.00	\$ 20,500.00	\$ 340.00	\$ 13,940.00	0.68	\$ 500.00	\$ 20,500.00	1.00
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ 250.00	\$ 12,500.00	\$ 1,105.00	\$ 55,250.00	4.42	\$ 625.00	\$ 31,250.00	2.50
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ 2,000.00	\$ 2,000.00	\$ 6,250.00	\$ 6,250.00	3.13	\$ 900.00	\$ 900.00	0.45
31	Remove and Replace Existing Mono Curb	LF	163	\$ 5.00	\$ 815.00	\$ 51.00	\$ 8,313.00	10.20	\$ 15.00	\$ 2,445.00	3.00
32	Remove and Replace Existing Concrete Sidewalk	SF	1,996	\$ 10.00	\$ 19,960.00	\$ 9.00	\$ 17,964.00	0.90	\$ 6.55	\$ 13,073.80	0.66
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ 10.00	\$ 4,420.00	\$ 16.00	\$ 7,072.00	1.60	\$ 8.00	\$ 3,536.00	0.80
34	Remove and Replace Existing Curb Ramps	EA	10	\$ 2,500.00	\$ 25,000.00	\$ 1,310.00	\$ 13,100.00	0.52	\$ 2,000.00	\$ 20,000.00	0.80
35	Remove and Replace Existing Concrete Pavement	LF	3,467	\$ 50.00	\$ 173,350.00	\$ 36.75	\$ 127,412.25	0.74	\$ 68.00	\$ 235,756.00	1.36
36	Temporary Pavement Replacement	LF	3,467	\$ 20.00	\$ 69,340.00	\$ 14.00	\$ 48,538.00	0.70	\$ 20.00	\$ 69,340.00	1.00
37	Solid Sodding incl. 4" Thick Topsoil	SY	432	\$ 6.00	\$ 2,592.00	\$ 15.00	\$ 6,480.00	2.50	\$ 12.00	\$ 5,184.00	2.00
38	Trench Safety	LF	3,292	\$ 1.00	\$ 3,292.00	\$ 2.00	\$ 6,584.00	2.00	\$ 1.00	\$ 3,292.00	1.00
39	Traffic Control Plan and Implementation	LS	1	\$ 20,000.00	\$ 20,000.00	\$ 19,000.00	\$ 19,000.00	0.95	\$ 6,200.00	\$ 6,200.00	0.31
40	Erosion Control Plan	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 14,000.00	\$ 14,000.00	5.60	\$ 1,200.00	\$ 1,200.00	0.48
41	Project Signs	EA	2	\$ 750.00	\$ 1,500.00	\$ 1,400.00	\$ 2,800.00	1.87	\$ 650.00	\$ 1,300.00	0.87
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	1.00	\$ 50,000.00	\$ 50,000.00	1.00
43	24" Wide White Thermoplastic Stop Bar	LF	303	\$ 10.00	\$ 3,030.00	\$ 11.00	\$ 3,333.00	1.10	\$ 8.00	\$ 2,424.00	0.80
44	12" Wide White Thermoplastic Cross Walk Bar	LF	1,213	\$ 5.00	\$ 6,065.00	\$ 6.00	\$ 7,278.00	1.20	\$ 8.00	\$ 9,704.00	1.60
45	12" Wide White Thermoplastic School Zone Bar	LF	40	\$ 5.00	\$ 200.00	\$ 6.00	\$ 240.00	1.20	\$ 8.00	\$ 320.00	1.60
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	2	\$ 300.00	\$ 600.00	\$ 275.00	\$ 550.00	0.92	\$ 250.00	\$ 500.00	0.83
47	4" Dia. Type "Y" Yellow Buttons	EA	32	\$ 7.50	\$ 240.00	\$ 6.00	\$ 192.00	0.80	\$ 4.50	\$ 144.00	0.60
48	4" Dia. Type "W" White Buttons	EA	40	\$ 7.50	\$ 300.00	\$ 6.00	\$ 240.00	0.80	\$ 4.50	\$ 180.00	0.60
49	Type "1C" or "1A" Reflective Buttons	EA	2	\$ 15.00	\$ 30.00	\$ 6.00	\$ 12.00	0.40	\$ 4.50	\$ 9.00	0.30
50	Type "11AA" Reflective Buttons	EA	10	\$ 15.00	\$ 150.00	\$ 6.00	\$ 60.00	0.40	\$ 4.50	\$ 45.00	0.30
TOTAL AMOUNT BID					\$ 1,257,364.00		1,184,206.25	0.94		1,184,290.80	0.94

NUMBER OF CONSTRUCTION DAYS:

180 CONSECUTIVE CALENDAR DAYS

210 CALENDAR DAYS

150 CONSECUTIVE CALENDAR DAYS

BURGESS & NIPL
Engineers ■ Planners



STARNES ROAD 16" WATER LINE BID TABULATION

Bids Opened
June 20, 2018
2:00 PM

				Engineer's Estimate		#13 SYB Construction Company, Inc.			#14 Muniz Construction, Inc.		
ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	UNIT PRICE	COST	UNIT PRICE	AMOUNT	Ratio to Engineer	UNIT PRICE	AMOUNT	Ratio to Engineer
1	Prepare and Restore Right-of-Way	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 6,576.00	\$ 6,576.00	0.13	\$ 7,000.00	\$ 7,000.00	0.14
2	Remove Existing 16" Dia. Water Line	LF	126	\$ 50.00	\$ 6,300.00	\$ 25.00	\$ 3,150.00	0.50	\$ 55.00	\$ 6,930.00	1.10
3	Remove Existing 12" Dia. Water Line	LF	20	\$ 10.00	\$ 200.00	\$ 40.00	\$ 800.00	4.00	\$ 50.00	\$ 1,000.00	5.00
4	Remove Existing 8/6" Dia. Water Line	LF	150	\$ 10.00	\$ 1,500.00	\$ 35.00	\$ 5,250.00	3.50	\$ 65.00	\$ 9,750.00	6.50
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ 120.00	\$ 394,080.00	\$ 147.00	\$ 482,748.00	1.23	\$ 143.00	\$ 469,612.00	1.19
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	18	\$ 90.00	\$ 1,620.00	\$ 106.00	\$ 1,908.00	1.18	\$ 90.00	\$ 1,620.00	1.00
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ 72.00	\$ 29,520.00	\$ 90.00	\$ 36,900.00	1.25	\$ 65.00	\$ 26,650.00	0.90
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ 70.00	\$ 2,310.00	\$ 88.00	\$ 2,904.00	1.26	\$ 55.00	\$ 1,815.00	0.79
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ 1,000.00	\$ 50,000.00	\$ 246.00	\$ 12,300.00	0.25	\$ 620.00	\$ 31,000.00	0.62
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ 225.00	\$ 13,500.00	\$ 351.00	\$ 21,060.00	1.56	\$ 400.00	\$ 24,000.00	1.78
11	16" Gate Valve and Box	EA	6	\$ 8,800.00	\$ 52,800.00	\$ 6,750.00	\$ 40,500.00	0.77	\$ 8,500.00	\$ 51,000.00	0.97
12	12" Gate Valve and Box	EA	2	\$ 2,900.00	\$ 5,800.00	\$ 2,350.00	\$ 4,700.00	0.81	\$ 3,100.00	\$ 6,200.00	1.07
13	8" Gate Valve and Box	EA	9	\$ 1,600.00	\$ 14,400.00	\$ 1,325.00	\$ 11,925.00	0.83	\$ 1,700.00	\$ 15,300.00	1.06
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftg, 6" Pipe	EA	6	\$ 6,500.00	\$ 39,000.00	\$ 6,150.00	\$ 36,900.00	0.95	\$ 15,000.00	\$ 90,000.00	2.31
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ 5,000.00	\$ 25,000.00	\$ 4,100.00	\$ 20,500.00	0.82	\$ 6,000.00	\$ 30,000.00	1.20
16	Ductile Iron Fittings	TONS	7.5	\$ 7,000.00	\$ 52,500.00	\$ 5,250.00	\$ 39,375.00	0.75	\$ 5,000.00	\$ 37,500.00	0.71
17	2" Combination Air Release Valve & Vault with Offset	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 6,500.00	\$ 6,500.00	1.86	\$ 7,000.00	\$ 7,000.00	2.00
18	Temporary 2" Blow Off /Sample point	EA	2	\$ 1,500.00	\$ 3,000.00	\$ 1,950.00	\$ 3,900.00	1.30	\$ 6,500.00	\$ 13,000.00	4.33
19	Salvage Existing Fire Hydrant	EA	3	\$ 400.00	\$ 1,200.00	\$ 300.00	\$ 900.00	0.75	\$ 650.00	\$ 1,950.00	1.63
20	Abandon Existing Water Valve	EA	15	\$ 200.00	\$ 3,000.00	\$ 200.00	\$ 3,000.00	1.00	\$ 600.00	\$ 9,000.00	3.00
21	Connect to Existing 16" Water Line	EA	2	\$ 8,900.00	\$ 17,800.00	\$ 8,625.00	\$ 17,250.00	0.97	\$ 2,000.00	\$ 4,000.00	0.22
22	Connect to Existing 12" Water Line	EA	3	\$ 4,300.00	\$ 12,900.00	\$ 2,500.00	\$ 7,500.00	0.58	\$ 1,800.00	\$ 5,400.00	0.42
23	Connect to Existing 6/8" Water Line	EA	8	\$ 2,300.00	\$ 18,400.00	\$ 1,800.00	\$ 14,400.00	0.78	\$ 1,820.00	\$ 14,560.00	0.79
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ 400.00	\$ 6,800.00	\$ 900.00	\$ 15,300.00	2.25	\$ 1,000.00	\$ 17,000.00	2.50
25	Long Double Water Service	EA	13	\$ 1,000.00	\$ 13,000.00	\$ 1,425.00	\$ 18,525.00	1.43	\$ 1,800.00	\$ 23,400.00	1.80
26	Short Double Water Service	EA	25	\$ 750.00	\$ 18,750.00	\$ 1,200.00	\$ 30,000.00	1.60	\$ 1,500.00	\$ 37,500.00	2.00
27	Short Single Water Service	EA	3	\$ 700.00	\$ 2,100.00	\$ 800.00	\$ 2,400.00	1.14	\$ 1,050.00	\$ 3,150.00	1.50
28	Water Service Transfer	EA	41	\$ 500.00	\$ 20,500.00	\$ 100.00	\$ 4,100.00	0.20	\$ 180.00	\$ 7,380.00	0.36
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ 250.00	\$ 12,500.00	\$ 150.00	\$ 7,500.00	0.60	\$ 1,300.00	\$ 65,000.00	5.20
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ 2,000.00	\$ 2,000.00	\$ 4,100.00	\$ 4,100.00	2.05	\$ 1,500.00	\$ 1,500.00	0.75
31	Remove and Replace Existing Mono Curb	LF	163	\$ 5.00	\$ 815.00	\$ 15.00	\$ 2,445.00	3.00	\$ 21.00	\$ 3,423.00	4.20
32	Remove and Replace Existing Concrete Sidewalk	SF	1,996	\$ 10.00	\$ 19,960.00	\$ 7.50	\$ 14,970.00	0.75	\$ 6.00	\$ 11,976.00	0.60
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ 10.00	\$ 4,420.00	\$ 9.45	\$ 4,176.90	0.95	\$ 9.00	\$ 3,978.00	0.90
34	Remove and Replace Existing Curb Ramps	EA	10	\$ 2,500.00	\$ 25,000.00	\$ 2,700.00	\$ 27,000.00	1.08	\$ 1,600.00	\$ 16,000.00	0.64
35	Remove and Replace Existing Concrete Pavement	LF	3,467	\$ 50.00	\$ 173,350.00	\$ 100.00	\$ 346,700.00	2.00	\$ 66.00	\$ 228,822.00	1.32
36	Temporary Pavement Replacement	LF	3,467	\$ 20.00	\$ 69,340.00	\$ 11.25	\$ 39,003.75	0.56	\$ 6.00	\$ 20,802.00	0.30
37	Solid Sodding incl. 4" Thick Topsoil	SY	432	\$ 6.00	\$ 2,592.00	\$ 7.00	\$ 3,024.00	1.17	\$ 20.00	\$ 8,640.00	3.33
38	Trench Safety	LF	3,292	\$ 1.00	\$ 3,292.00	\$ 1.00	\$ 3,292.00	1.00	\$ 2.00	\$ 6,584.00	2.00
39	Traffic Control Plan and Implementation	LS	1	\$ 20,000.00	\$ 20,000.00	\$ 23,000.00	\$ 23,000.00	1.15	\$ 10,000.00	\$ 10,000.00	0.50
40	Erosion Control Plan	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 4,000.00	\$ 4,000.00	1.60	\$ 8,000.00	\$ 8,000.00	3.20
41	Project Signs	EA	2	\$ 750.00	\$ 1,500.00	\$ 500.00	\$ 1,000.00	0.67	\$ 900.00	\$ 1,800.00	1.20
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	1.00	\$ 50,000.00	\$ 50,000.00	1.00
43	24" Wide White Thermoplastic Stop Bar	LF	303	\$ 10.00	\$ 3,030.00	\$ 9.50	\$ 2,878.50	0.95	\$ 25.00	\$ 7,575.00	2.50
44	12" Wide White Thermoplastic Cross Walk Bar	LF	1,213	\$ 5.00	\$ 6,065.00	\$ 5.00	\$ 6,065.00	1.00	\$ 20.00	\$ 24,260.00	4.00
45	12" Wide White Thermoplastic School Zone Bar	LF	40	\$ 5.00	\$ 200.00	\$ 6.00	\$ 240.00	1.20	\$ 18.00	\$ 720.00	3.60
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	2	\$ 300.00	\$ 600.00	\$ 450.00	\$ 900.00	1.50	\$ 20.00	\$ 40.00	0.07
47	4" Dia. Type "Y" Yellow Buttons	EA	32	\$ 7.50	\$ 240.00	\$ 6.00	\$ 192.00	0.80	\$ 50.00	\$ 1,600.00	6.67
48	4" Dia. Type "W" White Buttons	EA	40	\$ 7.50	\$ 300.00	\$ 6.00	\$ 240.00	0.80	\$ 50.00	\$ 2,000.00	6.67
49	Type "1C" or "1A" Reflective Buttons	EA	2	\$ 15.00	\$ 30.00	\$ 7.00	\$ 14.00	0.47	\$ 50.00	\$ 100.00	3.33
50	Type "11AA" Reflective Buttons	EA	10	\$ 15.00	\$ 150.00	\$ 7.00	\$ 70.00	0.47	\$ 50.00	\$ 500.00	3.33
TOTAL AMOUNT BID					\$ 1,257,364.00		1,392,082.15	1.11		1,426,037.00	1.13

NUMBER OF CONSTRUCTION DAYS:

180 CONSECUTIVE CALENDAR DAYS

210 CONSECUTIVE CALENDAR DAYS

200 CONSECUTIVE CALENDAR DAYS

BURGESS & NIPL
Engineers ■ Planners



STARNES ROAD 16" WATER LINE BID TABULATION

Bids Opened
June 20, 2018
2:00 PM

				Engineer's Estimate		#15 Mountain Cascade			#16 R & D Burns Brothers, Inc.		
ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	UNIT PRICE	COST	UNIT PRICE	AMOUNT	Ratio to Engineer	UNIT PRICE	AMOUNT	Ratio to Engineer
1	Prepare and Restore Right-of-Way	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 60,000.00	\$ 60,000.00	1.20	\$ 70,000.00	\$ 70,000.00	1.40
2	Remove Existing 16" Dia. Water Line	LF	126	\$ 50.00	\$ 6,300.00	\$ 20.00	\$ 2,520.00	0.40	\$ 75.00	\$ 9,450.00	1.50
3	Remove Existing 12" Dia. Water Line	LF	20	\$ 10.00	\$ 200.00	\$ 16.00	\$ 320.00	1.60	\$ 25.00	\$ 500.00	2.50
4	Remove Existing 8/6" Dia. Water Line	LF	150	\$ 10.00	\$ 1,500.00	\$ 12.00	\$ 1,800.00	1.20	\$ 25.00	\$ 3,750.00	2.50
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ 120.00	\$ 394,080.00	\$ 115.00	\$ 377,660.00	0.96	\$ 105.00	\$ 344,820.00	0.88
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	18	\$ 90.00	\$ 1,620.00	\$ 100.00	\$ 1,800.00	1.11	\$ 75.00	\$ 1,350.00	0.83
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ 72.00	\$ 29,520.00	\$ 80.00	\$ 32,800.00	1.11	\$ 50.00	\$ 20,500.00	0.69
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ 70.00	\$ 2,310.00	\$ 60.00	\$ 1,980.00	0.86	\$ 40.00	\$ 1,320.00	0.57
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ 1,000.00	\$ 50,000.00	\$ 750.00	\$ 37,500.00	0.75	\$ 450.00	\$ 22,500.00	0.45
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ 225.00	\$ 13,500.00	\$ 90.00	\$ 5,400.00	0.40	\$ 125.00	\$ 7,500.00	0.56
11	16" Gate Valve and Box	EA	6	\$ 8,800.00	\$ 52,800.00	\$ 8,760.00	\$ 52,560.00	1.00	\$ 8,500.00	\$ 51,000.00	0.97
12	12" Gate Valve and Box	EA	2	\$ 2,900.00	\$ 5,800.00	\$ 3,900.00	\$ 7,800.00	1.34	\$ 2,500.00	\$ 5,000.00	0.86
13	8" Gate Valve and Box	EA	9	\$ 1,600.00	\$ 14,400.00	\$ 2,650.00	\$ 23,850.00	1.66	\$ 1,500.00	\$ 13,500.00	0.94
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftg, 6" Pipe	EA	6	\$ 6,500.00	\$ 39,000.00	\$ 8,000.00	\$ 48,000.00	1.23	\$ 9,000.00	\$ 54,000.00	1.38
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ 5,000.00	\$ 25,000.00	\$ 5,000.00	\$ 25,000.00	1.00	\$ 7,250.00	\$ 36,250.00	1.45
16	Ductile Iron Fittings	TONS	7.5	\$ 7,000.00	\$ 52,500.00	\$ 7,000.00	\$ 52,500.00	1.00	\$ 7,500.00	\$ 56,250.00	1.07
17	2" Combination Air Release Valve & Vault with Offset	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 4,700.00	\$ 4,700.00	1.34	\$ 8,500.00	\$ 8,500.00	2.43
18	Temporary 2" Blow Off /Sample point	EA	2	\$ 1,500.00	\$ 3,000.00	\$ 2,800.00	\$ 5,600.00	1.87	\$ 5,000.00	\$ 10,000.00	3.33
19	Salvage Existing Fire Hydrant	EA	3	\$ 400.00	\$ 1,200.00	\$ 400.00	\$ 1,200.00	1.00	\$ 500.00	\$ 1,500.00	1.25
20	Abandon Existing Water Valve	EA	15	\$ 200.00	\$ 3,000.00	\$ 350.00	\$ 5,250.00	1.75	\$ 250.00	\$ 3,750.00	1.25
21	Connect to Existing 16" Water Line	EA	2	\$ 8,900.00	\$ 17,800.00	\$ 7,000.00	\$ 14,000.00	0.79	\$ 8,500.00	\$ 17,000.00	0.96
22	Connect to Existing 12" Water Line	EA	3	\$ 4,300.00	\$ 12,900.00	\$ 5,500.00	\$ 16,500.00	1.28	\$ 5,000.00	\$ 15,000.00	1.16
23	Connect to Existing 6/8" Water Line	EA	8	\$ 2,300.00	\$ 18,400.00	\$ 4,200.00	\$ 33,600.00	1.83	\$ 2,500.00	\$ 20,000.00	1.09
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ 400.00	\$ 6,800.00	\$ 1,400.00	\$ 23,800.00	3.50	\$ 500.00	\$ 8,500.00	1.25
25	Long Double Water Service	EA	13	\$ 1,000.00	\$ 13,000.00	\$ 2,450.00	\$ 31,850.00	2.45	\$ 2,100.00	\$ 27,300.00	2.10
26	Short Double Water Service	EA	25	\$ 750.00	\$ 18,750.00	\$ 1,760.00	\$ 44,000.00	2.35	\$ 1,650.00	\$ 41,250.00	2.20
27	Short Single Water Service	EA	3	\$ 700.00	\$ 2,100.00	\$ 1,100.00	\$ 3,300.00	1.57	\$ 1,550.00	\$ 4,650.00	2.21
28	Water Service Transfer	EA	41	\$ 500.00	\$ 20,500.00	\$ 300.00	\$ 12,300.00	0.60	\$ 200.00	\$ 8,200.00	0.40
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ 250.00	\$ 12,500.00	\$ 930.00	\$ 46,500.00	3.72	\$ 500.00	\$ 25,000.00	2.00
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ 2,000.00	\$ 2,000.00	\$ 2,600.00	\$ 2,600.00	1.30	\$ 2,500.00	\$ 2,500.00	1.25
31	Remove and Replace Existing Mono Curb	LF	163	\$ 5.00	\$ 815.00	\$ 16.00	\$ 2,608.00	3.20	\$ 45.00	\$ 7,335.00	9.00
32	Remove and Replace Existing Concrete Sidewalk	SF	1,996	\$ 10.00	\$ 19,960.00	\$ 9.00	\$ 17,964.00	0.90	\$ 8.00	\$ 15,968.00	0.80
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ 10.00	\$ 4,420.00	\$ 15.00	\$ 6,630.00	1.50	\$ 15.00	\$ 6,630.00	1.50
34	Remove and Replace Existing Curb Ramps	EA	10	\$ 2,500.00	\$ 25,000.00	\$ 2,200.00	\$ 22,000.00	0.88	\$ 2,600.00	\$ 26,000.00	1.04
35	Remove and Replace Existing Concrete Pavement	LF	3,467	\$ 50.00	\$ 173,350.00	\$ 80.00	\$ 277,360.00	1.60	\$ 90.00	\$ 312,030.00	1.80
36	Temporary Pavement Replacement	LF	3,467	\$ 20.00	\$ 69,340.00	\$ 13.00	\$ 45,071.00	0.65	\$ 15.00	\$ 52,005.00	0.75
37	Solid Sodding incl. 4" Thick Topsoil	SY	432	\$ 6.00	\$ 2,592.00	\$ 4.00	\$ 1,728.00	0.67	\$ 15.00	\$ 6,480.00	2.50
38	Trench Safety	LF	3,292	\$ 1.00	\$ 3,292.00	\$ 1.00	\$ 3,292.00	1.00	\$ 2.00	\$ 6,584.00	2.00
39	Traffic Control Plan and Implementation	LS	1	\$ 20,000.00	\$ 20,000.00	\$ 18,000.00	\$ 18,000.00	0.90	\$ 25,000.00	\$ 25,000.00	1.25
40	Erosion Control Plan	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 2,400.00	\$ 2,400.00	0.96	\$ 15,000.00	\$ 15,000.00	6.00
41	Project Signs	EA	2	\$ 750.00	\$ 1,500.00	\$ 900.00	\$ 1,800.00	1.20	\$ 1,000.00	\$ 2,000.00	1.33
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	1.00	\$ 50,000.00	\$ 50,000.00	1.00
43	24" Wide White Thermoplastic Stop Bar	LF	303	\$ 10.00	\$ 3,030.00	\$ 9.00	\$ 2,727.00	0.90	\$ 15.00	\$ 4,545.00	1.50
44	12" Wide White Thermoplastic Cross Walk Bar	LF	1,213	\$ 5.00	\$ 6,065.00	\$ 4.00	\$ 4,852.00	0.80	\$ 10.00	\$ 12,130.00	2.00
45	12" Wide White Thermoplastic School Zone Bar	LF	40	\$ 5.00	\$ 200.00	\$ 4.00	\$ 160.00	0.80	\$ 15.00	\$ 600.00	3.00
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	2	\$ 300.00	\$ 600.00	\$ 225.00	\$ 450.00	0.75	\$ 1,000.00	\$ 2,000.00	3.33
47	4" Dia. Type "Y" Yellow Buttons	EA	32	\$ 7.50	\$ 240.00	\$ 5.00	\$ 160.00	0.67	\$ 15.00	\$ 480.00	2.00
48	4" Dia. Type "W" White Buttons	EA	40	\$ 7.50	\$ 300.00	\$ 5.00	\$ 200.00	0.67	\$ 15.00	\$ 600.00	2.00
49	Type "1C" or "1A" Reflective Buttons	EA	2	\$ 15.00	\$ 30.00	\$ 5.00	\$ 10.00	0.33	\$ 15.00	\$ 30.00	1.00
50	Type "11AA" Reflective Buttons	EA	10	\$ 15.00	\$ 150.00	\$ 5.00	\$ 50.00	0.33	\$ 15.00	\$ 150.00	1.00
TOTAL AMOUNT BID					\$ 1,257,364.00		1,434,152.00	1.14		1,436,407.00	1.14

NUMBER OF CONSTRUCTION DAYS:

180 CONSECUTIVE CALENDAR DAYS

120 CALENDAR DAYS

300 CONSECUTIVE CALENDAR DAYS

BURGESS & NIPL
Engineers ■ Planners



STARNES ROAD 16" WATER LINE BID TABULATION

Bids Opened
June 20, 2018
2:00 PM

				Engineer's Estimate		#17 Tex Global			#18 SJ Louis Construction		
ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	UNIT PRICE	COST	UNIT PRICE	AMOUNT	Ratio to Engineer	UNIT PRICE	AMOUNT	Ratio to Engineer
1	Prepare and Restore Right-of-Way	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 100,000.00	\$ 100,000.00	2.00	\$ 50,000.00	\$ 50,000.00	1.00
2	Remove Existing 16" Dia. Water Line	LF	126	\$ 50.00	\$ 6,300.00	\$ 85.00	\$ 10,710.00	1.70	\$ 10.00	\$ 1,260.00	0.20
3	Remove Existing 12" Dia. Water Line	LF	20	\$ 10.00	\$ 200.00	\$ 65.00	\$ 1,300.00	6.50	\$ 10.00	\$ 200.00	1.00
4	Remove Existing 8/6" Dia. Water Line	LF	150	\$ 10.00	\$ 1,500.00	\$ 50.00	\$ 7,500.00	5.00	\$ 10.00	\$ 1,500.00	1.00
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ 120.00	\$ 394,080.00	\$ 98.00	\$ 321,832.00	0.82	\$ 200.00	\$ 656,800.00	1.67
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	18	\$ 90.00	\$ 1,620.00	\$ 100.00	\$ 1,800.00	1.11	\$ 186.00	\$ 3,348.00	2.07
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ 72.00	\$ 29,520.00	\$ 40.13	\$ 16,453.30	0.56	\$ 177.00	\$ 72,570.00	2.46
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ 70.00	\$ 2,310.00	\$ 45.00	\$ 1,485.00	0.64	\$ 174.00	\$ 5,742.00	2.49
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ 1,000.00	\$ 50,000.00	\$ 635.00	\$ 31,750.00	0.64	\$ 701.00	\$ 35,050.00	0.70
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ 225.00	\$ 13,500.00	\$ 635.00	\$ 38,100.00	2.82	\$ 200.00	\$ 12,000.00	0.89
11	16" Gate Valve and Box	EA	6	\$ 8,800.00	\$ 52,800.00	\$ 8,250.00	\$ 49,500.00	0.94	\$ 6,900.00	\$ 41,400.00	0.78
12	12" Gate Valve and Box	EA	2	\$ 2,900.00	\$ 5,800.00	\$ 6,250.00	\$ 12,500.00	2.16	\$ 2,000.00	\$ 4,000.00	0.69
13	8" Gate Valve and Box	EA	9	\$ 1,600.00	\$ 14,400.00	\$ 1,750.00	\$ 15,750.00	1.09	\$ 1,200.00	\$ 10,800.00	0.75
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftg, 6" Pipe	EA	6	\$ 6,500.00	\$ 39,000.00	\$ 7,500.00	\$ 45,000.00	1.15	\$ 1,700.00	\$ 10,200.00	0.26
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ 5,000.00	\$ 25,000.00	\$ 4,565.00	\$ 22,825.00	0.91	\$ 4,700.00	\$ 23,500.00	0.94
16	Ductile Iron Fittings	TONS	7.5	\$ 7,000.00	\$ 52,500.00	\$ 4,634.53	\$ 34,758.98	0.66	\$ 1.00	\$ 7.50	0.00
17	2" Combination Air Release Valve & Vault with Offset	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 7,817.61	\$ 7,817.61	2.23	\$ 7,000.00	\$ 7,000.00	2.00
18	Temporary 2" Blow Off /Sample point	EA	2	\$ 1,500.00	\$ 3,000.00	\$ 2,785.00	\$ 5,570.00	1.86	\$ 3,000.00	\$ 6,000.00	2.00
19	Salvage Existing Fire Hydrant	EA	3	\$ 400.00	\$ 1,200.00	\$ 1,250.00	\$ 3,750.00	3.13	\$ 100.00	\$ 300.00	0.25
20	Abandon Existing Water Valve	EA	15	\$ 200.00	\$ 3,000.00	\$ 600.00	\$ 9,000.00	3.00	\$ 100.00	\$ 1,500.00	0.50
21	Connect to Existing 16" Water Line	EA	2	\$ 8,900.00	\$ 17,800.00	\$ 2,803.00	\$ 5,606.00	0.31	\$ 2,900.00	\$ 5,800.00	0.33
22	Connect to Existing 12" Water Line	EA	3	\$ 4,300.00	\$ 12,900.00	\$ 1,404.00	\$ 4,212.00	0.33	\$ 1,300.00	\$ 3,900.00	0.30
23	Connect to Existing 6/8" Water Line	EA	8	\$ 2,300.00	\$ 18,400.00	\$ 750.00	\$ 6,000.00	0.33	\$ 900.00	\$ 7,200.00	0.39
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ 400.00	\$ 6,800.00	\$ 650.00	\$ 11,050.00	1.63	\$ 200.00	\$ 3,400.00	0.50
25	Long Double Water Service	EA	13	\$ 1,000.00	\$ 13,000.00	\$ 3,850.00	\$ 50,050.00	3.85	\$ 2,500.00	\$ 32,500.00	2.50
26	Short Double Water Service	EA	25	\$ 750.00	\$ 18,750.00	\$ 3,325.00	\$ 83,125.00	4.43	\$ 2,200.00	\$ 55,000.00	2.93
27	Short Single Water Service	EA	3	\$ 700.00	\$ 2,100.00	\$ 3,250.00	\$ 9,750.00	4.64	\$ 1,500.00	\$ 4,500.00	2.14
28	Water Service Transfer	EA	41	\$ 500.00	\$ 20,500.00	\$ 900.00	\$ 36,900.00	1.80	\$ 520.00	\$ 21,320.00	1.04
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ 250.00	\$ 12,500.00	\$ 400.00	\$ 20,000.00	1.60	\$ 500.00	\$ 25,000.00	2.00
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ 2,000.00	\$ 2,000.00	\$ 3,250.00	\$ 3,250.00	1.63	\$ 800.00	\$ 800.00	0.40
31	Remove and Replace Existing Mono Curb	LF	163	\$ 5.00	\$ 815.00	\$ 18.50	\$ 3,015.50	3.70	\$ 30.00	\$ 4,890.00	6.00
32	Remove and Replace Existing Concrete Sidewalk	SF	1,996	\$ 10.00	\$ 19,960.00	\$ 9.00	\$ 17,964.00	0.90	\$ 6.80	\$ 13,572.80	0.68
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ 10.00	\$ 4,420.00	\$ 12.00	\$ 5,304.00	1.20	\$ 9.00	\$ 3,978.00	0.90
34	Remove and Replace Existing Curb Ramps	EA	10	\$ 2,500.00	\$ 25,000.00	\$ 2,000.00	\$ 20,000.00	0.80	\$ 1,800.00	\$ 18,000.00	0.72
35	Remove and Replace Existing Concrete Pavement	LF	3,467	\$ 50.00	\$ 173,350.00	\$ 48.50	\$ 168,149.50	0.97	\$ 60.00	\$ 208,020.00	1.20
36	Temporary Pavement Replacement	LF	3,467	\$ 20.00	\$ 69,340.00	\$ 38.90	\$ 134,866.30	1.95	\$ 5.00	\$ 17,335.00	0.25
37	Solid Sodding incl. 4" Thick Topsoil	SY	432	\$ 6.00	\$ 2,592.00	\$ 38.00	\$ 16,416.00	6.33	\$ 9.00	\$ 3,888.00	1.50
38	Trench Safety	LF	3,292	\$ 1.00	\$ 3,292.00	\$ 0.90	\$ 2,962.80	0.90	\$ 0.01	\$ 32.92	0.01
39	Traffic Control Plan and Implementation	LS	1	\$ 20,000.00	\$ 20,000.00	\$ 17,500.00	\$ 17,500.00	0.88	\$ 3,000.00	\$ 3,000.00	0.15
40	Erosion Control Plan	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 5,500.00	\$ 5,500.00	2.20	\$ 5,000.00	\$ 5,000.00	2.00
41	Project Signs	EA	2	\$ 750.00	\$ 1,500.00	\$ 1,000.00	\$ 2,000.00	1.33	\$ 500.00	\$ 1,000.00	0.67
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	1.00	\$ 50,000.00	\$ 50,000.00	1.00
43	24" Wide White Thermoplastic Stop Bar	LF	303	\$ 10.00	\$ 3,030.00	\$ 18.00	\$ 5,454.00	1.80	\$ 8.00	\$ 2,424.00	0.80
44	12" Wide White Thermoplastic Cross Walk Bar	LF	1,213	\$ 5.00	\$ 6,065.00	\$ 14.00	\$ 16,982.00	2.80	\$ 4.00	\$ 4,852.00	0.80
45	12" Wide White Thermoplastic School Zone Bar	LF	40	\$ 5.00	\$ 200.00	\$ 14.00	\$ 560.00	2.80	\$ 4.00	\$ 160.00	0.80
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	2	\$ 300.00	\$ 600.00	\$ 600.00	\$ 1,200.00	2.00	\$ 175.00	\$ 350.00	0.58
47	4" Dia. Type "Y" Yellow Buttons	EA	32	\$ 7.50	\$ 240.00	\$ 32.00	\$ 1,024.00	4.27	\$ 3.75	\$ 120.00	0.50
48	4" Dia. Type "W" White Buttons	EA	40	\$ 7.50	\$ 300.00	\$ 32.00	\$ 1,280.00	4.27	\$ 3.75	\$ 150.00	0.50
49	Type "1C" or "1A" Reflective Buttons	EA	2	\$ 15.00	\$ 30.00	\$ 32.00	\$ 64.00	2.13	\$ 4.00	\$ 8.00	0.27
50	Type "11AA" Reflective Buttons	EA	10	\$ 15.00	\$ 150.00	\$ 32.00	\$ 320.00	2.13	\$ 4.00	\$ 40.00	0.27
TOTAL AMOUNT BID					\$ 1,257,364.00		1,437,906.99	1.14		1,439,418.22	1.14

NUMBER OF CONSTRUCTION DAYS:

180 CONSECUTIVE CALENDAR DAYS

180 CONSECUTIVE CALENDAR DAYS

180 CONSECUTIVE CALENDAR DAYS

BURGESS & NIPLE
Engineers ■ Planners



STARNES ROAD 16" WATER LINE BID TABULATION

Bids Opened
June 20, 2018
2:00 PM

ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	Engineer's Estimate		#19 Rumsey Construction			#20 Ark Contracting Services		
				UNIT PRICE	COST	UNIT PRICE	AMOUNT	Ratio to Engineer	UNIT PRICE	AMOUNT	Ratio to Engineer
1	Prepare and Restore Right-of-Way	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 32,667.00	\$ 32,667.00	0.65	\$ 60,000.00	\$ 60,000.00	1.20
2	Remove Existing 16" Dia. Water Line	LF	126	\$ 50.00	\$ 6,300.00	\$ 28.00	\$ 3,528.00	0.56	\$ 35.00	\$ 4,410.00	0.70
3	Remove Existing 12" Dia. Water Line	LF	20	\$ 10.00	\$ 200.00	\$ 28.00	\$ 560.00	2.80	\$ 24.00	\$ 480.00	2.40
4	Remove Existing 8/6" Dia. Water Line	LF	150	\$ 10.00	\$ 1,500.00	\$ 28.00	\$ 4,200.00	2.80	\$ 18.00	\$ 2,700.00	1.80
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ 120.00	\$ 394,080.00	\$ 60.00	\$ 197,040.00	0.50	\$ 177.00	\$ 581,268.00	1.48
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	18	\$ 90.00	\$ 1,620.00	\$ 46.00	\$ 828.00	0.51	\$ 160.00	\$ 2,880.00	1.78
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ 72.00	\$ 29,520.00	\$ 37.00	\$ 15,170.00	0.51	\$ 115.00	\$ 47,150.00	1.60
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ 70.00	\$ 2,310.00	\$ 34.00	\$ 1,122.00	0.49	\$ 100.00	\$ 3,300.00	1.43
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ 1,000.00	\$ 50,000.00	\$ 464.00	\$ 23,200.00	0.46	\$ 550.00	\$ 27,500.00	0.55
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ 225.00	\$ 13,500.00	\$ 60.00	\$ 3,600.00	0.27	\$ 400.00	\$ 24,000.00	1.78
11	16" Gate Valve and Box	EA	6	\$ 8,800.00	\$ 52,800.00	\$ 6,703.00	\$ 40,218.00	0.76	\$ 12,000.00	\$ 72,000.00	1.36
12	12" Gate Valve and Box	EA	2	\$ 2,900.00	\$ 5,800.00	\$ 2,563.00	\$ 5,126.00	0.88	\$ 3,000.00	\$ 6,000.00	1.03
13	8" Gate Valve and Box	EA	9	\$ 1,600.00	\$ 14,400.00	\$ 1,580.00	\$ 14,220.00	0.99	\$ 1,500.00	\$ 13,500.00	0.94
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftg, 6" Pipe	EA	6	\$ 6,500.00	\$ 39,000.00	\$ 6,417.00	\$ 38,502.00	0.99	\$ 5,000.00	\$ 30,000.00	0.77
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ 5,000.00	\$ 25,000.00	\$ 5,037.00	\$ 25,185.00	1.01	\$ 4,000.00	\$ 20,000.00	0.80
16	Ductile Iron Fittings	TONS	7.5	\$ 7,000.00	\$ 52,500.00	\$ 3,810.00	\$ 28,575.00	0.54	\$ 5,000.00	\$ 37,500.00	0.71
17	2" Combination Air Release Valve & Vault with Offset	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 5,238.00	\$ 5,238.00	1.50	\$ 9,000.00	\$ 9,000.00	2.57
18	Temporary 2" Blow Off /Sample point	EA	2	\$ 1,500.00	\$ 3,000.00	\$ 4,138.00	\$ 8,276.00	2.76	\$ 2,500.00	\$ 5,000.00	1.67
19	Salvage Existing Fire Hydrant	EA	3	\$ 400.00	\$ 1,200.00	\$ 1,307.00	\$ 3,921.00	3.27	\$ 500.00	\$ 1,500.00	1.25
20	Abandon Existing Water Valve	EA	15	\$ 200.00	\$ 3,000.00	\$ 392.00	\$ 5,880.00	1.96	\$ 600.00	\$ 9,000.00	3.00
21	Connect to Existing 16" Water Line	EA	2	\$ 8,900.00	\$ 17,800.00	\$ 2,193.00	\$ 4,386.00	0.25	\$ 6,000.00	\$ 12,000.00	0.67
22	Connect to Existing 12" Water Line	EA	3	\$ 4,300.00	\$ 12,900.00	\$ 1,394.00	\$ 4,182.00	0.32	\$ 3,000.00	\$ 9,000.00	0.70
23	Connect to Existing 6/8" Water Line	EA	8	\$ 2,300.00	\$ 18,400.00	\$ 1,234.00	\$ 9,872.00	0.54	\$ 2,000.00	\$ 16,000.00	0.87
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ 400.00	\$ 6,800.00	\$ 1,288.00	\$ 21,896.00	3.22	\$ 1,200.00	\$ 20,400.00	3.00
25	Long Double Water Service	EA	13	\$ 1,000.00	\$ 13,000.00	\$ 1,689.00	\$ 21,957.00	1.69	\$ 1,600.00	\$ 20,800.00	1.60
26	Short Double Water Service	EA	25	\$ 750.00	\$ 18,750.00	\$ 1,583.00	\$ 39,575.00	2.11	\$ 1,200.00	\$ 30,000.00	1.60
27	Short Single Water Service	EA	3	\$ 700.00	\$ 2,100.00	\$ 1,186.00	\$ 3,558.00	1.69	\$ 1,000.00	\$ 3,000.00	1.43
28	Water Service Transfer	EA	41	\$ 500.00	\$ 20,500.00	\$ 532.00	\$ 21,812.00	1.06	\$ 300.00	\$ 12,300.00	0.60
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ 250.00	\$ 12,500.00	\$ 1,477.00	\$ 73,850.00	5.91	\$ 300.00	\$ 15,000.00	1.20
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ 2,000.00	\$ 2,000.00	\$ 4,104.00	\$ 4,104.00	2.05	\$ 1,200.00	\$ 1,200.00	0.60
31	Remove and Replace Existing Mono Curb	LF	163	\$ 5.00	\$ 815.00	\$ 46.00	\$ 7,498.00	9.20	\$ 20.00	\$ 3,260.00	4.00
32	Remove and Replace Existing Concrete Sidewalk	SF	1,996	\$ 10.00	\$ 19,960.00	\$ 26.00	\$ 51,896.00	2.60	\$ 12.00	\$ 23,952.00	1.20
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ 10.00	\$ 4,420.00	\$ 26.00	\$ 11,492.00	2.60	\$ 16.00	\$ 7,072.00	1.60
34	Remove and Replace Existing Curb Ramps	EA	10	\$ 2,500.00	\$ 25,000.00	\$ 1,562.00	\$ 15,620.00	0.62	\$ 2,400.00	\$ 24,000.00	0.96
35	Remove and Replace Existing Concrete Pavement	LF	3,467	\$ 50.00	\$ 173,350.00	\$ 106.00	\$ 367,502.00	2.12	\$ 75.00	\$ 260,025.00	1.50
36	Temporary Pavement Replacement	LF	3,467	\$ 20.00	\$ 69,340.00	\$ 65.00	\$ 225,355.00	3.25	\$ 25.00	\$ 86,675.00	1.25
37	Solid Sodding incl. 4" Thick Topsoil	SY	432	\$ 6.00	\$ 2,592.00	\$ 17.00	\$ 7,344.00	2.83	\$ 12.00	\$ 5,184.00	2.00
38	Trench Safety	LF	3,292	\$ 1.00	\$ 3,292.00	\$ 2.00	\$ 6,584.00	2.00	\$ 1.00	\$ 3,292.00	1.00
39	Traffic Control Plan and Implementation	LS	1	\$ 20,000.00	\$ 20,000.00	\$ 13,440.00	\$ 13,440.00	0.67	\$ 20,000.00	\$ 20,000.00	1.00
40	Erosion Control Plan	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 3,920.00	\$ 3,920.00	1.57	\$ 7,000.00	\$ 7,000.00	2.80
41	Project Signs	EA	2	\$ 750.00	\$ 1,500.00	\$ 800.00	\$ 1,600.00	1.07	\$ 1,000.00	\$ 2,000.00	1.33
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	1.00	\$ 50,000.00	\$ 50,000.00	1.00
43	24" Wide White Thermoplastic Stop Bar	LF	303	\$ 10.00	\$ 3,030.00	\$ 12.00	\$ 3,636.00	1.20	\$ 20.00	\$ 6,060.00	2.00
44	12" Wide White Thermoplastic Cross Walk Bar	LF	1,213	\$ 5.00	\$ 6,065.00	\$ 10.00	\$ 12,130.00	2.00	\$ 15.00	\$ 18,195.00	3.00
45	12" Wide White Thermoplastic School Zone Bar	LF	40	\$ 5.00	\$ 200.00	\$ 10.00	\$ 400.00	2.00	\$ 14.00	\$ 560.00	2.80
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	2	\$ 300.00	\$ 600.00	\$ 450.00	\$ 900.00	1.50	\$ 300.00	\$ 600.00	1.00
47	4" Dia. Type "Y" Yellow Buttons	EA	32	\$ 7.50	\$ 240.00	\$ 25.00	\$ 800.00	3.33	\$ 6.00	\$ 192.00	0.80
48	4" Dia. Type "W" White Buttons	EA	40	\$ 7.50	\$ 300.00	\$ 25.00	\$ 1,000.00	3.33	\$ 6.00	\$ 240.00	0.80
49	Type "1C" or "1A" Reflective Buttons	EA	2	\$ 15.00	\$ 30.00	\$ 55.00	\$ 110.00	3.67	\$ 6.00	\$ 12.00	0.40
50	Type "11AA" Reflective Buttons	EA	10	\$ 15.00	\$ 150.00	\$ 75.00	\$ 750.00	5.00	\$ 7.00	\$ 70.00	0.47
TOTAL AMOUNT BID					\$ 1,257,364.00		1,444,225.00	1.15		1,615,277.00	1.28

NUMBER OF CONSTRUCTION DAYS:

180 CONSECUTIVE CALENDAR DAYS

180 WORKING DAYS

210 CONSECUTIVE CALENDAR DAYS

BURGESS & NIPLE
Engineers ■ Planners



STARNES ROAD 16" WATER LINE BID TABULATION

Bids Opened
June 20, 2018
2:00 PM

ITEM NO.	DESCRIPTION OF UNIT	UNIT	BID QUANTITY	Engineer's Estimate		#21 Joe Funk Construction, Inc.			#22 Dickerson Construction Company, Inc.		
				UNIT PRICE	COST	UNIT PRICE	AMOUNT	Ratio to Engineer	UNIT PRICE	AMOUNT	Ratio to Engineer
1	Prepare and Restore Right-of-Way	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 65,000.00	\$ 65,000.00	1.30	\$ 15,000.00	\$ 15,000.00	0.30
2	Remove Existing 16" Dia. Water Line	LF	126	\$ 50.00	\$ 6,300.00	\$ 32.50	\$ 4,095.00	0.65	\$ 250.00	\$ 31,500.00	5.00
3	Remove Existing 12" Dia. Water Line	LF	20	\$ 10.00	\$ 200.00	\$ 23.40	\$ 468.00	2.34	\$ 200.00	\$ 4,000.00	20.00
4	Remove Existing 8/6" Dia. Water Line	LF	150	\$ 10.00	\$ 1,500.00	\$ 19.50	\$ 2,925.00	1.95	\$ 200.00	\$ 30,000.00	20.00
5	16" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	3,284	\$ 120.00	\$ 394,080.00	\$ 123.50	\$ 405,574.00	1.03	\$ 145.00	\$ 476,180.00	1.21
6	12" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	18	\$ 90.00	\$ 1,620.00	\$ 162.50	\$ 2,925.00	1.81	\$ 150.00	\$ 2,700.00	1.67
7	8" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	410	\$ 72.00	\$ 29,520.00	\$ 62.40	\$ 25,584.00	0.87	\$ 125.00	\$ 51,250.00	1.74
8	6" Dia. C-900-16 DR-18 PVC Water Line By Open Cut	LF	33	\$ 70.00	\$ 2,310.00	\$ 49.40	\$ 1,630.20	0.71	\$ 125.00	\$ 4,125.00	1.79
9	24" Dia. (3/8" Thick) Welded Steel Casing By Other Than Open Cut	LF	50	\$ 1,000.00	\$ 50,000.00	\$ 370.50	\$ 18,525.00	0.37	\$ 450.00	\$ 22,500.00	0.45
10	16" Dia. C-900-16 DR-18 PVC Water Line By Other Than Open Cut	LF	60	\$ 225.00	\$ 13,500.00	\$ 344.50	\$ 20,670.00	1.53	\$ 350.00	\$ 21,000.00	1.56
11	16" Gate Valve and Box	EA	6	\$ 8,800.00	\$ 52,800.00	\$ 15,600.00	\$ 93,600.00	1.77	\$ 8,150.00	\$ 48,900.00	0.93
12	12" Gate Valve and Box	EA	2	\$ 2,900.00	\$ 5,800.00	\$ 5,200.00	\$ 10,400.00	1.79	\$ 3,500.00	\$ 7,000.00	1.21
13	8" Gate Valve and Box	EA	9	\$ 1,600.00	\$ 14,400.00	\$ 2,535.00	\$ 22,815.00	1.58	\$ 2,000.00	\$ 18,000.00	1.25
14	6" By-Pass Assembly, Includes 6" GV, DIP Ftg, 6" Pipe	EA	6	\$ 6,500.00	\$ 39,000.00	\$ 6,136.00	\$ 36,816.00	0.94	\$ 7,000.00	\$ 42,000.00	1.08
15	Fire Hydrant Assembly, including 6" GV	EA	5	\$ 5,000.00	\$ 25,000.00	\$ 7,150.00	\$ 35,750.00	1.43	\$ 4,500.00	\$ 22,500.00	0.90
16	Ductile Iron Fittings	TONS	7.5	\$ 7,000.00	\$ 52,500.00	\$ 6,175.00	\$ 46,312.50	0.88	\$ 8,000.00	\$ 60,000.00	1.14
17	2" Combination Air Release Valve & Vault with Offset	LS	1	\$ 3,500.00	\$ 3,500.00	\$ 5,327.40	\$ 5,327.40	1.52	\$ 7,000.00	\$ 7,000.00	2.00
18	Temporary 2" Blow Off /Sample point	EA	2	\$ 1,500.00	\$ 3,000.00	\$ 3,607.50	\$ 7,215.00	2.41	\$ 4,000.00	\$ 8,000.00	2.67
19	Salvage Existing Fire Hydrant	EA	3	\$ 400.00	\$ 1,200.00	\$ 1,755.00	\$ 5,265.00	1.46	\$ 1,000.00	\$ 3,000.00	2.50
20	Abandon Existing Water Valve	EA	15	\$ 200.00	\$ 3,000.00	\$ 325.00	\$ 4,875.00	1.63	\$ 500.00	\$ 7,500.00	2.50
21	Connect to Existing 16" Water Line	EA	2	\$ 8,900.00	\$ 17,800.00	\$ 6,175.00	\$ 12,350.00	0.69	\$ 8,250.00	\$ 16,500.00	0.93
22	Connect to Existing 12" Water Line	EA	3	\$ 4,300.00	\$ 12,900.00	\$ 1,950.00	\$ 5,850.00	0.45	\$ 2,000.00	\$ 6,000.00	0.47
23	Connect to Existing 6/8" Water Line	EA	8	\$ 2,300.00	\$ 18,400.00	\$ 1,625.00	\$ 13,000.00	0.71	\$ 1,250.00	\$ 10,000.00	0.54
24	Cut and Plug Existing Water Line (all sizes)	EA	17	\$ 400.00	\$ 6,800.00	\$ 1,592.50	\$ 27,072.50	3.98	\$ 1,250.00	\$ 21,250.00	3.13
25	Long Double Water Service	EA	13	\$ 1,000.00	\$ 13,000.00	\$ 3,672.50	\$ 47,742.50	3.67	\$ 2,500.00	\$ 32,500.00	2.50
26	Short Double Water Service	EA	25	\$ 750.00	\$ 18,750.00	\$ 3,120.00	\$ 78,000.00	4.16	\$ 2,250.00	\$ 56,250.00	3.00
27	Short Single Water Service	EA	3	\$ 700.00	\$ 2,100.00	\$ 2,535.00	\$ 7,605.00	3.62	\$ 2,000.00	\$ 6,000.00	2.86
28	Water Service Transfer	EA	41	\$ 500.00	\$ 20,500.00	\$ 1,040.00	\$ 42,640.00	2.08	\$ 250.00	\$ 10,250.00	0.50
29	4" Dia PVC Sanitary Sewer Service Replacement (Trench Width)	EA	50	\$ 250.00	\$ 12,500.00	\$ 1,820.00	\$ 91,000.00	7.28	\$ 750.00	\$ 37,500.00	3.00
30	4" Dia PVC Sanitary Sewer Service Replacement (Full Street Width)	EA	1	\$ 2,000.00	\$ 2,000.00	\$ 5,850.00	\$ 5,850.00	2.93	\$ 7,500.00	\$ 7,500.00	3.75
31	Remove and Replace Existing Mono Curb	LF	163	\$ 5.00	\$ 815.00	\$ 26.00	\$ 4,238.00	5.20	\$ 35.00	\$ 5,705.00	7.00
32	Remove and Replace Existing Concrete Sidewalk	SF	1,996	\$ 10.00	\$ 19,960.00	\$ 9.10	\$ 18,163.60	0.91	\$ 9.00	\$ 17,964.00	0.90
33	Remove and Replace Existing Concrete Driveways	SF	442	\$ 10.00	\$ 4,420.00	\$ 9.75	\$ 4,309.50	0.98	\$ 15.00	\$ 6,630.00	1.50
34	Remove and Replace Existing Curb Ramps	EA	10	\$ 2,500.00	\$ 25,000.00	\$ 2,860.00	\$ 28,600.00	1.14	\$ 3,500.00	\$ 35,000.00	1.40
35	Remove and Replace Existing Concrete Pavement	LF	3,467	\$ 50.00	\$ 173,350.00	\$ 58.50	\$ 202,819.50	1.17	\$ 125.00	\$ 433,375.00	2.50
36	Temporary Pavement Replacement	LF	3,467	\$ 20.00	\$ 69,340.00	\$ 23.40	\$ 81,127.80	1.17	\$ 15.00	\$ 52,005.00	0.75
37	Solid Sodding incl. 4" Thick Topsoil	SY	432	\$ 6.00	\$ 2,592.00	\$ 13.00	\$ 5,616.00	2.17	\$ 10.00	\$ 4,320.00	1.67
38	Trench Safety	LF	3,292	\$ 1.00	\$ 3,292.00	\$ 5.20	\$ 17,118.40	5.20	\$ 5.00	\$ 16,460.00	5.00
39	Traffic Control Plan and Implementation	LS	1	\$ 20,000.00	\$ 20,000.00	\$ 34,775.00	\$ 34,775.00	1.74	\$ 27,500.00	\$ 27,500.00	1.38
40	Erosion Control Plan	LS	1	\$ 2,500.00	\$ 2,500.00	\$ 20,475.00	\$ 20,475.00	8.19	\$ 5,000.00	\$ 5,000.00	2.00
41	Project Signs	EA	2	\$ 750.00	\$ 1,500.00	\$ 1,235.00	\$ 2,470.00	1.65	\$ 1,000.00	\$ 2,000.00	1.33
42	Miscellaneous Allowance	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	1.00	\$ 50,000.00	\$ 50,000.00	1.00
43	24" Wide White Thermoplastic Stop Bar	LF	303	\$ 10.00	\$ 3,030.00	\$ 13.00	\$ 3,939.00	1.30	\$ 15.00	\$ 4,545.00	1.50
44	12" Wide White Thermoplastic Cross Walk Bar	LF	1,213	\$ 5.00	\$ 6,065.00	\$ 10.40	\$ 12,615.20	2.08	\$ 8.00	\$ 9,704.00	1.60
45	12" Wide White Thermoplastic School Zone Bar	LF	40	\$ 5.00	\$ 200.00	\$ 10.40	\$ 416.00	2.08	\$ 8.00	\$ 320.00	1.60
46	LA, SRA - Thermoplastic Turn Arrow (All)	EA	2	\$ 300.00	\$ 600.00	\$ 260.00	\$ 520.00	0.87	\$ 700.00	\$ 1,400.00	2.33
47	4" Dia. Type "Y" Yellow Buttons	EA	32	\$ 7.50	\$ 240.00	\$ 5.20	\$ 166.40	0.69	\$ 8.00	\$ 256.00	1.07
48	4" Dia. Type "W" White Buttons	EA	40	\$ 7.50	\$ 300.00	\$ 5.20	\$ 208.00	0.69	\$ 8.00	\$ 320.00	1.07
49	Type "1C" or "1A" Reflective Buttons	EA	2	\$ 15.00	\$ 30.00	\$ 7.80	\$ 15.60	0.52	\$ 15.00	\$ 30.00	1.00
50	Type "11AA" Reflective Buttons	EA	10	\$ 15.00	\$ 150.00	\$ 7.80	\$ 78.00	0.52	\$ 15.00	\$ 150.00	1.00
TOTAL AMOUNT BID					\$ 1,257,364.00		\$ 1,631,043.10	1.30		\$ 1,758,589.00	1.40

NUMBER OF CONSTRUCTION DAYS:

180 CONSECUTIVE CALENDAR DAYS

120 CONSECUTIVE CALENDAR DAYS

270 CONSECUTIVE CALENDAR DAYS

BURGESS & NIPLE
Engineers ■ Planners

Starnes Road 16" Water Line

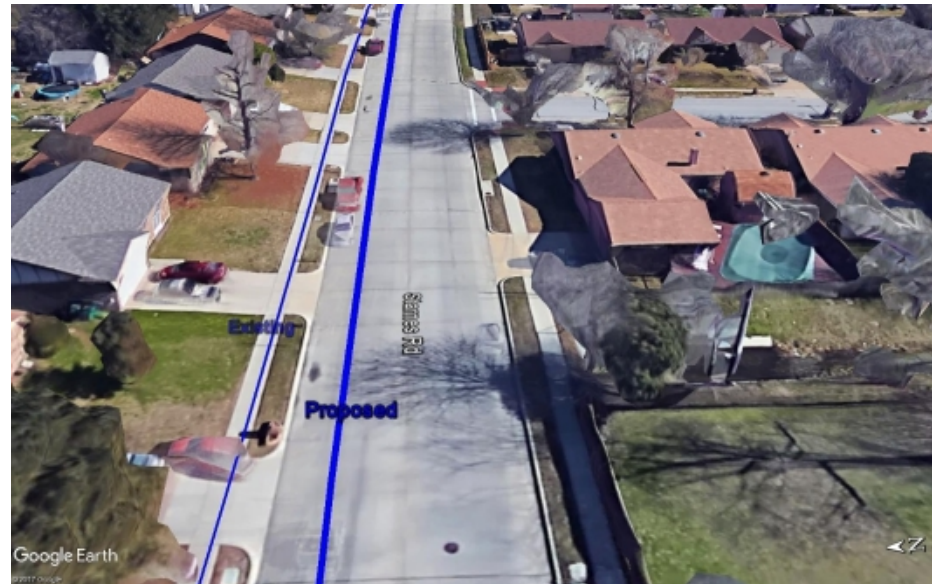
Project Location Map



City Council
August 6, 2018



Starnes Road 16-Inch
Water Line from
Indian Springs Road
to
Rufe Snow Drive



Agenda Item—Construction Award of Starnes Road 16-Inch Water Line

1. The project limits are along Starnes Rd from Indian Springs Rd to Rufe Snow Dr.
2. The existing 16-inch water line is under the north sidewalk of Starnes Rd and is nearing its end of life. It was identified in the Capital Improvement Plan for replacement. The new 16-inch PVC water line will be constructed under the pavement of Starnes Rd.
3. Construction Cost
\$871,739.43
4. Start date should be October 15, 2018 and complete around March 2019.



Questions ???



Recommendation/Action Desired



Authorize the City to enter into a Construction Contract with Raytech Services in the amount of \$871,739.43 for the construction of Starnes Road 16" Water Main from Indian Springs Road to Rufe Snow Drive.



NOTICE INVITATION TO BID

Sealed Bids for the Starnes Road 16" Water Line will be received in the City of Watauga Purchasing Office located at City Hall, 7105 Whitley Road, Watauga, Texas 76148 until Wednesday, June 13, 2018 at 2:00 PM (Central Time) at which time they will be publicly opened and read aloud. Bids received after the closing date and time will not be considered.

Bid # 18-027 Starnes Road 16" Water Line
Opening Date: Wednesday, June 13, 2018 at 2:00 PM (Central Time)

The work covered by the Contract Documents includes the following: Installing a 16" diameter water line along Starnes Road from Indian Springs Road to Rufe Snow Drive in the City of Watauga, Texas, together with the necessary appertaining work.

Complete Contract Documents may be examined without charge or deposit from the engineer, William D. Wendland, P.E. at Burgess & Niple, 3950 Fossil Creek Blvd., Suite 210, Fort Worth, Texas 76137. The Contract Documents may be purchased at the same location for a non-refundable cost of \$100.00. Make checks payable to "BURGESS & NIPLE". Complete Contract Documents have also been provided to CivCast USA for immediate download. Please go to <http://www.civcastusa.com/>. The Project ID is "19463-55991". Prospective bidders shall address written inquiries through the project's CivCast website.

Attention to the Bidders is called to the Instructions to Bidders, which are included in the proposed Contract Documents.

A non-mandatory pre-bid conference will be held Wednesday, June 6, 2018 at 10:00 AM (Central Time) at City of Watauga Council Chambers, 7105 Whitley Road, Watauga, Texas 76148.

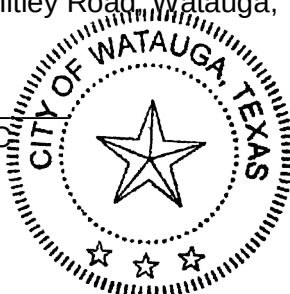
Successful Bidders shall be required to comply with all laws pertaining to minimum wage and discrimination of persons. Minimum rates of pay to all laborers and mechanics on the project must not be less than as provided in the Wage Rate Schedule, and wage provisions must particularly comply with all other applicable wage laws of the State of Texas.

The City reserves the right to reject any and all Bids or to increase or decrease or omit any item or items and/or award to the lowest responsive and responsible Bidder. The City of Watauga also reserves the right to waive any informalities or irregularities in the Bidding.

PUBLISHED: **Wednesday, May 23, 2018**
Wednesday, May 30, 2018

I, Zolaina R. Parker, City Secretary for the City of Watauga, hereby certify that this notice was posted on the bulletin boards at City Hall, 7105 Whitley Road, Watauga, Texas, in accordance with the Texas Local Government Code Chapter 252.


Zolaina R. Parker, City Secretary, TRMC



LAW OFFICES
EVANS, DANIEL, MOORE, EVANS, BIGGS & DECKER
(NOT A PARTNERSHIP)

MARK G. DANIEL

BOARD CERTIFIED - CRIMINAL LAW
TEXAS BOARD OF LEGAL SPECIALIZATION

CRIMINAL TRIAL SPECIALIST-BOARD CERTIFIED
NATIONAL BOARD OF TRIAL ADVOCACY

SUNDANCE SQUARE
115 WEST SECOND STREET, SUITE 202
FORT WORTH, TEXAS 76102

(817) 332-3822
FACSIMILE (817) 332-2763

OF COUNSEL:
TIM EVANS
TIM MOORE
LANCE T. EVANS
WILLIAM R. BIGGS
ANDREW J. DECKER

July 27, 2018

Via Email

Mr. Paul Hackleman
Public Works Director
City of Watauga
7105 Whitley Road
Watauga, Texas 76148

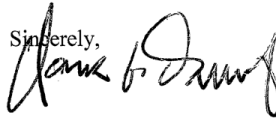
Re: *City Project No. 18-027*
Starnes Road 16" Water Line
Specifications and Contract Documents

Dear Mr. Hackleman:

Pursuant to your request, I have reviewed the Specifications and Contract Documents for City Project No. 18-027 regarding the Starnes Road 16" Water Line from Indian Springs Road to Rufe Snow Drive. I approve of these documents as to form and legality and would recommend that you forward the same to the City Council for consideration and approval.

Thank you for your attention to the above and the opportunity to be of assistance. Should you have any questions, please do not hesitate to contact my office.

Sincerely,



MARK G. DANIEL

MGD/tp

cc: Mayor Pat Shelbourne
Ms. Andrea Gardner, City Manager
Ms. Zolaina Parker, City Secretary



AGENDA MEMORANDUM

DATE: July 16, 2018

TO: Honorable City Council Members

FROM: Andrea Gardner, City Manager

SUBJECT: Discussion and action on approval of the Letter of Engagement for Whitley Penn, LLP to perform the Fiscal Year 2017-2018 City of Watauga Independent Audit in an amount not to exceed \$52,000, representing the third renewal term for Proposal # 15-024

BACKGROUND/INFORMATION:

The City Charter 9.06 (C) requires that an independent audit be made of all accounts of the City by a Certified public Accountant. These audits are performed in accordance with generally accepted auditing standards as well as examination for compliance with procedures established by Charter, Ordinance, or where applicable, State and Federal laws or regulations. The audit and related reports comply with all standards provided by the Governmental Accounting Standards Board (GASB) and the Financial Standards Board (FASB) where applicable.

Section 103.001 of the Texas Local Government Code requires a municipality to have its records and accounts audited annually and have an annual financial statement prepared based on the audit.

Financial Audit Services Proposal # 15-024 was issued May 13, 2015 and closed May 28, 2015 with responses received from ten (10) firms. Evaluations of the firms and audit proposals were completed by a committee consisting of three staff members resulting in a recommendation for award to Whitley Penn, LLP. This recommendation was presented to, and awarded, by Council on July 13, 2015. The proposal agreement was awarded for the independent audit of Fiscal Year 2014-2015 in the amount of \$49,500 with renewal terms of four (4) subsequent fiscal years.

The first renewal term for Fiscal Year 2015-2016 audit was approved by Council July 25, 2016 in the amount of \$50,500. The second renewal term for Fiscal Year 2016-2017 was approved by Council July 24, 2017 in the amount of \$51,000.

Staff has been pleased with the independent audit services performed by Whitley Penn, LLP and request approval of the attached Letter of Engagement for Whitley Penn, LLP to perform the Fiscal Year 2017-2018 independent audit of the general purpose



AGENDA MEMORANDUM

financial statements in the amount of \$52,000. This will represent the third renewal term for independent audit services.

FINANCIAL IMPLICATIONS:

Funds are budgeted and available in Fiscal Year 2017-18 and Fiscal Year 2018-19.

RECOMMENDATION/ACTION DESIRED:

Staff requests approval of the Letter of Engagement for Whitley Penn, LLP to perform the Fiscal Year 2017-2018 City of Watauga Independent Audit in an amount not to exceed \$52,000. This represents the third renewal term for Proposal # 15-024.

ATTACHMENTS/ SUPPORTING DOCUMENTATION:

1. FINANCIAL AUDIT - ATTORNEY LETTER - 3RD RENEWAL
2. FINANCIAL AUDIT - WHITLEY PENN - 3RD RENEWAL
3. AUDIT ENGAGEMENT LETTERS 2015 (ORIGINAL) THROUGH 2017

REVIEWED BY:

Sandra Gibson, Director of Finance
Andrea Gardner, City Manager
Zolaina Parker, City Secretary, TRMC

Approved - 07/27/2018
Approved - 07/27/2018
Final Approval - 08/01/2018

LAW OFFICES
EVANS, DANIEL, MOORE, EVANS, BIGGS & DECKER
(NOT A PARTNERSHIP)

MARK G. DANIEL

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TEXAS BOARD OF LEGAL SPECIALIZATION

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FACSIMILE (817) 332-2763

OF COUNSEL:
TIM EVANS
TIM MOORE
LANCH T. EVANS
WILLIAM R. BIGGS
ANDREW J. DECKER

July 17, 2018

Ms. Deby Woodard
Assistant Finance Director/Purchasing Manager
City of Watauga
7105 Whitley Road
Watauga, Texas 76148

Via Email

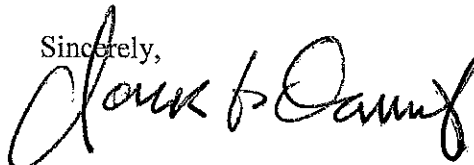
Re: *Whitley Penn Letter of Engagement for Audit Services Third Term
(2017-2018)*

Dear Ms. Woodard:

I am in receipt of the engagement letter from Whitley Penn to the City of Watauga, Texas regarding auditing the City's financial statements for the year 2018. I have reviewed this audit engagement letter for the third term (2017-2018) and would recommend that this be presented to the City Council for consideration and approval.

Thank you for your attention to the above and the opportunity to be of assistance. If you have any questions regarding this matter, please do not hesitate to contact my office.

Sincerely,



MARK G. DANIEL
City Attorney for the City of Watauga

MGD/tp

cc: Mayor Pat Shelbourne
Ms. Andrea Gardner, City Manager
Ms. Zolaina R. Parker, City Secretary

July 16, 2018

To the Honorable Mayor, Members of
City Council and the City Manager
City of Watauga, Texas

The following represents our understanding of the services we will provide the City of Watauga, Texas.

You have requested that we audit the financial statements of the governmental activities, the business-type activities, each major fund, and the aggregate remaining fund information of the City of Watauga, Texas (the "City"), as of September 30, 2018, and for the year then ended and the related notes to the financial statements, which collectively comprise the City's basic financial statements as listed in the table of contents. We are pleased to confirm our acceptance and our understanding of this audit engagement by means of this letter. Our audit will be conducted with the objective of our expressing an opinion on each opinion unit.

Accounting principles generally accepted in the United States of America require that management's discussion and analysis and budgetary comparison information be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the *Governmental Accounting Standards Board*, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. As part of our engagement, we will apply certain limited procedures to the required supplementary information (RSI) in accordance with auditing standards generally accepted in the United States of America. These limited procedures will consist primarily of inquiries of management regarding their methods of measurement and presentation, and comparing the information for consistency with management's responses to our inquiries. We will not express an opinion or provide any form of assurance on the RSI. The following RSI is required by accounting principles generally accepted in the United States of America. This RSI will be subjected to certain limited procedures but will not be audited:

1. Management's Discussion and Analysis
2. General Fund – Budgetary Comparison Information
3. Required Supplementary Pension Information and Other Post-Employment Benefit (OPEB) information, if applicable.

Supplementary information other than RSI will accompany the City's basic financial statements. We will subject the following supplementary information to the auditing procedures applied in our audit of the basic financial statements and certain additional procedures, including comparing and reconciling the supplementary information to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and additional procedures in accordance with auditing standards generally accepted in the United States of America. We intend to provide an opinion on the following supplementary information in relation to the financial statements as a whole:

1. Combining and Individual Fund Statements and Schedules

Also, the document we submit to you will include the following other additional information that will not be subjected to the auditing procedures applied in our audit of the financial statements:

1. Introductory Section
2. Statistical Section

The Objective of an Audit

The objective of our audit is the expression of opinions as to whether your basic financial statements are fairly presented, in all material respects, in accordance with generally accepted accounting principles and to report on the fairness of the supplementary information referred to in the second paragraph when considered in relation to the financial statements as a whole. Our audit will be conducted in accordance with auditing standards generally accepted in the United States of America and will include tests of the accounting records and other procedures we consider necessary to enable us to express such opinions. We cannot provide assurance that unmodified opinions will be expressed. Circumstances may arise in which it is necessary for us to modify our opinions or add emphasis-of-matter or other-matter paragraphs. If our opinions on the financial statements are other than unmodified, we will discuss the reasons with you in advance. If, for any reason, we are unable to complete the audit or are unable to form or have not formed opinions, we may decline to express opinions or to issue a report as a result of this engagement.

General Audit Procedures

We will conduct our audit in accordance with auditing standards generally accepted in the United States of America (U.S. GAAS). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the basic financial statements are free from material misstatement. An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to error, fraudulent financial reporting, misappropriation of assets, or violations of laws, governmental regulations, grant agreements, or contractual agreements. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

Internal Control Audit Procedures

Because of the inherent limitations of an audit, together with the inherent limitations of internal control, an unavoidable risk that some material misstatements may not be detected exists, even though the audit is properly planned and performed in accordance with U.S. GAAS.

In making our risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. However, we will communicate to you in writing concerning any significant deficiencies or material weaknesses in internal control relevant to the audit of the financial statements that we have identified during the audit.

Compliance with Laws and Regulations

As part of obtaining reasonable assurance about whether the financial statements are free of material misstatement, we will perform tests of the City's compliance with the provisions of applicable laws,

regulations, contracts, and agreements. However, the objective of our audit will not be to provide an opinion on overall compliance and we will not express such an opinion.

Management Responsibilities

Our audit will be conducted on the basis that management acknowledge and understand that they have responsibility:

1. For the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America;
2. For the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to error, fraudulent financial reporting, misappropriation of assets, or violations of laws, governmental regulations, grant agreements, or contractual agreements; and
3. To provide us with:
 - i. Access to all information of which management is aware that is relevant to the preparation and fair presentation of the financial statements such as records, documentation, and other matters;
 - ii. Additional information that we may request from management for the purpose of the audit; and
 - iii. Unrestricted access to persons within the entity from whom we determine it necessary to obtain audit evidence.
4. For including the auditor's report in any document containing financial statements that indicates that such financial statements have been audited by the entity's auditor;
5. For identifying and ensuring that the entity complies with the laws and regulations applicable to its activities; and
6. For adjusting the financial statements to correct material misstatements and confirming to us in the management representation letter that the effects of any uncorrected misstatements aggregated by us during the current engagement and pertaining to the current year period(s) under audit are immaterial, both individually and in the aggregate, to the financial statements as a whole.

With regard to the supplementary information referred to above, you acknowledge and understand your responsibility: (a) for the preparation of the supplementary information in accordance with the applicable criteria; (b) to provide us with the appropriate written representations regarding supplementary information; (c) to include our report on the supplementary information in any document that contains the supplementary information and that indicates that we have reported on such supplementary information; and (d) to present the supplementary information with the audited financial statements, or if the supplementary information will not be presented with the audited financial statements, to make the audited financial statements readily available to the intended users of the supplementary information no later than the date of issuance by you of the supplementary information and our report thereon.

As part of our audit process, we will request from management, written confirmation concerning representations made to us in connection with the audit.

Reporting

We will issue a written report upon completion of our audit of the City's basic financial statements. Our report will be addressed to the governing body of the City. We cannot provide assurance that unmodified opinions will be expressed. Circumstances may arise in which it is necessary for us to modify our opinions, add an emphasis-of-matter or other-matter paragraph(s), or withdraw from the engagement.

Other

We understand that your employees will prepare all confirmations we request and will locate any documents or support for any other transactions we select for testing.

If you intend to publish or otherwise reproduce the financial statements and make reference to our firm, you agree to provide us with printers' proofs or masters for our review and approval before printing. You also agree to provide us with a copy of the final reproduced material for our approval before it is distributed

Provisions of Engagement Administration, Timing and Fees

During the course of the engagement, we may communicate with you or your personnel via fax or e-mail, and you should be aware that communication in those mediums contains a risk of misdirected or intercepted communications.

The timing of our audit will be scheduled for performance and completion as follows:

Document internal control and preliminary tests	<u>September 2018</u>
Perform year-end audit procedures	<u>December 2018</u>
Issue audit report	<u>February 2019</u>

Celina Cereceres Miller, CPA, is the engagement partner for the audit services specified in this letter. Her responsibilities include supervising Whitley Penn, LLP's services performed as part of this engagement and signing or authorizing another qualified firm representative to sign the audit report.

Our fees for the audit services will be based on the amount of time required and the difficulty of the work involved which will not exceed those fees set out in the following schedule:

Financial statement audit fee	\$52,000
-------------------------------	----------

We would like to make the following comments regarding the fee estimates:

1. Our fee estimates have not considered the effects of any changes to auditing standards and accounting principles, which may be promulgated by the AICPA, Congress, or any other regulatory body in the future and are unknown to us at this time. If significant additional time is necessary resulting in increased fees, we will endeavor to notify you of any such circumstances as they are assessed.
2. The City's personnel are responsible for the preparation of all items requested in the Prepared by Client ("PBC") listing and received by the date requested. Any delays caused by not preparing the items when requested may result in additional fees, as well as the possibility of postponing our fieldwork. The PBC listing will be provided to you during the planning process of the engagement.
3. Time incurred for audit adjustments identified during our audit and the related additional testing required has not been considered in our fee estimates. Prior to performing any additional testing, we will notify you of the exceptions and obtain approval for any additional fees which may be incurred.

4. Our fee estimates are based on all general ledger sub ledgers being reconciled to the general ledger balance and any adjustment necessary should be recorded to the general ledger prior to our fieldwork start date.

The ethics of our profession prohibit the rendering of professional services where the fee for such services is contingent, or has the appearance of being contingent, upon the results of such services. Accordingly, it is important that our bills be paid promptly when received. If a situation arises in which it may appear that our independence would be questioned because of significant unpaid bills, we may be prohibited from issuing our auditors' report.

Any and all claims relating to or arising out of this contract/agreement shall be governed by the laws of Texas and any dispute shall be finally resolved by the Texas courts in Tarrant County.

This letter replaces and supersedes any previous proposals, correspondence and understanding, whether written or oral. The agreements contained in this engagement letter shall survive the completion or termination of this engagement.

We will notify you immediately of any circumstances we encounter that could significantly affect this initial fee estimate. Whenever possible, we will attempt to use the City's personnel to assist in the preparation of schedules and analyses of accounts. This effort could substantially reduce our time requirements and facilitate the timely conclusion of the audit.

With respect to any nonattest services we perform, the City's management is responsible for (a) making all management decisions and performing all management functions; (b) assigning a competent individual to oversee the services; (c) evaluating the adequacy of the services performed; (d) evaluating and accepting responsibility for the results of the services performed; and (e) establishing and maintaining internal controls, including monitoring ongoing activities. Further, we will be available during the year to consult with you on financial management and accounting matters of a routine nature.

During the course of the audit we may observe opportunities for economy in, or improved controls over, your operations. We will bring such matters to the attention of the appropriate level of management, either orally or in writing.

We agree to retain our audit documentation or work papers for a period of at least seven years from the date of our report.

At the conclusion of our audit engagement, we will communicate to City Council the following significant findings from the audit:

- Our view about the qualitative aspects of the entity's significant accounting practices;
- Significant difficulties, if any, encountered during the audit;
- Uncorrected misstatements, other than those we believe are trivial, if any;
- Disagreements with management, if any;
- Other findings or issues, if any, arising from the audit that are, in our professional judgment, significant and relevant to those charged with governance regarding their oversight of the financial reporting process;
- Material, corrected misstatements that were brought to the attention of management as a result of our audit procedures;
- Representations we requested from management;

- Management's consultations with other accountants, if any; and
- Significant issues, if any, arising from the audit that were discussed, or the subject of correspondence, with management.

Please sign and return the attached copy of this letter to indicate your acknowledgment of, and agreement with, the arrangements for our audit of the financial statements including our respective responsibilities.

We appreciate the opportunity to be your financial statement auditors and look forward to working with you and your staff.

Respectfully,

Whitley Penn, LLP

A handwritten signature in black ink that reads "Whitley Penn LLP". The signature is written in a cursive, flowing style.

RESPONSE:

This letter correctly sets forth our understanding.

CITY OF WATAUGA, TEXAS

Acknowledged and agreed on behalf of the City of Watauga by:

Title: _____

Date: _____

Original

LAW OFFICES
EVANS, DANIEL, MOORE, EVANS & BIGGS
(NOT A PARTNERSHIP)

MARK G. DANIEL

BOARD CERTIFIED - CRIMINAL LAW
TEXAS BOARD OF LEGAL SPECIALIZATION

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SUNDANCE SQUARE
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FORT WORTH, TEXAS 76102

(817) 332-3822
FACSIMILE (817) 332-2763

OF COUNSEL

TIM EVANS
TIM MOORE
LANCE T. EVANS
WILLIAM R. BIGGS

July 14, 2015

Ms. Deby Woodard
Assistant Finance Director/Purchasing Manager
City of Watauga
7105 Whitley Road
Watauga, Texas 76148

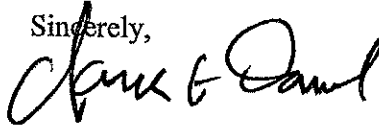
Re: *Whitley Penn Audit Agreement*

Dear Ms. Woodard:

I am in receipt of the audit services engagement letter for fiscal year ending September 30, 2015 between the City of Watauga and Whitley Penn. I have reviewed this Agreement and approve of the same. Due to the nature of these audit services, I believe best practice dictates that the City Council approve the same.

Thank you for your attention to the above and the opportunity to be of assistance.

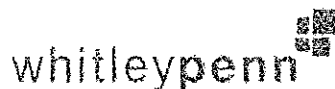
Sincerely,



MARK G. DANIEL

MGD:tp

cc: Mayor Hector Garcia
Mr. Greg Vick, City Manager
Ms. Zolaina Reyes, City Secretary



Houston Office
2411 Richmond Avenue
Suite 500
Houston, Texas 77046
713.621.1515 Main
whitleypenn.com

July 14, 2015

To the Honorable Mayor and
Members of the City Council
Watauga, Texas

We are pleased to confirm our understanding of the services we are to provide City of Watauga, Texas ("the City") for the year ended September 30, 2015. We will audit the financial statements of the governmental activities, the business-type activities, each major fund, and the aggregate remaining fund information, including the related notes to the financial statements, which collectively comprise the basic financial statements of the City as of and for the year ended September 30, 2015. Accounting standards generally accepted in the United States of America provide for certain required supplementary information (RSI), such as management's discussion and analysis (MD&A), to supplement the City's basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. As part of our engagement, we will apply certain limited procedures to the City's RSI in accordance with auditing standards generally accepted in the United States of America. These limited procedures will consist of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We will not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance. The following RSI is required by generally accepted accounting principles and will be subjected to certain limited procedures, but will not be audited:

- 1) Management's Discussion and Analysis.
- 2) The Budgetary Comparison Schedules.
- 3) Required Supplementary Pension Information.

We have also been engaged to report on supplementary information other than RSI that accompanies the City's financial statements. We will subject the following supplementary information to the auditing procedures applied in our audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America, and we will provide an opinion on it in relation to the financial statements as a whole, in a report combined with our auditor's report on the financial statements:

- 1) Combining and Individual Fund Statements and Schedules.

The following other information accompanying the financial statements will not be subjected to the auditing procedures applied in our audit of the financial statements, and our auditor's report will not provide an opinion or any assurance on that other information.

- 1) Introductory Section.
- 2) Statistical Section.

To the Honorable Mayor and
Members of the City Council
Watauga, Texas
Page 2

Audit Objective

The objective of our audit is the expression of opinions as to whether your financial statements are fairly presented, in all material respects, in conformity with generally accepted accounting principles and to report on the fairness of the supplementary information referred to in the second paragraph when considered in relation to the financial statements as a whole. Our audit will be conducted in accordance with auditing standards generally accepted in the United States of America and will include tests of the accounting records and other procedures we consider necessary to enable us to express such opinions. We will issue a written report upon completion of our audit of the City's financial statements. Our report will be addressed to the Mayor and Members of the City Council of the City. We cannot provide assurance that unmodified opinions will be expressed. Circumstances may arise in which it is necessary for us to modify our opinions or add emphasis-of-matter or other-matter paragraphs. If our opinions on the financial statements are other than unmodified, we will discuss the reasons with you in advance. If, for any reason, we are unable to complete the audit or are unable to form or have not formed opinions, we may decline to express opinions or may withdraw from this engagement.

Audit Procedures—General

An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements; therefore, our audit will involve judgment about the number of transactions to be examined and the areas to be tested. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. We will plan and perform the audit to obtain reasonable rather than absolute assurance about whether the financial statements are free of material misstatement, whether from (1) errors, (2) fraudulent financial reporting, (3) misappropriation of assets, or (4) violations of laws or governmental regulations that are attributable to the government or to acts by management or employees acting on behalf of the government.

Because of the inherent limitations of an audit, combined with the inherent limitations of internal control, and because we will not perform a detailed examination of all transactions, there is a risk that material misstatements may exist and not be detected by us, even though the audit is properly planned and performed in accordance with U.S. generally accepted auditing standards. In addition, an audit is not designed to detect immaterial misstatements, or violations of laws or governmental regulations that do not have a direct and material effect on the financial statements. However, we will inform the appropriate level of management of any material errors, any fraudulent financial reporting, or misappropriation of assets that come to our attention. We will also inform the appropriate level of management of any violations of laws or governmental regulations that come to our attention, unless clearly inconsequential. Our responsibility as auditors is limited to the period covered by our audit and does not extend to any later periods for which we are not engaged as auditors.

Our procedures will include tests of documentary evidence supporting the transactions recorded in the accounts, and may include tests of the physical existence of inventories, and direct confirmation of receivables and certain other assets and liabilities by correspondence with selected individuals, funding sources, creditors, and financial institutions. We will request written representations from your attorneys as part of the engagement, and they may bill you for responding to this inquiry. At the conclusion of our audit, we will require certain written representations from you about the financial statements and related matters.

Audit Procedures—Internal Control

Our audit will include obtaining an understanding of the government and its environment, including internal control, sufficient to assess the risks of material misstatement of the financial statements and to design the nature, timing, and extent of further audit procedures. An audit is not designed to provide assurance on internal control or to identify deficiencies in internal control. However, during the audit, we will communicate to management and those charged with governance internal control related matters that are required to be communicated under AICPA professional standards.

To the Honorable Mayor and
Members of the City Council
Watauga, Texas
Page 3

Audit Procedures—Compliance

As part of obtaining reasonable assurance about whether the financial statements are free of material misstatement, we will perform tests of the City's compliance with the provisions of applicable laws, regulations, contracts, and agreements. However, the objective of our audit will not be to provide an opinion on overall compliance and we will not express such an opinion.

Other Services

We will also prepare the financial statements of the City in conformity with U.S. generally accepted accounting principles based on information provided by you.

Management Responsibilities

Management is responsible for establishing and maintaining effective internal controls, including monitoring ongoing activities; for the selection and application of accounting principles; and for the preparation and fair presentation of the financial statements in conformity with U.S. generally accepted accounting principles.

Management is also responsible for making all financial records and related information available to us and for the accuracy and completeness of that information. You are also responsible for providing us with (1) access to all information of which you are aware that is relevant to the preparation and fair presentation of the financial statements, (2) additional information that we may request for the purpose of the audit, and (3) unrestricted access to persons within the government from whom we determine it necessary to obtain audit evidence.

Your responsibilities include adjusting the financial statements to correct material misstatements and confirming to us in the management representation letter that the effects of any uncorrected misstatements aggregated by us during the current engagement and pertaining to the latest period presented are immaterial, both individually and in the aggregate, to the financial statements taken as a whole.

You are responsible for the design and implementation of programs and controls to prevent and detect fraud, and for informing us about all known or suspected fraud affecting the government involving (1) management, (2) employees who have significant roles in internal control, and (3) others where the fraud could have a material effect on the financial statements. Your responsibilities include informing us of your knowledge of any allegations of fraud or suspected fraud affecting the government received in communications from employees, former employees, regulators, or others. In addition, you are responsible for identifying and ensuring that the government complies with applicable laws and regulations.

You are responsible for the preparation of the supplementary information in conformity with U.S. generally accepted accounting principles. You agree to include our report on the supplementary information in any document that contains and indicates that we have reported on the supplementary information. You also agree to include the audited financial statements with any presentation of the supplementary information that includes our report thereon. Your responsibilities include acknowledging to us in the representation letter that (1) you are responsible for presentation of the supplementary information in accordance with GAAP; (2) you believe the supplementary information, including its form and content, is fairly presented in accordance with GAAP; (3) the methods of measurement or presentation have not changed from those used in the prior period (or, if they have changed, the reasons for such changes); and (4) you have disclosed to us any significant assumptions or interpretations underlying the measurement or presentation of the supplementary information.

You agree to assume all management responsibilities for financial statement preparation services and any other nonattest services we provide; oversee the services by designating an individual, preferably from senior management, with suitable skill, knowledge, or experience; evaluate the adequacy and results of the services; and accept responsibility for them.

To the Honorable Mayor and
Members of the City Council
Watauga, Texas
Page 4

Engagement Administration, Fees, and Other

We may from time to time, and depending on the circumstances, use third-party service providers in serving your account. We may share confidential information about you with these service providers, but remain committed to maintaining the confidentiality and security of your information. Accordingly, we maintain internal policies, procedures, and safeguards to protect the confidentiality of your personal information. In addition, we will secure confidentiality agreements with all service providers to maintain the confidentiality of your information and we will take reasonable precautions to determine that they have appropriate procedures in place to prevent the unauthorized release of your confidential information to others. In the event that we are unable to secure an appropriate confidentiality agreement, you will be asked to provide your consent prior to the sharing of your confidential information with the third-party service provider. Furthermore, we will remain responsible for the work provided by any such third-party service providers.

We understand that your employees will prepare all cash or other confirmations we request and will locate any documents selected by us for testing.

The audit documentation for this engagement is the property of Whitley Penn and constitutes confidential information. However, subject to applicable laws and regulations, audit documentation and appropriate individuals will be made available upon request and in a timely manner to a federal agency or its designee. We will notify you of any such request. If requested, access to such audit documentation will be provided under the supervision of Whitley Penn personnel. Furthermore, upon request, we may provide copies of selected audit documentation to the federal agency or its designee. The federal agency or its designee may intend or decide to distribute the copies or information contained therein to others, including other governmental agencies.

We expect to begin our audit on approximately August, 2015 and to issue our reports no later than February 29, 2016. Tom Pedersen is the engagement partner and is responsible for supervising the engagement and signing the report or authorizing another individual to sign it.

Our fee for these services will be at our standard hourly rates plus out-of-pocket costs (such as report reproduction, word processing, postage, travel, copies, telephone, etc.) except that we agree that our gross fee, including expenses will not exceed \$49,500. Our standard hourly rates vary according to the degree of responsibility involved and the experience level of the personnel assigned to your audit. Our invoices for these fees will be rendered each month as work progresses and are payable on presentation. In accordance with our firm policies, work may be suspended if your account becomes 30 days or more overdue and may not be resumed until your account is paid in full. If we elect to terminate our services for nonpayment, our engagement will be deemed to have been completed upon written notification of termination, even if we have not completed our report. You will be obligated to compensate us for all time expended and to reimburse us for all out-of-pocket costs through the date of termination. The above fee is based on anticipated cooperation from your personnel and the assumption that unexpected circumstances will not be encountered during the audit. If significant additional time is necessary, we will discuss it with you and arrive at a new fee estimate before we incur the additional costs.

We would like to make the following comments regarding fee estimates:

- The City's personnel are responsible for the preparation of the items in the "PBC listing" and received by the date requested. Any delays caused by not preparing the items when requested may result in additional fees, as well as the possibility of postponing our fieldwork. The "PBC listing" will be provided to you during the planning process of the engagement.
- Our fee estimates have not considered the effects of any changes to auditing standards and accounting principles, which may promulgated by the AICPA, Congress or any other regulatory body in the future and are unknown to us at this time. If significant additional time is necessary resulting in increased fees, we will endeavor to notify you of any such circumstances as they are assessed.
- Time incurred for audit adjustments identified during our audit and the related additional testing required has not been considered in our fee estimates. Prior to performing any additional testing, we will notify you of the expectations and obtain approval for any additional fees which may be incurred.

To the Honorable Mayor and
Members of the City Council
Watauga, Texas
Page 5

We appreciate the opportunity to be of service to the City and believe this letter accurately summarizes the significant terms of our engagement. If you have any questions, please let us know. If you agree with the terms of our engagement as described in this letter, please sign the enclosed copy and return it to us.

Very truly yours,

Whitley Penn LLP

Whitley Penn, LLP

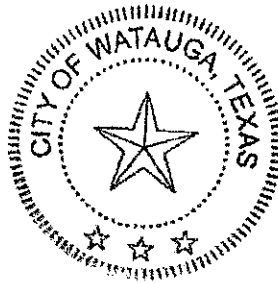
RESPONSE:

This letter correctly sets forth the understanding of City of Watauga, Texas.

Signature: _____

Title: _____

Date: _____



SYSTEM REVIEW REPORT

June 28, 2012

To the Partners of Whitley Penn LLP,
and the National Peer Review Committee of the AICPA

We have reviewed the system of quality control for the accounting and auditing practice of Whitley Penn LLP (the firm) applicable to non-SEC issuers in effect for the year ended April 30, 2012. Our peer review was conducted in accordance with the Standards for Performing and Reporting on Peer Reviews established by the Peer Review Board of the American Institute of Certified Public Accountants. The firm is responsible for designing a system of quality control and complying with it to provide the firm with reasonable assurance of performing and reporting in conformity with applicable professional standards in all material respects. Our responsibility is to express an opinion on the design of the system of quality control and the firm's compliance therewith based on our review. The nature, objectives, scope, limitations of, and the procedures performed in a System Review are described in the standards at www.aicpa.org/prsummary.

As required by the standards, engagements selected for review included engagements performed under the *Government Auditing Standards* and audits of employee benefit plans.

In our opinion, the system of quality control for the accounting and auditing practice of Whitley Penn LLP applicable to non-SEC issuers in effect for the year ended April 30 2012, has been suitably designed and complied with to provide the firm with reasonable assurance of performing and reporting in conformity with applicable professional standards in all material respects. Firms can receive a rating of *pass*, *pass with deficiency(ies)* or *fail*. Whitley Penn LLP has received a peer review rating of *pass*.

Olsen Thielen & Co., Ltd.

Olsen Thielen & Co., Ltd.

1st Renewal

LAW OFFICES
EVANS, DANIEL, MOORE, EVANS & BIGGS
(NOT A PARTNERSHIP)

MARK G. DANIEL

BOARD CERTIFIED - CRIMINAL LAW
TEXAS BOARD OF LEGAL SPECIALIZATION

CRIMINAL TRIAL SPECIALIST-BOARD CERTIFIED
NATIONAL BOARD OF TRIAL ADVOCACY

SUNDANCE SQUARE
115 WEST SECOND STREET, SUITE 202
FORT WORTH, TEXAS 76102

(817) 332-3822
FACSIMILE (817) 332-2763

OF COUNSEL

TIM EVANS
TIM MOORE
LANCE T. EVANS
WILLIAM R. BIGGS

July 11, 2016

Ms. Deby Woodard
Assistant Finance Director/Purchasing Manager
City of Watauga
7105 Whitley Road
Watauga, Texas 76148

Re: *Whitley Penn Audit Agreement*

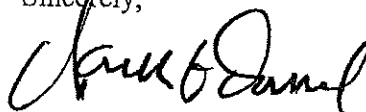
Dear Ms. Woodard:

I am in receipt of the audit services engagement letter for fiscal year ending September 30, 2016 between the City of Watauga and Whitley Penn. I have reviewed this Agreement and approve of the same. Due to the nature of these audit services, I believe best practice dictates that the City Council approve the same.

Since this agreement is being presented to the City Council for approval, the vendor is subject to the requirements of Texas Government Code Section 2252.908. This will necessitate that the vendor submit a Certificate of Interested Parties Form/Form 1295 to the Texas Ethics Commission. The completed Form 1295 and certification of filing must be submitted to the City at the time the vendor submits the signed agreement to the City. Texas Government Code 2252.908(f). The City of Watauga must use the Texas Ethics Commission's online filing application to acknowledge that the City has received the signed/notarized Form 1295 not later than the 30th day after the date the contract binds all parties. The Texas Ethics Commission's rules provide that the business entity must include on Form 1295 an identification number used by the City of Watauga to trace or identify the contract for which the form is being filed.

Thank you for your attention to the above and the opportunity to be of assistance.

Sincerely,



MARK G. DANIEL

MGD:tp

cc: Mayor Hector Garcia
Mr. Greg Vick, City Manager
Ms. Zolaina Parker, City Secretary

June 29, 2016

To the Honorable Mayor and
Members of the City Council
Watauga, Texas

We are pleased to confirm our understanding of the services we are to provide City of Watauga, Texas ("the City") for the year ended September 30, 2016. We will audit the financial statements of the governmental activities, the business-type activities, each major fund, and the aggregate remaining fund information, including the related notes to the financial statements, which collectively comprise the basic financial statements of the City as of and for the year ended September 30, 2016. Accounting standards generally accepted in the United States of America provide for certain required supplementary information (RSI), such as management's discussion and analysis (MD&A), to supplement the City's basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. As part of our engagement, we will apply certain limited procedures to the City's RSI in accordance with auditing standards generally accepted in the United States of America. These limited procedures will consist of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We will not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance. The following RSI is required by generally accepted accounting principles and will be subjected to certain limited procedures, but will not be audited:

- 1) Management's Discussion and Analysis.
- 2) The Budgetary Comparison Schedules.
- 3) Required Supplementary Pension Information.

We have also been engaged to report on supplementary information other than RSI that accompanies the City's financial statements. We will subject the following supplementary information to the auditing procedures applied in our audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America, and we will provide an opinion on it in relation to the financial statements as a whole, in a report combined with our auditor's report on the financial statements:

- 1) Combining and Individual Fund Statements and Schedules.

The following other information accompanying the financial statements will not be subjected to the auditing procedures applied in our audit of the financial statements, and our auditor's report will not provide an opinion or any assurance on that other information.

- 1) Introductory Section.
- 2) Statistical Section.

Audit Objective

The objective of our audit is the expression of opinions as to whether your financial statements are fairly presented, in all material respects, in conformity with generally accepted accounting principles and to report on the fairness of the supplementary information referred to in the second paragraph when considered in relation to the financial statements as a whole. Our audit will be conducted in accordance with auditing standards generally accepted in the United States of America and will include tests of the accounting records and other procedures we consider necessary to enable us to express such opinions. We will issue a written report upon completion of our audit of the City's financial statements. Our report will be addressed to the Mayor and Members of the City Council of the City. We cannot provide assurance that unmodified opinions will be expressed. Circumstances may arise in which it is necessary for us to modify our opinions or add emphasis-of-matter or other-matter paragraphs. If our opinions are other than unmodified, we will discuss the reasons with you in advance. If, for any reason, we are unable to complete the audit or are unable to form or have not formed opinions, we may decline to express opinions or may withdraw from this engagement.

Audit Procedures—General

An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements; therefore, our audit will involve judgment about the number of transactions to be examined and the areas to be tested. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. We will plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether from (1) errors, (2) fraudulent financial reporting, (3) misappropriation of assets, or (4) violations of laws or governmental regulations that are attributable to the government or to acts by management or employees acting on behalf of the government.

Because of the inherent limitations of an audit, combined with the inherent limitations of internal control, and because we will not perform a detailed examination of all transactions, there is a risk that material misstatements may exist and not be detected by us, even though the audit is properly planned and performed in accordance with U.S. generally accepted auditing standards. In addition, an audit is not designed to detect immaterial misstatements, or violations of laws or governmental regulations that do not have a direct and material effect on the financial statements. However, we will inform the appropriate level of management of any material errors, fraudulent financial reporting, or misappropriation of assets that comes to our attention. We will also inform the appropriate level of management of any violations of laws or governmental regulations that come to our attention, unless clearly inconsequential. Our responsibility as auditors is limited to the period covered by our audit and does not extend to any later periods for which we are not engaged as auditors.

Our procedures will include tests of documentary evidence supporting the transactions recorded in the accounts, and may include tests of the physical existence of inventories, and direct confirmation of receivables and certain other assets and liabilities by correspondence with selected individuals, funding sources, creditors, and financial institutions. We will request written representations from your attorneys as part of the engagement, and they may bill you for responding to this inquiry. At the conclusion of our audit, we will require certain written representations from you about the financial statements and related matters.

Audit Procedures—Internal Control

Our audit will include obtaining an understanding of the government and its environment, including internal control, sufficient to assess the risks of material misstatement of the financial statements and to design the nature, timing, and extent of further audit procedures. An audit is not designed to provide assurance on internal control or to identify deficiencies in internal control. However, during the audit, we will communicate to management and those charged with governance internal control related matters that are required to be communicated under AICPA professional standards.

Audit Procedures—Compliance

As part of obtaining reasonable assurance about whether the financial statements are free of material misstatement, we will perform tests of the City's compliance with the provisions of applicable laws, regulations, contracts, and agreements. However, the objective of our audit will not be to provide an opinion on overall compliance and we will not express such an opinion.

Other Services

We will also prepare the financial statements of the City in conformity with U.S. generally accepted accounting principles based on information provided by you. We will perform the services in accordance with applicable professional standards. The other services are limited to the financial statement services previously defined. We, in our sole professional judgment, reserve the right to refuse to perform any procedure or take any action that could be construed as assuming management responsibilities.

Management Responsibilities

Management is responsible for establishing and maintaining effective internal controls, including monitoring ongoing activities; for the selection and application of accounting principles; and for the preparation and fair presentation of the financial statements in conformity with U.S. generally accepted accounting principles.

Management is also responsible for making all financial records and related information available to us and for the accuracy and completeness of that information. You are also responsible for providing us with (1) access to all information of which you are aware that is relevant to the preparation and fair presentation of the financial statements, (2) additional information that we may request for the purpose of the audit, and (3) unrestricted access to persons within the government from whom we determine it necessary to obtain audit evidence.

Your responsibilities include adjusting the financial statements to correct material misstatements and confirming to us in the management representation letter that the effects of any uncorrected misstatements aggregated by us during the current engagement and pertaining to the latest period presented are immaterial, both individually and in the aggregate, to the financial statements taken as a whole.

You are responsible for the design and implementation of programs and controls to prevent and detect fraud, and for informing us about all known or suspected fraud affecting the government involving (1) management, (2) employees who have significant roles in internal control, and (3) others where the fraud could have a material effect on the financial statements. Your responsibilities include informing us of your knowledge of any allegations of fraud or suspected fraud affecting the government received in communications from employees, former employees, regulators, or others. In addition, you are responsible for identifying and ensuring that the government complies with applicable laws and regulations.

You are responsible for the preparation of the supplementary information in conformity with U.S. generally accepted accounting principles. You agree to include our report on the supplementary information in any document that contains and indicates that we have reported on the supplementary information. You also agree to [include the audited financial statements with any presentation of the supplementary information that includes our report thereon OR make the audited financial statements readily available to users of the supplementary information no later than the date the supplementary information is issued with our report thereon]. Your responsibilities include acknowledging to us in the representation letter that (1) you are responsible for presentation of the supplementary information in accordance with GAAP; (2) you believe the supplementary information, including its form and content, is fairly presented in accordance with GAAP; (3) the methods of measurement or presentation have not changed from those used in the prior period (or, if they have changed, the reasons for such changes); and (4) you have disclosed to us any significant assumptions or interpretations underlying the measurement or presentation of the supplementary information.

You agree to assume all management responsibilities for financial statement preparation services and any other nonattest services we provide; oversee the services by designating an individual, preferably from senior management, with suitable skill, knowledge, or experience; evaluate the adequacy and results of the services; and accept responsibility for them.

Engagement Administration, Fees, and Other

We may from time to time, and depending on the circumstances, use third-party service providers in serving your account. We may share confidential information about you with these service providers, but remain committed to maintaining the confidentiality and security of your information. Accordingly, we maintain internal policies, procedures, and safeguards to protect the confidentiality of your personal information. In addition, we will secure confidentiality agreements with all service providers to maintain the confidentiality of your information and we will take reasonable precautions to determine that they have appropriate procedures in place to prevent the unauthorized release of your confidential information to others. In the event that we are unable to secure an appropriate confidentiality agreement, you will be asked to provide your consent prior to the sharing of your confidential information with the third-party service provider. Furthermore, we will remain responsible for the work provided by any such third-party service providers.

We understand that your employees will prepare all cash, accounts receivable, or other confirmations we request and will locate any documents selected by us for testing.

The audit documentation for this engagement is the property of Whitley Penn, LLP and constitutes confidential information. However, subject to applicable laws and regulations, audit documentation and appropriate individuals will be made available upon request and in a timely manner to federal agency or its designee. We will notify you of any such request. If requested, access to such audit documentation will be provided under the supervision of Whitley Penn, LLP personnel. Furthermore, upon request, we may provide copies of selected audit documentation to aforementioned parties or its designee. These parties or its designee may intend or decide to distribute the copies or information contained therein to others, including other governmental agencies.

We expect to begin our audit on approximately August 2016 and to issue our reports no later than February 2017. Celina Miller, CPA is the engagement partner and is responsible for supervising the engagement and signing the report or authorizing another individual to sign it.

Our fee for these services will be at our standard hourly rates plus out-of-pocket costs (such as report reproduction, word processing, postage, travel, copies, telephone, etc.) except that we agree that our gross fee, including expenses will not exceed \$50,500. Our standard hourly rates vary according to the degree of responsibility involved and the experience level of the personnel assigned to your audit. Our invoices for these fees will be rendered each month as work progresses and are payable on presentation. In accordance with our firm policies, work may be suspended if your account becomes 30 days or more overdue and may not be resumed until your account is paid in full. If we elect to terminate our services for nonpayment, our engagement will be deemed to have been completed upon written notification of termination, even if we have not completed our report. You will be obligated to compensate us for all time expended and to reimburse us for all out-of-pocket costs through the date of termination. The above fee is based on anticipated cooperation from your personnel and the assumption that unexpected circumstances will not be encountered during the audit. If significant additional time is necessary, we will discuss it with you and arrive at a new fee estimate before we incur the additional costs.

We would like to make the following comments regarding fee estimates:

- The City's personnel are responsible for the preparation of the items in the "PBC listing" and received by the date requested. Any delays caused by not preparing the items when requested may result in additional fees, as well as the possibility of postponing of fieldwork. The "PBC listing" will be provided to you during the planning process of the engagement.

To the Honorable Mayor and
Members of the City Council

June 29, 2016
Page 5

- Our fee estimates have not considered the effects of any changes to auditing standards and accounting principles, which may promulgated by the AICPA, Congress or any other regulatory body in the future and are unknown to us at this time. If significant additional time is necessary resulting in increased fees, we will endeavor to notify you of any such circumstances as they are assessed.
- Time incurred for audit adjustments identified during our audit and the related additional testing required has not been considered in our fee estimates. Prior to performing any additional testing, we will notify you of the expectations and obtain approval for any additional fees which may be incurred.

We appreciate the opportunity to be of service to the City and believe this letter accurately summarizes the significant terms of our engagement. If you have any questions, please let us know. If you agree with the terms of our engagement as described in this letter, please sign the enclosed copy and return it to us.

Very truly yours,

Whitley Penn LLP

Whitley Penn, LLP

RESPONSE:

This letter correctly sets forth the understanding of City of Watauga, Texas.

Management signature: _____

Title: _____

Date: _____

Governance signature: _____

Title: _____

Date: _____

CERTIFICATE OF INTERESTED PARTIES

1st renewal

FORM 1295

1 of 1

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY CERTIFICATION OF FILING

Certificate Number:
2016-78498

Date Filed:
06/30/2016

Date Acknowledged:

7-11-16

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

Whitley Penn, LLP
Houston, TX United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Watauga, Texas

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

RFP #15-024
Financial Audit Services

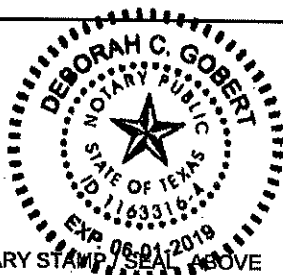
4	Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
			Controlling	Intermediary

5 Check only if there is NO interested Party.



6 AFFIDAVIT

I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.



AFFIX NOTARY STAMP/SEAL ABOVE

Celina Cereceres Miller

Signature of authorized agent of contracting business entity

Sworn to and subscribed before me, by the said Celina Cereceres Miller, this the 30th day of June, 2016, to certify which, witness my hand and seal of office.

Deborah C. Gobert

Signature of officer administering oath

Deborah C. Gobert

Printed name of officer administering oath

Notary

Title of officer administering oath

2nd Renewal

LAW OFFICES
EVANS, DANIEL, MOORE, EVANS & BIGGS
(NOT A PARTNERSHIP)

MARK G. DANIEL

BOARD CERTIFIED - CRIMINAL LAW
TEXAS BOARD OF LEGAL SPECIALIZATION

CRIMINAL TRIAL SPECIALIST-BOARD CERTIFIED
NATIONAL BOARD OF TRIAL ADVOCACY

SUNDANCE SQUARE
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(817) 332-3822
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OF COUNSEL

TIM EVANS
TIM MOORE
LANCE T. EVANS
WILLIAM R. BIGGS

June 29, 2017

Ms. Sandra Gibson
Director of Finance and Administration
City of Watauga
7105 Whitley Road
Watauga, Texas 76148

Via Email

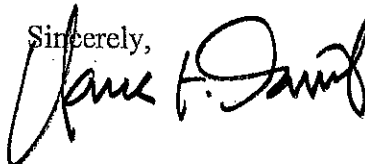
Re: Whitley Penn Letter of Engagement

Dear Ms. Gibson:

I am in receipt of the engagement letter from Whitley Penn to the City of Watauga, Texas regarding auditing the City's financial statements for the year 2017. I have reviewed this letter and would recommend that this be presented to the City Council for consideration and approval.

Thank you for your attention to the above and the opportunity to be of assistance. If you have any questions regarding this matter, please do not hesitate to contact my office.

Sincerely,



MARK G. DANIEL
City Attorney for the City of Watauga

MGD/tp

cc: Mayor Hector Garcia
Mr. Greg Vick, City Manager
Ms. Zolaina R. Parker, City Secretary

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

1 of 1

*3rd and
Renewal option*

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY CERTIFICATION OF FILING

Certificate Number:
2017-247869

Date Filed:
08/10/2017

Date Acknowledged:
8-15-17

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

Whitley Penn, LLP
Houston, TX United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Watauga, Texas

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

RFP 15-024
Annual Financial Statement Audit

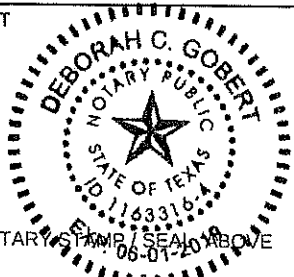
4	Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
			Controlling	Intermediary

5 Check only if there is NO interested Party.



6 AFFIDAVIT

I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.



AFFIX NOTARY SEAL ABOVE

Celina Cereceres Miller, CPA

Signature of authorized agent of contracting business entity

Sworn to and subscribed before me, by the said Celina Cereceres Miller, this the 10th day of August, 20 17, to certify which, witness my hand and seal of office.

Deborah C. Gobert

Signature of officer administering oath

Deborah C. Gobert

Printed name of officer administering oath

Notary

Title of officer administering oath



Houston Office
3411 Richmond Avenue
Suite 500
Houston, Texas 77046
713.621 1515 Main

whitleypenn.com

June 23, 2017

To the Honorable Mayor, Members of
City Council and the City Manager
City of Watauga, Texas

The following represents our understanding of the services we will provide the City of Watauga, Texas.

You have requested that we audit the financial statements of the governmental activities, the business-type activities, each major fund, and the aggregate remaining fund information of the City of Watauga, Texas (the "City"), as of September 30, 2017, and for the year then ended and the related notes to the financial statements, which collectively comprise the City's basic financial statements as listed in the table of contents. We are pleased to confirm our acceptance and our understanding of this audit engagement by means of this letter. Our audit will be conducted with the objective of our expressing an opinion on each opinion unit.

Accounting principles generally accepted in the United States of America require that management's discussion and analysis and budgetary comparison information be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the *Governmental Accounting Standards Board*, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. As part of our engagement, we will apply certain limited procedures to the required supplementary information (RSI) in accordance with auditing standards generally accepted in the United States of America. These limited procedures will consist primarily of inquiries of management regarding their methods of measurement and presentation, and comparing the information for consistency with management's responses to our inquiries. We will not express an opinion or provide any form of assurance on the RSI. The following RSI is required by accounting principles generally accepted in the United States of America. This RSI will be subjected to certain limited procedures but will not be audited:

1. Management's Discussion and Analysis
2. General Fund – Budgetary Comparison Information
3. Required Supplementary Pension Information

Supplementary information other than RSI will accompany the City's basic financial statements. We will subject the following supplementary information to the auditing procedures applied in our audit of the basic financial statements and certain additional procedures, including comparing and reconciling the supplementary information to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and additional procedures in accordance with auditing standards generally accepted in the United States of America. We intend to provide an opinion on the following supplementary information in relation to the financial statements as a whole:

1. Combining and Individual Fund Statements and Schedules

Also, the document we submit to you will include the following other additional information that will not be subjected to the auditing procedures applied in our audit of the financial statements:

1. Introductory Section
2. Statistical Section



Austin

Dallas

Fort Worth

Houston

To the Honorable Mayor, Members of
City Council and the City Manager
June 23, 2017
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The Objective of an Audit

The objective of our audit is the expression of opinions as to whether your basic financial statements are fairly presented, in all material respects, in accordance with generally accepted accounting principles and to report on the fairness of the supplementary information referred to in the second paragraph when considered in relation to the financial statements as a whole. Our audit will be conducted in accordance with auditing standards generally accepted in the United States of America and will include tests of the accounting records and other procedures we consider necessary to enable us to express such opinions. We cannot provide assurance that unmodified opinions will be expressed. Circumstances may arise in which it is necessary for us to modify our opinions or add emphasis-of-matter or other-matter paragraphs. If our opinions on the financial statements are other than unmodified, we will discuss the reasons with you in advance. If, for any reason, we are unable to complete the audit or are unable to form or have not formed opinions, we may decline to express opinions or to issue a report as a result of this engagement.

General Audit Procedures

We will conduct our audit in accordance with auditing standards generally accepted in the United States of America (U.S. GAAS). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the basic financial statements are free from material misstatement. An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to error, fraudulent financial reporting, misappropriation of assets, or violations of laws, governmental regulations, grant agreements, or contractual agreements. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

Internal Control Audit Procedures

Because of the inherent limitations of an audit, together with the inherent limitations of internal control, an unavoidable risk that some material misstatements may not be detected exists, even though the audit is properly planned and performed in accordance with U.S. GAAS.

In making our risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. However, we will communicate to you in writing concerning any significant deficiencies or material weaknesses in internal control relevant to the audit of the financial statements that we have identified during the audit.

Compliance with Laws and Regulations

As part of obtaining reasonable assurance about whether the financial statements are free of material misstatement, we will perform tests of the City's compliance with the provisions of applicable laws, regulations, contracts, and agreements. However, the objective of our audit will not be to provide an opinion on overall compliance and we will not express such an opinion.

Management Responsibilities

Our audit will be conducted on the basis that management acknowledge and understand that they have responsibility:

1. For the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America;
2. For the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to error, fraudulent financial reporting, misappropriation of assets, or violations of laws, governmental regulations, grant agreements, or contractual agreements; and

3. To provide us with:
 - i. Access to all information of which management is aware that is relevant to the preparation and fair presentation of the financial statements such as records, documentation, and other matters;
 - ii. Additional information that we may request from management for the purpose of the audit; and
 - iii. Unrestricted access to persons within the entity from whom we determine it necessary to obtain audit evidence.
4. For including the auditor's report in any document containing financial statements that indicates that such financial statements have been audited by the entity's auditor;
5. For identifying and ensuring that the entity complies with the laws and regulations applicable to its activities; and
6. For adjusting the financial statements to correct material misstatements and confirming to us in the management representation letter that the effects of any uncorrected misstatements aggregated by us during the current engagement and pertaining to the current year period(s) under audit are immaterial, both individually and in the aggregate, to the financial statements as a whole.

With regard to the supplementary information referred to above, you acknowledge and understand your responsibility: (a) for the preparation of the supplementary information in accordance with the applicable criteria; (b) to provide us with the appropriate written representations regarding supplementary information; (c) to include our report on the supplementary information in any document that contains the supplementary information and that indicates that we have reported on such supplementary information; and (d) to present the supplementary information with the audited financial statements, or if the supplementary information will not be presented with the audited financial statements, to make the audited financial statements readily available to the intended users of the supplementary information no later than the date of issuance by you of the supplementary information and our report thereon.

As part of our audit process, we will request from management, written confirmation concerning representations made to us in connection with the audit.

Reporting

We will issue a written report upon completion of our audit of the City's basic financial statements. Our report will be addressed to the governing body of the City. We cannot provide assurance that unmodified opinions will be expressed. Circumstances may arise in which it is necessary for us to modify our opinions, add an emphasis-of-matter or other-matter paragraph(s), or withdraw from the engagement.

Other

We understand that your employees will prepare all confirmations we request and will locate any documents or support for any other transactions we select for testing.

If you intend to publish or otherwise reproduce the financial statements and make reference to our firm, you agree to provide us with printers' proofs or masters for our review and approval before printing. You also agree to provide us with a copy of the final reproduced material for our approval before it is distributed.

Provisions of Engagement Administration, Timing and Fees

During the course of the engagement, we may communicate with you or your personnel via fax or e-mail, and you should be aware that communication in those mediums contains a risk of misdirected or intercepted communications.

To the Honorable Mayor, Members of
City Council and the City Manager
June 23, 2017
Page 4

The timing of our audit will be scheduled for performance and completion as follows:

Document internal control and preliminary tests	<u>September 2017</u>
Perform year-end audit procedures	<u>December 2017</u>
Issue audit report	<u>February 2018</u>

Celina Miller, CPA, is the engagement partner for the audit services specified in this letter. Her responsibilities include supervising Whitley Penn, LLP's services performed as part of this engagement and signing or authorizing another qualified firm representative to sign the audit report.

Our fees for the audit services will be based on the amount of time required and the difficulty of the work involved which will not exceed those fees set out in the following schedule:

Financial statement audit fee \$51,000

We will notify you immediately of any circumstances we encounter that could significantly affect this initial fee estimate. Whenever possible, we will attempt to use the City's personnel to assist in the preparation of schedules and analyses of accounts. This effort could substantially reduce our time requirements and facilitate the timely conclusion of the audit. With respect to any nonattest services we perform, the City's management is responsible for (a) making all management decisions and performing all management functions; (b) assigning a competent individual to oversee the services; (c) evaluating the adequacy of the services performed; (d) evaluating and accepting responsibility for the results of the services performed; and (e) establishing and maintaining internal controls, including monitoring ongoing activities. Further, we will be available during the year to consult with you on financial management and accounting matters of a routine nature.

During the course of the audit we may observe opportunities for economy in, or improved controls over, your operations. We will bring such matters to the attention of the appropriate level of management, either orally or in writing.

We agree to retain our audit documentation or work papers for a period of at least seven years from the date of our report.

At the conclusion of our audit engagement, we will communicate to City Council the following significant findings from the audit:

- Our view about the qualitative aspects of the entity's significant accounting practices;
- Significant difficulties, if any, encountered during the audit;
- Uncorrected misstatements, other than those we believe are trivial, if any;
- Disagreements with management, if any;
- Other findings or issues, if any, arising from the audit that are, in our professional judgment, significant and relevant to those charged with governance regarding their oversight of the financial reporting process;
- Material, corrected misstatements that were brought to the attention of management as a result of our audit procedures;
- Representations we requested from management;
- Management's consultations with other accountants, if any, and
- Significant issues, if any, arising from the audit that were discussed, or the subject of correspondence, with management.

To the Honorable Mayor, Members of
City Council and the City Manager
June 23, 2017
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Please sign and return the attached copy of this letter to indicate your acknowledgment of, and agreement with, the arrangements for our audit of the financial statements including our respective responsibilities.

We appreciate the opportunity to be your financial statement auditors and look forward to working with you and your staff.

Respectfully,

Whitney Penn LLP

RESPONSE:

This letter correctly sets forth our understanding.

CITY OF WATAUGA, TEXAS

Acknowledged and agreed on behalf of CITY OF WATAUGA, TEXAS by:

Hector F. Garcia

Title: Hector F. Garcia, Mayor

Date: July 24, 2017

