

City of Bartlett

David Parsons, Mayor

BOARD OF MAYOR AND ALDERMEN MEETING MINUTES

TUESDAY, APRIL 22, 2025 - BARTLETT CITY HALL - 6:00 PM

ATTENDANCE

Mayor David Parsons: Present, Alderman Brad King: Absent, Alderman Robert Griffin: Present, Alderman David Reaves: Present, Alderman Monique L. Williams: Present, Vice Mayor Jack Young: Present, Alderman Kevin Quinn: Present.

INVOCATION

Opening Prayer by Bo Grace, Waypoint Baptist Church

FUTURE MEETINGS

Bartlett Library Advisory Board, April 24 at 6 p.m.

YMCA Advisory Board, April 28 at 6 p.m.

City Beautiful Commission, May 1 at 6:30 p.m.

Industrial Development Board, May 1 at 6:30 p.m.

Family Assistance Commission, May 5 at 6 p.m.

Planning Commission, May 5 at 6:30 p.m.

Beer Board, May 6 at 6 p.m.

Bartlett Station Commission, May 7 at 7:30 a.m.

Parks and Recreation Advisory Board, May 8 at 6 p.m.

RECOGNITIONS

Administrative Professionals Day

Proclamation presented in recognition of Administrative Professionals' Day on Wednesday, April 23, 2025.

Professional Municipal Clerks Week

Proclamation issued in recognition of Professional Municipal Clerks Week on May 4, 2025 through May 10, 2025. The office of Municipal Clerk is the oldest among public servants.

*****Official Business of the Day*****

MINUTES ACCEPTANCE**Minutes of the April 8, 2025 Board of Mayor and Aldermen Regular Meeting**

RESULT:	ACCEPTED [UNANIMOUS]
MOVER:	Jack Young, Vice Mayor
SECONDER:	David Reaves, Alderman
AYES:	Robert Griffin, David Reaves, Monique L. Williams, Jack Young, Kevin Quinn

CONSENT AGENDA

RESULT:	APPROVED [UNANIMOUS]
MOVER:	David Reaves, Alderman
SECONDER:	Jack Young, Vice Mayor
AYES:	Robert Griffin, David Reaves, Monique L. Williams, Jack Young, Kevin Quinn

- 1 Special Event Permit for Bartlett Live Music Series. (Trey Arthur, Director of Code Enforcement)**
The events will be held on July 12, July 26, August 9, August 23, September 6, and September 20 from 7:00 p.m. to 10:00 p.m. at the A. Keith McDonald Pavilion in W.J. Freeman Park.
- 2 Special Event Permit for One More Loved 5k. (Trey Arthur, Director of Code Enforcement)**
The event will be held on Saturday, June 7 from 8:00 a.m. to 1:00 p.m. at Faith Baptist Church located at 3755 N. Germantown Road.
- 3 Special Event Permit for Memphis Runners Track Club Road Race Series, Cindy and Michael Rickert 5 Mile Runs. (Trey Arthur, Director of Code Enforcement)**
The events will be held on Sundays, August 10 and 24, from 5:30 a.m. to 9:30 a.m. at W.J. Freeman Park.
- 4 Amendment #3 for Allen and Hoshall Design Contract for sewer work funded by ARPA Funds. (John Horne, Director of Engineering)**
Recommend accepting Amendment #3 for Allen and Hoshall's Design Contract in the amount of \$54,400.00. Funding is available in the FY25 approved budget.
- 5 Purchase sanitary sewer easements for the Lakeland Oliver Creek Sewer Project. (John Horne, Director of Engineering)**
Request approval to purchase four sanitary sewer easements at a total appraised value of \$49,742.00. Easement acquisition will be conducted by Engineering staff. Funds are available in Account 312.48312.780.809.

6 Bid for Logging Recorder. (Jeff Cox, Police Chief)

Recommend accepting the lowest qualified bid for logging recorder for \$154,416.60 and a five- year maintenance agreement for \$113,409.95 from AMK Services.

Funds for the logging recorder will be furnished by Shelby County 911 District at \$154,416.60. Funds are available in Account 123.48123,264 for the five-year maintenance agreement for a cost of \$113,409.95.

7 Authorization to auction surplus property. (Dick Phebus, Director of Finance)

Eight items have been identified as having a potential auction value of \$500 or more and will be auctioned on GovDeals.com.

8 Treasurer's Report for February 2025. (Dick Phebus, Director of Finance)

Budgeted Expenditures \$100,937,114
Year-to-date Expenditures\$ 62,612,687
Budgeted Revenues \$100,937,114
Year-to-date Revenues \$ 60,013,213

NEW BUSINESS**1 Appoint Don Conway to the Planning Commission. (David Parsons, Mayor)**

RESULT:	APPROVED [UNANIMOUS]
MOVER:	David Reaves, Alderman
SECONDER:	Robert Griffin, Alderman
AYES:	Robert Griffin, David Reaves, Monique L. Williams, Jack Young, Kevin Quinn

2 Appoint James Reid to the Planning Commission. (David Parsons, Mayor)

RESULT:	APPROVED [UNANIMOUS]
MOVER:	Jack Young, Vice Mayor
SECONDER:	Kevin Quinn, Alderman
AYES:	Robert Griffin, David Reaves, Monique L. Williams, Jack Young, Kevin Quinn

3 First Reading of Ordinance 25-01, an ordinance to rezone from “C-L” Neighborhood Commercial to “C-H” Highway Business Commercial property at 8229 Highway 70. (Kim Taylor, Director of Planning and Economic Development)

The request comes from the property owner. Five acres face U.S. Highway 70 and five acres face Memphis Arlington Road. The second reading will be on Tuesday, May 13, 2025.

RESULT:	APPROVED ON FIRST READING [UNANIMOUS]	Next: 5/13/2025 6:00 PM
MOVER:	David Reaves, Alderman	
SECONDER:	Robert Griffin, Alderman	
AYES:	Robert Griffin, David Reaves, Monique L. Williams, Jack Young, Kevin Quinn	

OPEN DISCUSSION

The public shall be provided an opportunity to address the Board or Commission during an Open Discussion period at the end of each regular and special meeting of the governing body. Prior to the start of the meeting, individuals will be required to complete and present to the Clerk the Open Discussion Citizen form provided at each meeting. The Open Discussion period for regular and special meetings of the Board or Commission shall be limited to twenty (20) minutes. Individuals shall be allowed to speak for up to three (3) minutes each. Open Discussion periods will not be held for any meeting where there are no actionable items on the agenda or meetings where the governing body is conducting a disciplinary hearing for a member of the governing body or a person whose profession or activities fall within the jurisdiction of the governing body.

Alderman Kevin Quinn reminded everyone about the upcoming City Plant Sale this weekend, Saturday, April 26 through Sunday, April 27.

Alderman Robert Griffin reminded everyone of the Jazz Night with a Silent Auction at Bartlett High School at 6:30 p.m. in the cafeteria.

Alderman David Reaves announced that Resolution 08-25, a resolution of the Board of Mayor and Aldermen of the City of Bartlett requesting the Tennessee General Assembly to enact an amendment to the City Charter, passed in the House (86-7) and Senate (unanimously). It is awaiting the signature of Governor Bill Lee.

Trey Arthur, Director of Code Enforcement, reported the owners of Quail Ridge Golf Course are now receiving notices from the City regarding the property. The original notices had been delivered to the Club House and no one was available to accept them.

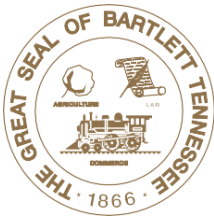
Debbie Gelineau, Director of Community Relations, reminded everyone about the upcoming National Day of Prayer observance at A. Keith Pavilion in Freeman Park beginning at noon.

Kathleen Bearden, 5503 Wakefield Cove, Bartlett, 38134, came forward and asked for clarification on the location of proposed rezoning of the property at 8229 Highway 70. Kim Taylor, Director of Planning and Economic Development, provided Ms. Bearden with a map of the location.

Charlotte Potter, 3020 Barrycrest Drive, Bartlett, 38134, and Betty Newman, 3035 Ingleside Drive, Bartlett, 38134 came forward expressing their concerns regarding the right of way and property on the perimeter of U.S. Post Office, 2966 Elmore Park Road, Bartlett. They stated the grass is overgrown, trash is spread all around the property, and downed limbs have broken a fence separating the Post Office from a residence. Mayor Parsons asked them to send him an email with their concerns and the City will forward those to leadership overseeing the U.S. Post Office.

ADJOURNMENT

Meeting adjourned at 6:23 PM



City of Bartlett

David Parsons, Mayor

BOARD OF MAYOR AND ALDERMEN MEETING MINUTES

TUESDAY, APRIL 8, 2025 - BARTLETT CITY HALL - 6:00 PM

ATTENDANCE

Mayor David Parsons: Present, Alderman Brad King: Present, Alderman Robert Griffin: Present, Alderman David Reaves: Present, Alderman Monique L. Williams: Present, Vice Mayor Jack Young: Present, Alderman Kevin Quinn: Present.

INVOCATION

Opening Prayer by Chaplain Johnny Byrd, Legacy Church

FUTURE MEETINGS

Parks and Recreation Advisory Board, April 10 at 6 p.m.

YMCA Advisory Board, April 14 at 6 p.m.

BPACC Advisory Board, April 14 at 6 p.m.

Bartlett Arts Council, April 15 at 6 p.m.

Design Review Commission, April 15 at 6:30 p.m.

Board of Zoning Appeals, April 17 at 6:30 p.m.

RECOGNITIONS

Blue and Green Day Proclamation

Dr. Telisa Franklin with the Mid-South Transplant Foundation announced that Blue and Green Day is April 11, 2025. Citizens are encouraged to wear those colors to promote organ and tissue donation.

National Public Safety Telecommunications Week

Mayor Parsons presented Police Chief Jeff Cox and PSAP Director Juliea Goodman with a proclamation for National Public Safety Telecommunications Week.

Employee of the Year Recognitions

The following employees were acknowledged for receiving Employee of the Year in 2024.

Police Department:	Jared Martin
Fire Department:	Jeremy Carver
Public Works:	Billy Johnson
Parks and Recreation:	Celestine Willis
Code Enforcement:	Laura Jenkins

Minutes Acceptance: Minutes of Apr 8, 2025 6:00 PM (MINUTES ACCEPTANCE)

*****Official Business of the Day*****

Mayor Parsons announced the emergency purchase of generator automatic transfer switch for the Ardie Road Water Treatment Plant from Lowrie Electric Company at \$69,680.00.

MINUTES ACCEPTANCE**Minutes of the March 11, 2025 Board of Mayor and Aldermen Regular Meeting**

RESULT:	ACCEPTED [UNANIMOUS]
MOVER:	Jack Young, Vice Mayor
SECONDER:	David Reaves, Alderman
AYES:	Brad King, Robert Griffin, David Reaves, Monique L. Williams, Jack Young, Kevin Quinn

CONSENT AGENDA

RESULT:	APPROVED [UNANIMOUS]
MOVER:	David Reaves, Alderman
SECONDER:	Robert Griffin, Alderman
AYES:	Brad King, Robert Griffin, David Reaves, Monique L. Williams, Jack Young, Kevin Quinn

- 1 Flashlight Easter Egg Hunt. (Trey Arthur, Director of Code Enforcement)**
The event will be held on Friday, April 18 from 7:00 p.m. to 9:00 p.m. at Ellendale Baptist Church.
- 2 Authorization to auction surplus property. (Dick Phebus, Director of Finance)**
Two items have been identified as having a potential auction-value of \$500 or more and will be auctioned on GovDeals.com.
- 3 Purchase picnic tables and benches. (Paul Wright, Director of Parks and Recreation)**
Request authorization to purchase 18 picnic tables and 50 benches for City parks. This purchase is from Mid-South Recreation through Keystone Purchasing Network (KPN) contract #: KPN-202001-03 for a total cost of \$85,850.00.
Funds are available in Account 110.44300.939.
- 4 Purchase a 2025 Chevrolet Silverado Custom Crew Cab. (Matt Crenshaw, Director of Public Works)**
Recommend purchasing a 2025 Chevrolet Silverado 1500 crew cab using the State of Tennessee vehicle contract, SWC #84707, from Wilson County Motors for \$43,469.90.
Funds are available in Account 510.513000.935.
- 5 Purchase two 2025 Chevrolet Silverado 1500 LT Crew Cabs. (Matt Crenshaw, Director of Public Works)**
Recommend purchasing two 2025 Chevrolet Silverado 1500 LT crew cabs for Water-Wastewater Division using the State of Tennessee vehicle contract, SWC #84707, from

Minutes Acceptance: Minutes of Apr 8, 2025 6:00 PM (MINUTES ACCEPTANCE)

Wilson County Motors for \$52,683.55 each total \$105,367.10. Funds are available in Account 510.513000.935.

6 Contract for St Elmo, Old Brownsville, Ellendale, Billy Maher Resurfacing project environmental and design services. (John Horne, Director of Engineering)

Recommend accepting the environmental and design contract proposal from Fisher Arnold in the amount of \$471,260.00. Funds are available in Account 311.48311.772.4581.

NEW BUSINESS

I Appoint Steve Hogel to City Beautiful Commission. (David Parsons, Mayor)

RESULT:	APPROVED [UNANIMOUS]
MOVER:	David Reaves, Alderman
SECONDER:	Robert Griffin, Alderman
AYES:	Brad King, Robert Griffin, David Reaves, Monique L. Williams, Jack Young, Kevin Quinn

2 Resolution 12-25, a resolution authorizing the Mayor to execute an Inter-Jurisdictional agreement between the City of Bartlett and the City of Lakeland. (John Horne, Director of Engineering)

RESULT:	APPROVED [UNANIMOUS]
MOVER:	David Reaves, Alderman
SECONDER:	Jack Young, Vice Mayor
AYES:	Brad King, Robert Griffin, David Reaves, Monique L. Williams, Jack Young, Kevin Quinn

OPEN DISCUSSION

Alderman Reaves asked about a paving schedule. Director of Engineering John Horne stated that during the annual bid process, proposed paving is outlined. Alderman Reaves requested that information be updated as paving progresses throughout the year.

Alderman Griffin made citizens aware of Bartlett High School Jazz Band's fundraiser scheduled for Tuesday, April 22 at 6:30 p.m.

Director of Parks and Recreation Paul Wright announced the Easter Extravaganza. He stated that Parks had partnered with the Bartlett Lion's Club to include a Beeping Egg Hunt for individuals with special needs. The event is Saturday, April 12 from 9 a.m. to noon. He also announced Keep Bartlett Beautiful on Saturday, April 26 from 9 a.m. to noon.

Chief Communications Officer Todd Halford announced that a Palm Sunday event from 2 p.m. - 4 p.m. hosted by Bartlett area churches would be held at the A. Keith McDonald Pavilion at W.J. Freeman Park on April 13, 2025.

In addition, the Bartlett Library will host the Bartlett Book Bonanza on April 19 from 1 p.m. - 5 p.m. Local authors will be in attendance.

Marva Malone, 6819 Old Brownsville Road stated that garbage was being dumped and expressed interest in paving her street.

Brad Less, 6599 Ricks Road, Arlington, TN, announced his candidacy for Shelby County Mayor in 2026.

ADJOURNMENT

Meeting adjourned at 6:49 PM

Harold Brad King, Register to the
Board of Mayor and Aldermen

David Parsons, Mayor

Minutes Acceptance: Minutes of Apr 8, 2025 6:00 PM (MINUTES ACCEPTANCE)



**APPLICATION FOR SPECIAL EVENT
OFFICE OF
BARTLETT CODE ENFORCEMENT
6382 STAGE ROAD
BARTLETT TN 38134
901-385-6425**

2629 Bartlett Blvd - A. Keith McDonald Pavilion 38134
Address Zip Code

SAT - July 12 + 26 - Aug 9 + 23 - Sept 6 + 20 7:00pm - 10:00pm
Dates of the Event Hours of the Event

BARTLETT LIVE MUSIC SERIES
Type of Event (Fund Raiser, Seasonal, Tent Sale, Sidewalk Sale, Public Attraction)

City of Bartlett
Property Owner

Debbie Galineau / Todd Halford - 6400 Stage Rd
Special Event Permit Applicant Address of Applicant

901-385-5589
Phone Number Fax Number

Check all items that apply:

For information call (901) 385-6425.

- ☐ State of TN Business License, Shelby County Business License, Bartlett Business License (For Type 2 Events)
- ☒ Letter of Permission
- ☒ Insurance
- ☐ Tents (Fire Retardant letter included)
- ☒ Special Event Checklist
- ☒ Map
- ☒ Sign or Banner

<u>\$60.00</u>	Special Event Fee
<u>\$5.00</u>	Permit Issuing Fee
<u>\$7.00</u>	Software Fee
<u>\$</u>	3% Credit Card Fee
<u>\$</u>	Total Permit Fee

[Signature]
Responsible Person Signature and Printed Name

2/17/2025
Date

****Notify building department 10 days prior to Special Event to be held unless it is a Public Attraction which requires approval from the Board of Mayor & Aldermen.****

APPROVAL

This application is not a permit and grants no rights or privileges.

Attachment: Bartlett Live Music Series (3731 : Bartlett Live Music Series)

Special Event Checklist

Event: Bartlett LIVE Music Series
 Location: A. Keith McDonald Pavilion @ W.J. Freeman Park
 Dates: July 12+26 - Aug 9+23 Sept 6+20
 Type of special event: (Check one.)

☐ *Type 1: Noncommercial Events.* Fund-raising or non-commercial events held outside an enclosed permanent structure, including parades, advertised demonstrations, or events, including structures used in conjunction with the event.

☐ *Type 2: Special Seasonal Events.* Farmers' market, Christmas tree sales, fruit, flower or vegetable sales, or sale of other seasonal products, when sold other than on the site where grown, constructed or assembled.

☒ *Type 3: Commercial Events.* Significant commercial events such as tent sales, sidewalk sales, trade shows, merchandise sales, product demonstrations or transient merchants.

☒ *Type 4: Public Attractions.* Significant outdoor public events intended primarily for entertainment or amusement, such as carnivals, concerts, or festivals, including fireworks displays. **Requires approval by the Board of Mayor and Aldermen.**

Exempt events: (If any of these apply, the special event is exempt from the permit requirement.)

☒ *Public property.* Any special event wholly on public streets and right-of-ways or other property of the City, excluding public parks, which special event is allowed specifically or generally by action of the Board of Mayor and Aldermen.

☒ *Public parks.* Any special event held within a public park. (Although exempt from this Section, these types of special events shall be governed by other provisions of the Codified Ordinances regulating conduct in City parks and recreation areas.)

☒ *City sponsorship.* Any special event sponsored or co-sponsored by the City. Such event shall, however, be in compliance with the performance standards in Section 27.F.

☒ *Special use permit or site plan.* Any business already operating under a special use permit or site plan that authorizes the display and sale of outdoor goods or authorizes the operation of any special event as defined herein.

☐ *Yard sales.* Yard sales regulated under Article VI, Section 1 of the Zoning Ordinance.

☐ *Auctions/estate sales.* Auctions/estate sale for individual property that is not considered a special event and is conducted by duly licensed auctioneers.

☐ *Business deliveries.* Newspaper delivery or bona fide merchants who deliver goods in the regular course of business.

☐ *Certain solicitations.* Solicitors for charitable, non-profit or religious organizations who go from dwelling to dwelling, business to business, street to street, taking or attempting to take orders for goods, wares and merchandise are exempt from these provisions, provided these organizations meet the Internal Revenue Service Criteria to qualify as a charitable, non-profit or religious organization.

☐ *First Amendment activity.* The dispensing of religious pamphlets or other literature which is protected by the United States Constitution under Freedom of Speech, Religion or Press.

☐ *Political campaigning.* Campaigning for public office.

Performance standards:

	Sub- mitted ✓ or X	OK	N/A		Comments
1		✓		<i>Location.</i> Special events that do not require the use of public right-of-way shall be conducted on private property in a commercial or industrial zoning district, except that non-profit organizations may conduct special events on any property where the owner has granted permission.	only in the park AYCA
2			✓	For all special events that require the use of public right-of-way, the permit granted shall clearly specify the streets to be used for the event and the time that the streets will be closed, if applicable.	
3		✓		Type 3 outdoor sales must be conducted by an existing permanent business adjacent to and on the property of the location of the permanent business. The outdoor sales are to be conducted as an adjunct to the existing permanent business.	Food vendors that are city approved with all info - Health-Fire COI on file
4			✓	<i>Land-use compatibility.</i> The special event shall be compatible with the purpose and intent of this Section and with adjacent land uses.	
5		✓		The special event shall not impair the normal, safe and effective operation of a permanent use on the same site.	
6		✓		The special event shall not endanger or be detrimental to the public health, safety or welfare or injurious to property or improvements in the immediate vicinity of the special event, given the nature of the activity, its location on the site and its relationship to parking and access points.	
7		✓		<i>Compliance with other regulations.</i> All structures shall meet all applicable provisions of the Building Code.	
8			✓	Any temporary structure shall be promptly removed upon the cessation of the event. Within forty-eight (48) hours of cessation of the event, the site shall be returned to its previous condition, including the removal of all litter, signage, attention-attracting devices or other evidence of the special event. If the site is not returned to its previous condition, the City may restore the site at the event coordinator's expense.	

	Sub- mitted ✓ or X	OK	N/A		Comments										
9		✓		<i>Hours of operation and duration.</i> The duration and hours of operation of a special event shall be consistent with the surrounding land uses. The total duration of a special event shall not exceed the duration set forth in Table VI.27-1; however, the duration of the special event may be modified by conditions attached to the issuance of the special event permit, as set forth in Section 27.F. Table V.27-1: Special Event Maximum Duration <table><tr><th>Type of Special Event</th><th>Duration</th></tr><tr><td>Type 1: Noncommercial</td><td>30 days</td></tr><tr><td>Type 2: Special Seasonal</td><td>90 days</td></tr><tr><td>Type 3: Commercial</td><td>14 days</td></tr><tr><td>Type 4: Public Attractions</td><td>14 days</td></tr></table>	Type of Special Event	Duration	Type 1: Noncommercial	30 days	Type 2: Special Seasonal	90 days	Type 3: Commercial	14 days	Type 4: Public Attractions	14 days	HOURS MUSIC 7pm-10pm
Type of Special Event	Duration														
Type 1: Noncommercial	30 days														
Type 2: Special Seasonal	90 days														
Type 3: Commercial	14 days														
Type 4: Public Attractions	14 days														
10				In addition to the maximum duration as set forth in Table VI.27-1, a shopping center may hold centralized special events, not connected to individual businesses within the shopping center, which do not exceed sixty (60) days in a calendar year. The duration of all special events in a shopping center may be extended on a case by case basis if the special event(s) take place in shopping center parking areas not required for the primary businesses.											
11		✓		<i>Frequency.</i> Except as otherwise provided herein, the maximum frequency of a special event on the same property shall be two (2) times per calendar year, excluding a shopping center. A shopping center shall be allowed to hold four (4) centralized events not connected to any individual business located within the center in addition to those events held by the individual businesses located within the shopping center.											

	Sub- mitted ✓ or X	OK	N/A		Comments
12		✓		Type 3 outdoor sales at a specific location may be permitted only as follows: a. Outdoor sales may be permitted once in each calendar month if the duration is not more than three (3) days. b. Outdoor sales may be permitted once in each calendar quarter if the duration is more than three (3) days but not more than ten (10) days. c. The minimum time between consecutive outdoor sales periods for the same business on the same property shall be fourteen (14) days from the beginning of one period to the beginning of the next period. Permitted durations are not cumulative in any time period, that is, the time periods in both "a" and "b" may not be added together.	McDaddlesome Brewing Co is Beer vendor to be APPROVED At April Beer Board - All Food vendors are city approved with info on file they will not be the SAME each time
13		✓		Traffic circulation. The special event shall not cause undue traffic congestion or accident potential, given anticipated attendance and the design of adjacent streets, intersections, parking and traffic controls. All sidewalks shall be left open for pedestrian traffic unless special approval is received for blockage. No alleys, driveways, fire lanes or other access points shall be blocked by the special event unless specific approval is granted for the special event.	
14			✓	Street closings. The special event permit recipients shall be responsible for securing, installing and immediate removal upon cessation all barricades and signs when street closings are approved. Large Class III barricades shall be sandbagged to prevent blowing over.	no street closings

	Sub- mitted ✓ or X	OK	N/A		Comments
15		✓		<i>Fire safety.</i> The fire department shall be consulted for the following requirements and inspection, as necessary. a. Fire lanes a minimum of 20 feet in width and 12 feet in height or as otherwise approved by the Fire Chief must be provided in order to allow Fire Department access within 150 feet of all structures and on at least two sides of all two-story structures within 500 feet of the location of the special event. b. All fire hydrants in the area of the special event must be left with five (5) feet of clearance on all sides and shall be accessible from the fire lanes that are designated with the event. c. No open fires shall be permitted unless advance approval is obtained from the Fire Department. d. Fire extinguishers shall be available as determined by the Fire Chief. e. Temporary electrical wiring for the special event shall be installed in accordance with the requirements of the National Electrical Code. f. Tents shall comply with the Fire Code and applicable building codes. g. Exit signs and proper exiting aisles shall be provided in temporary special event structures.	
16			✓	<i>Off-street parking.</i> The event shall not create a parking shortage for any other use. All off-street parking surfaces used for the special event shall be concrete or asphalt.	
17		✓		<i>Public conveniences and litter control.</i> Adequate on-site rest room facilities and solid waste containers shall be provided. The applicant shall calculate the demand for such facilities and specify how the need will be addressed.	Public Restrooms at the park
18		✓		<i>Nuisances.</i> The special event shall not generate excessive noise, dust, smoke, glare, spillover lighting or other forms of environmental or visual pollution.	

	Sub- mitted ✓ or X	OK	N/A		Comments
19	✓	✓		<i>Area of parking lot dedicated to outdoor special events.</i> a. No more than ten (10) percent of the parking stalls required for the structure associated with the parking lot in which the special event occurs shall be permitted to be used for a special event. Regardless of how many stalls are occupied by the special event, no special event that occurs in the parking lot for a permanent structure may cause a parking shortage for primary and accessory uses associated with that structure. b. No spikes, nails, anchors or other devices shall be driven into any public street, sidewalk or parking lot surface or into any existing concrete or asphalt. Such devices may be used on private parking lots provided any damage resulting therefrom shall be fixed upon cessation of the event and removal of the devices.	MAP INCLUDED WITH PERMIT
20				<i>City services.</i> If the applicant requests the City to provide services or equipment, including but not limited to traffic control or security personnel, or if the City otherwise determines that services or equipment are required to protect the public health, safety, or general welfare, the applicant shall be required to reimburse the City for the cost of the services. The City may require the applicant to submit a security deposit, in an amount determined by the Chief Administrative Officer and in the form approved by the City Attorney, prior to the event to ensure that the applicant complies with this provision.	CITY EVENT = WE WILL USE PARKS - PW POLICE - FIRE AS NEEDED
21		✓		<i>Insurance coverage.</i> Special event permit recipients must show proof of liability insurance at time of application. If the special event will take place on public property, said certificate of insurance shall name the City as an additional insured party in an amount determined by the Chief Administrative Officer based on the nature of the special event.	will have extra trash CARTS

Conditions

Conditions deemed necessary to ensure compatibility with adjacent land-uses and to minimize potential adverse impacts on nearby uses:

	Required ✓ or X	N/A		Comments
22	✓		Limitations on signs. <i>SPONSOR BANNERS will go up day of EVENT</i>	
23	✓		Temporary arrangements for parking and traffic circulation.	
24	✓		Requirements for screening/buffering and guarantees for site restoration and cleanup following the special event.	
25		✓	Modifications or restrictions on the hours of operation, duration of the event, size of the event or other operational characteristics.	
26		✓	The posting of security in an amount required by the Permitting Official to help ensure that the operation of the event and the subsequent restoration of the site are conducted according to required special event standards and conditions of approval.	
27		✓	The provision of traffic control or security personnel to ensure the public safety and convenience.	
28	✓		Execution of a "Special event agreement" in a form acceptable to the City Attorney to ensure the indemnification of the City and that public property will be protected and/or restored to its condition prior to the special event.	

Special event permit application, content and submission requirements

A complete application shall be submitted to the Permitting Official at least **ten (10) days** prior to the requested start date of any special event.

The application shall set forth and contain the following information:

	Sub- mitted ✓ or X	OK	N/A		Comments
29	✓			Name and address of the applicant.	
30	✓			Names and address of the owner of the premises on which the proposed event is to be held.	
31	✓			Written approval from the property owner agreeing to the proposed event, if the applicant is not the same as the property owner.	
32	✓			Description of the site on which the proposed event is to be held.	
33	✓			Date of the proposed event.	
34	✓			A narrative written description of the proposed event, the hours of operation, anticipated attendance, and any buildings/ structures, signs or attention-attracting devices proposed to be used in conjunction with the event, as well as a statement that the standards set forth in this Section have been satisfied. The narrative written description shall also state what public streets, if any, are requested to be used for the special event.	
35		✓		A site plan in the form and the level of detail as required by the Permitting Official, showing the location of all existing or proposed uses, structures, parking areas, outdoor display areas, signs, streets, and property lines.	
36		✓		Location and number of proposed temporary public toilets.	
37			✓	Proposed temporary potable water supplies, which shall be subject to approval by the Director of Code Enforcement, pursuant to applicable authority of the City.	
38		✓		Any other information deemed necessary by the Permitting Official to ensure compliance with the standards set forth in this Section.	

Special event permit - authorization by Permitting Official

Type 1, 2 and 3 special events (as defined in part B) may be issued a special event permit by the Permitting Official on the form provided by the City when all of the following conditions have been satisfied and continue to be met throughout the special event:

	OK ✓ or X	N/A		Comments
39	✓		A complete application is made on the form provided by the City and a fee paid in accordance with City ordinances.	
40	✓		The application has been reviewed and approved in writing by the Code Enforcement, Fire, Police, and Public Works Departments for traffic control and other safety concerns.	
41	✓		An electrical plan, if required for the special event, is approved by the Director of Code Enforcement.	
42	✓		The Permitting Official determines the following: a. The special event will comply with the special event performance standards...;	
43	✓		b. The special event will not endanger the public health, safety, or general welfare given the nature of the activity, its location on the site, and its relationship to parking and access points;	
44	✓		c. The special event will not impair the usefulness, enjoyment or value of adjacent property due to the generation of excessive noise, smoke, odor, glare, litter, or visual pollution;	
45	✓		d. The special event shall comply with all applicable state and federal health, safety, environmental and other applicable requirements.	



The Bartlett LIVE music series will hold its sophomore season this summer in WJ Freeman Park at the A.K. McDonald pavilion. This summer we will feature a host of local musical talent in a six concert series that is free and open to the public.

- July 12 YMNB
- July 26 Soundbox
- August 9 Park Hill Billies
- August 23 Area 51
- Sept 6 Bruce Kee
- Sept 20 Jay Jones

Along with the music the Parks Department Rec Rover will be set up with yard games. Food vendors and Meddlesome Brewing Company will be there.

The music series was a huge success last year and we were looking forward to making the 2025 season even better.



David Parsons, *Mayor*
Paul Wright, *Parks Director*

February 13, 2025

City of Bartlett
Code Enforcement
6382 Stage Road
Bartlett, TN 38134

The City of Bartlett has requested the use of A. Keith McDonald Pavilion and surrounding parking area at W.J. Freeman Park from 2pm-11pm to host the Bartlett LIVE Music Series on the following dates:

- Saturday, July 12
- Saturday, July 26
- Saturday, August 9
- Saturday, August 23
- Saturday, September 6
- Saturday, September 20

Live music, family activities and food trucks will be available to the public from 7-10pm on the above dates. All fees for use of the pavilion and surrounding area will be waived. Permission is hereby given by the Bartlett Parks and Recreation Department pending approval by Code Enforcement.

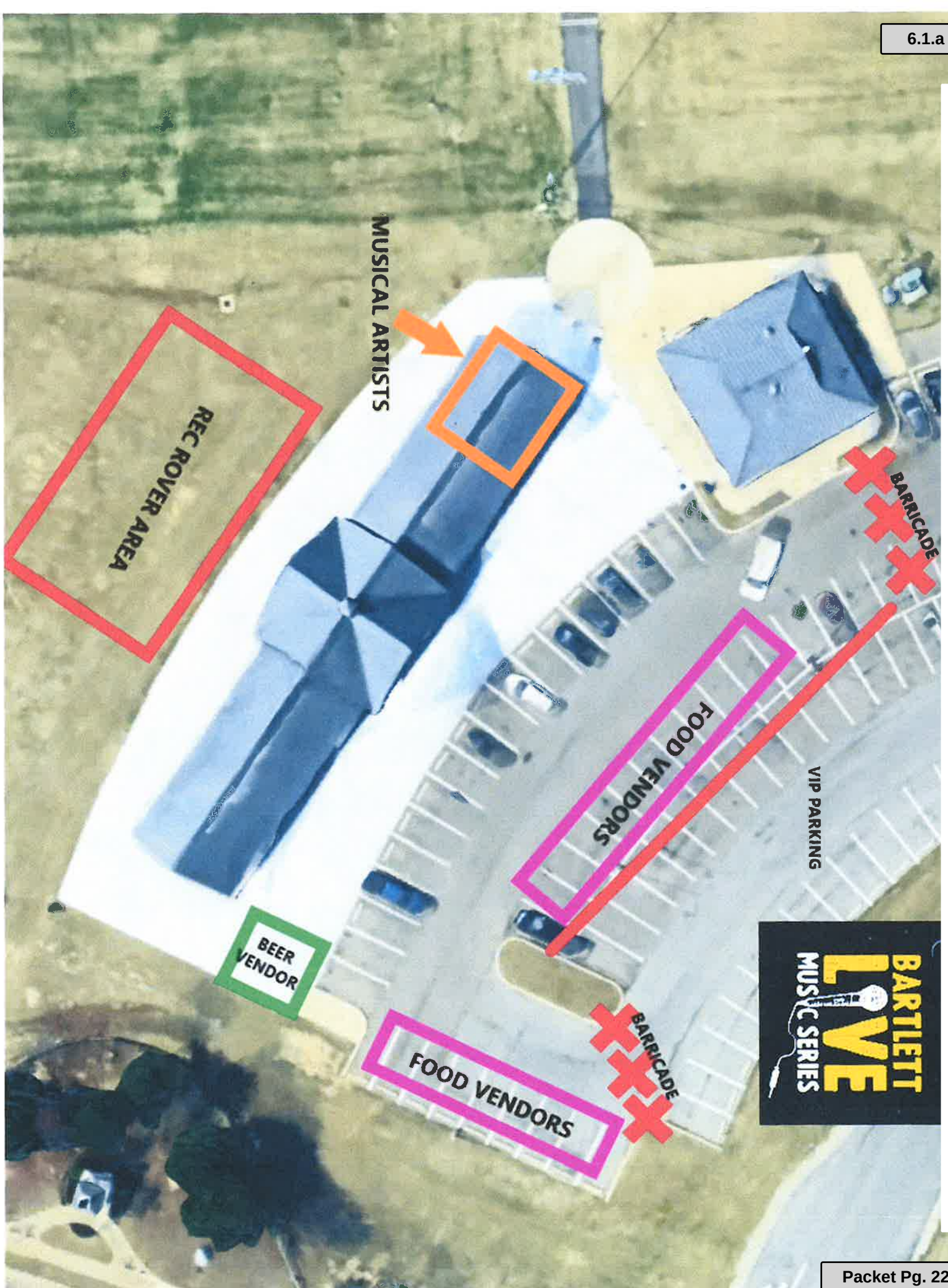
Sincerely,

A handwritten signature in blue ink, appearing to read "P. Wright".

Paul Wright, CPRE
Director Parks and Recreation Department
City of Bartlett

cc: Debbie Gelineau
dgelineau@cityofbartlett.org

Attachment: Bartlett Live Music Series (3731 : Bartlett Live Music Series)



Special Event Checklist

Event: One More Loved 5K
 Location: Faith Baptist - 3755 N. Germantown Rd.
 Dates: 6-7-25

Type of special event: (Check one.)

- ☒ *Type 1: Noncommercial Events.* Fund-raising or non-commercial events held outside an enclosed permanent structure, including parades, advertised demonstrations, or events, including structures used in conjunction with the event.
- ☐ *Type 2: Special Seasonal Events.* Farmers' market, Christmas tree sales, fruit, flower or vegetable sales, or sale of other seasonal products, when sold other than on the site where grown, constructed or assembled.
- ☐ *Type 3: Commercial Events.* Significant commercial events such as tent sales, sidewalk sales, trade shows, merchandise sales, product demonstrations or transient merchants.
- ☐ *Type 4: Public Attractions.* Significant outdoor public events intended primarily for entertainment or amusement, such as carnivals, concerts, or festivals, including fireworks displays. Requires approval by the Board of Mayor and Aldermen.

Exempt events: (If any of these apply, the special event is exempt from the permit requirement.)

- ☐ *Public property.* Any special event wholly on public streets and right-of-ways or other property of the City, excluding public parks, which special event is allowed specifically or generally by action of the Board of Mayor and Aldermen.
- ☐ *Public parks.* Any special event held within a public park. (Although exempt from this Section, these types of special events shall be governed by other provisions of the Codified Ordinances regulating conduct in City parks and recreation areas.)
- ☐ *City sponsorship.* Any special event sponsored or co-sponsored by the City. Such event shall, however, be in compliance with the performance standards in Section 27.F.
- ☐ *Special use permit or site plan.* Any business already operating under a special use permit or site plan that authorizes the display and sale of outdoor goods or authorizes the operation of any special event as defined herein.
- ☐ *Yard sales.* Yard sales regulated under Article VI, Section 1 of the Zoning Ordinance.
- ☐ *Auctions/estate sales.* Auctions/estate sale for individual property that is not considered a special event and is conducted by duly licensed auctioneers.
- ☐ *Business deliveries.* Newspaper delivery or bona fide merchants who deliver goods in the regular course of business.
- ☐ *Certain solicitations.* Solicitors for charitable, non-profit or religious organizations who go from dwelling to dwelling, business to business, street to street, taking or attempting to take orders for goods, wares and merchandise are exempt from these provisions, provided these organizations meet the Internal Revenue Service Criteria to qualify as a charitable, non-profit or religious organization.
- ☐ *First Amendment activity.* The dispensing of religious pamphlets or other literature which is protected by the United States Constitution under Freedom of Speech, Religion or Press.
- ☐ *Political campaigning.* Campaigning for public office.

Performance standards:

	Sub- mitted ✓ or X	OK	N/A		Comments
1	✓			<i>Location.</i> Special events that do not require the use of public right-of-way shall be conducted on private property in a commercial or industrial zoning district, except that non-profit organizations may conduct special events on any property where the owner has granted permission.	
2	✓			For all special events that require the use of public right-of-way, the permit granted shall clearly specify the streets to be used for the event and the time that the streets will be closed, if applicable.	
3			✓	Type 3 outdoor sales must be conducted by an existing permanent business adjacent to and on the property of the location of the permanent business. The outdoor sales are to be conducted as an adjunct to the existing permanent business.	
4		✓		<i>Land-use compatibility.</i> The special event shall be compatible with the purpose and intent of this Section and with adjacent land uses.	
5		✓		The special event shall not impair the normal, safe and effective operation of a permanent use on the same site.	
6		✓		The special event shall not endanger or be detrimental to the public health, safety or welfare or injurious to property or improvements in the immediate vicinity of the special event, given the nature of the activity, its location on the site and its relationship to parking and access points.	
7		✓		<i>Compliance with other regulations.</i> All structures shall meet all applicable provisions of the Building Code.	
8		✓		Any temporary structure shall be promptly removed upon the cessation of the event. Within forty-eight (48) hours of cessation of the event, the site shall be returned to its previous condition, including the removal of all litter, signage, attention-attracting devices or other evidence of the special event. If the site is not returned to its previous condition, the City may restore the site at the event coordinator's expense.	

	Sub- mitted ✓ or X	OK	N/A		Comments										
9		✓		<i>Hours of operation and duration.</i> The duration and hours of operation of a special event shall be consistent with the surrounding land uses. The total duration of a special event shall not exceed the duration set forth in Table VI.27-1; however, the duration of the special event may be modified by conditions attached to the issuance of the special event permit, as set forth in Section 27.F. Table V.27-1: Special Event Maximum Duration <table><tr><th>Type of Special Event</th><th>Duration</th></tr><tr><td>Type 1: Noncommercial</td><td>30 days</td></tr><tr><td>Type 2: Special Seasonal</td><td>90 days</td></tr><tr><td>Type 3: Commercial</td><td>14 days</td></tr><tr><td>Type 4: Public Attractions</td><td>14 days</td></tr></table>	Type of Special Event	Duration	Type 1: Noncommercial	30 days	Type 2: Special Seasonal	90 days	Type 3: Commercial	14 days	Type 4: Public Attractions	14 days	
Type of Special Event	Duration														
Type 1: Noncommercial	30 days														
Type 2: Special Seasonal	90 days														
Type 3: Commercial	14 days														
Type 4: Public Attractions	14 days														
10		✓		In addition to the maximum duration as set forth in Table VI.27-1, a shopping center may hold centralized special events, not connected to individual businesses within the shopping center, which do not exceed sixty (60) days in a calendar year. The duration of all special events in a shopping center may be extended on a case by case basis if the special event(s) take place in shopping center parking areas not required for the primary businesses.											
11		✓		<i>Frequency.</i> Except as otherwise provided herein, the maximum frequency of a special event on the same property shall be two (2) times per calendar year, excluding a shopping center. A shopping center shall be allowed to hold four (4) centralized events not connected to any individual business located within the center in addition to those events held by the individual businesses located within the shopping center.											

	Sub- mitted ✓ or X	OK	N/A		Comments
12				Type 3 outdoor sales at a specific location may be permitted only as follows: a. Outdoor sales may be permitted once in each calendar month if the duration is not more than three (3) days. b. Outdoor sales may be permitted once in each calendar quarter if the duration is more than three (3) days but not more than ten (10) days. c. ✓ The minimum time between consecutive outdoor sales periods for the same business on the same property shall be fourteen (14) days from the beginning of one period to the beginning of the next period. Permitted durations are not cumulative in any time period, that is, the time periods in both "a" and "b" may not be added together.	
13		✓		<i>Traffic circulation.</i> The special event shall not cause undue traffic congestion or accident potential, given anticipated attendance and the design of adjacent streets, intersections, parking and traffic controls. All sidewalks shall be left open for pedestrian traffic unless special approval is received for blockage. No alleys, driveways, fire lanes or other access points shall be blocked by the special event unless specific approval is granted for the special event.	
14		✓		<i>Street closings.</i> The special event permit recipients shall be responsible for securing, installing and immediate removal upon cessation all barricades and signs when street closings are approved. Large Class III barricades shall be sandbagged to prevent blowing over.	

	Sub- mitted ✓ or X	OK	N/A		Comments
15		✓		<i>Fire safety.</i> The fire department shall be consulted for the following requirements and inspection, as necessary. a. Fire lanes a minimum of 20 feet in width and 12 feet in height or as otherwise approved by the Fire Chief must be provided in order to allow Fire Department access within 150 feet of all structures and on at least two sides of all two-story structures within 500 feet of the location of the special event. b. All fire hydrants in the area of the special event must be left with five (5) feet of clearance on all sides and shall be accessible from the fire lanes that are designated with the event. c. No open fires shall be permitted unless advance approval is obtained from the Fire Department. d. Fire extinguishers shall be available as determined by the Fire Chief. e. Temporary electrical wiring for the special event shall be installed in accordance with the requirements of the National Electrical Code. f. Tents shall comply with the Fire Code and applicable building codes. g. Exit signs and proper exiting aisles shall be provided in temporary special event structures.	
16		✓		<i>Off-street parking.</i> The event shall not create a parking shortage for any other use. All off-street parking surfaces used for the special event shall be concrete or asphalt.	
17		✓		<i>Public conveniences and litter control.</i> Adequate on-site rest room facilities and solid waste containers shall be provided. The applicant shall calculate the demand for such facilities and specify how the need will be addressed.	
18		✓		<i>Nuisances.</i> The special event shall not generate excessive noise, dust, smoke, glare, spillover lighting or other forms of environmental or visual pollution.	

	Sub- mitted ✓ or X	OK	N/A		Comments
19		✓		<i>Area of parking lot dedicated to outdoor special events.</i> a. No more than ten (10) percent of the parking stalls required for the structure associated with the parking lot in which the special event occurs shall be permitted to be used for a special event. Regardless of how many stalls are occupied by the special event, no special event that occurs in the parking lot for a permanent structure may cause a parking shortage for primary and accessory uses associated with that structure. b. No spikes, nails, anchors or other devices shall be driven into any public street, sidewalk or parking lot surface or into any existing concrete or asphalt. Such devices may be used on private parking lots provided any damage resulting therefrom shall be fixed upon cessation of the event and removal of the devices.	
20		✓		<i>City services.</i> If the applicant requests the City to provide services or equipment, including but not limited to traffic control or security personnel, or if the City otherwise determines that services or equipment are required to protect the public health, safety, or general welfare, the applicant shall be required to reimburse the City for the cost of the services. The City may require the applicant to submit a security deposit, in an amount determined by the Chief Administrative Officer and in the form approved by the City Attorney, prior to the event to ensure that the applicant complies with this provision.	
21	✓			<i>Insurance coverage.</i> Special event permit recipients must show proof of liability insurance at time of application. If the special event will take place on public property, said certificate of insurance shall name the City as an additional insured party in an amount determined by the Chief Administrative Officer based on the nature of the special event.	

Conditions

Conditions deemed necessary to ensure compatibility with adjacent land-uses and to minimize potential adverse impacts on nearby uses:

	Required ✓ or X	N/A		Comments
22	✓		Limitations on signs.	
23		n/a	Temporary arrangements for parking and traffic circulation.	
24		n/a	Requirements for screening/buffering and guarantees for site restoration and cleanup following the special event.	
25		n/a	Modifications or restrictions on the hours of operation, duration of the event, size of the event or other operational characteristics.	
26	✓		The posting of security in an amount required by the Permitting Official to help ensure that the operation of the event and the subsequent restoration of the site are conducted according to required special event standards and conditions of approval.	
27	✓		The provision of traffic control or security personnel to ensure the public safety and convenience.	
28	✓		Execution of a "Special event agreement" in a form acceptable to the City Attorney to ensure the indemnification of the City and that public property will be protected and/or restored to its condition prior to the special event.	

Special event permit application, content and submission requirements

A complete application shall be submitted to the Permitting Official at least **ten (10) days** prior to the requested start date of any special event.

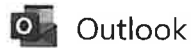
The application shall set forth and contain the following information:

	Sub- mitted ✓ or X	OK	N/A		Comments
29	✓			Name and address of the applicant.	
30	✓			Names and address of the owner of the premises on which the proposed event is to be held.	
31			✓	Written approval from the property owner agreeing to the proposed event, if the applicant is not the same as the property owner.	
32	✓			Description of the site on which the proposed event is to be held.	
33	✓			Date of the proposed event.	
34			✓	A narrative written description of the proposed event, the hours of operation, anticipated attendance, and any buildings/ structures, signs or attention-attracting devices proposed to be used in conjunction with the event, as well as a statement that the standards set forth in this Section have been satisfied. The narrative written description shall also state what public streets, if any, are requested to be used for the special event.	
35			✓	A site plan in the form and the level of detail as required by the Permitting Official, showing the location of all existing or proposed uses, structures, parking areas, outdoor display areas, signs, streets, and property lines.	
36			✓	Location and number of proposed temporary public toilets.	
37			✓	Proposed temporary potable water supplies, which shall be subject to approval by the Director of Code Enforcement, pursuant to applicable authority of the City.	
38			✓	Any other information deemed necessary by the Permitting Official to ensure compliance with the standards set forth in this Section.	

Special event permit - authorization by Permitting Official

Type 1, 2 and 3 special events (as defined in part B) may be issued a special event permit by the Permitting Official on the form provided by the City when all of the following conditions have been satisfied and continue to be met throughout the special event:

	OK ✓ or X	N/A		Comments
39	✓		A complete application is made on the form provided by the City and a fee paid in accordance with City ordinances.	
40	✓		The application has been reviewed and approved in writing by the Code Enforcement, Fire, Police, and Public Works Departments for traffic control and other safety concerns.	
41		✓	An electrical plan, if required for the special event, is approved by the Director of Code Enforcement.	
42			The Permitting Official determines the following: a. The special event will comply with the special event performance standards...;	
43			b. The special event will not endanger the public health, safety, or general welfare given the nature of the activity, its location on the site, and its relationship to parking and access points;	
44			c. The special event will not impair the usefulness, enjoyment or value of adjacent property due to the generation of excessive noise, smoke, odor, glare, litter, or visual pollution;	
45			d. The special event shall comply with all applicable state and federal health, safety, environmental and other applicable requirements.	



RE: [External]Re: Faith Baptist 5K

From Garrett Mack <gmack@bartlettspolice.org>
 Date Mon 2/17/2025 4:13 PM
 To amywsullivan@hotmail.com <amywsullivan@hotmail.com>
 Cc Robert Allen <rallen@bartlettspolice.org>

Ms. Sullivan,

After reviewing staffing and logistics for June 7th, we've determined the Bartlett Police Department Traffic Unit will be available to assist with traffic control for the Faith 5k. Please let us know if you have any questions or concerns.

Respectfully,

Garrett Mack | Lieutenant
 City of Bartlett | Police Department | Traffic Unit
 3730 Appling Road • Bartlett, TN 38133
 Desk: 901-385-5529 Ext. 2706



From: Robert Allen <rallen@bartlettspolice.org>
Sent: Monday, February 17, 2025 12:39 PM
To: Amy Sullivan <amywsullivan@hotmail.com>
Cc: Garrett Mack <gmack@bartlettspolice.org>
Subject: RE: [External]Re: Faith Baptist 5K

Ms. Sullivan,

I know that Lt. Mack was assessing the manpower that would be required to staff both events that day. He is in class this week and I will check with him and get back to you. I am including him on this email as well. I believe we are going to be able to do both, but I want to make sure before giving you a definitive answer.

Robert Allen | Captain
 City of Bartlett | Police Department
 3730 Appling Rd • Bartlett, TN 38133
 office (901) 385-5502 • Dispatch (901) 385-5555



Attachment: Faith Baptist Church 5K Run-Walk (3740 : Faith Baptist Church 5K Walk/Run Fundraiser)



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

01/05/2025

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

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

PRODUCER 901-867-7171 901-867-7878 Corporate Insurance Group LLC 8765 Chaffe Rd Ste 101 Ken Brady Arlington, TN 38002	CONTACT NAME: Corporate Insurance Group LLC PHONE (A/C, No, Ext): 901-867-7171 FAX (A/C, No): 901-867-7878 E-MAIL ADDRESS: ken@callcig.com														
INSURED Faith Baptist Church 3755 N Germantown Rd Bartlett TN 38134	<table border="1"> <tr> <th>INSURER(S) AFFORDING COVERAGE</th> <th>NAIC #</th> </tr> <tr> <td>INSURER A: Philadelphia Indemnity Insurance Co</td> <td></td> </tr> <tr> <td>INSURER B: Bridgefield Casualty Insurance Corp</td> <td></td> </tr> <tr> <td>INSURER C:</td> <td></td> </tr> <tr> <td>INSURER D:</td> <td></td> </tr> <tr> <td>INSURER E:</td> <td></td> </tr> <tr> <td>INSURER F:</td> <td></td> </tr> </table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A: Philadelphia Indemnity Insurance Co		INSURER B: Bridgefield Casualty Insurance Corp		INSURER C:		INSURER D:		INSURER E:		INSURER F:	
INSURER(S) AFFORDING COVERAGE	NAIC #														
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INSURER D:															
INSURER E:															
INSURER F:															

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

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

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSD WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☐ PRO-JECT ☐ LOC OTHER:		PHPK2606180	09/17/2024	09/17/2025	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 3,000,000 PRODUCTS - COMP/OP AGG \$ 3,000,000 Sexual Abuse & M \$ included
A	AUTOMOBILE LIABILITY ☐ ANY AUTO ☒ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS ☒ HIRED AUTOS ONLY ☒ NON-OWNED AUTOS ONLY		PHPK2606180	09/17/2024	09/17/2025	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ Deductible \$1,000
A	☒ UMBRELLA LIAB ☒ OCCUR ☐ EXCESS LIAB ☐ CLAIMS-MADE DED RETENTION \$		PHUB882808	09/17/2024	09/17/2025	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N ☐ N/A	196-56860	01/01/2024	01/01/2025	☒ PER STATUTE ☐ OTH-ER E.L. EACH ACCIDENT \$ 500,000 E.L. DISEASE - EA EMPLOYEE \$ 500,000 E.L. DISEASE - POLICY LIMIT \$ 500,000
A	Business Property		PHPK2606180	09/17/2024	09/17/2025	Blanket for all locations owned by Faith Baptist Chu \$33,915,000

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

Special event ONE MORE LOVED 5K June 7, 2025

CERTIFICATE HOLDER City of Bartlett Code Enforcement 6382 Stage Rd Bartlett TN 38134	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE <i>Ken Brady</i>
---	---

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1 Less Orphan \$K at Faith Baptist Church **Barren TN**

Start/Finish—Located in the drive to the parking lot north of the building (3785 N. Germantown Rd) the start line is in line with a red post indicator valve and 8'49" west of the concrete base of a street light pole both in a curbed landscaped planting area north of the drive.

Mile 1—Located in the driveway to 7896 Sandwood Ln, the washer is 172' east of a cash inlet on the north side

Site 2—Located in front of 1746 Haynes Rd, the washer is S10° south of a curb inlet on the east side

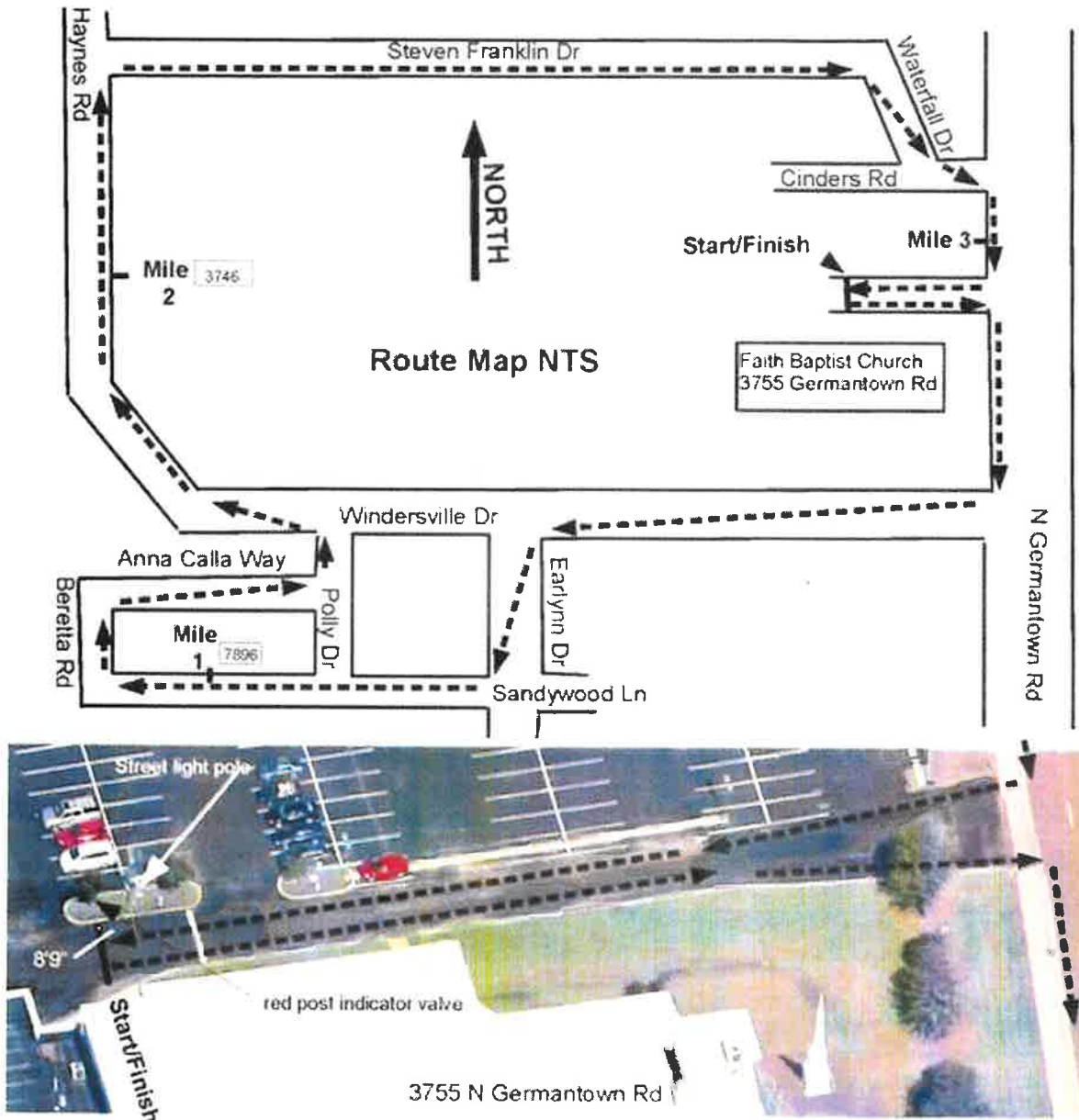
Site 3: Located on the west side of Germantown Rd, the washer is in line with the north edge of the 3rd curb inlet north of the church driveway.

Notes:

—Measured shortest possible route

-All measurements are to the nearest edge or face of curb unless otherwise noted

Measured 8/28/2014 by Rob Hunter. rob.hunter@usmc.mil 202-242-1868 and Lane Parker.





APPLICATION FOR SPECIAL EVENT
OFFICE OF
BARTLETT CODE ENFORCEMENT
6382 STAGE ROAD
BARTLETT TN 38134
901-385-6425

WJ Freeman Park, 2629 Bartlett Blvd. 38134
Address **Zip Code**

August 10, 2025 and August 24, 2025 5:30 am to 9:30 am
Dates of the Event **Hours of the Event**

Memphis Runners Track Club, Road Race Series "Cindy & Michael Rickert 5 mile runs"
Type of Event (Fund Raiser, Seasonal, Tent Sale, Sidewalk Sale, Public Attraction)

City of Bartlett
Property Owner

Memphis Runners Track Club P.O. Box 17981, Memphis TN 38187
Special Event Permit Applicant **Address of Applicant**

901-508-0251
Phone Number **Fax Number**

Check all items that apply:

For information call (901) 385-6425.

 State of TN Business License, Shelby County Business License, Bartlett Business License (For Type 2 Events)
XX **Letter of Permission**
XX **Insurance**
 Tents (Fire Retardant letter included)
XX **Special Event Checklist**
XX **Map**
 Sign or Banner

<u>\$60.00</u>	Special Event Fee
<u>\$5.00</u>	Permit Issuing Fee
<u>\$7.00</u>	Software Fee
<u>\$</u>	2% Credit Card Fee
<u>\$</u>	Total Permit Fee

 MIKE GRAY
Responsible Person Signature and Printed Name **Date**

****Notify building department 10 days prior to Special Event to be held unless it is a Public Attraction which requires approval from the Board of Mayor & Aldermen.****

APPROVAL

This application is not a permit and grants no rights or privileges.

Special Event Checklist

Event: MRTC ROAD RACE SERIES "CINDY & MICHAEL RICKERT 5 MILE RUNS"
Location: WJ FREEMAN PARK 2629 BATTNETT BLVD.
Dates: AUGUST 10TH & 24, 2025

Type of special event: (Check one.)

☐ *Type 1: Noncommercial Events.* Fund-raising or non-commercial events held outside an enclosed permanent structure, including parades, advertised demonstrations, or events, including structures used in conjunction with the event.

☐ *Type 2: Special Seasonal Events.* Farmers' market, Christmas tree sales, fruit, flower or vegetable sales, or sale of other seasonal products, when sold other than on the site where grown, constructed or assembled.

☐ *Type 3: Commercial Events.* Significant commercial events such as tent sales, sidewalk sales, trade shows, merchandise sales, product demonstrations or transient merchants.

☒ *Type 4: Public Attractions.* Significant outdoor public events intended primarily for entertainment or amusement, such as carnivals, concerts, or festivals, including fireworks displays. Requires approval by the Board of Mayor and Aldermen.

Exempt events: (If any of these apply, the special event is exempt from the permit requirement.)

☐ *Public property.* Any special event wholly on public streets and right-of-ways or other property of the City, excluding public parks, which special event is allowed specifically or generally by action of the Board of Mayor and Aldermen.

☒ *Public parks.* Any special event held within a public park. (Although exempt from this Section, these types of special events shall be governed by other provisions of the Codified Ordinances regulating conduct in City parks and recreation areas.)

☐ *City sponsorship.* Any special event sponsored or co-sponsored by the City. Such event shall, however, be in compliance with the performance standards in Section 27.F.

☒ *Special use permit or site plan.* Any business already operating under a special use permit or site plan that authorizes the display and sale of outdoor goods or authorizes the operation of any special event as defined herein.

☐ *Yard sales.* Yard sales regulated under Article VI, Section 1 of the Zoning Ordinance.

☐ *Auctions/estate sales.* Auctions/estate sale for individual property that is not considered a special event and is conducted by duly licensed auctioneers.

☐ *Business deliveries.* Newspaper delivery or bona fide merchants who deliver goods in the regular course of business.

☐ *Certain solicitations.* Solicitors for charitable, non-profit or religious organizations who go from dwelling to dwelling, business to business, street to street, taking or attempting to take orders for goods, wares and merchandise are exempt from these provisions, provided these organizations meet the Internal Revenue Service Criteria to qualify as a charitable, non-profit or religious organization.

☐ *First Amendment activity.* The dispensing of religious pamphlets or other literature which is protected by the United States Constitution under Freedom of Speech, Religion or Press.

☐ *Political campaigning.* Campaigning for public office.

Performance standards:

	Sub- mitted ✓ or X	OK	N/A		Comments
1	X			<i>Location.</i> Special events that do not require the use of public right-of-way shall be conducted on private property in a commercial or industrial zoning district, except that non-profit organizations may conduct special events on any property where the owner has granted permission.	MAP ATTACHED
2	X			For all special events that require the use of public right-of-way, the permit granted shall clearly specify the streets to be used for the event and the time that the streets will be closed, if applicable.	POLICE NOTIFIED BY MEMO + SEE ATTACHED MAP
3			X	Type 3 outdoor sales must be conducted by an existing permanent business adjacent to and on the property of the location of the permanent business. The outdoor sales are to be conducted as an adjunct to the existing permanent business.	
4			X	<i>Land-use compatibility.</i> The special event shall be compatible with the purpose and intent of this Section and with adjacent land uses.	
5		X		The special event shall not impair the normal, safe and effective operation of a permanent use on the same site.	
6		X		The special event shall not endanger or be detrimental to the public health, safety or welfare or injurious to property or improvements in the immediate vicinity of the special event, given the nature of the activity, its location on the site and its relationship to parking and access points.	
7		X		<i>Compliance with other regulations.</i> All structures shall meet all applicable provisions of the Building Code.	
8		X		Any temporary structure shall be promptly removed upon the cessation of the event. Within forty-eight (48) hours of cessation of the event, the site shall be returned to its previous condition, including the removal of all litter, signage, attention-attracting devices or other evidence of the special event. If the site is not returned to its previous condition, the City may restore the site at the event coordinator's expense.	

Attachment: MRTC 5 MILE RUN (3755 : MRTC Cindy & Michael Rickert 5 Mile Runs)

	Sub- mitted ✓ or X	OK	N/A		Comments										
9	X			<i>Hours of operation and duration.</i> The duration and hours of operation of a special event shall be consistent with the surrounding land uses. The total duration of a special event shall not exceed the duration set forth in Table VI.27-1; however, the duration of the special event may be modified by conditions attached to the issuance of the special event permit, as set forth in Section 27.F. Table V.27-1: Special Event Maximum Duration <table><tr><th>Type of Special Event</th><th>Duration</th></tr><tr><td>Type 1: Noncommercial</td><td>30 days</td></tr><tr><td>Type 2: Special Seasonal</td><td>90 days</td></tr><tr><td>Type 3: Commercial</td><td>14 days</td></tr><tr><td>Type 4: Public Attractions</td><td>14 days</td></tr></table>	Type of Special Event	Duration	Type 1: Noncommercial	30 days	Type 2: Special Seasonal	90 days	Type 3: Commercial	14 days	Type 4: Public Attractions	14 days	
Type of Special Event	Duration														
Type 1: Noncommercial	30 days														
Type 2: Special Seasonal	90 days														
Type 3: Commercial	14 days														
Type 4: Public Attractions	14 days														
10			X	In addition to the maximum duration as set forth in Table VI.27-1, a shopping center may hold centralized special events, not connected to individual businesses within the shopping center, which do not exceed sixty (60) days in a calendar year. The duration of all special events in a shopping center may be extended on a case by case basis if the special event(s) take place in shopping center parking areas not required for the primary businesses.											
11			X	<i>Frequency.</i> Except as otherwise provided herein, the maximum frequency of a special event on the same property shall be two (2) times per calendar year, excluding a shopping center. A shopping center shall be allowed to hold four (4) centralized events not connected to any individual business located within the center in addition to those events held by the individual businesses located within the shopping center.											

	Sub- mitted ✓ or X	OK	N/A		Comments
12				Type 3 outdoor sales at a specific location may be permitted only as follows: a. Outdoor sales may be permitted once in each calendar month if the duration is not more than three (3) days. b. Outdoor sales may be permitted once in each calendar quarter if the duration is more than three (3) days but not more than ten (10) days. c. The minimum time between consecutive outdoor sales periods for the same business on the same property shall be fourteen (14) days from the beginning of one period to the beginning of the next period. Permitted durations are not cumulative in any time period, that is, the time periods in both "a" and "b" may not be added together.	
13	X			<i>Traffic circulation.</i> The special event shall not cause undue traffic congestion or accident potential, given anticipated attendance and the design of adjacent streets, intersections, parking and traffic controls. All sidewalks shall be left open for pedestrian traffic unless special approval is received for blockage. No alleys, driveways, fire lanes or other access points shall be blocked by the special event unless specific approval is granted for the special event.	MEMO TO POLICE BY PAUL WRIGHT
14	X			<i>Street closings.</i> The special event permit recipients shall be responsible for securing, installing and immediate removal upon cessation all barricades and signs when street closings are approved. Large Class III barricades shall be sandbagged to prevent blowing over.	

	Sub- mitted ✓ or X	OK	N/A		Comments
15				<i>Fire safety.</i> The fire department shall be consulted for the following requirements and inspection, as necessary. a. Fire lanes a minimum of 20 feet in width and 12 feet in height or as otherwise approved by the Fire Chief must be provided in order to allow Fire Department access within 150 feet of all structures and on at least two sides of all two-story structures within 500 feet of the location of the special event. b. All fire hydrants in the area of the special event must be left with five (5) feet of clearance on all sides and shall be accessible from the fire lanes that are designated with the event. c. No open fires shall be permitted unless advance approval is obtained from the Fire Department. d. Fire extinguishers shall be available as determined by the Fire Chief. e. Temporary electrical wiring for the special event shall be installed in accordance with the requirements of the National Electrical Code. f. Tents shall comply with the Fire Code and applicable building codes. g. Exit signs and proper exiting aisles shall be provided in temporary special event structures.	
16		X		<i>Off-street parking.</i> The event shall not create a parking shortage for any other use. All off-street parking surfaces used for the special event shall be concrete or asphalt.	
17		X		<i>Public conveniences and litter control.</i> Adequate on-site rest room facilities and solid waste containers shall be provided. The applicant shall calculate the demand for such facilities and specify how the need will be addressed.	
18		X		<i>Nuisances.</i> The special event shall not generate excessive noise, dust, smoke, glare, spillover lighting or other forms of environmental or visual pollution.	

	Sub- mitted ✓ or X	OK	N/A		Comments
19		X		<i>Area of parking lot dedicated to outdoor special events.</i> a. No more than ten (10) percent of the parking stalls required for the structure associated with the parking lot in which the special event occurs shall be permitted to be used for a special event. Regardless of how many stalls are occupied by the special event, no special event that occurs in the parking lot for a permanent structure may cause a parking shortage for primary and accessory uses associated with that structure. b. No spikes, nails, anchors or other devices shall be driven into any public street, sidewalk or parking lot surface or into any existing concrete or asphalt. Such devices may be used on private parking lots provided any damage resulting therefrom shall be fixed upon cessation of the event and removal of the devices.	
20	X			<i>City services.</i> If the applicant requests the City to provide services or equipment, including but not limited to traffic control or security personnel, or if the City otherwise determines that services or equipment are required to protect the public health, safety, or general welfare, the applicant shall be required to reimburse the City for the cost of the services. The City may require the applicant to submit a security deposit, in an amount determined by the Chief Administrative Officer and in the form approved by the City Attorney, prior to the event to ensure that the applicant complies with this provision.	MEMO ATTACHED PLUS REQUEST PAUL WRIGHT
21	X			<i>Insurance coverage.</i> Special event permit recipients must show proof of liability insurance at time of application. If the special event will take place on public property, said certificate of insurance shall name the City as an additional insured party in an amount determined by the Chief Administrative Officer based on the nature of the special event.	

Conditions

Conditions deemed necessary to ensure compatibility with adjacent land-uses and to minimize potential adverse impacts on nearby uses:

	Required ✓ or X	N/A		Comments
22		X	Limitations on signs.	
23		X	Temporary arrangements for parking and traffic circulation.	
24		X	Requirements for screening/buffering and guarantees for site restoration and cleanup following the special event.	
25		X	Modifications or restrictions on the hours of operation, duration of the event, size of the event or other operational characteristics.	
26		X	The posting of security in an amount required by the Permitting Official to help ensure that the operation of the event and the subsequent restoration of the site are conducted according to required special event standards and conditions of approval.	
27		X	The provision of traffic control or security personnel to ensure the public safety and convenience.	
28		X	Execution of a "Special event agreement" in a form acceptable to the City Attorney to ensure the indemnification of the City and that public property will be protected and/or restored to its condition prior to the special event.	

Special event permit application, content and submission requirements

A complete application shall be submitted to the Permitting Official at least ten (10) days prior to the requested start date of any special event.

The application shall set forth and contain the following information:

	Sub- mitted ✓ or X	OK	N/A		Comments
29	X			Name and address of the applicant.	
30	X			Names and address of the owner of the premises on which the proposed event is to be held.	MEMO ATTACHED
31		X		Written approval from the property owner agreeing to the proposed event, if the applicant is not the same as the property owner.	
32	X			Description of the site on which the proposed event is to be held.	MEMO ATTACHED
33	X			Date of the proposed event.	MEMO ATTACHED
34	X			A narrative written description of the proposed event, the hours of operation, anticipated attendance, and any buildings/ structures, signs or attention-attracting devices proposed to be used in conjunction with the event, as well as a statement that the standards set forth in this Section have been satisfied. The narrative written description shall also state what public streets, if any, are requested to be used for the special event.	MEMO ATTACHED
35	X			A site plan in the form and the level of detail as required by the Permitting Official, showing the location of all existing or proposed uses, structures, parking areas, outdoor display areas, signs, streets, and property lines.	MAP ATTACHED
36	X			Location and number of proposed temporary public toilets.	MEMO ATTACHED
37			X	Proposed temporary potable water supplies, which shall be subject to approval by the Director of Code Enforcement, pursuant to applicable authority of the City.	
38		X		Any other information deemed necessary by the Permitting Official to ensure compliance with the standards set forth in this Section.	

Special event permit - authorization by Permitting Official

Type 1, 2 and 3 special events (as defined in part B) may be issued a special event permit by the Permitting Official on the form provided by the City when all of the following conditions have been satisfied and continue to be met throughout the special event:

	OK ✓ or X	N/A		Comments
39	X		A complete application is made on the form provided by the City and a fee paid in accordance with City ordinances.	
40			The application has been reviewed and approved in writing by the Code Enforcement, Fire, Police, and Public Works Departments for traffic control and other safety concerns.	
41		X	An electrical plan, if required for the special event, is approved by the Director of Code Enforcement.	
42	X		The Permitting Official determines the following: a. The special event will comply with the special event performance standards...;	
43	X		b. The special event will not endanger the public health, safety, or general welfare given the nature of the activity, its location on the site, and its relationship to parking and access points;	
44	X		c. The special event will not impair the usefulness, enjoyment or value of adjacent property due to the generation of excessive noise, smoke, odor, glare, litter, or visual pollution;	
45	X		d. The special event shall comply with all applicable state and federal health, safety, environmental and other applicable requirements.	



**Road Running Technical Council
USA Track & Field**

Measurement Certificate



Name of the course RRS 5 Miler Distance 5 mi
 Location (state) TN (city) Bartlett
 Type of course: Road Race
 Measuring Methods: Bicycle
 Measured By Robert Hunter - 1877 E Churchill Downs - Germantown, TN 38138 - (901) 246-1565 - robhunter33@gmail.com
 Race Contact Shan Criswell - 5868 Stage Rd, Bartlett, TN 38134 - 901-385-5552
 Date(s) when course measured: 07/02/2022
 Number of measurements of entire course: 2 Course Configuration: loop
 Elevation (meters above sea level) Start 79.00 Finish 78.00 Lowest 76 Highest 95
 Straight line distance between start and finish 70 m Drop 0.12 m/km Separation 0.87 %
 Type of surface: Paved 100 % Dirt 0 % Gravel 0 % Grass 0 % Track 0 %
 Effective date of certification: July 2, 2022 Certification code: TN22028MS

Note to Race Director: Use this Certification Code in all public announcements relating to your race.

Be It Officially Noted That

Based on examination of data provided by the above named measurer, the course described above and in the map attached is hereby certified as reasonably accurate in measurement according to the standards adopted by the Road Running Technical Council. If any changes are made to the course, this certification becomes void, and the course must then be recertified.

Verification of Course --- In the event a National Open Record is set on the course, or at the discretion of USA Track & Field, a verification measurement may be required to be performed by a member of the Road Running Technical Council. If such a remeasurement shows the course to be short, then all pending records will be rejected and the course certification will be cancelled.

This certification expires on December 31 of the year: **2032**

AS NATIONALLY CERTIFIED BY:

Date: July 26, 2022

Matthew Studholme - USATF/RRTC Certifier - 813 Barton Ave, Chattanooga TN 37405
 (276) 206-7202 - sheddingcat@comcast.net

Attachment: MRTC 5 MILE RUN (3755 : MRTC Cindy & Michael Rickert 5 Mile Runs)



RRS 5 Miler, Bartlett, TN

Start—In N Bartlett Park Dr approx. 50' west of Bartlett Blvd, the washer, the washer is in line with the W edge of the concrete base of a st lt post on the south side and 42'4" W of the W edge of the sidewalk.

Mile 1—On W side of Elmore Park Dr at Elmore Civic Park grounds, the washer is 1' south of wood elec pole #85342 in the ditch.

Mile 2—At 5877 Diplomat Pl, the washer is 50'4" W of the brick mailbox on the south side.

Mile 3—In Bartlett Woods Dr near the west curb line of Boysenberry Dr, the washer is 1'7" E of a water valve cover in the south side of the street.

Mile 4—At 5744 Magnolia Woods Dr, approx. 55' W of Honey Bee Ln, the washer is 30'6" W of a water meter cover on the south side.

Finish—In N Bartlett Park Dr approx. 275' W of Bartlett Blvd, the washer is 20'9" S of a st lt post and 30'6" N of the N curb of the entrance into the pavilion parking lot.

Finish
-20'9" S of st lt post
-30'6" N of N curb

Start and Finish Details



Note:

—Measured SPR (Shortest Possible Route) on 7/2/2022.

—All measurements to the nearest edge of monument or face of curb.

—Measured by Rob Hunter 901-246-1565

robhunter33@gmail.com and Kevin Raney 901-337-5354
raney01k@bellsouth.net





David Parsons, *Mayor*
Paul Wright, *Parks Director*
Jimbo Draffin, *Assistant Parks Director*

March 31, 2025

City of Bartlett
Code Enforcement
6462 Stage Rd.
Bartlett, TN 38134

The Memphis Runners Track Club has requested to use W. J. Freeman Park on the following dates: Sunday, August 10, 2025, and Sunday, August 24, 2025 from 5:30am to 9:30am for their annual Road Race Series 5 Mile Run.

Permission is hereby given by Bartlett Parks and Recreation Department pending approval by the Mayor and Board of Aldermen.

Sincerely,

A handwritten signature in blue ink, appearing to read "P. Wright".

Paul Wright, CPRE
Director, Parks and Recreation
City of Bartlett

Attachment: MRTC 5 MILE RUN (3755 : MRTC Cindy & Michael Rickert 5 Mile Runs)

TN22028MS - page 2 of 2

Officers needed for traffic control:
1.) Bartlett Blvd and Ivanhoe to cross
Bartlett Blvd for the start.

2.) Hawthorn at Elmore Park

3.) Kenwood and Barrentine

4.) Elmore at Bartlett/Blvd.
(officer at start could
move here)



USATF Certificate
Effective: 07/02/2022
Through: 12/31/2032

RRS 5 Miler, Bartlett, TN

Start—In N Bartlett Park Dr approx. 50' west of Bartlett Blvd, the washer, the washer is in line with the W edge of the concrete base of a st lt post on the south side and 42'4" W of the W edge of the sidewalk.

File 1—On W side of Elmore Park Dr at Elmore Civic Park grounds, the washer is 1' south of wood elec pole #85342 in the ditch.

Mile 2—At 5877 Diplomat Pl, the washer is 50'4" W of the brick mailbox on the south side.

Mile 3—In Bartlett Woods Dr near the west curb line of Boysenberry Dr, the washer is 17" E of a water valve cover in the south side of the street.

Mile 4—At 5744 Magnolia Woods Dr, approx. 55' W of Honey Bee Ln, the washer is 30'6" W of a water meter cover

on the south side.

Finish—In N Bartlett Park Dr approx. 275' W of Bartlett Blvd, the washer is 20'9" S of a st lt post and 30'6" N of the N curb of the entrance into the pavilion parking lot.

Finish

-20'9" S of st lt post
-30'6" N of N curb

Start and Finish Details

Sta

-42'4" W of s/s
-at st lt post W
edge of base

Note:

--Measured SPR (Shortest Possible Route) on 7/2/2022.

--All measurements to the nearest edge of monument or face of curb.

--Measured by Rob Hunter 901-246-1565

robhunter33@gmail.com and Kevin Raney 901-337-5354

raney01k@bellsouth.net



Attachment: MRTC 5 MILE RUN (3755 : MRTC Cindy & Michael Rickert 5 Mile Runs)



CERTIFICATE OF LIABILITY INSURANCE

DATE 04/08/2025 6.3.a

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

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

PRODUCER Insurance Management Group 9610 Lima Road, Suite 102 Fort Wayne IN 46818	CONTACT NAME: Tabitha Messersmith PHONE (A/C, No, Ext): (260) 338-2434 FAX (A/C, No): (765) 664-0761 E-MAIL ADDRESS: tmessersmith@insmgt.com
INSURED Road Runners Club of America/2025 and Its Member Clubs 100 W Jefferson St., Ste 202 Falls Church VA	INSURER(S) AFFORDING COVERAGE INSURER A: Granite State Insurance Company NAIC # 23809 INSURER B: National Union Fire Insurance Company of Pittsburgh, PA 19445 INSURER C: INSURER D: INSURER E: INSURER F:

COVERAGES CERTIFICATE NUMBER: 2025 \$2M AI Liability REVISION NUMBER:

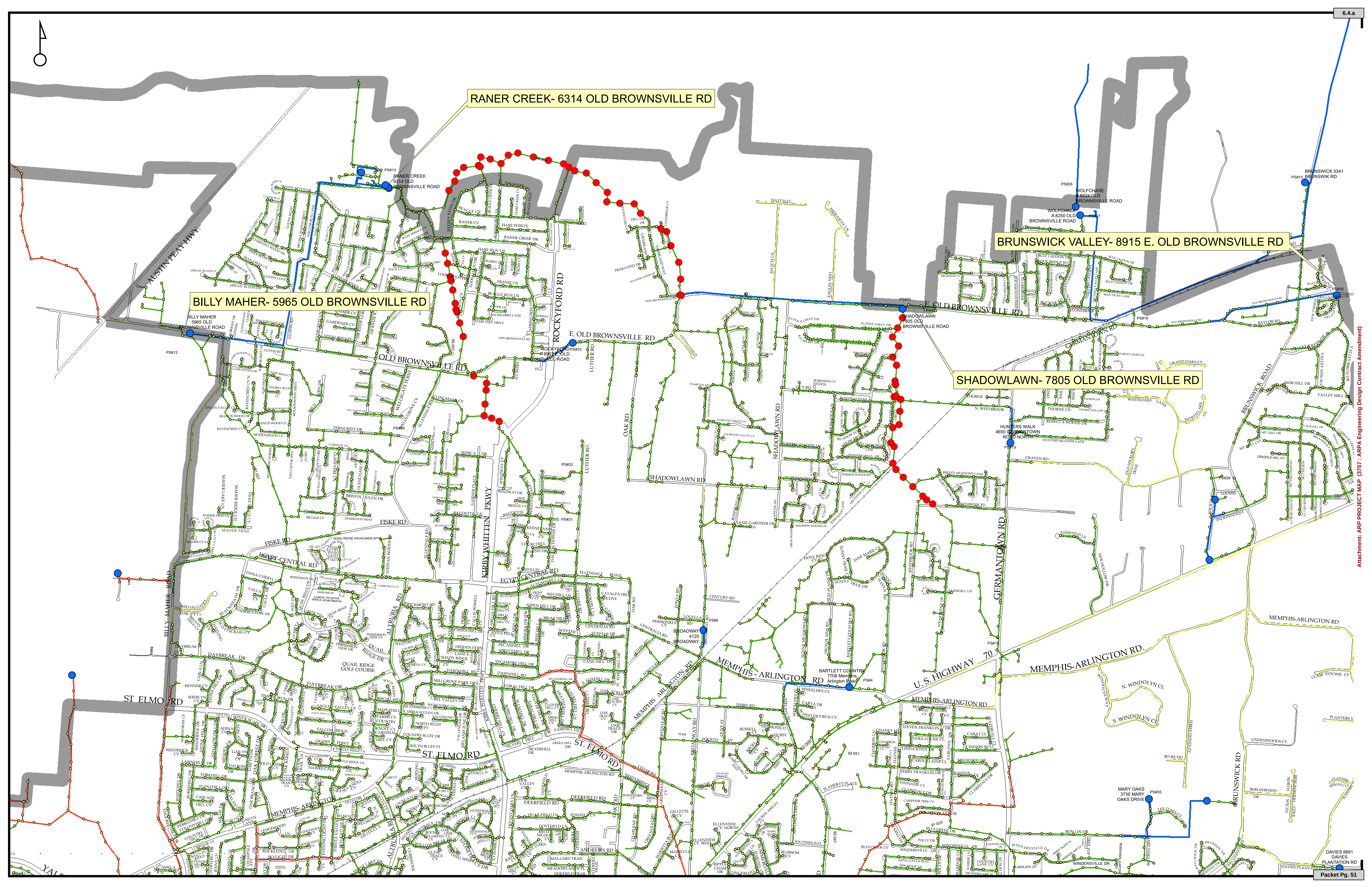
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE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

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR ☒ Legal Liability Participant \$2,000,000 GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☐ PRO-JECT ☐ LOC ☒ OTHER: Per Event Basis			AIL0003450335201	12/31/2024	12/31/2025	EACH OCCURRENCE \$ 2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 500,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 2,000,000 GENERAL AGGREGATE \$ 5,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 Abuse and Molestation \$ 1,000,000 COMBINED SINGLE LIMIT (Ea accident) \$ 2,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
A	☐ AUTOMOBILE LIABILITY ☐ ANY AUTO ☐ OWNED AUTOS ONLY ☒ HIRED AUTOS ONLY ☐ SCHEDULED AUTOS ☒ NON-OWNED AUTOS ONLY			AIL0003450335201	12/31/2024	12/31/2025	\$ \$ \$ \$ \$ \$ \$ \$
	☐ UMBRELLA LIAB ☐ EXCESS LIAB DED RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A				PER STATUTE OTH-ER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$
B	Medical Professional Liability			AID0003450335801	12/31/2024	12/31/2025	Medical Expense \$10,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
CERTIFICATE HOLDER IS NAMED AS AN ADDITIONAL INSURED AS RESPECTS TO THEIR INTEREST IN THE OPERATIONS OF THE NAMED INSURED.
DATE OF EVENT(S):08/10/25 Through 08/24/25 Road Race Series 5 Milers
INSURED RRCA CLUB/EVENT MEMBER: Memphis Runners Track Club, Attn: April Flanigan, PO Box 17981,Memphis, TN, 38187

CERTIFICATE HOLDER 08/10/25 City of Bartlett 6400 Stage Rd. Bartlett TN 38134	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE Jerry R. Miller
--	--

Attachment: MRTC 5 MILE RUN (3755 : MRTC Cindy & Michael Rickert 5 Mile Runs)



RANER CREEK- 6314 OLD BROWNSVILLE RD

BILLY MAHER- 5965 OLD BROWNSVILLE RD

BRUNSWICK VALLEY- 8915 E. OLD BROWNSVILLE RD

SHADOWLAWN- 7805 OLD BROWNSVILLE RD

EXHIBITS TO AGREEMENT BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL SERVICES

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Baseline Information: Owner has furnished the following Project information to Engineer as of the Effective Date. Engineer’s scope of services has been developed based on this information. As the Project moves forward, some of the information may change or be refined, and additional information will become known, resulting in the possible need to change, refine, or supplement the scope of services.

Project elements:

Part A - Project WW-PDC-1 / Pump Stations: The City of Bartlett intends to upgrade four existing lift stations as described below.

A.1: Upgrade the Raner Creek Lift Station by replacing pumps, valves, piping, installing a new control panel, and renovating the existing wet well. The upgrade will also include a pump discharge flow meter as required by TDEC. The upgrade will replace the 3 existing 25 horsepower pumps with 2 new submersible pumps to provide a pump discharge pumping rate equal to or greater than the existing pumps provide.

A.2: Upgrade the Billy Maher Lift Station by replacing pumps, valves, piping, installing a new control panel, and renovating the existing wet well. The upgrade will also include a pump discharge flow meter as required by TDEC. The upgrade will replace the 2 existing 40 horsepower pumps with 2 new submersible pumps to provide a pump discharge pumping rate equal to or greater than the existing pumps provide.

A.3: Upgrade the Valley Lift Station by replacing pumps, valves, piping, installing a new control panel, and renovating the existing wet well. The upgrade will also include a pump discharge flow meter as required by TDEC. The upgrade will replace the 2 existing 20 horsepower pumps with 2 new submersible pumps to provide a pump discharge pumping rate equal to or greater than the existing pumps provide.

A.4: Upgrade the Shadowlawn Lift Station by replacing pumps, valves, piping, installing a new control panel, and renovating the existing wet well. The upgrade will also include a pump discharge flow meter as required by TDEC. The upgrade will replace the 3 existing 25 horsepower pumps with 2 new submersible pumps to provide a pump discharge pumping rate equal to or greater than the existing pumps provide.

The current approved total cost for Part A is \$3,028,269.15.

Part B – Project WW-PDC-2 / Sewer Rehab: The City of Bartlett intends to rehabilitate selected sanitary sewers.

The current approved total cost for Part B is \$810,755.55.

Part C – Project WW-PDC-3 / Asset Management Plan: The City of Bartlett intends to upgrade their existing Asset Management Plan to comply with the Tennessee Asset Management Plan Guide.

Supplemental Conditions for the Project:

The Project is being funded, in part, by State and Local Fiscal Recovery Funds (SLRF). Because these funds are being used the following Supplemental Conditions must be met. Note, if one or more of these Supplemental Conditions conflicts with other provisions of this Agreement then the Supplemental Conditions requirements supersede the Agreement requirements. Within these Supplemental Conditions the word “contractor” means “Engineer”.

Equal Employment Opportunity

During the performance of this contract, the contractor agrees as follows:

- (1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- (2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including

an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

- (3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law. (8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through
- (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

Clean Air Act

- (1) The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
- (2) The contractor agrees to report each violation to the (name of subrecipient entering into the contract) and understands and agrees that the (name of the subrecipient entering into the contract) will, in turn, report each violation as required to assure notification to Treasury, and the appropriate Environmental Protection Agency Regional Office.
- (3) The contractor agrees to include these requirements in each subcontract exceeding \$150,000

Federal Water Pollution Control Act

- (1) The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 ets eq.
- (2) The contractor agrees to report each violation to the (name of the subrecipient entering into the contract) and understands and agrees that the (name of the subrecipient entering into the contract) will, in turn, report each violation as required to assure notification to the Treasury, and the appropriate Environmental Protection Agency Regional Office.
- (3) The contractor agrees to include these requirements in each subcontract exceeding \$150,000.

Suspension and Debarment

- (1) This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).
- (2) The contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.
- (3) This certification is a material representation of fact relied upon by (insert name of recipient/subrecipient/applicant). If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to (insert name of recipient/subrecipient/applicant), the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.
- (4) The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

Access to Records

- (1) The Contractor agrees to provide (insert name of state agency or local or Indian tribal government), (insert name of recipient), Treasury, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.
- (2) The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.
- (3) The Contractor agrees to provide the Treasury or authorized representatives access to construction or other work sites pertaining to the work being completed under the contract.

Compliance with Federal Law, Regulations and Executive Orders

- (1) This is an acknowledgement that Treasury ARP SLFRF financial assistance will be used to fund all or a portion of the contract. The contractor will comply with all applicable Federal law, regulations, executive orders, Treasury policies, procedures, and directive
- (2) The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this contract.

Engineer shall provide Basic and Additional Services as set forth below.

ARTICLE 1—BASIC SERVICES

1.01 Management of Engineering Services

- A. All phases of Engineer's services will include management of Engineer's Project-specific responsibilities, including but not limited to the following management tasks, whether separately tracked and itemized or included as being incidental to other phase and scope task items.
 - 1. Develop and submit an Engineering Services Schedule. The Engineering Services Schedule will:
 - a. be consistent with and serve as a supplement to the Schedule of Deliverables set forth in Exhibit B.
 - b. be updated on a regular basis, and as required to reflect any programmatic decisions by Owner.
 - c. include, but not be limited to, an anticipated sequence of tasks; estimates of task duration; interrelationships among tasks; milestone meetings and submittals; anticipated schedule of construction; and other pertinent Project events.
 - 2. Develop and submit detailed work plans from Exhibit A tasks.
 - 3. Coordinate services within Engineer's internal team, and with Subconsultants and Engineer's Subcontractors.
 - 4. Prepare for and participate in meetings with consultants and contractors working on other parts of the Project that may affect, or be affected by, Engineer's services or resulting construction.
 - 5. Prepare and submit monthly engineering services progress reports to the Owner.
 - 6. Special Invoicing: In addition to, or as a substitute for, Engineer's standard invoicing, provide the specified additional information or documentation, following the invoicing procedures indicated: None.
 - 7. Conduct ongoing management tasks, including:
 - a. Maintaining communications records and files pertaining to or arising from Engineer's services;
 - b. With respect to Engineer's services and other directly relevant parts of the Project, prepare for and participate in periodic progress meetings with Owner to discuss progress, schedule, budget, issues, potential problems and their resolution; and
 - c. Preparing agendas prior to and minutes following all Engineer-led meetings.
- B. In all phases of Engineer's services, Engineer shall prepare draft and final Drawings in accordance with Engineer's CAD standards, using AutoCAD version 23 software.
- C. The source documents for the draft and final Specifications in all phases of Engineer's services will be Engineer's standard specifications, unless otherwise mutually agreed upon by the parties.

1.02 Study and Report Phase

A. Engineer shall:

1. Consult with Owner to define and clarify Owner's requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility, and expandability, and any budgetary limitations, and identify available data, information, reports, facilities plans, and site evaluations.
 - a. If Owner has already identified one or more potential solutions to meet its Project requirements, then proceed with the study and evaluation of the Owner-identified potential solutions listed here:
 - 1) None.
 - b. If Owner has not identified specific potential solutions for study and evaluation, then assist Owner in determining whether Owner's requirements, and available data, reports, plans, and evaluations, point to a single potential solution for Engineer's study and evaluation, or are such that it will be necessary for Engineer to identify, study, and evaluate multiple potential solutions.
 - c. If it is necessary, the Engineer shall identify, study, and evaluate multiple potential solutions potentially available to Owner.
2. Identify potential solution(s) to meet Owner's Project requirements, as needed.
3. Study and evaluate the potential solution(s) to meet Owner's Project requirements.
4. Visit the Site, or potential Project sites, to review existing conditions and facilities, unless such visits are not necessary or applicable to meeting the objectives of the Study and Report Phase.
5. Assess initially available Project information and data, including the Baseline Information set forth at the beginning of this Exhibit A.
6. Advise Owner of any need for Owner to obtain, furnish, or otherwise make available to Engineer additional Project-related information and data, for Engineer's use in the study and evaluation of potential solution(s) to Owner's Project requirements, and preparation of a related report.
7. After consultation with Owner, recommend the solution(s) which in Engineer's judgment meet Owner's requirements for the Project.
8. Identify, consult with, and analyze requirements of authorities having jurisdiction to permit or approve construction or operation of the portions of the Project to be designed or specified by Engineer, including but not limited to impacts and mitigating measures identified in previously prepared environmental assessments for the Project provided to the Engineer or being concurrently prepared for Owner by others.
9. Advise the Owner of any need for Owner to provide data or services of the types described in Article 2 of the Agreement, for use in Project design, or in preparation for Contractor selection and construction.
10. Assist Owner in evaluating the possible use of building information modeling; civil integrated management; geotechnical baselining of subsurface conditions at the Site; innovative design, contracting, or procurement strategies; project delivery method; or

other strategies, technologies, or techniques for assisting in the design, construction, and operation of Owner's facilities. The subject matter of this paragraph will be referred to in Exhibit A as "Project Strategies, Technologies, and Techniques."

11. Assist Owner in identifying opportunities for enhancing the sustainability of the Project, and pursuant to Owner's instructions, plan for the inclusion of sustainable features in the design.
12. Review with Owner the thresholds established in applicable codes, standards, and design criteria specifically governing the ability of the proposed facilities or improvements to perform, and to absorb or avoid damage without suffering complete or substantial failure. As part of the review, identify additional risk assessment studies or tools that are available to evaluate the susceptibility of the facilities or improvements to natural and man-made events beyond the applicable established thresholds. Upon Owner request, as an additional service, perform additional risk assessment studies or tools to further evaluate system resiliency beyond the applicable established thresholds.
13. Utilities, including Underground Facilities
 - a. Review any utility mapping and surveys and other utilities documentation made available by Owner. Take note of observable utilities during Site visit.
 - b. Identify, in a preliminary manner and to the extent determinable by such mapping or other information provided by Owner, and by observations at the Site, those utilities (whether above-ground utilities of any type, or Underground Facilities) likely to be affected by the Project construction and additional utility facilities or extensions that will be needed to serve the Project.
 - c. If the impact on existing utilities or the need for additional utility facilities or extensions cannot reasonably be determined in a preliminary manner from mapping or other information provided by Owner, or such information was not available from Owner, then assist Owner in evaluating the need to either obtain additional utility mapping and utility documentation during the Study and Report Phase, or undertake other alternative approaches and contingencies to account for utility uncertainties in this phase.
 - d. Advise Owner of additional utility documentation and coordination needed during the design and construction phases to adequately assess, mitigate, and manage the impact of the Project (including any additional utility facilities or extensions needed to serve the Project) on existing utilities.
 - e. Use ASCE 38, "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data" as a means to advise the Owner regarding the extent and identification and mapping of existing Underground Facilities during the design and construction phases.
 - 1) If Owner has retained a land surveyor, utility engineer, or utility consultant, collaborate with such individuals or entities regarding the application of ASCE 38.
14. Inquire regarding survey methodologies and technologies that would aid in addressing Owner's Project requirements. Develop a scope of work and survey limits for any

topographic and other surveys necessary for design. For recommended survey deliverables, specify a) required technical specifications; b) pertinent datum; c) survey limits, and d) formats of deliverables. Collaborate with land surveyor, when separately retained by Owner or third party, to develop such scope of work.

15. Prepare a report (the "Report") which will, as appropriate, contain schematic layouts, sketches, and conceptual design criteria with appropriate exhibits to indicate the agreed-to requirements, considerations involved, and Engineer's recommended solution(s).
 - a. For each recommended solution, Engineer will separately tabulate Total Project Cost, itemizing those items and services included within the definition of Total Project Costs.
 - b. Engineer will meet with Owner to discuss the draft Report and receive Owner's comments.
 16. Perform or provide the following other Study and Report Phase tasks or deliverables:
 - a. None.
 17. Furnish the Report and any other Study and Report Phase deliverables to Owner pursuant to the requirements of the Deliverables Schedule in Exhibit B, and review the deliverables with Owner.
 18. Revise the Report and any other Study and Report Phase deliverables in response to Owner's comments, as appropriate, and submit revised deliverables pursuant to the Deliverables Schedule.
- B. Engineer's services under the Study and Report Phase will be considered complete on the date when Engineer has delivered to Owner the final Report (as revised) and any other Study and Report Phase deliverables.

1.03 Preliminary Design Phase

- A. After acceptance by Owner of the Report and any other Study and Report Phase deliverables (if Engineer's services under this Agreement included Study and Report Phase services); selection by Owner of a recommended solution; issuance by Owner of any instructions for use of Project Strategies, Technologies, and Techniques, or for inclusion of sustainable features in the design, or enhanced resiliency of the design; indication by Owner of any specific modifications or changes in the scope, extent, character, or design requirements of the Project desired by Owner; and any necessary changes, refinements, and supplementation of the Baseline Information set forth at the beginning of this Exhibit A, Engineer and Owner shall discuss, resolve, and document in writing any necessary revisions to Engineer's scope of services, compensation (through application of the provisions regarding Additional Services, or otherwise), and the time for completion of Engineer's services, resulting from the selected solution, related Project Strategies, Technologies, or Techniques, sustainable design and resiliency instructions, specific modifications to the Project, or changes, refinements, or supplementation of the Baseline Information.
- B. Upon written authorization from Owner, Engineer shall:

1. Review and assess all available Project information and data, including any pertinent reports or studies (whether prepared by Engineer or others) and any related instructions from Owner.
2. Based on the threshold review and assessment of available information and data, advise Owner of any need for Owner to obtain, furnish, or otherwise make available to Engineer any additional information and data, for Engineer's use in the preparation of a Preliminary Design Phase Report.
3. Prepare a Preliminary Design Phase Report in the following format: an assemblage of required documents.
4. The Preliminary Design Phase Report will consist of final design criteria, preliminary drawings, a preliminary list of expected specifications, and written descriptions of the Project. The Preliminary Design Phase Report will consider the following matters to the extent applicable to the Project and as necessary to establish the basis of design for proceeding to final design and construction:
 - a. The Project concept, intent, performance criteria, desired outcomes, Owner's standards and Owner directed improvements and facility elements as established in the Study and Report Phase and as expressly set forth in the Baseline Information section of this Exhibit A (collectively the "Project Goals").
 - b. Recommended appropriate design criteria for each primary portion and significant discipline of the design necessary to address the Project Goals.
 - c. Site conditions and characterization as known at the time of, or to be determined during, the Preliminary Design Phase, including topography; subsurface information; Constituents of Concern; cultural, historical, and archaeological resources at the Site; wetlands information; and evaluations of flora and fauna that may be affected by the Project.
 - d. The time schedule for completion of the Project in accordance with Project Goals, including any recommended changes to the time required to complete the Final Design Phase (as set forth in Exhibit B, Deliverables Schedule) and estimated schedule(s) for construction.
 - e. Identification of major items of materials and equipment, rationale for selection with consideration of quality, suitability, pricing, sourcing, regulatory, and bidding issues affecting recommended selection.
 - f. Revised opinions of probable Construction Cost.
 - g. The impact of Project Strategies, Technologies, and Techniques, sustainable features, and enhanced resiliency selected by Owner for inclusion in the Project on the Project Goals, schedule and probable Construction Cost, including impact of multiple prime construction contracts, separate procurement of materials or equipment, and other alternate project delivery methods when the Project Goals necessitate and Owner authorizes;
 - h. Construction Phase quality assurance and quality control needs affecting development of Drawings and Specifications and other Final Design and Bidding Phase documents.

- i. The effect of permits and authorizations by other entities and utility coordination needs on the Project.
 - j. Other matters and information pertinent to addressing the Project Goals.
- 5. In preparing the Preliminary Design Phase Report, use any specific applicable Project Strategies, Technologies, and Techniques authorized by Owner during or following the Study and Report Phase, and include sustainable features and enhanced resiliency, as appropriate, pursuant to Owner's instructions.
- 6. Visit the Site as needed to prepare the Preliminary Design Phase Report.
- 7. If at any point in the Preliminary Design Phase it becomes apparent to Engineer that additional reports, data, information, or services of the types described in Article 2 are necessary, then so advise Owner, and assist Owner in obtaining such reports, data, information, or services.
- 8. Above-Ground Utilities
 - a. Review above-ground utilities information obtained from Owner and from observations at the Site.
 - b. Make recommendations regarding any further identification, investigation, and mapping of above-ground utilities at or adjacent to the Site, for Engineer's design purposes or otherwise.
 - c. Account for above-ground utilities, based on available information, when advancing design during the Preliminary Design Phase.
- 9. Underground Facilities
 - a. Review Underground Facilities data furnished by Owner. Assist Owner in reducing and managing risks associated with Underground Facilities by working together with Owner to jointly establish a procedure ("Underground Facilities Procedure") for the further identification, investigation, and mapping of Underground Facilities at or adjacent to the Site.
 - b. Such Underground Facilities Procedure must take into account the Site and the nature of the Project.
 - c. Use the Underground Facilities Procedure to aid in the performance of design services:
 - 1) Account for Underground Facilities, based on available information, when advancing the design during the Preliminary Design Phase.
 - 2) The Underground Facilities Procedure will include a plan to keep Underground Facilities information current as Engineer proceeds with the provision of design services, and to add new or relocated Underground Facilities information to the base utility or Site drawings.
 - 3) To manage the potential impact of design changes on Underground Facilities, Engineer shall work together with Owner to modify or reapply the Underground Facilities Procedure as the design progresses and changes.

10. Mitigation of Utilities Conflicts

- a. Identify potential conflicts between the Project (including existing and new facilities and structures) and above-ground utilities and Underground Facilities as reviewed in Exhibit A Paragraphs 1.03.B.8 and 9 above, and advise Owner regarding the need for resolution of such conflicts with utility and Underground Facilities owners and permit agencies. Identify the potential need for the relocation of existing above-ground utilities and Underground Facilities.
- b. Update the Underground Facilities Procedure as necessary for any Underground Utilities conflicts and relocations.
- c. Working together with Owner, jointly identify which specific parties or other entities will be responsible for implementation of the various specific parts of the Underground Facilities Procedure (including those parts that address resolution of Underground Facilities conflicts), and for resolution of above-ground utilities conflicts. Such identification will take into account Owner's authority and standing, as owner of the Site, with respect to Underground Facilities and above-ground utilities.

11. Surveys, Topographic Mapping, and Utility Documentation

- a. Coordinate with Owner's utility engineer, utility consultant, or land surveyor for the necessary field surveys, topographic mapping, and utility documentation required for Engineer's design purposes, or by the Underground Facilities Procedure.
 - b. If no scope of work and procedure for utility documentation has been established, selected, or authorized, then at a minimum Engineer will contact utility owners and obtain available information. Except as otherwise provided in this Agreement, Owner acknowledges that the information gathered from utility owners may be incorrect, incomplete, outdated, or otherwise flawed, and as to Engineer, bidders, and Contractor, the Owner accepts all associated risks. Owner reserves all associated rights as to recourse against the sources of such flawed information and against third parties.
12. Prepare initial draft of a comprehensive permit document that identifies Owner's permit duties, Engineer's permit duties, and Contractor's permit duties, and the schedule for permitting activities.
 13. Continue to assist Owner with Project Strategies, Technologies, and Techniques that Owner has chosen to implement in Exhibit A Paragraph 1.03.A.
 14. Obtain Owner's instructions regarding Owner's procurement of construction services (including instructions regarding advertisements for bids, instructions to bidders, and requests for proposals, as applicable), Owner's construction contract practices and requirements, insurance and bonding requirements, electronic transmittals during construction, and other information necessary for the finalization of Owner's Bidding/Proposal Documents and Front-End Construction Contract Documents.
 - a. Also obtain copies of Owner's standard Bidding/Proposal Documents and Front-End Construction Contract Documents (if other than the EJCDC 2018 Construction Series documents), and any other related documents or content for Engineer to

include in drafts of the Project-specific Bidding/Proposal Documents and Front-End Construction Contract Documents, when applicable.

- b. Review Owner's instructions regarding procurement, bidding and contracting of construction services with respect to effects on the Project design, schedule and construction and address as needed in the Preliminary Design Phase deliverables.
15. Prepare the Preliminary Design Phase Report. This Report will consist of, as appropriate, separate or combined submittals in whole or summary, the Preliminary Design Phase documents listed in Exhibit A Paragraph 1.03.B.4, and Engineer's findings and recommendations for advancing the Project to the Final Design Phase (including Engineer's findings and recommendations, if any, regarding permitting, utilities, and Underground Facilities). The submittal will be in the format of a report, or otherwise organized and assembled for ease and practicality of use.
- a. Based on the information contained in the Preliminary Design Phase documents, prepare a revised opinion of probable Construction Cost, and on the basis of information furnished by Owner, assist Owner in tabulating the various cost categories which comprise Total Project Costs.
 - b. Engineer will meet with Owner to discuss the draft Preliminary Design Phase submittal and receive Owner's comments.
16. Perform or provide the following other Preliminary Design Phase tasks or deliverables:
- a. None.
17. Furnish the Preliminary Design Phase Report, opinion of probable Construction Cost, and any other Preliminary Design Phase deliverables to Owner pursuant to the requirements of the Deliverables Schedule in Exhibit B, and review the deliverables with Owner.
18. Revise the Report and any other deliverables in response to Owner's comments, as appropriate, and submit revised deliverables pursuant to the Deliverables Schedule.
- C. Engineer's services under the Preliminary Design Phase will be considered complete on the date when Engineer has delivered to Owner the final Preliminary Design Phase Report (as revised) and associated documents, revised opinion of probable Construction Cost, and any other Preliminary Design Phase deliverables.

1.04 Final Design Phase

- A. After acceptance by Owner of the Preliminary Design Phase Report and any other Preliminary Design Phase deliverables; issuance by Owner of any instructions for specific modifications or changes in the scope, extent, character, or design requirements of the Project desired by Owner; and any necessary changes, refinements, and supplementation of the Baseline Information set forth at the beginning of this Exhibit A, Engineer and Owner shall discuss, resolve, and document any necessary revisions to Engineer's scope of services, compensation (through application of the provisions regarding Additional Services, or otherwise), and the time for completion of Engineer's services, resulting from specific modifications to the Project, or changes, refinements, or supplementation of the Baseline Information.

1. The number of prime contracts for Work designed or specified by Engineer upon which the Engineer's compensation has been established under this Agreement is two. If more prime contracts are awarded, Engineer shall be entitled to an equitable increase in its compensation under this Agreement.
 2. If more than one prime construction contract is to be awarded for the Work designed or specified by Engineer, then Owner shall define and set forth (in an exhibit to this Agreement, or in a subsequent document) the duties, responsibilities, and limitations of authority of a person or entity that will have authority and responsibility for coordinating the activities among the various prime Contractors, and any resulting changes in the duties, responsibilities, and authority of Engineer.
 3. In the event that the Work designed or specified by Engineer is to be performed or furnished under more than one prime construction contract, or if Engineer's services are to be separately sequenced with the work of one or more separate design professional consultants or prime Contractors (such as in the case of fast-tracking), Owner and Engineer shall, prior to commencement of the Final Design Phase, develop a schedule for performance of Engineer's services during the Final Design, Bidding/Proposal, Construction, and Post-Construction Phases in order to sequence and coordinate properly such services as are applicable under such separate prime construction contracts. This schedule is to be prepared and included in or become an amendment to Exhibit A whether or not the work under such construction contracts is to proceed concurrently.
- B. Upon written authorization from Owner, Engineer shall prepare final Drawings and Specifications indicating the scope, extent, and character of the Work to be performed and furnished by Contractor, in accordance with the Preliminary Design Phase Report (as revised) and other Preliminary Design Phase deliverables. As part of the preparation of the Drawings and Specifications, Engineer shall prepare interim drafts and final Drawings and Specifications as follows, pursuant to the Deliverables Schedule in Exhibit B:
1. First Final Design Phase draft of all Drawings and Specifications.
 2. Second Final Design Phase draft of all Drawings and Specifications, addressing Owner comments and including appropriate design advancement.
 3. Final Drawings and Specifications that address Owner comments; complete the design; are suitable for estimating and pricing by prospective Contractors; and are complete and ready for construction.
- C. In preparing the Specifications (and any bidding, contract, or other documents that are part of Engineer's scope of services), Engineer shall obtain from Owner or Owner's legal counsel any relevant constraints such as requirements for use of domestic steel and iron, other domestic purchasing requirements, statutory restrictions on utilizing proprietary specifying methods, and the like, and comply with or account for such constraints in drafting Specifications, Bidding/Proposal Documents, and other Project documents.
- D. Engineer shall prepare or assemble draft Bidding/Proposal Documents and Front-End Construction Contract Documents as follows:

1. Such documents will be based on the 2018 EJCDC Construction Documents, and on the specific bidding or Contractor selection-related instructions and forms, contract forms, text, or other content received from Owner.
 2. When Engineer is required to use other than the 2018 EJCDC Construction Documents, then as required in the Preliminary Design Phase Owner will furnish to Engineer a copy of the required documents to be used for the Project's Bidding/Proposal Documents and Front-End Construction Contract Documents. Prior to the first Final Design Phase submittal, Engineer will review the bidding and contracting documents furnished by Owner and provide comments to Owner. Engineer will meet with Owner to discuss Engineer's comments. Owner will consider Engineer's recommendations to revise Owner's documents for the Project.
 3. Engineer will furnish to Owner, for review by Owner's legal counsel, the draft Bidding/Proposal Documents and Front-End Construction Contract Documents. Owner and Owner's legal counsel must transmit to Engineer, in a timely manner, one coordinated set of comments and revisions to the draft documents.
- E. During the Final Design Phase the Engineer shall continue to account for above-ground utilities and Underground Facilities as the design advances and is finalized.
- F. Engineer shall perform or furnish the following other Final Design Phase services:
1. Visit the Site as needed to assist in preparing the final Drawings and Specifications.
 2. Assist with or prepare applications for permits and approvals, as follows:
 - a. Update comprehensive permit document created in Preliminary Design Phase for Final Design detail.
 - b. Prepare applications for Owner's submittal to authorities having jurisdiction over the construction or operation of the Project.
 - c. Confer with Owner regarding revisions, if any, to the application(s), and make appropriate revisions to the application(s) for Owner's resubmittal to the authority having jurisdiction.
 - d. Provide technical criteria, written descriptions, and design data for Owner's use in filing applications for permits from or approvals of the authorities having jurisdiction listed above, including applications for review or approval of the final design.
 - e. Identify and indicate in the Construction Contract Documents the permits and approvals for which Contractor will be responsible, including work permits, building permits, and other permits and approvals that will be Contractor's responsibility; and, in addition, indicate those permits initially obtained by Owner for which Contractor will be a co-permittee, together with associated requirements.
 - f. Unless expressly indicated otherwise, Engineer's scope and budget includes attending one meeting or conference call with each permit and approval-issuing agency to discuss the Project and receive the agency's comments on the application.
 - g. Engineer does not guarantee issuance of any required permit or approval.

- h. Fees charged by authorities having jurisdiction for such permits or approvals are the responsibility of Owner.
- 3. Advise Owner of any recommended adjustments to the opinion of probable Construction Cost. Furnish to Owner an updated opinion of probable Construction Cost with the interim and final deliverables of the Drawings and Specifications.
- 4. After consultation with Owner, include in the Front-End Construction Contract Documents any Electronic Document Protocol addressing specific protocols for the transmittal of Project-related correspondence, documents, text, data, drawings, information, and graphics, in electronic media or digital format, either directly, or through access to a secure Project website.
- 5. Assist Owner in assembling known reports and drawings of Site conditions, and in identifying the technical data contained in such reports and drawings upon which bidders or other prospective contractors may rely.
- 6. Review the preliminary schedule for the Construction Phase and advise Owner when initial understanding of the Construction Contract Times must or should be revised, and furnish Owner with recommendations on revisions to the proposed Construction Contract Times.
- 7. Engineer's project manager and other appropriate staff will participate in the following meetings and conference calls:
 - a. First draft design review meeting at Owner's office.
 - b. Second draft design review meeting at Owner's office.
 - c. Engineer will prepare and distribute minutes of each such meeting and conference call, indicating attendees, topics discussed, decisions made, and action items for follow-up.
- 8. Perform or provide the following other Final Design Phase activities or deliverables:
 - a. None.
- G. Engineer shall complete the Final Design Phase as follows:
 - 1. Pursuant to the requirements of the Deliverables Schedule in Exhibit B, furnish for review by Owner, its legal counsel, and other advisors, the final Drawings and Specifications (as set forth in Exhibit A Paragraph 1.04.B.3 above); assembled drafts of other Construction Contract Documents including the draft Front-End Construction Contract Documents; the draft Bidding/Proposal Documents; the most recent opinion of probable Construction Cost; and any other Final Design Phase deliverables, and review the deliverables with Owner.
 - 2. Revise the final Design Phase deliverables in response to Owner's comments, as appropriate, and submit revised deliverables pursuant to the Deliverables Schedule.
 - 3. Engineer's services under the Final Design Phase will be considered complete on the date when Engineer has delivered to Owner the final Drawings and Specifications; assembled drafts of the Front-End Construction Contract Documents; the draft Bidding/Proposal Documents; and any other Final Design Phase deliverables, as revised.

1.05 Bidding/Proposal Phase

- A. After acceptance by Owner of the final Drawings and Specifications; assembled drafts of other Construction Contract Documents, including the draft Front-End Construction Contract Documents; the draft Bidding/Proposal Documents; the most recent opinion of probable Construction Cost as determined in the Final Design Phase, and any other Final Design Phase deliverables, and upon written authorization by Owner to proceed, Engineer shall:
1. Assist Owner in advertising for and obtaining bids or proposals for the Work; assist Owner in issuing assembled Bidding/Proposal Documents and proposed Construction Contract Documents to prospective contractors; if applicable, maintain a record of prospective contractors to which documents have been issued; attend pre-bid conferences, if any; and receive and process contractor deposits or charges, if any, for the issued documents.
 - a. The Engineer's electronic plan room will be used to distribute Bidding Documents.
 2. Prepare and issue addenda as appropriate to clarify, correct, or change the issued documents.
 3. If the issued documents require, the Engineer shall evaluate and determine the acceptability of "or equals" and substitute materials and equipment proposed by prospective contractors, provided that such proposals are allowed by the bidding-related documents (or requests for proposals or other construction procurement documents) prior to award of contracts for the Work. Services under this paragraph are subject to the provisions of Exhibit A Paragraph 2.01.A.2.
 4. Attend the bid opening; prepare bid tabulation sheets; and assist Owner in evaluating bids or proposals, assembling final Construction Contracts for the Work for execution by Owner and Contractor, and in preparing notices of award to be issued by Owner for such contracts.
 5. Provide information or assistance needed by Owner in the course of any review of bids, proposals, or negotiations with prospective contractors.
 6. Consult with Owner as to the qualifications of prospective contractors.
 7. Consult with Owner as to the qualifications of subcontractors, suppliers, and other individuals and entities proposed by prospective contractors, for those portions of the Work as to which review of qualifications is required by the issued documents.
 8. If Owner engages in negotiations with bidders or proposers, assist Owner with respect to technical and engineering issues that arise during the negotiations.
 9. Perform or provide the following other Bidding/Proposal Phase tasks or deliverables:
 - a. None.
 10. The Bidding/Proposal Phase will be considered complete upon award of Construction Contracts for the Work and commencement of the Construction Phase, or upon cessation of negotiations with prospective contractors.

1.06 Construction Phase

- A. After completion of the Final Design Phase and concurrent with the Bidding/Proposal Phase, and after issuance by Owner of any instructions for specific modifications or changes in the

scope, extent, character, design, schedule, number of prime construction contracts, and other construction requirements of the Project during the Construction Phase desired by Owner, the Engineer and Owner shall discuss, resolve, and document any necessary revisions to Engineer's scope of services or compensation (through application of the provisions regarding Additional Services, or otherwise), or the time for completion of Engineer's services, resulting from specific modifications to the Project.

1. Engineer shall be responsible only for those Construction Phase services expressly required of Engineer in Exhibit A Paragraph 1.06, as duly modified. With the exception of such expressly required services, Engineer shall have no design, Submittal (including Shop Drawing) review, or other obligations during construction, and Owner assumes all responsibility for providing or arranging for all other necessary Construction Phase administrative, engineering, and professional services.
 2. Owner waives all claims against Engineer and its officers, directors, members, partners, agents, employees, and Subconsultants, and Engineer's Subcontractors, that may be connected in any way to Construction Phase administrative, engineering, or professional services except for those services that are expressly required of Engineer in Exhibit A. Notwithstanding the foregoing waiver, Engineer shall be responsible for any professional opinions and interpretations provided by Engineer to Owner during the Construction Phase or Post-Construction Phase, including interpretations or clarifications of the Construction Contract Documents.
- B. Upon successful completion of the Bidding/Proposal Phase, and upon written authorization from Owner, Engineer shall provide the following services:
1. General Administration of Construction Contract: Consult with Owner and act as Owner's representative as provided in this Agreement and the Construction Contract. Unless otherwise set forth in the scope of Basic Services (as duly modified), the extent and limitations of the duties, responsibilities, and authority of Engineer shall be as assigned in EJCDC® C-700, Standard General Conditions of the Construction Contract (2018) or other construction general conditions specified in this Agreement. Except as otherwise provided in the Construction Contract, Owner's communications to Contractor will be issued through Engineer.
 - a. If the responsibilities of Engineer as set forth in the Construction Contract are greater than those Construction Phase services expressly required of Engineer in Exhibit A Paragraph 1.06, as duly modified, then Owner shall either (1) expand the scope of the Construction Phase services to match those of the Construction Contract, and compensate Engineer for any related increases in the cost to provide Construction Phase services, pursuant to the provisions for compensating Additional Services, or (2) identify a qualified individual or entity (other than Engineer) responsible for the additional responsibilities in the Construction Contract.
 - b. If Owner, or Owner and Contractor, modify the duties, responsibilities, and authority of Engineer in the Construction Contract, or modify other terms of the Construction Contract having a direct bearing on Engineer, or if Owner requires Engineer's services for construction that extends longer than the anticipated Construction Contract Times, then Owner shall compensate Engineer for any

related increases in the cost to provide Construction Phase services, pursuant to the provisions for compensating Additional Services.

- c. Engineer shall not be required to furnish or perform services contrary to Engineer's responsibilities as a licensed professional.
2. Field Office: Deleted.
 3. Resident Project Representative (RPR): Provide the services of an RPR at the Site to assist Engineer and to provide more extensive observation of Contractor's Work. Duties, responsibilities, and authority of the RPR are as set forth in Exhibit D. The furnishing of such RPR's services will not limit, extend, or modify Engineer's responsibilities or authority except as expressly set forth in Exhibit D.
 4. Selection of Independent Testing Laboratory: Assist Owner in the selection of an independent testing laboratory to perform required testing services.
 5. Pre-Construction Conference: Participate in a pre-construction conference prior to commencement of Work at the Site; prepare and distribute agenda for the conference and prepare and distribute minutes of such conference.
 6. Electronic Transmittal Protocols: If the Construction Contract does not establish protocols for transmittal of Electronic Documents by Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
 7. Original Documents: If requested by Owner to do so, maintain and safeguard during the Construction Phase at least one original printed record version of the Construction Contract Documents, including Drawings and Specifications signed and sealed by Engineer and other design professionals in accordance with applicable Laws and Regulations. Throughout the Construction Phase, make such original printed record version of the Construction Contract Documents available to Contractor and Owner for review.
 8. Schedules: Receive, review and, subject to the criteria of the Construction Contract, determine the acceptability of any and all schedules that Contractor is required to submit to Engineer, including the progress schedule, schedule of submittals, and schedule of values. Advise Contractor in writing of Engineer's comments or acceptance of schedules.
 - a. Schedules will be acceptable to Engineer as to form and substance:
 - 1) Progress Schedule: 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: if it provides a workable arrangement for reviewing and processing the required Submittals.
 - 3) Contractor's Schedule of Values: if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

9. Baselines and Benchmarks: As appropriate, establish baselines and benchmarks for locating the Work which in Engineer's judgment are necessary to enable Contractor to proceed.
10. Permits: Provide Owner with copies of technical information and supporting data previously obtained or developed by Engineer for Owner's use, or for Owner to provide to Contractor, in obtaining required permits and licenses delegated to Contractor by Owner.
11. Visits to Site and Observation of Construction: In connection with observations of Contractor's Work while it is in progress:
 - a. Make visits to the Site at intervals appropriate to the various stages of the Work, as Engineer deems necessary to observe as an experienced and qualified design professional, the progress of Contractor's executed Work. Such visits and observations by Engineer, including its RPR, if any, are not intended to be exhaustive or to extend to every aspect of the Work or to involve detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in this Agreement and the Construction Contract Documents, but rather are to be limited to spot checking, selective sampling, and similar methods of general observation of the Work based on Engineer's exercise of professional judgment, as assisted by its RPR, if any. Based on information obtained during such visits and observations, Engineer will determine in general if the Work is proceeding in accordance with the Construction Contract Documents, and Engineer shall keep Owner informed of the progress of the Work. Engineer will make a report of Engineer's visit, summarizing Engineer's general observations and any significant findings.
 - b. The purpose of Engineer's visits to the Site, and representation by the Resident Project Representative, if any, at the Site, will be to enable Engineer to better carry out the duties and responsibilities assigned to by this Agreement and undertaken by Engineer during the Construction Phase, and, in addition, by the exercise of Engineer's efforts as an experienced and qualified design professional, to provide for Owner a greater degree of confidence that the completed Work will conform in general to the Construction Contract Documents and that Contractor has implemented and maintained the integrity of the design concept of the completed Project as a functioning whole as indicated in the Construction Contract Documents. Engineer will not, during such visits or as a result of such observations of the Work, supervise, direct, or have control over the Work, nor will Engineer have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected or used by any Constructor, for security or safety at the Site, for safety precautions and programs incident to any Constructor's work in progress, for the coordination of the Constructors' work or schedules, nor for any failure of any Constructor to comply with Laws and Regulations applicable to furnishing and performing of its work. Accordingly, Engineer neither guarantees the performance of any Constructor nor assumes responsibility for any Constructor's failure to furnish or perform the Work, or any portion of the Work, in accordance with the Construction Contract Documents.

12. Defective Work: If, on the basis of Engineer's observations or as indicated in documentation available to Engineer, Engineer believes that any part of the Work is defective under the terms and standards set forth in the Construction Contract Documents, Engineer will promptly issue written notice to Contractor (with copy to Owner) of such defective Work. Such notice will communicate the scope, extent (to Engineer's understanding) of defect, and associated provisions of the Construction Contract Documents.
 - a. Provide recommendations to Owner regarding whether Contractor should correct such Work or remove and replace such Work, or whether Owner should consider accepting the defective Work in accordance with the provisions of the Construction Contract Documents. Engineer shall give notice to Contractor regarding whether the defective Work should be repaired, replaced, or will be accepted by Owner.
 - b. However, Engineer's authority to provide this information to Owner or Engineer's decision to exercise or not exercise such authority will not give rise to a duty or responsibility of the Engineer to Contractors, Subcontractors, material and equipment suppliers, their agents or employees, or any other person(s) or entities performing any of the Work, including but not limited to any duty or responsibility for Contractors' or Subcontractors' safety precautions and programs incident to the Work.
13. Compatibility with Design Concept: If Engineer has express knowledge that a specific part of the Work that is not defective under the terms and standards set forth in the Construction Contract Documents is nonetheless not compatible with the design concept of the completed Project as a functioning whole, then inform Owner of such incompatibility, and provide recommendations for addressing such Work.
14. Clarifications and Interpretations: Accept from Contractor and Owner submittal of all matters in question concerning the requirements of the Construction Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Construction Contract Documents. With reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Construction Contract Documents.
15. Non-reviewable Matters: If a submitted matter in question concerns the Engineer's performance of its duties and obligations, or terms and conditions of the Construction Contract Documents that do not involve (a) the performance or acceptability of the Work under the Construction Contract Documents, (b) the design (as set forth in the Drawings, Specifications, or otherwise), or (c) other engineering or technical matters, then Engineer will promptly give written notice to Owner and Contractor that Engineer will not provide a decision or interpretation.
16. Field Orders: Subject to any limitations in the Construction Contract Documents, Engineer may prepare and issue Field Orders requiring minor changes in the Work.
17. Change Orders and Work Change Directives: Recommend Change Orders and Work Change Directives to Owner, as appropriate, and prepare Change Orders and Work Change Directives as required.
18. Change Proposals and Claims

- a. Review and respond to Change Proposals. Review each duly submitted Change Proposal from Contractor and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties that the Engineer will not resolve the Change Proposal.
 - b. Provide information or data to Owner regarding engineering or technical matters pertaining to Claims.
- 19. Differing Site Conditions: Respond to any notice from Contractor of differing site conditions, including conditions relating to Underground Facilities such as utilities, and hazardous environmental conditions. Promptly conduct reviews and prepare findings, conclusions, and recommendations for Owner's use subject to limitations of Engineer's obligations under this Agreement.
- 20. Contractor's Submittals: Review and approve or take other appropriate action with respect to required Contractor Submittals, but only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Construction Contract Documents, and for compatibility with the design concept of the completed Project as a functioning whole as indicated by the Construction Contract Documents. Such reviews and approvals or other action will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions and programs incident thereto. Engineer shall meet any Contractor's Submittal schedule that Engineer has accepted.
- 21. Substitutes and "Or-equals": Evaluate and determine the acceptability of substitute or "or-equal" materials and equipment proposed by Contractor, but subject to the provisions of Exhibit A Paragraph 2.01.A.2.
- 22. Inspections and Tests
 - a. Receive and review all certificates of inspections, tests, and approvals required by Laws and Regulations or the Construction Contract Documents. Engineer's review of such certificates will be for the purpose of determining whether the results certified indicate compliance with the Construction Contract Documents and will not constitute an independent evaluation that the content or procedures of such inspections, tests, or approvals comply with the requirements of the Construction Contract Documents. Engineer shall be entitled to rely on the results of such inspections and tests.
 - b. Reply to Contractor requests for written concurrence that specific portions of the Work that are to be inspected, tested, or approved may be covered.
 - c. Issue written requests to Contractor that specific portions of the Work remain uncovered.
 - d. As deemed reasonably necessary, request that Contractor uncover Work that is to be inspected, tested, or approved.

- e. Pursuant to the terms of the Construction Contract, require additional inspections or testing of the Work, whether or not the Work is fabricated, installed, or completed.
23. Contractor's Applications for Payment: Based on Engineer's observations as an experienced and qualified design professional and on review of Applications for Payment and accompanying supporting documentation:
- a. Determine the amounts that Engineer recommends Contractor be paid. Recommend reductions in payment (set offs) based on the provisions for set offs stated in the Construction Contract. Such recommendations of payment will be in writing and will constitute Engineer's representation to Owner, based on such observations and review, that, within the limits of Engineer's knowledge, information and belief, Contractor's Work has progressed to the point indicated, the Work is generally in accordance with the Construction Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Construction Contract Documents, and to any other qualifications stated in the recommendation), and 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. In the case of unit price Work, Engineer's recommendations of payment will include final determinations of quantities and classifications of the Work (subject to any subsequent adjustments allowed by the Construction Contract Documents).
 - b. By recommending payment, Engineer shall not thereby be deemed to have represented that observations made by Engineer to check the quality or quantity of Contractor's Work as it is performed and furnished have been exhaustive, extended to every aspect of Contractor's Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in this Agreement. 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 on Engineer responsibility to supervise, direct, or control the Work, or for the means, methods, techniques, sequences, or procedures of construction or safety precautions or programs incident thereto, or Contractor's compliance with Laws and Regulations applicable to Contractor's furnishing and performing the Work. It will also not impose responsibility on Engineer to make any examination to ascertain how or for what purposes Contractor has used the money paid to Contractor by Owner; to determine that title to any portion of the Work, including materials or equipment, has passed to Owner free and clear of any liens, claims, security interests, or encumbrances; or that there may not be other matters at issue between Owner and Contractor that might affect the amount that should be paid.
24. Contractor's Completion Documents: Receive from Contractor, review, and transmit to Owner maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance required by the Construction Contract Documents, certificates of inspection, tests and approvals, and Shop Drawings, Samples, and other data approved as provided under Exhibit A Paragraph 1.06.B.20. Receive from Contractor, review, and transmit to Owner the annotated record documents which are

to be assembled by Contractor in accordance with the Construction Contract Documents to obtain final payment. The extent of Engineer's review of record documents will be to check that Contractor has submitted a complete set of those documents that Contractor is required to submit.

25. Substantial Completion: Promptly after notice from Contractor that Contractor considers the entire Work ready for its intended use, visit the Site in company with Owner and Contractor to review the Work and determine the status of completion. Follow the procedures in the Construction Contract regarding the preliminary certificate of Substantial Completion, punch list of items to be completed, Owner's objections, notice to Contractor, and issuance of a final certificate of Substantial Completion. Assist Owner regarding any remaining engineering or technical matters affecting Owner's use or occupancy of the Work following Substantial Completion.
 26. Other Tasks: Perform or provide the following other Construction Phase tasks or deliverables:
 - a. None.
 27. Completion and Acceptability of the Work: After notice from Contractor that the Work is complete:
 - a. visit the Site with Owner and Contractor to determine if the Work is in fact complete and acceptable;
 - b. notify Contractor of any part of the Work that is found during the visit to be incomplete or defective, and subsequently confirm that Contractor has corrected any such deficiencies;
 - c. follow the procedures in the Construction Contract regarding review and response to Contractor's application for final payment and accompanying documentation; and
 - d. if Engineer is satisfied that the Work is complete and acceptable, provide a notice to Owner and Contractor using EJCDC® C-626, Notice of Acceptability of Work (attached as Exhibit E), stating that the Work is acceptable (subject to the provisions of the Notice and this Exhibit A) within the limits of Engineer's knowledge, information, and belief, and based on the extent of the services provided by Engineer under this Agreement.
 28. Standards for Certain Construction-Phase Decisions: Engineer will render decisions regarding the requirements of the Construction Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth in the Construction Contract for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.
- C. Duration of Construction Phase: The Construction Phase will commence with the execution of the first Construction Contract for the Project or any part thereof and will terminate upon written recommendation by Engineer for final payment to Contractor. If the Project involves more than one prime contract as indicated in Exhibit A Paragraph 1.04.A.1, then

Construction Phase services may be rendered at different times in respect to the separate contracts. Subject to the provisions of Article 3, Engineer shall be entitled to an equitable increase in compensation if Construction Phase services (including Resident Project Representative services, if any) are required after the original date for completion and readiness for final payment of Contractor as set forth in the Construction Contract.

1.07 Post-Construction Phase

- A. Upon written authorization from Owner during the Post-Construction Phase, Engineer shall:
 - 1. Together with Owner, visit the Project to observe any apparent defects in the Work, make recommendations as to replacement or correction of defective Work, if any, or the need to repair of any damage to the Site or adjacent areas, and assist Owner in consultations and discussions with Contractor concerning correction of any such defective Work and any needed repairs.
 - 2. Together with Owner, visit the Project within one month before the end of the Construction Contract's correction period to ascertain whether any portion of the Work or the repair of any damage to the Site or adjacent areas is defective and therefore subject to correction by Contractor.
 - 3. Perform or provide the following other Post-Construction Phase tasks or deliverables:
 - a. None.
- B. The Post-Construction Phase services may commence during the Construction Phase and, if not otherwise modified in this Exhibit A, will terminate 12 months after the commencement of the Construction Contract's correction period.

ARTICLE 2—ADDITIONAL SERVICES

2.01 Additional Services Not Requiring Owner's Written Authorization

- A. Engineer shall advise Owner that Engineer is commencing to perform or furnish the Additional Services of the types listed below. For such Additional Services, Engineer need not request or obtain specific advance written authorization from Owner. Engineer shall cease performing or furnishing such Additional Services upon receipt of written notice to cease from Owner. These services are not included as part of Basic Services and will be paid for by Owner as indicated in Exhibit J.
 - 1. Substantive design and other technical services in connection with Work Change Directives, Change Proposals, and Change Orders to reflect changes requested by Owner.
 - 2. Services essential to the orderly progress of the Bidding/Proposal and Construction Phases and not wholly quantifiable prior to those Phases or otherwise dependent on the actions of prospective individual bidders or contractors and including:
 - a. making revisions to Drawings and Specifications occasioned by the acceptance of substitute materials or equipment other than "or equal" items;
 - b. services after the award of the Construction Contract in evaluating and determining the acceptability of a proposed "or equal" or substitution which is found to be inappropriate for the Project;

- c. evaluation and determination of an excessive number of proposed "or equals" or substitutions, whether proposed before or after award of the Construction Contract; and
 - d. providing to the Contractor or Owner additional or new information not previously prepared or developed by the Engineer for their use in applying for or obtaining required permits and licenses, in responding to agency comments on such applications, or in the administration of any such permits or licenses.
- 3. Services resulting from significant delays, changes, or price increases occurring as a direct or indirect result of materials, equipment, or energy shortages.
- 4. Additional or extended services arising from (a) the presence at the Site of any Constituent of Concern or items of historical or cultural significance, (b) emergencies or acts of God endangering the Work, (c) damage to the Work by fire or other causes during construction, (d) a significant amount of defective, neglected, or delayed Work, (e) acceleration of the progress schedule involving services beyond normal working hours, or (f) default by Contractor.
- 5. Implement coordination of Engineer's services with other parts of the Project that are not planned or designed by Engineer or its Subconsultants, unless Owner furnished to Engineer substantive information about such other parts of the Project prior to the parties' entry into this Agreement, in the Baseline Information section of this Exhibit A, or otherwise in Exhibit A; if such substantive information has been so provided, coordination of Engineer's services will be part of Basic Services.
- 6. Implement the specific parts of an Underground Facilities Procedure that are assigned to Engineer, or above-ground utilities tasks that are assigned to Engineer as the Project progresses (but not including the design-related services already assigned to Engineer as a Basic Service).
- 7. Services (other than Basic Services during the Post-Construction Phase) in connection with any partial utilization of the Work by Owner prior to Substantial Completion.
- 8. Evaluating unreasonable or frivolous requests for interpretation or information (RFIs), Change Proposals, or other demands from Contractor or others in connection with the Work, or an excessive number of RFIs, Change Proposals, or demands.
- 9. Reviewing a Shop Drawing or other Contractor submittal more than three times, as a result of repeated inadequate submissions by Contractor.
- 10. While at the Site, compliance by Engineer and its staff with those terms of Owner's or Contractor's safety program provided to Engineer subsequent to the Effective Date that exceed those normally required of engineering personnel by federal, State, or local safety authorities for similar construction sites.
- 11. To the extent the Project is subject to Laws and Regulations governing public or government records disclosure or non-disclosure, Engineer will comply with provisions applicable to Engineer, and Owner will compensate Engineer as Additional Services for Engineer's costs to comply with any disclosure or non-disclosure obligations beyond those identified in the Basic Services.

12. Services directly attributable to changes in Engineer's Electronic Documents obligations after the effective date of the Agreement.

2.02 Additional Services Requiring Owner's Written Authorization

- A. If authorized in writing by Owner, Engineer shall provide Additional Services of the types listed below. These services are not included as part of Basic Services and will be paid for by Owner as indicated in Exhibit J.
 1. Obtain or provide specified additional Project-related information and data to enable Engineer to complete its Basic and Additional Services.
 2. Preparation of special and customized reporting, invoicing, and related support documentation in addition to that identified to be provided under Basic Services.
 3. Preparation of applications and supporting documents (in addition to those furnished under Basic Services) for private or governmental grants, loans, or advances in connection with the Project; preparation or review of environmental assessments and impact statements; review and evaluation of the effects on the design requirements for the Project of any such statements and documents prepared by others; and assistance in obtaining approvals of authorities having jurisdiction over the anticipated environmental impact of the Project.
 4. Services to make measured drawings of existing conditions or facilities, to conduct tests or investigations of existing conditions or facilities, or to verify the accuracy of drawings or other information furnished by Owner or others.
 5. Services resulting from significant changes in the scope, extent, or character of the portions of the Project designed or specified by Engineer, or the Project's design requirements, including, but not limited to, changes in size, complexity, Owner's schedule, character of construction, or method of financing; and revising previously accepted studies, reports, Drawings, Specifications, or Construction Contract Documents when such revisions are required by changes in Laws and Regulations enacted subsequent to the Effective Date or are due to any other causes beyond Engineer's control.
 6. Services resulting from Owner's request to evaluate additional Study and Report Phase alternative solutions beyond those agreed to in Exhibit A Paragraph 1.02.A.1.
 7. Services required as a result of Owner's providing incomplete or incorrect Project information to Engineer.
 8. Providing renderings or models for Owner's use, including development, management, and other services in support of building information modeling or civil integrated management (except as agreed to under Basic Services).
 9. Undertaking investigations and studies including, but not limited to:
 - a. All-hazards risk assessments and other studies to evaluate the feasibility of enhancing the resiliency of the design;
 - b. detailed consideration of operations, maintenance, and overhead expenses;
 - c. the preparation of feasibility studies (such as those that include projections of output capacity, utility project rates, project market demand, or project revenues)

and cash flow analyses, provided that such services are based on the engineering and technical aspects of the Project, and do not include rendering advice regarding municipal financial products or the issuance of municipal securities;

- d. preparation of appraisals;
 - e. with respect to proprietary systems or processes requiring licensing, providing services necessary to assist Owner in obtaining such licensing.
 - f. detailed quantity surveys of materials, equipment, and labor; and
 - g. audits or inventories required in connection with construction performed or furnished by Owner.
10. Furnishing services of Subconsultants or Engineer's Subcontractors for other than Basic Services.
 11. Providing data or services of the types described in Article 2, when Owner retains Engineer to provide such data or services instead of Owner furnishing the same.
 12. Providing the following services:
 - a. Services attributable to more prime construction contracts than specified in Exhibit A Paragraph 1.04.A.1.
 - b. Services to arrange for performance of construction services for Owner by contractors other than the principal prime Contractor, and administering Owner's contract for such services.
 13. Services during out-of-town travel required of Engineer, other than for visits to the Site or Owner's office as required in Basic Services (Article 1 of Exhibit A).
 14. Preparing for, coordinating with, participating in and responding to structured independent review processes, including, but not limited to, construction management, cost estimating, project peer review, value engineering, and constructability review requested by Owner; and performing or furnishing services required to revise studies, reports, Drawings, Specifications, or other documents as a result of such review processes.
 15. Preparing additional bidding-related documents (or requests for proposals or other construction procurement documents); preparing pre-qualification procedures and documents, and participating in pre-qualifying prospective Bidders; and preparing Construction Contract Documents for alternate bids.
 16. Assistance in connection with bid protests, rebidding, or renegotiating contracts for construction, materials, equipment, or services.
 17. Preparing conformed Construction Contract Documents that incorporate and integrate the content of all addenda and any amendments negotiated by Owner and Contractor.
 18. Services to assist Owner in developing or modifying protocols for transmittal of Electronic Documents by Electronic Means after the effective date of this Agreement, either by revising or adapting Exhibit F to the Project or implementing other Electronic Documents protocols among Project participants.
 19. Not used.

20. Providing Construction Phase services beyond the original date for completion and readiness for final payment of Contractor, but only if such services increase the total quantity of services to be performed in the Construction Phase, rather than merely shifting performance of such services to a later date.
21. Preparing Record Drawings, and furnishing such Record Drawings to Owner (except as agreed to under Basic Services).
22. Supplementing Record Drawings with information regarding the completed Project, Site, and immediately adjacent areas obtained from field observations, Owner, utility companies, and other reliable sources.
23. Conducting surveys, investigations, and field measurements to verify the accuracy of Record Drawing content obtained from Contractor, Owner, utility companies, and other sources; revise and supplement Record Drawings as needed.
24. Preparation of operation, maintenance, and staffing manuals.
25. Protracted or extensive assistance in refining and adjusting of Project equipment and systems (such as initial startup, testing, and balancing) (except as agreed to under Basic Services).
26. Assistance to Owner in training Owner's staff to operate and maintain Project equipment and systems.
27. Assistance to Owner in developing systems and procedures for (a) control of the operation and maintenance of Project equipment and systems, and (b) related recordkeeping.
28. Preparing to serve or serving as a consultant or witness for, or producing documents for or on behalf of, Owner in any litigation, arbitration, mediation, lien or bond claim, or other legal or administrative proceeding involving the Project (but not including disputes between Owner and Engineer).
29. Overtime work requiring higher than regular rates.
30. Providing construction surveys and staking to enable Contractor to perform its work other than as required under Exhibit A Paragraph 1.06.B.9; any type of property surveys or related engineering services needed for the transfer of interests in real property; providing construction and property surveys to replace reference points or property monuments lost or destroyed during construction; and providing other special field surveys.
31. Providing more extensive services required to enable Engineer to issue notices or certifications requested by Owner.
32. Extensive services required during any correction period, or with respect to monitoring Contractor's compliance with warranties and guarantees called for in the Construction Contract (except as agreed to under Basic Services).
33. Other additional services performed or furnished by Engineer not otherwise provided for in this Agreement.

EXHIBIT B—DELIVERABLES SCHEDULE

Paragraphs 2.04.E, 3.02.A, and Exhibit A of the Agreement are supplemented by the following paragraph and table.

Engineer shall furnish Documents to Owner as required in Column 2 of the following table (and as further described in Exhibit A), according to the schedule in Column 4. Owner shall comment or take other identified actions with respect to the Documents as indicated in Column 2 (and as further described in Exhibit A), according to the schedule in Column 4.

Party	Action	Exhibit A Reference	Schedule
Engineer	Submit review copies of the Report and other Study and Report Phase deliverables to Owner.	1.02.A.17	Within 10 days of the Effective Date.
Owner	Submit comments regarding the Report and other Study and Report Phase deliverables to Engineer.	1.02.A.18	Within 5 days of the receipt from Engineer of the Report and other Study and Report Phase deliverables.
Engineer	Submit copies of the revised Report and other Study and Report Phase deliverables to Owner.	1.02.A.18	Within 5 days of the receipt of Owner's comments regarding the Report and other Study and Report Phase deliverables.
Engineer	Submit review copies of the Preliminary Design Report, opinion of probable Construction Cost, and other Preliminary Design Phase deliverables to Owner. (30% Submittal)	1.03.B.17	Within 60 days of Owner's authorization to proceed with Preliminary Design Phase services.
Owner	Submit comments regarding Preliminary Design Report, opinion of probable Construction Cost, and other Preliminary Design Phase deliverables to Engineer.	1.03.B.18	Within 5 days of the receipt from Engineer of Preliminary Design Report, opinion of probable Construction Cost, and other Preliminary Design Phase deliverables.
Engineer	Submit copies of the first Final Design Phase draft of Drawings and Specifications to Owner. (60% Submittal)	1.04.B.1	Within 60 days of Owner's authorization to proceed with Final Design Phase services.
Owner	Submit comments and instructions regarding the first Final Design Phase draft of Drawings and Specifications to Engineer.	1.04.B.1	Within 5 days of the receipt of the first final Design Phase drafts of Drawings and Specifications from Engineer.
Engineer	Submit copies of the second Final Design Phase drafts of Drawings and Specifications to Owner. (90% Submittal)	1.04.B.2	Within 60 days of the receipt of Owner's comments and instructions regarding the first Final Design Phase drafts of Drawings and Specifications.
Engineer	Submit copies of the final, completed, pricing-ready and construction-ready Drawings and Specifications to Owner. (100% Submittal)	1.04.B.3 and 1.04.G.1	Within 5 days of the receipt of Owner's comments and instructions regarding the second Final Design Phase drafts of Drawings and Specifications.

Party	Action	Exhibit A Reference	Schedule
Owner	Submit comments and instructions regarding the final, completed, pricing-ready and construction-ready Drawings and Specifications to Engineer.	1.04.G.2	Within 5 days of the receipt from Engineer of the final, completed, pricing-ready and construction-ready Drawings and Specifications.
Engineer	Submit to Owner: copies of the revised final, completed, pricing-ready and construction-ready Drawings and Specifications; and copies of assembled Bidding/Proposal and Front-End Construction Contract Documents, and any other Final Design Phase deliverables.	1.04.G.2 1.04.G.3	Within 5 days of receipt of Owner's final comments and instructions regarding the final, completed, pricing-ready and construction-ready Drawings and Specifications, the Bidding/Proposal and Front-End Construction Contract Documents, and any other Final Design Phase deliverables.

EXHIBIT C—AMENDMENT TO OWNER-ENGINEER AGREEMENT**AMENDMENT TO OWNER-ENGINEER AGREEMENT**Amendment No. **[Enter Amendment Number]**

Owner: The City of Bartlett Tennessee

Engineer: Allen & Hoshall, Inc.

Project: Sanitary Sewer System Improvements – 2023

Effective Date of Owner-Engineer Agreement: **[Effective Date of Agreement]**

Nature of Amendment: (Check those that apply)

- ☐ Additional Services to be performed by Engineer
- ☐ Modifications to services of Engineer
- ☐ Modifications to responsibilities of Owner
- ☐ Modifications of payment to Engineer
- ☐ Modifications to time(s) for rendering services
- ☐ Modifications to other terms and conditions of the Agreement

Description of Modifications:

[Here describe the modifications, in as much specificity and detail as needed. Use an attachment if necessary. Include cost breakdown and documentation, if applicable.]

Agreement Summary:

Original agreement amount: \$

Net change for prior amendments: \$

This amendment amount: \$

Adjusted Agreement amount: \$

Change in time for services (days or date, as applicable):

Owner and Engineer hereby agree to modify the above-referenced Agreement as set forth in this Amendment. The Effective Date of the Amendment is **[Enter Effective Date of Amendment]**.

Owner

Engineer

(typed or printed name of organization)

(typed or printed name of organization)

By:

(individual's signature)

By:

(individual's signature)

(Attach evidence of authority to sign.)

(Attach evidence of authority to sign.)

Date:

(date signed)

Date:

(date signed)

Name:

(typed or printed)

Name:

(typed or printed)

Title:

(typed or printed)

Title:

(typed or printed)

EXHIBIT D— DUTIES, RESPONSIBILITIES, AND LIMITATIONS OF AUTHORITY OF RESIDENT PROJECT REPRESENTATIVE

ARTICLE 1—RESIDENT PROJECT REPRESENTATIVE SERVICES

Article 1 of the Agreement, Services of Engineer, and Exhibit A, Engineer's Services, are supplemented to include Exhibit D Paragraphs 1.01, 1.02, and 1.03, as follows:

1.01 Resident Project Representative

- A. Engineer shall furnish a Resident Project Representative ("RPR") to observe progress and quality of the Work. RPR is Engineer's representative at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions.
- B. The RPR will provide representation only during critical construction events.
- C. Subject to the scope of RPR's observations of the Work, which may include field checks of materials and installed equipment, Engineer shall endeavor to identify defects and deficiencies in the Work. However, Engineer shall not, as a result of such RPR observations of the Work, supervise, direct, inspect, or have control over the Work, nor shall Engineer (including the RPR) have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected or used by any Constructor, for security or safety at the Site, for safety precautions and programs incident to the Work or any Constructor's work in progress, for the coordination of the Constructors' work or schedules, or for any failure of any Constructor to comply with Laws and Regulations applicable to the performing and furnishing of its work. The Engineer (including RPR) neither guarantees the performance of any Constructor nor assumes responsibility for any Constructor's failure to furnish and perform the Work, or any portion of the Work, in accordance with the Construction Contract Documents. In addition, the specific terms set forth in Exhibit A Paragraph 1.06 are applicable.

1.02 Duties and Responsibilities of RPR

- A. The duties and responsibilities of the RPR are as follows:
 - 1. General: RPR's dealings in matters pertaining to the Work in general will be with Contractor. RPR's dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner only with the knowledge of and under the direction of Engineer.
 - 2. Schedules: Review the progress schedule, schedule of Shop Drawing and Sample submittals, schedule of values, and other schedules prepared by Contractor and consult with Engineer concerning acceptability of such schedules.
 - 3. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor's safety meetings), and as appropriate prepare and circulate copies of minutes thereof.
 - 4. Safety Compliance: Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR's own personal safety while at the Site.

5. Liaison
 - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Construction Contract Documents.
 - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
 - c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.
6. Clarifications and Interpretations: Receive from Contractor submittal of any matters in question concerning the requirements of the Construction Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Construction Contract Documents. Report to Engineer regarding such RFIs. Report to Engineer when clarifications and interpretations of the Construction Contract Documents are needed, whether as the result of a Contractor RFI or otherwise. Transmit Engineer's clarifications, interpretations, and decisions to Contractor.
7. Shop Drawings, Samples, and other Submittals
 - a. Receive Samples that are furnished at the Site by Contractor.
 - b. Receive Contractor-approved Shop Drawings.
 - c. Receive other Submittals from Contractor.
 - d. Record date of receipt of Samples, Contractor-approved Shop Drawings, and other Submittals.
 - e. Notify Engineer of availability of Samples for examination, and forward Contractor-approved Shop Drawings and other Submittals to Engineer. When appropriate recommend distribution of Submittal to specified Subconsultants.
 - f. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal, if RPR believes that the submittal has not been received from Contractor, or has not been approved by Contractor or Engineer.
8. Proposed Modifications: Consider and evaluate Contractor's suggestions for modifications to the Drawings or Specifications, and report such suggestions, together with RPR's recommendations, if any, to Engineer. Transmit Engineer's response (if any) to such suggestions to Contractor.
9. Review of Work; Defective Work
 - a. Report to Engineer whenever RPR believes that any part of the Work is defective under the terms and standards set forth in the Construction Contract Documents, and provide recommendations as to whether such Work should be corrected, removed and replaced, or accepted as provided in the Construction Contract Documents.
 - b. Inform Engineer of any Work that RPR believes is not defective under the terms and standards set forth in the Construction Contract Documents, but is nonetheless

not compatible with the design concept of the completed Project as a functioning whole, and provide recommendations to Engineer for addressing such Work.

- c. Advise Engineer of that part of the Work that RPR believes should be uncovered for observation, or requires special testing, inspection, or approval.

10. Inspections, Tests, and System Start-ups

- a. Consult with Engineer in advance of scheduled inspections, tests, and systems start-ups.
- b. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
- c. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.
- d. Observe whether Contractor has arranged for inspections required by Laws and Regulations, including but not limited to those to be performed by public or other agencies having jurisdiction over the Work.
- e. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work, record the results of these inspections, and report to Engineer.
- f. Nothing in this Agreement will be construed to require RPR to conduct inspections.

11. Records

- a. Maintain at the Site orderly files for correspondence, reports of job conferences, copies of Construction Contract Documents including all Change Proposals, Change Orders, Field Orders, Work Change Directives, Addenda, additional Drawings issued subsequent to the execution of the Construction Contract, RFIs, Engineer's clarifications and interpretations of the Construction Contract Documents, progress reports, approved Shop Drawing and Sample submittals, and other Project-related documents.
- b. Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, Subcontractors present at the Site, weather conditions, data relative to questions of Change Proposals, Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.
- c. Upon request from Owner to Engineer, photograph or video Work in progress or Site conditions.
- d. Record and maintain accurate, up-to-date lists of the company names and points of contact for Contractors, Subcontractors, and major Suppliers of materials and equipment.
- e. Maintain records for use in preparing Project documentation.

- f. Upon completion of the Work, furnish original set of all RPR Project documentation to designated recipients.

12. Reports

- a. Furnish periodic reports as required of progress of the Work and of Contractor's compliance with the progress schedule and schedule of Shop Drawing and Sample submittals.
- b. Draft responses to or make recommends on Change Proposals, Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.
- c. Furnish to Engineer and Owner copies of all inspection, test, and system start-up reports.
- d. Immediately inform appropriate parties of the occurrence of any Site accidents, emergencies, natural catastrophes endangering the Work, possible force majeure or delay events, damage to property by fire or other causes, or the discovery of any potential differing site condition or Constituent of Concern.

- 13. Payment Requests: Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the schedule of values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.

- 14. Certificates, Operation and Maintenance Manuals: During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.

15. Completion

- a. Participate in Engineer's visits to the Site regarding Substantial Completion, assist in the determination of Substantial Completion, and prior to the issuance of a Certificate of Substantial Completion submit a punch list of observed items requiring completion or correction.
- b. Participate in Engineer's visit to the Site in the company of Owner and Contractor, to determine completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.
- c. Observe whether all items on the final punch list have been completed or corrected, and make recommendations to Engineer concerning acceptance and issuance of the Notice of Acceptability of the Work (Exhibit E).

1.03 Limitations of Authority

A. Resident Project Representative shall not:

- 1. Authorize any deviation from the Construction Contract Documents or substitution of materials or equipment (including "or-equal" items).

2. Exceed limitations of Engineer's authority as set forth in this Agreement.
3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers, or any Constructor.
4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of the Work, by Contractor or any other Constructor.
5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
7. Accept Shop Drawing or Sample submittals from anyone other than Contractor.
8. Authorize Owner to occupy the Project in whole or in part.

EXHIBIT E—EJCDC® C-626, NOTICE OF ACCEPTABILITY OF WORK

NOTICE OF ACCEPTABILITY OF WORK (EJCDC® C-626 2018)

Owner:	Owner's Project No.:
Engineer:	Engineer's Project No.:
Contractor:	Contractor's Project No.:
Project:	
Contract Name:	
Notice Date:	Effective Date of the Construction Contract:

The Engineer hereby gives notice to the Owner and Contractor that Engineer recommends final payment to Contractor, and that the Work furnished and performed by Contractor under the Construction Contract is acceptable, expressly subject to the provisions of the Construction Contract's Contract Documents ("Contract Documents") and of the Agreement between Owner and Engineer for Professional Services dated **[date of professional services agreement]** ("Owner Engineer Agreement"). This Notice of Acceptability of Work (Notice) is made expressly subject to the following terms and conditions to which all who receive and rely on said Notice agree:

1. This Notice has been prepared with the skill and care ordinarily used by members of the engineering profession practicing under similar conditions at the same time and in the same locality.
2. This Notice reflects and is an expression of the Engineer's professional opinion.
3. This Notice has been prepared to the best of Engineer's knowledge, information, and belief as of the Notice Date.
4. This Notice is based entirely on and expressly limited by the scope of services Engineer has been employed by Owner to perform or furnish during construction of the Project (including observation of the Contractor's Work) under the Owner Engineer Agreement, and applies only to facts that are within Engineer's knowledge or could reasonably have been ascertained by Engineer as a result of carrying out the responsibilities specifically assigned to Engineer under such Owner Engineer Agreement.
5. This Notice is not a guarantee or warranty of Contractor's performance under the Construction Contract, an acceptance of Work that is not in accordance with the Contract Documents, including but not limited to defective Work discovered after final inspection, nor an assumption of responsibility for any failure of Contractor to furnish and perform the Work thereunder in accordance with the Contract Documents, or to otherwise comply with the Contract Documents or the terms of any special guarantees specified therein.
6. This Notice does not relieve Contractor of any surviving obligations under the Construction Contract, and is subject to Owner's reservations of rights with respect to completion and final payment.

Engineer

By (signature): _____
 Name (printed): _____
 Title: _____

EXHIBIT F—ELECTRONIC DOCUMENTS PROTOCOL (EDP)

ARTICLE 1—ELECTRONIC DOCUMENTS PROTOCOL (EDP)

Paragraph 6.03 of the Agreement is supplemented by the following Exhibit F Paragraph 1.01 and Exhibit F—Attachment 1: Software Requirements for Electronic Document Exchange:

1.01 Electronic Documents Protocol

- A. Electronic Transmittals: The parties shall conform to the following provisions together referred to as the Electronic Documents Protocol ("EDP" or "Protocol") for exchange of electronic transmittals.

1. Basic Requirements

- a. To the fullest extent practical, the parties agree to and will transmit and accept Electronic Documents by Electronic Means using the procedures described in this Protocol. Use of the Electronic Documents and any information contained therein is subject to the requirements of this Protocol and other provisions of the Agreement.
- b. The contents of the information in any Electronic Document will be the responsibility of the transmitting party.
- c. Electronic Documents as exchanged by this Protocol may be used in the same manner as the printed versions of the same documents that are exchanged using non-electronic format and methods, subject to the same governing requirements, limitations, and restrictions, set forth in the Agreement.
- d. Except as otherwise explicitly stated herein, the terms of this Protocol will be incorporated into any other agreement or subcontract between the Owner and Engineer and any third party for any portion of the Project, or any Project-related services, where that third party is, either directly or indirectly, required to exchange Electronic Documents with Owner, Engineer, or any Contractor or other entity directly contracted with the Owner to furnish Program-related services. Nothing herein will modify the requirements of the Agreement and applicable Construction Contract Documents regarding communications between and among the individual third parties and their respective subcontractors and consultants, except to the extent that any respective subcontractor or consultant exchanges Electronic Documents with the Owner or Engineer.
- e. When transmitting Electronic Documents, the transmitting Party makes no representations as to long term compatibility, usability, or readability of the items resulting from the receiving Party's use of software application packages, operating systems, or computer hardware differing from those established in this Protocol.
- f. Nothing herein negates any obligation (1) in the Agreement to create, provide, or maintain an original printed record version of Drawings and Specifications, signed and sealed according to applicable Laws and Regulations; (2) to comply with any applicable Law or Regulation governing the signing and sealing of design documents or the signing and electronic transmission of any other documents; or

(3) to comply with any notice requirements limiting or otherwise modifying the acceptance of Electronic Documents for such notice.

2. System Infrastructure for Electronic Document Exchange

- a. Each party will provide hardware, operating system(s) software, internet, e-mail, and large file transfer functions ("System Infrastructure") at its own cost and sufficient for complying with the EDP requirements. With the exception of minimum standards set forth in this EDP and any explicit system requirements specified by attachment to this EDP, it will be the obligation of each party to determine, for itself, its own System Infrastructure.
 - 1) The maximum size of an e-mail attachment for exchange of Electronic Documents under this EDP is 20 MB. Attachments larger than that may be exchanged using large file transfer functions or physical media.
 - 2) Each Party assumes full and complete responsibility for any and all of its own costs, delays, deficiencies, and errors associated with converting, translating, updating, verifying, licensing, or otherwise enabling its System Infrastructure, including operating systems and software, for use with respect to this EDP.
- b. Each party is responsible for its own system operations, security, back-up, archiving, audits, printing resources, and other Information Technology ("IT") for maintaining operations of its System Infrastructure during the Project, including coordination with the party's individual(s) or entity responsible for managing its System Infrastructure and capable of addressing routine communications and other IT issues affecting the exchange of Electronic Documents.
- c. Each party will operate and maintain industry-standard, industry-accepted, ISO-standard, commercial-grade security software and systems that are intended to protect the other party from: software viruses and other malicious software like worms, trojans, adware; data breaches; loss of confidentiality; and other threats in the transmission to or storage of information from the other parties, including transmission of Electronic Documents by physical media such as CD/DVD/flash drive/hard drive. To the extent that a party maintains and operates such security software and systems, it will not be liable to the other party for any breach of system security.
- d. In the case of disputes, conflicts, or modifications to the EDP required to address issues affecting System Infrastructure, the parties will cooperatively resolve the issues; but, failing resolution, the Owner is authorized to make and require reasonable and necessary changes to the EDP to effectuate its original intent. If the changes cause additional cost or time to Engineer, not reasonably anticipated under the original EDP, Engineer shall be entitled to compensation as Additional Services for its costs associated with the revisions to the EDP, delayed adoption of Exhibit L or implementation of other Electronic Documents protocols.
- e. Each party is responsible for its own back-up and archive of documents sent and received during the term of any Project contract/agreement under this EDP, unless this EDP establishes a Project document archive, either as part of a mandatory Project website or other communications protocol, upon which the Parties may rely for document archiving during the specified term of operation of such project

document archive. Further, each party remains solely responsible for its own post-Project back-up and archive of project documents, as each party deems necessary for its own purposes, after the term of contract, or termination of the project document archive, if one is established.

- f. If a receiving party receives an obviously corrupted, damaged, or unreadable Electronic Document, the receiving party will advise the sending party of the incomplete transmission.
- g. The parties will bring any non-conforming Electronic Documents into compliance with the EDP. The parties will attempt to complete a successful transmission of the Electronic Document or use an alternative delivery method to complete the communication.

B. Software Requirements for Electronic Document Exchange; Limitations

- 1. Each party will acquire the software and software licenses necessary to create and transmit Electronic Documents and to read and to use any Electronic Documents received from the other party (and if relevant from third parties), using the software formats required in this section of the EDP.
 - a. Prior to using any updated version of the software required in this section for sending Electronic Documents to the other party, the originating party will first notify and receive concurrence from the other party for use of the updated version or adjust its transmission to comply with this EDP.
- 2. The parties agree not to intentionally edit, reverse engineer, decrypt, remove security or encryption features, or convert to another format for modification purposes any Electronic Document or information contained therein that was transmitted in a software data format, including Portable Document Format (PDF), intended by sender not to be modified, unless the receiving party obtains the permission of the sending party or is citing or quoting excerpts of the Electronic Document for Project purposes.
- 3. Software and data formats for exchange of Electronic Documents will conform to the requirements set forth in the following Attachment 1 to this EDP, including software version, if listed.

C. Format and Distribution of Deliverables

- 1. By definition, "Documents" as used in this Agreement are documents expressly identified as deliverables from Engineer to Owner. Exhibit A of the Agreement identifies various Documents that Engineer is required to deliver to Owner as part of Engineer's services; Exhibit B is a schedule of such Documents. Engineer will transmit such Documents to Owner in the formats identified in Attachment 1 to this Protocol. If no specific format is identified for a deliverable Document, the format will be Portable Document Format (PDF), MS Work, Excel and AutoCAD whichever is applicable.
- 2. If a Document will be distributed to third parties, such as prospective bidders and contractors, reviewing agencies, or lenders, the transmittal format for distribution will be as identified in Attachment 1 to this Protocol; provided, however, that if a format for distribution of a specific Document is expressly stated in Exhibit A, then the Exhibit A format will take precedence. If no specific format is identified for distribution of a

deliverable Document to third parties, the format will be Portable Document Format (PDF).

- a. If a format for Document distribution other than Portable Document Format (PDF) is specified, Owner shall first obtain a written, signed release from each third party to which the deliverable Document is distributed, establishing agreement to the following conditions:
 - 1) The content included in the Electronic Documents prepared by or for Engineer and covered by the request was prepared as an internal working document for Engineer's purposes solely, and is being provided to the third party on an "AS IS" basis without any warranties of any kind, including, but not limited to any implied warranties of fitness for any purpose. As such, the third party is advised and acknowledges that the content may not be suitable for the third party's application, or may require substantial modification and independent verification by the third party. The content may include limited resolution of models; not-to-scale schematic representations and symbols; use of notes to convey design concepts in lieu of accurate graphics; approximations; graphical simplifications; undocumented intermediate revisions; and other devices that may affect subsequent reuse.
 - 2) Electronic Documents containing text, graphics, metadata, or other types of data that are provided to the Requesting Party are only for the convenience of the third party. Any conclusion or information obtained or derived from such data will be at the third party's sole risk and the third party waives any and all claims against Engineer or Owner arising from the use of the Electronic Documents covered by the request, or of any data contained in such Electronic Documents.
 - 3) The third party shall indemnify and hold harmless Owner, Engineer, and Engineer's Subcontractors and Subconsultants, from all claims, damages, losses, and expenses, including attorneys' fees and defense costs arising out of or resulting from the third party's use, adaptation, or distribution of any Electronic Documents provided under the request.
 - 4) The third party agrees not to sell, copy, transfer, forward, give away or otherwise distribute this information (in source or modified file format) to any third party without the direct written authorization of Engineer, unless such distribution is specifically identified in the request and is limited to the third party's subcontractors and consultants. The third party warrants that subsequent use by the third party's subcontractors and subconsultants will comply with all terms of the Construction Contract Documents and any specific instructions or conditions established by Owner.
- b. If Engineer is required to assist or participate in obtaining such releases from third parties, such services will be categorized as Additional Services.

D. Requests by Project-Related Parties for Electronic Documents in Other Formats

1. Owner may release (or direct Engineer to release) an Electronic Document version of a Document prepared by or for Engineer, including but not limited to a deliverable Document as set forth in Exhibit F Paragraph 1.01.C, in a format other than those

identified in Exhibit F Paragraph 1.01.B or 1.01.C of the Electronic Documents Protocol, or elsewhere in the Agreement, only if (a) a Contractor or other Project-related party (Requesting Party) makes a good faith request for such release, (b) Owner determines in its sole discretion that such release is prudent and will be beneficial to the Project, and (c) Owner obtains Requesting Party's written consent to the four conditions set forth in Exhibit F Paragraph 1.01.C.2.a.1-4 above.

2. Any services by Engineer in connection with Owner or Engineer providing a Document to a Requesting Party under this Exhibit F Paragraph 1.01.D are included in basic services.

EXHIBIT F—ATTACHMENT 1: SOFTWARE REQUIREMENTS FOR ELECTRONIC DOCUMENT EXCHANGE

Item	Electronic Documents	Transmittal Means	Data Format	Note (1)
a.1	General communications, transmittal covers, meeting notices, and responses to general information requests for which there is no specific prescribed form.	Email	Email	
a.2	Meeting agendas; meeting minutes; RFI’s and Responses to RFI’s; and Construction Contract administrative forms.	Email w/Attach	PDF	(2)
a.3	Contractor’s Submittals (Shop Drawings, “Or Equal” requests, Substitute requests, documentation accompanying Sample submittals and other Submittals) to Owner and Engineer; and, Owner’s and Engineer’s Responses to Contractor’s Submittals, Shop Drawings, Correspondence, and Applications for Payment	Email w/Attach	PDF	
a.4	Correspondence; Interim and Final Versions of reports, layouts, Specifications, Drawings, maps, calculations and spreadsheets, Construction Contract, Bidding/Proposal Documents, and Front-End Construction Contract Documents.	Email w/ Attach or LFE	PDF	(3)
a.5	Layouts, plans, maps, and Drawings to be submitted to Owner by Engineer for future use and modification	Email w/ Attach or LFE	DWG	
a.6	Correspondence, reports, and specifications to be submitted by Engineer to Owner for future word processing use and modification	Email w/ Attach or LFE	DOC	
a.7	Spreadsheets and data to be submitted to Owner by Engineer for future data processing use and modification	Email w/ Attach or LFE	EXC	
a.8	Database files and data to be submitted to Owner for future data processing use and modification	Email w/ Attach or LFE	DB	
Notes				
(1)	All exchanges and uses of transmitted data are subject to the appropriate provisions of the Agreement and Construction Contract.			
(2)	Transmittal of written notices is governed by requirements of the Agreement and Construction Contract.			
(3)	Transmittal of Bidding/Proposal Documents and Front-End Construction Contract Documents will be in manner selected by Owner in Exhibit A, Paragraph 1.05.A.1.a. Unless otherwise expressly stated, these documents and the Construction Contract will be transmitted in PDF format, including transmittals to bidders and Contractor.			
Key				
EMAIL	Standard Email formats (.htm, .rtf, or .txt). Do not use stationery formatting or other features that impair legibility of content on screen or in printed copies.			
LFE	Agreed upon Large File Exchange method (FTP, CD, DVD, hard drive, flash drive.)			
PDF	Portable Document Format readable by Adobe® Acrobat Reader.			
DWG	Autodesk® AutoCAD. dwg format Version 23.			
DOC	Microsoft® Word. docx.			
EXC	Microsoft® Excel .xlsx or .xml			
DB	Microsoft® Access .mdb			

EXHIBIT G—INSURANCE**ARTICLE 1—INSURANCE**

Paragraph 6.04 of the Agreement, Insurance, is supplemented to include the following Exhibit G Paragraphs 1.01 and 1.02:

1.01 Insurance Policies and Limits

- A. In accordance with Paragraph 6.04.A of the Agreement, the insurance that Engineer must procure and maintain, and the policy limits of such insurance, are as follows:

Coverage	Policy limits of not less than:
Workers' Compensation	
State	Statutory
Employer's Liability	
Each accident	\$
Each employee	\$
Policy limit	\$
Commercial General Liability	
General Aggregate	\$ 2,000,000
Personal and Advertising Injury	\$ 1,000,000
Bodily Injury and Property Damage—Each Occurrence	\$ 1,000,000
Automobile Liability	
Bodily Injury	
Each Person	\$ ---
Each Accident	\$ ---
Property Damage	
Each Accident	\$ ---
Or	
Combined Single Limit	
Combined Single Limit (Bodily Injury and Property Damage)	\$ 1,000,000
Excess or Umbrella Liability	
Each Occurrence	\$ 10,000,000
General Aggregate	\$ 10,000,000
Professional Liability	
Each Claim	\$ 1,000,000
Annual Aggregate	\$ 1,000,000
Unmanned Aerial Vehicle Liability Insurance	
Each Claim	\$
General Aggregate	\$
Other Insurance [Specify]	
Each Claim	\$
General Aggregate	\$

- B. In accordance with Paragraph 6.04.C of the Agreement, the insurance that Owner must procure and maintain Project insurance.
- C. Owner shall cause Engineer, its Subconsultants, and its Engineer's Subcontractors to be listed as additional insureds on any of Owner's general liability policies that are applicable to the Project. The following individuals or entities are to be listed on Owner's general liability policies of insurance (and on Contractor's policies required under Paragraph 6.04.D of the Agreement) as additional insureds:
- D. During the term of this Agreement the Engineer shall notify Owner of any other Subconsultant or Engineer's Subcontractor to be listed as an additional insured on Owner's and applicable Contractor's general liability policies of insurance.
- E. The Owner must be listed on Engineer's general liability policy as provided in Paragraph 6.04.B.
- F. For applicable Contractor's general liability policies of insurance, the additional insured endorsements will include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.
- G. For applicable Contractor's general liability policies of insurance, Contractor shall provide ISO Endorsement CG 20 32 07 04, "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent for Engineer, Subconsultants, and other design professional additional insureds.

EXHIBIT H—NOT USED

EXHIBIT I— NOT USED

EXHIBIT J—PAYMENTS TO ENGINEER FOR SERVICES AND REIMBURSABLE EXPENSES**COMPENSATION PACKET BC-1: BASIC SERVICES—LUMP SUM****ARTICLE 1—COMPENSATION PACKET BC-1: BASIC SERVICES—LUMP SUM**

Article 2 of the Agreement is supplemented to include the following Exhibit J Paragraph 1.01:

1.01 Compensation for Basic Services (other than Resident Project Representative)—Lump Sum Method of Payment

A. Owner shall pay Engineer for Basic Services set forth in Exhibit A (except for Resident Project Representative services, if any) as follows:

1. A Lump Sum amount of \$505,900.00 based on the following estimated distribution of compensation:

	WW-PDC-1	WW-PDC-2	WW-PDC-3
a. Design Phase	\$ 168,000.00	\$ 56,000.00	\$ 0.00
b. Investigation & Planning	\$ 8,450.00	\$ 8,450.00	\$ 0.00
c. Permitting	\$ 3,000.00	\$ 2,000.00	\$ 0.00
d. Engineering CA	\$ 78,000.00	\$ 26,000.00	\$ 0.00
e. Asset Management Plan	\$ 0.00	\$ 0.00	\$ 180,000.00
f. TOTALS	\$ 257,450.00	\$ 68,450.00	\$ 180,000.00

2. Engineer may alter the distribution of compensation between individual phases noted herein to be consistent with services actually rendered, but compensation will not exceed the total Lump Sum amount unless approved in writing by the Owner.
3. The Lump Sum includes compensation for Engineer's services and services of Engineer's Subcontractors and Subconsultants, if any. Appropriate amounts have been incorporated in the Lump Sum to account for labor costs, overhead, profit, and expenses (other than any expressly allowed Reimbursable Expenses).
4. In addition to the Lump Sum, Engineer is also entitled to reimbursement from Owner for the following Reimbursable Expenses (see Appendix 1 for rates or charges): None.
5. The portion of the Lump Sum amount billed for Engineer's services will be based upon Engineer's estimate of the percentage of the total services actually completed during the billing period. If any Reimbursable Expenses are expressly allowed, Engineer may also bill for any such Reimbursable Expenses incurred during the billing period.
- B. Period of Service:** The compensation amount stipulated in Compensation Packet BC-1 is conditioned on a period of service not exceeding 36 months. If such period of service is extended, the compensation amount for Engineer's services will be appropriately adjusted.

EXHIBIT J—PAYMENTS TO ENGINEER FOR SERVICES AND REIMBURSABLE EXPENSES**COMPENSATION PACKET RPR-2: RESIDENT PROJECT REPRESENTATIVE—STANDARD HOURLY RATES****ARTICLE 2—COMPENSATION PACKET RPR-2: RESIDENT PROJECT REPRESENTATIVE—STANDARD HOURLY RATES**

Article 2 of the Agreement is supplemented to include the following Exhibit J Paragraph 2.01:

2.01 Compensation for Resident Project Representative Services—Standard Hourly Rates Method of Payment

A. Owner shall pay Engineer for Resident Project Representative Services as follows:

1. Resident Project Representative Services: For services of Engineer's Resident Project Representative (RPR), if any, under Exhibits A and D, an amount equal to the cumulative hours charged by each class of Engineer's personnel providing RPR services times Standard Hourly Rates for each applicable billing class, plus RPR-related Reimbursable Expenses and RPR-related Engineer's Subcontractors' and Subconsultants' charges, if any. Standard Hourly Rates are set forth in Appendix 2, Standard Hourly Rates Schedule.
2. The total compensation under this paragraph is estimated to be \$54,400.00 based upon the following distribution of man-hours of RPR services being provided during critical construction events.

	WW- PDC-1	WW- PDC-2	WW- PDC-3
a. RPR Services grant allocation	\$ 40,800.00	\$ 13,600.00	\$ 0.00
b. Hourly Rate for RVP	\$ 90.00	\$ 90.00	\$ 90.00
c. Estimated hours of service (rounded)	450	150	0
d. Estimated compensation for RPR Service	\$40,500.00	\$ 13,500.00	\$ 0.00

B. Compensation for Reimbursable Expenses

1. For those Reimbursable Expenses that are directly related to the provision of RPR services and are not already accounted for in the compensation for Basic Services, Owner shall reimburse Engineer, using the rates set forth in Appendix 1, Reimbursable Expense Schedule, to this Exhibit J when applicable.
2. Such Reimbursable Expenses include, to the extent RPR-related, the expenses identified in Appendix 1 and the following: transportation (including mileage), lodging, and subsistence incidental thereto; providing and maintaining field office facilities including furnishings and utilities; subsistence and transportation of Resident Project Representative; courier charges; reproduction of reports, Drawings, Specifications, bidding-related or other procurement documents, Construction Contract Documents, and similar items. In addition, if authorized in advance by Owner, Reimbursable Expenses will also include expenses incurred for the use of highly specialized equipment.
3. The amounts payable to Engineer for Reimbursable Expenses, if any, will be those internal expenses related to RPR services that are actually incurred or allocated by Engineer, plus all invoiced external Reimbursable Expenses allocable to such services, the latter multiplied by a factor of 1.1.

C. Other Provisions Concerning Payment

1. Whenever Engineer is entitled to compensation for the RPR-related charges of Engineer's Subcontractors and Subconsultants, that compensation will be the amounts billed by Engineer's Subcontractors and Subconsultants to Engineer times a factor of 1.1.
2. Factors: The external Reimbursable Expenses and Engineer's Subcontractors' and Subconsultants' factors include Engineer's overhead and profit associated with Engineer's responsibility for the administration of such services and costs.
3. Estimated Compensation Amounts
 - a. Engineer's estimate of the amounts that will become payable for specified services are only estimates for planning purposes, are not binding on the parties, and are not the minimum or maximum amounts payable to Engineer under the Agreement.
 - b. When estimated compensation amounts have been stated herein and it subsequently becomes apparent to Engineer that the total compensation amount thus estimated will be exceeded, Engineer shall give Owner written notice thereof, allowing Owner to consider its options, including suspension or termination of Engineer's services for Owner's convenience. Upon notice Owner and Engineer will promptly review the matter of services remaining to be performed and compensation for such services. Owner shall either exercise its right to suspend or terminate Engineer's services for Owner's convenience, agree to such compensation exceeding said estimated amount, or agree to a reduction in the remaining services to be rendered by Engineer, so that total compensation for such services will not exceed said estimated amount when such services are completed.
4. The Standard Hourly Rates and Reimbursable Expenses Schedule shall remain fixed for the duration of the Agreement.
5. To the extent necessary to verify Engineer's charges and upon Owner's timely request, Engineer shall make copies of such records available to Owner at cost

EXHIBIT J—PAYMENTS TO ENGINEER FOR SERVICES AND REIMBURSABLE EXPENSES**COMPENSATION PACKET AS-1: ADDITIONAL SERVICES—STANDARD HOURLY RATES**

ARTICLE 3—COMPENSATION PACKET AS-1: ADDITIONAL SERVICES—STANDARD HOURLY RATES

Article 2 of the Agreement is supplemented to include the following Exhibit J Paragraph 3.01:

3.01 Compensation for Additional Services—Standard Hourly Rates Method of Payment

- A. Owner shall pay Engineer for Additional Services, if any, as follows:
 - 1. For services of Engineer's personnel engaged directly on the Project pursuant to Exhibit A Paragraph 2.01 or 2.02, except for services as a consultant or witness under Exhibit A Paragraph 2.02.A.28 (which if needed will be separately negotiated based on the nature of the required consultation or testimony), an amount equal to the cumulative hours charged by each class of Engineer's personnel providing such Additional Services times Standard Hourly Rates for each applicable billing class, plus Additional Services-related Reimbursable Expenses and Additional Services-related Engineer's Subcontractors' and Subconsultants' charges, if any.
- B. Compensation for Reimbursable Expenses
 - 1. For those Reimbursable Expenses that are directly related to the provision of Additional Services, and are not already accounted for in the compensation for Basic Services or RPR-related services, Owner shall reimburse Engineer, using the rates set forth in Appendix 1 to this Exhibit J when applicable.
 - 2. Such Reimbursable Expenses include, to the extent Additional Services-related, the expenses identified in Appendix 1 and the following categories: transportation (including mileage), lodging, and subsistence incidental thereto; providing and maintaining field office facilities including furnishings and utilities; courier charges; reproduction of reports, Drawings, Specifications, bidding-related or other procurement documents, Construction Contract Documents, and similar items. In addition, if authorized in advance by Owner, Reimbursable Expenses will also include expenses incurred for the use of highly specialized equipment.
 - 3. The amounts payable to Engineer for Reimbursable Expenses, if any, will be the Additional Services-related internal expenses actually incurred or allocated by Engineer, plus all invoiced external Reimbursable Expenses allocable to such Additional Services, the latter multiplied by a factor of 1.1.
- C. Other Provisions Concerning Payment for Additional Services
 - 1. Whenever Engineer is entitled to compensation for the charges of Engineer's Subcontractors and Subconsultants, such compensation will be the amounts billed by Engineer's Subcontractors and Subconsultants to Engineer times a factor of 1.1.
 - 2. Factors: The external Reimbursable Expenses and Engineer's Subcontractors' and Subconsultants' factors include Engineer's overhead and profit associated with Engineer's responsibility for the administration of such services and costs.
 - 3. The Standard Hourly Rates and Reimbursable Expenses Schedule shall remain fixed for the duration of the Agreement.

4. To the extent necessary to verify Engineer's charges and upon Owner's timely request, Engineer shall make copies of such records available to Owner at cost.

EXHIBIT J—PAYMENTS TO ENGINEER FOR SERVICES AND REIMBURSABLE EXPENSES**APPENDIX 1: REIMBURSABLE EXPENSES SCHEDULE**

Reimbursable Expenses are subject to review and adjustment per Exhibit J. Rates and charges for Reimbursable Expenses as of the date of the Agreement are:

8"x11" Copies/Impressions B&W	\$ 0.06/page
8"x11" Copies/Impressions Color	\$.025/page
11x17" Copies/Impressions B&W	\$ 0.20/page
11x17" Copies/Impressions Color	\$ 0.50/page
Copies of Drawings	\$ 0.10/sq. ft.
Mileage for authorized travel (IRS rate)	\$ 0.65.5/mile
Courier services and overnight mail	At cost
Laboratory Testing	Cost + 10%
Subconsultants	Cost + 10%

EXHIBIT J—PAYMENTS TO ENGINEER FOR SERVICES AND REIMBURSABLE EXPENSES**APPENDIX 2: STANDARD HOURLY RATES SCHEDULE****A. Standard Hourly Rates**

1. Standard Hourly Rates are set forth in this Appendix 2 to this Exhibit J and include salaries and wages paid to personnel in each billing class plus the cost of customary and statutory benefits, general and administrative overhead, non-project operating costs, and operating margin or profit.
2. The Standard Hourly Rates apply only as specified in Exhibit J.
3. The Standard Hourly Rates are subject to review and adjustment per Exhibit J.

B. Schedule: Hourly rates for services performed on or after the date of the Agreement are:

Position - Classification	Rate
Principal – Project Manager III	\$ 255 / Hour
Project Manager II	\$ 200 / Hour
Project Manager I	\$ 155 / Hour
Engineer	
Discipline Leader	\$ 205 / Hour
Senior Professional	\$ 175 / Hour
Professional	\$ 150 / Hour
Graduate	\$ 105 / Hour *
Technical Support	
Senior Designer	\$ 140 / Hour
Designer	\$ 115 / Hour
Senior Technician	\$ 110 / Hour
Technician	\$ 90 / Hour *
Survey	
Survey Crew Chief	\$ 155 / Hour
Survey CAD Tech	\$ 110 / Hour
Survey 2-man Crew	\$160 / Crew Hour
Clerical Support	
Senior Clerical	\$ 100 / Hour
Clerical	\$ 75 / Hour*

* Hourly rates cited for these non-exempt positions apply to regular time. If overtime is required to meet client's schedule, Engineer reserves the right to negotiate overtime rates.

EXHIBIT C—AMENDMENT TO OWNER-ENGINEER AGREEMENT**AMENDMENT TO OWNER-ENGINEER AGREEMENT**

Amendment No. 3

Owner: The City of Bartlett, Tennessee
 Engineer: Allen & Hoshall, Inc.
 Project: Sanitary Sewer System Improvements – 2023
 Effective Date of Owner-Engineer Agreement:
 Nature of Amendment: (Check those that apply)

- ☐ Additional Services to be performed by Engineer
☐ Modifications to services of Engineer
☐ Modifications to responsibilities of Owner
☒ Modifications of payment to Engineer
☐ Modifications to time(s) for rendering services
☐ Modifications to other terms and conditions of the Agreement

Description of Modifications:

**Amendment to correct Exhibit J Payments to Engineer for Resident Project Representative (RPR)
 Services and Reimbursable Expenses**

Agreement Summary: Sanitary Sewer System Improvements - 2023

Original agreement amount: \$529,000.00

Net change for prior amendments: \$0

This amendment amount: \$54,400.00

Adjusted Agreement amount: \$583,400.00

Change in time for services (days or date, as applicable):

None

Owner and Engineer hereby agree to modify the above-referenced Agreement as set forth in this Amendment. The Effective Date of the Amendment is: 03-31-2025.

Owner

City of Bartlett, TN

(typed or printed name of organization)

By:

(individual's signature)

(Attach evidence of authority to sign.)

Date:

(date signed)

Name:

(typed or printed)

Title:

(typed or printed)

Engineer

Allen & Hoshall, Inc.

(typed or printed name of organization)

By:

(individual's signature)

(Attach evidence of authority to sign.)

Date:

(date signed)

Name:

Harry Pratt

(typed or printed)

Title:

President

(typed or printed)

Attachment: Amendment No.3 signed by Harry (3757 : ARPA Engineering Design Contract Amendment)

AGREEMENT BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL SERVICES

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AGREEMENT BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL SERVICES

This is an Agreement between the City of Bartlett, Tennessee (Owner) and Allen & Hoshall, Inc. (Engineer). Owner's Project, of which Engineer's services under this Agreement are a part, is generally identified as Sanitary Sewer System Improvements – 2023 (Project). Other terms used in this Agreement are defined in Article 7. Engineer's services under this Agreement are generally identified as various improvements to the City of Bartlett, Tennessee.

Owner and Engineer further agree as follows:

ARTICLE 1—SERVICES OF ENGINEER

1.01 Scope

- A. Engineer shall provide, or cause to be provided, the services set forth herein and in Exhibit A.
- B. All phases of service will include Management of Engineering Services as shown in Exhibit A.

ARTICLE 2—OWNER'S RESPONSIBILITIES

2.01 Project Information

- A. To the extent Owner has not already provided the following, or has new, additional, or revised information from that previously provided, Owner shall provide Engineer with information and data needed by Engineer in the performance of Basic and Additional Services, including Owner's:
 - 1. design objectives and constraints;
 - 2. space, capacity, and performance requirements;
 - 3. flexibility and expandability needs;
 - 4. design and construction standards;
 - 5. budgetary limitations; and
 - 6. any other available information pertinent to the Project including reports and data relative to previous designs, construction, or investigation at or adjacent to the Site.
- B. Following Engineer's assessment of initially-available Project information and data and upon Engineer's request, Owner shall obtain, furnish, or otherwise make available (if necessary through retention of specialists or consultants) such additional Project-related information and data as is reasonably required to enable Engineer to complete its Basic and Additional Services; or, with consent of Engineer, Owner may authorize the Engineer to obtain or provide all or part of such additional information as Additional Services. Such additional information or data may include the following:
 - 1. Property descriptions.
 - 2. Zoning, deed, and other land use restrictions.
 - 3. Surveys, topographic mapping, and utility documentation.
 - 4. Property, boundary, easement, right-of-way, and other special surveys or data, including establishing relevant reference points.

5. Explorations and tests of subsurface conditions at or adjacent to the Site; geotechnical reports and investigations; drawings of physical conditions relating to existing surface or subsurface structures at the Site; hydrographic surveys, laboratory tests and inspections of samples, materials, and equipment; appropriate professional interpretation of such information or data.
 6. Environmental assessments, audits, investigations, and impact statements, and other relevant environmental, historical, or cultural studies relevant to the Project, the Site, and adjacent areas.
 7. Data or consultations as required for the Project but not otherwise identified in this Agreement.
- C. Owner shall examine all alternative solutions, studies, reports, sketches, Drawings, Specifications, proposals, and other documents presented by Engineer (including obtaining advice of an attorney, risk manager, insurance counselor, financial/municipal advisor, and other advisors or consultants as Owner deems appropriate with respect to such examination) and render in writing timely decisions pertaining thereto.
 - D. Owner shall furnish to Engineer data as to Owner's anticipated costs for services to be provided to Owner by others (including, but not limited to, accounting, bond and financial, independent cost estimating, insurance counseling, and legal advice) so that Engineer may assist Owner in collating the various cost categories that comprise Total Project Costs.
 - E. Owner shall advise Engineer if any invention, design, process, product, or device that Owner has requested, required, or recommended for inclusion in the Drawings or Specifications will be subject to payment (whether by Owner or Contractor) of any license fee or royalty to others, as required by patent rights or copyrights.
 - F. Owner shall inform Engineer as to whether Engineer's assistance is requested with respect to Owner's evaluation of the possible use of Project Strategies, Technologies, and Techniques, as defined in Exhibit A.
 - G. Owner shall inform Engineer as to whether Engineer's assistance is requested in identifying opportunities for enhancing the sustainability of the Project.
- 2.02 Owner's Instructions Regarding Bidding/Proposal and Front-End Construction Contract Documents
- A. Owner shall give instructions to Engineer regarding Owner's procurement of construction services (including instructions regarding advertisements for bids, instructions to bidders, and requests for proposals, as applicable) and Owner's construction contract practices and requirements, and furnish to Engineer (or give specific directions requesting Engineer to use copies already in Engineer's possession) the following:
 1. Owner's standard contract forms, general conditions (if other than the current edition of EJCDC® C-700, Standard General Conditions of the Construction Contract), supplementary conditions, text, and related documents and content for Engineer to include in the draft Bidding/Proposal Documents, and in draft Front-End Construction Contract Documents;
 2. insurance and bonding requirements;
 3. protocols for electronic transmittals during bidding and construction;

4. Owner's safety and security programs applicable to Contractor and other Constructors;
 5. diversity and other social responsibility requirements;
 6. bidding and contract requirements of funding, financing, or regulatory entities;
 7. other specific conditions applicable to the procurement of construction or contract documents;
 8. any other information necessary for Engineer to assist Owner in preparing its Bidding/Proposal Documents and Front-End Construction Contract Documents.
- B. Owner shall have responsibility for the final content of (1) such Bidding/Proposal Documents, and (2) such Front-End Construction Contract Documents, other than content furnished by Engineer concerning the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters.
1. Owner shall seek the advice of Owner's legal counsel, risk managers, and insurance advisors with respect to the drafting and content of such documents.
- C. If there will be an advertisement soliciting bids for construction, Owner shall place and pay for such advertisement.

2.03 Owner-Furnished Services

- A. Recognizing and acknowledging that Engineer's services and expertise do not include the following services, Owner shall obtain, as required for the Project:
1. Accounting, bond and financial advisory services (including, if applicable, "municipal advisor" services as described in Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010) and the municipal advisor registration rules issued by the Securities and Exchange Commission), independent cost estimating, and insurance counseling services.
 2. Legal services, including attorney review of proposed Construction Contract Documents, legal services required by Owner, legal services needed as a result of issues raised by Contractor, and Project-related legal services reasonably requested by Engineer.
 3. Auditing services, including those needed by Owner to ascertain how or for what purpose Contractor has used money paid to it.
- B. Unless specifically stated otherwise in Exhibit A, Owner shall provide the services of an independent testing laboratory to perform all inspections, tests, and approvals of samples, materials, and equipment required by the Construction Contract Documents (other than those required to be furnished or arranged by Contractor), or to evaluate the performance of materials, equipment, and facilities of Owner, prior to their incorporation into the Work with appropriate professional interpretation thereof. Owner shall provide Engineer with the findings and reports generated by testing laboratories, including findings and reports obtained from or through Contractor.
- C. Owner shall acquire or arrange for acquisition of the Site(s) and any temporary or permanent rights of access, easements, or property rights needed for the Project.
- D. With respect to the portions or phases of the Project designed or specified by Engineer, Owner shall provide, obtain, or arrange for:

1. all required reviews, approvals, consents, and permits from governmental authorities having jurisdiction, and
 2. such reviews, approvals, and consents from others as may be necessary for completion of each portion or phase of the Project.
- E. Owner may delegate to Contractor or others the responsibilities set forth in Paragraphs 2.03.C and D.

2.04 Owner's General Responsibilities

- A. Owner shall inform Engineer of the policies, procedures, and requirements of Owner that are applicable to Engineer's performance of services under this Agreement.
- B. Owner shall provide Engineer with Owner's budget for the Project, including type and source of funding to be used, and will promptly inform Engineer if the budget or funding sources change.
- C. Owner shall inform Engineer in writing of any safety or security programs that are applicable to the personnel of Engineer, its Subconsultants, and Engineer's Subcontractors, as they visit the Site or otherwise perform services under this Agreement.
- D. Owner shall arrange for safe access to and make all provisions for Engineer to enter upon public and private property as required for Engineer to perform services under this Agreement.
- E. Owner shall provide necessary direction and make decisions, including prompt review of Engineer's submittals, and carry out its other responsibilities in a timely manner so as not to delay Engineer's performance of its services.
- F. Owner shall be responsible for all requirements and instructions that it furnishes to Engineer pursuant to this Agreement, and for the accuracy and completeness of all programs, reports, data, and other information furnished by Owner to Engineer pursuant to this Agreement. Engineer may use and rely upon such requirements, programs, instructions, reports, data, and information in performing or furnishing services under this Agreement, subject to any express limitations or reservations applicable to the furnished items.
- G. Owner shall give prompt written notice to Engineer whenever Owner observes or otherwise becomes aware of:
 1. any development that affects the scope or time of performance of Engineer's services;
 2. the presence at the Site of any Constituent of Concern; or
 3. any relevant, material defect or nonconformance in: (a) Engineer's services, (b) the Work, (c) the performance of any Constructor, or (d) Owner's performance of its responsibilities under this Agreement.
- H. Owner shall advise Engineer of the identity and scope of services of any independent consultants employed by Owner to perform or furnish services in regard to the Project, including, but not limited to, cost estimating, project peer review, value engineering, and constructability review.
- I. If Owner designates a construction manager, site representative, or any individual or entity other than, or in addition to, Engineer to represent Owner at the Site, Owner shall define and set forth as an exhibit to this Agreement the duties, responsibilities, and limitations of

authority of such other party and the relation thereof to the duties, responsibilities, and authority of Engineer.

J. Owner shall:

1. Attend and participate in the pre-bid conference, bid opening, pre-construction conferences, construction progress and other job-related meetings, and Site visits to determine Substantial Completion and readiness of the completed Work for final payment.
2. Primarily communicate with Engineer's Subcontractors and Subconsultants through the Engineer.
 - a. Promptly inform Engineer of the substance of any communications between Owner and Engineer's Subcontractors or Subconsultants.
 - b. Refrain from directing the services of Engineer's Subcontractors or Subconsultants.
3. Authorize Engineer to provide Additional Services as set forth in Article 2 of Exhibit A of the Agreement, as required.

2.05 Payment

- A. Owner shall pay Engineer as set forth in Article 4 and Exhibit J.
- B. Engineer's compensation is summarized as follows; if there is a conflict between the following summary and the contents of Exhibit J, then Exhibit J will prevail.

Description of Service		Amount	Basis of Compensation
1.	Basic Services (Article 1 of Exhibit A)	\$ 505,900.00	Lump Sum
2.	Resident Project Representative Services	\$ 54,400.00	Hourly Rates
3.	Additional Services (Article 2 of Exhibit A)		Hourly Rates

Based on a 36-month continuous project period.

1. Compensation items and totals based in whole or in part on Hourly Rates, Direct Labor, or Percentage of Construction Cost are estimates only.
2. Lump sum amounts incorporate Engineer's labor, overhead, profit, and Engineer's Subcontractor and Subconsultants' charges.

ARTICLE 3—SCHEDULE FOR RENDERING SERVICES

3.01 Commencement

- A. Engineer is authorized to begin rendering services as of the Effective Date.

3.02 Time for Completion

- A. Engineer shall complete its obligations within a reasonable time. Specific periods of time for rendering services, or specific dates by which services are to be completed, are provided in Exhibit B, and are hereby agreed to be reasonable.
- B. If, through no fault of Engineer, such periods of time or dates are changed, or the orderly and continuous progress of Engineer's services is impaired, or Engineer's services are delayed

or suspended, then the time for completion of Engineer's services, and the rates and amounts of Engineer's compensation, will be adjusted equitably.

- C. If Owner authorizes changes in the scope, extent, or character of the Project or Engineer's services, then the time for completion of Engineer's services, and the rates and amounts of Engineer's compensation, will be adjusted equitably.
- D. If Engineer fails, for reasons within control of Engineer, to complete the performance required in this Agreement within the time set forth, as duly adjusted, then Owner shall be entitled, as its sole remedy, to the recovery of direct damages to the extent, if any, resulting from such failure by Engineer.

ARTICLE 4—INVOICES AND PAYMENTS

4.01 Invoices

- A. Preparation and Submittal of Invoices: Engineer shall prepare invoices in accordance with its standard invoicing practices, the progress reporting and special invoicing requirements (if any) in Exhibit A Paragraph 1.01.A, and the terms of Exhibit J. Engineer shall submit its invoices to Owner on a monthly basis. Invoices are due and payable within 30 days of approval.

4.02 Payments

- A. Application to Interest and Principal: Payment will be credited first to any interest owed to Engineer and then to principal.
- B. Disputed Invoices: If Owner disputes an invoice, either as to amount or entitlement, then Owner shall promptly advise Engineer in writing of the specific basis for doing so; may withhold only that portion so disputed; and must pay the undisputed portion, subject to the terms of Paragraph 4.01. After a disputed item has been resolved, Engineer shall include the agreed-upon amount on a new invoice.
- C. Failure to Pay: If Owner fails to make any undisputed payment due Engineer within 30 days after approval of Engineer's invoice, then:
 - 1. amounts due Engineer will be increased at the rate of 1.0% per month (or the maximum rate of interest permitted by law, if less) from said thirtieth day, and
 - 2. Engineer may, after giving 7 days' written notice to Owner, suspend services under this Agreement until Owner has paid in full amounts due. Owner waives any and all claims against Engineer for any such suspension.
- D. Sales or Use Taxes: If after the Effective Date any governmental entity takes an action that imposes additional sales or use taxes on Engineer's services or compensation under this Agreement, then Engineer may invoice such additional sales or use taxes for reimbursement by Owner. Owner shall reimburse Engineer for the cost of such invoiced additional sales or use taxes; such reimbursement will be in addition to the compensation to which Engineer is entitled under the terms of Exhibit J.

ARTICLE 5—OPINIONS OF COST

5.01 Opinions of Probable Construction Cost

- A. Engineer's opinions of probable Construction Cost (if any) are to be made on the basis of Engineer's experience, qualifications, and general familiarity with the construction industry. However, because Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over contractors' methods of determining prices, or over competitive bidding or market conditions, Engineer cannot and does not guarantee that proposals, bids, or actual Construction Cost will not vary from opinions of probable Construction Cost prepared by Engineer. If Owner requires greater assurance as to probable Construction Cost, then Owner agrees to obtain an independent cost estimate.

5.02 Opinions of Total Project Costs

- A. The services, if any, of Engineer with respect to Total Project Costs will be limited to assisting the Owner in tabulating the various categories that comprise Total Project Costs. Engineer assumes no responsibility for the accuracy of any opinions of Total Project Costs.

ARTICLE 6—GENERAL CONSIDERATIONS

6.01 Standards of Performance

- A. Standard of Care: The standard of care for all professional engineering and related services performed or furnished by Engineer under this Agreement will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. Engineer makes no warranties, express or implied, under this Agreement or otherwise, in connection with any services performed or furnished by Engineer.
- B. Technical Accuracy: Owner shall not be responsible for discovering deficiencies in the technical accuracy of Engineer's services. Engineer shall correct deficiencies in technical accuracy without additional compensation, unless such corrective action is directly attributable to deficiencies in Owner-furnished information.
- C. Engineer's Subcontractors and Subconsultants: Engineer may retain such Engineer's Subcontractors and Subconsultants as Engineer deems necessary to assist in the performance or furnishing of the services, subject to reasonable, timely, and substantive objections by Owner.
- D. Reliance on Others: Subject to the standard of care set forth in Paragraph 6.01.A, Engineer may use or rely upon design elements and information ordinarily or customarily furnished by others, including, but not limited to, specialty contractors, manufacturers, suppliers, and the publishers of technical standards.
- E. Compliance with Laws and Regulations, and Policies and Procedures
 - 1. Engineer and Owner shall comply with applicable Laws and Regulations.
 - 2. Engineer shall comply with the policies, procedures, and instructions of Owner that are applicable to Engineer's performance of services under this Agreement and that Owner provides to Engineer in writing, subject to the standard of care set forth in Paragraph 6.01.A, and to the extent compliance is not inconsistent with professional practice requirements.

3. This Agreement is based on Laws and Regulations and Owner-provided written policies and procedures as of the Effective Date. The following may be the basis for modifications to Owner's responsibilities or to Engineer's scope of services, times of performance, or compensation:
 - a. changes after the Effective Date to Laws and Regulations,
 - b. the receipt by Engineer after the Effective Date of Owner-provided written policies and procedures, and
 - c. changes after the Effective Date to Owner-provided written policies or procedures.
- F. General Conditions of Construction Contract: The general conditions for any Construction Contract Documents prepared hereunder are to be the current edition of EJCDC® C-700, Standard General Conditions of the Construction Contract, prepared by the Engineers Joint Contract Documents Committee, unless expressly indicated otherwise.
- G. Copies of Drawings and Specifications: If Engineer is required to prepare or furnish Drawings or Specifications under this Agreement, Engineer shall deliver to Owner at least one complete electronic copy of such Drawings and Specifications, signed and sealed according to applicable Laws and Regulations, and one complete printed copy, duly signed and sealed.
- H. Engineer shall not be required to sign any document, no matter by whom requested, that would result in Engineer having to certify, guarantee, or warrant conditions whose existence Engineer cannot ascertain within the authorized scope of Engineer's services. Owner agrees not to make resolution of any dispute with Engineer or payment of any amount due to Engineer in any way contingent upon Engineer signing any such document.
- I. Engineer shall not at any time supervise, direct, control, or have authority over any Constructor's work, nor will Engineer have authority over or be responsible for the means, methods, techniques, sequences, or procedures of construction selected or used by any Constructor, or the safety precautions and programs incident thereto, for security or safety at the Site, nor for any failure of a Constructor to comply with Laws and Regulations applicable to that Constructor's furnishing and performing of its work. Engineer shall not be responsible for the acts or omissions of any Constructor.
- J. Engineer neither guarantees the performance of any Constructor nor assumes responsibility for any Constructor's failure to furnish and perform the Work in accordance with the Construction Contract Documents.
- K. Engineer shall not be responsible for any decision made regarding the Construction Contract Documents, or any application, interpretation, clarification, or modification of the Construction Contract Documents, other than those made by Engineer.
- L. Engineer is not required to provide and does not have any responsibility for surety bonding or insurance-related advice, recommendations, counseling, or research, or enforcement of construction insurance or surety bonding requirements.
- M. Engineer's services do not include providing legal advice or representation.
- N. Engineer's services do not include (1) serving as a "municipal advisor" for purposes of the registration requirements of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010) or the municipal advisor registration rules issued by the Securities and Exchange Commission, or (2) advising Owner, or any municipal entity or other

person or entity, regarding municipal financial products or the issuance of municipal securities, including advice with respect to the structure, timing, terms, or other similar matters concerning such products or issuances.

- O. While at the Site, Engineer, its Subconsultants, and Engineer's Subcontractors, and their employees and representatives will comply with the applicable requirements of Contractor's and Owner's safety programs of which Engineer has been informed in writing.

6.02 Ownership and Use of Documents

- A. All Documents are instruments of service, and Owner owns the Documents, including all associated copyrights and the right of reuse at the discretion of the Owner, subject to the following provisions:
 - 1. Receipt by Engineer of full payment due and owing for all services relating to preparation of the Documents and subject to the express exclusions that follow.
 - 2. Owner acknowledges that the Documents are not intended or represented to be suitable for use on the Project unless completed by Engineer, or for use or reuse by Owner or others on extensions of the Project, on any other project, or for any other use or purpose, without written verification or adaptation by Engineer.
 - 3. Any such use or reuse, or any modification of the Documents, without written verification, completion, or adaptation by Engineer, as appropriate for the specific purpose intended, will be at Owner's sole risk and without liability or legal exposure to Engineer or to its officers, directors, members, partners, agents, employees, and Subconsultants.
 - 4. NOT USED.
 - 5. Owner provided documents shall not create any rights in third parties.
- B. If Engineer at Owner's request verifies the suitability of the Documents, completes them, or adapts them for extensions of the Project or for any other purpose, then Owner shall compensate Engineer at rates or in an amount to be agreed upon by Owner and Engineer.
- C. Engineer shall inform Owner if Engineer is aware of any invention, design, process, product, or device specified in the Drawings, Specifications, or other Documents that is subject to payment (whether by Owner or Contractor) of any license fee or royalty to others, as required by patent rights or copyrights. If Engineer's good-faith inclusion in the Drawings, Specifications, or other Documents of new, innovative, or non-standard technologies, for the benefit of Owner and the Project, results in third-party claims of infringement or violation of intellectual property rights, then Owner and Engineer shall share equally the costs of defending against, settling, or paying such claims.
- D. Engineer will obtain Owner's consent, which will not be unreasonably withheld, prior to releasing any publicity, including news and press releases, promotional publications, award and prize competition submittals, and other advertising regarding the subject matter of this Agreement. Nothing herein will limit the Engineer's right to include information in statements of qualifications and proposals to others accurately describing its participation and participation of employees in the Project.

6.03 Electronic Transmittals

- A. To the fullest extent practical, Owner and Engineer agree to transmit, and accept, Project-related correspondence, Documents, text, data, drawings, information, and graphics, in electronic media or digital format, either directly, or through access to a secure Project website, in accordance with Exhibit F, Electronic Documents Protocol (EDP).
 - 1. Compliance with the EDP by Engineer shall be considered a Basic Service and no direct or separate compensation will be paid to Engineer for such compliance, unless provisions for separate compensation are expressly set forth in the EDP.
 - 2. Engineer's costs directly attributable to changes in Engineer's Electronic Documents obligations, after the effective date of this Agreement, necessitated by revisions to Exhibit F, delayed adoption of Exhibit F, or implementation of other Electronic Documents protocols, will be compensated as Additional Services.
- B. If this Agreement does not include Exhibit F or otherwise does not establish or include protocols for transmittal of Electronic Documents by Electronic Means, then Owner and Engineer may operate without specific protocols or may jointly develop such protocols at a later date.
- C. Except as stated otherwise in Exhibit F (if included in this Agreement), when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents, or from those established in applicable protocols.
- D. This Agreement (including the EDP) is not intended to create obligations for Owner or Engineer with respect to transmittals to or from third parties, except as expressly stated in the EDP.

6.04 Insurance

- A. Engineer shall procure and maintain insurance as set forth in Exhibit G.
- B. Additional Insureds: The Engineer's commercial general liability, automobile liability, and umbrella or excess liability policies, must:
 - 1. include and list as additional insureds Owner, and any individuals or entities identified as additional insureds in Exhibit G;
 - 2. include coverage for the respective officers, directors, members, partners, and employees of all such additional insureds;
 - 3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations); and
 - 4. not seek contribution from insurance maintained by the additional insured.
- C. Owner shall procure and maintain insurance as set forth in Exhibit G.
- D. Owner shall require Contractor to purchase and maintain policies of insurance covering workers' compensation, general liability, motor vehicle damage and injuries, and other insurance necessary to protect Owner's and Engineer's interests in the Project. Owner shall

require Contractor to cause Engineer, its Subconsultants, and Engineer's Subcontractors to be listed as additional insureds with respect to such liability insurance purchased and maintained by Contractor for the Project. Owner shall give Engineer access to any certificates of insurance and copies of endorsements and policies obtained by Owner from Contractor.

- E. Owner and Engineer shall each deliver to the other certificates of insurance evidencing the coverages indicated in Exhibit G. Such certificates must be furnished prior to commencement of Engineer's services and at renewals thereafter during the life of the Agreement.
 - 1. Upon request by Owner or any other insured, Engineer shall also furnish other evidence of such required insurance, including but not limited to copies of policies and endorsements, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by Subconsultants and Engineer's Subcontractors. In any documentation furnished under this provision, Engineer may redact (a) any confidential premium or pricing information and (b) any wording specific to projects or jurisdictions other than those applicable to this Agreement.
- F. All construction contracts entered into by Owner with respect to the Project must require builder's risk or similar property insurance.
- G. NOT USED.
- H. All policies of insurance must contain a provision or endorsement that the coverage afforded will not be canceled, and that renewal will not be refused, until at least 10 days' prior written notice has been given to the primary insured. Upon receipt of such notice, the primary insured must promptly forward a copy of the notice to the other party to this Agreement and replace the coverage being cancelled or reduced to conform to the requirements of this Agreement.
- I. At any time, Owner may request that Engineer, or Engineer's Subcontractors or Subconsultants, at Owner's sole expense, provide additional insurance coverage, increased limits, or revised deductibles that are more protective than those specified in Exhibit G. If so requested by Owner, and if commercially available, Engineer shall obtain and shall require Engineer's Subcontractors or Subconsultants to obtain such additional insurance coverage, different limits, or revised deductibles for such periods of time as requested by Owner, and Exhibit G will be supplemented to incorporate these requirements.

6.05 Suspension and Termination

A. Suspension

- 1. By Owner: Owner may suspend Engineer's services for up to 90 days upon 7 days' written notice to Engineer.
- 2. By Engineer: Engineer may, after giving 7 days' written notice to Owner, suspend services under this Agreement:
 - a. if Owner has failed to pay Engineer for invoiced services and expenses, as set forth in Paragraphs 4.02.B and 4.02.C;
 - b. in response to the presence of Constituents of Concern at the Site, as set forth in Paragraph 6.09.D; or

- c. if persistent circumstances beyond the control of Engineer have prevented it from performing its obligations under this Agreement.

B. Termination for Cause

1. Either party may terminate the Agreement for cause upon 30 days' written notice in the event of substantial failure by the other party to perform in accordance with the terms of the Agreement, through no fault of the terminating party.
 - a. Notwithstanding the foregoing, this Agreement will not terminate under Paragraph 6.05.B.1 if the party receiving such notice begins, within 7 days of receipt of such notice, to correct its substantial failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt thereof; provided, however, that if and to the extent such substantial failure cannot be reasonably cured within such 30-day period, and if such party has diligently attempted to cure the same and thereafter continues diligently to cure the same, then the cure period provided for herein will extend up to, but in no case more than, 60 days after the date of receipt of the notice.
2. In addition to its termination rights in Paragraph 6.05.B.1, Engineer may terminate this Agreement for cause upon 7 days' written notice:
 - a. if Owner demands that Engineer furnish or perform services contrary to Engineer's responsibilities as a licensed professional;
 - b. if Engineer's services for the Project are delayed or suspended for more than 90 days for reasons beyond Engineer's control; or
 - c. as the result of the presence at or adjacent to the Site of undisclosed Constituents of Concern, as set forth in Paragraph 6.09.E.
3. Engineer will have no liability to Owner on account of any termination by Engineer for cause.

C. Termination for Convenience: Owner may terminate this Agreement for convenience, effective upon Engineer's receipt of notice from Owner.

D. Extension of Effective Date of Termination: If Owner terminates the Agreement for cause or convenience, Owner may set the effective date of termination at a time up to 30 days later than otherwise provided to allow Engineer to demobilize personnel and equipment from the Site, to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble Project materials in orderly files. Engineer shall be entitled to compensation for such tasks.

E. Payments Upon Termination: In the event of any termination under Paragraph 6.05, Engineer will be entitled to invoice Owner and to receive full payment for all services performed or furnished in accordance with this Agreement and all reimbursable expenses incurred through the effective date of termination. Upon making such payment, Owner will have the limited right to the use of Documents, at Owner's sole risk, subject to the provisions of Paragraph 6.02.A.

1. If Owner has terminated the Agreement for cause and disputes Engineer's entitlement to compensation for services and reimbursement of expenses, then Engineer's entitlement to payment and Owner's rights to the use of the Documents will be resolved

in accordance with the dispute resolution provisions of this Agreement or as otherwise agreed in writing.

6.06 Successors, Assigns, and Beneficiaries

- A. Owner and Engineer are hereby bound and the successors, executors, administrators, and legal representatives of Owner and Engineer (and to the extent permitted by Paragraph 6.06.B the assigns of Owner and Engineer) are hereby bound to the other party to this Agreement and to the successors, executors, administrators and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements, and obligations of this Agreement.
- B. Neither Owner nor Engineer may assign, sublet, or transfer any rights under or interest (including, but without limitation, claims arising out of this Agreement or money that is due or may become due) in this Agreement without the written consent of the other party, except to the extent that any assignment, subletting, or transfer is mandated by law. 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 this Agreement.
- C. Unless expressly provided otherwise in this Agreement:
 - 1. All duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of Owner and Engineer and not for the benefit of any other party.
 - 2. Nothing in this Agreement will be construed to create, impose, or give rise to any duty owed by Owner or Engineer to any Constructor, other third-party individual or entity, or to any surety for or employee of any of them.
 - 3. Owner agrees that the substance of the provisions of this Paragraph 6.06.C will appear in the Construction Contract Documents.

6.07 Dispute Resolution

- A. Unless otherwise required by Exhibit H, Owner and Engineer shall resolve all disputes in the following manner:
 - 1. Owner and Engineer agree to negotiate all disputes between them in good faith for a period of 30 days from the date of notice, prior to invoking mediation.
 - 2. Owner and Engineer agree that they shall first submit any and all unsettled claims, counterclaims, disputes, and other matters in question between them arising out of or relating to this Agreement or the breach thereof ("Disputes") to mediation. Owner and Engineer agree to participate in the mediation process in good faith. The process will be conducted on a confidential basis, and must be completed within 120 days.
 - 3. If the parties fail to resolve a Dispute through negotiations under Paragraph 6.07.A.1 or mediation under Paragraph 6.07.A.2, then:
 - a. either or both may invoke the applicable dispute resolution procedures of Exhibit H for final resolution of Disputes.
 - b. If Exhibit H is not included, or if no final dispute resolution method is specified in Exhibit H, then the parties may exercise their rights at law.

6.08 Controlling Law; Venue

- A. This Agreement is to be governed by the Laws and Regulations of the state in which the Project is located: Tennessee.
- B. Venue for any exercise of rights at law will be the state court having jurisdiction at the location cited in Paragraph 6.08.A; and if federal jurisdictional requirements can be met, in federal court in the district at the location cited in Paragraph 6.08.A.

6.09 Environmental Condition of Site

- A. Owner represents to Engineer that, as of the Effective Date, to the best of Owner's knowledge, no Constituents of Concern, other than those disclosed in writing to Engineer, exist at or adjacent to the Site.
- B. Undisclosed Constituents of Concern: For purposes of this Paragraph 6.09, the presence at or adjacent to the Site of Constituents of Concern that were not disclosed to Engineer pursuant to Paragraph 6.09.A, in such quantities or circumstances that such Constituents of Concern may present a danger to persons or property exposed to them, will be referred to as "undisclosed" Constituents of Concern.
 - 1. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of this Agreement or the Construction Contract, are not undisclosed Constituents of Concern.
 - 2. Constituents of Concern that are to be located, identified, studied, removed, or remediated as part of the services under this Agreement are not undisclosed Constituents of Concern.
 - 3. Constituents of Concern that are to be located, identified, studied, removed, or remediated as part of the services under another professional services contract for Owner, or as part of the work under a construction or remediation contract, are not undisclosed Constituents of Concern if Engineer has been informed of the general scope of such contract.
- C. If Engineer encounters or learns of an undisclosed Constituent of Concern at the Site, then Engineer shall notify (1) Owner and (2) appropriate authorities having jurisdiction if Engineer reasonably concludes that doing so is required by applicable Laws or Regulations.
- D. It is acknowledged by both parties that Engineer's scope of services does not include any services related to undisclosed Constituents of Concern. If Engineer or any other party encounters, uncovers, or reveals an undisclosed Constituent of Concern, or if encountered, uncovered, or revealed Constituents of Concern are present in substantially greater quantities or substantially different locations than disclosed or anticipated, or if investigative or remedial action, or other professional services, are necessary or required by applicable Laws and Regulations with respect to such Constituents of Concern, then Engineer may, at its option and without liability for direct, consequential, or any other damages, suspend performance of services on the portion of the Project adversely affected thereby until such portion of the Project is no longer so affected; and Owner shall promptly determine whether to retain a qualified expert to evaluate such condition or take any necessary corrective action.

- E. If the presence at the Site of undisclosed Constituents of Concern, or of Constituents of Concern in substantially greater quantities or in substantially different locations than disclosed or anticipated, adversely affects the performance of Engineer's services under this Agreement, then:
 - 1. if the adverse effects do not preclude Engineer from completing its Project services in general accordance with this Agreement on unaffected or marginally affected portions of the Project, Engineer may accept an equitable adjustment in its compensation or in the time of completion, or both; and the Agreement will be amended to reflect changes necessitated by the presence of such Constituents of Concern; or
 - 2. if the adverse effects are of such materiality to the overall performance of Engineer that it cannot complete its services without significant changes to the scope of services, time of completion, and compensation, then Engineer may terminate this Agreement for cause on 7 days' written notice.
- F. Owner acknowledges that Engineer is performing professional services for Owner and that Engineer is not and will not be required to become an "owner," "arranger," "operator," "generator," or "transporter" of hazardous substances, as defined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, which are or may be encountered at or near the Site in connection with Engineer's activities under this Agreement.

6.10 Indemnification and Mutual Waiver

- A. Indemnification by Engineer: To the fullest extent permitted by Laws and Regulations, Engineer shall indemnify and hold harmless Owner, and Owner's officers, directors, members, partners, agents, and employees, from losses, damages, and judgments (including reasonable consultants' and attorneys' fees and expenses) arising from third-party claims or actions relating to the Project, provided that any such claim, action, loss, damages, or judgment 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 Engineer or Engineer's officers, directors, members, partners, agents, employees, Subconsultants, or Engineer's Subcontractors. This indemnification provision is subject to and limited by the provisions, if any, agreed to by Owner and Engineer in Exhibit I, "Limitations of Liability."
- B. Environmental Indemnification: To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Engineer, its Subconsultants, Engineer's Subcontractors, and their officers, directors, members, partners, agents, employees, and subconsultants from all claims, costs, losses, damages, actions, and judgments (including reasonable consultants' and attorney's fees and expenses) caused by, arising out of, relating to, or resulting from a Constituent of Concern at, on, or under the Site, provided that:
 - 1. any such claim, cost, loss, damages, action, or judgment 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, and
 - 2. nothing in this paragraph obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence or willful misconduct.

- C. No Defense Obligation: The indemnification commitments in this Agreement do not include a defense obligation by the indemnitor unless such obligation is expressly stated.
- D. Percentage Share of Negligence: To the fullest extent permitted by Laws and Regulations, a party's total liability to the other party and anyone claiming by, through, or under the other party for any cost, loss, or damages caused in part by the negligence of the party and in part by the negligence of the other party or any other negligent entity or individual, will not exceed the percentage share that the party's negligence bears to the total negligence of Owner, Engineer, and all other negligent entities and individuals.
- E. Mutual Waiver: To the fullest extent permitted by Laws and Regulations, Owner and Engineer waive against each other, and the other's officers, directors, members, partners, agents, employees, subconsultants, and insurers, any and all claims for or entitlement to special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to this Agreement or the Project, from any cause or causes. Such excluded damages include but are not limited to loss of profits or revenue; loss of use or opportunity; loss of good will; cost of substitute facilities, goods, or services; and cost of capital.

6.11 Records Retention

- A. Engineer shall maintain on file in legible form, for a period of five years following completion or termination of its services, or such other period as required by Laws and Regulations, all Documents, records (including cost records), and design calculations related to Engineer's services or pertinent to Engineer's performance under this Agreement. Upon Owner's request, Engineer shall provide a copy of any such item to Owner at cost.

6.12 Miscellaneous Provisions

- A. Notices: Any notice required under this Agreement will be in writing, and delivered: in person (by commercial courier or otherwise); by registered or certified mail; or by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line. All such notices are effective upon the date of receipt.
- B. Survival: Subject to applicable Laws and Regulations, all express representations, waivers, indemnifications, and limitations of liability included in this Agreement will survive its completion or termination for any reason.
- C. Severability: Any provision or part of the Agreement held to be void or unenforceable under any Laws or Regulations will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Engineer.
- D. No Waiver: A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Agreement.
- E. Accrual of Claims: To the fullest extent permitted by Laws and Regulations, all causes of action arising under this Agreement will be deemed to have accrued, and all statutory periods of limitation will commence, no later than the date of Substantial Completion; or, if Engineer's services do not include Construction Phase services, or the Project is not completed, then no later than the date of Owner's last payment to Engineer.

ARTICLE 7—DEFINITIONS

7.01 Defined Terms

- A. Wherever used in this Agreement (including the exhibits hereto) terms (including the singular and plural forms) printed with initial capital letters have the meanings indicated in the text above, in the exhibits, or in the following definitions:
1. Addenda—Written or graphic instruments issued prior to the opening of bids which clarify, correct, or change the bidding requirements or the proposed Construction Contract Documents.
 2. Additional Services—The services to be performed for or furnished to Owner by Engineer in accordance with Article 2 of Exhibit A of this Agreement.
 3. Agreement—This written contract for professional services between Owner and Engineer, including all exhibits identified in Paragraph 8.01 and any duly executed amendments.
 4. 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 Construction Contract.
 5. Basic Services—The services to be performed for or furnished to Owner by Engineer in accordance with Article 1 of Exhibit A of this Agreement.
 6. Bidding/Proposal Documents—Documents related to the selection of the Contractor, including advertisements or invitations to bid; requests for proposals; instructions to bidders or proposers, including any attachments such as lists of available Site-related documents; bid forms; bids; proposal forms; proposals; bidding requirements; and qualifications documents.
 7. Change Order—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Construction Contract Price or the Construction Contract Times, or other revision to the Construction Contract, issued on or after the effective date of the Construction Contract.
 8. Change Proposal—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth in the Construction Contract, seeking an adjustment in Construction Contract Price or Construction Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Construction Contract Documents or the acceptability of Work under the Construction Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Construction Contract.
 9. Constituents of Concern—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

10. Construction Contract—The entire and integrated written contract between Owner and Contractor concerning the Work.
11. Construction Contract Documents—Those items designated as “Contract Documents” in the Construction Contract, and which together comprise the Construction Contract. See also definition of “Front-End Construction Contract Documents” below.
12. Construction Contract Price—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Construction Contract Documents.
13. Construction Contract Times—The number of days or the dates by which Contractor must: (a) achieve milestones, if any, in the Construction Contract; (b) achieve Substantial Completion; and (c) complete the Work.
14. Construction Cost—The cost to Owner of the construction of those portions of the entire Project designed or specified by or for Engineer under this Agreement, including construction labor, services, materials, equipment, insurance, and bonding costs, and allowances for contingencies. Construction Cost does not include costs of services of Engineer or other design professionals and consultants; cost of land or rights-of-way, or compensation for damages to property; Owner’s costs for legal, accounting, insurance counseling, or auditing services; interest or financing charges incurred in connection with the Project; or the cost of other services to be provided by others to Owner. Construction Cost is one of the items comprising Total Project Costs.
15. Constructor—Any person or entity (not including the Engineer, its employees, agents, representatives, or Subconsultants, or Engineer’s Subcontractors), performing or supporting construction activities relating to the Project, including but not limited to Contractors, Subcontractors, Suppliers, Owner’s work forces, utility companies, other contractors, construction managers, design-builders, testing firms, shippers, and truckers, and the employees, agents, and representatives of any or all of them.
16. Contractor—The entity or individual with which Owner enters into a Construction Contract.
17. Documents—All documents expressly identified as deliverables in this Agreement, whether in printed or Electronic Document form, required by this Agreement to be provided or furnished by Engineer to Owner. Such specifically required deliverables may include, by way of example, Drawings, Specifications, data, reports, building information models, and civil integrated management models.
18. Drawings—That part of the Construction Contract Documents that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. Effective Date—The date indicated in this Agreement on which it becomes effective, but if no such date is indicated, the date on which this Agreement is signed and delivered by the last of the parties to sign and deliver.
20. Electronic Document—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
21. Electronic Means—Electronic mail (e-mail), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or

communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Agreement. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. Engineer—The individual or entity named as such in this Agreement.
23. Engineer's Subcontractor—An individual, firm, vendor, or other entity having a contract with Engineer to furnish general services, equipment, or materials with respect to the Project as an independent contractor.
24. Field Order—A written order issued by Engineer which requires minor changes in the Work but does not change the Construction Contract Price or the Construction Contract Times.
25. Front-End Construction Contract Documents—Those Construction Contract Documents whose primary purpose is to establish legal and contractual terms and conditions, typically including the Owner-Contractor agreement, bonds, general conditions, and supplementary conditions. The term excludes the Drawings and Specifications, and any Construction Contract Documents delivered or issued after the effective date of the Construction Contract.
26. Laws and Regulations; Laws or Regulations—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
27. Owner—The individual or entity named as such in this Agreement and for which Engineer's services are to be performed. Unless indicated otherwise, this is the same individual or entity that will enter into any Construction Contracts concerning the Project.
28. Project—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the services to be performed or furnished by Engineer under this Agreement are a part.
29. Record Drawings—Drawings depicting the completed Project, or a specific portion of the completed Project, prepared by Engineer and based on Contractor's record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications, as delivered to Engineer and annotated by Contractor to show changes made during construction.
30. Resident Project Representative—The authorized representative of Engineer assigned to assist Engineer at the Site during the Construction Phase. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of the RPR.
31. Samples—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.

32. Shop Drawings—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Construction Contract Documents.
33. Site—Lands or areas to be indicated in the Construction Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for the use of Contractor.
34. Specifications—The part of the Construction Contract Documents that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
35. Subconsultant—An individual, design firm, consultant, or other entity having a contract with Engineer to furnish professional services with respect to the Project as an independent contractor.
36. 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.
37. Submittal—A written or graphic document, prepared by or for Contractor, which the Construction Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Construction Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Construction Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
38. 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 Construction 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.
39. 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 a Subcontractor.
40. Total Project Costs—The total cost of planning, studying, designing, constructing, testing, commissioning, and start-up of the Project, including Construction Cost and all other Project labor, services, materials, equipment, insurance, and bonding costs,

allowances for contingencies, and the total costs of services of Engineer or other design professionals and consultants, together with such other Project-related costs that Owner furnishes for inclusion, including but not limited to cost of land, rights-of-way, compensation for damages to properties and private utilities (including relocation if not part of Construction Cost), Owner's costs for legal, accounting, insurance counseling, and auditing services, interest and financing charges incurred in connection with the Project, and the cost of other services to be provided by others to Owner.

41. **Underground Facilities**—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
42. **Work**—The entire construction or the various separately identifiable parts thereof required to be provided under the Construction Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Construction Contract Documents.
43. **Work Change Directive**—A written directive to Contractor issued on or after the effective date of the Construction Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

B. Terminology

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

ARTICLE 8—EXHIBITS AND SPECIAL PROVISIONS

8.01 Exhibits to Agreement

The following exhibits are incorporated by reference and included as part of this Agreement:

- A. Exhibit A, Engineer's Services.
- B. Exhibit B, Deliverables Schedule.
- C. Exhibit C, Amendment to Owner-Engineer Agreement (form).
- D. Exhibit D, Duties, Responsibilities and Limitations of Authority of Resident Project Representative.
- E. Exhibit E, EJCDC® C-626, Notice of Acceptability of Work (form).
- F. Exhibit F, Electronic Documents Protocol (EDP).
- G. Exhibit G, Insurance.
- H. Exhibit H, Not Used.

- I. Exhibit I, Not Used.
 - J. Exhibit J, Payments to Engineer for Services and Reimbursable Expenses.
- 8.02 Total Agreement
- A. This Agreement (which includes the exhibits listed above) constitutes the entire contractual agreement between Owner and Engineer and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a written instrument duly executed by both parties. Amendments should be based whenever possible on the format of Exhibit C to this Agreement.
- 8.03 Designated Representatives
- A. With the execution of this Agreement, Engineer and Owner shall each designate a specific individual to act as representative under this Agreement. Such an individual must have authority to transmit instructions, receive information, and render decisions with respect to this Agreement on behalf of the party that the individual represents.
- 8.04 Engineer's Certifications
- A. Engineer certifies that it has not engaged in corrupt, fraudulent, or coercive practices in competing for or in executing the Agreement. For the purposes of this Paragraph 8.04:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the selection process or in the Agreement execution;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the selection process or the execution of the Agreement to the detriment of Owner, or (b) to deprive Owner of the benefits of free and open competition;
 - 3. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the selection process or affect the execution of the Agreement.
- 8.05 Conflict of Interest
- A. Nothing in this Agreement will be construed to create or impose any duty on the part of Engineer that would be in conflict with Engineer's paramount obligations to the public health, safety, and welfare under the professional practice requirements governing Engineer, its Subconsultants, and all licensed professionals employed by Engineer or its Subconsultants.
 - B. If during the term of this Agreement a potential or actual conflict of interest arises or is identified:
 - 1. Engineer and Owner together will make reasonable, good faith efforts to avoid or eliminate the conflict of interest; to mitigate any adverse consequences of the conflict of interest; and, if necessary and feasible, to modify this Agreement to address the conflict of interest and its consequences, such that progress under the Agreement may continue.
 - 2. Such efforts will be governed by applicable Laws and Regulations and by any pertinent Owner's policies, procedures, and requirements (including any conflict of interest

resolution methodologies) provided to Engineer under Paragraph 2.04.A of this Agreement.

Address for giving notices:

6400 Stage Road

Barlett, TN 38134

Address for giving notices:

1661 International Drive

Suite 100

Memphis, TN 38120

Designated Representative:

Name: John Horne, P.E.

(typed or printed)

Title: Director of Engineering

(typed or printed)

Address:

6382 Stage Road

Barlett, Tennessee 38134

Designated Representative:

Name: Ben Pearson

(typed or printed)

Title: Project Manager

(typed or printed)

Address:

Same

Phone: 901-385-6499

Email: jhorne@cityofbartlett.org

Phone: 901-261-4650

Email: bpearson@allenhoshall.com

This Agreement's Effective Date is 10-18-23.

Owner:

City of Bartlett, Tennessee

John T. Horn (name of organization)
10/18/23

By:

[Signature]
(individual's signature)

Date:

10-18-23
(date signed)

Name: David Parsons

(typed or printed)

Title: Mayor

(typed or printed)

Attest:

(individual's signature)

Title:

(typed or printed)

Engineer:

Allen & Hoshall, Inc.

(name of organization)

By:

[Signature]
(individual's signature)

Date:

10-13-2023
(date signed)

Name: Harry Pratt

(typed or printed)

Title: President

(typed or printed)

Attest:

Ben Pearson
(individual's signature)

Title:

Ben Pearson

(typed or printed)

Subscribed and sworn to before me on this 13th day of October, 2023 by

Harry Pratt

[Signature]
Notary Public



My Commission Expires: 12/13/23



PROJECT MANUAL

Allen & Hoshall
1661 International Drive #100
Memphis, Tennessee 38120

Job No. 72379
JULY 2024

WW-PDC-1 PUMP STATIONS (4) CONTRACT A

City of Bartlett Bartlett, Tennessee

American Rescue Plan (ARP) Grant

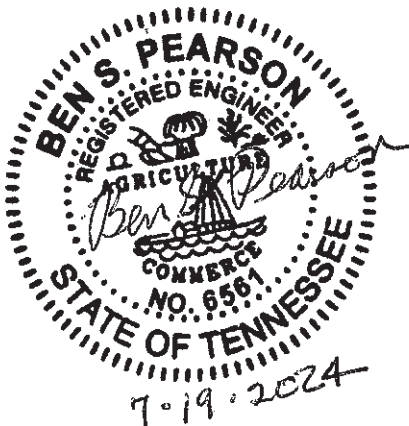
Grant Contract ARP No. 2022-8724

Project ID: WW-PDC-1

NPDES Permit TN0066800

Edison Vender ID 000000 2665

ESU Project No. _____



WPN24.0657

APPROVED FOR CONSTRUCTION

THE DOCUMENT BEARING THIS STAMP HAS BEEN RECEIVED AND REVIEWED BY THE

**TENNESSEE DEPT. OF ENVIRONMENT & CONSERVATION
DIVISION OF WATER RESOURCES**

AND IS HEREBY APPROVED FOR CONSTRUCTION BY THE COMMISSIONER

09/13/2024

THIS APPROVAL SHALL NOT BE CONSTRUED AS CREATING A PRESUMPTION
OF CORRECT OPERATION OR AS WARRANTING BY THE COMMISSIONER THAT
THE APPROVED FACILITIES WILL REACH THE DESIGNED GOALS.

APPROVAL EXPIRES ONE YEAR FROM ABOVE DATE

PROJECT MANUAL
FOR
WW-PDC-1 PUMPING STATIONS (4), CONTRACT A

CITY OF BARTLETT
BARTLETT, TENNESSEE

ALLEN & HOSHALL
1661 INTERNATIONAL DRIVE
SUITE 100
MEMPHIS, TENNESSEE 38120

Job No. 72379

Date: JULY 19, 2024

Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

SECTION 00003

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72379

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Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

DOCUMENT 00004

LIST OF DRAWINGS

The following is a list of Contract Drawings which this contract is to be based. These drawings are entitled WW-PDC-1/ PUMP STATIONS (4) – CONTRACT A, CITY OF BARTLETT, TENNESSEE and dated JULY 19, 2024 with revision dates (if any), as noted. They will be supplemented by additional shop and dimensional drawings of materials and equipment and other drawings where specified.

<u>Drawing Number</u>	<u>Sub-Title</u>	<u>Revision Date</u>
C0.1	EX. CONDITIONS & DEMO PLAN – RANER CREEK	
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E1.3	ELECTRICAL PLAN & DETAILS B. VALLEY PUMP STATION 8860 OLD BROWNSVILLE ROAD	
E1.4	SITE PLAN – ELECTRICAL SHADOWLAWN PUMP STATION 7805 OLD BROWNSVILLE ROAD	
ED1.1	ELECTRICAL DEMOLITION PLAN RANER CREEK PUMP STATION 5258 SHELTER RUN LANE	
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ED1.3	ELECTRICAL DEMO PLAN B. VALLEY PUMP STATION 8860 OLD BROWNSVILLE ROAD	
ED1.4	ELECTRICAL DEMO PLAN SHADOWLAWN PUMP STATION 7805 OLD BROWNSVILLE ROAD	

END OF DOCUMENT

SECTION 00021
ADVERTISEMENT FOR BIDS

Bid Number:	2022-8724
Bid Title:	City of Bartlett, Tennessee, WW-PDC-1/Pump Stations (4), Contract A Construction Bid
Category:	Public Works
Status:	

DESCRIPTION

Advertisement for Bids

Project Name: WW-PDC-1/Pump Stations (4), Contract A

City of Bartlett, TN will be soliciting bids for the renovation and upgrading of 4 existing wastewater pumping stations with the following names and street addresses: Billy Maher, 5965 Old Brownsville Road; Raner Creek, 5258 Shelter Run Lane; Shadowlawn, 7805 Old Brownsville Road; Brunswick Valley, 8860 Old Brownsville Road. The work for WW-PDC-1/Pump Stations (4), Contract A will include, but not be limited to: demolition of existing pumping equipment, excavation, bypass sewage pumping, demolition, wet well modification, wet well wall coating, new valve vault; new submersible pumps and installation, pipework, standby generators, site work, and electrical and control work.

This project is being supported with Treasury, Coronavirus State and Local Recovery Fund grant funding. Therefore, certain restrictions and other federal requirements attach to this opportunity.

Separate sealed bids for **Project Name** will be received by **Honorable David Parsons, Mayor**, at **Bartlett City Hall 6400 Stage Road, Bartlett, TN, 38134** until 2:00 p.m. C.D.T., October 31, 2024, and then at said office publicly opened and read aloud. Any person with disability requiring special accommodations must contact the **City of Bartlett, TN** no later than 7 days prior to the bid opening.

A **MANDATORY** Pre-bid Meeting will NOT be conducted for this project. To schedule a visit to the Rainer Creek pumping station, contact Matt Crenshaw, 901-385-5570. The other three (3) sites are open to the public for a site visit at anytime.

All bid documents may be examined and/or obtained from Allen Hoshall Plan Room at www.allenhoshallplanroom.com.

City of Bartlett, TN hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement will be afforded full opportunity to submit bids in

response to this invitation and will not be discriminated against on the grounds of race, color, sex, or national origin in consideration for an award. City of Bartlett, TN is an Equal Opportunity Employer. Any contract that uses federal funds to pay for construction work is a "federally assisted construction contract" and must include the equal opportunity clause found in 2 C.F.R. Part 200, unless otherwise stated in 41 C.F.R. Part 60. We encourage all small and minority owned firms and women's business enterprises to participate. No bidder may withdraw his bid within (60) days after the actual date of the opening thereof.

PLEASE NOTE: Official plan holders list will only be available from Allen & Hoshall Plan Room at www.allenhoshallplanroom.com.

The Copeland "Anti-Kickback" Act is also applicable, which prohibits workers on construction contracts from giving up wages that they are owed. Contractor must not appear on Sam.gov disbarment list.

A detailed listing of all subcontractors shall be provided by the Bidder. In accordance with the Contract Documents, documentation that the prospective General Contractor and its subcontractors meet minimum qualifications shall be provided and submitted. Subcontractors must also not appear on Sam.gov disbarment list. Mark-ups on subcontractor work or Cost Plus Overhead will be disallowed for reimbursement.

A bid bond or certified check for five percent (5%) of the total bid amount must accompany each bid. The successful bidder will be required to furnish a performance bond and payment in the amount of his bid and shall, before entering on the work of said contract, be licensed as a contractor as required by the regulations of the State of Tennessee General Assembly's Contractor's Licensing Act of 1976, and all amendments thereto in effect on bid receipt date. License number, expiration date, and license classification (Classification for this Project shall be MU-B or BC-B or BC) shall be shown on the outside of the envelope containing the bid of the General Contractor. The license number, expiration date, and license classification shall also be shown for the electrical subcontractor, plumbing subcontractor, and mechanical subcontractor. Failure to show these items on outside of envelope will result in bid being returned to Bidder unopened, as required by Tennessee Contractor's Licensing Act referenced above.

The owner reserves the right to waive any informalities or to reject any or all bids.

Publication Date

October 16, 2024

Closing Date/Time

2:00 p.m., CDT, October 31, 2024

Bid Opening Information

2:00 p.m., CDT, October 31, 2024

Bartlett City Hall

6400 Stage Road

Bartlett, TN 38134

Pre-bid Meeting:

A Pre-Bid Meeting will NOT be conducted for this project.

Plans and Specifications Available

These may be obtained from Allen & Hoshall Plan Room at

WWW.allenhoshallplanroom.com.

Digital copy Plans and Specifications may be secured for no fee. All printing, shipping and other required costs are at the contractor's expense.

Plan Holders List

This may be obtained from Allen & Hoshall Plan Room at WWW.allenhoshallplanroom.com.

Related Documents

Supplemental Conditions

Required State or Grantee Certifications

The following documents outline required supplementary requirements to be completed and provided by the bidders with your bid response.

[BYRD Anti-Lobbying Amendment Certification](#)

[Iran Divestment Act Certification](#)

[Debarment Certification](#)

[Non-Boycott of Israel Certification](#)

Required and Recommended Federal Contract Provisions

The following document outline the required and recommended provisions that must be included in contracts that are being funded in part or whole with grant funding from the SLFRF.

[Required and Recommended SLFRF Supplemental Conditions for Contracts Provisions Davis-Bacon and Certification of Labor Agreements Reporting Template](#) (for projects greater than \$10 million)

Required Construction Site Signage

- **Identification Signage for Individual Projects Going to Construction**
 - [State Water Infrastructure Grants Project Sign Sample](#)
- **Wage Rates** – every employer performing work covered by the labor standards of the Davis-Bacon and Related Acts shall post a notice (including an applicable wage determination) at the site of the work in a prominent and accessible place where it may be easily seen by employees
- **Permits** - a copy of all applicable permits must be posted on-site for the duration of the permit(s) and be installed in accordance with all permit requirements

DOCUMENT 00200
INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACT
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ARTICLE 1—DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

A. *Issuing Office*—See Section 00021 – Advertisement for Bids.

ARTICLE 2—BIDDING DOCUMENTS

- 2.01 Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). See the Agreement for a list of the Contract Documents. It is Bidder's responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.
- 2.02 Bidding Documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download or distribution of the Bidding Documents does not confer a license or grant permission or authorization for any other use. Authorization to download documents, or other distribution, includes the right for plan holders to print documents solely for their use, and the use of their prospective Subcontractors and Suppliers, provided the plan holder pays all costs associated with printing or reproduction. Printed documents may not be re-sold under any circumstances.
- 2.03 Engineer has established a Bidding Documents Website as indicated in the Advertisement or invitation to bid. Engineer recommends that Bidder register as a plan holder with the Issuing Office at such website, and obtain a complete set of the Bidding Documents from such website. Bidders may rely that sets of Bidding Documents obtained from the Bidding Documents Website are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Engineer.
- 2.04 *Electronic Documents*
- A. See Section 00021 – Advertisement for Bids.

ARTICLE 3—QUALIFICATIONS OF BIDDERS

- 3.01 *Information to be Furnished by the Bidder with his Bid*
- A. The names, addresses and contact information of at least three (3) references where work and construction techniques similar to this project have been successfully completed by the Bidder.
- B. The previous work references shall include at least the following items of work: deep excavations on sites with very limited work space and access; installation of wet wells in deep excavations with limited access; work around active sanitary sewers which must remain in service during construction; ductile iron pipework; connections to existing sanitary sewage facilities; structural concrete forming and placement work; equipment installation; electrical work; control work; site work; EPSC work; traffic control; and similar related items of work.

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- 3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.
- 3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

ARTICLE 4—PRE-BID CONFERENCE

- 4.01 A pre-bid conference will NOT be conducted for this project.

ARTICLE 5—SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

5.01 *Site and Other Areas*

- A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

5.02 *Existing Site Conditions*

- A. There is no subsurface information available for the pipeline route and no documentation of physical conditions.
- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05 of the General Conditions. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

5.03 *Site Visit by Bidders*

- A. Bidder is not required to but may visit the Site during normal working hours and conduct a thorough visual examination of the Site and adjacent areas. During the visit the Bidder must not disturb any ongoing operations at the Site.

5.04 *Other Work at the Site*

- A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Express Representations and Certifications in Bid Form, Agreement*

- A. The Bid Form that each Bidder will submit contains express representations regarding the Bidder's examination of Project documentation, Site visit, and preparation of the Bid, and certifications regarding lack of collusion or fraud in connection with the Bid.

Bidder should review these representations and certifications and assure that Bidder can make the representations and certifications in good faith, before executing and submitting its Bid.

- B. If Bidder is awarded the Contract, Bidder (as Contractor) will make similar express representations and certifications when it executes the Agreement.

ARTICLE 7—INTERPRETATIONS AND ADDENDA

- 7.01 Owner or Engineer on its own initiative may issue Addenda to clarify, correct, supplement, or change the Bidding Documents.
- 7.02 Bidder shall submit all questions about the meaning or intent of the Bidding Documents to Engineer in writing. Contact information and submittal procedures for such questions are as follows:
- 7.03 Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all registered plan holders. Questions received less than 7 days prior to the date for opening of Bids may not be answered.
- 7.04 Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract Documents unless set forth in an Addendum that expressly modifies or supplements the Contract Documents.

ARTICLE 8—BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 5 percent of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a Bid bond issued by a surety meeting the requirements of Paragraph 6.01 of the General Conditions. Such Bid bond will be issued in the form included in the Bidding Documents.
- 8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract, furnished the required Contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract and furnish the required Contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture will be Owner's exclusive remedy if Bidder defaults.
- 8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of 7 days after the Effective Date of the Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.
- 8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within 7 days after the Bid opening.

ARTICLE 9—CONTRACT TIMES

- 9.01 The number of days within which the Work is to be (a) substantially completed and (b) ready for final payment are set forth in the Agreement.
- 9.02 Provisions for liquidated damages, if any, for failure to timely attain completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 10—SUBSTITUTE AND “OR EQUAL” ITEMS

- 10.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or “or-equal” items. In cases in which the Contract allows the Contractor to request that Engineer authorize the use of a substitute or “or-equal” item of material or equipment, application for such acceptance may not be made to and will not be considered by Engineer until after the Effective Date of the Contract.
- 10.02 All prices that Bidder sets forth in its Bid will be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder’s sole risk.

ARTICLE 11—NOT USED**ARTICLE 12—PREPARATION OF BID**

- 12.01 The Bid Form is included with the Bidding Documents.
- A. All blanks on the Bid Form must be completed in ink and the Bid Form signed in ink. Erasures or alterations must be initialed in ink by the person signing the Bid Form. A Bid price must be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.
 - B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words “No Bid” or “Not Applicable.”
- 12.02 If Bidder has obtained the Bidding Documents as Electronic Documents, then Bidder shall prepare its Bid on a paper copy of the Bid Form printed from the Electronic Documents version of the Bidding Documents. The printed copy of the Bid Form must be clearly legible, printed on 8½ inch by 11-inch paper and as closely identical in appearance to the Electronic Document version of the Bid Form as may be practical. The Owner reserves the right to accept Bid Forms which nominally vary in appearance from the original paper version of the Bid Form, providing that all required information and submittals are included with the Bid.
- 12.03 A Bid by a corporation must be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation must be shown.

- 12.04 A Bid by a partnership must be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership must be shown.
- 12.05 A Bid by a limited liability company must be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown.
- 12.06 A Bid by an individual must show the Bidder's name and official address.
- 12.07 A Bid by a joint venture must be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture must have been formally established prior to submittal of a Bid, and the official address of the joint venture must be shown.
- 12.08 All names must be printed in ink below the signatures.
- 12.09 The Bid must contain an acknowledgment of receipt of all Addenda, the numbers of which must be filled in on the Bid Form.
- 12.10 Postal and e-mail addresses and telephone number for communications regarding the Bid must be shown.
- 12.11 The Bid must contain evidence of Bidder's authority to do business in the state where the Project is located, or Bidder must certify in writing that it will obtain such authority within the time for acceptance of Bids and attach such certification to the Bid.
- 12.12 The Bid must contain evidence of Bidder's licensure,. Bidder's state contractor license number, if any, must also be shown on the Bid Form.

ARTICLE 13—BASIS OF BID

13.01 *Lump Sum*

- A. Bidders must submit a Bid on a lump sum basis and unit price basis as set forth in the Bid Form.

13.02 *Allowances*

NOT USED.

ARTICLE 14—SUBMITTAL OF BID

- 14.01 The Bidder shall submit one unbound, properly prepared and executed Bid Form along with the Bid security and the other documents required to be submitted under the terms of Article 2 of the Bid Form.
- 14.02 A Bid must be received no later than the date and time prescribed and at the place indicated in the Advertisement or invitation to bid. The Bid must be enclosed in an envelope or package that includes on the outside of the envelope or package the information required in the Advertisement of invitation to bid, and the Bid must be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid must be enclosed in a separate envelope or package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid must be addressed

to the location designated in the Advertisement.

- 14.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 15—MODIFICATION AND WITHDRAWAL OF BID

- 15.01 An unopened Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 15.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 15.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 15.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, the Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, the Bidder will be disqualified from further bidding on the Work.

ARTICLE 16—OPENING OF BIDS

- 16.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. 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.

ARTICLE 17—BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 17.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 18—EVALUATION OF BIDS AND AWARD OF CONTRACT

- 18.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner also reserves the right to waive all minor Bid informalities not involving price, time, or changes in the Work.
- 18.02 Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible.
- 18.03 If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, whether in the Bid itself or in a separate communication to Owner or Engineer, then Owner will reject the Bid as nonresponsive.
- 18.04 If Owner awards the contract for the Work, such award will be to the responsible Bidder submitting the lowest responsive Bid.

18.05 Evaluation of Bids

- A. In evaluating Bids, Owner will consider whether 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.

18.06 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.

18.07 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 19—BONDS AND INSURANCE

19.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds, other required bonds (if any), and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it must be accompanied by required bonds and insurance documentation.

19.02 Article 8, Bid Security, of these Instructions, addresses any requirements for providing bid bonds as part of the bidding process.

ARTICLE 20—SIGNING OF AGREEMENT

20.01 When Owner issues a Notice of Award to the Successful Bidder, it will be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder must execute and deliver the required number of counterparts of the Agreement and any bonds and insurance documentation required to be delivered by the Contract Documents to Owner. Within 10 days thereafter, Owner will deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

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DOCUMENT 00300

BID FORM

Project Identification:

This Bid is Submitted to (Name and Address of Owner): CITY OF BARTLETT – 6400 STAGE ROAD,
BARTLETT, TENNESSEE 38134

This Bid is Submitted from (Contractor): Chris-Hill Construction Company, LLC

Bidders License No. 08974

Classification: MU-B; BC-B

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with Owner in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in this Bid and in accordance with other terms and conditions of the Contract Documents.
2. Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for sixty days after the day of Bid opening. Bidder will sign and submit the Agreement with the Bonds and other documents required by the Bidding Requirements within fifteen days after the date of Owner's Notice of Award.
3. In submitting this Bid, Bidder represents, as more fully set forth in the Agreement, that:
 - (a) Bidder has examined copies of all the Bidding Documents.
 - (b) Bidder has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.
 - (c) Bidder has studied carefully all reports and drawings of subsurface conditions and drawings of physical conditions which are provided in paragraph 5.03 of the General Conditions, and accepts the determination set forth in paragraph 5.03 of the General Conditions of the extent of the technical data contained in such reports and drawings upon which Bidder is entitled to rely.
 - (d) Bidder has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests and studies (in addition to or to supplement those referred to in (c) above) which pertain to the subsurface or physical conditions at the site or otherwise may affect the cost, progress, performance or furnishing of the Work as Bidder considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 5.03 of the General Conditions; and no additional examinations, investigations, explorations, tests, reports or similar information or data are or will be required by Bidder for such purposes.

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BID FORM

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- (e) Bidder has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports or similar information or data in respect of said Underground Facilities are or will be required by Bidder in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 5.05 of the General Conditions.
- (f) Bidder has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.
- (g) Bidder has given Architect/Engineer written notice to all conflicts, errors or discrepancies that it has discovered in the Contract Documents and the written resolution thereof by Architect/Engineer is acceptable to Bidder.
- (h) This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.
- (i) Bid shall include all applicable taxes, permits, and fees.

Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

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BID FORM
WW-PDC-1/PUMP STATIONS (4) CONTRACT A
CITY OF BARTLETT

Bidder hereby agrees to furnish all parts, labor and materials necessary for the construction of all items set forth by the attached plans and specifications at the LUMP SUM prices shown for each bid item below.

Item No.	Description of Item	Qty	Unit	Unit Price	Total
1.	Construction and renovation of Billy Maher Pump Station, 5965 Old Brownsville Road, complete, including but not limited to: excavation; possible dewatering; earthwork; grading and site work; erosion control; bypass pumping system; precast concrete wet well extension; special wet well coating; pumps, pump bases, piping, fittings, valves; combination air release valves; pump control panel; diesel standby generator; valve vault; pipework painting; bollards; wood fence; and all other related work, complete in every detail and ready for the City's beneficial use as indicated and as specified.	1	LS	<u>\$966,700.00</u>	<u>\$966,700.00</u>
2.	Construction and renovation of Raner Creek Pump Station, 5258 Shelter Run Lane, complete, including but not limited to: excavation; possible dewatering; earthwork; grading and site work; erosion control; bypass pump connection on existing force main; bypass pumping system; precast concrete wet well extension; special wet well coating; pumps, pump bases, piping, fittings, valves; combination air release valves; pump control panel; diesel standby generator; valve vault; pipework painting; and all other related work, complete in every detail and ready for the City's beneficial use as indicated and as specified.	1	LS	<u>\$964,200.00</u>	<u>\$964,200.00</u>
3.	Construction and renovation of Shadowlawn Pump Station, 7805 Old Brownsville Road, complete, including but not limited to: excavation; possible dewatering; earthwork; grading and site work; erosion control; bypass pump connection on existing force main; bypass pumping system; precast concrete wet well extension; special wet well coating; pumps, pump bases, piping, fittings, valves; combination air release valves; pump control panel; diesel standby generator; valve vault; pipework painting; and all other related work,	1	LS	<u>\$937,130.00</u>	<u>\$937,130.00</u>

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BID FORM

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	complete in every detail and ready for the City's beneficial use as indicated and as specified.				
Item No.	Description of Item	Qty	Unit	Unit Price	Total
4.	Construction and renovation of Brunswick Valley Pump Station, 8860 Old Brownsville Road, complete, including but not limited to: excavation; possible dewatering; earthwork; grading and site work; erosion control; bypass pump connection on existing force main; bypass pumping system; precast concrete wet well extension; special wet well coating; pumps, pump bases, piping, fittings, valves; combination air release valves; pump control panel; diesel standby generator; valve vault; pipework painting; and all other related work, complete in every detail and ready for the City's beneficial use as indicated and as specified.	1	LS	\$ 868,270.	\$ 868,270.
5.	Sod	100	SY	\$ 20.00	\$ 2,000.00
6.	Undercutting Unsuitable Soil	50	CY	\$ 41.00	\$ 2,050.00
7.	Granular in-place backfill material to replace unsuitable soil only	80	TON	\$ 69.00	\$ 5,520.00
8.	Erosion Control	1	LS	\$ 6215.00	\$ 6,215.00

TOTAL BID PRICE, ITEM NOS. 1 through 8 IN WORDS:

THREE MILLION SEVEN HUNDRED FIFTY TWO THOUSAND EIGHTY FIVEDOLLARS AND NO CENTS (\$ 3,752,085.00).BIDDER QUALIFICATIONS included ☒ YES ☐ NO (CIRCLE ONE)- SEE ARTICLE 3, SECTION C-200, INSTRUCTIONS TO BIDDERS

Each Bidder shall list the appropriate blank spaces below the name of manufacturer of equipment items upon which this bid is based. The Bidder agrees that if awarded this contract; Bidder will:

- (1) Furnish equipment of the manufacturer listed below, unless otherwise approved by the Engineer.
- (2) In each case where equipment is specified by performance and/or description without any manufacturer's name, Bidder will list the name of the manufacturer of the proposed equipment; and agree the Engineer may reject the equipment of the Bidder's listed manufacturer if the Engineer considers that the equipment involved does not comply with the specification requirements or is unsuitable for performing the required functions.

Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

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SPECIFICATION SECTION	EQUIPMENT DESCRIPTION	BONA FIDE MANUFACTURER (LIST ONE ONLY FOR EACH ITEM)
Section 02664	Ductile Iron Pipe	<u>CONSOLIDATED PIPE & SUPPLY</u>
Section 02664	Ductile Iron Pipe Fittings	<u>CONSOLIDATED PIPE & SUPPLY</u>
Section 02732	Precast Concrete Structures Supplier	<u>RINKER</u>
Section 02736	Sewage Pump Supplier	<u>GULF STATES ENGINEERING</u>
Section 13000	Check Valve Supplier	<u>GULF STATES ENGINEERING</u>
Section 13000	Gate Valve Supplier	<u>GULF STATES ENGINEERING</u>
Section 11201	Sewage Flow Meter Mfg.	<u>MSK</u>
Section 16230	Package Generator Supplier	<u>CONSOLIDATED ELECTRICAL SERV.</u>
Section 16010	Electrical Subcontractor	<u>CONSOLIDATED ELECTRICAL SERV.</u>
Section 09891	Interior Coatings Subcontractor For Wet Wells	<u>CTA COATINGS</u>
Section 09960	Painting Subcontractor	<u>M&D PAINTING</u>

5. Receipt of the following Addenda is hereby acknowledged: 1, 2, 3, 4, 5
(Insert number of all addenda received; if no addenda received, insert "None").

6. Bidder agrees that the Work: the WW-PDC-1/Pump Stations (4), Contract A, City of Bartlett will be substantially complete within 365 calendar days after the date when the Contract Time commences to run as provided in the Contract Documents, and completed and ready for final payment within 420 calendar days after the date when the Contract Time commences to run.

Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work on time.

7. The following documents are attached to and made a condition of this Bid:

- (a) Required Bid Security in the form of 5% Bid Bond or Bank Check in the amount of 5% of the Bid.
- (b) A tabulation of Subcontractors, Suppliers and other persons and organizations required to be identified in this Bid.
- (c) Required Bidder's Qualification Statement with supporting data.

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8. Communications concerning this Bid shall be addressed to:
- Bidder Danny R. Stoppenhagen
- Mailing Address 4749 Pleasant Run Road Memphis, TN 38118
- Physical Address Same as Mailing
- Telephone 901-767-6312
- Fax 901-767-1323
- Email danny@chrishillconstruction.com
9. The terms used in this Bid which are defined in the General Conditions of the Construction Contract included as part of the Contract Documents have the meanings assigned to them in the General Conditions.

Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

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If Bidder is:

An Individual_____
(Individual's Name)_____
(Individual's Signature)

(SEAL)

doing business as: _____

Business address: _____

Phone No.: _____

A PartnershipChris-Hill Construction Company, LLC

(Firm Name)

(SEAL)

By: _____

Danny R. Stoppenhagen, Chief Manager

(Signature of General Partner)

Business address: 4749 Pleasant Run Road Memphis, TN 38118Phone No.: 901-767-6312A Corporation_____
(Corporation Name)

By: _____

Title: _____

(Signature of person authorized to sign)

(Corporate Seal)

Attest: _____ (Secretary)

(State of incorporation)

Business address: _____

Phone No.: _____



Office: 901.767.6312 ▲ Fax: 901.767.1323 ▲ 4749 Pleasant Run Road ▲ Memphis, TN 38118

Date: 11/14/2024

RE: Binding Authority of Partners

To Whom It May Concern:

As Partners and Chief Managers of Chris-Hill Construction Company, LLC, each of the three individuals listed below is authorized to sign individually or jointly to bind Chris-Hill Construction Co., LLC to an agreement.

Craig A. Christenbury
Jon J. Hill
Danny R. Stoppenhagen

Signed,

Randy S. Lax
Secretary/Treasurer
Chris-Hill Construction Co., LLC

State of Tennessee }
County of Shelby }

Subscribed and sworn before me this 14th day of November, 2024 by

Randy S. Lax



Notary Public Cecelia Hale

My commission expires: 06/03/2026

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A Joint Venture

_____(SEAL)
(Joint Venture)

By: _____(Signature of Joint Venturer)

(Address)

By: _____(Signature of Joint Venturer)

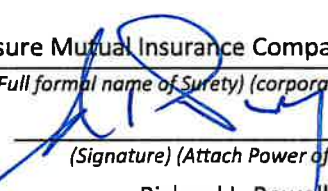
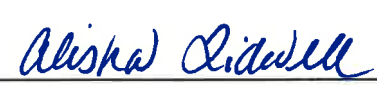
(Address)

(Each joint venturer must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above).

END OF DOCUMENT

Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

BID BOND (DAMAGES FORM)

Bidder Name: Chris-Hill Construction Co., LLC Address (principal place of business): 4749 Pleasant Run Road, Memphis, TN 38118	Surety Name: Amerisure Mutual Insurance Company Address (principal place of business): P.O. Box 9098, Farmington Hills, MI 48333
Owner Name: City of Bartlett Address (principal place of business): 6400 Stage Road Bartlett, Tennessee 38134	Bid Project (name and location): WW-PDC-1/Pump Stations (4), Contract A Bid Due Date: November 14, 2024
Bond Bond Amount: Five Percent of Amount Bid (5%) Date of Bond: November 14, 2024	
Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.	
Bidder Chris-Hill Construction Co., LLC _____ (Full formal name of Bidder)	Surety Amerisure Mutual Insurance Company _____ (Full formal name of Surety) (corporate seal)
By:  _____ (Signature)	By:  _____ (Signature) (Attach Power of Attorney)
Name: DANNY R. STOPPENHAGEN _____ (Printed or typed)	Name: Richard L. Powell _____ (Printed or typed)
Title: CHIEF MANAGER _____	Title: Attorney-in-Fact _____
Attest:  _____ (Signature)	Attest:  _____ (Signature)
Name: CECELIA HALE _____ (Printed or typed)	Name: Alisha Tidwell _____ (Printed or typed)
Title: OFFICE MANAGER _____	Title: Witness _____
Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.	

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder any difference between the total amount of Bidder's Bid and the total amount of the Bid of the next lowest, responsible Bidder that submitted a responsive Bid, as determined by Owner, for the work required by the Contract Documents, provided that:

- 1.1. If there is no such next Bidder, and Owner does not abandon the Project, then Bidder and Surety shall pay to Owner the bond amount set forth on the face of this Bond, and

:EJCDC® C-435, Bid Bond (Damages Form).

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- 1.2. In no event will Bidder's and Surety's obligation hereunder exceed the bond amount set forth on the face of this Bond.
- 1.3. Recovery under the terms of this Bond will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation will be null and void if:
 - 3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2. All Bids are rejected by Owner, or
 - 3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions will not in the aggregate exceed 120 days from Bid due date without Surety's written consent.
6. No suit or action will be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety, and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond must be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond will be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

:EJCDC® C-435, Bid Bond (Damages Form).

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"Revised 10-22-24"
Addendum No.1

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Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)



AMERISURE MUTUAL INSURANCE COMPANY
 AMERISURE INSURANCE COMPANY
 AMERISURE PARTNERS INSURANCE COMPANY

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Amerisure Mutual Insurance Company, Amerisure Insurance Company and Amerisure Partners Insurance Company are corporations duly organized under the laws of the State of Michigan (herein collectively the "Companies"), and that the Companies do hereby make, constitute and appoint:

JOSEPH MADDEN III, MARK E. HARRIS, RICHARD L. POWELL, RIC STALLINGS,

KEITH W. BROWN, DANIEL B. DICKENS, COOPER W. PERMENTER,

RICHARD L. POWELL JR. and FORBES HARRIS

of HUB International Mid-South, its true and lawful Attorney(s)-in Fact, each in their separate capacity if more than one is named above, to sign, execute, seal and acknowledge, for and on its behalf and as its act and deed, bonds or others writings obligatory in the nature of a bond on behalf of each of said Companies, as surety, on contracts or suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract or suretyship executed under this authority shall exceed the amount of:

ONE HUNDRED MILLION (\$100,000,000.00) DOLLARS

This Power of Attorney is granted and signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of Amerisure Mutual Insurance Company, Amerisure Insurance Company and Amerisure Partners Insurance Company at meetings duly called and held on February 17, 2022.

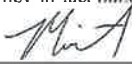
"RESOLVED, that any two of the President & Chief Executive Officer, the Chief Financial Officer & Treasurer, the Senior Vice President Surety, the Vice President Surety, or the General Counsel & Corporate Secretary be, and each or any of them hereby is authorized to execute, a Power of Attorney qualifying the attorney-in-fact named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings and all contracts of surety, and that President & Chief Executive Officer, Chief Financial Officer & Treasurer or General Counsel & Corporate Secretary each or any of them hereby is authorized to attest to the execution of any such Power of Attorney and to attach therein the seal of the Company;

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto electronically/digitally or by facsimile, and any such Power of Attorney or certificate bearing such electronic/digital or facsimile signatures or electronic/digital or facsimile seal shall be binding upon the Company when so affixed and in the future with regard to any bond, undertaking or contract of surety to which it is attached;

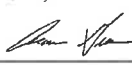
FURTHER RESOLVED, that any work carried out by the attorney-in-fact pursuant to this resolution shall be valid and binding upon the Company."



By:


 Michael A. Ito, Senior Vice President Surety

By:


 Aaron Green, Vice President Surety

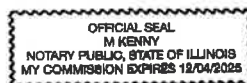


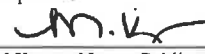
IN WITNESS WHEREOF, Amerisure Mutual Insurance Company, Amerisure Insurance Company and Amerisure Partners Insurance Company have caused their official seals to be hereunto affixed, and these presents to be signed by their authorized officers this 26th day of April, 2023.

**Amerisure Mutual Insurance Company
 Amerisure Insurance Company
 Amerisure Partners Insurance Company**

State of Illinois
 County of Kane

On this 26th day of April, 2023, before me, a Notary Public personally appeared Michael A. Ito, of Amerisure Mutual Insurance Company, Amerisure Insurance Company and Amerisure Partners Insurance Company and Aaron Green of Amerisure Mutual Insurance Company, Amerisure Insurance Company and Amerisure Partners Insurance Company, personally known to me, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as officers of and acknowledged said instrument to be the voluntary act and deed of their respective companies.




 M. Kenny, Notary Public

I, Christopher M. Spaude, the duly elected Chief Financial Officer & Treasurer of Amerisure Mutual Insurance Company, Amerisure Insurance Company and Amerisure Partners Insurance Company, do hereby certify and attest that the above and foregoing is a true and correct copy of a Power of Attorney executed by said Companies, which remains in full force and effect.

IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this 14th day of November, 2024.


 Christopher M. Spaude, Chief Financial Officer & Treasurer

Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

License Search and Verification

We are upgrading verify.tn.gov to Public Search. Please visit us here: <https://search.cloud.commerce.tn.gov/>

For best results, please limit the number of search fields. Only exact matches will be displayed. You may need to try different variations of search terms. e.g., "Smith and Smith Construction" and "Smith & Smith Construction." If any name has an apostrophe in it, please replace the apostrophe with a percent sign, entering "Smith's Auto Shop" as "Smith%s Auto Shop."

After you submit the search form, your results will appear below the form in this window (the form will remain for your reuse)...if you cannot see the results below, please scroll further down the search form.

For self-insured workers' compensation, or other reports, please submit to the [Public Record Request form](#).

<< [Click Here To Go Back To The Search Page](#)

License Details

License Status	Active - Fully Licensed
License #	64535
License ID	64535
Expiration Date	Mar 31 2025
Original Date	Mar 29 2011
Profession Code	1801
Profession Name	Contractor
First Name	\
Middle Name	\
Last Name	CONSOLIDATED ELECTRICAL SERVICES, INC
City	MEMPHIS
State	TN
Zip Code	38115
Rank	Contractor
License Activity Description	Active - Fully Licensed

Classification and Limit

CLASS	CE
MONETARY LIMIT	\$3,000,000

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Search

All Words ▼ e.g. 1606N020Q02



Select Domain

Entity Information

[All Entity Information](#)[Entities](#)[Disaster Response Registry](#)[Responsibility / Qualification](#)[Exclusions](#)

Filter By

Keyword Search

For more information on how to use our keyword search, visit our [help guide](#)

Simple Search

Search Editor

- ☐ Any Words
- ☒ All Words
- ☐ Exact Phrase

e.g. 123456789, Smith Corp

"consolidated electrical services" x

Classification

Excluded Individual

Excluded Entity

Federal Organizations

Exclusion Type

Exclusion Program

Location

Dates



Reset

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We couldn't find a match for your search criteria.

Please try another search or go back to previous results.

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Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

Chris-Hill Construction Co., LLC.

11/14/2024

City of Bartlett - WW-PDC-1 Pump Stations (4) Contract A

Contractor Qualifications - Previous Work

Previous Work:

Project: MLGW Mallory Wash Water Recovery Basin
Owner: Memphis Light, Gas, and Water
Contact Info.: Darren Beal, Lead Engineer - Water Engineering, Memphis, Light, Gas, and Water.
 (901) 636-7124
Year Completed: 2023
Work Description: Construct a new 25' deep 1.1 million gallon concrete water reservoir. Install (2) 27' deep Recycle Water pump stations with submersible pumps and ductile iron pipe. Complete with pump automation and a SCADA system connection.

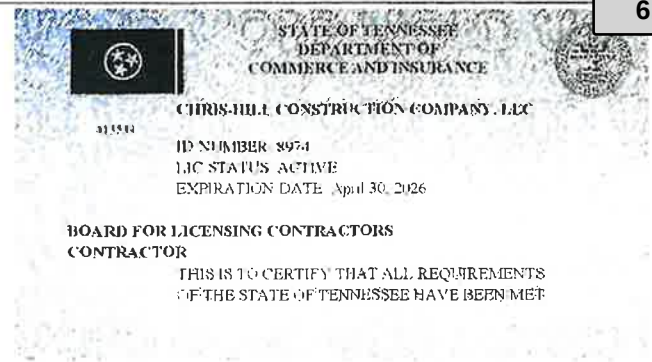
Project: MSCAA -Glycol Management Program - Bridges and Site Construction
Owner: Memphis-Shelby County Airport Authority
Contact Info.: Prudy Edwards, Project Control Specialist MSCAA (901) 344-1650
Year Completed: 2020
Work Description: Installed new 30' deep concrete pumping station structure, (3) 300 Hp Vertical Turbine Pumps, and 1,200 lf of 30" Ø Ductile Iron Piping.

Project: Storm Water Pump Station 54" Pipe Repair
Owner: West Memphis Utility Authority
Contact Info.: Ward Wimbish, WMUA Assistant General Manager (901) 277-9407
Year Completed: 2021
Work Description: Realigned & modified tie-in joints and installed helical anchor & concrete saddle foundations, for four 54"Ø steel forcemain pipes. Bury depth 15' deep.

Project: Cordova Lift Station Repair
Owner: City of Germantown, Public Works Dept.
Contact Info.: Andy Sanders, Assist. Dir. City of Germantown Public Works, (901) 757-7329
Year Completed: 2020
Work Description: Installed refurbished an existing pump station structure (24' deep), installed (2) new 20 Hp sewage pumps & piping, and 70' of 10"Ø Restrained Joint DIP Forcemain. Bury depth 10'.

Project: Water Treatment Plant Improvements
Owner: Town of Rossville TN.
Contact Info.: Tim Verner, Senior Vice President Fisher Arnold Engineering (901)748-1811
Year Completed: 2019
Work Description: Installed a new Aeration System, (3) 30Hp High Service Pumps, and 30' of 8"Ø DIP Flanged Header Piping above grade and 120' of 6" Ø DIP Raw Water piping. Bury depth 5' deep.

Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)



CHRIS-HILL CONSTRUCTION COMPANY, LLC
4749 PLEASANT RUN ROAD
MEMPHIS, TN 38118



**CHRIS HILL CONSTRUCTION CO**

**4749 PLEASANT RUN ROAD
MEMPHIS, TN 38118**

**MEMPHIS AND SHELBY COUNTY
BUSINESS TAX LICENSE**

RECEIPT NUMBER	241009917
LICENSE NUMBER	79503146
THIS LICENSE EXPIRES	05/15/2025
CLASSIFICATION	4

OWNER(S)

CHRIS HILL CONSTRUCTION CO

BUSINESS LOCATION ADDRESS

**4749 PLEASANT RUN RD
MEMPHIS, TN 38118**

**MUST DISPLAY IN A CONSPICUOUS
PLACE**

Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

AFFIDAVITS TO BE SUBMITTED WITH BID

DRUG-FREE WORKPLACE AFFIDAVITSTATE OF TENNESSEECOUNTY OF SHELBY

The undersigned, principal officer of Chris-Hill Construction Co., LLC, an employer of five (5) or more employees contracting with City of Bartlett, Shelby County government to provide construction services, hereby states under oath as follows:

1. The undersigned is a principal officer of Chris-Hill Construction Co., LLC (hereinafter referred to as the "Company"), and is duly authorized to execute this Affidavit on behalf of the Company.
2. The Company submits this Affidavit pursuant to T.C.A. § 50-9-113, which requires each employer with no less than five (5) employees receiving pay who contracts with the state or any local government to provide construction services to submit an affidavit stating that such employer has a drug-free workplace program that complies with Title 50, Chapter 9, of the *Tennessee Code Annotated*.
3. The Company is in compliance with T.C.A. § 50-9-113.

Further affiant saith not.


Principal Officer Danny R. Stoppenhagen, Chief Manager

STATE OF TENNESSEECOUNTY OF SHELBY

Before me personally appeared Danny R. Stoppenhagen, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who acknowledged that such person executed the foregoing affidavit for the purposes therein contained.

Witness my hand and seal at office this 14TH day of November, 20 24.


Notary Public Cecelia Hale

My commission expires: 06/03/2026



**AMERICAN IRON AND
STEEL AFFIDAVIT**

The goods and services under this Agreement are being funded with monies made available by the Clean Water State Revolving Fund and/or Drinking Water State Revolving Fund that have statutory requirements commonly known as "American Iron and Steel;" that requires all of the iron and steel products used in the project to be produced in the United States ("American Iron and Steel Requirement") including iron and steel products provided by the Contactor pursuant to this Agreement.

The Bidder hereby represents and warrants to and for the benefit of the Purchaser (City of Bartlett) and the State that:

- (a) the Bidder has reviewed and understands the American Iron and Steel Requirement;
- (b) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved; and
- (c) the Bidder will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the City of Bartlett (Purchaser) or the State.

Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Purchaser or State to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney's fees) incurred by the Purchaser or State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the Purchaser). While the Contractor has no direct contractual privity with the State, as a lender to the Purchaser for the funding of its project, the Purchaser and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

STATE OF TENNESSEE

COUNTY OF SHELBY

Name of Bidder Chris-Hill Construction Company, LLC

Name of Principal Officer Danny R. Stoppenhagen, Chief Manager

Signature of Principal Officer *Danny R. Stoppenhagen*
Danny R. Stoppenhagen

STATE OF TENNESSEE

COUNTY OF SHELBY

Before me personally appeared Danny R. Stoppenhagen, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who acknowledged that such person executed the foregoing affidavit for the purposes therein contained.

Witness my hand and seal at office this 14TH day of November, 2024

Cecelia Hale
 Notary Public Cecelia Hale

My commission expires: 06/03/2026



AFFIDAVIT REGARDING NON-BOYCOTT OF ISRAEL

In compliance with the Contractor Affidavit Regarding Non-Boycott of Israel (State of Tennessee 2022, Public Chapter No. 775, the Act), which became effective on July 1, 2022, certification is required of all bidders on contracts of \$250,000 or greater or when the Contractor has 10 or more employees.

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party hereto certifies that it is not currently engaged in, and covenants that it will not, for the duration of the Contract, engage in a Boycott of Israel as that term is defined in Tenn. Code Ann §12-4-127.

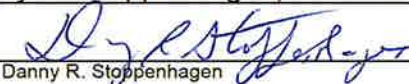
I affirm, under the penalties of perjury, this statement to be true and correct.

STATE OF: TENNESSEE

COUNTY OF: SHELBY

Name of Bidder Chris-Hill Construction Company, LLC

Name of Principal Officer Danny R. Stoppenhagen, Chief Manager

Signature of Principal Officer 
 Danny R. Stoppenhagen

STATE OF TENNESSEE

COUNTY OF SHELBY

Before me personally appeared Danny R. Stoppenhagen, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who acknowledged that such person executed the foregoing affidavit for the purposes therein contained.

Witness my hand and seal at office this 14TH day of November, 2024


 Notary Public Cecelia Hale

My commission expires: 06/03/2026



END OF SECTION

SECTION 00801



STATE OF TENNESSEE

BYRD ANTI-LOBBYING AMENDMENT CERTIFICATION

Contractors who apply or bid for an award of \$100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352.

Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

APPENDIX A, 44 C.F.R. PART 18 – CERTIFICATION REGARDING LOBBYING – REQUIRED FOR CONTRACTS OVER \$100,000 *Certification for Contracts, Grants, Loans, and Cooperative Agreements*

The undersigned certifies, to the best of his or her knowledge and belief, that:

☒ No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

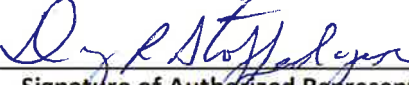
☒ If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

☒ The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

72379

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

	11/14/2024
Signature of Authorized Representative	Date
Danny R. Stoppenhagen, Chief Manager	901-767-6312 / danny@chrishillconstruction.com
Printed Name and Title	Phone Number / Email Address

Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

72379

SECTION 00802

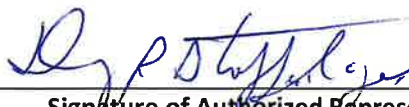


**STATE OF TENNESSEE
CERTIFICATION REGARDING
DEBARMENT, SUSPENSION AND OTHER
RESPONSIBILITY MATTERS**

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

- ☒ Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- ☒ Have not within a three-year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- ☒ Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and
- ☒ Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

	11/14/2024
Signature of Authorized Representative	Date
Danny R. Stoppenhagen, Chief Manager	901-767-6312 / danny@chrishillconstruction.com
Printed Name	Phone Number / Email Address

☐ I am unable to certify to the above statements. Explanation is attached.

071924

CERTIFICATION REGARDING DEBARMENT, SUSPENSION
AND OTHER RESPONSIBILITY MATTERS

00802-1

Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

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Search

All Words ▼ e.g. 1606N020Q02



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Entity Information

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Filter By

Keyword Search

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Simple Search

Search Editor

- ☐ Any Words
- ☒ All Words
- ☐ Exact Phrase

e.g. 123456789, Smith Corp

"Chris-Hill Construction Company" x

Classification

Excluded Individual

Excluded Entity

Federal Organizations

Exclusion Type

Exclusion Program

Location

Dates



Reset

**No matches found**

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Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

72379

SECTION 00803



STATE OF TENNESSEE
IRAN DIVESTMENT ACT CERTIFICATION

SUBJECT CONTRACT NUMBER(S):	
CONTRACTOR LEGAL ENTITY NAME:	Chris-Hill Construction Company, LLC
EDISON SUPPLIER IDENTIFICATION NUMBER:	

The Iran Divestment Act, Tenn. Code Ann. § 12-12-101 et. seq. requires a person that attempts to contract with the state, including a contract renewal or assumption, to certify at the time the bid is submitted or the contract is entered into, renewed, or assigned, that the person or the assignee is not identified on a list created pursuant to § 12-12-106.

Currently, the list is available online at the following website:

<https://www.tn.gov/generalservices/procurement/central-procurement-office-cpo/library/public-information-library.html>

The Contractor, identified above, certifies by signature below that it is not included on the list of persons created pursuant to Tenn. Code Ann. § 12-12-106 of the Iran Divestment Act.

CONTRACTOR SIGNATURE

Danny R. Stoppenhagen
 Danny R. Stoppenhagen

NOTICE: This certification MUST be signed by an individual with legal capacity to contractually bind the Contractor.

Danny R. Stoppenhagen, Chief Manager

PRINTED NAME AND TITLE OF SIGNATORY

11/14/2024

DATE

Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)



NOTICE

Tenn. Code Ann. § 12-12-106 requires the chief procurement officer to publish, using credible information freely available to the public, a list of persons it determines engage in investment activities in Iran, as described in § 12-12-105.

For these purposes, the State intends to use the attached list of “Entities determined to be non-responsive bidders/offerers pursuant to the New York State Iran Divestment Act of 2012.”

While inclusion on this list would make a person ineligible to contract with the state of Tennessee, if a person ceases its engagement in investment activities in Iran, it may be removed from the list.

If you feel as though you have been erroneously included on this list please contact the Central Procurement Office at CPO.Website@tn.gov.

List Date: December 4, 2023

Source: <https://www.ogs.ny.gov/iran-divestment-act-2012>

- | | |
|--|---|
| 1. Ak Makina, Ltd. | 25. Sinohydro Co., Ltd. |
| 2. Amona | 26. Sinopec Corp. (China Petroleum & Chemical Corporation) |
| 3. Bank Markazi Iran (Central Bank of Iran) | 27. SKS Ventures |
| 4. Bank Mellat | 28. SK Energy Co., Ltd. |
| 5. Bank Melli Iran | 29. Som Petrol AS |
| 6. Bank Saderat Iran | 30. Unipet (China International United Petroleum & Chemicals Co., Ltd.) |
| 7. Bank Sepah | 31. Zhuhai Zhenrong Co. |
| 8. Bank Tejarat | |
| 9. China Precision Machinery Import- Export Corporation (CPMIEC) | |
| 10. ChinaOil (China National United Oil Corporation) | |
| 11. China National Offshore Oil Corporation (CNOOC) | |
| 12. China National Petroleum Corporation (CNPC) | |
| 13. Indian Oil Corporation | |
| 14. Kingdream PLC | |
| 15. Naftiran Intertrade Co. (NICO) | |
| 16. National Iranian Tanker Co. (NITC) | |
| 17. Oil and Natural Gas Corporation (ONGC) | |
| 18. Oil India, Ltd. | |
| 19. Persia International Bank | |
| 20. Petroleos de Venezuela (PDVSA Petróleo, SA) | |
| 21. PetroChina Co., Ltd. | |
| 22. Petronet LNG, Ltd. | |
| 23. Sameh Afzar Tajak Co. (SATCO) | |
| 24. Shandong FIN CNC Machine Co., Ltd. | |

72379

SECTION 00804



STATE OF TENNESSEE
CERTIFICATION OF BIDDER
REGARDING
USE OF WOMEN/MINORITY SUBCONTRACTORS
****Construction Projects Only****

This certification is required for the contractor to demonstrate that when subcontractors are to be used on this project, an attempt will be made to utilize women/minority owned firms.

Documentation must be on file to show who has been contacted.



I certify that every attempt was made to utilize female/minority contractors on this project.



I am unable to certify to the above statements. Explanation is attached.

	11/14/2024
Signature of Authorized Representative	Date
Danny R. Stoppenhagen, Chief Manager	901-767-6312
Printed Name	Phone Number
danny@chrishillconstruction.com	4749 Pleasant Run Road Memphis, TN 38118
Email Address	Address

SECTION 00805



STATE OF TENNESSEE
NON-BOYCOTT OF ISRAEL CERTIFICATION

The Bidder certifies that it is not currently engaged in, and will not for the duration of the contract engage in, a boycott of Israel as defined by Tenn. Code Ann. § 12-4-119. This provision shall not apply to contracts with a total value of less than two hundred fifty thousand dollars (\$250,000) or to contractors with less than ten (10) employees.

According to the law, a boycott of Israel means engaging in refusals to deal, terminating business activities, or other commercial actions that are intended to limit commercial relations with Israel, or companies doing business in or with Israel or authorized by, licensed by, or organized under the laws of the State of Israel to do business, or persons or entities doing business in Israel, when such actions are taken:

- 1) In compliance with, or adherence to, calls for a boycott of Israel, or
- 2) In a manner that discriminates on the basis of nationality, national origin, religion, or other unreasonable basis, and is not based on a valid business reason. Tenn. Code Ann. § 12-4-119.

 Signature of Authorized Representative	11/14/2024 Date
Danny R. Stoppenhagen, Chief Manager Printed Name	901-767-6312 / danny@chrishillconstruction.com Phone Number / Email Address

NOTICE OF AWARD

Date of Issuance: January 14, 2025
 Owner: CITY OF BARTLETT, TENNESSEE
 Engineer: ALLEN & HOSHALL Engineer's Project No.: 72379

Contract Name: WW-DPC-1 PUMPING STATIONS (4), CONTRACT A
 Bidder: Chris Hill Construction Company, LLC
 Bidder's Address: 4749 Pleasant Run Road, Memphis, TN 38118

You are notified that Owner has accepted your Bid dated **11-14-24** for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

CONTRACT A – WW-DPC-1 PUMPING STATIONS (4)

The Contract Price of the awarded Contract is **\$3,752,085.00**. Contract Price is subject to adjustment based on the provisions of the Contract, including but not limited to those governing changes, Unit Price Work, and Work performed on a cost-plus-fee basis, as applicable.

One unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award or has been transmitted or made available to Bidder electronically.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner One counterparts of the Agreement, signed by Bidder (as Contractor).
2. Deliver with the signed Agreement(s) the Contract security (such as required performance and payment bonds) and insurance documentation, as specified in the Instructions to Bidders and in the General Conditions, Articles 2 and 6.

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 10 days after you comply with the above conditions, Owner will return to you one fully signed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner: CITY OF BARTLETT, TENNESSEE

By (signature):



Name (printed): David Parsons

Title: Mayor of Bartlett, Tennessee

Copy: Engineer

DOCUMENT 00520

AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT

This Agreement is by and between City of Bartlett, Tennessee ("Owner") and CHARLS HILL CONSTRUCTION CO., LLC ("Contractor").

Terms used in this Agreement have the meanings stated in the General Conditions and the Supplementary Conditions.

Owner and Contractor hereby 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: the renovation and upgrading of 4 existing wastewater pumping stations with the following names and street addresses: Billy Maher, 5965 Old Brownsville Road; Raner Creek, 5258 Shelter Run Lane; Shadowlawn, 7805 Old Brownsville Road; Brunswick Valley, 8860 Old Brownsville Road. The work for WW-PDC-1/Pump Stations (4), Contract A will include, but not be limited to: demolition of existing pumping equipment, excavation, bypass sewage pumping, demolition, wet well modification, wet well wall coating, new valve vault; new submersible pumps and installation, pipework, standby generators, site work, and electrical and control work.

ARTICLE 2—THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described in Article 1 above.

ARTICLE 3—ENGINEER

3.01 The Owner has retained **Allen & Hoshall** ("Engineer") to act as Owner's representative, assume all duties and responsibilities of Engineer, and have the rights and authority assigned to Engineer in the Contract.

ARTICLE 4—CONTRACT TIMES

4.01 *Time is of the Essence*

A. All time limits Substantial Completion and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Contract Times: Days*

A. The Work will be substantially complete within the calendar days listed in Paragraph 4.03 Milestones hereinafter, days after the date when the Contract Times commence to run

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as provided in Paragraph 4.01 of the General Conditions and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within **365** days after the date when the Contract Times commence to run.

4.03 *Milestones*

- A. Parts of the Work must be substantially completed on or before the following Milestone(s): **None**.

4.04 *Liquidated Damages*

- A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed within the Contract Times, as duly modified. The parties also recognize the delays, expense, and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):
1. *Substantial Completion*: Contractor shall pay Owner **\$300.00** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.
 2. *Completion of Remaining Work*: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner **\$300.00** for each day that expires after such time until the Work is completed and ready for final payment.
 3. *Milestones*: Contractor shall pay Owner **\$300.00** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for achievement of Milestone 1, until Milestone 1 is achieved, or until the time specified for Substantial Completion is reached, at which time the rate indicated in Paragraph 4.05 A.1 will apply, rather than the Milestone rate.
 4. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive, and will not be imposed concurrently.
- B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.

ARTICLE 5—CONTRACT PRICE

5.01 **OWNER SHALL PAY CONTRACTOR FOR COMPLETION OF THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, THE AMOUNTS SHOWN ON THE CONTRACTOR'S BID FORM ATTACHED HERETO, SUBJECT TO ADJUSTMENT UNDER THE CONTRACT:**

- A. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

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ARTICLE 6—PAYMENT PROCEDURES**6.01 Submittal and Processing of Payments**

- A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 Progress Payments; Retainage

- A. Owner shall make progress payments on the basis of Contractor's Applications for Payment on or about the 25th day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

- 1. 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 Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.

- a. **95** percent of the value of the Work completed (with the balance being retainage).

- 1) If 50 percent or more of the Work has been completed, as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and

- b. **95** percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

- B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to **95** percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions.

6.03 Final Payment

- A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

6.04 Consent of Surety

- A. Owner will not make final payment or return or release retainage at Substantial Completion or any other time, unless Contractor submits written consent of the surety to such payment, return, or release.

6.05 Interest

- A. All amounts not paid when due will bear interest at the rate maximum allowed by the State of Tennessee.

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ARTICLE 7—CONTRACT DOCUMENTS**7.01 Contents**

- A. The Contract Documents consist of all of the following:
1. This Agreement.
 2. Bonds:
 - a. Performance bond (together with power of attorney).
 - b. Payment bond (together with power of attorney).
 3. General Conditions.
 4. Supplementary Conditions.
 5. Specifications as listed in the table of contents of the project manual (copy of list attached).
 6. Drawings listed on the attached sheet index.
 7. Addenda (numbers 1 to 5, inclusive).
 8. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid Form
 - b. Certificates of Insurance
 9. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
 - a. Notice to Proceed.
 - b. Work Change Directives.
 - c. Change Orders.
 - d. Field Orders.
- B. The Contract Documents listed in Paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 7.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

ARTICLE 8—REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS**8.01 Contractor's Representations**

- A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:
1. Contractor has examined and carefully studied the Contract Documents, including Addenda.

2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions, if any, at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
6. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.
7. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
8. 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.
9. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

8.02 Contractor's Certifications

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:

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1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;
2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

8.03 *Standard General Conditions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineers Joint Contract Documents Committee, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

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IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on March 5, 2025 (which is the Effective Date of the Contract).

Owner:

City of Bartlett, Tennessee

(typed or printed name of organization)

By: [Signature]

(individual's signature)

Date: 3/5/2025

(date signed)

Name: David Pearson

(typed or printed)

Title: Mayor

(typed or printed)

Attest: [Signature]

(individual's signature)

Title: John T. Horne City Engineer

(typed or printed)

Address for giving notices:

6400 Stage Road
Bartlett TN 38134

Designated Representative:

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Address: _____

Phone: _____

Email: _____

If [Type of Entity] is a corporation, attach evidence of authority to sign. If [Type of Entity] is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)

Contractor:

CHRIS HILL CONSTRUCTION CO., LLC

(typed or printed name of organization)

By: [Signature]

(individual's signature)

Date: 01/24/2025

(date signed)

Name: DANNY A STOPPENHAGEN

(typed or printed)

Title: CHIEF MANAGER

(typed or printed)

(If [Type of Entity] is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest: [Signature]

(individual's signature)

Title: CHIEF FINANCIAL OFFICER

(typed or printed)

Address for giving notices:

4749 PLEASANT RUN ROAD
MEMPHIS, TN 38118

Designated Representative:

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Address: _____

Phone: _____

Email: _____

License No.: _____

(where applicable)

State: _____



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6.4.e

DATE (MM/DD/YYYY)

1/24/2025

CERTIFICATE OF LIABILITY INSURANCE

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

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

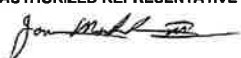
PRODUCER Hub International Mid-South 1661 International Drive Suite #300 Memphis, TN 38120	CONTACT NAME:	
	PHONE (A/C, No, Ext): (901) 312-5300 FAX (A/C, No):	
INSURED Chris-Hill Construction Company, LLC 4749 Pleasant Run Road Memphis, TN 38118	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A: The Travelers Indemnity Company	25658
	INSURER B: The Travelers Indemnity Company of Connecticut	25682
	INSURER C: Travelers Property Casualty Company of America	25674
	INSURER D: Old Republic Insurance Company	24147
INSURER E: St. Paul Surplus Lines Insurance Company	30481	
INSURER F:		

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

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	☒ COMMERCIAL GENERAL LIABILITY	X		CO8745M281	12/1/2024	12/1/2025	EACH OCCURRENCE \$ 1,000,000	
	☐ CLAIMS-MADE ☒ OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000	
	☒ XCU						MED EXP (Any one person) \$ 5,000	
	☒ Contractual Liab						PERSONAL & ADV INJURY \$ 1,000,000	
GEN'L AGGREGATE LIMIT APPLIES PER:							GENERAL AGGREGATE \$ 2,000,000	
☐ POLICY ☒ PRO-JECT ☒ LOC							PRODUCTS - COM/OP AGG \$ 2,000,000	
OTHER:							\$	
B	☒ AUTOMOBILE LIABILITY	X		8101L310871	12/1/2024	12/1/2025	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000	
	☒ ANY AUTO OWNED AUTOS ONLY						☐ SCHEDULED AUTOS	BODILY INJURY (Per person) \$
	☒ HIRED AUTOS ONLY						☒ NON-OWNED AUTOS ONLY	BODILY INJURY (Per accident) \$
							PROPERTY DAMAGE (Per accident) \$	
C	☒ UMBRELLA LIAB	☒ OCCUR	X	CUP9H370458	12/1/2024	12/1/2025	EACH OCCURRENCE \$ 10,000,000	
	☐ EXCESS LIAB	☐ CLAIMS-MADE					AGGREGATE \$ 10,000,000	
	☐ DED	☒ RETENTION \$ 10,000					\$	
D	☒ WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	Y/N	N/A	MWC318902	12/1/2024	12/1/2025	☒ PER STATUTE ☐ OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)						E.L. EACH ACCIDENT \$ 1,000,000	
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE \$ 1,000,000	
							E.L. DISEASE - POLICY LIMIT \$ 1,000,000	
E	Pollution / Environm			ZCE16P93170	12/1/2024	12/1/2025	Limit \$ 5,000,000	
E	Professional Liab			ZCE16P93170	12/1/2024	12/1/2025	Limit \$2,000,000 Occ 5,000,000	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Project Description: WW-PDC-1 Pumping Station (4), Contract A.

Certificate Holder is additional insured for (General Liability, Automobile Liability, and Umbrella Liability) with respect to the services/work to be performed, only if required by written contract. All coverage is subject to policy terms and conditions.

CERTIFICATE HOLDER City of Bartlett 6400 Stage Road Bartlett, TN 38134	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE 
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ACORD 25 (2016/03)

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Packet Pg. 188

Attachment: SIGNED CONTRACT - 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

COMMERCIAL AUTO

permission, while performing duties related to the conduct of your business.

However, any "auto" that is leased, hired, rented or borrowed with a driver is not a covered "auto".

D. EMPLOYEES AS INSURED

The following is added to Paragraph A.1., **Who is An Insured**, of **SECTION II – COVERED AUTOS LIABILITY COVERAGE**:

Any "employee" of yours is an "insured" while using a covered "auto" you don't own, hire or borrow in your business or your personal affairs.

E. SUPPLEMENTARY PAYMENTS – INCREASED LIMITS

1. The following replaces Paragraph A.2.a.(2), of **SECTION II – COVERED AUTOS LIABILITY COVERAGE**:

(2) Up to \$3,000 for cost of bail bonds (including bonds for related traffic law violations) required because of an "accident" we cover. We do not have to furnish these bonds.

2. The following replaces Paragraph A.2.a.(4), of **SECTION II – COVERED AUTOS LIABILITY COVERAGE**:

(4) All reasonable expenses incurred by the "insured" at our request, including actual loss of earnings up to \$500 a day because of time off from work.

F. HIRED AUTO – LIMITED WORLDWIDE COVERAGE – INDEMNITY BASIS

The following replaces Subparagraph (5) in Paragraph B.7., **Policy Period, Coverage Territory**, of **SECTION IV – BUSINESS AUTO CONDITIONS**:

(5) Anywhere in the world, except any country or jurisdiction while any trade sanction, embargo, or similar regulation imposed by the United States of America applies to and prohibits the transaction of business with or within such country or jurisdiction, for Covered Autos Liability Coverage for any covered "auto" that you lease, hire, rent or borrow without a driver for a period of 30 days or less and that is not an "auto" you lease, hire, rent or borrow from any of your "employees", partners (if you are a partnership), members (if you are a limited liability company) or members of their households.

(a) With respect to any claim made or "suit" brought outside the United States of America, the territories and possessions of the United States of America, Puerto Rico and Canada:

(i) You must arrange to defend the "insured" against, and investigate or settle any such claim or "suit" and keep us advised of all proceedings and actions.

(ii) Neither you nor any other involved "insured" will make any settlement without our consent.

(iii) We may, at our discretion, participate in defending the "insured" against, or in the settlement of, any claim or "suit".

(iv) We will reimburse the "insured" for sums that the "insured" legally must pay as damages because of "bodily injury" or "property damage" to which this insurance applies, that the "insured" pays with our consent, but only up to the limit described in Paragraph C., Limits Of Insurance, of **SECTION II – COVERED AUTOS LIABILITY COVERAGE**.

(v) We will reimburse the "insured" for the reasonable expenses incurred with our consent for your investigation of such claims and your defense of the "insured" against any such "suit", but only up to and included within the limit described in Paragraph C., Limits Of Insurance, of **SECTION II – COVERED AUTOS LIABILITY COVERAGE**, and not in addition to such limit. Our duty to make such payments ends when we have used up the applicable limit of insurance in payments for damages, settlements or defense expenses.

(b) This insurance is excess over any valid and collectible other insurance available to the "insured" whether primary, excess, contingent or on any other basis.

(c) This insurance is not a substitute for required or compulsory insurance in any country outside the United States, its territories and possessions, Puerto Rico and Canada.

COMMERCIAL AUTO

such contract. The waiver applies only to the person or organization designated in such contract.

N. UNINTENTIONAL ERRORS OR OMISSIONS

The following is added to Paragraph B.2., **Concealment, Misrepresentation, Or Fraud**, of SECTION IV – BUSINESS AUTO CONDITIONS:

The unintentional omission of, or unintentional error in, any information given by you shall not prejudice your rights under this insurance. However this provision does not affect our right to collect additional premium or exercise our right of cancellation or non-renewal.

Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

COMMERCIAL GENERAL LIABILITY

C. INCIDENTAL MEDICAL MALPRACTICE

1. The following replaces Paragraph **b.** of the definition of "occurrence" in the **DEFINITIONS** Section:

- b. An act or omission committed in providing or failing to provide "incidental medical services", first aid or "Good Samaritan services" to a person, unless you are in the business or occupation of providing professional health care services.

2. The following replaces the last paragraph of Paragraph **2.a.(1)** of **SECTION II – WHO IS AN INSURED**:

Unless you are in the business or occupation of providing professional health care services, Paragraphs **(1)(a), (b), (c)** and **(d)** above do not apply to "bodily injury" arising out of providing or failing to provide:

- (a) "Incidental medical services" by any of your "employees" who is a nurse, nurse assistant, emergency medical technician or paramedic; or
 - (b) First aid or "Good Samaritan services" by any of your "employees" or "volunteer workers", other than an employed or volunteer doctor. Any such "employees" or "volunteer workers" providing or failing to provide first aid or "Good Samaritan services" during their work hours for you will be deemed to be acting within the scope of their employment by you or performing duties related to the conduct of your business.
3. The following replaces the last sentence of Paragraph **5.** of **SECTION III – LIMITS OF INSURANCE**:
For the purposes of determining the applicable Each Occurrence Limit, all related acts or omissions committed in providing or failing to provide "incidental medical services", first aid or "Good Samaritan services" to any one person will be deemed to be one "occurrence".
4. The following exclusion is added to Paragraph **2., Exclusions,** of **SECTION I – COVERAGES – COVERAGE A – BODILY INJURY AND PROPERTY DAMAGE LIABILITY**:

Sale Of Pharmaceuticals

"Bodily injury" or "property damage" arising out of the violation of a penal statute or ordinance relating to the sale of

pharmaceuticals committed by, or with the knowledge or consent of, the insured.

5. The following is added to the **DEFINITIONS** Section:

"Incidental medical services" means:

- a. Medical, surgical, dental, laboratory, x-ray or nursing service or treatment, advice or instruction, or the related furnishing of food or beverages; or
 - b. The furnishing or dispensing of drugs or medical, dental, or surgical supplies or appliances.
6. The following is added to Paragraph **4.b., Excess Insurance,** of **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS**:

This insurance is excess over any valid and collectible other insurance, whether primary, excess, contingent or on any other basis, that is available to any of your "employees" for "bodily injury" that arises out of providing or failing to provide "incidental medical services" to any person to the extent not subject to Paragraph **2.a.(1)** of Section **II – Who Is An Insured**.

D. BLANKET WAIVER OF SUBROGATION

The following is added to Paragraph **8., Transfer Of Rights Of Recovery Against Others To Us,** of **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS**:

If the insured has agreed in a contract or agreement to waive that insured's right of recovery against any person or organization, we waive our right of recovery against such person or organization, but only for payments we make because of:

- a. "Bodily injury" or "property damage" that occurs; or
 - b. "Personal and advertising injury" caused by an offense that is committed;

subsequent to the execution of the contract or agreement.

E. CONTRACTUAL LIABILITY – RAILROADS

1. The following replaces Paragraph **c.** of the definition of "insured contract" in the **DEFINITIONS** Section:
- c. Any easement or license agreement;

DOCUMENT 00550

NOTICE TO PROCEED

Owner: City of Bartlett, Tennessee Owner's Project No.: 2022.001
 Engineer: Allen & Hoshall Engineer's Project No.: 72379
 Contractor: Chris Hill Construction Contractor's Project No.: _____
 Project: WW-DPC-1 Pumping Stations (4), Contract A
 Contract Name: WW-DPC-1 Pumping Stations (4) Contract A
 Effective Date of Contract: March 5, 2025

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on April 7, 2025, pursuant to Paragraph 4.01 of the General Conditions.

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work will be done at the Site prior to such date.

In accordance with the Agreement:

The number of days to achieve Substantial Completion is 365 Days - from the date stated above for the commencement of the Contract Times, resulting in a date for Substantial Completion of April 7, 2026; and the number of days to achieve readiness for final payment is 365 Days from the commencement date of the Contract Times, resulting in a date for readiness for final payment of April 7, 2026.

Before starting any Work at the Site, Contractor must comply with the following:

Notify Owner 10 days prior.

Owner: City of Bartlett, Tennessee
 By (signature): [Signature]
 Name (printed): David Passer
 Title: Mayor
 Date Issued: March 5, 2025

Copy: Engineer



CHRICON-10

TCALDWELL

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

2/3/2025

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

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

PRODUCER Hub International Mid-South 1661 International Drive Suite #300 Memphis, TN 38120	CONTACT NAME: PHONE (A/C, No, Ext): (901) 312-5300		FAX (A/C, No):
	E-MAIL ADDRESS:		
INSURED Chris-Hill Construction Company, LLC 4749 Pleasant Run Road Memphis, TN 38118	INSURER(S) AFFORDING COVERAGE		NAIC #
	INSURER A : The Travelers Indemnity Company		25658
	INSURER B : The Travelers Indemnity Company of Connecticut		25682
	INSURER C : Travelers Property Casualty Company of America		25674
	INSURER D : Old Republic Insurance Company		24147
	INSURER E : St. Paul Surplus Lines Insurance Company		30481
INSURER F :			

COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

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

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR ☒ XCU ☒ Contractual Liab GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☒ PROJECT ☒ LOC OTHER:	☒		CO8745M281	12/1/2024	12/1/2025	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
B	AUTOMOBILE LIABILITY ☒ ANY AUTO OWNED AUTOS ONLY ☒ HIRED AUTOS ONLY ☐ SCHEDULED AUTOS ☒ NON-OWNED AUTOS ONLY	☒		8101L310871	12/1/2024	12/1/2025	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
C	☒ UMBRELLA LIAB ☒ OCCUR ☐ EXCESS LIAB ☐ CLAIMS-MADE DED ☒ RETENTION \$ 10,000	☒		CUP9H370458	12/1/2024	12/1/2025	EACH OCCURRENCE \$ 10,000,000 AGGREGATE \$ 10,000,000 \$
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) ☐ Y / N If yes, describe under DESCRIPTION OF OPERATIONS below		N / A	MWC318902	12/1/2024	12/1/2025	☒ PER STATUTE ☐ OTHER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
C	Installation Floater			6309H399753	12/1/2024	12/1/2025	Limit \$2,000,000 Occ 4,000,000
E	Professional Liab			ZCE16P93170	12/1/2024	12/1/2025	Limit \$2,000,000 Occ 5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
 Project Description: WW-PDC-1 Pumping Station (4), Contract A.

Pump Station Locations:
 Billy Maher, 5965 Old Brownsville Road, Bartlett, TN
 Raner Creek, 5258 Shelter Run Lane, Bartlett, TN
 Shadowlawn, 7805 Old Brownsville Road, Bartlett, TN
 Brunswick Valley, 8860 Old Brownsville Road, Bartlett, TN
 SEE ATTACHED ACORD 101

CERTIFICATE HOLDER

CANCELLATION

City of Bartlett
 6400 Stage Road
 Bartlett, TN 38134

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Jon Miller

AGENCY CUSTOMER ID: CHRICON-10

TCALDWELL

LOC #: 1



ADDITIONAL REMARKS SCHEDULE

Page 1 of 1

AGENCY Hub International Mid-South		NAMED INSURED Chris-Hill Construction Company, LLC 4749 Pleasant Run Road Memphis, TN 38118	
POLICY NUMBER SEE PAGE 1			
CARRIER SEE PAGE 1	NAIC CODE SEE P 1		
		EFFECTIVE DATE: SEE PAGE 1	

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
 FORM NUMBER: ACORD 25 FORM TITLE: Certificate of Liability Insurance

Description of Operations/Locations/Vehicles:

Certificate Holder is additional insured for (General Liability, Automobile Liability, and Umbrella Liability) with respect to the services/work to be performed, only if required by written contract. All coverage is subject to policy terms and conditions.

Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

BUSINESS AUTO EXTENSION ENDORSEMENT

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM

GENERAL DESCRIPTION OF COVERAGE – This endorsement broadens coverage. However, coverage for any injury, damage or medical expenses described in any of the provisions of this endorsement may be excluded or limited by another endorsement to the Coverage Part, and these coverage broadening provisions do not apply to the extent that coverage is excluded or limited by such an endorsement. The following listing is a general coverage description only. Limitations and exclusions may apply to these coverages. Read all the provisions of this endorsement and the rest of your policy carefully to determine rights, duties, and what is and is not covered.

- | | |
|--|--|
| <p>A. BROAD FORM NAMED INSURED</p> <p>B. BLANKET ADDITIONAL INSURED</p> <p>C. EMPLOYEE HIRED AUTO</p> <p>D. EMPLOYEES AS INSURED</p> <p>E. SUPPLEMENTARY PAYMENTS – INCREASED LIMITS</p> <p>F. HIRED AUTO – LIMITED WORLDWIDE COVERAGE – INDEMNITY BASIS</p> <p>G. WAIVER OF DEDUCTIBLE – GLASS</p> | <p>H. HIRED AUTO PHYSICAL DAMAGE – LOSS OF USE – INCREASED LIMIT</p> <p>I. PHYSICAL DAMAGE – TRANSPORTATION EXPENSES – INCREASED LIMIT</p> <p>J. PERSONAL PROPERTY</p> <p>K. AIRBAGS</p> <p>L. NOTICE AND KNOWLEDGE OF ACCIDENT OR LOSS</p> <p>M. BLANKET WAIVER OF SUBROGATION</p> <p>N. UNINTENTIONAL ERRORS OR OMISSIONS</p> |
|--|--|

PROVISIONS

A. BROAD FORM NAMED INSURED

The following is added to Paragraph A.1., **Who Is An Insured**, of **SECTION II – COVERED AUTOS LIABILITY COVERAGE**:

Any organization you newly acquire or form during the policy period over which you maintain 50% or more ownership interest and that is not separately insured for Business Auto Coverage. Coverage under this provision is afforded only until the 180th day after you acquire or form the organization or the end of the policy period, whichever is earlier.

B. BLANKET ADDITIONAL INSURED

The following is added to Paragraph c. in A.1., **Who Is An Insured**, of **SECTION II – COVERED AUTOS LIABILITY COVERAGE**:

Any person or organization who is required under a written contract or agreement between you and that person or organization, that is signed and executed by you before the "bodily injury" or "property damage" occurs and that is in effect during the policy period, to be named as an additional insured is an "insured" for Covered Autos Liability Coverage, but only for damages to which

this insurance applies and only to the extent that person or organization qualifies as an "insured" under the Who Is An Insured provision contained in Section II.

C. EMPLOYEE HIRED AUTO

1. The following is added to Paragraph A.1., **Who Is An Insured**, of **SECTION II – COVERED AUTOS LIABILITY COVERAGE**:

An "employee" of yours is an "insured" while operating an "auto" hired or rented under a contract or agreement in an "employee's" name, with your permission, while performing duties related to the conduct of your business.

2. The following replaces Paragraph b. in B.5., **Other Insurance**, of **SECTION IV – BUSINESS AUTO CONDITIONS**:

- b. For Hired Auto Physical Damage Coverage, the following are deemed to be covered "autos" you own:

- (1) Any covered "auto" you lease, hire, rent or borrow; and
- (2) Any covered "auto" hired or rented by your "employee" under a contract in an "employee's" name, with your

COMMERCIAL AUTO

permission, while performing duties related to the conduct of your business.

However, any "auto" that is leased, hired, rented or borrowed with a driver is not a covered "auto".

D. EMPLOYEES AS INSURED

The following is added to Paragraph A.1., **Who Is An Insured**, of **SECTION II – COVERED AUTOS LIABILITY COVERAGE**:

Any "employee" of yours is an "insured" while using a covered "auto" you don't own, hire or borrow in your business or your personal affairs.

E. SUPPLEMENTARY PAYMENTS – INCREASED LIMITS

1. The following replaces Paragraph A.2.a.(2), of **SECTION II – COVERED AUTOS LIABILITY COVERAGE**:

(2) Up to \$3,000 for cost of bail bonds (including bonds for related traffic law violations) required because of an "accident" we cover. We do not have to furnish these bonds.

2. The following replaces Paragraph A.2.a.(4), of **SECTION II – COVERED AUTOS LIABILITY COVERAGE**:

(4) All reasonable expenses incurred by the "insured" at our request, including actual loss of earnings up to \$500 a day because of time off from work.

F. HIRED AUTO – LIMITED WORLDWIDE COVERAGE – INDEMNITY BASIS

The following replaces Subparagraph (5) in Paragraph B.7., **Policy Period, Coverage Territory**, of **SECTION IV – BUSINESS AUTO CONDITIONS**:

(5) Anywhere in the world, except any country or jurisdiction while any trade sanction, embargo, or similar regulation imposed by the United States of America applies to and prohibits the transaction of business with or within such country or jurisdiction, for Covered Autos Liability Coverage for any covered "auto" that you lease, hire, rent or borrow without a driver for a period of 30 days or less and that is not an "auto" you lease, hire, rent or borrow from any of your "employees", partners (if you are a partnership), members (if you are a limited liability company) or members of their households.

(a) With respect to any claim made or "suit" brought outside the United States of America, the territories and possessions of the United States of America, Puerto Rico and Canada:

(i) You must arrange to defend the "insured" against, and investigate or settle any such claim or "suit" and keep us advised of all proceedings and actions.

(ii) Neither you nor any other involved "insured" will make any settlement without our consent.

(iii) We may, at our discretion, participate in defending the "insured" against, or in the settlement of, any claim or "suit".

(iv) We will reimburse the "insured" for sums that the "insured" legally must pay as damages because of "bodily injury" or "property damage" to which this insurance applies, that the "insured" pays with our consent, but only up to the limit described in Paragraph C., Limits Of Insurance, of **SECTION II – COVERED AUTOS LIABILITY COVERAGE**.

(v) We will reimburse the "insured" for the reasonable expenses incurred with our consent for your investigation of such claims and your defense of the "insured" against any such "suit", but only up to and included within the limit described in Paragraph C., Limits Of Insurance, of **SECTION II – COVERED AUTOS LIABILITY COVERAGE**, and not in addition to such limit. Our duty to make such payments ends when we have used up the applicable limit of insurance in payments for damages, settlements or defense expenses.

(b) This insurance is excess over any valid and collectible other insurance available to the "insured" whether primary, excess, contingent or on any other basis.

(c) This insurance is not a substitute for required or compulsory insurance in any country outside the United States, its territories and possessions, Puerto Rico and Canada.

COMMERCIAL AUTO

You agree to maintain all required or compulsory insurance in any such country up to the minimum limits required by local law. Your failure to comply with compulsory insurance requirements will not invalidate the coverage afforded by this policy, but we will only be liable to the same extent we would have been liable had you complied with the compulsory insurance requirements.

- (d) It is understood that we are not an admitted or authorized insurer outside the United States of America, its territories and possessions, Puerto Rico and Canada. We assume no responsibility for the furnishing of certificates of insurance, or for compliance in any way with the laws of other countries relating to insurance.

G. WAIVER OF DEDUCTIBLE – GLASS

The following is added to Paragraph D., **Deductible**, of **SECTION III – PHYSICAL DAMAGE COVERAGE**:

No deductible for a covered "auto" will apply to glass damage if the glass is repaired rather than replaced.

H. HIRED AUTO PHYSICAL DAMAGE – LOSS OF USE – INCREASED LIMIT

The following replaces the last sentence of Paragraph A.4.b., **Loss Of Use Expenses**, of **SECTION III – PHYSICAL DAMAGE COVERAGE**:

However, the most we will pay for any expenses for loss of use is \$65 per day, to a maximum of \$750 for any one "accident".

I. PHYSICAL DAMAGE – TRANSPORTATION EXPENSES – INCREASED LIMIT

The following replaces the first sentence in Paragraph A.4.a., **Transportation Expenses**, of **SECTION III – PHYSICAL DAMAGE COVERAGE**:

We will pay up to \$50 per day to a maximum of \$1,500 for temporary transportation expense incurred by you because of the total theft of a covered "auto" of the private passenger type.

J. PERSONAL PROPERTY

The following is added to Paragraph A.4., **Coverage Extensions**, of **SECTION III – PHYSICAL DAMAGE COVERAGE**:

Personal Property

We will pay up to \$400 for "loss" to wearing apparel and other personal property which is:

- (1) Owned by an "insured"; and

- (2) In or on your covered "auto".

This coverage applies only in the event of a total theft of your covered "auto".

No deductibles apply to this Personal Property coverage.

K. AIRBAGS

The following is added to Paragraph B.3., **Exclusions**, of **SECTION III – PHYSICAL DAMAGE COVERAGE**:

Exclusion 3.a. does not apply to "loss" to one or more airbags in a covered "auto" you own that inflate due to a cause other than a cause of "loss" set forth in Paragraphs A.1.b. and A.1.c., but only:

- If that "auto" is a covered "auto" for Comprehensive Coverage under this policy;
 - The airbags are not covered under any warranty; and
 - The airbags were not intentionally inflated.
- We will pay up to a maximum of \$1,000 for any one "loss".

L. NOTICE AND KNOWLEDGE OF ACCIDENT OR LOSS

The following is added to Paragraph A.2.a., of **SECTION IV – BUSINESS AUTO CONDITIONS**:

Your duty to give us or our authorized representative prompt notice of the "accident" or "loss" applies only when the "accident" or "loss" is known to:

- You (if you are an individual);
- A partner (if you are a partnership);
- A member (if you are a limited liability company);
- An executive officer, director or insurance manager (if you are a corporation or other organization); or
- Any "employee" authorized by you to give notice of the "accident" or "loss".

M. BLANKET WAIVER OF SUBROGATION

The following replaces Paragraph A.5., **Transfer Of Rights Of Recovery Against Others To Us**, of **SECTION IV – BUSINESS AUTO CONDITIONS**:

5. Transfer Of Rights Of Recovery Against Others To Us

We waive any right of recovery we may have against any person or organization to the extent required of you by a written contract signed and executed prior to any "accident" or "loss", provided that the "accident" or "loss" arises out of operations contemplated by

COMMERCIAL AUTO

such contract. The waiver applies only to the person or organization designated in such contract.

N. UNINTENTIONAL ERRORS OR OMISSIONS

The following is added to Paragraph **B.2., Concealment, Misrepresentation, Or Fraud**, of **SECTION IV – BUSINESS AUTO CONDITIONS**:

The unintentional omission of, or unintentional error in, any information given by you shall not prejudice your rights under this insurance. However this provision does not affect our right to collect additional premium or exercise our right of cancellation or non-renewal.

Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

COMMERCIAL GENERAL LIABILITY

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

XTEND ENDORSEMENT FOR CONTRACTORS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

GENERAL DESCRIPTION OF COVERAGE – This endorsement broadens coverage. However, coverage for any injury, damage or medical expenses described in any of the provisions of this endorsement may be excluded or limited by another endorsement to this Coverage Part, and these coverage broadening provisions do not apply to the extent that coverage is excluded or limited by such an endorsement. The following listing is a general coverage description only. Read all the provisions of this endorsement and the rest of your policy carefully to determine rights, duties, and what is and is not covered.

- | | |
|--|---|
| <p>A. Who Is An Insured – Unnamed Subsidiaries</p> <p>B. Blanket Additional Insured – Governmental Entities – Permits Or Authorizations Relating To Operations</p> | <p>C. Incidental Medical Malpractice</p> <p>D. Blanket Waiver Of Subrogation</p> <p>E. Contractual Liability – Railroads</p> <p>F. Damage To Premises Rented To You</p> |
|--|---|

PROVISIONS

A. WHO IS AN INSURED – UNNAMED SUBSIDIARIES

The following is added to **SECTION II – WHO IS AN INSURED**:

Any of your subsidiaries, other than a partnership, joint venture or limited liability company, that is not shown as a Named Insured in the Declarations is a Named Insured if:

- a. You are the sole owner of, or maintain an ownership interest of more than 50% in, such subsidiary on the first day of the policy period; and
- b. Such subsidiary is not an insured under similar other insurance.

No such subsidiary is an insured for "bodily injury" or "property damage" that occurred, or "personal and advertising injury" caused by an offense committed:

- a. Before you maintained an ownership interest of more than 50% in such subsidiary; or
- b. After the date, if any, during the policy period that you no longer maintain an ownership interest of more than 50% in such subsidiary.

For purposes of Paragraph 1. of Section II – Who Is An Insured, each such subsidiary will be deemed to be designated in the Declarations as:

- a. An organization other than a partnership, joint venture or limited liability company; or
- b. A trust;

as indicated in its name or the documents that govern its structure.

B. BLANKET ADDITIONAL INSURED – GOVERNMENTAL ENTITIES – PERMITS OR AUTHORIZATIONS RELATING TO OPERATIONS

The following is added to **SECTION II – WHO IS AN INSURED**:

Any governmental entity that has issued a permit or authorization with respect to operations performed by you or on your behalf and that you are required by any ordinance, law, building code or written contract or agreement to include as an additional insured on this Coverage Part is an insured, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" arising out of such operations.

The insurance provided to such governmental entity does not apply to:

- a. Any "bodily injury", "property damage" or "personal and advertising injury" arising out of operations performed for the governmental entity; or
- b. Any "bodily injury" or "property damage" included in the "products-completed operations hazard".

COMMERCIAL GENERAL LIABILITY

C. INCIDENTAL MEDICAL MALPRACTICE

1. The following replaces Paragraph **b.** of the definition of "occurrence" in the **DEFINITIONS** Section:

- b.** An act or omission committed in providing or failing to provide "incidental medical services", first aid or "Good Samaritan services" to a person, unless you are in the business or occupation of providing professional health care services.

2. The following replaces the last paragraph of Paragraph 2.a.(1) of **SECTION II – WHO IS AN INSURED**:

Unless you are in the business or occupation of providing professional health care services, Paragraphs (1)(a), (b), (c) and (d) above do not apply to "bodily injury" arising out of providing or failing to provide:

- (a) "Incidental medical services" by any of your "employees" who is a nurse, nurse assistant, emergency medical technician or paramedic; or
 - (b) First aid or "Good Samaritan services" by any of your "employees" or "volunteer workers", other than an employed or volunteer doctor. Any such "employees" or "volunteer workers" providing or failing to provide first aid or "Good Samaritan services" during their work hours for you will be deemed to be acting within the scope of their employment by you or performing duties related to the conduct of your business.

3. The following replaces the last sentence of Paragraph 5. of **SECTION III – LIMITS OF INSURANCE**:

For the purposes of determining the applicable Each Occurrence Limit, all related acts or omissions committed in providing or failing to provide "incidental medical services", first aid or "Good Samaritan services" to any one person will be deemed to be one "occurrence".

4. The following exclusion is added to Paragraph 2., **Exclusions**, of **SECTION I – COVERAGES – COVERAGE A – BODILY INJURY AND PROPERTY DAMAGE LIABILITY**:

Sale Of Pharmaceuticals

"Bodily injury" or "property damage" arising out of the violation of a penal statute or ordinance relating to the sale of

pharmaceuticals committed by, or with the knowledge or consent of, the insured.

5. The following is added to the **DEFINITIONS** Section:

"Incidental medical services" means:

- a. Medical, surgical, dental, laboratory, x-ray or nursing service or treatment, advice or instruction, or the related furnishing of food or beverages; or
 - b. The furnishing or dispensing of drugs or medical, dental, or surgical supplies or appliances.

6. The following is added to Paragraph 4.b., **Excess Insurance**, of **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS**:

This insurance is excess over any valid and collectible other insurance, whether primary, excess, contingent or on any other basis, that is available to any of your "employees" for "bodily injury" that arises out of providing or failing to provide "incidental medical services" to any person to the extent not subject to Paragraph 2.a.(1) of Section II – Who Is An Insured.

D. BLANKET WAIVER OF SUBROGATION

The following is added to Paragraph 8., **Transfer Of Rights Of Recovery Against Others To Us**, of **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS**:

If the insured has agreed in a contract or agreement to waive that insured's right of recovery against any person or organization, we waive our right of recovery against such person or organization, but only for payments we make because of:

- a. "Bodily injury" or "property damage" that occurs; or
 - b. "Personal and advertising injury" caused by an offense that is committed;

subsequent to the execution of the contract or agreement.

E. CONTRACTUAL LIABILITY – RAILROADS

1. The following replaces Paragraph c. of the definition of "insured contract" in the **DEFINITIONS** Section:

- c. Any easement or license agreement;

COMMERCIAL GENERAL LIABILITY

2. Paragraph f.(1) of the definition of "insured contract" in the **DEFINITIONS** Section is deleted.

F. DAMAGE TO PREMISES RENTED TO YOU

The following replaces the definition of "premises damage" in the **DEFINITIONS** Section:

"Premises damage" means "property damage" to:

- a. Any premises while rented to you or temporarily occupied by you with permission of the owner; or
- b. The contents of any premises while such premises is rented to you, if you rent such premises for a period of seven or fewer consecutive days.

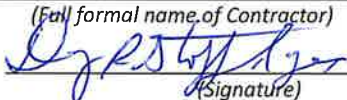
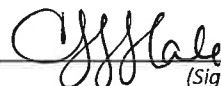
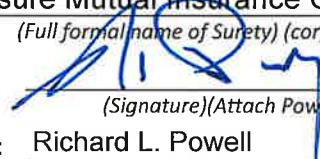
Attachment: SIGNED CONTRACT - 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

071924

Bond No. 8054019

72329

DOCUMENT 00610
PERFORMANCE BOND
[Power of Attorney Required]

Contractor Name: <u>Chris-Hill Construction Co., LLC</u> Address (principal place of business): <u>4749 Pleasant Run Rd.</u> <u>Memphis, TN 38118</u>	Surety Name: <u>Amerisure Mutual Insurance Company</u> Address (principal place of business): <u>P.O. Box 9098</u> <u>Farmington Hills, MI 48333</u>
Owner Name: Bartlett, Tennessee Mailing address (principal place of business): 6400 Stage Road Bartlett, Tennessee 38134	Contract Description (name and location): WW-DPC-1 Pumping Stations (4), Contract A Contract Price: \$ <u>3,752,085.00</u> Effective Date of Contract: _____
Bond Bond Amount: \$ <u>3,752,085.00</u> Date of Bond: _____ (Date of Bond cannot be earlier than Effective Date of Contract) Modifications to this Bond form: ☒ None ☐ See Paragraph 16	
Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.	
Contractor as Principal <u>Chris-Hill Construction Co., LLC</u> (Full formal name of Contractor) By: <u></u> (Signature) Name: <u>DANNY R. STOPPENHAGEN</u> (Printed or typed) Title: <u>CHIEF MANAGER</u> Attest: <u></u> (Signature) Name: <u>CECELIA HALE</u> (Printed or typed) Title: <u>WITNESS</u>	Surety <u>Amerisure Mutual Insurance Company</u> (Full formal name of Surety) (corporate seal) By: <u></u> (Signature) (Attach Power of Attorney) Name: <u>Richard L. Powell</u> (Printed or typed) Title: <u>Attorney-in-Fact</u> Attest: <u></u> (Signature) Name: <u>Nicole Lovett</u> (Printed or typed) Title: <u>Witness</u>
Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.	

Attachment: SIGNED CONTRACT - 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

EJCDC® C-610, Performance Bond.

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071924

72329

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:
 - 3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;
 - 3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
 - 3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
 - 5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
 - 5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
 - 5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

EJCDC® C-610, Performance Bond.

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Page 2 of 4

Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

071924

72329

- 5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
 - 5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.
 7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:
 - 7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
 - 7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
 - 7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
 8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.
 9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
 10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
 11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.
 12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.

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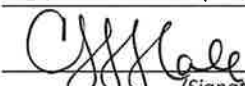
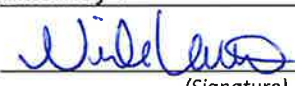
13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.
14. Definitions
- 14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
- 14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.
- 14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.
- 14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
- 14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

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Bond No. 8054019

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DOCUMENT 00615
PAYMENT BOND
[Power of Attorney Required]

Contractor Name: <u>Chris-Hill Construction Co., LLC</u> Address (principal place of business): <u>4749 Pleasant Run Rd.</u> <u>Memphis, TN 38118</u>	Surety Name: <u>Amerisure Mutual Insurance Company</u> Address (principal place of business): <u>P.O. Box 9098</u> <u>Farmington Hills, MI 48333</u>
Owner Name: <u>City of Bartlett, Tennessee</u> Mailing address (principal place of business): <u>6400 Stage Road</u> <u>Bartlett, Tennessee 38134</u>	Contract Description (name and location): <u>WW-DPC-1 Pumping Stations (4), Contract A</u> Contract Price: <u>\$ 3,752,085.00</u> Effective Date of Contract: _____
Bond Bond Amount: <u>\$ 3,752,085.00</u> Date of Bond: _____ <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i> Modifications to this Bond form: ☒ None ☐ See Paragraph 18	
Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.	
Contractor as Principal <u>Chris-Hill Construction Co., LLC</u> <i>(Full formal name of Contractor)</i> By: <u></u> <i>(Signature)</i> Name: <u>DANNY R. STOPPENHAGEN</u> <i>(Printed or typed)</i> Title: <u>CHIEF MANAGER</u> Attest: <u></u> <i>(Signature)</i> Name: <u>CECELIA HALE</u> <i>(Printed or typed)</i> Title: <u>WITNESS</u>	Surety <u>Amerisure Mutual Insurance Company</u> <i>(Full formal name of Surety) (corporate seal)</i> By: <u></u> <i>(Signature) (Attach Power of Attorney)</i> Name: <u>Richard L. Powell</u> <i>(Printed or typed)</i> Title: <u>Attorney-in-Fact</u> Attest: <u></u> <i>(Signature)</i> Name: <u>Nicole Lovett</u> <i>(Printed or typed)</i> Title: <u>Witness</u>
Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.	

EICDC® C-615, Payment Bond.

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Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

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1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond will arise after the following:
 - 5.1. Claimants who do not have a direct contract with the Contractor
 - 5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2. Pay or arrange for payment of any undisputed amounts.
 - 7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's

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fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
16. Definitions
 - 16.1. *Claim*—A written statement by the Claimant including at a minimum:
 - 16.1.1. The name of the Claimant;
 - 16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;

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Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

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- 16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
 - 16.1.4. A brief description of the labor, materials, or equipment furnished;
 - 16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
 - 16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
 - 16.1.7. The total amount of previous payments received by the Claimant; and
 - 16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.
- 16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
- 16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
- 16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
- 16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)



AMERISURE MUTUAL INSURANCE COMPANY
 AMERISURE INSURANCE COMPANY
 AMERISURE PARTNERS INSURANCE COMPANY

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Amerisure Mutual Insurance Company, Amerisure Insurance Company and Amerisure Partners Insurance Company are corporations duly organized under the laws of the State of Michigan (herein collectively the "Companies"), and that the Companies do hereby make, constitute and appoint:

JOSEPH MADDEN III, MARK E. HARRIS, RICHARD L. POWELL, RIC STALLINGS,

KEITH W. BROWN, DANIEL B. DICKENS, COOPER W. PERMENTER,

RICHARD L. POWELL JR. and FORBES HARRIS

of HUB International Mid-South, its true and lawful Attorney(s)-in Fact, each in their separate capacity if more than one is named above, to sign, execute, seal and acknowledge, for and on its behalf and as its act and deed, bonds or others writings obligatory in the nature of a bond on behalf of each of said Companies, as surety, on contracts or suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract or suretyship executed under this authority shall exceed the amount of:

ONE HUNDRED MILLION (\$100,000,000.00) DOLLARS

This Power of Attorney is granted and signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of Amerisure Mutual Insurance Company, Amerisure Insurance Company and Amerisure Partners Insurance Company at meetings duly called and held on February 17, 2022.

"RESOLVED, that any two of the President & Chief Executive Officer, the Chief Financial Officer & Treasurer, the Senior Vice President Surety, the Vice President Surety, or the General Counsel & Corporate Secretary be, and each or any of them hereby is authorized to execute, a Power of Attorney qualifying the attorney-in-fact named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings and all contracts of surety, and that President & Chief Executive Officer, Chief Financial Officer & Treasurer or General Counsel & Corporate Secretary each or any of them hereby is authorized to attest to the execution of any such Power of Attorney and to attach therein the seal of the Company;

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto electronically/digitally or by facsimile, and any such Power of Attorney or certificate bearing such electronic/digital or facsimile signatures or electronic/digital or facsimile seal shall be binding upon the Company when so affixed and in the future with regard to any bond, undertaking or contract of surety to which it is attached;

FURTHER RESOLVED, that any work carried out by the attorney-in-fact pursuant to this resolution shall be valid and binding upon the Company."



By:

Michael A. Ito
 Michael A. Ito, Senior Vice President Surety

By:

Aaron Green
 Aaron Green, Vice President Surety



IN WITNESS WHEREOF, Amerisure Mutual Insurance Company, Amerisure Insurance Company and Amerisure Partners Insurance Company have caused their official seals to be hereunto affixed, and these presents to be signed by their authorized officers this 26th day of April, 2023.

**Amerisure Mutual Insurance Company
 Amerisure Insurance Company
 Amerisure Partners Insurance Company**

State of Illinois
 County of Kane

On this 26th day of April, 2023, before me, a Notary Public personally appeared Michael A. Ito, of Amerisure Mutual Insurance Company, Amerisure Insurance Company and Amerisure Partners Insurance Company and Aaron Green of Amerisure Mutual Insurance Company, Amerisure Insurance Company and Amerisure Partners Insurance Company, personally known to me, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as officers of and acknowledged said instrument to be the voluntary act and deed of their respective companies.



M. Kenny
 M. Kenny, Notary Public

I, Christopher M. Spaude, the duly elected Chief Financial Officer & Treasurer of Amerisure Mutual Insurance Company, Amerisure Insurance Company and Amerisure Partners Insurance Company, do hereby certify and attest that the above and foregoing is a true and correct copy of a Power of Attorney executed by said Companies, which remains in full force and effect.

IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this ____ day of _____, 20____.

Christopher M. Spaude
 Christopher M. Spaude, Chief Financial Officer & Treasurer

DOCUMENT 00700

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. 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, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 8. *Change Order*—A document 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, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 10. *Claim*
 - a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by

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Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.

- b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.
 - c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.
 - d. A demand for money or services by a third party is not a Claim.
11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
 12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.
 13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
 14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
 15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
 16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
 17. *Cost of the Work*—See Paragraph 13.01 for definition.
 18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
 19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
 20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
 21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or

communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.
23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
 - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
 - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
 - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
29. *Notice to Proceed*—A written notice 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.
30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.

32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.
33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.
36. *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.
37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
38. *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, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
40. *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.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
42. *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 of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.
44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
45. *Supplier*—A manufacturer, fabricator, supplier, distributor, 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 a Subcontractor.
46. *Technical Data*
 - a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
 - b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
 - c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.
47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
49. *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; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 Terminology

- A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives*: 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 Article 10 or any other provision of the Contract Documents.
- C. *Day*: The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective*: The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - 1. does not conform to the Contract Documents;
 - 2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - 3. 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 15.03 or Paragraph 15.04).
- E. *Furnish, Install, Perform, Provide*
 - 1. The word “furnish,” when used in connection with services, materials, or equipment, means 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, means 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, means to furnish and install said services, materials, or equipment complete and ready for intended use.

4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.
- F. *Contract Price or Contract Times*: References to a change in “Contract Price or Contract Times” or “Contract Times or Contract Price” or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term “or both” is not expressed.
- G. 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 Performance and Payment Bonds; Evidence of Insurance*

- A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.
- C. *Evidence of Owner’s Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), 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;
 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.

2.04 *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 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, 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 and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *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 the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will 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 the component parts of the Work.
 4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one Contract Document 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.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will 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.
- G. Nothing in the Contract Documents creates:
 - 1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or
 - 2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

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

1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract 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, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer 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 part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
2. *Contractor's Review of Contract Documents:* If, before or 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) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) 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 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
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 part of the Contract Documents prepared by or for Engineer take

precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:

- a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); 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 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.
- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers 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 versions, or 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; or
 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract 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 Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

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

4.03 *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.

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 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 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, 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 Contract Price or Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.

- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 2. Abnormal weather conditions;
 3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
 4. Acts of war or terrorism.
- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
 2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
 3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
1. The circumstances that form the basis for the requested adjustment;
 2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
 3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
 4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
 5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.

Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the

effect of the delay, disruption, or interference on the critical path to completion of the Work.

- F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor in writing 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.
- 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 permanent improvements are to be made 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.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

- 1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
- 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise;

(b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, 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 any such claim, and against all 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 directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will 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 and adjacent areas 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 of 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 structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
 1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
 2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and
 3. Technical Data contained in such reports and drawings.
- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.
- C. *Reliance by Contractor on Technical Data:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

D. *Limitations of Other Data and Documents:* Except for such reliance on 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;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:

1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
2. is of such a nature as to require a change in the Drawings or Specifications;
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 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement

- to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, 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 fall within any one or more of the categories described in Paragraph 5.04.A;
 - 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 Paragraph 13.03; and,
 - c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
 2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a 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 otherwise;
 - b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice required by Paragraph 5.04.A.
 3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.
- F. *Underground Facilities; Hazardous Environmental Conditions*: Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities.

Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:
1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 2. complying with applicable state and local utility damage prevention Laws and Regulations;
 3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
 4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then 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 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. *Engineer's Review:* Engineer will:
1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
 2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
 3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and
 4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written

statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.

- E. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

F. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. 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 Paragraph 13.03;
 - b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
 - c. Contractor gave the notice required in Paragraph 5.05.B.
2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.
4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

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

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;

2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
 3. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on 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;
 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 removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) 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 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. 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, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.
- H. 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, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.
- I. 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, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. 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 failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.
- B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.
- C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or Regulations, and must be issued and signed by a surety named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond 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 must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.
- D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.
- E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.
- F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.
- G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.
- H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the

- required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Alternative forms of insurance coverage, including but not limited to self-insurance and “Occupational Accident and Excess Employer’s Indemnity Policies,” are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.
 - D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.
 - E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.
 - F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party’s full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party’s obligation to obtain and maintain such insurance.
 - G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner’s option, may purchase and maintain Owner’s own liability insurance. Owner’s liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner’s liability policies for any of Contractor’s obligations to the Owner, Engineer, or third parties.
 - H. Contractor shall require:
 - 1. Subcontractors to purchase and maintain worker’s compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor’s liability policies) on each Subcontractor’s commercial general liability insurance policy; and

2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.
- I. If either party does not purchase or maintain the insurance required of such party by the Contract, 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.
- J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.
- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.
- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 Contractor's Insurance

- A. *Required Insurance:* Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.
- B. *General Provisions:* The policies of insurance required by this Paragraph 6.03 as supplemented must:
 1. include at least the specific coverages required;
 2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
 3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;

4. apply with respect to the performance of the Work, whether such performance is 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; and
 5. include all necessary endorsements to support the stated requirements.
- C. *Additional Insureds*: The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:
1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;
 2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
 3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);
 4. not seek contribution from insurance maintained by the additional insured; and
 5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

- A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.
- B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.
- C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.

- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.
- E. *Insurance of Other Property; Additional Insurance:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

- A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.
 - 1. Owner and Contractor waive all rights against each other and the 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, risks, 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 Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, 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.
 - 2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.

1. 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 all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.
- C. The waivers in this Paragraph 6.05 include the waiver of rights 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 insured peril, risk, or cause of loss.
- D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, 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 fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

- A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at

Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *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.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *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 maintain good discipline and order at the Site.
- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.
- C. 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 will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *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, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will 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 must 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.

7.05 "Or Equals"

- A. *Contractor's Request; Governing Criteria:* Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item 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 is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.
1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that the proposed item:
 - 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) 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;
 - 3) has a proven record of performance and availability of responsive service; and
 - 4) is not objectionable to Owner.
 - b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense:* Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination:* Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.

- E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an “or-equal” item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 Substitutes

- A. *Contractor’s Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.
1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
 2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.
 3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
 - a. will certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design;
 - 2) be similar in substance to the item specified; and
 - 3) be suited to the same use as the item specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
 - 2) 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
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from the item specified; and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in

Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.

- B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. 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.
- E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.
- B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or

otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.

- E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.
- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.
- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *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 an 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

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license fee or royalty to others, the existence of such rights will be disclosed 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.

7.09 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. 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 the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *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.

7.11 *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. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and 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

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such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.

- C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

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

7.13 *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.
- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. 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, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.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 at its expense (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).

- E. 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.
- F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.
- H. 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.
- I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
- J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as 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.

7.15 *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 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 by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 Submittals

A. Shop Drawing and Sample Requirements

1. Before submitting a Shop Drawing or Sample, Contractor shall:
 - a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determine and verify:
 - 1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
 - 2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - 3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
 - c. confirm that the Submittal is complete with respect to all related data included in the Submittal.
2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.
3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.

B. Submittal Procedures for Shop Drawings and Samples: Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.

1. Shop Drawings

- a. Contractor shall submit the number of copies required in the Specifications.
- b. Data shown on the Shop Drawings must 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 7.16.C.

2. Samples

- a. Contractor shall submit the number of Samples required in the Specifications.
- b. Contractor shall 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 7.16.C.

3. 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. Engineer's Review of Shop Drawings and Samples

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. 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, comply with the requirements of 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, or to safety precautions or programs incident thereto.
3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.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 will document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.
5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. Resubmittal Procedures for Shop Drawings and Samples

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.
2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two

resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.

3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
 - a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
 - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.
 - c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.
 - d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.
2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03, 2.04, and 2.05.

- F. Owner-delegated Designs:** Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 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 is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
 1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and

2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
1. abuse, or improper modification, 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.
- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
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;
 6. The issuance of a notice of acceptability by Engineer;
 7. The end of the correction period established in Paragraph 15.08;
 8. Any inspection, test, or approval by others; or
 9. Any correction of defective Work by Owner.
- E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, 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 losses, damages, costs, and judgments (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 from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage 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 7.18.A will 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.

7.19 *Delegation of Professional Design Services*

- A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.
- B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.
- C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.
- D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.
- E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:
 1. Checking for conformance with the requirements of this Paragraph 7.19;
 2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
 3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.
- F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.

- G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
- D. 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.
- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, 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.
- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be

set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:

1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 2. An itemization of the specific matters to be covered by such authority and responsibility; and
 3. The extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.
1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
 2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.

- C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) 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 any such claims, and against all 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 damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

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

9.02 *Replacement of Engineer*

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

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

9.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *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.

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *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 (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

- 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.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *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.

10.02 *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 10.07. 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.

10.03 *Resident Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

- A. Engineer has the authority to reject Work in accordance with Article 14.
- B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.
- C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.
- D. Engineer's authority as to changes in the Work is set forth in Article 11.
- E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

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

- A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, 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, will 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 Contractor under Paragraph 15.06.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 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.
- C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
 - 1. Changes in 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;
 - 2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;

3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and
 4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

- A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.
- B. If Owner has issued a Work Change Directive and:
1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.
 2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

- A. Engineer may authorize minor changes in the Work if the changes 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. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.
- B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-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. Changes involving

the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.

- B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.
- C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *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, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.
- B. 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, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
 - 2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
 - 3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit will 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 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
 - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 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 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
- d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
- e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
- f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.
- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

- A. *Purpose and Content:* Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

B. Change Proposal Procedures

1. *Submittal:* Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.
2. *Supporting Data:* The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.
 - a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
 - b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

3. *Engineer's Initial Review:* Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.
 4. *Engineer's Full Review and Action on the Change Proposal:* Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.
 5. *Binding Decision:* Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- C. *Resolution of Certain Change Proposals:* If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.
- D. *Post-Completion:* Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *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.

ARTICLE 12—CLAIMS

12.01 *Claims*

- A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:
1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;
 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and
 4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.
- B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.
- C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation*
1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.
 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal

and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or
 2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will 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 in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe

benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will 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 accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will 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, which 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 will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.
5. Other costs consisting of 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, 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.
 - 1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.
 - c. *Construction Equipment Rental*
 - 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment,

machinery, or parts must cease when the use thereof is no longer necessary for the Work.

- 2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.
 - 3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed 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 builder's risk or other property insurance established in accordance with Paragraph 6.04), 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 include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will 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 communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
 - i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.
- C. *Costs Excluded*: The term Cost of the Work does not include any of the following items:
1. Payroll costs and other compensation of Contractor's officers, executives, principals, general 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 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.

2. The cost of purchasing, renting, or furnishing small tools and hand tools.
3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
5. 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.
6. Expenses incurred in preparing and advancing Claims.
7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. Contractor's Fee

1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
 - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
 - b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
 - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
 - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

- E. Documentation and Audit:** Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 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*: Contractor agrees that:
 - 1. 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
 - 2. 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 for any of the foregoing will be valid.
- C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's 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 for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 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. Payments to Contractor for Unit Price Work will be based on actual quantities.
- 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. 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, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.
- E. *Adjustments in Unit Price*
 - 1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

- b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
- 2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
- 3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 Access to Work

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction 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 with such procedures and programs as applicable.

14.02 Tests, Inspections, and Approvals

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.
- 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, obtaining, and paying for all inspections and tests required:
 - 1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 - 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 - 3. by manufacturers of equipment furnished under the Contract Documents;
 - 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and

5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. 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. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

- A. *Contractor's Obligation*: It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority*: Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects*: Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement*: Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties*: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages*: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages 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. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then 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, and provide all necessary labor, material, and equipment.
 - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages 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 pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
 - 2. 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, 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, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *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, then 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 will 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.

14.07 *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 defective Work as required by Engineer, then

- Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, 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, 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 incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. 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 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 *Progress Payments*

- A. *Basis for Progress Payments*: The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *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.
 - 2. 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 must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. Review of Applications

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, 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 13.03, 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; 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;
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;

- c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; 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 15.01.C.2.
 6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
 - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

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

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
 - b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;

- e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. The Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. The Contract Price has been reduced by Change Orders;
 - i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;
 - j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. 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; or
 - l. Other items entitle Owner to a set-off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, 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, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
 3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *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 and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.
- 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 preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. 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 punch list.

15.04 *Partial Use or Occupancy*

- 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. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be 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 15.03.A through 15.03.E for that part of the Work.

2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work 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 15.03 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 6.04 regarding builder's risk or other property insurance.

15.05 *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, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *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, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
 - d. a list of all duly pending Change Proposals and Claims; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) 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, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

- B. *Engineer's Review of Final Application and Recommendation of Payment:* 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 have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. 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. *Notice of Acceptability:* In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.
- E. *Final Payment Becomes Due:* Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

- A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim, appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.
- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *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 Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such adjacent areas;
 - 2. correct such defective Work;
 - 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.
- C. If, after receipt of a notice of defect within 60 days and within the correction period, 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. Contractor shall pay all 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). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.
- D. 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.
- E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, 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.
- F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *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 written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and 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);
 - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
 - 1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
 - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, 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 complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.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 the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds 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.

- F. 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, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

- A. Upon 7 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; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 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 16.03.
- 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, 7 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 are not intended to preclude Contractor from submitting a Change Proposal 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 17—FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this article:
 - 1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
 - 2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this article, Owner or Contractor may:
 - 1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
 - 2. agree with the other party to submit the dispute to another dispute resolution process; or
 - 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

- A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
 - 1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
 - 2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
 - 3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

- A. When any period of time is referred to in the Contract 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.

18.03 *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. 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.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

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

18.07 *Controlling Law*

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

18.08 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is 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.

18.09 *Successors and Assigns*

- A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

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

DOCUMENT 000800

SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added—for example, "Paragraph SC-4.05."

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SC-2.02 Amend the first sentence of Paragraph 2.02.A. to read as follows:

Owner shall furnish to Contractor two (2) printed copies of the Contract Documents (including one fully signed counterpart of the Agreement), and one (1) copy in electronic portable document format (PDF).

SC-5.03 Add the following new paragraphs immediately after Paragraph 5.03.D:

- E. The following table lists the reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data, and specifically identifies the Technical Data in the report upon which Contractor may rely:

Report Title	Date of Report	Technical Data
None		

- F. The following table lists the drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data, and specifically identifies the Technical Data upon which Contractor may rely: **[If there are no such drawings, so indicate in the table.]**

Drawings Title	Date of Drawings	Technical Data
None		

- G. Contractor may examine copies of reports and drawings identified in SC-5.03.E and SC-5.03.F that were not included with the Bidding Documents at **[location]** during regular business hours, or may request copies from Engineer.

Exhibit A—Foreseeable Bad Weather Days.

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SC-5.06 Add the following new paragraphs immediately after Paragraph 5.06.A.3:

4. The following table lists the reports known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and the Technical Data (if any) upon which Contractor may rely:

Report Title	Date of Report	Technical Data
None		

5. The following table lists the drawings known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and Technical Data (if any) contained in such Drawings upon which Contractor may rely: **[If there are no such drawings, so indicate in the table]**

Drawings Title	Date of Drawings	Technical Data
None		

SC-6.03 Replace Paragraph 6.03.B.3 with the following:

3. remain in effect until one year after the date of Substantial Completion (as set forth in Paragraph 15.06.D) and longer if expressly required elsewhere in this Contract;

SC-6.03 Supplement Paragraph 6.03 with the following provision to Paragraph 6.03.C:

6. all liability policies provided by the Contractor shall waive subrogation against the additional insureds.

SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:

- D. *Other Additional Insureds:* As a supplement to the provisions of Paragraph 6.03.C of the General Conditions, the commercial general liability, automobile liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies must include as additional insureds the Owner, Engineer, and the following: None.
- E. *Workers' Compensation and Employer's Liability:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance, including, as applicable, United States Longshoreman and Harbor Workers' Compensation Act.

Workers' Compensation and Related Policies	Policy limits of not less than:
Workers' Compensation	
State	Statutory
Applicable Federal (e.g., Longshoreman's)	Statutory
Employer's Liability	
Each accident	\$1,000,000
Each employee	\$1,000,000
Policy limit	\$1,000,000

Exhibit A—Foreseeable Bad Weather Days.

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- F. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:
1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees,
 2. damages insured by reasonably available personal injury liability coverage, and
 3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- G. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage.
 - a. Such insurance must be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
 2. Blanket contractual liability coverage, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Severability of interests and no insured-versus-insured or cross-liability exclusions.
 4. Underground, explosion, and collapse coverage.
 5. Personal injury coverage.
 6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.
 7. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- H. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:
1. Any modification of the standard definition of "insured contract" (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).
 2. Any exclusion for water intrusion or water damage.
 3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.

4. Any exclusion of coverage relating to earth subsidence or movement.
5. Any exclusion for the insured's vicarious liability, strict liability, or statutory liability (other than worker's compensation).
6. Any limitation or exclusion based on the nature of Contractor's work.
7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.

I. *Commercial General Liability—Minimum Policy Limits*

Commercial General Liability	Policy limits of not less than:
General Aggregate	\$2,000,000
Products—Completed Operations Aggregate	\$2,000,000
Personal and Advertising Injury	\$2,000,000
Bodily Injury and Property Damage—Each Occurrence	\$2,000,000

- J. *Automobile Liability*: Contractor shall purchase and maintain automobile liability insurance 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. The automobile liability policy must be written on an occurrence basis.

Automobile Liability	Policy limits of not less than:
Bodily Injury	
Each Person	\$
Each Accident	\$
Property Damage	
Each Accident	\$
[or]	
Combined Single Limit	
Combined Single Limit (Bodily Injury and Property Damage)	\$2,000,000

- K. *Umbrella or Excess Liability*: Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the Paragraphs above. The coverage afforded must be at least as broad as that of each and every one of the underlying policies.

Excess or Umbrella Liability	Policy limits of not less than:
Each Occurrence	\$5,000,000
General Aggregate	\$5,000,000

- L. *Using Umbrella or Excess Liability Insurance to Meet CGL and Other Policy Limit Requirements*: Contractor may meet the policy limits specified for employer's liability, commercial general liability, and automobile liability through the primary policies alone, or

Exhibit A—Foreseeable Bad Weather Days.

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through combinations of the primary insurance policy's policy limits and partial attribution of the policy limits of an umbrella or excess liability policy that is at least as broad in coverage as that of the underlying policy, as specified herein. If such umbrella or excess liability policy was required under this Contract, at a specified minimum policy limit, such umbrella or excess policy must retain a minimum limit of \$[specify amount] after accounting for partial attribution of its limits to underlying policies, as allowed above.

SC-6.04 Delete Paragraph 6.04.A of the General Conditions and substitute the following in its place:

A. *Installation Floater*

1. Contractor shall provide and maintain installation floater insurance on a broad form or "all risk" policy providing coverage for materials, supplies, machinery, fixtures, and equipment that will be incorporated into the Work ("Covered Property"). Coverage under the Contractor's installation floater will include loss from covered "all risk" causes (perils) to Covered Property:
 - a. of the Contractor, and Covered Property of others that is in Contractor's care, custody, and control;
 - b. while in transit to the Site, including while at temporary storage sites;
 - c. while at the Site awaiting and during installation, erection, and testing;
 - d. continuing at least until the installation or erection of the Covered Property is completed, and the Work into which it is incorporated is accepted by Owner.
2. The installation floater coverage cannot be contingent on an external cause or risk or limited to property for which the Contractor is legally liable.
3. The installation floater coverage will be in the full amount of the contract price. The Contractor will be solely responsible for any deductible carried under this coverage.
4. This policy will include a waiver of subrogation applicable to Owner, Contractor, Engineer, all Subcontractors, and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them.

SC-8.02 Add the following new Paragraph 8.02.C immediately after Paragraph 8.02.B:

- C. Owner intends to contract with others for the performance of other work at or adjacent to the Site.
 1. City of Bartlett, Tennessee shall have authority and responsibility for coordination of the various contractors and work forces at the Site;

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.B:

- C. The Resident Project Representative (RPR) will be Engineer's representative at the Site. RPR's dealings in matters pertaining to the Work in general will be with Engineer and Contractor. RPR's dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The RPR will:
 1. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor's safety meetings), and as appropriate prepare and circulate copies of minutes thereof.

Exhibit A—Foreseeable Bad Weather Days.

EJCDC® C-800, Supplementary Conditions of the Construction Contract.

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2. *Safety Compliance:* Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR's own personal safety while at the Site.
 3. *Liaison*
 - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
 - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
 - c. Assist in obtaining from Owner additional details or information, when required for Contractor's proper execution of the Work.
 4. *Review of Work; Defective Work*
 - a. Conduct on-Site observations of the Work to assist Engineer in determining, to the extent set forth in Paragraph 10.02, if the Work is in general proceeding in accordance with the Contract Documents.
 - b. Observe whether any Work in place appears to be defective.
 - c. Observe whether any Work in place should be uncovered for observation, or requires special testing, inspection or approval.
 5. *Inspections and Tests*
 - a. Observe Contractor-arranged inspections required by Laws and Regulations, including but not limited to those performed by public or other agencies having jurisdiction over the Work.
 - b. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.
 6. *Payment Requests:* Review Applications for Payment with Contractor.
 7. *Completion*
 - a. Participate in Engineer's visits regarding Substantial Completion.
 - b. Assist in the preparation of a punch list of items to be completed or corrected.
 - c. Participate in Engineer's visit to the Site in the company of Owner and Contractor regarding completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.
 - d. Observe whether items on the final punch list have been completed or corrected.
- D. The RPR will not:
1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
 2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
 3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.

4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction.
- 5 Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
7. AUTHORIZE OWNER TO OCCUPY THE PROJECT IN WHOLE OR IN PART.

Exhibit A—Foreseeable Bad Weather Days.

EJCDC® C-800, Supplementary Conditions of the Construction Contract.

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SECTION 00801



STATE OF TENNESSEE

BYRD ANTI-LOBBYING AMENDMENT CERTIFICATION

Contractors who apply or bid for an award of \$100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352.

Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

APPENDIX A, 44 C.F.R. PART 18 – CERTIFICATION REGARDING LOBBYING – REQUIRED FOR CONTRACTS OVER \$100,000 *Certification for Contracts, Grants, Loans, and Cooperative Agreements*

The undersigned certifies, to the best of his or her knowledge and belief, that:

- ☐ No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- ☐ If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- ☐ The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Signature of Authorized Representative	Date
Printed Name and Title	Phone Number / Email Address

SECTION 00802



**STATE OF TENNESSEE
CERTIFICATION REGARDING
DEBARMENT, SUSPENSION AND OTHER
RESPONSIBILITY MATTERS**

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

- ☐ Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- ☐ Have not within a three-year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- ☐ Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and
- ☐ Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

Signature of Authorized Representative	Date
Printed Name	Phone Number / Email Address

☐ I am unable to certify to the above statements. Explanation is attached.

SECTION 00803



STATE OF TENNESSEE
IRAN DIVESTMENT ACT CERTIFICATION

SUBJECT CONTRACT NUMBER(S):	
CONTRACTOR LEGAL ENTITY NAME:	
EDISON SUPPLIER IDENTIFICATION NUMBER:	

The Iran Divestment Act, Tenn. Code Ann. § 12-12-101 et. seq. requires a person that attempts to contract with the state, including a contract renewal or assumption, to certify at the time the bid is submitted or the contract is entered into, renewed, or assigned, that the person or the assignee is not identified on a list created pursuant to § 12-12-106.

Currently, the list is available online at the following website:

<https://www.tn.gov/generalservices/procurement/central-procurement-office--cpo-/library-/public-information-library.html>

The Contractor, identified above, certifies by signature below that it is not included on the list of persons created pursuant to Tenn. Code Ann. § 12-12-106 of the Iran Divestment Act.

CONTRACTOR SIGNATURE

NOTICE: This certification MUST be signed by an individual with legal capacity to contractually bind the Contractor.

PRINTED NAME AND TITLE OF SIGNATORY

DATE

Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

SECTION 00804



STATE OF TENNESSEE
CERTIFICATION OF BIDDER
REGARDING
USE OF WOMEN/MINORITY SUBCONTRACTORS
****Construction Projects Only****

This certification is required for the contractor to demonstrate that when subcontractors are to be used on this project, an attempt will be made to utilize women/minority owned firms.

Documentation must be on file to show who has been contacted.

☐
☐

I certify that every attempt was made to utilize female/minority contractors on this project. I am unable to certify to the above statements. Explanation is attached.

Signature of Authorized Representative	Date
Printed Name	Phone Number
Email Address	Address

SECTION 00805



STATE OF TENNESSEE
NON-BOYCOTT OF ISRAEL CERTIFICATION

The Bidder certifies that it is not currently engaged in, and will not for the duration of the contract engage in, a boycott of Israel as defined by Tenn. Code Ann. § 12-4-119. This provision shall not apply to contracts with a total value of less than two hundred fifty thousand dollars (\$250,000) or to contractors with less than ten (10) employees.

According to the law, a boycott of Israel means engaging in refusals to deal, terminating business activities, or other commercial actions that are intended to limit commercial relations with Israel, or companies doing business in or with Israel or authorized by, licensed by, or organized under the laws of the State of Israel to do business, or persons or entities doing business in Israel, when such actions are taken:

- 1) In compliance with, or adherence to, calls for a boycott of Israel, or
- 2) In a manner that discriminates on the basis of nationality, national origin, religion, or other unreasonable basis, and is not based on a valid business reason. Tenn. Code Ann. § 12-4-119.

Signature of Authorized Representative	Date
Printed Name	Phone Number / Email Address

SECTION 000806



Required and Recommended State and Local Fiscal Recovery Funds (SLRF) Supplemental Conditions for Contracts

Below is a listing of required and recommended supplemental conditions for contracts, along with sample language. This is not an exhaustive list. It is recommended Grantees use this list to supplement typical contract provisions and notify potential bidders of these conditions in the advertisement for bids.

Required Clauses

Legal/contractual/administrative remedies for breach of contract

Contracts for more than the simplified acquisition threshold, currently set at \$250,000, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.

Termination for cause or convenience

All contracts in excess of \$10,000 must address termination for cause and for convenience by the non-Federal entity, including the manner by which it will be affected and the basis for settlement.

Equal Employment Opportunity

Any contract that uses federal funds to pay for construction work is a "federally assisted construction contract" and must include the equal opportunity clause found in 2 C.F.R. Part 200, unless otherwise stated in 41 C.F.R. Part 60. This contract provision is required for all procurements that meet the definition of a "federally assisted construction contract."

During the performance of this contract, the contractor agrees as follows:

- (1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

- (2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

- (2) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.
- (3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law. (8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through
- (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable

to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

Copeland Anti-Kickback Act

The Copeland "Anti-Kickback" Act prohibits workers on construction contracts from giving up wages that they are owed. This requirement applies to all contracts for construction or repair work above \$2,000 in situations where the Davis-Bacon Act also applies.

- a. a. Contractor. The contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract.
- b. b. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clause above and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.
- c. c. Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. § 5.12."

Contract Work Hours and Safety Standards Act

Where applicable, all contracts awarded by the non-Federal entity in excess of \$100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. §§ 3702 and 3704, as supplemented by Department of Labor regulations at 29 C.F.R. Part 5. See 2 C.F.R. Part 200, Appendix II(E). Each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours.

Compliance with the Contract Work Hours and Safety Standards Act.

- (1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
- (2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of \$27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.
- (3) Withholding for unpaid wages and liquidated damages. The (write in the name of the Federal agency or the loan or grant recipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.
- (4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

Clean Air Act and Federal Water Pollution Control Act

For contracts over \$150,000, contracts must contain a provision requiring contractors to comply with the Clean Air Act and the Federal Water Pollution Control Act. If applicable, contracts must contain a provision that requires the contractor to agree to comply with all applicable standards, orders, or regulations issued pursuant

to the Clean Air Act (42 U.S.C. §§ 7401-7671q.) and the Federal Water Pollution Control Act as amended (33 U.S.C. §§ 1251-1387).

Clean Air Act

- (1) The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq
- (2) The contractor agrees to report each violation to the (name of subrecipient entering into the contract) and understands and agrees that the (name of the subrecipient entering into the contract) will, in turn, report each violation as required to assure notification to Treasury, and the appropriate Environmental Protection Agency Regional Office.
- (3) The contractor agrees to include these requirements in each subcontract exceeding \$150,000

Federal Water Pollution Control Act

- (1) The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 ets eq.
- (2) The contractor agrees to report each violation to the (name of the subrecipient entering into the contract) and understands and agrees that the (name of the subrecipient entering into the contract) will, in turn, report each violation as required to assure notification to the Treasury, and the appropriate Environmental Protection Agency Regional Office.
- (3) The contractor agrees to include these requirements in each subcontract exceeding \$150,000

Debarment and Suspension

Non-federal entities, contractors and subcontractors are subject to debarment and suspension regulations. These regulations restrict awards, subawards, and contracts with certain parties that are debarred, suspended, or otherwise excluded from or ineligible for participation in Federal assistance programs and activities. In general, an "excluded" party cannot receive a Federal grant award or a contract within the meaning of a "covered transaction," to include subawards and subcontracts. The debarment and suspension clause is required for all contracts and subcontracts for \$25,000 or more, all contracts that require the consent of an official of a federal agency, and all contracts for federally required audit services.

Suspension and Debarment

- (1) This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).
- (2) The contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.

- (3) This certification is a material representation of fact relied upon by (insert name of recipient/subrecipient/applicant). If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to (insert name of recipient/subrecipient/applicant), the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.
- (4) The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

Byrd Anti-Lobbying Amendment

Contractors that apply or bid for a contract of \$100,000 or more under a federal grant must file the required certification. This is also applicable to subcontractors of more than \$100,000, must include a contract provision prohibiting the use of federal appropriated funds to influence officers or employees of the federal government. Contractors that apply or bid for a contract for more than \$100,000 must also file the required certification regarding lobbying.

Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352

Contractors who apply or bid for an award of \$100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

Procurement of Recovered Materials

A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

“In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired competitively within a timeframe providing for compliance with the contract performance schedule; meeting contract performance requirements; or at a reasonable price.

Information about this requirement, along with the list of EPA-designated items, is available at [EPA's Comprehensive Procurement Guidelines webpage](#).

The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.”

Domestic Preference for Procurement

As appropriate, and to the extent consistent with law, NFEs should, to the greatest extent practicable under a federal award, provide a preference for the purchase, acquisition, or use of goods, products or materials produced in the United States. This includes, but is not limited to, iron, aluminum, steel, cement, and other manufactured products.

“Domestic Preference for Procurements

As appropriate, and to the extent consistent with law, the contractor should, to the greatest extent practicable, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States. This includes, but is not limited to iron, aluminum, steel, cement, and other manufactured products.

For purposes of this clause:

Produced in the United States means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States. Manufactured products mean items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.”

Access to Records

NFEs and their contractors and subcontractors must give the Department of Treasury and other authorized representatives access to records associated with their awards during the federally required record retention period and as long as the records are retained.

The following access to records requirements apply to this contract:

- (1) The Contractor agrees to provide (insert name of state agency or local or Indian tribal government), (insert name of recipient), Treasury, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.
- (2) The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

(3) The Contractor agrees to provide the Treasury or authorized representatives access to construction or other work sites pertaining to the work being completed under the contract.

Contract Changes or Modifications

To be eligible for ARP SLFRF assistance under the non-Federal entity's Treasury grant or cooperative agreement, the cost of the change, modification, change order, or constructive change must be allowable, allocable, within the scope of its grant or cooperative agreement, and reasonable for the completion of project scope.

Compliance with Federal Law, Regulations and Executive Orders

The recipient and its contractors are required to comply with all Federal laws, regulations, and executive orders.

"This is an acknowledgement that Treasury ARP SLFRF financial assistance will be used to fund all or a portion of the contract. The contractor will comply with all applicable Federal law, regulations, executive orders, Treasury policies, procedures, and directives."

Program Fraud and False or Fraudulent Statements or Related Acts

Recipients must comply with the requirements of The False Claims Act (31 U.S.C. §§ 3729-3733) which prohibits the submission of false or fraudulent claims for payment to the federal government. It is that the non-Federal entity include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

"The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this contract."

SECTION 00807
STATE WATER INFRASTRUCTURE GRANTS
IDENTIFICATION SIGN

All plans and specifications for each project approved shall contain provisions for requiring the general contractor to provide identification signs. The signs shall conform to the following basic features:

1. The following diagram shall be used as a design:

WATER INFRASTRUCTURE FOR TENNESSEE			
DEPARTMENT OF ENVIRONMENT AND CONSERVATION			
GOVERNOR BILL LEE			CITY OR COUNTY OF MAYOR
COMMISSIONER DAVID SALYERS	AMERICAN RESCUE PLAN PROJECT STATE WATER INFRASTRUCTURE GRANTS		
GRANT AWARD: \$ _____			

2. The sign shall be a 4'0" X 8'0" sheet of exterior grade plywood and shall be built so as to remain erected during the entire construction phase of the project.
3. The background of both sides shall be white. The lettering shall be black and shall be large enough to take advantage of the full size of the plywood. The stars shall be white set on a blue field and surrounded by a white ring placed inside a state map in red with a stripe of white and blue on the right side. The sign shall be bordered by a one-inch blue stripe.

DOCUMENT 01201

SPECIAL CONDITIONS

These Special Conditions amend or supplement the EJCDC C-700, Standard General Condition of the Construction Contract and the EJCDC C-800 – Supplementary Conditions to the Construction Contract 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.

A. Salvaged Materials and Equipment

1. Promptly haul away from the Owner's premises all materials and equipment which are removed and are neither indicated nor required to be reused in the completed project, EXCEPT as otherwise specified below.
2. The Owner will select certain removed existing materials and equipment and retain them for future use. BEFORE removing any existing materials and equipment, determine from the Owner which of these materials and equipment (if any) he desires to retain. Remove all Owner-selected materials and equipment without unnecessary damage thereto, and safely store them at locations designated by the Owner and obtain the Owner's signed receipt therefore.
 - a. Retained materials and equipment shall include, but not be limited to, sewage pumps; motors; electrical control panel; valves; and related items.

B. Continuity of Services and Existing Operations

1. Arrange all work to interfere as little as possible with the normal existing operations. Do not interrupt any existing utility or other service or existing operation at any time without Owner's prior approval. After each interruption has been made, make all necessary connections and alterations, and restore services and avoid interferences with normal existing operations as quickly as possible.
2. At no additional cost to Owner, provide all necessary temporary connections and temporary facilities to accomplish the required continuity of services and existing operations.

C. Erosion and Siltation Control

1. The Contractor shall install temporary silt fences and baled straw to prevent slope, spoil bank and ditch bank erosion at the construction site. Suitable filter fabric, supported by stakes shall be installed at the Construction site along property boundaries and ditch banks to prevent silt migration. The need for, and location of, silt fences shall be determined by the ENGINEER/OWNER.

D. Continuance of Wastewater Service

1. The Contractor shall hereby be aware that the sanitary sewer system is an essential utility for Bartlett. This means the sewers, pumps and other equipment must be operational at all times; however, some portions of the utility may, with the Owner's prior approval, be shut down for short periods of time to allow for piping connections, and other similar required activities. It is imperative that all work necessitating utility shut-down be carefully planned and organized to the smallest detail, well in advance of actual shut-down. When requesting a shut-down, the Contractor shall submit to the Owner and Engineer a detailed schedule of the work being done during any shut-down. The request shall be submitted at least one week prior to the requested time of shut-down. The schedule shall include, but is not limited to, the following: procedure to be followed; work to be accomplished; equipment to be installed; construction personnel available; construction equipment available; preliminary work that will be

done prior to shut-down to expedite the work; emergency procedures to be followed in the event problems develop; estimated time required for shut-down and subsequent start-up; and similar information. The absence of proper planning and/or proper equipment and personnel will constitute reasons for rejecting the request. The Contractor shall obtain the Owner's approval for any and all shut-downs. After shutting down, immediately begin work on the item(s) involved, make all modifications, perform all necessary work and place the item back in service as quickly as practicable.

2. It may be necessary that some of the work be scheduled during late night or weekend low flow periods and it may be necessary that the Contractor's work days longer than the normal 8 hour day, none of which shall be considered as extra work.
 3. It is imperative that any work done around existing equipment, pipelines, structures, etc. be done in such a manner as not to cause an emergency interruption of service. Provide all shoring, bracing, temporary pipe supports, pumping equipment and other necessary equipment to insure the continuance of wastewater services.
- E. Narrative Description of Work to be Done and Suggested Construction Sequence
1. General: This article is included for the general information of the Bidder. The word "SUGGESTED" is used throughout this article with regard to construction sequences, procedures, and/or techniques. When the word "SUGGESTED" is used, the construction sequence, procedures and/or technique referred to is NOT binding to the Contractor, however the work to be accomplished is part of this Contract. There is no intent, either specifically stated nor implied, to instruct the Bidder in the methods and means of the performance of the work. If the Bidder follows the "SUGGESTED" sequence, procedure or technique, he does so on his own authority and accepts full responsibility for the work. The intent of this Article is to convey to the bidder the following:
 - a. The purpose of the work.
 - b. The reasoning used by the Engineer in the preparation of the design.
 - c. The desired result of the work.
 - d. Possible construction problems that may not be readily apparent.
 2. The following paragraphs list some, but not all, of the steps that may be followed in accomplishing the base bid work: Construction and renovation of four (4) Bartlett Lift Stations: The purpose of the work is to provide a separate valve vault for the new check valves in lieu of the check valves being in wet well.

SUGGESTED CONSTRUCTION SEQUENCE

- a. The Bidder shall be aware especially that the Brunswick Valley Station work is located in an established residential area so extreme care and courtesy shall be required relative to the owner's property and all excavation shall be, on the indicated, existing utility easements and rights-of-way unless otherwise authorized.
- b. For all 4 stations, confirm all sewer invert elevations, wet well inside diameter, and other existing conditions. If different conditions are discovered, notify Engineer and Owner BEFORE proceeding with the work.
- c. Provide submittals and shop drawings for all equipment and materials including, but not limited to: hatch cover; pumps; control panel; check valves, vault and top; piping; fittings; valves; and all other equipment and materials. After approval, obtain and store all equipment and materials on the project site and/or at a location acceptable to the Owner.
- d. Prepare and submit schedule for completing the work including, but not limited to: equipment and materials purchased and on hand; construction equipment available; construction personnel available and their job description; time schedule for starting the work and for placing the new

- equipment in service; construction equipment on hand; and other related scheduling items.
- e. After all plans and schedules have been approved by the Owner, and all materials and equipment are on site, remove top soil in areas to be excavated and store and protect and reuse top soil, excavate around the existing wet well and set up and make ready the bypass pumping equipment.
 - f. Apply finish paint to pipe and other items to be painted that are located inside the wet well, and valve vault allowing sufficient time for the coating to dry and cure.
 - g. Locate existing force mains. Remove, store and protect top soil from area to be excavated. Excavate and locate pipe line. During a low flow night time period, excavate and install tees and gate valves as indicated for bypass pumping connection at the Raner, Shadowlawn and Valley Stations. Install the check valve vault and as much piping as practicable.
 - h. Plug sewers to pumping station wet well and start bypass pumping system by standard methods and means.
 - i. After bypass pumping is operating satisfactorily, discontinue the operation of the existing pumping system.
 - j. Remove and dispose of the existing pump chamber assembly and piping.
 - k. Install new section(s) of the precast concrete wet well and flat concrete top with hatch.
 - l. Allow subcontractor to install concrete coating system on wet well surfaces.
 - m. By standard methods and means, install accessories, piping, and all other items and place new system in operation.

END OF SECTION

Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

SECTION 01300

SUBMITTALS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Submittal procedures.
- B. Construction progress schedules.
- C. Proposed products list.
- D. Shop drawings.
- E. Product data.
- F. Manufacturers' instructions.
- G. Manufacturers' certificates.

1.2 RELATED SECTIONS.

- A. Section C-700 ECJD General Conditions.
- B. Section 01700 - Contract Closeout: Contract warranty and manufacturer's certificates, closeout submittals.

1.3 SUBMITTAL PROCEDURES (SHOP DRAWINGS, MANUFACTURERS DATA ALL OTHER SUBMITTALS)

- A. Transmit each submittal with Architect/Engineer accepted form.
- B. All submittals shall be transmitted electronically in PDF format. The submittal information shall be inserted into a single PDF file prior to transmission to the Architect/Engineer. Individual files of information shall only be acceptable if the size of a single file exceeds 10 megs.
- C. Sequentially number the transmittal forms. Resubmittals to have original number with an alphabetic suffix.
- D. Identify Project, Contractor, Subcontractor or supplier; pertinent Drawing sheet and detail number(s), and specification Section number, as appropriate.
- E. Apply Contractor's stamp, signed or initialed certifying that review, verification of Products required, field dimensions, adjacent construction Work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents.
- F. Schedule submittals to expedite the Project, and deliver to Architect/Engineer.
- G. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
- H. Provide space for Contractor and Architect/Engineer review stamps.
- I. Revise and resubmit submittals as required, identify all changes made since previous submittal.
 - 1. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.

1.4 CONSTRUCTION PROGRESS SCHEDULES.

- A. Submit initial progress schedule in duplicate within 15 days after date of Owner-Contractor Agreement for Architect/Engineer review.
- B. Revise and resubmit as required.
- C. If requested, submit revised schedules with each Application for Payment, identifying changes since previous version.
- D. Submit a computer generated, horizontal bar Chart with separate line for each major section of Work or operation, identifying first work day of each week.
- E. Show complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate the early and late start, early and late finish, float dates, and duration.
- F. Indicate estimated percentage of completion for each item of Work at each submission.
- G. Indicate submittal dates required for shop drawings, product data, samples, and product delivery dates.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

SECTION 01500

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 GENERAL

1.1 SUMMARY

- A. This Section describes construction facilities and temporary controls required for the Work.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 - 2. Except that equipment furnished by subcontractors shall comply with requirements of pertinent safety regulations, such equipment normally furnished by the individual trades in execution of their own portions of the Work are not part of this Section.
 - 3. Permanent installation and hookup of the various utility lines are described in other Sections.

1.2 REQUIREMENTS

- A. Provide construction facilities and temporary controls needed for the Work including, but not necessarily limited to:
 - 1. Sanitary facilities;
 - 2. Enclosures such as tarpaulins, barricades, and canopies;
 - 3. Temporary fencing of the construction site if requested by Owner.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Maintain temporary facilities and controls in proper and safe condition throughout progress of the Work.

PART 2 PRODUCTS

2.1 SANITARY FACILITIES

- A. Sanitary facilities:
 - 1. Provide temporary sanitary facilities in the quantity required for use by all personnel.
 - 2. Maintain in a sanitary condition at all times.

2.2 EQUIPMENT AND MATERIALS STORAGE AND PROTECTION

- A. Equipment and Materials Which Will be Installed Outdoors: At all times prior to its installation, store this equipment and these materials on pallets, skids, runners, platforms, or other suitable supports which will hold all parts of this equipment and these materials at least six inches aboveground; provide watertight coverings for those stored items which may be damaged by rain or snow; all as approved.
- B. Payment for Stored Materials and Equipment: No payment will be made for on-site or off-site stored materials and equipment which is not stored as specified above.
- C. At Contractor's expense, provide temporary weathertight storage for materials which may be damaged by storage exposed to weather.

2.3 TRAFFIC CONTROL

- A. Schedule and perform all work to interfere as little as possible with vehicular traffic flow. Poor planning and gross inconsideration of traffic flow will be just cause for the Owner to stop the Contractor's work until the unsatisfactory conditions have been remedied.
- B. Mark clearly all open ditches, soft backfill, parked equipment, etc., with signs and barricades. Maintain all signs and barricades during weekends, holidays, and at other times when work is not in progress.

2.4 CLEANING REQUIREMENTS FOR ROADWAYS AND DRIVEWAYS

- A. Existing roadways and driveways that provide access to the Construction area of this Contract shall be maintained and kept passable by the Contractor. Dirt, mud and other debris shall be broomed from the pavement of adjacent roads, and removed from the right-of-ways, to keep this roadway clean.

PART 3 EXECUTION

3.1 MAINTENANCE AND REMOVAL

- A. Maintain temporary facilities and controls as long as needed for safe and proper completion of the Work.
- B. Remove such temporary facilities and controls as rapidly as progress of the Work will permit, or as directed by the Architect/Engineer.

END OF SECTION

SECTION 01700
CONTRACT CLOSEOUT

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Closeout procedures.
- B. Final cleaning.
- C. Adjusting.
- D. Project record documents.
- E. Warranties.

1.2 RELATED SECTIONS

- A. Section 01500 - Construction Facilities and Temporary Controls: Progress cleaning.
- B. Section 01730 - Operation and Maintenance Data.

1.3 FINAL CLEANING

- A. Execute final cleaning prior to final inspection.
- B. Clean site; sweep paved areas, rake clean landscaped surfaces.
- C. Remove waste and surplus materials, rubbish, and construction facilities from the site.

1.4 ADJUSTING

- A. Adjust operating Products and equipment to ensure smooth and unhindered operation.

1.5 PROJECT RECORD DOCUMENTS

- A. Maintain on site, one set of the following record documents; record actual revisions to the Work:
 - 1. Contract Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other Modifications to the Contract.
 - 5. Reviewed shop drawings, product data, and samples.
- B. Store Record Documents separate from documents used for construction.
- C. Record information concurrent with construction progress.
- D. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and Modifications.
- E. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:
 - 1. Measured depths of foundations in relation to finish [first] [main] floor datum.

2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 4. Field changes of dimension and detail.
 5. Details not on original Contract Drawings.
 6. Delete Architect/Engineer title block and seal from all documents.
- F. Submit documents to Architect/Engineer with claim for final Application for Payment.
- 1.6 OPERATION AND MAINTENANCE DATA
- A. Submit one electric copy and two (2) sets prior to final inspection, bound in 8-1/2 x 11 inch text pages, three ring size capacity expansion binders with durable covers.
 - B. Prepare binder covers with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of binder when multiple binders are required.
 - C. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
 - D. Contents: Prepare a Table of Contents for each volume, with each Product or system description identified, type white paper.
 - E. Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers.
 - F. Part 2: Operation and maintenance instructions arranged by system. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
 1. Significant design criteria.
 2. List of equipment.
 3. Parts list for each component.
 4. Operating instructions.
 5. Maintenance instructions for equipment and systems.
 6. Maintenance instructions for special finishes, including recommended cleaning methods and materials and special precautions identifying detrimental agents.
 - G. Part 3: Project documents and certificates, including the following:
 1. Shop drawings and product data.
 2. Air and water balance reports.
 3. Certificates.
 4. Copies of warranties.
 - H. Submit one copy of completed volumes in final form 15 days prior to final inspection. This copy will be returned with Architect/Engineer comments. Revise content of documents as required prior to final submittal.
 - I. Submit final volumes revised, within ten days after final inspection.
- 1.7 WARRANTIES
- A. Provide duplicate notarized copies and an electronic copy.
 - B. Execute and assemble documents from Subcontractors, suppliers, and manufacturers.
 - C. Provide electronic copies and two hard copies of Table of Contents and assemble in three D size ring binder with durable cover.

D. Submit prior to final Application for Payment.

1.8 SPARE PARTS AND MAINTENANCE MATERIALS

A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification Sections.

B. Deliver to Owner, obtain his signed receipt therefor prior to final payment.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION– NOT USED

END OF SECTION

SECTION 01720

PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.1 SUMMARY

- A. Throughout progress of the Work, maintain an accurate record of changes in the Contract Documents.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 - 2. Other requirements affecting Project Record Documents may appear in pertinent other Sections of these Specifications.

1.2 SUBMITTALS

- A. Comply with pertinent provisions of General Conditions.
- B. The Architect/Engineer's approval of the current status of Project Record Documents may be a prerequisite to the Architect/Engineer's approval of requests for progress payment and request for final payment under the Contract.
- C. Prior to submitting request for final payment, submit the final Project Record Documents to the Architect/Engineer and secure his approval.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Maintain the job set of Record Documents completely protected from deterioration and from loss and damage until completion of the Work and transfer of all recorded data to the final Project Record Documents.

PART 2 PRODUCTS

2.1 RECORD DOCUMENTS

- A. Job set: Promptly following the Effective Date of Agreement secure from the Architect/Engineer at no charge to the Contractor one complete electronic set of all Documents comprising the Contract.
- B. Final Record Documents: At a time nearing the completion of the Work, secure from the Architect/Engineer at no charge to the Contractor one complete set of sepia transparencies of all Drawings in the Contract.

PART 3 EXECUTION

3.1 MAINTENANCE OF JOB SET

- A. Preservation: Maintain the job set of documents at the site of Work as that site is designated by the Architect/Engineer.
- B. Making entries on Drawings: In the event of overlapping changes, use different colors for the overlapping changes.

- C. Make entries in the pertinent other Documents as approved by the Architect/Engineer.
- D. Drawings shall clearly show actual installed locations, depth, and sizes of:
 - 1. Pipe work of all descriptions.
 - 2. Electrical feeders, including locations of pull boxes and junction boxes.
 - 3. Pipework of all descriptions below ground.

3.2 FINAL PROJECT RECORD DOCUMENTS

- A. The purpose of the final Project Record Documents is to provide factual information regarding all aspects of the Work, both concealed and visible, to enable future modification of the Work to proceed without lengthy and expensive site measurement, investigation, and examination.
- B. Review and submittal:
 - 1. Submit the completed set of Project Record Documents to the Architect/Engineer as described in Paragraph 1.2-C above.
 - 2. Make required changes and promptly deliver the final Project Record Documents to the Architect/Engineer.

END OF SECTION

SECTION 01730

OPERATION AND MAINTENANCE DATA

PART 1 GENERAL

1.1 SUMMARY

- A. To aid the continued instruction of operating and maintenance personnel, and to provide a positive source of information regarding products incorporated into the Work, furnish and deliver the data described in this Section and in pertinent other Sections of these Specifications.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 - 2. Required contents of submittals also may be amplified in pertinent other Sections of these Specifications.

1.2 SUBMITTALS

- A. Submit two copies of a preliminary draft of the proposed Manual or Manuals to the Architect/Engineer for review and comments.
- B. Unless otherwise directed in other Sections or in writing by the Architect/Engineer, submit three copies of the final Manual to the Architect/Engineer prior to indoctrination of operation and maintenance personnel.

1.3 QUALITY ASSURANCE

- A. In preparing data required by this Section, use only personnel who are thoroughly trained and experienced in operation and maintenance of the described items, completely familiar with the requirements of this Section, and skilled in technical writing to the extent needed for communicating the essential data.

PART 2 PRODUCTS

2.1 INSTRUCTION MANUALS

- A. Where instruction Manuals are required to be submitted under other Sections of these Specifications, prepare in accordance with the provisions of this Section.

PART 3 EXECUTION

3.1 INSTRUCTION MANUALS

- A. Preliminary:
 - 1. Prepare a preliminary draft of each proposed Manual.
 - 2. Show general arrangement, nature of contents in each portion, probable number of drawings and their size, and proposed method of binding and covering.
 - 3. Secure the Architect/Engineer's approval prior to proceeding.
- B. Final: Complete the Manuals in strict accordance with the approved preliminary drafts and the Architect/Engineer's review comments.
- C. Revisions: Following the indoctrination and instruction of operation and maintenance personnel, review all proposed revisions of the Manual with the Architect/Engineer.

END OF SECTION

SECTION 02140

DEWATERING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Performing all work necessary to lower and control the ground water levels and hydrostatic pressures to permit all excavation and construction specified under this contract to be performed in the dry.
- B. The control of all ice, snow, and surface water shall be considered as part of the work, and it shall include all costs of mobilization, supply, installation, operation, maintenance, supervision and final dismantling and removal from the site of the dewatering equipment.

1.2 RELATED SECTIONS

- A. DIVISION 2 - SITEWORK.

1.3 JOB CONDITIONS

- A. Examination of the Site:
 - 1. The Contractor shall examine the site conditions, the ground conditions and the ground water conditions. Copies of the logs of the borings and information on the ground water conditions are included and/or are available. The data is furnished for information only, and it is understood that neither the Owner nor the Engineer will be held responsible for any interpretation or conclusions drawn therefrom by the Contractor.
- B. Special Instructions: It is anticipated that some of the structures in this project extend below the ground water table, at least during certain periods of the year. Perform all dewatering as required to permit excavation and construction to be performed under dry conditions.
- C. Special Instructions: if a ground water dewatering system is determined to be required, a registered Engineer approved by the Architect/Engineer shall be employed by the Contractor to prepare a dewatering plan.
 - 1. Submittals:
 - a. Experience: Dewatering Contractor shall submit evidence that he has engaged in the successful installation of dewatering systems for at least 5 years which included installation, operation, and removal of ground water required for construction.
 - b. Records: A complete and accurate record of all observation wells and dewatering operation shall be maintained and furnished to the Engineer.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 METHOD

- A. The Contractor shall submit complete plans and description of the overall dewatering system he proposes to use for the work under this section for approval by the Architect/Engineer, showing the details of the dewatering system prior to initiation of any excavation below the naturally prevailing ground water levels.
- B. Approval by the Architect/Engineer of the dewatering system proposed by the Contractor will only be with respect to the basic principles of the methods the Contractor intends to employ. Approval by the Architect/Engineer of the dewatering system will be based on the demonstrated performance of the system to satisfy the requirements for dewatering as specified herein.

3.2 DEWATERING REQUIREMENTS

- A. It is the intent of these specifications that an adequate dewatering system be installed to lower and control the ground water to permit excavation, construction of the structures and the placement of the fill materials, all to be performed under dry conditions. The dewatering system shall be adequate to pre-drain the water-bearing strata above and below the bottom of the structure foundations and all other excavations.
- B. Prior to any excavation below the ground water level, the dewatering system shall be placed into operation to lower the water levels as required and then shall be operated continuously 24 hours per day, seven days per week until all structures have been satisfactorily constructed including placement of fill materials, and no longer require dewatering. An adequate weight of fill material should be in place to prevent buoyancy prior to discontinuing operation of the dewatering system.
- C. The Contractor shall obtain written approval from the Architect/Engineer before discontinuing the operation of the dewatering system.
- D. The Contractor shall be solely responsible for the arrangement, location, and depths of the dewatering system necessary to accomplish the work described under this section of the Specifications. The dewatering shall be accomplished in a manner that will maintain the construction area ground water level at least one foot below the bottom of the bottom slab of the two wet wells. The dewatering system will prevent the loss of fines, seepage, boils, quick conditions or softening of the foundation strata and will maintain stability of the sides and bottom of the excavation, and will result in all construction operations being performed in the dry.
- E. The Contractor shall dispose of all water removed from the excavations in such a manner as will not endanger public health, property, any portion of the work under construction or completed either by him or any other contractor, and shall be performed in such a manner as will cause no inconvenience whatsoever to the Owners, Architect/Engineer or to others engaged on work about the site.
- F. The Contractor shall provide complete standby equipment, installed and available, for immediate operation as may be required to adequately maintain the dewatering on a continuous basis.

3.3 CONTROL OF GROUND WATER LEVELS

- A. The observation wells and test pits, or holes, shall be used as a primary basis of determining compliance with the requirements of the dewatering specification.

3.4 RESPONSIBILITY

- A. Review by the Engineer's/Architect's inspector in no way relieves the Contractor nor the Contractor's engineer of their responsibility to complete the work according to plans and specifications.

END OF SECTION

SECTION 02200

EARTHWORK

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Remove surface debris.
- B. Remove of topsoil and subsoil.
- C. Excavation and Backfill.
- D. Remove paving, curbs and other foreign materials.
- E. Clear site of plant life and grass.
- F. Grading.
- G. Remove shrubs.

1.2 RELATED SECTIONS

- A. DIVISION 2 - SITEWORK.
- B. DIVISION 3 - CONCRETE.

1.3 REFERENCES

- A. ASTM C136 - Method of Sieve Analysis for Fine and Coarse Aggregates.
- B. ASTM D2487 - Classifications of Soils for Engineering Purposes.

1.4 SUBMITTALS

- A. Provide submittals under provisions of the General Conditions.
- B. Submit test reports certifying that fill materials comply with specifications.

1.5 QUALITY ASSURANCE

- A. Requirements of Regulatory Agencies:
 - 1. Work shall comply with rules and regulations of local and state agencies having jurisdiction.
 - 2. State and local code requirements shall control disposal of debris and excess materials.

1.6 ENVIRONMENTAL REQUIREMENTS

- A. When rainy weather conditions necessitate interrupting filling and grading operations, grade and compact the surface to avoid collection of water. Provide adequate temporary drainage to prevent erosion. After interruption, re-establish compaction specified in last layer before resuming work.
- B. Conduct earthwork operations so as to prevent windblown dust and dirt and waterborne silt from interfering with the Owner's and adjacent property owner's normal operations. Assume liability for all claims related to windblown dust, and dirt caused by this Contractor's work.

1.7 SEQUENCING

- A. Sequence operations so as to maintain safe operative conditions and preserve existing work which is to remain.

1.8 COORDINATION

- A. Existing Conditions:
 1. Carefully maintain bench marks, monuments, and survey control references.
 2. Verify or determine locations of underground utilities and avoid damage. Should damage occur, notify the Owner and repair at no additional cost to the Contract.
 3. Restore grades disturbed by this contract activity or other causes to elevations indicated or noted on drawings or as required to provide proper drainage.

1.9 ARCHEOLOGICAL REQUIREMENTS

- A. When the Contractor's excavating operations encounter artifacts of historical or archaeological significance, the operations shall be temporarily discontinued. At the direction of the Engineer, the Contractor shall excavate the site in such a manner as to preserve the artifacts encountered and allow for their removal. Such excavation will be paid for as extra work.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Contractor-Furnished Borrow Material
 1. Comply with ASTM D2487 Soil Classification groups GW, GP, GM, SM, SP, ML, and CL.
 2. Plasticity Index 20 or less and liquid limit 50 or less.
- B. Fill Materials: Fill materials shall be selected earth excavated from the project site or elsewhere, or sand, or granular backfill material.
- C. Granular Backfill Material:
 1. Crushed Rock:
 - a. Clean mineral aggregate (broken stone, crushed or uncrushed gravel, or combination thereof).
 - b. Absorption of water in saturated surface dry condition shall not exceed 3 percent of oven dry weight of sample.
 - c. Graded (Laboratory sieves, US Series) to following:

Sieve Size	Percentage Passing Sieve
3/4 inch	100
No. 200	8-15
 2. Sand: Clean dry concrete sand of no special grading.
 3. Drainage Rock (Gravel): Clean river wash rock; graded minimum 3/8 inch to maximum 3/4 inch, no fines.
- D. All fill materials shall be free of wood, rubbish, vegetable materials, topsoil, and other unsuitable materials.
- E. Geotextile Fabric: This shall be a woven or nonwoven synthetic, permeable barrier sheet, as manufactured by Mirafi, Inc., 140N unless otherwise indicated, or equal, which is resistant to soil, chemicals, and mildew, stable under freeze-thaw cycles, will not shrink or expand under wet conditions and will not unravel or become clogged during use. The filter cloth shall have a minimum grab tensile strength of 120 pounds in air accordance with ASTM D-1682. Fabric furnished shall be specifically selected to prevent existing soil from inter-mixing with the granular backfill material but will allow ground water to enter the granular backfill material.

2.2 CLASSIFICATION

- A. **Unclassified Excavation.** Unclassified excavation shall consist of the excavation and disposal of all material, regardless of its nature, shall be used in fill areas only when approved as suitable and shaped and compacted as specified herein. Excess material shall be disposed of off-site at Contractor's expense.
- B. **Undercut Excavation.** This item shall include the excavation of unsuitable subgrade material as determined by the Engineer. It shall be the Contractor's responsibility to perform compaction efforts on the top 24 inches of existing subgrade prior to authorization for undercutting. Material used to replace "undercut" areas shall be obtained from the grading operations or borrow areas or replaced with granular backfill material.
- C. **Borrow Excavation.** Borrow excavation shall consist of approved material required for the construction of subgrade when insufficient quantity or quality of onsite excavation is available or when unsuitable material is encountered and undercutting is authorized. Borrow materials shall be obtained from Contractor-furnished Borrow area located off site.

PART 3 EXECUTION

3.1 INSPECTION

- A. The Contractor shall inspect the site and inform himself of actual grades, levels, and other conditions under which work is to be performed.

3.2 TOPSOIL REMOVAL

- A. After clearing and grubbing and prior to all other earthwork, in all areas to be cut or filled, remove all of the existing topsoil and soil containing organic matter regardless of the depth, but in no event less than 6 inches below existing ground surface.
- B. Stockpile the removed topsoil in an approved location on the project site where the stockpile will not interfere with the project construction, and protect the stockpile from erosion.

3.3 STRIPPING

- A. **Cut Areas:** before excavating in areas (including borrow areas) from which excavated materials will be used as fill materials, strip all grass, weeds, vegetation, roots, trash, and other unsuitable materials from the existing surfaces of the areas to be cut. Remove all unsuitable materials down to the depths required to reach suitable materials, but at least 6-inch depth.
- B. **Filled areas:** before placing fill, strip all grass, weeds, vegetation, roots, trash, and other unsuitable materials from the existing surfaces of the areas to be filled. Remove all unsuitable materials down to the depths required to reach suitable subgrade, but at least to 6 inch depth.

3.4 EXCAVATION

- A. **General Requirements:**
 - 1. Excavate to dimensions and elevations shown or noted with bottoms square and true.
 - 2. Remove debris, old foundations, tree stumps, and loose rocks from bottom of excavation.
 - 3. Shore, brace, sheet, and slope excavations as required to prevent caving, erosion, danger to persons and structures, or interference with construction operations and as required to comply with safety laws.

4. Keep excavations free of water at all times until concrete work or backfilling is complete. Grade excavated areas to prevent ponding of water.
 5. Dispose of excess material off site at no cost to the Owner.
- B. Provisions for Formwork Construction:
1. Extend excavations sufficient distance from walls and footings to permit replacing and removal of forms, installation of services, and inspection.
 2. Trim excavation walls and bottoms to reasonable smooth lines and grades.
- C. Earth Forms: Requirements for earth forms for foundations are stated in CONCRETE Section.
- D. Over-Depth Excavations: Fill to grade with compacted fill as directed by the Architect/Engineer or fill with concrete.
- E. Removal of Below-Grade Construction or Obstructions: Remove all existing construction or obstructions wherever they occur below new grade within immediate area of new construction, new paving, or new planting areas.
- F. Undercutting: Rock, shale, hardpan, loose rock, boulders, or other material unsatisfactory for subgrades, roads, shoulders, or any areas intended for turfing shall be excavated to a minimum depth of 12 inches (300 mm), or to the depth specified by the Engineer, below the subgrade. Muck, peat, matted roots, or other yielding material, unsatisfactory for subgrade foundation, shall be removed to the depth specified. Unsuitable materials shall be disposed of at locations off site. This excavated material shall be paid for at the contract unit price per cubic yard for undercut. The excavated area shall be refilled with suitable material, obtained from the grading operations or borrow areas or replaced with granular backfill as directed and thoroughly compacted by rolling.

3.5 FILLING AND BACKFILLING

- A. General Requirements:
1. Do not place fill or backfill until forms, rubbish and other deleterious materials have been removed, waterproofing measures completed, and areas have been approved by the Engineer.
 2. Scarify surface of area to receive fill or backfill to 6 inch depth. Disc or blade surface until free from large clods.
 3. Bring scarified material to proper moisture content and compact to specified density.
 4. Spread fill material in layers not to exceed 6 inch depth before compaction unless compaction of thicker layers is approved by the Engineer. Sprinkle material without sufficient moisture to compact properly; permit material with excess moisture to dry to proper water content. Thoroughly mix soil and water by blading and discing before compacting.
 5. Adequately brace and shore footings, walls, etc. against which backfill is to be placed to prevent displacement or damage during placement.
 6. Import approved fill if site excavations do not produce sufficient quantity or approved quality.
 7. There shall be NO separate payment for suitable materials removed, manipulated, and replaced in order to obtain the required depth of density and all costs shall be considered a subsidiary obligation of excavation. No extra payment will be made for reworking material to obtain specified density even in the event that areas which have been initially accepted for compaction require reworking due to rainfall, drying out or other reasons.
- B. Minimum Compaction Requirements:
1. Compact non-granular fill materials to the density specified below as determined by ASTM D698 (Standard Proctor).
 - a. Fill under foundations and concrete floors on grade: 95 percent of optimum.
 - b. Fill under paving: 95 percent of optimum.

- c. General Site Fill: 90 percent of optimum.
 - d. Other backfill: 90 percent of optimum.
- 2. Compact granular fill materials for which impact compaction will produce a well-defined moisture-density relationship curve to the density specified below as determined by ASTM D698 (Standard Proctor).
 - a. Fill under foundation and concrete floors on grade: 100 percent of optimum.
 - b. Fill under paving: 97 percent of optimum.
 - c. General site fill: 90 percent of optimum.
 - d. Other backfill: 90 percent of optimum.
- 3. Compact granular fill materials of a free-draining type for which impact compaction will not produce a well-defined moisture-density relationship curve to the density specified below as determined by ASTM D 4253 and D4254.
 - a. Fill under foundations and concrete floors on grade: 80 percent of relative density.
 - b. Fill under paving: 80 percent of relative density.
 - c. General site fill: 70 percent of relative density.
 - d. Other backfill: 70 percent of relative density.
- 4. Do not compact soil in planting areas.
- 5. If proper compaction techniques or adequate moisture control are not maintained by the Contractor, compactive efforts shall be repeated until satisfactory results are obtained.

3.6 MISCELLANEOUS EARTHWORK

- A. Spreading Topsoil and Finish Grading:
 - 1. After completion of rough grading and after substantial completion of other construction operations, spread the stockpiled topsoil to a 4 inch uniform depth over all filled areas and all cut areas, except areas which are covered by buildings, structures, or paving.
 - 2. Before placing the topsoil, remove all construction debris, wood, concrete, and masonry materials, and other unsuitable materials, and scarify the underlying surfaces to at least 2 inch depth. Then spread the topsoil and perform all finish grading to the indicated lines and elevations, to provide smooth and uniform final surfaces.
- B. Unsuitable Subgrade:
 - 1. Where the required subgrade elevations are uncompactable or otherwise unstable and will not provide satisfactory support for the structure at the indicated soil bearing values, extend the excavations to depths as required to reach a subgrade having at least the indicated soil bearing value. Before placing concrete, backfill the excavations up to the indicated subgrade elevations with one of the granular backfill materials specified in Part 2 C, compacted as specified hereinbefore or filled with concrete, all as authorized by the Architect/Engineer.
- C. Rock Courses:
 - 1. Verify that all improvements such as floor drains are installed; that the subgrade has been rough graded and compacted.
 - 2. Place rock course under building slabs to thicknesses as noted.
 - 3. Level and compact to smooth surface.
- D. Sand Beds:
 - 1. Provide a compacted course of sand under concrete slabs as indicated.
 - 2. Screed and level before reinforcing or concrete is placed.

3.7 GRADING

- A. Begin grading only after debris and construction materials are removed from area concerned.

- B. Grade areas to conform to contour lines and elevations indicated. Round abrupt changes in slopes. Regrade any areas that have settled to the required levels. Slope ground away from building walls.
- C. Insure finished grades and surfaces drain to area drain, gutters, etc.
- D. Prevent erosion of freshly graded areas during construction and until permanent drainage and erosion control measures are installed.

3.8 FIELD QUALITY CONTROL

- A. The Contractor shall provide the following:
 - 1. Notify the Engineer 24 hours prior to any fill or backfill operations.
 - 2. Pay costs for additional inspections and tests due to noncompliance with Contract Documents.

3.9 EROSION CONTROL

- A. Provide temporary silt fences between the project site, including the borrow area, and the adjacent drainage system for the purpose of erosion control.
- B. The temporary silt fence shall consist of woven wire fence attached to posts with geotextile fabric attached to the upper grade side of the fence. The geotextile fabric shall be anchored into the soil.
- C. Maintain the erosion control structure in satisfactory condition until an approved cover of grass is established to prevent erosion, for the duration of the project, or until removal is approved, whichever occurs first.

3.10 FINISHING AND PROTECTION OF SUBGRADE

- A. After the subgrade has been substantially completed the full width shall be conditioned by removing any soft or other unstable material which will not compact properly. The resulting areas and all other low areas, holes or depressions shall be brought to grade with suitable select material. Scarifying, blading, rolling and other methods shall be performed to provide a thoroughly compacted subgrade shaped to the lines and grades shown on the plans.
- B. Grading of the subgrade shall be performed so that it will drain readily. The Contractor shall take all precautions necessary to protect the subgrade from damage. He/she shall limit hauling over the finished subgrade to that which is essential for construction purposes.
- C. All ruts or rough places that develop in a completed subgrade shall be smoothed and recompact.
- D. No subbase, or surface course shall be placed on the subgrade until the subgrade has been approved by the Engineer.

3.11 HAUL

- A. All hauling will be considered a necessary and incidental part of the work. Its cost shall be considered by the Contractor and included in the contract unit price for the pay of items of work involved. No payment will be made separately or directly for hauling on any part of the work.

3.12 TOLERANCES

- A. General Excavation
 - 1. Excavations shall not exceed 1/10 foot variation from dimensions and elevations shown or noted.

2. Fill and backfill shall be placed within tolerance of plus or minus 1/10 foot.
 3. Grading shall be done within plus or minus 1/10 foot typically.
- B. Pavement Bases and Subbases. In those areas upon which a subbase or base course is to be placed, the top of the subgrade shall be of such smoothness that, when tested with a 16-foot (4.8 m) straightedge applied parallel and at right angles to the centerline, it shall not show any deviation in excess of 1/2-inch (12 mm), or shall not be more than 0.05-foot (.015 m) from true grade as established by grade hubs or pins. Any deviation in excess of these amounts shall be corrected by loosening, adding, or removing materials; reshaping; and recompactng by sprinkling and rolling.

END OF SECTION

SECTION 02273

EROSION, SEDIMENTATION, & DUST CONTROL

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. This work shall consist of the control of erosion, sedimentation, and dust resulting from the construction and includes the installation and maintenance of control measures throughout the duration of the contract.
 - 1. The Contractor shall endeavor to prevent and control all erosion and sedimentation, including soil erosion caused by wind. The Contractor shall establish, construct, monitor, and maintain erosion and sediment control measures to prevent runoff sediments from entering waters of the State of Tennessee (the State) and the United States of America and to prevent stream damage. Siltation control devices shall be installed before construction begins. The erosion control structures shall be maintained until permanent ground cover is established.
 - 2. The erosion control features shall be installed prior to commencement of any other work on the site and shall be effectively maintained by the Contractor for the duration of the project.

1.2 RELATED SECTIONS

- A. DIVISION 1 – GENERAL REQUIREMENTS.
- B. DIVISION 2 - EARTHWORK.

1.3 QUALITY ASSURANCE

- A. Materials and methods of construction shall comply with the following standards:
 - 1. American Society for Testing and Materials (ASTM).
 - 2. Tennessee Department of Environment and Conservation (TDEC).
 - 3. Tennessee Department of Transportation (TDOT).

1.4 SUBMITTALS

- A. Provide samples if requested and certifications of all materials proposed for use.

1.5 PROJECT CONDITIONS

- A. Damage to a stream or other natural areas is herein defined as “the addition to waters of the State or the United States: of soil or top soil whether deposited by poor construction practice, erosion, sedimentation, wind or other means; of vegetation matter such as whole trees or any part thereof, of remnants from burning or other clearing processes; of construction waste materials such as concrete, broken pipe, etc.; of waste from construction equipment such as petroleum product spills, oil cans, damaged equipment or parts thereof; or of any other additions, individually or together which can be classified as detrimental to said waters or natural areas, whether caused by erosion, sedimentation, poor construction methods, wind, or other causes”.
- B. If it is determined that damaged has been caused by the Contractor through failure it implement and maintain erosion control, negligence, carelessness by intention, or otherwise, then the Contractor will act to correct said damage as quickly as possible and to take steps to prevent further damage. Such corrections to damage will be at no cost to the Owner or the Engineer.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Silt fences shall be as shown on the drawings and shall consist of the following minimum requirements:
 - 1. Posts shall be metal "T" posts or wood posts placed at 5' on center.
 - 2. Sedimentation control fabric shall be Mirafi-100X, or equal, with wire backing.
- B. Sediment tube barriers shall be as shown on the drawing; stakes and sediment tubes shall be new and in good condition.

PART 3 EXECUTION

3.1 REGULATORY MEASURES

- A. The Contractor shall provide erosion control measures necessary to satisfy the requirements of the Tennessee Department of Environment and Conservation (TDEC).
- B. The Contractor shall be responsible for inspections and reporting as required by TDEC.
- C. Any fines or penalties resulting from the discharge of sediment to waters of the State or United States or from inadequate erosion control shall be paid by the Contractor and at no cost to the Owner. This applies to actions taken by local authorities, State agencies, and Federal agencies, and includes action taken against the Owner or Contractor.

3.2 EROSION CONTROL

- A. Locations:
 - 1. Silt Fences: provide silt fences as indicated on the plans. Provide silt fences around the perimeter of earth materials excavated and stockpiled from wet well excavations and boring pit.
 - 2. Sediment Tubes: when necessary to control erosion, provide sediment tubes along both sides of the Construction Easements for the Work.
- B. Maintenance:
 - 1. The Contractor shall install, maintain, repair, and replace all silt fences, sediment tubes, and other erosion/sedimentation control measures until the permanent ground cover has been installed.

3.3 DUST CONTROL

- A. The Contractor shall exercise precautionary measures to minimize dust emissions that will include periodic sprinkling or wetting of the site or using commercially available dust suppressants or other dust palliatives.

3.4 CLEANING

- A. Upon completion of work, clean areas within contract limits, remove tools, erosion control fencing, and equipment. Provide site clear, clean, free of debris, and suitable for intended use.

3.5 EROSION CONTROL

- A. The Contractor shall install and maintain erosion control devices in general conformance to the requirements shown on the drawings. Additional erosion control measures shall be undertaken by the Contractor as required to minimize impacts to adjacent properties and the drainage system downstream of the site, at no additional cost.
- B. Grass seed and mulch for erosion control and restoration shall be placed in accordance with Section 02931 on all disturbed areas, and as directed by the Engineer.
- C. Erosion control structures shall be maintained in satisfactory condition until an approved cover of grass is established to prevent erosion, for the duration of the project, or until removal is approved, whichever occurs first.

3.6 PAYMENT

- A. Payment for Silt Fences, sediment tubes and Erosion Control: shall be paid for at the Lump Sum Price Bid.
- B. There will be no separate payment for maintenance, repair, or replacement of silt fences or sediment tubes; include the cost thereof in the unit prices for the Work.

END OF SECTION

SECTION 02664
UNDERGROUND YARD PIPING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Provide pipe, valves, valve boxes, fittings, and other required items whether indicated or not.
- B. Provide lines, Grades, Stakes, and Templates.

1.2 RELATED SECTIONS

- A. DIVISION 2 - SITEWORK.
- B. DIVISION 3 - CONCRETE.
- C. Section 13000 - PLANT PIPEWORK.

1.3 REFERENCES

- A. AWWA C104 - Cement Mortar Lining for Ductile Iron Pipe and Fittings for Water.
- B. AWWA C110 - Ductile Iron and Gray Iron Fittings.
- C. AWWA C151 - Ductile-Iron Pipe, Centrifugally Cast for Water or Other Liquids.
- D. AWWA C500 - Gate Valves, for Water & Sewage Systems.
- E. AWWA C504 - Rubber Seated Butterfly Valves.
- F. AWWA C600 - Installation of Ductile Iron.
- G. ASTM D2241 - Poly (Vinyl Chloride PVC) Pressure Rated Pipe (SDR Series).
- H. ASTM C94 - Ready Mix Concrete

1.4 JOB CONDITIONS

- A. Existing Conditions: Carefully maintain benchmarks, fences, roads, traffic, monuments, and survey control references.

1.5 SUBMITTALS

- A. Submit manufacturer's literature showing all materials.
- B. Submit layout drawing and bill of materials showing all fittings and specialty items.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Submit manufacturer printed technical literature.

2.2 TYPES OF PIPE TO BE USED

- A. Types of pipes for various locations and usages shall be as specified in Section 13000 – PLANT

2.3 DUCTILE IRON PIPE, FITTINGS, AND JOINTS

- A. Pipe: Ductile iron pipe shall conform to AWWA Specification C151 and shall have at least 150 psi working pressure rating. The raw material for ductile iron shall have an average minimum recycled content consisting of 90% scrap iron and steel. Ductile iron pipe (hereinafter referred to as "iron pipe") shall have bituminous outside coating for buried and non-exposed piping, and ends as required for the joint types specified or indicated for the various pipe locations and applications. MINIMUM wall thickness and MINIMUM thickness classes at all points, including in bottoms of surface depressions, shall be as tabulated below. All exposed piping, submerged, non-submerged, interior and exterior: See Section 09960 – COATING SYSTEMS FOR UTILITY FACILITIES, Paragraph 2.2. All wastewater piping shall have special epoxy lining. Special epoxy lining shall be "Protector 401" ceramic epoxy lining as manufactured by Protector Division of Vulcan Painters, Inc., Bessemer, Alabama or as approved, applied to a blast cleaned interior pipe surface and holiday tested with a high voltage tester.

<u>Pipe Size</u>	<u>Wall Thickness</u>	<u>Thickness Class</u>
4	0.26"	51
6	0.25"	50
8	0.27"	50
10	0.29"	50
12	0.31"	50

1. For each individual laying length of iron pipe having threaded ends for screwed-on flanges or grooved ends for locking type joints, the pipe wall thickness shall be at least as recommended by the pipe manufacturer to provide ample strength in the thread roots or groove bottom to safely accommodate the pressure and other conditions involved, but in no case shall the pipe wall thickness before threading or grooving be less than the minimum wall thickness specified above for the size and type of pipe involved.
- B. Fittings for Ductile Iron Pipe: These shall be ductile iron short or full body pattern conforming to AWWA Specification C110 or C153 as applicable, Class 150 or heavier, with outside coating and special epoxy lining as specified above.
- C. Joints: Except as otherwise specified or indicated, iron pipe joints shall be AWWA Specification C111 mechanical or push-on type, with plain rubber gaskets, except that all fittings shall have mechanical joints.
1. Where indicated or required, iron pipe and/or iron fittings shall have ANSI Class 125 faced and drilled flanged ends. Screwed-on flanges for iron pipe shall be especially designed and sized for iron pipe, with counterboard long hubs completely covering the pipe threads. Gaskets shall be plain rubber; bolts shall be standard square or hexagon head steel, with standard steel hexagon nuts.
- D. Certificates: Submit in duplicate certificates from the manufacturers certifying that all iron pipe and iron fittings furnished for this project comply with these specifications.
- E. Layout Drawings: Submit specifically prepared layout drawings of all iron pipe and fittings on this project including a Bill of Materials showing finishes, joints, laying lengths and other similar data.

2.4 CUT-OFF VALVES AND VALVE BOXES

- A. General: For each location where a certain type of cut-off valve is specified, indicated, or required for the application involved, provide the appropriate type accordingly. OTHERWISE, cut-off valves shall be either gate type or butterfly type.

- B. Resilient Seat Gate Valves: These shall be American Flow 2506-MM*; M&H style 4067; U.S. Pipe Metroseal 250#5460; Mueller #A-2360-20; or Kennedy 8571R; iron body, bronze mounted, modified wedge disc type, non-rising stem type, conforming to AWWA Specification C509. Each valve shall have "O" ring type stem seal, standard two inch AWWA operating nut, and shall be opened by CLOCKWISE stem rotation. Except where otherwise specified, indicated, or required for the application involved, all gate valve ends shall be AWWA Specification C111 mechanical joint type, with plain rubber gaskets.
- C. Valve Boxes: These shall be standard cast iron two-piece 5-1/4 inch inside shaft diameter screw adjustable type, each consisting of a cover marked SEWER or as approved by the Owner, an upper telescoping section, and a lower section. Where necessary to provide extra depth, provide cast iron extension pieces as required.

2.5 GRANULAR BACKFILL

- A. Granular backfill material shall be one of the materials specified above for granular pipe bedding material.
- B. Usage: Use granular backfill material ONLY where indicated, specified hereinafter, or authorized.

2.6 WEDGE TYPE RETAINER GLANDS

- A. See ANCHORAGE hereinafter.

2.7 GEOTECHNICAL FABRIC

- A. Fabric shall be "Supac 8NP" as manufactured by Phillips Fibers Corporation; "Quline Geotextiles WQ275" as manufactured by Wellman, Inc.; "Mirafi", 140N drainage fabric or as approved. Fabric shall be polypropylene non-woven filament type or type manufactured with a random mixture of polypropylene filaments and nylon sheathed polypropylene core filaments, or 100% polyester fiber type, all resistant to water, rot mildew, aging, rodent and insects, hydrocarbons and resistant to ultraviolet deterioration. The Apparent Opening Size (AOS) shall be at least No. 70 U.S. Sieve. The filter cloth shall have a minimum grab tensile strength of 120 pounds in accordance with ASTM D 4632. Fabric furnished shall be specifically selected to prevent existing soil from inter-mixing with the granular backfill material but will allow ground water to enter the granular backfill material.
 - 1. Splices in the geotextile fabric shall be sewn closed to make the longest practicable lengths before placing in the pipe trench. Each length of fabric shall be lapped at least one foot in the pipe trench and/or secured by other approved methods.

2.8 AIR AND VACUUM VALVES

- A. See Section 13000 hereinafter.

2.9 CONCRETE MANHOLES

- A. All concrete manholes and other precast items shall be manufactured in a plant that is certified by the National Precast Concrete Association. Manufacturer's certificates of compliance and installation recommendations shall be provided to the Engineer and City prior to construction.
- B. All manholes shall be constructed with concentric precast concrete sections with steps unless otherwise approved. Precast concrete manhole sections shall be manufactured to standards at least equal to or greater than the requirements of the Standard Specifications for Precast Reinforced Concrete Manhole Sections, ASTM Designation C478. The minimum internal diameter for sanitary manholes shall be forty-eight inches (48") unless shown otherwise. Manholes shall conform to all requirements as shown on the detail drawings. Precast manhole

joints shall be made water-tight with Ram-Nek material or an approved gasket at each joint. The Ram-Nek and primer must be used in accordance with the manufacturer's instructions.

- C. Rubber gaskets used for precast manhole joints shall be designed in accordance with ASTM C361, C478, C443, and AASHTO M 315-94. All lifting holes must be grouted in after placement. All concrete for manhole manufacturing and drop manhole encasement shall use Portland Cement Type II, ASTM C 150.
 - D. The concrete base shall be cast-in-place or precast concrete of the size and depth required or as shown on the drawings. Concrete used for bases shall have a twenty-eight (28) day compressive strength of at least four thousand five hundred pounds per square inch (4,500psi). Precast concrete bases shall conform to ASTM C478. Manholes with the base monolithically poured with the bottom barrel are also acceptable and preferred. (See Division 3)
 - E. Concrete Manhole Interior Protective Coating: See Section 09891 – Concrete Protective Coating System for Sewerage Structure Surfaces.
 - F. Precast concrete manhole inverts shall be constructed by hand forming a system designed to provide a finished invert that aligns precisely with the pipelines. The completed invert shall include an alignment bench for each pipe, and provide for uniform horizontal and vertical transition through the manhole as required. Provide 0.1 foot minimum fall between inlet and outlet pipes except not required for straight through manholes or where approved.
 - 1. After the installation of the pipelines into the manhole, the annular space around the outside of the pipe in the manhole wall shall be sealed with non-shrink grout. Manhole couplings or other acceptable water stops (i.e. PVC pipe gasket stretched over outside of pipe, Ram-Nek, Greenstreak Hydrophilic Swelling Waterstop, or equal) shall be used when connecting sewer pipes to concrete manholes.
 - 2. If used, manufactured sewer pipe-to-precast concrete manholes connectors shall be KOR-N-SEAL as manufactured by NPC, Inc., Milford, N.H.; Press Corporation Concrete Products Supply Company, Fort Wayne, IN.; A-Lok Products Inc., Tullytown, PA; or as approved.
 - G. Manhole frames and covers shall be Neenah R 1643 or approved equal. Cover and frame seat shall be machine finished to prevent any rocking of cover in its associated frame. Cover shall have the word "SEWER" clearly cast on its surface. Manhole cover shall be minimum of 7.5 inches in height, have a minimum inside clearance of 24 inches in diameter and shall be considered heavy duty with 1.5 inch thick cover.
 - H. In the 100-year flood plain subject to flooding and when required, self-sealing, waterproof frames and covers meeting Neenah R-1916-F or D&L Supply E-1926 or approved equal shall be used.
 - I. Manholes located in the 100 year floodplain and more than three feet (3') above final grade shall have a flat, precast top and self-sealing waterproof frame and cover.
 - J. Plastic Covered Manhole Steps: These shall be plastic covered bent steel type No. PS-1 as manufactured by M.A. Industries, East Point, GA, Sure Foot as manufactured by Oliver Tire & Rubber Co., Atlanta, GA, Manhole Step No. 93821 R or manufactured by Bowco Industries Inc., Portland, Oregon, or equal.
- 2.10 GRANULAR BEDDING AND GRANULAR BACKFILL
- A. Granular Pipe Beddings and Granular Backfill: This shall be CR 610 crushed limestone watered and compacted in place. CR 610 shall consist of clean, sound, durable particles of crushed stone, and shall be free from coatings of clay, silt, vegetable matter, and other objectionable materials and shall contain no clay balls. Fine aggregate passing the number 4 sieve shall

consist of fines from the operation of crushing the coarse aggregate. If necessary, fine aggregates may be added to produce the correct gradation.

1. Gradation Requirements: The gradation of the mix crushed limestone mixture shall fall within the design range indicated below when tested in accordance with ASTM C117 and C136. Most of the large particles shall pass the 3/4 inch sieve to comply with AWWA C 605-94, Underground Installation of Polyvinyl Chloride (PVC) Pressure Pipe and Fittings for Water. The final gradation shall be continuously well graded from coarse to fine and shall not vary from the low limit on one sieve to the high limit on an adjacent sieve or vice versa.

REQUIREMENTS FOR GRADATION OF CRUSHED LIMESTONE

	<u>Sieve Size</u>	<u>Design Range</u> <u>Percentage by Weight Passing Sieves</u>
1	1/2 Inch	100%
	3/4 Inch	85 – 100%
	1/2 Inch	40 – 75%
	No. 4	15 – 40%
	No. 100	2 – 10%

- B. Alternate Bedding and Backfill Material where approved

1. Sand, clean and sharp, compacted in 8-inch maximum thickness layers.

2.11 CASING/CARRIER PIPE SPACERS AND END SEALS

- A. General: For each pipeline in a casing provide spaces and end seals as specified below and as required.
- B. Spacers: Provide spacers attached to the carrier pipe to support the carrier pipe in the casing, at 10-foot maximum spacing or as required by the carrier pipe and/or spacer manufacturer. Spacers shall be manufactured by Pipeline Seal and Insulator, Inc., or as approved. Spacers shall support carrier pipe and hold it on grade in casing.
- C. Casing End Seals: After installation of carrier pipe, seal space between casing and carrier pipes with Pipeline Seal and Insulator, Inc., Model "C" End Seal or an approved seal to prevent mud and debris from entering casing.

2.12 PIPE HANGERS AND SUPPORTS

- A. All hangers, concrete anchors, other anchors, nuts, bolts, washers, brackets, hanger rods, and all other devices shall be Type 304, 316, 18-8 or other suitable stainless steel or cast or ductile iron. No steel devices coated or otherwise, will be accepted.
- B. Secure hangers, supports, and other devices to structures as specified below. Where attachment method and/or anchorage material types are indicated, provide anchorage accordingly; OTHERWISE, anchorage shall be:
 1. Existing concrete construction: Hilti or as approved suitable epoxy and/or expansion anchors, each installed as recommended by its manufacturer to develop his full rated shear and pull-out rating of the anchor.
 2. Other construction: anchors suitable for the conditions involved.
- C. Hangers: Pipe hanger systems shall be approved for use for AWWA Zone 3 Seismic events. Where types of hangers and spacings thereof are indicated, provide these accordingly; OTHERWISE, hangers and hanger spacings shall be:
 1. Horizontal suspended pipes: standard stainless steel clevis type hangers, with the hanger manufacturer's recommended size stainless steel hanger rods, supporting nuts under the hangers, and stainless-steel locknuts above the hangers; as applicable to types and outside diameters of pipes involved.
 2. Maximum hanger spacings: 8 inch and larger PVC, 10 feet, 8 inch and larger ductile iron, 20 feet.

PART 3 EXECUTION

3.1 TRENCHING, EXCAVATING, SHORING, BRACING, AND DEWATERING

- A. Special Requirements:
 - 1. Driveway and special crossings: install pipe crossing concrete driveways, sidewalks, asphalt driveways, and other special conditions by tunneling or boring, or as authorized.
 - 2. Unstable or unsuitable trench bottoms: where authorized because unstable trench bottom conditions, lay pipe on granular bedding, as specified in GRANULAR BEDDING hereinbefore. Where the trench bottom at required subgrade contains ashes, cinders, any type of refuse, vegetable or other organic material, large pieces or fragments of inorganic material or other unsuitable materials which in the Engineer's opinion should be removed, remove such material; before laying pipe, bring the trench bottom up to proper subgrade by backfilling with approved material placed in three inch maximum thickness loose layers, and thoroughly compact each layer as required to provide an approved firm and stable trench bottom.
- B. General Excavation Requirements: Except as otherwise indicated, specified hereinafter, or authorized, make all excavations by open cut as specified in this paragraph. Excavate trenches to the indicated lines and locations to provide uniform and continuous bearing and support of each pipe barrel on firm undisturbed earth at every point between bell holes, with an ample bell hole at each joint to facilitate proper jointing and to prevent bells from bearing on the trench bottom. Trench depths shall be as required to provide the specified MINIMUM cover over the tops of pipes; as required to permit pipes to pass under culverts, existing pipelines, and other obstructions; and as required to accommodate valves and boxes. Trench widths shall be as required for the proper laying and jointing of pipes, and the proper placing and compacting of backfill, but in no case shall a trench be more than 24 inches wider than the inside diameter of the pipe to be laid therein. Machine or hand-cut trenches, except that in all cases prepare the final subgrade accurately with hand tools, and in special cases where required, cut the trenches entirely by hand. Where excavation is carried below proper subgrade, before laying pipe bring the trench bottom up to proper subgrade by backfilling with approved material placed in three inch maximum thickness loose layers, and thoroughly compact each layer as required to provide uniform and continuous bearing and support for the pipe barrel at every point between bell holes.
- C. Minimum cover over tops of pipes shall be as follows:
 - 1. All pipes, except as otherwise specified below: 30 inch MINIMUM cover.
 - 2. Special Conditions: MINIMUM cover as indicated on the drawings.
- D. IN ALL CASES, THE SPECIFIED MINIMUM COVER OVER PIPES SHALL BE BASED UPON FINAL FINISHED SURFACES, INCLUDING PAVING, IF ANY. Where grading is involved, do not cut trenches under roads, streets, or other areas until the final finish grading has been done, unless otherwise authorized.
- E. Shore and brace trenches and excavations as required, to protect personnel, adjacent structures, and adjacent property. Where required by the conditions encountered, brace trenches and excavations with suitable close sheeting or sheet piling. Do all necessary cribbing up required for the proper operation of trenching machines.
- F. Provide and maintain in proper working order all necessary dewatering equipment required to remove water from the excavations. Where quicksand or other water bearing strata are encountered, install and connect the necessary number of well points with pumping equipment of sufficient capacity to prevent rise of water in the excavation until the work has been installed properly and will be unaffected by submersion.
- G. Do not install any work until excavations are free of water, mud, and loose earth. Do not install any work on frozen ground.

3.2 HANDLING AND LAYING DUCTILE IRON PIPE AND FITTINGS.

- A. Provide and use suitable equipment for the safe and convenient handling of pipe, fittings, valves, and other water piping materials. Unload all water piping materials carefully, and lower them carefully into the trenches, piece by piece, in such a manner that will prevent damage to the materials and their protective coatings and linings. Do not under any circumstances drop or dump water piping materials, either from transportation vehicles, or into trenches.
- B. Before laying, inspect each length of pipe and each fitting for defects. Promptly remove all defective pipe and defective fittings from the pipe laying area.
- C. Before laying pipe and fittings: Remove all lumps, blisters, and excess coal tar coating from each spigot and the inside of each bell; wire brush and wipe all dirt and other foreign matter from the outside of each spigot and the inside of each bell; swab out the inside of each length of pipe and each fitting; and remove all dirt and other foreign matter from all gaskets, glands, bolts, and nuts. Use every precaution to prevent dirt and other foreign matter from entering pipe and fittings while they are being laid. Spigot ends, insides of bells, gasket grooves, gaskets, glands, bolts, and nuts shall be kept free from dirt and other foreign matter after they have been cleaned and before the joints have been made up.
- D. Mechanical Joints: After placing pipe and fittings into the trench, slide gland over spigot, apply proper lubricant to gasket and spigot, slip gasket over spigot, center spigot end in bell, force pipe home, and bring it into correct line and grade. Press gasket evenly in place into bell, slide gland into position for bolting, insert all bolts, screw on and hand tighten all nuts, then tighten all nuts with an approved wrench. Tighten diagonally opposite nuts alternately to obtain uniform pressure on all parts of the gland in accordance with manufacturer's requirements. Realign pipe as required and secure it in place with approved backfill material tamped around pipe, except at bells.
 - 1. On retainer type glands, after pipe has been aligned properly, tighten all bolts as specified hereinafter under ANCHORAGE.
- E. Push-On Joints: Make up push-on joints in accordance with the manufacturer's recommendations, generally as follows: after placing pipe and fittings into the trench, insert gasket in gasket groove, apply proper lubricant to gasket and spigot, center spigot end in bell, and force pipe home with proper jacks, bars, chains, cables, or other suitable equipment. Realign pipe as required, and secure it in place with approved backfill material tamped around pipe, except at bells. Taper each field cut spigot end back about 1/8 inch at a 30 degree angle, using a coarse file or portable grinder, to prevent gasket damage.
- F. Do not "buckle-in" any pipe without approval.
- G. At all times when pipe laying is not in progress, keep all open ends closed tightly with suitable caps or plugs to prevent foreign material from entering any part of the pipework.

3.3 ALIGNMENT OF PIPE

- A. Pipe: In straight trenches, lay pipe in reasonably straight lines, using appropriate fittings at all sharp breaks in grade. In curved trenches, lay pipe to follow the trench centerline as closely as practicable, using appropriate fittings at all sharp breaks in grade, and using appropriate fittings or deflecting joints and using shorter than standard lengths of pipe as necessary to make the required curves. Do not deflect any joint in excess of pipe manufacturer's recommendations.

3.4 ANCHORAGE

- A. Provide anchorage for each bend, tee, plug, deadend, and other fitting subject to blowing off of the line under pressure.

- B. Unless otherwise indicated, anchorage shall consist of 3,000 psi concrete blocking poured between firm undisturbed earth and the unbalanced sides of the items to be anchored, with sufficient earth bearing area to prevent displacement of joints under pressure. Pour concrete blocking before applying pressure test on piping and arrange it so that the pipe and fitting joints will be accessible for repair. BLOCKING BEARING AREA SHALL BE BASED UPON THE SPECIFIED TESTING PRESSURE.
- C. Wedge Type Retainer Gland for Iron Pipe: These shall be "Megalug" as manufactured by EBAA Iron Inc., Eastland, Texas or as approved, consisting of a specifically designed ductile iron mechanical joint follower gland with multiple wedging action restraining mechanisms with a minimum working pressure of 250 psi. Gland shall be suitable for use with a standard mechanical joint bell and tee-head bolts conforming to ANSI/AWWA A21.11. Twist off nuts shall be used to indicate proper torque of the restraining wedges. Glands shall be installed in accordance with manufacturers written instructions and directions. This type of anchorage MAY be used at any location instead of concrete anchorage subject to approval, and SHALL be used at the following locations:
 - 1. Where indicated.
 - 2. Where concrete anchorage is not practicable.

3.5 VALVE AND BOX INSTALLATION

- A. Install valves with their operating stems plumb, at approximate locations indicated, but at exact locations as approved and as specified below. Leave all valves in normal operating positions, free from leakage.
 - 1. All valves: insofar as practicable, install these 3'-0" from centers of tees and crosses at intersections, and at locations in runs where easy to find in the future.
- B. Set and support each valve box so that no stress or shock can be transmitted to the valve, with the box centered and plumb over the valve wrench nut, and the box top exposed and flush with finished grade. Readjust boxes as required so that all boxes conform to these requirements at the time of acceptance of the system.
- C. For valve boxes in unpaved areas, provide a 1'-6" square by 6" thick concrete pad around each valve box. Place concrete pad flush with existing grade.

3.6 BACKFILLING

- A. General:
 - 1. Do not backfill pipe trenches until the pipework has been inspected and approved. Immediately after approval, backfill the trenches as specified below.
 - 2. Testing for leaks on the surface of the pipe prior to backfilling will not be required, but other test procedures, as specified hereinafter under TESTING shall be followed after backfilling trenches.
- B. Pipe Under Non-Paved Areas: Backfill the trenches with the materials specified below. Up to six inches ABOVE tops of pipes and BEFORE placing remaining backfill, thoroughly hand tamp the backfill equally and uniformly into bell holes and between trench walls and pipework on each side of the pipework, and over the tops of the pipework, all to prevent pipe displacement. Then place the remaining backfill to fill the trenches completely, and compact the backfill by running the wheels of heavy rubber-tired construction equipment longitudinally over the trench, until the backfill is compacted to at least the density of the undisturbed soil and is flush with the surrounding ground surfaces. Finally, windrow the excess excavated materials over the trench. At the end of each day's work, do not leave more than 200 feet of trench without compacted backfill, unless otherwise approved. PUDDLING OR WATER SETTLING WILL NOT BE PERMITTED.

- C. Pipe Under Paved Areas, Including Areas with Existing Paving and Areas Proposed to be Paved: Backfill the trenches with sand ONLY, from pipe laying subgrade up to paving subgrade. Up to tops of pipes and BEFORE placing the remaining backfill, place and compact sand backfill equally and uniformly into bell holes and between the trench walls and pipework on each side of the pipework, all to prevent pipe displacement. Then place the remaining sand backfill to fill the trenches completely up to paving subgrade. For each section of pipe laid, do not allow more than 200 feet of trench to remain without compacted backfill at the end of the day on which the section of pipe was laid, unless otherwise approved.
 - D. Vehicular Traffic: For all pipes crossing streets, roads, gravel driveways, and dirt driveways which are in regular use, backfill the trenches and make the crossings usable by vehicular traffic immediately after laying pipe and obtaining approval thereof, and maintain these crossings usable by vehicular traffic until project acceptance. Do not under any circumstances leave a street or road crossing or a private driveway unusable overnight.
 - E. Backfill Materials, Except as Otherwise Specified:
 - 1. Up to six inches above the tops of the pipes: backfill only with selected earth which is free of rocks, stones, bricks, cinders, broken concrete, rubbish, wood, vegetable materials, topsoil, and other unsuitable materials.
 - 2. From six inches above tops of pipes up to finished grade or paving subgrade as the case may be: backfill with any materials removed from the excavation and suitable for backfill, except do not use as backfill material any pieces of the following materials which are larger than six inches in their greatest dimensions: rock; stone; concrete; asphalt paving; or masonry. Dispose of all excavated materials which are not replaced as backfill, as approved.
 - F. Final Backfilling Requirements: Refill and smooth off as required all backfill which settles, so that all backfill finally conforms to the original ground surfaces, not only at the time of project acceptance, but also for the duration of the guarantee period. This includes removing and repairing all pavement which may have been damaged by settlement.
 - G. Special Backfill Requirements:
 - 1. Pipes in tunneled or bored holes, without casings: backfill with sand only, placed as approved and as required to prevent caving and settling.
 - 2. Granular backfill materials: where authorized in the field to accommodate special conditions which may be encountered, where indicated on drawings, and/or where specified herein, backfill materials from six inches above tops of pipes up to finished grade or paving subgrade as the case may be, shall be as specified in GRANULAR BACKFILL specified hereinbefore.
- 3.7 TESTING
- A. Pressure test new piping as directed, as follows herein and as required.
 - B. Admit water slowly into the section to be tested, and expel all air openings at all high points in the piping, as required. After all air has been expelled apply a hydrostatic pressure specified below measured at the lowest point in the piping section involved. Maintain the test pressure at least 30 minutes. Repair all apparent leaks. If the leakage exceeds the allowable leakage as determined by the Owner or Engineer, locate and repair the leaks, and repeat the tests on sections of pipe involved until all tests have been approved. Furnish approved testing equipment, consisting of a suitable pump to apply and maintain test pressure, accurate pressure gauges, suitable equipment to measure volume of water pumped, and other necessary equipment, and conduct all tests in the Engineer's presence, as approved.
 - 1. At Contractor's risk, pressure tests on underground piping may be made after backfilling; however, where this is done, uncover each section of pipe which fails to pass the required pressure test, as required to locate and repair the leaks.

- C. Testing Schedule: Test piping as follows:
 - 1. Ductile iron and PVC, piping subject to pressure: hydrostatic pressure, at least 150% of normal operating pressure, or 50 psi, whichever gives the highest pressure.
 - 2. Other miscellaneous piping not otherwise specified above: under operating conditions.
- D. Provide temporary caps, plugs, valves, pumps, hoses, and other items necessary for the testing work.

3.8 SEPARATION OF WATER MAINS AND SEWERS

- A. Parallel Installation:
 - 1. Normal conditions: water mains shall be laid at least 10 feet horizontally from existing sanitary sewers, storm sewers, and sewer manholes, wherever possible; the distance shall be measured edge-to-edge.
 - 2. Unusual conditions: where local conditions prevent a 10 foot horizontal separation, a water main may be laid closer to existing storm or sanitary sewers, provided that the bottom of the water main is at least 18 inches above the top of the existing sewer.
- B. Crossings:
 - 1. Normal conditions: water mains crossing or sanitary sewers shall be laid to provide a separation of at least 18 inches between the bottom of the water main and the top of the existing sewer, wherever possible.
 - 2. Unusual conditions: where local conditions prevent a vertical separation as described above, water mains passing under existing sewers shall be protected by providing:
 - a. A vertical separation of at least 18 inches between the bottom of the existing sewer and the top of the water main.
 - b. Adequate structural support for the existing sewers, to prevent excessive deflection of joints and settling on and breaking the water mains.
 - c. A full laying length of water pipe centered at the point of crossing, so that the joints will be equidistant and as far as possible from the existing sewer.
- C. Manholes: No pipe shall pass through or come into contact with any part of any existing manhole.

3.9 STREET CROSSINGS

- A. General: Sanitary sewers crossing city streets shall be installed to the grade indicated by open cut, wet uncased bore, jack and bore operation or in bored steel casing, all as directed and/or required by the Owner.
- B. DO NOT UNDER ANY CIRCUMSTANCES PLACE ANY EXCAVATED MATERIALS, CONSTRUCTION MATERIALS, CONSTRUCTION EQUIPMENT, OR OTHER ITEMS ON THE HIGHWAY OR STREET PAVEMENT. Arrange all work to avoid all unnecessary interference with highway traffic. As soon as practicable after installation of each pipeline, restore all roadway property at that location to at least the conditions that existed prior to the beginning of work thereon.
- C. Provide a pipe casing around each sanitary sewer which crosses the city street. Bore holes as required under the pavement and shoulders and install the casings through these holes, as prescribed and/or approved. Open cut will be permitted only beyond pavement and shoulders and ditches. Install pipes in casings by methods that will positively prevent separation of pipe joints and damage to pipes.
- D. Casings for Sewers: These shall be ¼ inch minimum wall thickness black steel pipe, with inside diameters as required for the satisfactory installation of the carrier pipes through the casings. Weld all casing joints.

- E. Spacers and End Seals: Provide spacers between carrier pipe and casing and casing end seals as specified hereinbefore.

END OF SECTION

SECTION 02726
BYPASS PUMPING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. This work shall consist of furnishing and installing temporary bypass pumping facilities at all four (4) lift stations as required to complete the new pumping system work in accordance with the specifications, the plans, or as directed by the Engineer and/or Owner.

1.2 RELATED SECTIONS

- A. Section 01201 - SPECIAL CONDITIONS.

1.3 UNIT PRICE - MEASUREMENT AND PAYMENT

- A. Method of Measurement: Bypass Pumping will be considered an incidental to the project and will not be measured for payment.
- B. Basis of Payment: The cost of bypass pumping and its installation will be included in the project bid price for the construction and renovation of the four (4) lift stations.

1.4 SUBMITTALS

- A. Prepare and submit a detailed schedule of the proposed bypass pumping arrangement(s). Plan shall include, but not be limited to, the items listed in Section 01201.

PART 2 PRODUCTS

2.1 GENERAL

- A. Sewage flow to the existing pumping station must be bypass pumped so work in the wet well can be completed. Flow to the station varies and it is estimated to range from 300 gpm to 1,500 gpm to match the pumping capacity of the proposed new pumps – See Section 02736 – Solids -Handling Submersible Pumps and Control System. The bypass pumping system shall have the design capacity to handle at least the maximum estimated flow. The bypass pumping system shall operate as required to continuously transfer the sewage flow around the existing wet well. After start-up, the bypass pumping system shall be operated continuously 24 hours per day 7 days per week until the new equipment has been installed, inspected and approved by a factory representative, inspected and accepted by the Owner and Engineer, and the equipment placed in satisfactory automatic operation.
- B. The pumps will be located in a residential area. If the pumps are powered by diesel or gasoline engines, these shall be equipped with residential type mufflers and enclosures in order to operate as quietly as practicable.

2.2 MATERIALS, OPERATION AND MAINTENANCE

- A. The Contractor shall supply all materials and be responsible for the operation and maintenance during the entire life of this contract when bypass pumping is needed.
- B. This shall include, but not be limited to, pumps, force main pipe, plugs, fuel, lubricants, and other appurtenances and all miscellaneous items necessary for the complete success of the bypass pumping operation.

PART 3 EXECUTION**3.1 INSTALLATION**

- A. The Contractor shall be responsible for installing all pumps, force mains, and necessary appurtenances. Installation shall be done according to manufacturer's and/or supplier's recommendations and these specifications.

3.2 OPERATION

- A. The Contractor shall be responsible for the operation of all pumps including, but not limited to, maintenance, fuel, controls, accessories and all other related items.

3.3 REMOVAL

- A. The Contractor shall be responsible for removal of all pumps, piping and all other related equipment and the restoration of the site.

END OF SECTION

Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

SECTION 02732

CONCRETE MANHOLES, WET WELLS AND VALVE VAULTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. These concrete items consisting of precast concrete manhole sections with precast flat concrete top, and accessories.

1.2 RELATED SECTIONS

- A. DIVISION 2 - SITEWORK.
- B. DIVISION 13 – SPECIAL CONSTRUCTION.

1.3 REFERENCES

- A. ASTM C 33 - Concrete Aggregates.
- B. ASTM C 94 - Ready-Mixed Concrete.
- C. ASTM C 150 - Portland Cement.
- D. ASTM C 789/AASHTO M259 Precast Reinforced Concrete Box Sections for Culverts, Storm Drains and Sewers.
- E. ASTM C 478 - Precast Reinforced Concrete Manhole Sections.
- F. ASTM C913 – Precast Concrete Products.
- G. ASTM A 48 - Gray Iron Casting

1.4 UNIT PRICES - MEASUREMENT AND PAYMENT

- A. These precast concrete items: no separate payment. Paid for as part of the lump sum bid price.

PART 2 PRODUCTS

2.1 CONCRETE MANHOLES, WET WELLS AND, VALVE VAULTS

- A. These concrete items and other precast items shall be manufactured in a plant that is certified by the National Precast Concrete Association. Manufacturer's certificates of compliance and installation recommendations shall be provided to the Engineer and City prior to construction.
- B. All manholes shall be constructed with precast concrete sections with steps unless otherwise approved. Precast concrete sections shall be manufactured to standards at least equal to or greater than the requirements of the Standard Specifications for Precast Reinforced Concrete Manhole Sections, ASTM Designation C478, size as indicated. Precast concrete joints shall be made water-tight with Ram-Nek material or an approved gasket at each joint. The Ram-Nek and primer must be used in accordance with the manufacturer's instructions.

- C. Rubber gaskets, if used for precast structure joints, shall be designed in accordance with ASTM C361, C478, C443, and AASHTO M 315-94. All lifting holes must be grouted in after placement. All concrete for structure manufacturing shall use Portland Cement Type II, ASTM C 150.
 - D. The concrete base shall be cast-in-place or precast concrete of the size and depth required or as shown on the drawings. Concrete used for bases shall have a twenty-eight (28) day compressive strength of at least four thousand five hundred pounds per square inch (4,500psi). Precast concrete bases shall conform to ASTM C478. Manholes with the base monolithically poured with the bottom barrel are also acceptable and preferred.
 - E. Concrete Structure Interior Protective Coating: See Section 09891 – Concrete Protective Coating System for Sewerage Structure Surfaces.
 - F. Concrete structure inverts shall be constructed by hand forming a system designed to provide a finished invert that aligns precisely with the pipelines. The completed invert shall include an alignment bench for each pipe, and provide for uniform horizontal and vertical transition through the manhole as required. Provide 0.1 foot minimum fall between inlet and outlet pipes except where approved, otherwise.
 - 1. After the installation of the pipelines into the structures, the annular space around the outside of the pipe in the structure wall shall be sealed with non-shrink grout, e, couplings or other acceptable water stops (i.e. PVC pipe gasket stretched over outside of pipe, Ram-Nek, Greenstreak Hydrophilic Swelling Waterstop, or equal) shall be used when connecting sewer pipes to concrete structures.
 - 2. If used, manufactured sewer pipe-to-precast concrete structures connectors shall be KOR-N-SEAL as manufactured by NPC, Inc., Milford, N.H.; Press Corporation Concrete Products Supply Company, Fort Wayne, IN.; A-Lok Products Inc., Tullytown, PA; or as approved.
 - G. Cast iron frames and covers shall be Neenah R 1643 or approved equal. Cover and frame seat shall be machine finished to prevent any rocking of cover in its associated frame. Cover shall have the word "SEWER" clearly cast on its surface. Manhole cover shall be minimum of 7.5 inches in height, have a minimum inside clearance of 24 inches in diameter and shall be considered heavy duty with 1.5 inch thick cover.
 - H. Plastic Covered Manhole Steps: These shall be plastic covered bent steel type No. PS-1 as manufactured by M.A. Industries, East Point, GA, Sure Foot as manufactured by Oliver Tire & Rubber Co., Atlanta, GA, Manhole Step No. 93821 R or manufactured by Bowco Industries Inc., Portland, Oregon, or equal.
 - I. Concrete Tops: this shall be a standard heavy duty precast flat concrete top, designed to support AASHTO H20, with a cast iron frame and cover with the word "SEWER" clearly cast on its surface as specified above or an aluminum access hatch cover cast into the top by the precaster as specified below. The hatch cover and openings shall be installed as a part of the manufacturing of the top. The aluminum hatch cover is specified in Section 11201 Miscellaneous Equipment. Hatch cover shall be positioned in the precast concrete top generally as indicated, or for wet wells, as required by the pump supplier.
- 2.2 WALL OPENINGS IN PRECAST CONCRETE STRUCTURES
- A. General: Provide openings in precast concrete structures as specified below and/or as required for pipes, conduits and any other items
 - B. Details of Openings in the walls of wet wells:
 - 1. Two openings in one wall, approximately 20-inch diameter, or as required for force main outlets, arranged to accommodate pumping equipment.
 - 2. One 6-inch diameter for valve vault drain and other drains.
 - 3. Other openings as required for influent sewers, conduits, and other required items.

- C. Details of openings in the walls of the valve vaults:
 - 1. Two openings in opposite walls approximately 20-inch diameter, (4 total openings required) for force main inlets and outlets (grout pipes in place). One 6-inch diameter opening for valve vault drain located in bottom of wall below force main openings.

PART 3 EXECUTION

3.1 WORKMANSHIP

- A. Install the precast concrete structures at the location indicated, vertically plumb, and complete in every respect, ready for the installation of the pumps and other equipment.
- B. All work shall be installed by competent workmen in their respective trades. At all times the installation shall be under the supervision of a supervisor who is thoroughly familiar with all portions of the installation.
- C. All work shall be accomplished in a finished, workmanlike manner reflecting craftsmanship in accordance with the standards of the trade.
- D. All work shall be performed in accordance with all federal, state, and local codes.

3.2 COORDINATION

- A. This contractor shall coordinate his work with the work of the other contractors and with the Owner so that the installation and completion of all work may proceed in an orderly and expeditious manner.

END OF SECTION

SECTION 02736

SOLIDS-HANDLING SUBMERSIBLE PUMPS AND CONTROL SYSTEMS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. For each of the 4 pumping stations shown on the plans, provide two (2) solids-handling, submersible pumps with integral electric motors, including pump discharge connections, stainless steel guide bars with required brackets, duplex control panel, and other accessories required for each complete installation.
- B. Acceptable manufacturers for the pumps, motors, accessories, and control systems shall meet all specified requirements for the pump station controls. Where indicated, named equipment herein shall meet or exceed all performance, service, and warranty requirements of these specifications.

1.2 RELATED SECTIONS

- A. DIVISION 2 – SITEWORK
- B. SECTION 02664 – UNDERGROUND YARD PIPING
- C. SECTION 02732 - CONCRETE WET WELLS AND VALVE VAULTS
- D. SECTION 05500 – METAL FABRICATIONS
- E. SECTION 09891 – CONCRETE PROTECTIVE COATING SYSTEM FOR SEWAGE STRUCTURE SURFACES
- F. SECTION 09960 – COATING SYSTEMS FOR UTILITY FACILITIES
- G. SECTION 13000 – PLANT PIPEWORK
- H. DIVISION 16 – ELECTRICAL

1.4 QUALITY ASSURANCE

- A. Manufacturer's Qualifications
 - 1. The pump manufacturer shall have a minimum of 500 units with like specified performance and materials of construction installed and operating for no less than ten (10) years in the United States. This experience clause shall prevail upon the contractor for the duration of the warranty period for this contract.
 - 2. All equipment approved for this project shall meet or exceed all performance, material, service, and warranty requirements of this specification.
 - 3. The solid-handling pumps shall be suitable for pumping raw sanitary sewerage containing solids and debris usually found in sewerage and shall be designed and fully guaranteed for this use. The fluid temperature range shall be from 40 degrees to 104 degrees F.

1.5 TESTING

- A. General: Each pump shall be shop tested and field tested as specified hereinafter. All costs for the tests shall be borne by the Contractor. The Contractor shall submit the complete shop test procedures to the Engineer for approval at least 30 days prior to the shop test. In the event any equipment fails to meet the performance values set forth in this specification, the equipment shall be modified and re-tested or replaced with equipment that performs in accordance with this specification.

- B. Shop Tests: The motor and cable on each pump shall be tested for moisture content and insulation defects. After the test, the pump cable end shall be fitted with a shrink-fit rubber boot to protect it from moisture or water.
- C. Field Tests: Equipment shall be field tested as specified hereinafter. Field testing shall be composed of acceptance tests. The Contractor shall provide the services of authorized equipment supplier's representatives to conduct all field tests.
1. Acceptance tests shall be performed to demonstrate that the pumping units, motors and control system meet the following requirements:
 - a. The pumping units operate as specified without excessive noise, cavitation, vibration, and without overheating of the bearings.
 - b. All automatic and manual controls function in accordance with the specified requirements.

1.6 PERFORMANCE

- A. Submersible pumps shall have the pumping capacity and Total Dynamic Head (TDH) indicated on the drawings (Drawings take precedence in the event of a conflict) and as listed below. Pumps and motors shall also meet the following performance requirements:

	Billy Maher Pumps	Raner Creek Pumps	Shadowlawn Pumps	Valley Pumps
Primary Duty Point (GPM/ft.)	1200 GPM @ 75 feet TDH	1500 GPM at 60 feet TDH	1000 GPM @ 70 feet TDH	300 GPM @ 95 feet TDH
Maximum Active Shaft Power at Primary Duty Point (Hp)	45 horsepower	34 horsepower	30 horsepower	17 horsepower
Secondary Duty Point (GPM/ft.)	1600 GPM @ 68 feet TDH	1,600 GPM @ 55 feet TDH	1200 GPM @ 65 feet TDH	400 GPM @ 85 feet TDH
Voltage/Cycle/Phase	480 volt 3 phase	480 volt, 3 phase	480 volt, 3 phase	480 volt 3 phase
Motor Service Factor	1.15	1.15	1.15	1.15
Maximum Pump Speed (RPM)	1800 RPM	1800 RPM	1800 RPM	3600 RPM
Minimum Pump Discharge Connection Size (inches)	6 inch	6 inch	4 inch	3 inch

1.7 SUBMITTALS

- A. Furnish complete assembly, foundation support, and installation drawings, together with detailed specifications and data covering pumps, motors, material used, parts, devices and other accessories forming a part of the equipment furnished shall be submitted for approval in accordance with the procedure set forth in these Contract Documents. Data and specifications for the equipment shall include, but shall not be limited to the following:
- B. Setting Plans. Plans shall include: Anchor bolt layout; Anchor bolt dimensions, Outline dimensions and weights of pumps, bases, motors, and control enclosures.
- C. Pumps. Data and drawings shall include:
1. Manufacturer, type and model number.
 2. Assembly drawing, nomenclature and material list, O&M manual, and parts list.
 3. Type, manufacturer, model numbers, location and spacing of bearings.
 4. Impeller type, diameter, thru-let dimensions, shreader size, number of vanes, Rc harness, and identification number.

5. Complete motor performance data including: rating, voltage/phase/frequency; design type; service factor; insulation class; motor pole number; actual rotation speed when combined with the specified pumps; current, power factor and active input power (KW) as a continuous function of shaft power from no load to at least 115 percent load, start (max. inrush) current; locked rotor current; NEC code letter; and motor torque as a continuous function through the motor start cycle from no rotation to synchronous speed.
 6. Complete performance test curve(s) showing full range (shutoff to run-out) head vs. Capacity, NPSHR, hydraulic efficiency, motor active (KW) input power, motor total (KVA) input power (Based on measured current and voltage), and shaft power (BHP).
 7. Location and description of Service Centers and spare parts stock.
 8. Warranty for the proposed equipment.
- D. The manufacturer shall indicate, by arrows to points on the Flow/Head curves, limits recommended for stable operation, between which the pumps are to be operated to prevent surging, cavitation, and vibration. The stable operating range shall be as large as possible, and shall be based on actual hydraulic and mechanical characteristics of the units and shall meet the hydraulic performance requirements of the proposed system.
- E. Furnish shop drawings and other pertinent data to the Engineer and obtain his approval before fabrication. The drawings shall be complete with respect to dimensions, materials of construction, wiring diagrams, and all supporting engineering information.
- F. At least one month before installation of this work, submit four (4) copies of operation and maintenance instructions to the Engineer.
- 1.8 DELIVERY, STORAGE AND HANDLING
- A. Deliver store and handle items of equipment in a manner that will prevent any damage.
- B. Follow manufacturer's instructions for short term and long term storage, particularly with respect to proper lubricants and periodic rotation of shafts and bearing.
- 1.9 CO-ORDINATION
- A. Co-ordinate this work with the work of other trades to avoid interferences and to provide for timely installation.
- 1.10 WARRANTY
- A. The pump manufacturer shall provide prorated warranty for the units supplied to the Owner against defects in material and workmanship for a period of at least five (5) years or 10,000 operating hours in writing under the operating conditions presented by this project. Pump manufacturer shall demonstrate ability to support claimed warranty coverage by meeting all requirements of this specification. In addition to the Standard Municipal Warranty, the supplier shall provide a 10 Year Warranty on the pump motors subject to the use of the specified VFD System. This warranty is subject to the terms as set forth in the Warranty hereinafter.

PART 2 - PRODUCTS

2.1 SUBMERSIBLE SOLIDS-HANDLING PUMPS

- A. Provide two (2) wet well mounted submersible sewage, solids-handling pumps for each of 2 locations. Each pump shall be equipped with submersible electric motor, connected for operation on 480 volt, 3 phase, electrical service with 65 feet of shielded submersible cable (SUBCAB) suitable for submersible pump applications. The power cable shall be sized according to NEC and ICEA standards and also meet with P-MSHA Approval. Each pump shall be supplied with a mating cast iron discharge connection and be capable of delivering flows at Total Dynamic Head (TDH) as shown in the performance data table above. Each pump shall be fitted with a 30' length of stainless steel lifting chain. The working load of the lifting system shall be 50 percent greater than the pump unit weight.
- B. Acceptable Manufacturers – Those that meet these Specifications in Their Entirety.

2.2 PUMP DESIGN

- A. Each pump shall be automatically and firmly connected to the discharge connection, guided by no less than two 3-inch diameter, Schedule 40 stainless steel guide bars extending from the top of the station to the discharge connection. There shall be no need for personnel to enter the wet-well. Sealing of the pumping unit to the discharge connection shall be accomplished by a machined metal-to-metal watertight contact. Sealing of the discharge interface with a diaphragm, O-ring or profile gasket will not be acceptable. No portion of the pump shall bear directly on the sump floor.
- B. Each discharge connection unit shall be anchored to the wet well floor slab by suitable stainless steel anchors using Hilti HY-150 epoxy adhesive anchor system or as approved equivalent.

2.3 PUMP CONSTRUCTION

- A. Major pump components shall be of grey cast iron, ASTM A-48, Class 35B, with smooth surfaces devoid blow holes or other irregularities. All exposed nuts or bolts shall be AISI type 304 stainless steel. All metal surfaces coming into contact with the pumpage, other than stainless steel or brass shall be protected by a factory applied spray coating of acrylic dispersion zinc phosphate primer and a polyester resin paint finish on the exterior of the pump.
- B. Sealing design shall incorporate meta-to-metal contact between machined surfaces. Critical mating surfaces where watertight sealing is required shall be machined and fitted with nitrile or Viton rubber O-rings. Fittings will be the result of controlled compressing of rubber O-rings in two planes and O-ring contact of four sides without the requirement of a specific torque limit.
- C. Rectangular cross sectioned gaskets requiring specific torque limits to achieve compression shall not be considered as adequate or equal. No secondary sealing compounds, elliptical O-rings, grease or other devices shall be used.

2.4 COOLING SYSTEM

- A. Each unit shall be provided with an adequately designed cooling system that allows up to 30 motor starts per hour on a continuous basis and the ability to pump liquids of up to 104°F with no damage to motor windings, bearings, or drive shaft seals. The motor shall be provided with an integral motor cooling system. A stainless steel cooling jacket shall encircle the stator housing, providing for dissipation of motor heat regardless of the type of pump installation. An impeller, integral to the cooling system and driven by the pump shaft, shall provide the necessary circulation of the cooling liquid through the jacket. The cooling liquid shall pass about the stator housing in the closed loop system in turbulent flow providing for superior

heat transfer. The cooling system shall have one fill port and one drain port integral to the cooling jacket.

2.5 CABLE ENTRY SEAL

- A. The cable entry seal design shall preclude specific torque requirements to insure a watertight and submersible seal. The cable entry shall consist of dual cylindrical elastomer grommets, flanked by washers, having a close tolerance fit against the cable outside diameter and the entry inside diameter and compressed by the body containing a strain relief function. The assembly shall provide ease of changing the cable when necessary using the same entry seal. Epoxies, silicones, or other secondary sealing systems shall not be considered acceptable.

2.6 MOTOR

- A. The pump motor shall be a NEMA B design, induction type with a squirrel cage rotor, shell type design, housed in an air filled, watertight chamber. The stator windings shall be insulated with moisture resistant Class H insulation rated for 180°C (356°F). The stator shall be insulated by the trickle impregnation method using Class H monomer-free polyester resin resulting in a winding fill factor of at least 95%. The motor shall be inverter duty rated in accordance with NEMA MG1, Part 31. The stator shall be heat-shrink fitted into the cast iron stator housing. The use of multiple step dip and bake-type stator insulation process is not acceptable. The use of pins, bolts, screws or other fastening devices used to locate or hold the stator and that penetrate the stator housing are not acceptable. The motor shall be designed for continuous duty while handling pumped media of up to 104°F. The motor shall be capable of withstanding at least 15 evenly spaced starts per hour. The rotor bars and short circuit rings shall be made of aluminum. Three thermal switches shall be embedded in the stator end coils, one per phase winding, to monitor the stator temperature. These thermal switches shall be used in conjunction with and supplemental to external motor overload protection and shall be connected to the motor control panel.
- B. The junction chamber shall be sealed off from the stator housing and shall contain a terminal board for connection of power and pilot sensor cables using threaded compression type terminals. The use of wire nuts or crimp-type connectors is not acceptable. The motor and the pump shall be produced by the same manufacturer.
- C. The motor service factor (combined effect of voltage, frequency and specific gravity) shall be 1.15. The motor shall have a voltage tolerance of plus or minus 10%. The motor shall be designed for continuous operation in up to a 40°C. ambient and shall have a NEMA Class B maximum operating temperature rise of 80° C. A motor performance chart shall be provided upon request exhibiting curves for motor torque, current, power factor, input/output kW and efficiency. The chart shall also include data on motor starting and no-load characteristics.
- D. The pump and motor shaft shall be the same unit. The pump shaft shall be an extension of the motor shaft. Couplings shall not be acceptable. The shaft shall be AISI Type 420 stainless steel and shall be completely isolated from the pumped liquid.
- E. Motor horsepower shall be sufficient so that the pump is non-overloading throughout its entire performance range, from shut-off to a point below the corresponding static head for this pumping station.

2.7 BEARINGS

- A. The pump shaft shall rotate on two bearings. Motor bearings shall be permanently grease lubricated and have a nominal L10 lifetime of 50,000 hours. The upper bearing shall be a single deep groove ball bearing. The lower bearing shall be a two row angular contact bearing to compensate for axial thrust and radial forces. Single row lower bearings are not acceptable.

2.8 MECHANICAL SEAL

- A. Each pump shall be provided with a positively driven dual, tandem mechanical shaft seal system consisting of two seal sets, each having an independent spring. The lower primary seal, located between the pump and seal chamber, shall contain one stationary and one positively driven rotating corrosion and abrasion resistant tungsten-carbide ring. The upper secondary seal, located between the seal chamber and the seal inspection chamber shall be a leakage-free seal. The upper seal shall contain one stationary and one positively driven rotating corrosion and abrasion resistant tungsten-carbide seal ring. The rotating seal ring shall have small back-swept grooves laser inscribed upon its face to act as a pump as it rotates, returning any fluid that should enter the dry motor chamber back into the lubricant chamber. All seal rings shall be individual solid sintered rings. Each seal interface shall be held in place by its own spring system. The seals shall not depend upon direction of rotation for sealing. Mounting of the lower seal on the impeller hub is not acceptable. Shaft seals without positively driven rotating members or conventional double mechanical seals containing either a common single or double spring acting between the upper and lower seal faces are not acceptable. The seal springs shall be isolated from the pumped media to prevent materials from packing around them, limiting their performance. Any leakage passing the seal shall not pass the bearings. Before it reaches the bearings the liquid shall create an alarm via the floating leakage sensor.
- B. Each pump shall be provided with a lubricant chamber for the shaft sealing system. The lubricant chamber shall be designed to prevent overfilling and to provide lubricant expansion capacity. The drain and inspection plug, with positive anti-leak seal shall be easily accessible from the outside. The seal system shall not rely upon the pumped media for lubrication. Seal lubricant shall be non-hazardous. Where a seal cavity is present in the seal chamber, the area about the exterior of the lower mechanical seal in the cast iron housing shall have cast in an integral concentric spiral groove. This groove shall protect the seals by causing abrasive particulate entering the seal cavity to be forced out away from the seal due to centrifugal action.

2.9 IMPELLER

- A. The impeller shall be capable of passing a 3-inch compressible solid and shall be of Hard-Iron™ (ASTM A-532 (Alloy III A) 25% chrome cast iron), dynamically balanced, semi-open, multi-vane, back-swept, non-clog design. The impeller vane leading edges shall be mechanically self-cleaned upon each rotation as they pass across a spiral groove located on a replaceable insert ring.
- A. The impeller shall have vanes hardened to Rc 60 and shall be capable of handling solids, fibrous materials, heavy sludge and other matter found in waste water. The screw shape of the impeller inlet shall provide an inducing effect for the handling of sludge and rag-laden wastewater.
- B. The screw shape of the impeller inlet shall provide an inducing effect for the handling of up to 5% sludge. The impeller to volute clearance shall be readily adjustable by the means of a single trim screw. The Impeller shall be locked to the shaft, held by an impeller bolt and treated with a corrosion inhibitor.

2.10 VOLUTE

- A. The pump volute shall be a single piece gray cast iron, ASTM A-48, Class 35B, non-concentric design with smooth passages of sufficient size to pass any solids that may enter the impeller. Minimum discharge size shall be as specified. The volute shall have integral spiral-shaped, sharp-edged groove(s) that is cast into the suction cover. The spiral groove(s) shall provide the sharp edge(s) across which each impeller vane leading edge shall cross during rotation so to remain unobstructed. The internal volute bottom shall provide effective sealing between the multi-vane semi-open impeller and the volute. The volute insert ring shall be constructed of Hard-Iron™ (ASTM A-532 (Alloy III A) 25% chrome cast iron).

2.11 PROTECTION

- A. All stators shall incorporate thermal switches in series to monitor the temperature of each phase winding. At 140°C (260°F) or less, the thermal switches shall open, stop the motor and activate an alarm.
- B. A leakage sensor shall be provided to detect water in the stator chamber. The Float Leakage Sensor (FLS) will be connected to a control unit providing a contact to stop the motor and send an alarm. Use of Voltage Sensitive solid state sensors and trip temperature above 125 degrees C (260 degrees F) shall not be allowed.
- C. Monitoring unit for the above sensors shall be supplied by the pump manufacturer.
- D. Automatic Ground Fault Checking System: The control panels shall include, for each pump, the VFD system and required accessories to insure a 10 Year Motor Warranty for the Owner. The warranty shall be in printed form and shall be presented to the Owner during submittals.

2.12 CONTROL PANEL

- A. It is the intention that this specification shall cover a complete Duplex Pump Lift Station Electrical Control System to control the pumping stations (4 required) and all necessary appurtenances which might normally be considered a part of the complete electrical system for this installation. It shall be factory assembled, wired and tested and covered by complete electrical drawings and instructions. Equally, the Pump Lift Control System shall be capable of being integrated into a SCADA system via MODBUS protocol. As such, appropriate industry standard methods and protocols shall be utilized to accomplish said integration if necessary.
- B. The control system described hereafter shall be supplied by the pump supplier to provide single source responsibility for complete functioning system.
- C. Signal conditioning, set-point, control, alternation, logic function, alarm and all other control functions shall be performed by solid-state modules which shall be standard catalog items of the system manufacturer, with proven field performance.
- D. At least one module of each type used in the system shall be stocked by the system supplier for system expansions or renewal parts purposes. The modules shall be of a compatible, integrated control family with a full range of control/protective/alternation/telemetry capabilities and associated housings, enclosure system and appurtenances to perform a variety of functions required by this project and foreseeable expansion. It is the intention of this specification to disallow non-standard, "one of a kind", experimental, unproven combinations of equipment.
- E. The control unit transducer and redundant level sensor shall be standard products manufactured and stocked by the system supplier in order to assure one source responsibility, ready availability, proper system interconnections and reliable, long-term operation.
- F. For the Brunswick Valley lift station control panel only, the control system shall include an integrated phase conversion unit, achieved through the use of Variable Frequency Drives (VFDs), to allow the operation of three-phase pumps using a single-phase incoming power supply. This will ensure compatibility and efficient performance of the three phase pumps in environments where only single-phase power is available.

2.13 CONTROL PANEL SCOPE

- A. The equipment provided shall be a completely integrated automatic control system consisting of the required automation, phase protection and alarm monitoring equipment in a factory wired and tested assembly. The automatic control and alarm system components shall be

- standard, catalogued, stocked products of the system manufacturer to assure single source responsibility, immediately available spare/replacement parts, proper system interconnections and reliable long term operation. All programming will be provided by the pumping system supplier.
- B. All equipment and materials shall be subject to the Engineer's review and shall not be purchased or manufactured until the review is complete.
 - C. The supplier shall prepare detailed design information, procure, configure, start-up, and make ready for use, the complete system as indicated on the plans and specifications. These submittals and drawings include descriptions of functional operation and performance, as well as standards, but do not necessarily enumerate detailed specifications for all components and devices that are essential for system operation. However, all components and devices shall be furnished and installed as required to provide complete and operable systems for accomplishing the functions and meeting the performance set forth hereinafter.
 - D. The system shall be installed by the contractor, complete and ready to operate, including all necessary connections to sources of electrical power, interconnection between field equipment and accessories as specified or as recommended for best operation for the equipment furnished. The hardware that is installed in the control system shall be readily available. None of the hardware in the system shall be part of a discontinued line or classified as hardware that is on repair status only. The contractor shall provide documentation verifying the continuing availability of the system hardware for full integration of the original hardware with future hardware improvements. All necessary mounting panels, stands, hangers, and brackets shall be furnished and installed and shall comply with the relevant sections of the Specifications.
 - E. The Pump Supplier shall include in the bid allowance for factory-trained service personnel to adjust all the equipment until the system has been completely accepted.

2.14 QUALITY ASSURANCE

- A. The Supplier shall maintain quality in both design and workmanship as well as materials used in manufacture of equipment supplied. All equipment supplied under this Contract shall be of new manufacture.
- B. The Supplier shall be a firm that is engaged in the manufacturing of process control systems. The system shall be in regular production with pre-designed hardware and software for process control systems. When the specification conflicts with a manufacturer's standard system, the standard system may be furnished if the intention of the specification is met.
- C. System shall be a standard system. Custom one of a kind application software and customized hardware components will not be accepted. A standard system is defined as one which is available, at time of bid, with fully tested hardware and software, full documentation, and prepared training classes such that no development must be done beyond system configuration.
- D. Supplier shall be responsible for detailed engineering, manufacture, programming, test, start-up and demonstration of all equipment and software programs to the Owner to provide a complete operating system.
- E. The Supplier shall have been continuously involved in the design and manufacture of control systems for the past ten(10) years. The manufacturer shall have successfully built and placed into operation, systems similar to the one proposed herein and will furnish a list of at least ten (10) operating installations upon request by the Engineer.

- F. Provide all engineering and render coordination assistance, necessary for calibration of overall control system and to resolve interface discrepancies between panels, equipment, instrumentation and final control devices. Where interface conflicts exist, the Supplier shall document conflicts in writing to the Owner and/or engineer providing absolute information such as terminal numbers, device name, tests performed and diagnosis of problem.
- G. All equipment supplied shall be of the most current and proven design at the time of delivery. The completed System and the equipment provided by the Supplier shall be compatible with the functions required and shall be a complete working System.
- H. All electrical components of the System shall operate on 460 volt, three phase, 60 Hertz current, except as otherwise noted in the specifications and on the drawings. Required step down transformers and/or power supplies shall be provided either inside the panel or rack mounted on the exterior of the panel.

2.15 CONTROL PANEL DOCUMENTATION

- A. The complete assembly shall be provided with job-specific wiring diagrams, parts lists, enclosure dimensional and door layout drawings and instructions.
- B. Production Schematics shall be submitted for approval for all equipment herein specified. The Production Schematics Submittal shall include a Document List. An Order Specification shall be included which shall describe in detail the major functionality of the equipment being provided as well as components used detailed down to major component level. Each panel shall be provided with a job-specific wiring diagram, parts list, enclosure door layout and enclosure dimension drawing. Manufacturer's wiring diagrams that are not job-specific (standard drawings with options crossed out, etc.) are not acceptable. The wiring diagram requirement applies to all field mounted instrumentation and control equipment. Interconnection details shall be shown for all field-mounted instrumentation. A Description of Operation shall be provided detailing the operation of the complete system, including the control and alarm handling.
- C. Provide As-built Drawings and Instruction Manuals. These manuals shall include corrected Shop Drawings. In addition, a detailed Programming and Operations Manual for the Microprocessor-based Control Unit shall be included. The manual shall include all information as detailed for the Shop Drawing Submittals above.

2.16 CONTROL PANEL GENERAL EQUIPMENT REQUIREMENTS

- A. U.L. SERIALIZED LABEL: The control panel shall be constructed in compliance with Underwriter's Laboratories Categories 698A and 913 standards – "Enclosed Industrial Control Panel Relating to Hazardous Locations with Intrinsically Safe Circuit Extensions" listing and following-up service. The control panel shall bear the Underwriter's Laboratories serialized label for "Enclosed Industrial Control Panel Relating to Hazardous Locations with Intrinsically Safe Circuit Extensions". Prior to shipment from the manufacturer's facility to the jobsite for installation, an Underwriter's Laboratories (U.L.) representative shall inspect the completed control panel. Upon successful completion of the inspection, the panel shall be assigned the required "Enclosed Industrial Control Panel Relating to Hazardous Locations with Intrinsically Safe Circuit Extensions" serialized U.L. label, indicating the equipment is built in accordance with the practices and requirements of the Underwriter's Laboratories 698A and 913 categories. While the use of U.L. listed components is encouraged, their use alone and/or the alternate use of a U.L. 508A – "Enclosed Industrial Control Panel" serialized label will not be considered an acceptable or satisfactory alternate to the "Enclosed Industrial Control Panel Relating to Hazardous Locations with Intrinsically Safe Circuit Extensions" serialized label specified above. Upon request from the Engineer, the panel manufacturer shall supply documentation to the owner proving they are a U.L. recognized manufacturing facility for the type of equipment required. Only the labeled products of U.L.698A and 913 "Enclosed Industrial Control Panel Relating to Hazardous Locations with Intrinsically Safe Circuit Extensions" recognized panel manufacturer shall be considered acceptable for use on this

project.

- B. **WIRING:** All wiring shall be minimum 600 volt UL type MTW or AWM and have a current-carrying capacity of not less than 125% of the full load current. The conductors shall be in complete conformity with the national electric codes, state, local and NEMA electrical standards. For ease of servicing and maintenance, all wiring shall be color-coded. The wire color code shall be clearly shown on the drawings, with each wire's color indicated. In addition, the equipment wiring shall be permanently marked with wire numbers that correspond to the system schematics. The numbering convention shall comply with the municipal industry standard. All control wiring shall be contained within plastic/PVC wiring duct with covers. Where dimensional constraints prevent the use of wiring duct, wires shall be trained to panel components in groupings. The wire groupings shall be bundled and tied not less than every 3 inches with nylon self-locking cable ties as manufactured by Panduit or equal. Every other cable tie shall be fastened to the enclosure door or inner device panel with a cable tie mounting plate with pressure tape. Where wiring crosses hinged areas such as when trained from the inner device panel to the enclosure door, spiral wrap shall be used.
- C. **INCOMING SERVICE AND LIGHTNING ARRESTOR:** The incoming service and main disconnect will be installed ahead of the lift stations control panel as provided by the electrical contractor. Conduit and wiring between the power company termination and the lift station shall be furnished and installed by the contractor. The power supply will be 480 volts, 3 phase, 3 wire, 60 Hertz. A lightning arrestor shall be supplied in the control system and connected to each line of the load side of main power disconnect. The arrestor shall protect the control system against damage as the result of transient voltage surges caused by lightning interference, switching loads and power line interference. It shall begin shunting to ground at 1000 volts maximum. Each panel shall be supplied with a properly sized control power circuit breaker and fused control power transformer where necessary. The breaker shall supply power to all control wiring within the enclosure.
- D. **NAMEPLATES:** All major components and sub-assemblies shall be identified as to function with laminated, engraved bakelite nameplates, or similar approved means

2.17 CONTROL SYSTEM AND CONTROL PANEL

- A. **ENCLOSURE:** The described equipment shall be housed in a NEMA Type 4X, Stainless Steel enclosure, properly sized in accordance with the NEC for the equipment to be contained in the enclosure. The enclosure door shall be provided with a 3 point lockable latch and aluminum dead front operator's inner door. This weatherproof, rain-tight enclosure shall be designed specifically for mounting in an unprotected outdoor location. It shall have a gasketed, hinged, front weather door with locking capability, and an internally mounted hinged dead front panel so that all the components normally actuated by Operating Personnel are accessible without opening the dead front and yet are not exposed to the elements or to unauthorized personnel.
- B. **INCOMING POWER CONNECTIONS:** The control panel shall include a power distribution terminal block for connection of the incoming service. The internal distribution system shall include lugged terminal connections on the load side of the main disconnect switch inside panel.
- C. **BRANCH CIRCUIT BREAKERS & VARIABLE FREQUENCY DRIVES**
 - 1. For all supply voltage ranges, a 3-phase thermal magnetic circuit breaker shall be supplied as branch circuit protection for each pump motor. The circuit breaker must have a minimum ampere interrupting capacity of (25,000 @ 240 volt) symmetrical RMS amps. The circuit breaker shall be operable through the operator's door of the enclosure and shall have a trip rating to allow full voltage starting and continuous operation of the motors. The circuit breaker shall be manufactured by Square D.
 - 2. A Variable Frequency pump drive shall be provided for each pump in the system, sized for the appropriate voltage and power. The pump drive shall be supplied by the pump manufacturer and designed for wastewater pumping and with functionality pre-

programmed for the specific pump model used or a PLC of equivalent functionality shall be provided. The pump drive shall provide all level control functionality, hand/auto operation, pump alternation, pump over temperature monitoring, seal leakage monitoring, pump self-cleaning, sump cleaning and pipe cleaning algorithms. The pump drive shall also include capability to monitor station inflow, pump speed and energy consumption in order to automatically operate the pump station at optimal energy efficiency.

3. The variable frequency drive ampere rating shall be equal to or greater than the ampere rating listed on the motor being driven by the variable frequency drive. The drive units shall be modularly constructed. Printed circuit boards shall be connected in such manner that they are easily removed from the unit. Power components shall be readily accessible and be connected in such manner that they are easily removed from the unit. The pump drive shall be freestanding for wall mounting or cabinet installation construction, for 460V, 60HZ 3Phase power supply. It holds an IP55 and IP66 isolation class.
- D. **PUMP CONTROL SELECTOR SWITCHES AND "RUN" LIGHTS:** The control panel shall have three position selector switches integral to the VFD HMI for Hand-Off-Auto operation of each pump. In the Hand position the motor shall be called to operate. In the Off mode the motor shall not be allowed to operate. In the Auto mode, the motor shall operate in response to control signals from the controller. An operator's door mounted, 30.5mm diameter, NEMA Type 4X selector switch(s) shall be industrial rated heavy duty NEMA Type 4X with modular contact block assemblies. Contact Blocks shall be stacking screw together type with parallel double break contacts with wiping action. Contact blocks shall be rated NEMA A600, 600 Volt, 10A continuous duty, 7200VA make, 720VA break AC. Contacts shall have compression type screw terminals with self lifting spring washers to insure that the wire remains secure even under severe vibration. Snap together contact blocks are not acceptable. All pilot devices specified herein are to be Square D Series 9001, Siemens Class 52, Allen Bradley 800-H Line. Unless specified otherwise, Selector Switch(s) shall be of the maintained position type. Provide a single "Lamp Test" pushbutton with dual-input lights for all specified alarm conditions. Lamp test shall also test the external, top mounted, common alarm light. Door-mounted indicator lights shall be the LED type, NEMA 4x rated.
- E. **PUMP STATION CONTROL SYSTEM**
1. High/Low Level Sump Control: The pump controls system shall provide automatic level control via means of a submersible pressure transducer (4-20mADC) and one (1) non-mercury liquid level float switch. User-programmable Start Level shall indicate the point at which the pump will start. Upon activation the pump shall run at maximum speed for a pre-determined period, then ramp down to the energy efficient Optimal speed, calculated by the pump drive. When the water level reaches the Stop Level, the pump shall stop. The Optimal Speed shall either be calculated by the pump drive or manually entered by the user. In case of high inflow, the pump drive shall increase pump speed until the water level begins to decrease. When the water level reaches the Stop Level, the pump shall stop. In case of very high inflow, in a duplex installation, when a single pump is unable to overcome the inflow conditions even at maximum speed, additional pumps shall be activated and run at maximum speed until the Stop Level is reached. If water levels continue to rise, a High Level Alarm shall be activated. The pump drive shall incorporate a Minimum Speed function that prevents the pump from operating at speeds too low to move water based on the pump curve.
 2. Run Time Averaging Duplex Application: In cases of duplex pumps/drives, the pump drive shall provide capability to balance run times for even wear. This shall be an internal function of the drive and not require external devices, such as an Alternating Relay. The function shall operate by determining a "random" start level based on the Start Level setting. Each drive shall determine its own random start level independent of each other. New random start levels will be determined every 24 hours. The pump with the lowest random start level shall be first to start on any given pump cycle. The second pump shall remain in Standby capacity in case the lead pump shall not be able to lower the water level as described in the section above. By recalculating the random start levels every 24 hours, balanced run times are accomplished.

3. Pump Cleaning Function: The Pump drive shall incorporate a "self-cleaning" function to remove debris from the impeller. The cleaning shall be triggered by three circumstances:
 - a. Soft Clogging: When motor current equals 20% or greater above rated motor current, in the drive, for a period of 7 seconds.
 - b. Hard Clogging: When motor current equals 80% or greater above rated current for a period of 0.01 seconds.
 - c. Schedule Cleaning: The pump drive is pre-programmed to perform cleaning regularly.
 - d. The cleaning function shall consist of forced stopping, reversal and forward runs timed to allow for debris to fall from the impeller. After cleaning cycle is complete, drive shall resume to automatic operation.
4. Sump Cleaning Function: The pump drive shall incorporate a sump cleaning function to ensure surface solids and grease is regularly removed from the sump. The sump cleaning function shall perform regularly when enabled by the operator. Sump cleaning shall consist of the following functions:
 - a. Sump cleaning is triggered when internal timer expires and during a normal pump down cycle.
 - b. Pump is automatically ramped to maximum speed.
 - c. Pump runs at maximum speed for designated time or until the pump are "snoring".
 - d. When Sump Cleaning is over, the pump is shut off and resumes normal operation.
5. Pipe Cleaning Function: The pump drive shall incorporate a pipe cleaning function to avoid discharge pipe sedimentation and clogging due to reduced pump speed. This shall be an automatic feature that initiates with every pump cycle. Upon reaching Pump Start Level, the drive shall operate the pump at 100% speed for a determined time before ramping down to the most energy efficient speed for the duration of the cycle.
6. Energy Efficient Speed Finder: The pump drive shall provide a function that automatically calculates the most energy efficient speed for the pump based on station inflow characteristics. An algorithm calculates the optimal speed whereby the most water is pumped using the least amount of energy, the optimal speed is constantly adjusted to account for changes inflow without requiring operator adjustment, multiple setpoints, etc. The energy efficient function prevents the drive from running off of the system curve for the pump. This will ensure maximum hydraulic efficiency as well as electrical efficiency is maintained.
7. Alarms & Monitoring: The pump drive shall provide alarms and monitoring for the drive, pump and sump. Alarms shall be presented on the LCD display, via a Summary Alarm relay and via Modbus registers. All alarms, when occurring, shall remain active until reset. Alarms shall have a built-in 4 second delay to prevent nuisance tripping. Alarms shall be as follows:
 - a. Pump Monitoring:
 - 1) Pump Over Temperature (thermal contacts in motor stator)
 - 2) Pump Seal Leak (seal leakage sensor)
 - b. Sump Monitoring:
 - 1) High Sump Level (via level float switch or submersible transducer)
 - 2) Submersible transducer Sensor Error (Submersible transducer is not connected, reports faulty values or the wrong start level is used)
 - c. Pump drive Monitoring (includes, but not limited to):
 - 1) Drive Overcurrent
 - 2) Drive Overload Trip
 - 3) Drive Undervoltage
 - 4) Drive Overvoltage
 - 5) Drive Overtemperature (Internal)
 - 6) Drive Overtemperature (ambient)
 - 7) Drive Undertemperature (ambient)
 - 8) Input Phase Loss
 - 9) Drive Output Max Torque Exceeded

F. WET WELL SUBMERSIBLE LEVEL TRANSDUCER

1. The liquid level of the wet well shall be sensed by a submersible level transducer. The transducer shall be a 2-wire type to operate from the level controller's regulated loop power supply and produce an instrumentation signal (4-20mA) in direct proportion to the measured level excursion over a factory-calibrated range of zero to (30) feet of water.
2. The transducer shall be of the ceramic capacitive, relative pressure sensing type, suitable for continuous submergence and operation and shall be installed in accordance with manufacturer's instructions. The bottom diaphragm face of the sensor shall be installed approximately 6 inches above the wet well floor. The sensor shall be hung in the wet well using a cable bracket including two sliding cable locking jaws in a location in the wet well and as shown on the job plans.
3. The transducer housing shall be fabricated of PPS (polyphenylene sulfide) with a ceramic bottom diaphragm.
4. The transducer element shall incorporate high over-pressure protection and be designed to withstand intermittent overpressures (10) times the full-scale range being sensed. Metallic diaphragms shall not be acceptable in that they are subject to damage or distortion. Sensing principles employing LVDTs, resistive or pneumatic elements shall not be acceptable.
5. The internal pressure of the lower transducer assembly shall be relieved to atmospheric pressure through a heavy-duty urethane jacketed hose/cable assembly and a slack PVC bellows mounted in the control panel. The sealed breather system shall compensate for variations in barometric pressure and expansion and contraction of air due to temperature changes and altitude as well as prevent fouling from moisture and other corrosive elements.
6. The transducer assembly shall be installed where directed by the Engineer and connected with other system elements and placed in successful operation
7. The transducer shall have a programming feature using a standard USB interface and a laptop computer, the servicing transmitter can be programmed on-the-fly to the required measuring range. The design without sharp edges prevents particles, textiles and paper from sticking to the housing or the diaphragm. The transducer shall be surge resistant.
8. The transducer power cable shall be steel reinforced PUR cable with high tensile strength (2,000 lb).

H. BACKUP LEVEL CONTROL: Backup sump level controls shall be a float system operated by a single float switch. The float switch shall be utilized for pump stop and pump start/high water level. The float switches shall be mechanical type switch, potted in a solid polyurethane float, with two (2) conductor No. 16 flexible cord (Type SJOW). Float switches shall be normally open type with contacts rated at 3 amps for 115 or 230 volts.

G. LOCAL ALARM SYSTEM: A top mounted weatherproof, strobe alarm indication light assembly with shatter resistant polycarbonate red lens mounted on a polycarbonate/ABS blend case shall be provided. The alarm light shall be NEMA 4X rated, suitable for indoor or outdoor mounting and operate on 120 VAC and be PLC rated. The strobe tube shall provide a minimum of 300,000 peak candela output and shall be rated for 3,000 hour life. The alarm light shall flash upon occurrence of an alarm condition.

J. CONDENSATION PROTECTIVE HEATER: A 100 watt, 120 VAC condensation protective heater and adjustable high temperature cutout thermostwitch shall be supplied in the control panel. The heater's surface area for heat dissipation shall be large enough to prevent a skin burn (if an operator's hand should inadvertently come in contact with the unit when energized). The heater shall be regulated by a humidistat located within the control panel enclosure.

K. CONTROL PANEL SERVICE, TRAINING AND GUARANTEE: The services of a factory trained, qualified representative shall be provided to inspect the completed installation, make all adjustments necessary to place the system in trouble-free operation and instruct the operating personnel in the proper care and operation of the equipment. After each system has been installed, the Supplier shall demonstrate with performance of each unit, and

document that the system operates properly as specified. The Supplier shall provide systems training for operations staff totaling no less than 2 hours. All training shall be conducted at the site. Travel expenses are the responsibility of the supplier. All equipment shall be guaranteed against defects in material and workmanship for a period of one year from the date of Owner's final inspection and acceptance to the effect that any defective equipment shall be repaired or replaced without cost or obligation to the Owner.

2.18 ACCESS COVER

- A. See Section 11201 – MISCELLANEOUS EQUIPMENT

PART 3 - EXECUTION

3.1 INSPECTION

- A. Inspect all equipment upon arrival at job site and prior to installation. Notify manufacturer of any damage and/or shortage.
- B. Inspect concrete mounting pads and anchor bolts for correct size and alignment prior to installation.

3.2 PREPARATION

- A. Make corrections and/or repairs as required for items inspected and found to be deficient.

3.3 INSTALLATION

- A. Install pumps and accessories in strict accordance with the manufacturer's instructions.

3.4 FIELD QUALITY CONTROL

- A. The manufacturer's field engineer or representative shall inspect and check the installation after erection and be on hand for initial start-up of the equipment for a period of at least three days. He shall also instruct Owner's personnel in the operation and maintenance of the system.

3.5 ADJUSTING AND CLEANING

- A. Adjust equipment as required and within limits of manufacturer's instructions for proper alignment.
- B. Apply proper type and quantity of lubricants for short term storage or start-up operation as applicable.
- C. Clean equipment of any foreign matter or substances.
- D. Field paint all components to be painted in accordance with manufacturers recommendations.

3.6 PROTECTION

- A. After installation and painting protect the equipment from any damage by work of other trades. Repair any damage that nevertheless occurs.

PART 4 - SERVICE AND WARRANTY

4.1 SERVICE

- A. The pump manufacturer shall have an authorized factory service center capable of completely servicing the proposed pumps within 100 miles of the project site. The pump manufacturer shall have a direct factory service center/stocking facility capable of completely servicing, and which stocks identical complete drive units, and spare parts for, the proposed pumps within 500 miles of the project site.

4.2 WARRANTY

- A. The pump manufacturer shall warrant the pumps for this project in accordance with their 5 Year/10,000 Hour Municipal Warranty for sewage products as published in the latest release of their product catalog. The units supplied shall be warranted to be free from defects in materials and workmanship as prescribed by the referenced warranty to include parts and labor for the period so noted in the printed warranty. Congruent with the standard Municipal Warranty, the pump manufacturer will provide a Ten Year Motor Warranty to the owner. The supplier shall provide a signed and properly executed written document to the owner for the specific project that defines the terms and conditions of the warranty to replace the stator and rotor parts at no charge where compliance with the warranty is verified. The supplier shall have offered this warranty for a period of no less than 10 years and shall provide documentation to validate compliance. The manufacturer shall not have any obligation for other claims, losses, costs or expenses, including incidental and consequential damages relating to any defective parts. The pump warranty shall conform to the 5 Year Pro-Rated Municipal Warranty and the Ten Year Motor Warranty shall cover the motors from pre-mature failure associated with a defective winding or rotor in accordance with the printed warranty. The warranty period for each warranty shall commence at the time of Start-Up or no longer than 90 days from the date of shipment to the contractor, whichever applies.

4.3 ACCESSORIES

- A. The anchor bolts, upper guide bar brackets and cable holder shall be fabricated from AISI 304 stainless steel.

END OF SECTION

SECTION 02931

SEED AND GRASSES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Provide all labor, materials, equipment, installation, and tests for all seeding and mulching in accordance with all applicable codes.

1.2 RELATED SECTIONS AND DOCUMENTS

- A. STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
- B. Section 02940 - SODDING.

1.3 QUALITY ASSURANCE

- A. Test top soil in accordance with the requirements of the local Agricultural Department to evaluate the required and recommended fertilizer to properly germinate the seeding process.
 - 1. Supply written analysis stating N, P, and K requirements, organic matter content, and Ph value or soil.
- B. The selection of all materials and execution of all preparation required under the Drawings and Specifications shall be subject approval of the Engineer. The Engineer shall have the right to reject any and all materials, all work, which is in his opinion does not meet the requirements Specifications or Drawings at any stage of the operations. Rejected materials shall be removed from the site and shall not carded on adjacent sites.
- C. The Contractor shall notify the Authority having jurisdiction least 48 hours in advance of the time he intends to begin sowing seed and shall not proceed with such work until permission to do so has been granted. Before starting operation on any area, final dressing shall have been completed in accordance with these Specifications. All seeding and related operation shall be continuous operations.
- D. Maintenance of Site During Planting: Sidewalks, roads, and other pavement adjacent to planting operation shall be kept clean and free of obstructions, mud and debris at all times. Wheels of vehicles used in work shall be cleaned if necessary. Flushing of streets or disposal of dirt or debris into sewers or drainage ditches will not be permitted. Dust shall be controlled by approved means to the satisfaction of the Engineer.

1.4 GUARANTEE

- A. One year after final completion of project, or one year after work on this Section, whichever is the date, lawn shall be solid color well-sodded mat, reasonably free from weeds.
- B. Inspection for Beginning of Guarantee Period
 - 1. Inspection of the planting work, to determine its completion for beginning the guarantee period, will be made by the Authority having jurisdiction, and given approval in writing upon notice requesting such inspection by the Contractor.
 - 2. All planting must be alive and healthy in order to be considered complete.
- C. Final Inspection and Replacements: Inspection of the planting to determine its final acceptance will be made at the conclusion of the guarantee period. No grassing shall be accepted unless alive and healthy.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver grass seed in original containers showing analysis of seed mixture, percentages of pure seed, year of production, net weight, date of packaging and location of packaging. Damaged packages shall NOT be acceptable to site.
- B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.
- C. Deliver straw or mulch in original bales or bags properly stored in original bags or containers.

PART 2 PRODUCTS

2.1 GROWING MEDIA

- A. Topsoil: Natural, fertile, agricultural soil typical of the locality, capable of sustaining vigorous plant growth, from a well-drained site free of flooding, not in frozen or muddy condition, not less than 6 percent organic matter, and Ph value of 5.9 to 7.0. Free from subsoil, slag, clay, stones, lumps, live plants, roots, sticks, crabgrass, couch grass, noxious weeds, and foreign matter.
- B. Peatmoss: Horticultural grade Class A decomposed plant material, elastic and homogeneous. Free of decomposed colloidal residue, wood, sulphur, and iron. Peatmoss: pH value to 5.9 to 7.0, 60 percent organic matter by weight, moisture content not exceeding 15 percent and water absorption capacity of not less than 300 percent by weight on oven dry basis.
- C. Sand: Hard, granular, natural, beach sand, washed, free of impurities, chemical, or organic matter.
- D. Fertilizer: 6-12-12 grade Commercial type with 6 percent nitrogen 12 percent P_2O_5 , and 12 percent K_2O or as required by the testing specified hereinbefore, Article 1.03 - QUALITY ASSURANCE. Apply at the rate of not less than ten pounds per 1000 S.F.
- E. Lime: Standard agricultural type containing at least 85 percent total carbonates applied at a rate of 4000 pounds per acre (92 pounds per 1,000 square feet) or as required by the test results and recommendation as specified hereinbefore.
 - 1. Before seeding, apply lime and fertilizer and incorporate them into the soil at least 3 inches deep by discing and harrowing, at the rates recommended above or required by the above test results.

2.2 SEED

- A. Seed and times of sowing shall be as specified in the SWPPP.

2.3 ACCESSORIES

- A. Mulching Material: Oat or wheat straw, reasonably free from weeds, foreign matter detrimental to plant life, and in dry condition. Hay or chopped cornstalks are not acceptable.

PART 3 EXECUTION

3.1 PREPARATION

- A. Protect existing underground improvements from damage.

- B. Remove foreign materials, plants, roots, stones, and debris, from site. Do not bury foreign material.
- C. Remove contaminated subsoil.
- D. Cultivate to depth of 3 inches, area to receive topsoil. Repeat cultivation areas where equipment has compacted subgrade.

3.2 SPREADING TOPSOIL

- A. Spread topsoil to depth of 4 inches in ballfields and infield of the track and two inches over all other areas to be seeded. Place during dry weather, and on dry unfrozen subgrade.
- B. Cultivate topsoil to depth of 4 inches with mechanical tiller. Cultivate inaccessible areas by hand. Rake until surface is smooth.
- C. Remove from site, foreign materials collected during cultivation.
- D. Grade to eliminate rough spots and low areas where ponding may occur. Maintain smooth, uniform grade as indicated.

3.3 FERTILIZING

- A. Apply fertilizer at a rate of not less than ten pounds per 1000 square feet in formulation and quality required by soil analysis or to the above minimum requirements.
- B. Apply after fine grading, mix thoroughly into upper 2 inches of topsoil.

3.4 SEEDING

- A. Apply seed at a rate of 1.95 pounds per 1,000 square feet or 85 pounds per acre.
- B. Broad cast half the seed with a mechanical spreader and then broadcast the remaining half of the seed at right angles to the first seeding pattern using a mechanical spreader.
- C. Cover seed to a depth of 1/8" by raking or harrowing.
- D. Do not sow immediately following rain, when ground is too dry, or during windy periods.
- E. Roll seeded area with roller not exceeding 112 pounds.
- F. Apply water with fine spray immediately after each area has been sown.

3.5 MULCHING

- A. Mulching: Cover the seeded areas specified below with a one inch minimum thickness layer of weed-free straw or other approved mulch, and wet the mulch thoroughly.
- B. Watering and Maintenance: Water and maintain the seeding until satisfactory grass growth has been established, and at least until final project acceptance.
- C. Areas Requiring Seeding and Mulching:
 1. Seeding: all ground surfaces which have been filled, or otherwise disturbed by the work under this contract, and other areas as indicated on the drawings, except types covered by paving or structures or sodding.
 2. Mulching: all seeded areas.

3.6 SLOPE EROSION CONTROL

- A. For all 4 horizontal to 1 vertical and steeper slopes, provide "Curlex Blankets" by American Excelsir, "DS75 Straw Blanket" by Northern American Green or an approved similar mat one side, low velocity product specifically designed to prevent the erosion of the top soil by wind and/or rain.
- B. Complete final grading, spreading of topsoil, fertilizing and seeding before placing erosion control mat.
- C. Extend the erosion control mat to a point at least 3 feet above the top of the slope and at least 2 feet below the bottom of the slope. Unroll the mat in the direction of water flow, lap edges by at least 3 inches and fasten to the ground with anchor stakes at 3 to 5 foot intervals. Bury terminal ends in an anchor trench as recommended by the manufacturer. all of the installation of the mat shall be in accordance with the manufacturer's written instructions and specific instructions for the site involved.

3.7 MAINTENANCE PERIOD

- A. Maintain surfaces and supply additional topsoil where necessary, including areas affected by erosion.
- B. Water to insure uniform seed germination and to keep surface of soil damp.
- C. Apply water slowly so that surface of soil will not puddle and crust.
- D. Cut grass first time when it reaches height of 2-1/2 inches (60 mm) and maintain to minimum height of 2 inches. Do not cut more than 1/3 of blade at any one mowing. Remove clippings.
- E. After first mowing, water grass sufficient to moisten soil from 3 to 5 inches deep.
- F. Apply weed killer when weeds start developing, during calm weather when air temperature is above 50 degrees Fahrenheit.
- G. Replant damaged grass areas showing root growth failure, deterioration, bare or thin spots, and eroded areas.

3.8 RESTORATION

- A. Restore pavement, concrete, grassed areas, planted areas, and structures damaged during execution of work, of this section.

3.9 ACCEPTANCE

- A. Seeded and mulched areas will be accepted at end of maintenance period when seeded areas are properly established and otherwise acceptable.
- B. If in the opinion of the authority having jurisdiction that any seeded areas do not show a uniform or healthy stand of grass, the Contractor shall reseed and/or refertilize those areas as directed without any additional cost to the Owner.

3.10 PAYMENT

- A. No separate payment. Include in Lump Sum Bid Price.

END OF SECTION

SECTION 02940

SODDING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Provide all labor, materials, and equipment to install topsoil, including but not limited to:
 - 1. Prepare sub-grade to receive topsoil.
 - 2. Place, rake, and level topsoil as required to prepare for sod.
 - 3. Place sod.
 - 4. Maintain sod.

1.2 RELATED SECTIONS

- A. DIVISION 2 - SITEWORK.

1.3 QUALITY ASSURANCE

- A. Test top soil in accordance with the requirements of the local Agricultural Department to evaluate the required and recommended fertilizer to properly substantiate sodding.
 - 1. Supply written analysis stating N, P, and K requirements, organic matter content, pH value of soil, and lime requirements.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver sodding on pallets as recommended by ASPA.
- B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.

1.5 EXISTING CONDITIONS

- A. Beginning work means acceptance of existing conditions.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Sod:
 - 1. Obtain sod from reasonable fertile loamy topsoil areas where the sod has a good cover of living or growing grass with at least 70 percent of the plants therein composed of grass to match exactly the existing adjacent lawn or Bermuda; sod shall be free of weeds, rocks, roots, and other materials which could interfere with the sod development and its future maintenance. Remove sod in conveniently handled equal width rectangular sections, with native soil retained on roots.
 - 2. Liming and fertilizing:
 - a. Lime: shall be as required by Topsoil Testing as specified hereinbefore under Article 1.3 - QUALITY ASSURANCE.
 - 3. Water: clean, fresh, and free of substances or matter which would inhibit vigorous growth of grass.

2.2 CUTTING SOD

- A. Cut sod using an approved method, in accordance with local governing American Sod Producers Association. Cut sod in pieces not exceeding one square yard (one square meter), with minimum ½ inch (13 mm) and maximum one inch (25 mm) soil portion. Transport sod within 24 hours after it is stripped.

PART 3 EXECUTION

3.1 PREPARATION OF SUB-GRADE

- A. Fine grade sub-grade, eliminating uneven areas and low spots. Maintain lines, levels, profiles, and contours. Make changes in grade gradual. Blend slopes into level areas.
- B. Remove foreign materials, undesirable plants and their roots, stones, and debris. Do not bury foreign material beneath areas to be sodded. Remove sub-soil which has been contaminated with petroleum products.
- C. Cultivate sub-soil to a depth of 3 inches (76 mm) where sod is to be placed. Repeat cultivation in areas where equipment, used for hauling and spreading topsoil, has compacted sub-soil.

3.2 PLACING TOPSOIL

- A. Spread topsoil to a depth of minimum 4 inches (102 mm) over entire area to be sodded.
- B. Place topsoil during dry weather and on dry unfrozen sub-grade.
- C. Grade to eliminate rough and low areas, ensuring positive drainage. Maintain levels, profiles, and contours of sub-grade.
- D. Remove stones, roots, grass, weeds, debris, and other foreign nonorganic material while spreading.

3.3 FERTILIZING

- A. Apply fertilizer at a rate recommended by manufacturer and the recommendations of American Sod Producers Association. Apply after fine grading. Mix thoroughly into upper 2 inches (51 mm) of topsoil.
- B. Lightly water to aid the breakdown of fertilizer.
- C. Apply fertilizer within 48 hours before laying sod.

3.4 LAYING SOD

- A. Lay sod as soon as possible after delivery to prevent deterioration.
- B. Lay sod closely knit together with no open joints visible and pieces not overlapped. Lay smooth and flush with adjoining grass areas, paving, and top surfaces of curbs.
- C. On slopes 2:1 and steeper, lay sod perpendicular to slope and secure every row with wooden pegs at maximum 2 feet (610 mm) on center. Drive pegs flush with soil portion of sod.
- D. Immediately water sodded areas after installation. Water in sufficient amounts to saturate sod and upper 4 inches (102 mm) of soil.

- E. After sod and soil has dried sufficiently to prevent damage, roll sodded areas to insure good bond between sod and soil and to remove minor depressions and irregularities. Insure rolling equipment weight not over 250 pounds (113 kg) or less than 150 pounds (68 kg).

3.5 MAINTENANCE

- A. Maintain sodded areas immediately after placement until grass is well established and exhibits a vigorous growing condition and until acceptance by the Architect/Engineer.
- B. Mow grass at regular intervals as required to maintain at a maximum height of 2-1/2 inches (64 mm). Do not cut more than 1/3 of grass blade at any one mowing. Neatly trim edges and hand clip where necessary. Immediately remove heavy clippings after mowing and trimming.
- C. Water when required and in sufficient quantities to prevent grass and underlying soil from drying out.
- D. Roll when required to remove minor depressions or irregularities.
- E. Control growth of weeds. When using herbicides, apply in accordance with manufacturer's recommendations. Remedy damage resulting from negligent or improper use of herbicides.
- F. Immediately repair or replace any areas which show deterioration or bare spots.
- G. Protect sodded areas with warning signs during maintenance period.

3.6 AREAS TO BE SODDED

- A. Provide sod on all disturbed areas as authorized by the Engineer that have been disturbed by the installation of the work under this Contract.

3.7 PAYMENT

- A. Sod will be paid for at the bid price per square yard for all areas sodded and accepted as specified herein and shall include all materials, labor, equipment, topsoil, water and incidentals necessary to complete the item.

END OF SECTION

SECTION 03302
CONCRETE (SMALL)

PART 1- GENERAL

1.1 SECTION INCLUDES

- A. Provide and prepare sub-grade to receive concrete.
- B. Provide forming as required.
- C. Provide concrete complete with reinforcement.

1.2 RELATED SECTIONS

- A. DIVISION 2 - EARTHWORK
- B. DIVISION 5 - METAL
- C. DIVISION 9 - FINISHES
- D. DIVISION 16 - ELECTRICAL

1.3 QUALITY ASSURANCE

- A. Requirements of Regulatory Agencies: All work shall comply with rules and regulations of local and state agencies having jurisdiction.

1.4 JOB CONDITIONS

- A. Existing Conditions: Carefully maintain bench marks, monuments, and survey control references.

PART 2- PRODUCTS

2.1 MATERIALS

- A. Portland Cement: ASTM C150; normal - Type I.
- B. Aggregates: ASTM C33.
 - 1. Fine aggregates shall be natural sand, or sand prepared from stone, or other inert materials having similar characteristics as approved.
 - 2. Coarse shall be crushed, washed limestone only.
- C. Water: Clean and free from injurious amounts of oil, alkali, organic matter, or other deleterious material.
- D. Air entrainment (for all exterior exposed concrete): ASTM C260 or AASHTO M-154. Air entraining admixtures shall be added to the mixer in the amount necessary to produce the specified air content.
- E. Water-reducing, set-controlling admixtures shall meet the requirements of ASTM C494, Type A, water-reducing or Type D, water-reducing and retarding. Water-reducing admixtures shall be added at the mixer separately from air-entraining admixtures in accordance with the manufacturer's printed instructions.

2.2 REINFORCEMENT

- A. Reinforcing Steel: 60 ksi (414 MPa) yield strength; deformed billet steel bars; ASTM A615; plain finish.
- B. Tie Wire: Minimum 16 gauge annealed type, or patented system acceptable to Architect/Engineer.
- C. Welded Wire Fabric: Confirm to ASTM A 185.

2.3 CONCRETE MIX

- A. Ready-Mix Concrete: All concrete shall be ready-mix concrete.
- B. Mix and proportion to produce minimum 4,500 psi concrete at 28 days with maximum slump of 4 inches and 5.5 percent air entrainment, ASTM C94 OR AS INDICATED ON DRAWINGS.
- C. Use accelerating admixtures in cold weather only when acceptable to Architect/Engineer. Use of admixtures shall not relax cold weather placement requirements. Do not use calcium chloride.
- D. Use set-retarding admixtures during hot weather only when acceptable to Architect/Engineer.

PART 3- EXECUTION

3.1 PREPARATION OF SUB-GRADE

- A. Insure rough grading has brought sub-grade to required elevations.
- B. Fill soft spots and hollows with additional fill.
- C. Level and compact sub-grade, to receive concrete to the minimum required dry density compaction of 95 percent standard Proctor.
- D. Sub-grade: Place concrete only on a moist compacted subgrade or base, free from loose material. Do not place concrete on a muddy or frozen sub-grade.

3.2 FORMING

- A. All forms shall be free from warp, tight enough to prevent leakage of mortar, and substantial enough to maintain their shape and position, without springing or settlement, when concrete is placed or vibrated. Forms shall be clean and those for surfaces to be exposed shall produce a smooth, even finish without fins or board marks. Set forms for slabs on ground at exact finished grade; check for line and grade and correct as necessary immediately before concreting. Provide uniform bearing for such forms.

3.3 PLACING CONCRETE

- A. Concrete shall be deposited so as to require as little rehandling as practicable. Spade concrete thoroughly along forms and expansion joints, and work carefully into corners and around reinforcement. Tamp and screed to a dense mass. Do not mix or place concrete when the air temperature is below freezing. If the temperature may be expected to fall below 40 degrees Fahrenheit within 24 hours after concrete is placed, heat water and aggregate to bring the temperature of concrete mix to at least 50 degrees Fahrenheit. Consolidate concrete by means of a mechanical vibrator unless otherwise approved.
- B. Time in Transit: The maximum time elapsed between loading the concrete on the truck and placing in final position shall be 45 minutes.

- C. Retempering: Water shall not be added after the concrete has been placed on the truck unless authorized by the Engineer or his authorized representative.
- D. Weather Conditions: In addition to ACI 302, comply with the following:
 - 1. Cold Weather: "Recommended Practice for Cold Weather Concreting" ACI 306.
 - 2. Hot Weather: "Recommended Practice for Hot Weather Concreting" ACI 305.
- E. Concrete shall not be placed on frozen subgrade.
- F. Protection: Do not remove forms for 24 hours after pouring concrete. Protect concrete from traffic for a period of 7 days after pouring.

3.4 FINISHING CONCRETE

- A. General: The concrete shall be struck-off, consolidated, and finished with mechanical equipment in such a manner that after final finishing, it shall conform to the cross section shown on the Plans. Hand finishing will be permitted in narrow widths, areas of irregular dimensions, and in the event of breakdown of the mechanical equipment, to finish the concrete already deposited on the grade.
- B. Final Surface Finish (Ref ACI 301):
 - 1. Pavements shall have a broomed or burlap drag finish providing a uniform, skid-resistant texture.
 - 2. See drawing for other type of finish.

3.5 CURING CONCRETE

- A. General: Immediately after finishing operations have been completed, the surface of the slab shall be coated and sealed with a uniform layer of membrane curing compound applied as recommended by the manufacturer. When the forms are removed, curing compound shall be applied to the sides of the slab.
 - 1. Areas in which the curing membrane is damaged within a period of three days shall be resprayed with curing compound.
 - 2. Curing compound may be omitted when the concrete is otherwise protected from surface drying for three days.
- B. Impervious Membrane: Concrete shall be cured through the application of a transparent, impervious membrane of a type approved by the Engineer. The liquid shall contain a fugitive dye and shall be of such composition as not to react with the concrete nor alter appreciably its natural color. Apply the liquid immediately after free water has disappeared from the finished surface of the concrete; apply in a fine mist and in such manner as to cover the surface with a uniform, flexible film, ample to seal the surface thoroughly, and without marring the concrete finish. Keep workmen, equipment, and materials off the membrane for three days after applying.
- C. Cold Weather Protection: Whenever the air temperature may be expected to reach the freezing point, spread straw or other blanketing material to sufficient depth to keep concrete from freezing, or provide enclosure and heating device capable of maintaining concrete temperature of at least 50 degrees Fahrenheit. Maintain such protection for at least five days. The Contractor shall be responsible for removing and replacing any concrete injured by frost action.

END OF SECTION

SECTION 05500

METAL FABRICATIONS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Backing and mounting plates for equipment mounting studs and other equipment items.
- B. Miscellaneous metal angles and shapes for supports.
- C. Shop fabricated ferrous metals items, galvanized and prime painted.

1.2 RELATED SECTIONS

- A. DIVISION 3 - CONCRETE.
- B. DIVISION 5 - METALS.
- C. DIVISION 11 – EQUIPMENT.

1.3 REFERENCE STANDARDS

- A. Published Specifications, standards, tests, or recommended methods of trade, industry, or governmental organizations apply to work in this section where cited below:
 - 1. ASTM A36 - Structural Steel.
 - 2. ASTM A53 - Hot-Dipped, Zinc-coated Welded and Seamless Steel Pipe.
 - 3. ASTM A325 - High Strength Bolts for Structural Steel Joints.
 - 4. ASTM A123 - Specification for Zinc-Coating (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 - 5. ASTM A500 - Cold-formed Welded and Seamless Carbon Steel Structural Tubing.
 - 6. ASTM A501 - Hot-formed Welded and Seamless Carbon Steel Structural Tubing.
 - 7. AWS D1.1 - Structural Welding Code.
 - 8. FS Federal Specification.
 - a. FS TT-P-641 - Primer Coating, Zinc Dust-Zinc Oxide (for Galvanized Surfaces).
 - b. FS TT-P-645 - Primer, Paint, Zinc Chromate Alkalyed Type.
 - c. FS TT-P-664-D, Type I.

1.4 QUALITY ASSURANCE

- A. Welders' Qualifications: Welders shall be qualified in accordance with American Welding Society D1.1.
- B. Design Criteria:
 - 1. Work shall be designed to support normally imposed loads and meet requirements of American Institute of Steel Construction (AISC).
 - 2. Built-up parts shall not exhibit warp.
 - 3. Exposed joints shall be formed to drain or exclude moisture and water.

1.5 SUBMITTALS

- A. Manufacturer's literature describing products including details and dimensions.
- B. Shop Drawings:
 - 1. Show at large scale construction of various parts, methods of joining, thickness of metals, profiles of surfaces, reinforcing, anchorage, and structural supports. Include information regarding concealed and exposed joints, welds, and fastenings.
 - 2. Where welded connectors, concrete, or masonry inserts are required.

- C. Samples: Only as requested.
- D. Indicate welded connections using standard AWS welding symbols. Indicate net weld lengths.
- E. Prepare Shop Drawings under seal of a professional engineer registered in the State of Tennessee.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Steel Sections: ASTM A36.
- B. Wide Flange Sections: ASTM A992 Grade 50.
- C. Steel Tubing: ASTM A500, Grade B.
- D. Steel Pipe (used in structural applications: ASTM A501 or ASTM A53, Types E or S, Grade B.
- E. Bolts, Nuts, and Washers: ASTM A325 (Galvanized).
- F. Self Welding Shear Studs: ASTM A108.
- G. Welding Materials: AWS D1.1 and AWS D12.1; type required for materials being welded.
- H. Primer: FS TT-P-664-D, Type I Alkyd modified oil base.
- I. Touch-up Primer for Galvanized Surfaces: FS TT-P-645.

2.2 FABRICATION

- A. Verify dimensions on site prior to shop fabrication.
- B. Fabricate items with joints tightly fitted and secured.
- C. Fit and shop assemble in largest practical sections, for delivery to site.
- D. Grind exposed welds flush and smooth with adjacent finished surface. Ease exposed edges to small uniform radius.
- E. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of structure, except where specifically noted otherwise.
- F. Make exposed joints butt tight, flush, and hairline.
- G. Supply components required for anchorage of metal fabrications. Fabricate anchorage and related components and finish as metal fabrication, except where specifically noted otherwise.

2.3 FINISH

- A. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.
- B. Do not prime surfaces in direct contact bond with concrete or where field welding is required.
- C. Prime paint items scheduled with one coat.

- D. Galvanize items to minimum 2.0 ounce per square foot (610 g/sq m) zinc coating in accordance with ASTM A123.

2.4 GUARD POSTS

- A. These shall be 6-inch diameter steel pipe filled with concrete, at least 6 feet long, set 3 feet into a 24-inch minimum diameter concrete foundation.

2.5 MISCELLANEOUS ALUMINUM ITEMS

- A. Aluminum Items: These shall be factory prefabricated aluminum assemblies, of the size indicated. These shall be complete with 1/4" thick, unless otherwise indicated, smooth finish 60610-T6 aluminum alloy structural shapes. All welding shall be done by the "MIG" or the "TIG" process.
- B. Corrosion Protection: All surfaces of the above specified aluminum items which will contact concrete shall be factory coated with coal tar paint or other suitable material which will prevent corrosion and electrolytic action.

2.6 MISCELLANEOUS STEEL FABRICATED ITEMS

- A. Unless otherwise indicated shop fabricate this from ASTM A36 steel sections as indicated and as required.

2.9 ALUMINUM ACCESS COVERS

- A. See Section 11201 Miscellaneous Equipment for access covers for wet wells and valve manholes.

2.10 ALUMINUM GRATINGS AND GRATING FRAMES

- A. Gratings: These shall be standard aluminum grating with rectangular or I-section bearing bars as manufactured by Reliance, Borden, Kerrigan or equal. Bearing bars shall be 1-1/2" MINIMUM depth spaced at 1" O.C. maximum spacing except that MINIMUM bearing bar size and spacings shall be as required to support a minimum uniform load of 100 PSF with not more than 1/4" deflection or a concentrated load of 200 pounds at mid-span with not more than 0.15" deflection whichever requires the heavier grating, all in accordance with the grating manufacturer's ratings. Arrangement shall be as indicated.
 1. Each individual grating section shall be banded all around with bars similar to the bearing bars, welded at all corners, and welded or otherwise securely attached to the ends of all bearing bars.
 2. All aluminum surfaces which will contact steel shall be factory treated to prevent electrolytic action.
 3. Secure each grating section to supports with suitable aluminum fastening accessories and stainless steel or galvanized steel bolts and nuts which shall not extend above the tops of the gratings.
 4. Provide a hinged section of grating over the Vortex Flow Insert as indicated and/or as required.
- B. Grating Frames for Grating: Fabricate these from steel angles hot dipped galvanized after fabrication as indicated.

PART 3 EXECUTION

3.1 PREPARATION

- A. Obtain Architect/Engineer approval prior to site cutting or making adjustments not scheduled.

- B. Clean and strip site primed steel items to bare metal where site welding is scheduled.
- C. Make provision for erection loads with temporary bracing. Keep work in alignment.
- D. Supply items required to be cast into concrete with setting templates, to appropriate sections.

3.2 INSTALLATION

- A. Install items plumb and level, accurately fitted, free from distortion or defects.
- B. Perform field welding in accordance with AWS D1.1.
- C. After installation, touch-up field welds, scratched or damaged surfaces with primer.

3.3 SCHEDULE

- A. Provide and install items listed in Schedule and shown on Drawings with anchorage and attachments necessary for installation.
- B. Bumper posts, bollards, and guard rails; prime paint finish.

3.4 CLEANING

- A. Remove protective devices only when items will be safe from other construction operations or removal is required to permit related work.
- B. Clean prime-coated items as required for finish painting.

END OF SECTION

SECTION 09891

CONCRETE PROTECTIVE COATING SYSTEM FOR SEWERAGE STRUCTURE SURFACES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Requirements for surface preparation, coating materials and application to specified sewerage structure surfaces including, manholes, wet wells and similar surfaces.

1.2 RELATED SECTIONS

- A. DIVISION 2 - SITEWORK.

1.3 REFERENCES

- A. ASTM D638 - Tensile Properties of Plastics.
- B. ASTM D790 - Flexural Properties of Unreinforced and Reinforced Plastics.
- C. ASTM D695 - Compressive Properties of Rigid Plastics.
- D. ASTM D4541 - Pull-off Strength of Coatings Using a Portable Adhesion Tester.
- E. ASTM D2584 - Volatile Matter Content.
- F. ASTM D2240 - Durometer Hardness, Type D.
- G. ASTM D543 - Resistance of Plastics to Chemical Reagents.
- H. ASTM C109 - Compressive Strength Hydraulic Cement Mortars.
- I. ACI 506.2-77 - Specifications for Materials, Proportioning, and Application of Shotcrete.
- J. ASTM C579 - Compressive Strength of Chemically Setting Silicate and Silica Chemical Resistant Mortars.
- K. ASTM - The published standards of the American Society for Testing and Materials, West Conshohocken, PA.
- L. NACE - The published standards of National Association of Corrosion Engineers (NACE International), Houston, TX.
- M. SSPC - The published standards of the Society of Protective Coatings, Pittsburgh, PA.

1.4 SUBMITTALS

- A. The following items shall be submitted:
 - 1. Technical data sheet on each product used, including ASTM test results indicating the product conforms to and is suitable for its intended use per these specifications.
 - 2. Material Safety Data Sheets (MSDS) for each product used.
 - 3. Project specific guidelines and recommendations.
 - 4. Design details for any additional ancillary systems and equipment to be used in site and surface preparation, application and testing.
 - 5. Materials and method for repair of leaks or cracks.
 - 6. Final installation report.

1.5 APPLICATOR QUALIFICATIONS

- A. Manufacturer certification that Applicator has been trained and approved in the handling, mixing and application of the products to be used.
- B. Certification by the protective coating manufacturer that the equipment to be used for applying the products has been approved and Applicator personnel have been trained and certified for proper use of the equipment.
- C. One (1) year contracting experience under current company name and three (3) recent references of projects of similar size and scope. Applicator must also provide references indicating successful application of 100% solids, high-build solvent-free epoxy coating by heated, plural component spray application.
- D. Proof of any necessary federal, state or local permits or licenses necessary for the project.

1.6 QUALITY ASSURANCE

- A. Applicator shall initiate and enforce quality control procedures consistent with applicable ASTM, NACE and SSPC standards and the protective coating manufacturer's recommendations.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Materials are to be kept dry, protected from weather and stored under cover.
- B. Protective coating materials are to be stored between 50 deg F and 90 deg F. Do not store near flame, heat or strong oxidants.
- C. Protective coating materials are to be handled according to their material safety data sheets.

1.8 SITE CONDITIONS

- A. Applicator shall conform with all local, state and federal regulations including those set forth by OSHA, RCRA and the EPA and any other applicable authorities.

1.9 10 YEAR LIMITED WARRANTY

- A. The coating manufacturer shall warrant the liner against failure for a period of 10 years. "Failure" will be deemed to have occurred if the protective lining fails to (a) prevent the internal damage or corrosion of the structure (b) protective the substrate and environment from contamination by contact with raw sewage and/or components commonly associated raw sewage. If any such failure within 10 years of initial completion of work on a structure, the coatings manufacturer will repair the damage and restore the lining at no cost to the Owner within 60 days after written notification of the failure. "Failure" does not include damage resulting from mechanical or chemical abuse or act of God. Mechanical or chemical abuse means exposing the lined surfaces of the structure to any mechanical force or chemical substance not customarily present or used in connection with structures of the type involved.
- B. Applicator shall warrant all work against defects in materials and workmanship for a period of one (1) year, unless otherwise noted, from the date of final acceptance of the project. Applicator shall, within a reasonable time after receipt of written notice thereof, repair defects in materials or workmanship which may develop during said one (1) year period, and any damage to other work caused by such defects or the repairing of same, at his own expense and without cost to the Owner.

PART 2 PRODUCTS**2.1 MANUFACTURER**

- A. Spectra Tech Manhole Maintenance and Rehabilitation ("Spectrashield"), Noblesville, IN,
- B. OBIC Armor
- C. Quadex Products
- D. Sauereisen SewerGard

2.2 REPAIR MATERIALS

- A. Repair materials shall be used to fill voids, structurally reinforce and/or rebuild surfaces, etc. as determined necessary by the engineer and protective coating applicator. Repair materials must be compatible with the specified epoxy coating and shall be applied in accordance with the manufacturer's recommendations.
- B. The following products may be accepted and approved by the protective coating manufacturer and could be used within the specifications:
 - 1. 100% solids, solvent-free epoxy grout that can be troweled or sprayed and specifically formulated for optimum epoxy top coating compatibility. The epoxy grout manufacturer shall provide instructions for epoxy top coating procedures.

2.3 MATERIALS AND EQUIPMENT

- A. The materials to be utilized in the lining of manholes shall be designed and manufactured to withstand the severe effects of hydrogen sulfide in a wastewater environment. Manufacturer of corrosion protection products shall have long proven experience in the production of the lining products utilized and shall have satisfactory installation record.
- B. A minimum of 5,000 psi or as approved hydro blasting equipment shall be used to remove debris and corroded materials from the surfaces to be coated.
- C. Equipment for installation of lining materials shall be high quality grade and be as recommended by the manufacturer.
- D. The lining system to be utilized for manhole structures shall be the manufacturer's standard product as listed above and as recommended for the application involved.

PART 3 EXECUTION**3.1 INSPECTION**

- A. Prior to conducting any work, perform inspection of structure to determine need for protection against hazardous gases or oxygen depleted atmosphere and the need for flow control or flow diversion. Submit plan for flow control or bypass to Owner/Engineer for approval prior to conducting the work.

3.2 SURFACE PREPARATION

- A. Conduct surface preparation program to include monitoring of atmosphere of hydrogen sulfide, methane, low oxygen or other gases approved flow control equipment, and hydro-blasting equipment.

- B. Hydro blasting equipment shall remove all debris and corrosion from surface to be coated. Final surfaces shall be a cleaned, dry surface ready for liner application.
- C. After completion of surface preparation, blasting phase, perform the seven point checklist, which is the inspection for:
 - 1. Leaks
 - 2. Cracks
 - 3. Holes
 - 4. Exposed rebar
 - 5. Inlet and outlet pipe condition
- D. After the defects in the structure are identified, repair all leaks with a chemical or hydraulic sealant designed for use in field sealing of ground water. Sever cracks shall be "repaired with a urethane based chemical" sealant. Product to be utilized shall be as approved by Owner/Engineer prior to installation. Repairs to exposed rebar, defective pipe penetrations or inverts, etc. shall be repaired utilizing non-shrink grout or approved alternative method.

3.3 MATERIAL INSTALLATION

- A. The limits of the corrosion protection system shall be all exposed concrete surfaces including walls, tap sections, risers, etc., unless otherwise directed by the Owner/Engineer.
- B. Application of multi-component system shall be in strict accordance with manufacturer's recommendation. Final installation shall be a minimum of 500 mils. A permanent identification number and date of work performed shall be affixed to the structure in a readily visible location.
- C. Provide final written report to Owner/Engineer detailing the location, date of report, and description of repair.

3.4 INSPECTION

- A. Final concrete/brick structure corrosion protection system shall be completely free of pinholes or voids. Entire exposed concrete surface shall be protected with corrosion protection system. Liner thickness shall be the minimum value as described here.

3.5 REPAIR OF DEFECTS

- A. All defects identified during inspection such as pinholes, low film mileage, etc. shall be repaired with same material.

3.6 MEASUREMENT AND PAYMENT

- A. No separate payment. Include in other LUMP SUM bid prices.

END OF SECTION

SECTION 09960

COATING SYSTEMS FOR UTILITY FACILITIES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Preparation of surfaces which are to receive field painting and application of field applied painting and coatings.
- B. Intent: The intent of work under this Section is to clean and paint all new pipe surfaces installed under this contract.

1.2 RELATED SECTIONS

- A. DIVISION 3 – CONCRETE.
- B. Section 13000 – PLANT PIPEWORK.

1.3 REFERENCES

- A. ANSI/NSF 61 - Drinking Water System Components - Health Effects.
- B. ASTM D 16 - Terminology Relating to Paint, Varnish, Lacquer, and Related Products.
- C. ASTM D 4263 - Indicating Moisture in Concrete by the Plastic Sheet Method.
- D. ASTM F 1869 - Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.
- E. AWWA C 652 - Disinfection of Water-Storage Facilities.
- F. AWWA D 102 - Painting Steel Water Storage Tanks.
- G. International Concrete Repair Institute (ICRI) Guideline No. 03732 - Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays.
- H. SSPC-SP 1 - Solvent Cleaning.
- I. SSPC-SP 2 - Hand Tool Cleaning.
- J. SSPC-SP 6/NACE 3 - Commercial Blast Cleaning.
- K. SSPC-SP 10/NACE 2 - Near-White Metal Blast Cleaning.
- L. SSPC-SP 11 - Power Tool Cleaning to Bare Metal.
- M. SSPC-SP 13/NACE 6 - Surface Preparation of Concrete.
- N. Standard 500-0304 National Association of Pipe Fabricators (NAPF) Abrasive Blast Cleaning for Ductile Iron Pipe.

1.4 DEFINITIONS

- A. Definitions of Painting Terms: ASTM D 16, unless otherwise specified.
- B. Dry Film Thickness (DFT): Thickness of a coat of paint in fully cured state measured in mils (1/1000 inch).

1.5 SUBMITTALS

- A. Comply with Section 01300 - Submittal.
- B. Product Data: Submit manufacturer's product data for each coating, including generic description, complete technical data, surface preparation, and application instructions.
- C. Color Samples: Submit manufacturer's color sample cards showing full range of standard colors. Before any paint is applied, a color schedule will be furnished to the Contractor.
- D. Manufacturer's Quality Assurance: Submit manufacturer's certification that coatings comply with specified requirements and are suitable for intended application.
- E. Applicator's Quality Assurance: Submit list of a minimum of 5 completed projects of similar size and complexity to this Work. Include for each project:
 - 1. Project name and location.
 - 2. Name of owner.
 - 3. Name of contractor.
 - 4. Name of engineer.
 - 5. Name of coating manufacturer.
 - 6. Approximate area of coatings applied.
 - 7. Date of completion.
- F. Warranty: Submit manufacturer's standard warranty.

1.6 QUALITY ASSURANCE

- A. Manufacturer's Qualifications:
 - 1. Specialize in manufacture of coatings with a minimum of 10 years successful experience.
 - 2. Able to demonstrate successful performance on comparable projects.
 - 3. Single Source Responsibility: Coatings and coating application accessories shall be products of a single manufacturer.
- B. Applicator's Qualifications:
 - 1. Experienced in application of specified coatings for a minimum of 5 years on projects of similar size and complexity to this Work.
 - 2. Applicator's Personnel: Employ persons trained for application of specified coatings.
- C. Preapplication Meeting: Convene a preapplication meeting before start of application of coating systems. Require attendance of parties directly affecting work of this section, including Contractor, Engineer, applicator, and manufacturer's representative. Review the following:
 - 1. Environmental requirements.
 - 2. Protection of surfaces not scheduled to be coated.
 - 3. Surface preparation.
 - 4. Application.
 - 5. Disinfection.
 - 6. Repair.
 - 7. Field quality control.
 - 8. Cleaning.
 - 9. Protection of coating systems.
 - 10. One-year inspection.
 - 11. Coordination with other work.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying:

1. Coating or material name.
2. Manufacturer.
3. Color name and number.
4. Batch or lot number.
5. Date of manufacture.
6. Mixing and thinning instructions.

B. Storage:

1. Store materials in a clean dry area and within temperature range in accordance with manufacturer's instructions.
2. Keep containers sealed until ready for use.
3. Do not use materials beyond manufacturer's shelf life limits.

C. Handling: Protect materials during handling and application to prevent damage or contamination.

1.8 ENVIRONMENTAL REQUIREMENTS

A. Weather:

1. Air and Surface Temperatures: Prepare surfaces and apply and cure coatings within air and surface temperature range in accordance with manufacturer's instructions.
2. Surface Temperature: Minimum of 5 degrees F (3 degrees C) above dew point.
3. Relative Humidity: Prepare surfaces and apply and cure coatings within relative humidity range in accordance with manufacturer's instructions.
4. Precipitation: Do not prepare surfaces or apply coatings in rain, snow, fog, or mist.
5. Wind: Do not spray coatings if wind velocity is above manufacturer's limit.

B. Ventilation: Provide ventilation during coating evaporation stage in confined or enclosed areas in accordance with AWWA D 102.

C. Dust and Contaminants:

1. Schedule coating work to avoid excessive dust and airborne contaminants.
2. Protect work areas from excessive dust and airborne contaminants during coating application and curing.

1.9 PROTECTION

A. Adequately protect other surfaces from paint and damage. Repair damage as a result of inadequate or unsuitable protection.

B. Furnish sufficient drop cloths, shields, and protective equipment to prevent spray or droppings from fouling surfaces not being painted and in particular, surfaces within storage and preparation area.

C. Place cotton waste, cloths, and material which may constitute a fire hazard in closed metal containers and remove daily from site.

D. Remove or mask-off electrical plates, name plates, surface hardware, fittings, and fastenings, prior to painting operations. If removed, these items shall to be carefully stored, cleaned, and replaced on completion of work in each area. Do not use solvent to clean hardware that may remove permanent lacquer finish.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Tnemec Company Incorporated, 6800 Corporate Drive, Kansas City, Missouri 64120-1372, or as approved equivalent.
1. Polyamidoamine Epoxy, TNEMEC Series N140 Pota-Pox Plus
 2. Polyamidoamine Epoxy, TNEMEC Series N69 Hi-Build Epoxoline II
 3. HDP Acrylic Polymer, TNEMEC Series 1029 Enduratone
 4. Modified Polyamidoamine Epoxy, TNEMEC Series 135 Chembuild
 5. Modified Alkyd, TNEMEC Series 10 TNEMEC Primers
 6. Waterborne Cementitious Acrylic, TNEMEC Series 130 Envirofill
 7. Waterborne Acrylic Epoxy, TNEMEC Series 113/114 H.B. Tneme-Tufcoat
 8. Epoxy Modified Cementitious Mortar, TNEMEC Series 218 MortarClad
 9. Waterborne Modified Epoxy Primer, TNEMEC Series 151 Elasto Grip FC.
 10. High-build Elastomeric Coating, TNEMEC Series 156, Enviro-Crete.

2.2 COATING SYSTEMS FOR NEW STEEL, DUCTILE AND CAST IRON IN WET WELL, VALVE VAULT AND MISCELLANEOUS STEEL, PIPING, VALVES AND EQUIPMENT.

- A. Interior Exposed/New Piping and Equipment:
1. System Type: Epoxy.
 2. Surface Preparation by Fabricator or Supplier: Steel by SSPC-SP 10 – Near White Blast Cleaning, ductile and cast iron by National Association of Pipe Fabricators (NAPF) Standard 500-03-04 Abrasive Blast Cleaning for Ductile Iron Pipe to achieve a minimum 1.5 mil angular surface profile.
 3. Primer by Fabricator or Supplier: Tnemec Series N140 Pota-Pox Plus; DFT 3.0 to 5.0 dry mils. Touch up damaged primer on site with Series N69 Hi-Build Epoxoline. DFT 3.0 to 5.0 mils.
 4. Intermediate Coat on site BEFORE installation: Series N69 Hi-Build Epoxoline II. DFT 4.0 to 6.0 mils.
 5. Finish Coat on site BEFORE installation: Series N69 Hi-Build Epoxoline II. DFT 4.0 to 6.0 mils.
 6. Total DFT: 11.0 to 17.0 mils.
- B. Interior Exposed/Marginally Prepared Existing Surfaces (Maintenance, Non-Immersion):
1. System Type: Epoxy.
 2. Surface Preparation: Clean failed areas in accordance with SSPC-SP11 Power Tool Cleaning to Bare Metal. Feather the transition between intact paint and exposed primer and substrate, and spot prime exposed primer and substrate to make flush with surrounding intact paint. Scarify all surfaces to a dull finish.
 3. Spot Primer: Series 135 Chembuild. DFT 4.0 to 6.0 mils.
 4. Intermediate Coat: Series 135 Chembuild. DFT 4.0 to 6.0 mils.
 5. Finish Coat: Series 135 Chembuild. DFT 4.0 to 6.0 mils.
 6. Total DFT: 8.0 to 12.0 mils.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions under which coating systems are to be applied. Notify Engineer in writing of areas or conditions not acceptable. Do not begin surface preparation or application until unacceptable areas or conditions have been corrected.

3.2 PROTECTION OF SURFACES NOT SCHEDULED TO BE COATED

- A. Protect surrounding areas and surfaces not scheduled to be coated from damage during surface preparation and application of coatings.

- B. Immediately remove coatings that fall on surrounding areas and surfaces not scheduled to be coated.

3.3 SURFACE PREPARATION OF STEEL

- A. Prepare steel surfaces in accordance with manufacturer's instructions.
- B. Fabrication Defects:
 1. Correct steel and fabrication defects revealed by surface preparation.
 2. Remove weld spatter and slag.
 3. Round sharp edges and corners of welds to a smooth contour.
 4. Smooth weld undercuts and recesses.
 5. Grind down porous welds to pinhole-free metal.
 6. Remove weld flux from surface.
- C. Ensure surfaces are dry.
- D. Immersion or Below Grade Surfaces: Remove visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter in accordance with SSPC-SP 10/NACE 2.
- E. Exterior Exposed or Interior Exposed Surfaces: Remove visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter in accordance with SSPC-SP 6/NACE 3.
- F. Existing Marginally Prepared Surfaces (Maintenance): Remove visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, loose and poorly adhere paint, and other foreign matter in accordance with SSPC-SP 11.
- G. Abrasive Blast-Cleaned Surfaces: Coat abrasive blast-cleaned surfaces with primer before visible rust forms on surface. Do not leave blast-cleaned surfaces uncoated for more than 8 hours.
- H. Shop Primer: Prepare shop primer to receive field coat in accordance with manufacturer's instructions.

3.4 SURFACE PREPARATION OF DUCTILE OR CAST IRON

- A. Prepare ductile or cast iron surfaces in accordance National Association of Pipe Fabricators (NAPF) Standard 500-0304 Abrasive Blast Cleaning for Ductile Iron Pipe.
- B. Ensure surfaces are clean, dry, and free of oil, grease, dirt, dust, and other contaminants.

3.5 APPLICATION

- A. Apply coatings in accordance with manufacturer's instructions.
- B. Mix and thin coatings, including multi-component materials, in accordance with manufacturer's instructions.
- C. Keep containers closed when not in use to avoid contamination.
- D. Do not use mixed coatings beyond pot life limits.
- E. Use application equipment, tools, pressure settings, and techniques in accordance with manufacturer's instructions.
- F. Uniformly apply coatings at spreading rate required to achieve specified DFT.

- G. Apply coatings to be free of film characteristics or defects that would adversely affect performance or appearance of coating systems.
- H. Stripe paint with brush critical locations on steel such as welds, corners, and edges using specified primer.

3.6 REPAIR

- A. Materials and Surfaces Not Scheduled To Be Coated: Repair or replace damaged materials and surfaces not scheduled to be coated.
- B. Damaged Coatings: Touch-up or repair damaged coatings. Touch-up of minor damage shall be acceptable where result is not visibly different from adjacent surfaces. Recoat entire surface where touch-up result is visibly different, either in sheen, texture, or color.
- C. Coating Defects: Repair in accordance with manufacturer's instructions coatings that exhibit film characteristics or defects that would adversely affect performance or appearance of coating systems.

3.7 FIELD QUALITY CONTROL

- A. Inspector's Services:
 - 1. Verify coatings and other materials are as specified.
 - 2. Verify surface preparation and application are as specified.
 - 3. Verify DFT of each coat and total DFT of each coating system are as specified using wet film and dry film gauges.
 - 4. Coating Defects: Check coatings for film characteristics or defects that would adversely affect performance or appearance of coating systems.
 - a. Check for holidays on interior steel immersion surfaces using holiday detector.
 - 5. Report:
 - a. Submit written reports describing inspections made and actions taken to correct nonconforming work.
 - b. Report nonconforming work not corrected.
 - c. Submit copies of report to Engineer and Contractor.
- B. Manufacturer's Field Services: Manufacturer's representative shall provide technical assistance and guidance for surface preparation and application of coating systems.

3.8 CLEANING

- A. Remove temporary coverings and protection of surrounding areas and surfaces.

3.9 PROTECTION OF COATING SYSTEMS

- A. Protect surfaces of coating systems from damage during construction.

3.10 ONE-YEAR INSPECTION

- A. Owner will set date for one-year inspection of coating systems.
- B. Inspection shall be attended by Owner, Contractor, Engineer, and manufacturer's representative.
- C. Repair deficiencies in coating systems as determined by Engineer in accordance with manufacturer's instructions.

3.11 FACTORY FINISHED ITEMS

- A. Do not field paint items of equipment having factory applied final finishes which are acceptable to the Engineer, unless otherwise specified. This includes such items as electrical equipment, aluminum windows, lighting fixtures, glass, unit heaters, exhaust fans and other prefinished items. This does not apply to valves and other machinery which shall be field painted.
- B. However, touch up all damaged areas in the factory applied finish with MATCHING paint, except surfaces which are extensively damaged, the entire equipment shall be repainted by a skilled painter, all as approved.

3.12 ITEMS AND AREAS NOT TO BE PAINTED

- A. Aluminum items.
- B. Plastic and PVC piping.
- C. Fiberglass items.
- D. Stainless Steel items.
- E. Factory finished control panels, electrical cabinets, and equipment, unless otherwise damaged during shipment and/or installation.

END OF SECTION

SECTION 11201

MISCELLANEOUS EQUIPMENT

PART 1 GENERAL

1.1 WORK INCLUDED

- A. Provide miscellaneous equipment as follows:

1.2 RELATED WORK

- A. DIVISION 2 – SITEWORK.
- B. Section 13000 - PLANT PIPEWORK.

1.3 SUBMITTALS

- A. Submit manufacturer's literature, descriptions and detail of each item of equipment furnished under this section showing details of each item of equipment, materials of construction, maintenance provisions, capacities, installation recommendations, parts lists, O&M Manuals and other pertinent data.

PART 2 PRODUCTS

2.1 ACCESS HATCH FOR WET WELLS AND VALVE VAULTS

- A. These shall be ITT "Safe Hatch", Halliday Products "Retro-Grate" or as approved equivalent, heavy duty construction, designed for 300 PSF load rating in accordance with OSHA Standard 1910.23 and the confined space entry shall be in accordance with OSHA standard 1910.146. The covers shall be sized as indicated or, for wet wells, as recommended by the pump supplier for pump removal. The access cover shall allow visual inspections, limited maintenance and level system adjustment while safety grate is left in place. The safety grate shall be orange in color to promote a visual awareness of the hazard. The material of the access cover bars, angles, and extrusions shall be 6061-T6. The diamond deck plate shall be constructed of 5086 aluminum. The access frame and bearing plate shall be cast into the concrete. Each access cover with safety grates shall be supplied with a heavy duty, stainless steel, pneu-spring for ease of operation when opening. The grate shall be counter-balanced for ease of opening. Each unit shall be equipped with a 316 stainless steel hold open arm and shall lock in the 90 degree position. The aluminum lift handle shall be recessed and the stem-lock assembly will be fitted to the deck plate. A special key for the slam lock will be provided. The hatch shall also be fitted to be locked with an Owner furnished padlock.
- B. Wet Wells: 1 @ 36" x 78".
- C. Valve Vaults: 1 @ 48" x 48".

2.2 MISCELLANEOUS STAINLESS STEEL ITEMS

- A. Stainless Steel Items: These shall be factory fabricated assemblies, size as indicated, with smooth mill finish, Type 304 (18-8) stainless steel or as approved.
- B. Stainless Steel Anchor Bolts: These shall be Hilti Type 304 (18-8) stainless steel or as approved.

2.3 MAGNETIC FLOW METER FOR RAW SEWAGE

- A. Meter: The flow meter (4 required) shall be a Endress+Hauser Promag W400 Series, MJK Mag Flux System or as approved equivalent, flanged sensor which complies with AWWA C751 and transmitter which may be mounted remote with interconnecting cables, with a flow range and size as follows and shall be microprocessor-based and possess a non-volatile memory to store the sensor calibration and transmitter setup information. The sensor shall consist of a stainless steel flow tube with ANSI B16.5 or AWWA C207 stainless steel flanges, Class 150. The sensor liner and electrode material shall be chosen to be compatible with the process fluid. The sensor tube shall be lined with polyurethane, in accordance with NSF-61. The sensor shall house two measuring electrodes, a grounding electrode, and one for physical empty pipe detection. The electrodes shall be bullet-nosed shaped and made of 316L stainless steel. The external sensor housing shall enclose the coil assemblies and internal wiring. The materials shall be designed and constructed to prevent moisture ingress and promote corrosion resistance. The sensor shall be rated for NEMA 4X service as standard.
1. Billy Maher: 8 inch; from range 90 to 2,600 gpm.
 2. Raner Creek: 8 inch; from range 90 to 2,600 gpm.
 3. Shadowlawn: 8 inch; from range 90 to 2,600 gpm.
 4. Brunswick Valley: 4 inch; flow range 16 to 650 gpm.
- B. Transmitter: The transmitter shall be a three-stage microprocessor controller mounted remotely. The transmitter shall incorporate a universal 100-240 VAC/18-30 VDC power supply. The transmitter housing will carry a NEMA 4X rating and shall be constructed to prevent moisture ingress, promote corrosion resistance, and be impervious to saline environments. The transmitter shall allow local programming that can be operated through the enclosure window without opening the electrical enclosure. The transmitter display shall indicate simultaneous flow rate and total flow with 3 totalizers (forward, reverse and net total) and user-selectable engineering units, readout of diagnostic error messages, and support 12 standard languages. The transmitter output shall be specified, as either: 4-20mA HART®, pulse/frequency/switch or a standard, unmodified form of Ethernet (ex. EtherNet/IP™), or as required. The transmitter output(s) shall be integral to the magnetic flowmeter transmitter electronics. The transmitter shall retain all setup parameters and accumulated measurements internally in non-volatile memory in the event of power failure. The memory unit shall be transferrable from a damaged unit or used for a duplicate device with no loss of device parameters or data stored. The transmitter shall be protected against voltage spikes from the power source with internal transient protection. Power consumption shall be no more than 16 VA, independent of meter size. The transmitter shall provide access to service and monitoring parameters designed to identify transient or permanent process influences. The transmitter and sensor shall include a method to verify flow meter performance to the original manufacturer specifications.
- C. Accessories: Provide stainless steel tag - labeled to match the contract documents. Provide grounding rings, as per manufacture's recommendations, if required.
- D. Calibration: Magnetic flow meters shall be factory calibrated on an ISO-17025 accredited test stand per "General Requirements for the Competence of Testing and Calibration Laboratories" with certified accuracy traceable to NIST. Evidence of accreditation shall originate from a national verification agency such as A2LA. The meter shall ship with a certificate of a 2-point calibration report exceeding stated standard accuracy of 0.5% of rate. A real-time computer generated printout of the actual calibration data points shall indicate apparent and actual flows. The flow calibration data shall be confirmed by the manufacturer and shipped with the meter to the project site. The manufacturer shall provide complete documentation covering the traceability of all calibration instruments. The manufacturer shall provide ISA data sheet ISA-TR20.00.01 as latest revision of form 20F2321. The manufacturer shall complete the form with all known data and model codes and dash out the inapplicable fields.
- E. Safety: All electrical equipment shall meet the requirements of ANSI/NFPA 70, National Electric Code latest edition. Electrical equipment housing shall conform to NEMA 4X classification.

- F. Installaton: Install generally as shown on installation details and as recommended by the manufacturer's installation and operation manual.
- G. Field Quality Control: Provide Manufacturers Field Services for start-up and commissioning by a Factory field service representative or a manufacturer's authorized service provider (ASP) – the warranty against manufacturing defects is three years. Manufacturer representative shall verify installation of all installed flow tubes and transmitters. Manufacturer representative shall notify the ENGINEER in writing of any problems or discrepancies and proposed solutions. Manufacturer representative shall perform field verification at the time of installation for long-term analysis of device linearity, repeatability and electronics health. A comparative report shall be generated for the meter tested. Manufacturer representative shall generate a configuration report for each meter.

PART 3 EXECUTION

NOT USED.

END OF SECTION

Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

SECTION 13000
PLANT PIPEWORK

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Work includes piping, valves and related accessories that generally are above ground. Underground piping is generally specified in Section 02664 - UNDERGROUND YARD PIPING.

1.2 RELATED SECTIONS

- A. DIVISION 2 - SITEWORK.
- B. Section 02664 - UNDERGROUND YARD PIPING.
- C. DIVISION 3 - CONCRETE.
- D. Section 05500 - METAL FABRICATION.
- E. DIVISION 11 - EQUIPMENT.
- F. DIVISION 13 - SPECIAL CONSTRUCTION.
- G. DIVISION 16 - ELECTRICAL.

1.3 SUBMITTALS

- A. Submit manufacturer's data, layout drawings, list of materials takeoff and related items for all work included in this Section.
- B. Submit under provisions of Section 01300.

1.4 COORDINATION OF PIPEWORK

- A. Coordinate the work of this Section with that of all other Sections in which pipework is specified, so that all pipework and related items indicated on the overall contract drawings will be provided without duplication and without omissions.

1.5 PIPE SIZES AND ARRANGEMENTS

- A. These shall be as indicated, except that subject to prior approval, minor changes may be made if necessary to accommodate the actual equipment furnished. Unless otherwise indicated, install all exposed pipework parallel or at right angles to beams, walls, ceilings, or other building and structure lines, straight, true and plumb to line, in a neat, pleasing, and workmanlike manner, all as approved.

PART 2 PRODUCTS

2.1 HANGERS AND SUPPORTS

- A. All hangers, concrete anchors, other anchors, nuts, bolts, washers, brackets, hanger rods, and all other devices shall be Type 304, 316, 18-8 or other suitable stainless steel or cast or ductile iron. No steel devices coated or otherwise, will be accepted.

- B. Secure hangers, supports, and other devices to structures as specified below. Provide angle iron, pipe, or other suitable steel auxiliary pipe supports, as required. Where attachment method and/or anchorage material types are indicated, provide anchorage accordingly; OTHERWISE, anchorage shall be:
1. New construction: stainless steel anchor bolts, or iron concrete inserts cast-in-place in concrete, except that expansion anchors as specified below may be used for small pipework, and where approved. For pipes larger than 12" supported by concrete inserts, provide 2 No. 5 steel reinforcing rods through each insert yoke.
 2. Existing concrete construction: Hilti HY200 or as approved suitable epoxy and/or expansion anchors, each installed as recommended by its manufacturer to develop his full rated shear and pull-out rating of the anchor.
 3. Steel construction: stainless steel bolts and nuts, stainless steel clamps, or welded-on clips or lugs.
 4. Other construction: anchors suitable for the conditions involved.
- C. Hangers: Where types of hangers and spacings thereof are indicated, provide these accordingly; OTHERWISE, hangers and hanger spacings shall be:
1. Horizontal suspended pipes: standard stainless steel clevis type hangers, with the hanger manufacturer's recommended size stainless steel hanger rods, supporting nuts under the hangers, and stainless-steel locknuts above the hangers; as applicable to types and outside diameters of pipes involved.
 2. Maximum hanger spacings: 1/4" O.D. copper tubing, 4 feet; other 1" and smaller copper tubing and 1" and smaller pipe, 8 feet; and all copper tubing and pipe larger than 1", 10 feet. In all cases, place hangers at or sufficiently near elbows, tees, valves, other specialties, and risers to provide adequate pipework support.
- D. Floor Supports: Provide base elbows, concrete piers, metal pedestals, or other suitable supports for pipework supported by floor or other construction below pipework.
1. Maximum floor support spacings shall be as specified in paragraph above for hangers. In all cases, place floor supports at or sufficiently near elbows, tees, risers, valves, and other specialties to provide adequate pipework support.
- E. Underground Piping: Support underground piping with full-length bearing of pipe barrels on firm trench bottoms.

2.2 TYPES OF PIPES AND USAGES

- A. Types of pipes for the various usages shall be as specified below. Detailed requirements for the various types of pipes shall be specified in other Articles hereinafter.
1. Where pipe type is indicated on drawings: Provide the indicated type pipe ONLY.
 2. Where pipe type is NOT indicated on drawings: Provide types of pipe for various applications as follows:
- B. Ductile iron pipe shall be used for:
1. Underground and above ground gravity and pressure wastewater piping.
 2. Other locations where iron pipe is indicated or specified.
- C. Schedule 40 PVC piping shall be used for small diameter pressure water lines where indicated and underground and above ground drain lines.

2.3 DUCTILE IRON PIPE, FITTINGS, AND JOINTS

- A. Pipe: Ductile iron pipe shall conform to AWWA Specification C151 and shall have at least 150 psi working pressure rating. The raw material for ductile iron shall have an average minimum recycled content consisting of 90% scrap iron and steel. Ductile iron pipe (hereinafter referred to as "iron pipe") shall have outside coating, as specified below, and ends as required for the joint types specified or indicated for the various pipe locations and applications. MINIMUM wall thickness and MINIMUM thickness classes at all points, including in bottoms of surface depressions, shall be as tabulated below. All wastewater

piping shall have special epoxy lining. Special epoxy lining shall be "Protector 401" ceramic epoxy lining as manufactured by Protector Division of Vulcan Painters, Inc., Bessemer, Alabama or as approved, applied to a blast cleaned interior pipe surface and holiday tested with a high voltage tester.

<u>Pipe Size</u>	<u>Wall Thickness</u>	<u>Thickness Class</u>
4"	0.26"	51
6"	0.25"	50
8"	0.27"	50
10"	0.29"	50
12"	0.31"	50
14"	0.33"	50

- B. Outside Coating:
- Buried and non-exposed piping shall have outside bituminous coating.
 - All exposed piping, submerged, non-submerged, interior and exterior: outside of piping shall be shop or field blast cleaned to SSPC SP10 Near White Blast condition for submerged piping and SSPC SP6 Commercial Blast condition for all other exposed piping and primed with TNEMEC Series N140 Porta-Pox Plus, or an equal epoxy primer which is recommended by the coating manufacturer for submerged service in wastewater and is compatible with the field painting specified in Section 9960. Apply the primer to at least the manufacturer's recommended dry film thickness.
- C. Minimum wall thickness for screwed-on flanges or grooved ends: As specified in Section 02664.
- D. Fittings for Ductile Iron Pipe: These shall be ductile iron short body pattern conforming to AWWA Specification C110, Class 150 or heavier, with special lining and outside coating as specified above, and flanged or mechanical joint ends ONLY as specified or indicated for the various pipe locations and applications.
- E. Flanged Joints: These shall be ANSI Class 125 faced and drilled flanges, with plain rubber full face or ring gaskets, standard steel square or hexagon head bolts, and standard steel hexagon nuts. Flanges shall be especially designed and sized for the pipe involved, with counterbored long hubs completely covering the pipe threads. Use flanged joints at the following locations:
- All above ground piping, unless otherwise specified or indicated.
 - At all connections to items having flanged ends.
 - At other locations where flanged joints are indicated or required.
- F. Mechanical Coupling Joints: These shall be Smith-Blair (Rockwell), Dresser, or Victaulic type, as follows:
- Smith-Blair (Rockwell) couplings shall be Style 431 cast type, Dresser couplings shall be Style 53 cast type for ductile iron pipe, Style 62 for joining ductile iron to steel pipe; each with plain rubber gaskets. Where necessary to prevent joints from separating under pressure, provide suitable tie rods attached to pipe on each side of coupling with suitable clamps.
 - Victaulic couplings shall be Style 31, with grade H or T gaskets. Pipe ends shall be properly grooved to accommodate these couplings.
 - Where mechanical type couplings are indicated by specific type, use the indicated type only; otherwise, use either of the above specified types where mechanical couplings are indicated.
 - Also, subject to prior approval, either of the above specified types of mechanical couplings may be used where other types of joints are neither indicated nor specified.

- G. Mechanical and Push-On Joints: These shall conform to AWWA Specification C111, with plain rubber gaskets, EXCEPT THAT ALL UNDERGROUND FITTINGS SHALL HAVE MECHANICAL JOINTS. Use these at the following locations:
 - 1. Where indicated.
 - 2. In underground piping, except where other types of joints are specified hereinafter; push-on joints may be used on pipe, but not on fittings.
- H. Joints in Wall Sleeves and Wall Pipes: See WALL SLEEVES, WALL SEALS, WALL PIPES, AND SPECIAL FITTINGS, hereinafter.
- I. Certificates: Submit a certificate from the manufacturers certifying that all ductile iron pipe and fittings furnished for this project comply with the above specifications.
- J. Special Strength Requirements: Each ductile iron pipe which passes under a structure footing shall have sufficient strength to safely withstand the footing loading in addition to other loadings.
- K. Layout Drawings: See Section 02664.

2.4 VALVES AND RELATED ACCESSORIES

- A. General:
 - 1. Type of valve required for each individual location and application shall be as indicated. Detailed requirements of the various types of valves shall be as specified below.
 - 2. Where the type of valve is not indicated or specified, use one of the types specified below as suitable for the conditions involved.
 - 3. Unless otherwise indicated, underground cut-off valves for cast iron and ductile iron pipe may be either gate or butterfly type.
- B. Resilient Seat Gate Valves: These shall be iron body, modified wedge disc type, conforming to AWWA Specification C509, as manufactured by Mueller, American, M&H, or U.S. Pipe. Each valve shall have "O" ring type stem seal, standard two inch AWWA operating nut, and shall be opened by Counter-Clockwise stem rotation. Except where otherwise specified, indicated, or required for the application involved, all gate valve ends shall be flanged or AWWA Specification C111 mechanical joint type, with plain rubber gaskets.
- C. Extension Stems: Provide extension stems as indicated and/or required to facilitate operation of inaccessible valves. Extension stem assemblies shall be standard types as furnished by the manufacturers of the valves involved, each complete with Schedule 40 stainless steel pipe stems and cast iron hardware to attach stems to valves, steady bearings, brackets or floor stands, and handwheels.
- D. Check Valves: These shall be 125 pound swing type, flanged iron body bronze mounted or screwed bronze, as applicable, M&H, Mueller, or equal. All swing check valves shall be non-slam type, with outside levers and springs.

2.5 WALL SLEEVES, WALL SEALS AND WALL PIPES

- A. General:
 - 1. Provide wall sleeves, wall seals, or wall pipes at each location where a pipe enters or passes through the concrete wall, ceiling, or floor of a basin or structure which will normally contain water, and at each location where an underground pipe passes through a concrete structure exterior wall, whether indicated on the drawings or not, all to provide strictly leakproof joints between pipes and concrete structures.
 - 2. Where type is indicated: provide EXACTLY the indicated type of water seal.
 - 3. Where type is NOT indicated: provide one of the following water seal type, as applicable and suitable for the conditions involved:
 - a. Underground or otherwise in contact with ground: iron wall pipe ONLY.

- b. Aboveground, connecting to a water containing concrete structure: iron wall pipe or iron mechanical joint wall sleeve.
 - c. Where an underground pipe passes through the exterior wall of a non-water containing structure: iron mechanical joint wall sleeve.
 - d. Where an aboveground pipe passes through the exterior wall of a non-water containing structure: iron mechanical joint wall sleeve or an iron or steel sleeve with compression rubber seal.
 - B. Iron Wall Pipes: These shall be cast iron or ductile iron conforming to applicable requirements of CAST IRON AND DUCTILE IRON PIPE, FITTINGS AND JOINTS, hereinbefore, each with an integral water stop collar, and plain, flanged, or mechanical joint hub ends as indicated. Unless otherwise indicated: mechanical joint ends and flanged ends shall have bolt holes tapped for studs, and shall be set flush with concrete surfaces.
 - C. Iron Wall Sleeves: These shall be cast iron or ductile iron conforming to applicable requirements of CAST IRON AND DUCTILE IRON PIPE, FITTINGS AND JOINTS hereinbefore, each with an integral water stop collar and mechanical joint hub ends with bolt holes tapped for studs. Set hub ends flush with concrete surfaces.
- 2.6 PRESSURE GAGES AND DIAPHRAGM SEALS AND SAMPLE FACETS
- A. Pressure gages: these (2 required) shall be standard indicating dial type, liquid-filled; with mini-diaphragm seal, all stainless steel construction, 4 ½ inch minimum size dial, 0 to 30 psi range, 1/4 or ½ inch NPT bottom connection, with pointer travel at least 200 degrees, and will all standard features, as manufactured by Ashcraft, Metek, Marshalltown, Weiss or as approved.
 - B. Cut-off Valves, Fittings and Nipples: Provide a brass ball valve, brass hose facet and brass nipples and fittings for each pressure gauge arrangement.
 - C. Pipe Tap: Provide a 1/2 inch NPT tap in the top of the ductile iron pipe immediately downstream of the gate valve on each pump.
 - D. Ball Valves: These shall be Crane brass or bronze type with Teflon seats, blow-out proof stems, lever handles, at least 300 psi WOG ratings, and threaded ends as applicable.
- 2.7 PVC DRAIN PIPE, FITTINGS, AND JOINTS
- A. PVC pipe shall be Schedule 40, Type 1 rigid type, with Type 1 PVC socket fittings, and solvent welded joints. Provide suitable PVC threaded-to-socket adapters where required to connect PVC pipe to threaded openings. Use Teflon pipe joint tape on all threaded joints.
 - B. Make up solvent welded joints in accordance with piping and solvent manufacturer's directions. Install PVC piping with ample flexibility to allow for free expansion and contraction, without putting excessive stress on piping supports, or equipment. Provide a PVC union at each piping connection to each equipment item, so that piping can be disconnected from equipment without requiring cutting of piping, whether indicated on drawings or not. Use Teflon tape type joint compound on threaded joints.
- 2.8 WASTEWATER COMBINATION AIR AND VACUUM VALVES
- A. These (4 required) shall be A.R.I. D-020 (No substitutes), designed specially for sewage service and designed to exhaust large amounts of air during fillings, to release small amounts of accumulated air during operation and to admit large amounts of air during draining, complete with: 2" NPT inlet connections; stainless steel body and cover; stainless steel float, float rod, float rod, float arm and all other internal parts; 2" outlet; Buna-N orifice button and seat; drain plug; backflushing connection; blow off valves; quick disconnect couplings and 5 feet of flushing hose; and other standard features. Provide service saddle on carrier pipe, two stainless steel nipples and a brass ball valve between air release valve and pipeline.

PART 3 EXECUTION (NOT USED)

END OF SECTION

Attachment: SIGNED CONTRACT- 3-5-25 (3757 : ARPA Engineering Design Contract Amendment)

SECTION 16010

GENERAL PROVISIONS, ELECTRICAL

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Basic Electrical requirements specifically applicable to Division 16 Sections, in addition to Division 1 - General Requirements.
- B. General and procedural requirements for work specified under Sections of Division 16 shall be as required herein.

1.2 RELATED SECTIONS

- A. DIVISION 2 - SITEWORK.
- B. DIVISION 3 - CONCRETE.
- C. DIVISION 16 - ELECTRICAL.
- D. Section 16050 - BASIC MATERIALS AND METHODS, ELECTRICAL.

1.3 CONTRACTOR'S RESPONSIBILITY

- A. Contractor agrees to assume responsibility for liability, workmanship, and quality of materials concerning work sublet to others. Before contract is sublet, submit in writing the names of proposed subcontractor and obtain written approval therefor.

1.4 CODES AND FEES

- A. All work shall be installed in accordance with the applicable provisions of the local codes, the National Electrical Code, and the National Electrical Safety Code.
- B. All electrical materials shall have Underwriters' approval where applicable, and shall be so labeled where UL labeling is customary.
- C. All electrical equipment shall conform to applicable NEMA Standards whether specified hereinafter or not, and to other applicable Standards which may be specified hereinafter.
- D. Make all arrangements with electric utility company for their services and metering work, PAY ALL CHARGES THEREFOR, AND INCLUDE THE COST THEREOF IN CONTRACT PRICE.
- E. The Contractor shall be responsible for obtaining local permits, payment of fees and notification for inspection by code authorities consistent with the schedule of work.

1.5 ACCURACY OF DATA AND DRAWINGS

- A. Drawings and Data: Electrical drawings are generally diagrammatic, and where not dimensioned or detailed, indicate approximate locations and general arrangements of electrical work. All electrical work offsets, rises, and fittings are not necessarily shown; however, provide these as required by the conditions involved.
- B. Building and structure dimensions: TAKE FROM ACTUAL MEASUREMENTS MADE BY ELECTRICAL SECTION.
- C. Equipment NOT furnished by Electrical Section but requiring electrical connections: from other Sections and others furnishing this equipment, determine exact electrical connection

requirements therefor; locations and arrangements of electrical connections indicated for this equipment are APPROXIMATE ONLY.

1.6 EQUIPMENT LISTS, SHOP DRAWINGS, SAMPLES AND SUBMITTALS

- A. Submit under provisions of Section 01300 and General Conditions.
- B. Submit to the Engineer for approval, within 30 days after receipt of Notice to Proceed with the work, a complete list of materials, equipment and accessories proposed for use, including complete descriptions and specifications of any proposed substitutions, manufacturer's shop drawings, and roughing-in work. Submit five (5) copies of all items for approval and furnish additional copies if required for installation purposes.
- C. Submission material and all shop drawings for the various items of equipment shall be marked with the respective mark number or identification of the equipment shown on the drawings or specified. The shop drawings shall list all ratings, capacities, accessories, and other pertinent data to show that the proposed item is as called for and as specified.
- D. Shop drawings shall show sizes and details of required concrete and steel machine foundation, locations of anchor bolts, physical dimensions of equipment, capacity characteristics of equipment, and all other work pertinent to details. Concrete foundations are specified under "Concrete Work" section, but steel racks or stands for mechanical apparatus shall be furnished and installed as part of the mechanical work.

1.7 QUALITY CONTROL

- A. Comply with Section 00700 GENERAL CONDITIONS.
- B. Qualifications: Where specific qualifications are specified in individual specification section, provide required data with Subcontractor list.

1.8 GUARANTEE

- A. Comply with GENERAL CONDITIONS.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 EQUIPMENT INSTALLATION

- A. Install all equipment in accordance with applicable manufacturer's drawings and recommendations.
- B. Identification of circuits and equipment: Identification designations shall correspond to those indicated on electrical drawings and as specified in corresponding articles describing the equipment.

3.2 TEST, INSPECTIONS, ADJUSTMENTS, AND CLEANUP

- A. Wiring, 600 volts and less: Make insulation tests with a "Megger", demonstrate that neither short circuits nor ground faults exist, and that wiring complies with NEC.
- B. Furnish suitable testing equipment, give the Engineer and all applicable authorities ample advance notice of all proposed tests and readiness of work for inspections, and conduct each test in their presence, as approved. Do not conceal electrical work until all necessary inspections have been made and all required tests have been approved by the Owner's Representative and all applicable authorities.

- C. Put entire electrical system in operation, test all equipment, remedy all defects, and make all necessary adjustments. Demonstrate that the entire system functions satisfactorily, as specified, as indicated, and as approved.
- D. After electrical system has been tested and before any field painting is commenced, clean up all electrical work thoroughly. Remove all foreign matter which has accumulated in all fixtures, equipment, and enclosures. Clean all fixture glassware and reflectors, and clean and polish all other surfaces that are not to be painted so that they present a new and acceptable appearance.

3.3 PROTECTION AND CLEANING

- A. Work shall be protected at all times. Conduit openings shall be closed with caps or plugs until permanent connections are made.

3.4 OPERATING INSTRUCTIONS

- A. Furnish the services of a competent man (or men) to instruct the Owner's personnel in the proper operation and maintenance of all equipment, for a period of not less than one-half (½) working day.
- B. Furnish and deliver to the Owner three sets of operating instructions for all equipment installed under this contract, including shop drawings, piping diagrams, wiring diagrams, maintenance recommendations and information concerning replacement parts.

END OF SECTION

SECTION 16050

BASIC MATERIALS AND METHODS, ELECTRICAL

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Equipment and materials used in the work shall be in accordance with the contract documents; of the best quality and grade for the use intended; shall be new and unused; and shall be the manufacturer's latest standard or current model for which replacement parts are readily available.
- B. Work shall be installed under the constant supervision of a qualified superintendent and by skilled and qualified electricians.
- C. All apparatus and equipment shall be installed and connected in accordance with the best engineering practices and in accordance with the manufacturer's recommendations. All auxiliary wiring, relays, contactors, controllers, and electrical connections of any description recommended by the manufacturer and required for the proper operation of all items of equipment furnished under this contract shall be furnished and installed complete.
- D. Basic Electrical Requirements specifically applicable to Division 16 Sections, in addition to Division 01 - General Requirements.

1.2 RELATED SECTIONS

- A. DIVISION 2 - SITEWORK.
- B. DIVISION 16 - ELECTRICAL.
- C. Section 16010 - GENERAL PROVISIONS, ELECTRICAL.

1.3 SUBMITTALS

- A. Submit under provisions of Division 1.

1.4 ELECTRICAL WIRING FOR EQUIPMENT OF OTHER SECTIONS

- A. General:
 - 1. All electrical wiring of every description required to operate all equipment furnished by other Sections shall be done by the Electrical Section, except as otherwise specified hereinafter. Read carefully all other Sections in which electrically operated equipment is specified, and include in the electrical work all electric wiring required for the proper operation of the equipment, whether indicated on the electrical drawings or not. Coordinate the Electrical section work with that of all other Sections that furnish equipment requiring electrical connections.
 - 2. All control devices required to operate the equipment shall be furnished by the Section that furnishes the equipment, unless otherwise specified. All control devices which are not factory mounted on the equipment and require electrical connections ONLY shall be installed by the Electrical Section. All control devices which are not factory mounted on the equipment and require piping, linkage, remote bulb, or other mechanical connections as well as electrical connections shall be installed by the Section that furnishes the equipment involved, ready for electrical connections.
 - 3. Outlet locations indicated on the electrical drawings for motors, controls, and other electrically operated items of other Sections are APPROXIMATE ONLY, as the actual wiring requirements are not necessarily identical for the various makes of each item of equipment involved. However, the Electrical Section shall locate all outlets and arrange all wiring to properly serve the equipment ACTUALLY INSTALLED, generally

as indicated on the electrical drawings, but EXACTLY in accordance with rough-in sheets and/or wiring diagrams furnished by the other Sections involved.

4. The necessary wiring diagrams shall be furnished by the Section that furnishes the equipment involved, and after these are approved, do all wiring accordingly.
- B. Wiring NOT Included: Wiring which is factory installed on equipment.
- C. Wiring Included: Generally, equipment of other Sections requiring wiring, includes but shall not be limited to the following items:
1. Special construction: equipment connections.
 2. Special type wire (other than type MTW): If any of this is required for other Divisions, that wire shall be furnished by the other Divisions and installed under this Division.

PART 2 PRODUCTS

2.1 HANGERS, SUPPORTS, AND SLEEVES

- A. Hangers or supports for conduits and raceways shall be standard conduit or raceway straps, or other suitable clamping devices.
- B. Maximum hanger or support spacings for all conduits shall be as required by the Codes. Support non-concrete encased underground conduits by laying with full length bearing on firm trench bottoms. Support each riser conduit at each building floor level within one foot of floor and boxes, ten feet for vertical and horizontal runs; each shall have at least one support.
- C. Adequately support all boxes, switches, and other devices, and equipment. Where supporting method is indicated or detailed, provide supports accordingly; OTHERWISE, supports shall be as required by the Codes, and as approved.
- D. Provide all necessary sleeves for conduits and other electrical items passing through concrete and masonry construction, where electrical items are not installed prior to concrete placing and masonry laying. Sleeves through concrete walls, shall be IPS steel pipe or rigid steel conduit, flush with finished concrete surfaces.

2.2 CONDUIT AND FITTINGS, EXCEPT UNDERGROUND DUCTS

- A. Conduits: These shall be zinc coated rigid steel, ANSI Specification C80.5 rigid aluminum, Carlon Schedule 40 Certaineed PVC Schedule 40 or Cantex PVC Schedule 40 as approved UL listed heavy wall rigid PVC, as applicable. In each case where the conduit type is indicated, specified, or required by the Codes, install only the indicated, specified, or Code required type; OTHERWISE, conduit usage shall be as follows:
 1. Embedded in concrete: rigid steel coated with bituminous compound or PVC coated.
 2. In contact with ground: rigid steel coated with bituminous compound or PVC Schedule 40 conduit.
 3. For supporting fixture, outlet boxes, and other devices and equipment which are not directly anchored to the building structure: PVC Schedule 40 conduit, with all joints and connections glued.
 4. All other locations: rigid steel, rigid aluminum, or PVC conduit, as applicable.
- B. Conduit Fittings: For metallic conduit, fittings shall be zinc coated steel, cast aluminum, or cast zinc. For PVC conduit, fittings shall be of the same materials and make as those of the conduit. All fittings exposed to weather and inside Vortex towel shall be weatherproof type.
- C. Installation:
 1. General: ream ends of all conduits after cutting. Prior to wire pulling, keep all open conduit ends plugged, and swab out all trapped conduits in which water or moisture has collected. Where conduits are concealed in walls, install these conduits so that the exposed wall faces will not be marred.

2. PVC conduits: solvent weld all joints between PVC materials, with cement furnished by the conduit manufacturer. Provide suitable adapters where PVC conduits are coupled to metallic conduits. Provide a rigid steel elbow at the base of each exposed riser from below ground and below floor to above ground and above floor.
3. Conduit routing, general: see TYPE OF SYSTEM, METHOD OF WIRING hereinbefore for locations where concealed and exposed conduits are required and/or permitted. Where conduit routings are detailed or dimensioned install conduits accordingly; OTHERWISE, install concealed conduits with the shortest practicable path, and install all exposed conduits in straight, level, and plumb lines, parallel with or at right angles with beams, walls, ceilings, and other building lines.
4. Branch circuit conduit routings: except where detailed or dimensioned, the indicated branch circuit conduit routings are generally diagrammatic, and are intended to show the required circuitry from panelboards to outlets. However, if necessitated by job conditions, deviations from the indicated routings may be made, provided that regardless of the actual installed arrangement of the conduits: each outlet marked with the same circuit number is connected to the same corresponding numbered circuit; outlets are switched and controlled as indicated; and no home run is brought into any switch box unless otherwise indicated.

2.3 UNDERGROUND DUCTS

- A. General: Where indicated on the electrical drawings as "duct" or "ducts", underground conduits shall be PVC type, with concrete encasement.
- B. Duct Materials and Joints:
 1. PVC conduit: This shall be Carlon Type EB or as approved, UL listed.
 2. Fittings: These shall include couplings, elbows (except the riser elbows specified below), adapters, and other necessary types, all of the same material and make as those of the PVC conduit.
 3. Joints between PVC materials shall be solvent welded type, made with cement furnished by the PVC conduit manufacturer.
 4. Riser elbows: Provide a galvanized rigid steel conduit elbow at the base of each duct riser from below-ground and below-floor to above-ground and above-floor, coupled to the horizontal end of the PVC conduit with a suitable adapter.
 5. Supports and spacers: Provide these as required to securely hold conduits in proper position prior to and during concrete placing, with required spacing between adjacent conduits.
- C. Concrete Encasement: This shall be as detailed; if not detailed, concrete shall be at least 3" thick below, above, and on each side of the duct assembly. (Concrete by Concrete Section, with 5/8" maximum size aggregate).
- D. Grounding Conductor: For each run of one or more PVC conduits in an underground duct assembly, provide a single stranded copper grounding conductor, buried directly in the ground below the concrete encasement, and connected to the above-ground metallic conduit system at each end of the duct run.

2.4 PULL BOXES, JUNCTION BOXES, AND WIRING GUTTERS

- A. General: Pull boxes, junction boxes, and wiring gutters shall be of the types and minimum sizes indicated, or as required for the conditions involved where types and sizes are not indicated. Before installation, check proposed locations of boxes and gutters with the architectural, structural, and mechanical drawings, and locate each box and gutter so that it will be accessible in the finished project.
- B. Above Ground Boxes and Gutters: These shall be galvanized steel of at least Code gauge for each size involved, and of weatherproof construction where exposed to weather.
 1. Where indicated, boxes for underground conduits shall be above ground and encased in concrete pedestals, as detailed.

2.5 OUTLET BOXES

- A. General: Outlet boxes and covers therefor shall be steel or cast ferrous metal with zinc or other suitable metallic rustproof coating, cast aluminum, or PVC if indicated, all of the proper sizes and types to accommodate the conduits, conductors, connections, devices, fixtures, architectural conditions, and structural conditions involved.
- B. Special Box Requirements:
 - 1. Exposed-to-weather outlet boxes shall be cast metal, with threaded hubs and gasketed covers, all strictly weatherproof.
- C. Installation:
 - 1. Before installation, check proposed location of each outlet box with the architectural, structural, and mechanical drawings, and locate each outlet box so that it will be accessible and interference free in the finished project.
 - 2. Where equipment is served by exposed flexible cords, locate the outlet box as near as practicable to the equipment connection point, to minimize flexible cord length.

2.6 WIRE, JOINTS, AND SPLICES, 600 VOLTS AND LESS

- A. Lighting and power wire shall be copper only: Types shall be as follows:
 - 1. Where type is indicated: indicated type only.
 - 2. High temperature and other special conditions: types NEC approved for the conditions involved.
 - 3. Exposed flexible cords: Type S, with grounding conductor.
 - 4. All other lighting and power wire: No. 8 and larger, Type THWN stranded; No. 10 and smaller, Type THWN/THHN solid.
- B. Control wire shall be Type MTW copper, stranded.
- C. Signaling, sound, communications, alarm, indicating, and other special system wire shall be copper, of the types specified hereinafter with the equipment, or as indicated, or as recommended by the equipment manufacturers if neither indicated nor specified.
- D. Wire Sizes: Where sizes are neither indicated nor otherwise specified wire sizes shall be:
 - 1. Branch circuit wire: No. 12.
 - 2. Control wire: No. 14, or as recommended by the control manufacturer.
 - 3. Special system wire: as recommended by the manufacturer of the equipment involved.
- E. Identification:
 - 1. General: All wires shall be identified as required by NEC.
 - 2. Control and special systems wire: these shall be color coded throughout, or identified at each terminal and junction point with a suitable permanently attached tag or label.
- F. Joints and Splices: Make these with suitable solderless connectors, in the various boxes, gutters, and similar locations, but not in any conduit. Leave enough wire slack to permit at least one splice or joint to be remade in case of fault.
 - 1. Branch circuit, control, and special system wire joints: use Ideal, Buchanan, 3M, or similar tool-applied to twist-on type connectors.
 - 2. All other wire joints: use IlSCO tin plated aluminum type pressure connectors, or suitable brass, bronze or copper pressure type connectors.
 - 3. Insulate all joints and splices with suitable insulating sleeves or caps integral with the connectors or separate therefrom, or with vinyl plastic insulating tape.

2.7 PANELBOARDS

- A. General: The panelboard components shall be integrated into the pump controller. Panelboards shall be Cutler-Hammer, Square D, Siemens, or as approved, circuit breaker type as specified below. Capacities, quantities of overcurrent protective devices, mounting type (surface or flush), and special requirements (if any) for each panelboard shall be as indicated on drawings. Each panelboard shall have a lockable door with a circuit directory card and card holder. All panelboards shall be keyed alike; furnish one key for each lock; deliver these to the Owner's authorized representative, and obtain his signed receipt therefor. Where two or more flush panelboards are mounted side-by-side, boxes and trims of all panelboards in each individual group shall be same size and type.
 - 1. Unless otherwise indicated or otherwise specified, load centers will not be permitted.
- B. Types of Panelboards: Each panelboard shall be of type required to accommodate application involved, and indicated for available fault current listed at panelboard. Overcurrent protective device type shall be fully rated at 40° C ambient, other requirements are:
 - 1. Branch circuit panelboard: Bolt on molded case circuit breakers. Where indicated or required, circuit breakers shall have ground fault tripping devices.
 - 2. Distribution panelboards: molded case circuit breakers or fusible switches, as indicated.
 - 3. Copper buses shall be for electrical use with approved copper conductor terminations.
 - 4. Breakers for lighting circuits shall carry SWD or UL equivalent rating.
 - 5. Breakers shall be quick make, quick break type with trip indications shown and with common trip handle on all multiple breakers.
 - 6. All terminals for breakers shall be rated and marked for 75 degrees C terminations. The panelboard assembly shall be rated and marked for 75 degrees C terminations.
- C. Identification of Panelboards:
 - 1. Clearly typewrite on each panelboard directory card the designations of the fixtures, outlets, and equipment served by each device in the panelboard.
 - 2. Identify each entire panelboard assembly with a one inch minimum height laminated plastic nameplate engraved with 1/2 inch minimum height characters showing panelboard designation, and securely attach to the inside of panelboard door over directory card.

2.8 DEVICES

- A. General:
 - 1. Wiring devices shall be Hubbell, Legrand, Leviton, Cooper, or other makes as approved or as specified below. Type of wiring devices required for this project shall be as indicated on the drawings, or suitable for the application involved if type is not indicated; qualities, ratings, and other requirements of wiring devices shall be as specified below. All wiring device types specified below may not necessarily be required for this project. Disregard specifications for devices which are neither indicated nor required for this project.
 - 2. Receptacle configurations shall conform to NEMA standards.
 - 3. Exposed finish shall be: for each device with a plastic plate, same color as that of plate; for devices.
- B. Device Plates: Unless otherwise specified or inapplicable to the devices involved, plates shall be: as selected by Architect.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Run exposed conduit, and other wireways parallel to the principal parts of the structure. Wireways shall be run concealed when provisions are made in floors, walls, ceilings, and chases through all finished areas. Fire stop or weather seal all openings around conduit which penetrates floors and walls with approved non-combustible materials, slabs on grade are excepted.
- B. Conduits and other raceways shall be kept as close as possible to ceilings, walls, columns, etc., and shall be installed in such an orderly manner as to take up a minimum of space and allow a maximum of headroom.
- C. Circuiting: Circuit numbers shown on drawings indicate specific panelboard to which each branch circuit shall be connected, and specific outlets which shall be connected to each branch circuit, and unless otherwise indicated these circuit numbers do not necessarily indicate actual number of circuit breaker in each panel to which each branch circuit shall be connected. Connect each outlet marked with same circuit number to same numbered branch circuit, and connect each branch circuit to indicated panelboard. In each individual panelboard:
 - 1. Balance active circuits on panelboard busses, and leave spare circuit breakers equally divided among panelboard busses, as nearly as practicable.
 - 2. Connect each ungrounded wire of each 3 and 4 wire common neutral circuit to a different panelboard bus.
- D. Provide templates, layouts drawings, and supervision to ensure correct placement of anchors and conduit projecting in concrete.
- E. Painting shall be done to repair scratches to surfaces, electrical equipment nameplates shall be protected from paint.
- F. Qualifications: Where specific qualifications are specified in individual specification section, provide required data with Subcontractor list.

3.2 TYPE OF SYSTEM, WIRING METHOD

- A. Electrical system characteristics: These shall be as indicated. In addition, whether indicated or not, provide low voltage (less than 120 volts) wiring for controls and other purposes, as required for the complete electrical system.
- B. Enclosures: Regardless of voltage or use, install wiring in conduits and metal or other enclosures, unless otherwise indicated or otherwise specified.

3.3 GROUNDING

- A. Ground electrical equipment and conductors as required by NEC and other applicable electrical codes.
 - 1. Panelboards served by individual transformers: ground panelboard neutral busses to building grounding system.
 - 2. All metallic cable sheaths, cable shields, metal conduit, transformer cases, cabinets and pedestals shall be made electrically secure to form a continuous system and shall be grounded.
 - 3. The neutral shall only be grounded at the panelboard or service grounding device. Grounding conductors shall be continuous between the service and the driven grounding electrode or other grounding electrode as permitted in Part H of NEC Article 250.
 - 4. All conduits shall have code sized green equipment grounding conductors with diameter based on the largest circuit in each conduit.

3.4 EXCAVATION AND BACKFILL

- A. Excavate and backfill as required for the electrical work. Cut bottoms of trenches to the proper lines and grades to provide firm and continuous support for the underground electrical work, and to provide 24 inch MINIMUM depth from finished grade to tops of all exterior underground electrical work. Sheet and brace excavations as required to protect personnel and adjacent structures.
- B. After the underground electrical work has been installed and approved, place all backfill in 8 inch maximum thickness loose layers, and compact each layer to at least the density of the adjacent undisturbed site soil, using pneumatic or other suitable power tampers. Mass backfilling (backfilling without tamping) is prohibited.
- C. Warning tape for buried electrical work: install detectable warning tape directly over every device by burying tape as close to the surface as possible but no less than six inches beneath finished grade. Tape shall be Reef Industries, Inc., "Terra Tape D", or equal as approved, composition metallized foil-plastic film laminate bearing imprint describing the type of buried electrical work. All materials shall be specifically formulated for prolonged use underground.

END OF SECTION

SECTION 16230

PACKAGE DIESEL GENERATOR SYSTEM

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Generator with all necessary accessories.

1.2 RELATED SECTIONS

- A. DIVISION 3 - CONCRETE.
- B. DIVISION 15 - MECHANICAL.
- C. Section 16010 - GENERAL PROVISIONS, ELECTRICAL.

1.3 SYSTEM DESCRIPTION

- A. Provide standby power system for supply of power in event of failure to normal supply, consisting of liquid cooled engine directly coupled to AC generator complete with fittings, connections, auxiliaries, control panels, safety devices, meters necessary for complete operating system.
- B. Provide fully automatic operation so that unit takes full load within 10 seconds after power failure. On resumption of normal power after time delay on transfer switch, automatically retransfer load shall return to normal power and automatically shut down generator, returning to starting condition ready for another operating cycle.
- C. Capable of delivering capacity as shown on drawings at sea level and capable of delivering capacity at installed location after consideration of applicable derating factors. Generator supplier shall be responsible for generator, transfer switch and fuel system to provide operational standby power.

1.4 SUBMITTALS

- A. Submit shop drawings and product data under provisions of Section 01300 and Section 00700, General Conditions and as specified below.
- B. Submit shop drawings showing plan and elevation views with overall and interconnection point dimensions, fuel consumption rate curves at various loads, ventilation and combustion air requirements, and electrical diagrams including schematic and interconnection diagrams.
- C. Submit product data showing dimensions, weights, ratings, interconnection points, and internal wiring diagrams for engine, generator, control panel, battery, battery rack, battery charger, exhaust silencer, vibration isolators, integral radiator, and integral annunciator.
- D. Submit manufacturer's installation and instructions under provisions of Section 00700, General Conditions and this section.

1.5 PROJECT RECORD DOCUMENTS

- A. Submit record documents under provisions of Section 01720.
- B. Accurately record location of engine generator and mechanical and electrical connections.

1.6 OPERATION AND MAINTENANCE DATA

- A. Submit operation and maintenance data under provisions of Section 01730.

- B. Include instructions for normal operation, routine maintenance requirements, service manuals for engine and day tank, oil sampling and analysis for engine wear, and emergency maintenance procedures.

1.7 QUALIFICATIONS

- A. Manufacturer: Company specializing in packaged engine generator system with minimum three years documented experience.
- B. Supplier: Authorized or Franchised distributor of engine generator manufacturer with service facilities within 50 miles of project site.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Accept packaged engine generator set and accessories on site in crates and verify damage.
- B. Protect equipment from dirt and moisture by securely wrapping in heavy plastic.

1.9 WARRANTY

- A. Provide five year warranty.

1.10 MAINTENANCE SERVICE

- A. Furnish service and maintenance of packaged engine generator system for one year from Date of Substantial Completion.

1.11 EXTRA MATERIALS

- A. Furnish one set of tools required for preventative maintenance of the engine generator system. Package tools in adequately sized metal tool box.
- B. Provide two additional sets of each oil, and air filter element required for the engine generator system.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. The manufacturer specified is intended to indicate the standard of quality of materials in this section; other manufacturers will be acceptable. Submit for acceptance.

2.2 ENGINE GENERATOR

- A. General: Emergency generator shall be Onan, Caterpillar, or Generac complete automatic starting packaged engine-generator unit for 3 phase, 4 wire, 60 Hz, voltage as noted on drawings voltage regulated, with continuous standby rating not less than that indicated on the drawings. Rating shall be based upon the unit operating with all of its accessories, in 110 degrees Fahrenheit ambient temperature, and using standard locally available diesel fuel. Emergency generator unit shall include the features specified below, and all other standard and necessary accessories required for a complete operational unit. Entire generator unit shall be factory assembled and mounted steel skid base. Generator unit shall have factory-applied painted finish.

- B. Engine: This shall be a naturally aspirated or turbocharged liquid cooled, 4 cycle type, of sufficient capacity to operate generator at specified capacity without overloading or overheating, at 1,800 maximum rpm, and in 110 degrees Fahrenheit ambient temperature. Engine shall be complete with but not limited to the following features: full pressure lubrication; electric governor with electric actuator; 24 minimum volt dc electric starter suitable for cranking engine continuously for at least 90 seconds at 0 degrees Fahrenheit ambient temperature; engine driven battery charging alternator with voltage regulator; radiator, engine driven fan, engine driven water pump, and thermostatic control to maintain stable and efficient engine operating temperature under all load conditions; full flow lube oil filter; intake air cleaner; critical type exhaust muffler safety cut-off controls for low lube oil pressure, high jacket water temperature; over crank, and overspeed; lube oil pressure gauge; jacket water thermostatically controlled electric jacket heater to ensure quick engine starting in ambient temperatures down to 0 degrees Fahrenheit. Voltage regulation shall be to plus or minus 2 percent adjustable asynchronous type immune to SCR tracking. Filter systems that reduce motor starting capacity shall not be used.
- C. Generator: This shall be revolving field type, direct connected to engine with suitable coupling, with integral static type 3 phase exciter, Class F insulation, and 90 degrees C. maximum temperature rise.
- D. Generator Control Panel: This shall include but shall not be limited to: voltmeter with 3 phase transfer switch; ammeter with transfer switch for metering all three phases; voltage regulator; exciter and voltage controls; main circuit breaker; frequency meter; automatic start-stop controls; manual starting switch; and an adjustable clock type exercisor which will automatically start and stop the engine at preselected time intervals and run the engine for a preselected time, without load transfer.
- E. Accessories: Provide these as follows:
1. Dual wall - 24-Hour Belly Fuel Tank with leak detection.
 2. Starting battery, 24 volts minimum, capacity as required to crank engine continuously for at least 90 seconds in 0 degrees Fahrenheit ambient temperature but at least 225 ampere hour rating at 20 hours, complete with cables and rack set batteries at least two inches above concrete pad.
 3. Vibration absorbing mountings, Korfound Vibration Dampener, or as approved, sized as recommended by the mounting manufacturer for the service involved, and securely attached to the slab and generator unit base.
 4. Auxiliary battery charger, solid state constant voltage current limiting infinite taper type, for operation on 120 volts AC single phase.
 5. Full charge of proper grade lube oil in engine crankcase.
 6. Full charge of ethylene glycol and water coolant, to prevent freezing down to at least 0 degrees Fahrenheit ambient temperature.
 7. Suitable metallic flexible connector, between muffler and engine exhaust outlet, and weatherproof muffler outlet.
 8. Weatherproof enclosure.
 9. Sound Attenuated Integral annunciator.
 10. Dual engine jacket heaters, 115 volt, single phase.
 11. Remote panel shall include visual and audible signals as a minimum to indicate:
 - a. Generating (visual only).
 - b. Low Battery Voltage (visual only).
 - c. High Battery Voltage (visual only).
 - d. Over crank.
 - e. Low Oil Pressure.
 - f. High Cool Temperature.
 - g. Low Cool Temperature.
 - h. Low Fuel Alarm & Shutdown

2.3 EXHAUST EQUIPMENT

- A. Muffler and Piping: Hospital type, completely sealed, metal primed finish.

- B. Internal exhaust silencer system shall be completely enclosed in the housing.

2.4 FABRICATION

- A. Mount on common steel rail base.
- B. Provide steel spring vibration isolators between rail base and concrete base.
- C. Provide semi-flexible couplings between generator and engine and protective guards over moving parts.
- D. Machine enamel finish shall be exterior type for outside use, color as selected by the Owner.

2.5 HOUSING

- A. Weather protective housing shall be provided constructed of reinforced sheet steel. The housing shall enclose the generator; exhaust silencer, batteries, charger. A panelboard shall be mounted inside the housing for power for the fuel transfer pump, heaters, outlets and light. Hinged doors shall be provided for access to engine, generator, instrument panel and batteries.

2.6 ENGINE ALARM PANEL

- A. Incorporate in generator control panel complete with generator OFF-START-AUTO selector switch cranking limiter trouble horn and double pole, double throw silencing switch with red indicating light and illuminated annunciators with engraved nameplates reading:
 1. Low oil pressure alarm
 2. High water temperature alarm
 3. Low oil pressure shut down
 4. High water temperature shut down
 5. Overspeed shut down
 6. Over cranking shut down
 7. Contacts for engine trouble remote indicator

2.7 TOOLS

- A. Provide tools required for normal maintenance of unit in metal box complete with lock and keys. One set for the job shall be included.

2.8 SERVICE ENTRANCE RATED AUTOMATIC TRANSFER SWITCHES

- A. Automatic transfer switch (referred to hereinafter as "ATS") Shall be Service Entrance Rated. These shall be sizes and capacities as indicated on drawings, and listed under UL-1008. ATS shall be suitable for service entrance standby systems per NEC 517. ATS shall be mechanically held, electrically operated double throw type, 4 pole 4 wire as indicated. The ATS shall have NEMA 3R enclosure and shall be completely factory assembled, factory wired, and ready for field installation. The ATS shall include: relays; test switch to simulate normal power failure; pilot lights to indicate switch position; ammeter and voltmeter with selector switches on load side; generator starting contacts; other auxiliary contacts closed on normal and closed on loss of normal power; and other necessary devices, all as required to operate the switch as specified below.
 1. Operation, ATS: when normal power voltage falls below 70 percent on any two phases or 80 percent on third phase, generator starting contacts shall close and start generator unit after nonadjustable 3 second time delay to allow for momentary voltage dips. When power reaches 90 percent of its rated voltage and frequency, ATS shall immediately transfer to emergency power. After an adjustable 0-30 minute time delay period following restoration of normal power voltage of 90 percent on all phases, ATS shall transfer back to normal power. If generator power fails during the time delay period, ATS shall return immediately to normal power. After ATS has retransferred to normal power, generator shall continue to run at not load for an adjustable 0-5 minute period to allow it to cool,

and then shut down. On transfer to generator power, a set of auxiliary contacts will close providing a status signal to the elevator controllers.

- B. ATS (Programmed Transition Not Required) These shall be ONAN Type LT II (below 200 amp) ONAN Type OT III, Caterpillar Mechanically Held Contactor Type or ASCO Type 940.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Generator and Accessories:
 - 1. Exterior Installation: The generator, engine and equipment shall be installed in the weatherproof housing and protected from rain and freezing.
- B. Testing and Adjusting: Make performance tests, by simulating power failure with cold engine at least three times, and operating emergency generator unit at least 15 minutes per start, under as full load Contractor provided load bank. Make all necessary adjustments for satisfactory operation. Run engine generator for 4 hours after last power failure then transfer to normal powers.

END OF SECTION

SECTION 16422

UNDERGROUND ELECTRICAL SERVICE

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. The work required under this Section includes all work necessary to provide a complete electrical system.
- B. The work of this Section is subject to the requirements of Sections 16010 and 16050.

1.2 RELATED SECTIONS

- A. DIVISION 2 - SITEWORK.
- B. DIVISION 3 - CONCRETE.
- C. Section 16010 - GENERAL PROVISIONS, ELECTRICAL.
- D. Section 16050 - BASIC MATERIALS AND METHODS, ELECTRICAL

PART 2 PRODUCTS

2.1 GENERAL SERVICE AND METERING

- A. The Electric Utility Company will:
 - 1. Furnish and install pole mounted service transformer.
 - 2. Connect the low voltage (120/240 volt 1 phase 3 wire) service conductors to load side of service transformer.
- B. DIVISION 16 shall:
 - 1. Provide underground building service (120/240 volt 1 phase 3 wire), from main service equipment service transformer as directed by utility.
 - 2. Provide weather head on pole as required.
 - 3. Leave 10' free line ends at transformer, left ready for utility company connector.
 - 4. Make arrangements with Electric Utility Company for their service and metering work, PAY ALL CHARGES THEREFOR, AND INCLUDE COST THEREOF IN CONTRACT PRICE.
 - 5. Coordinate work of DIVISION 16 with that of Electric Utility Company.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install equipment as indicated, in accordance with equipment manufacturer's written instructions, and with recognized industry practices, to ensure that service-entrance equipment fulfills requirements. Comply with applicable installation requirements of NEC and NEMA standards.
- B. Coordinate with other electrical work, including utility company wiring, as necessary to interface installation of service entrance equipment work with other work.

3.2 GROUNDING AND BONDING

- A. Provide equipment bonding and grounding connectors, sufficiently tight to assure a permanent and effective ground, for equipment and wiring/cabling as indicated.

3.3 ADJUST AND CLEAN

- A. Adjust operating mechanisms for free mechanical movement.
- B. Touch-up scratched or marred enclosure surfaces to match original finishes.

3.4 FIELD QUALITY CONTROL

- A. Upon completion of installation of equipment and electrical circuitry, energized circuitry and demonstrate capability and compliance with requirements. Where possible, correct malfunctioning units at site, then retest to demonstrate compliance; otherwise, remove and replace with new units, and retest.

END OF SECTION



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
 William R. Snodgrass - Tennessee Tower
 312 Rosa L. Parks Avenue, 11th Floor
 Nashville, Tennessee 37243-1102

MEMORANDUM

To: Mr. Christopher Marlow, Environmental Manager, TN DWR State Water Infrastructure Grants
 e-copy: christopher.s.marlow@tn.gov

From: Angela Jones, P.E., Manager, Engineering Services Unit, Division of Water Resources

e-sig:

Date December 21, 2023

Re: Transmittal of Preliminary Engineering Report
 City of Bartlett, Shelby County
 Wastewater Project Number 23.0743
 Project: Sewer System Rehabilitation

Receipt is acknowledged on November 28, 2023, of the above-referenced preliminary engineering report. The project is associated with permit TN0065\6800 and consists of renovations to four pumping stations and gravity sewer rehabilitation on the North Bartlett Outfall Sewer.

The chosen alternative is to replace the four lift stations with submersible style pumps and to rehabilitation the gravity main with CIPP.

The Engineering Services Unit has no objection to the chosen alternative. The facility should upload this memo and approved files to their ARP grant file.

To expedite matters, please reference the assigned wastewater project number 23.0743 on any future correspondence. If we may be of any assistance, please feel free to contact Mr. Tim Hill, P.E. at (865) 364-9535 or by E-mail at Timothy.Hill@tn.gov.

cc: Water-Based Systems File
 Mr. Ben Pearson, PE, Allen and Hoshall, bpearson@allenhoshall.com
 Ms. Angie Thweatt, Allen and Hoshall, athweatt@allenhoshall.com
 Mr. Kyle Mabry, Program Manager, TDEC Division of Water Resources, kyle.mabry@tn.gov
 Mr. John Horne, City of Bartlett, jhorne@cityofbartlett.org

Attachment: WPN23.0743 ARP Memo 20231220 (3757 : ARPA Engineering Design Contract Amendment)



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES

Davy Crockett Tower, 9th Floor
500 James Robertson Parkway
Nashville, Tennessee 37243-1204

September 13, 2024

Mr. Ben Pearson, PE
e-copy: bpearson@allenhoshall.com
Allen & Hoshall
1661 International Drive
Suite 100
Memphis, TN 38120

Subject: **Bartlett**
County: Shelby
Wastewater Project Number: 24.0657
Project: WW-PDC-1 Pump Stations (4) Contract A

Dear Mr. Pearson:

The Tennessee Department of Environment and Conservation, Division of Water Resources, acknowledges the receipt of your construction documents on August 21, 2024.

The project consists of renovation and upgrades of four wastewater pumping stations. The work will include: demolition of existing pumping equipment, wet well modifications, wet well wall coating, new valve vault; new submersible pumps and installation, pipework, standby generators, site work, and electrical and control work. The four lift stations and approximate design flow rates are:

Raner Creek- 1500 gpm
Billy Maher- 1200 gpm
Brunswick Valley- 300 gpm
Shadowlawn- 100 gpm

Approval is granted in accordance with certain requirements of the Water Quality Control (WQC) Act of 1977 and Regulations of the Water Quality Control Board. **On the coversheet(s) of the site's set of plans and specifications, an approval date and its expiration date will be stamped by the Division. Any indication of tampering with the bound set of documents will be subject to investigation and prosecution.** One complete set of construction documents, bearing the official stamp, must be kept at the construction site.

Attachment: WPN24.0657 Approval Letter 20240913 (3757 : ARPA Engineering Design Contract Amendment)

Approval expires one year from the stamped approval date (September 13, 2024) unless construction is either underway or complete. Any request for extension must be made prior to this expiration date. Significant deviations from the approved plan documents must be submitted and approved in writing before such changes are made. Minor changes made during construction need not have prior written approval. Modifications, however, may be required by this Department should the changes be deemed inappropriate. It is therefore advisable to obtain prior approval in cases where the significance of the change is uncertain.

The Division of Water Resources is authorized to inspect the construction work to verify compliance with the approved plans and specifications, which are on the site. Therefore, the engineer shall notify our staff at the Memphis Environmental Field Office by calling (901) 371-3000 before the start of construction.

Approval of these construction documents should not be construed as a permit for any activities related to this project. Activities which may require a permit under the WQC Act and Regulations include, but are not limited to, the following: streambank vegetation removal; creek crossing(s) for equipment or utility lines; construction within twenty (20) feet of a stream bank; construction in or near a marshy area or wetland, and/or land disturbance equal to or greater than one acre. Additionally, this approval does not authorize connection and use of sewer that will cause or contribute to collection system overflow or overload of receiving wastewater treatment facility.

The Memphis Environmental Field Office should also be contacted for determinations regarding whether modification of the existing NPDES or SOP permit, an Aquatic Resource Alteration Permit (ARAP) and/or a National Pollutant Discharge Elimination System (NPDES) construction stormwater permit will need to be obtained prior to the beginning of construction of this project.

The Division's most recent *Design Criteria for Review of Sewage Works Construction Plans and Documents* is available on our website: <https://www.tn.gov/environment/permit-permits/water-permits1/plans-review-and-approval-for-sewage-works-construction-projects.html>.

To expedite matters, please reference the assigned wastewater project number 24.0657 on any future correspondence. If you have any questions, please feel free to contact Mr. Tim Hill, P.E. at (865) 364-9535 or by E-mail at Timothy.Hill@tn.gov.

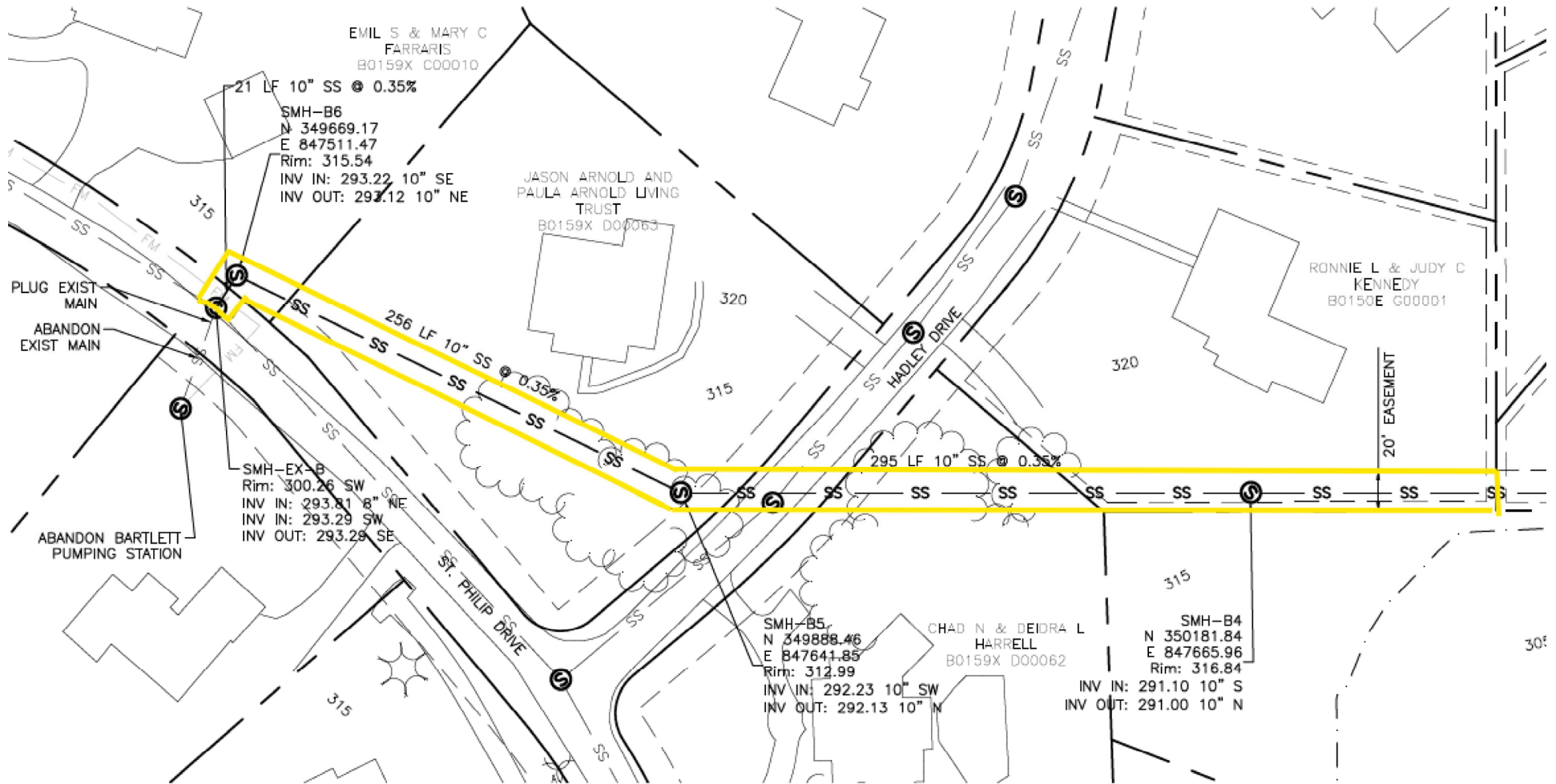
Sincerely,



Angela Jones, PE, CPM
Manager, Engineering Services Unit

cc: Water-Based Systems File
Mr. Kyle Mabry, Program Manager, TDEC - Division of Water Resources, Kyle.Mabry@tn.gov
Mr. John Horne, City Engineer, City of Bartlett, jhorne@cityofbartlett.org

Attachment: WPN24.0657 Approval Letter 20240913 (3757 : ARPA Engineering Design Contract Amendment)



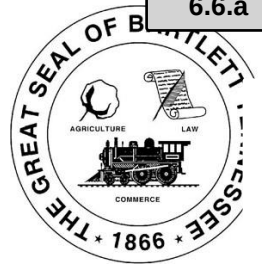
Attachment: Easement Map (3759 : Lakeland Oliver Creek Sewer Easement Acquisitions)

Oliver Creek Sewer Easement Map



BARTLETT POLICE DEPARTMENT

Logging Recorder for Emergency Communications Center



6.6.a

Project Description:

- The Police Department is seeking to replace its Logging Recorder, used by the emergency dispatch center, to record and store all communications and data related to emergency responses. These recordings include radio communications, phone communications, and text and data logs.

Vendor Selection Process:

- On December 8, 2023, an ad was placed in The Daily News seeking an invitation for sealed bids for the purchase and installation of a new Logging System for the Bartlett Police Department's Emergency Operations Center. On January 25, 2024, the City of Bartlett received four proposals. The bids received were from Exacom, Equature, Eventide NexLog (AMK) and Revcord.

Eventide NexLog (AMK)	\$132,332.40 (Purchase Cost); \$85,785.70 (5-Year Maintenance)
Equature	\$159,664.40 (Purchase Cost); \$133,064.25 (5-Year Maintenance)
Exacom	\$205,340.50 (Purchase Cost); \$231,835 (5-Year Maintenance)
Revcord / Vartec	\$58,995 (Purchase Cost); \$24,750 (5-Year Maintenance)

- Representatives from the Bartlett Police Department and Mission Critical Partners reviewed the bids mentioned above to ensure that all specifications met the noted requirements. As part of this process, our members considered price, compatibility with current and future software, customer satisfaction, and customer service. Upon review, it was determined that the lowest bidder, Revcord, did not meet the requirements and was inconsistent with current industry standards. As a result, representatives determined that AMK Services provided the best response and should be designated as the preferred provider of the equipment described. AMK Services agreed to supply the related equipment during the bid process, perform the required installation, and provide a one (1) year warranty. In addition, AMK Services has also provided a five (5) year maintenance agreement, which includes regular software updates and preventive maintenance activities.

Equipment & Cost:

- Due to ongoing technology enhancements and the construction of the City of Bartlett's Emergency Communication Center, the need arose to integrate additional functionalities previously not noted in the bid specifications. These functionalities included interfaces with our new CAD/RMS Vendor, E911 Services, Quality Assurance Programs, and Text Transcriptions. AMK Services agreed to supply such functionalities at a discounted rate and a lower total cost than any other original comparative bids.
- AMK Services has quoted \$154,416.60 to purchase and install two (2) Eventide NexLog 740 DX-Series Recording Systems with associated software licenses and interfaces to be installed at the City of Bartlett Police Department's Primary and Backup Emergency Communication Centers. The Shelby County 911 District is funding the initial purchase of this equipment at no cost to the City.

Attachment: Logging Recorder for BMA (3764 : Bid for Logging Recorder)

- AMK Services has agreed to provide a five- (5) year maintenance agreement for \$113,409.95, which includes regular software updates, preventive maintenance activities, and local technical support. This agreement will commence upon completion of the one (1) year warranty provided at the equipment's initial purchase and installation. All maintenance costs associated with this project will be budgeted in Account # 123.48123.264 for their respective fiscal years.
- The Police Department respectfully requests that AMK Services be utilized as the equipment provider described.
- The following documents are attached for further review:
 - System Purchase Agreement
 - Maintenance Agreement
 - Exhibit A – Acceptance Testing, Drawings, Connections
 - Exhibit B – AMK Bid Response
 - Exhibit C – Software License
 - Exhibit D – Pricing Pages

Thank you for your consideration,

Jeff Cox, Chief of Police

Attachment: Logging Recorder for BMA (3764 : Bid for Logging Recorder)



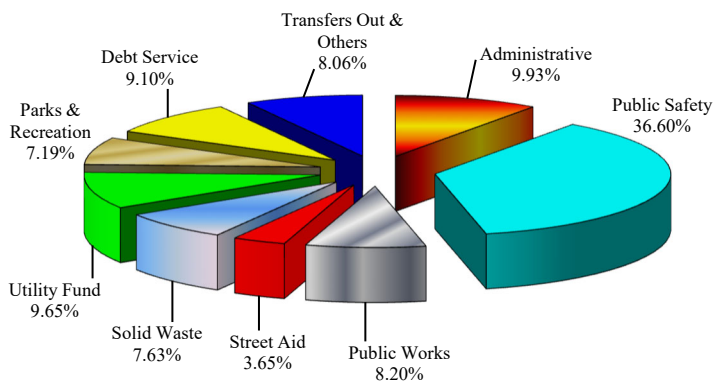
City of Bartlett

FINANCIAL REPORT

February 28, 2025

Total Expenditures, FY 2025 Budget: \$100,937,114

WHERE THE \$ GOES (Does not include School)

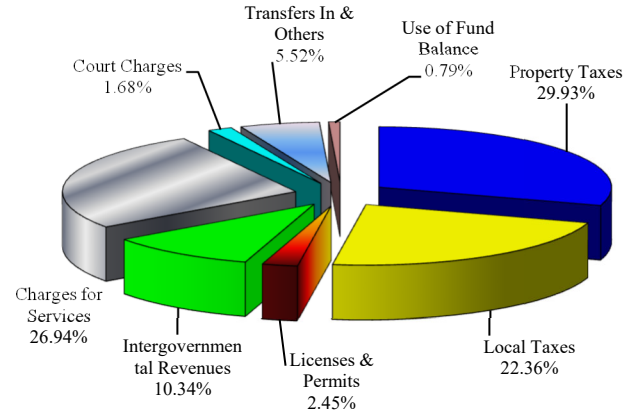


BUDGET HIGHLIGHTS

- Property and Sales taxes are below budgeted. Court fees and interests are exceeding budget. Other revenues are within budget. Overall, General Fund is within budget.
- Property taxes were due February 28 and delinquent March 1.
- Fiscal Year 2026 budgets were prepared by the departments. Budget meetings with the departments will start in March and April.

Total Revenues, FY 2025 Budget: \$100,937,114

WHERE THE \$ COMES FROM (Does not include School)



FY 2025 YEAR-TO-DATE For The Period Ending February 28, 2025

	Adopted Budget	Year-to-Date Actual
General Fund Expenditures		
Administrative	\$ 8,929,661	\$ 5,974,902
Public Safety	36,477,170	24,579,131
Public Works	7,488,894	4,816,938
Parks and Recreation	6,269,135	4,168,511
Performing Arts	861,880	606,195
Transfers & Other Gen. Fund Items	5,046,519	4,931,019
Subtotal	\$ 65,073,258	\$ 45,076,696
General Fund Revenues		
Property Taxes	\$ 30,212,000	\$ 28,533,924
Local Taxes	17,700,000	9,525,012
Building and Development Fees	2,477,000	1,351,738
Intergovernmental	8,415,000	4,279,360
Charges for Services	3,371,870	2,249,833
Court Charges	1,437,000	1,095,543
Other Revenue	1,460,388	903,399
Subtotal	\$ 65,073,258	\$ 47,938,808
Special Rev. Funds -Expenditures	\$ 13,909,195	\$ 7,847,986
Special Rev. Funds -Revenues	\$ 13,909,195	\$ 12,147,171
Utility Expenses	\$ 13,345,921	\$ 8,897,620
Utility Revenues	\$ 13,345,921	\$ 8,915,853
Debt Service Expenditures	\$ 8,608,740	\$ 8,085,854
Debt Service Revenues	\$ 8,608,740	\$ 6,025,252
Total Expenditures	\$ 100,937,114	\$ 69,908,156
Total Revenues	\$ 100,937,114	\$ 75,027,084

Note: FY 2025 Adopted Budget includes use of fund balance in the General Fund, Special Revenue Funds, Utility Fund and the Debt Service Fund.

Attachment: Feb25FinRprt (3758 : Treasurer's Report for February 2025)



City of Bartlett -- Financial Summary

For The Period Ending For The Period Ending February 28, 2025



	FY 2024 Audited Actual	FY 2025 Adopted Budget	Increase/ Decrease in \$	Year-to-Date Actual FY 2024	Year-to-Date Actual FY 2025	Increase/ Decrease in \$	Percent of FY 2024 Actual	Percent of FY 2025 Budget	Increase/ Decrease in %
General Fund Expenditures									
Administrative	\$ 7,853,574	\$ 8,929,661	\$ 1,076,087	\$ 4,955,002	\$ 5,974,902	\$ 1,019,900	63.09%	66.91%	3.82%
Public Safety	33,969,752	36,477,170	2,507,418	23,060,339	24,579,131	1,518,792	67.88%	67.38%	-0.50%
Public Works	7,170,493	7,488,894	318,401	4,630,365	4,816,938	186,573	64.58%	64.32%	-0.25%
Parks and Recreation	7,045,366	6,269,135	(776,231)	5,179,503	4,168,511	(1,010,991)	73.52%	66.49%	-7.02%
Performing Arts	862,087	861,880	(207)	586,661	606,195	19,534	68.05%	70.33%	2.28%
Transfers & Other Gen. Fund Items	6,835,242	5,046,519	(1,788,723)	6,728,665	4,931,019	(1,797,646)	98.44%	97.71%	-0.73%
Total General Fund Expenditures	\$ 63,736,513	\$ 65,073,258	\$ 1,336,746	\$ 45,140,535	\$ 45,076,696	\$ (63,839)	70.82%	69.27%	-1.55%
General Fund Revenues									
Property Taxes	\$ 29,420,768	\$ 30,212,000	\$ 791,232	\$ 28,380,792	\$ 28,533,924	\$ 153,133	96.47%	94.45%	-2.02%
Local Taxes	17,532,028	17,700,000	167,972	9,399,647	9,525,012	125,364	53.61%	53.81%	0.20%
Building and Development Fees	2,672,237	2,477,000	(195,237)	1,614,462	1,351,738	(262,724)	60.42%	54.57%	-5.84%
Intergovernmental	8,300,946	8,415,000	114,054	4,180,671	4,279,360	98,688	50.36%	50.85%	0.49%
Charges for Services	4,301,747	3,371,870	(929,877)	2,965,632	2,249,833	(715,799)	68.94%	66.72%	-2.22%
Court Charges	1,357,313	1,437,000	79,687	904,199	1,095,543	191,344	66.62%	76.24%	9.62%
Other Revenue	1,306,563	1,460,388	153,825	665,662	903,399	237,737	50.95%	61.86%	10.91%
Total General Fund Revenues	\$ 64,891,601	\$ 65,073,258	\$ 181,658	\$ 48,111,065	\$ 47,938,808	\$ (172,257)	74.14%	73.67%	-0.47%
Special Revenue Funds									
Street Aid Fund	\$ 2,814,903	\$ 3,680,000	\$ 865,097	\$ 1,136,106	\$ 1,467,636	\$ 331,530	40.36%	39.88%	-0.48%
Solid Waste Fund	7,878,391	7,758,377	(120,014)	4,955,735	4,776,787	(178,948)	62.90%	61.57%	-1.33%
General Improvement Fund	1,110,482	1,090,800	(19,682)	535,374	475,395	(59,979)	48.21%	43.58%	-4.63%
Drug Enforcement Fund	184,004	334,500	150,496	144,488	139,352	(5,136)	78.52%	41.66%	-36.86%
DEA Enforcement Fund	18,726	134,994	116,268	1,325	40,394	39,069	7.08%	29.92%	22.85%
Drainage Control Fund	133,691	785,524	651,833	89,738	658,901	569,163	67.12%	83.88%	16.76%
Park Improvement Fund	0	125,000	125,000	0	0	0	0.00%	0.00%	0.00%
E-Citation Fund	12,907	0	(12,907)	3,099	19,212	16,114	0.00%	0.00%	0.00%
Grant Funds	7,541,552	0	(7,541,552)	4,707,389	270,309	(4,437,080)	62.42%	0.00%	-62.42%
Special Revenue Funds - Expenditures	\$ 19,694,656	\$ 13,909,195	\$ (5,785,461)	\$ 11,573,253	\$ 7,847,986	\$ (3,725,267)	58.76%	56.42%	-2.34%
Special Revenue Funds - Revenues	\$ 17,542,819	\$ 13,909,195	\$ (3,633,624)	\$ 10,668,927	\$ 12,147,171	\$ 1,478,244	60.82%	87.33%	26.52%
Utility Fund									
Total Utility Operations	\$ 13,951,499	\$ 12,771,741	\$ (1,179,758)	\$ 10,802,811	\$ 8,393,489	\$ (2,409,322)	77.43%	65.72%	-11.71%
Total Utility Debt Expenses	1,132,204	574,180	(558,024)	1,146,928	504,131	(642,797)	101.30%	87.80%	-13.50%
Total Utility Expenses	\$ 15,083,703	\$ 13,345,921	\$ (1,737,782)	\$ 11,949,739	\$ 8,897,620	\$ (3,052,119)	79.22%	66.67%	-12.55%
Total Utility Revenues	\$ 14,715,845	\$ 13,345,921	\$ (1,369,924)	\$ 8,500,475	\$ 8,915,853	\$ 415,378	57.76%	66.81%	9.04%
Debt Service Fund									
Total Debt Service Expenditures	\$ 11,802,966	\$ 8,608,740	\$ (3,194,226)	\$ 11,337,200	\$ 8,085,854	\$ (3,251,347)	96.05%	93.93%	-2.13%
Total Debt Service Revenues	\$ 9,526,476	\$ 8,608,740	\$ (917,736)	\$ 7,169,650	\$ 6,025,252	\$ (1,144,398)	75.26%	69.99%	-5.27%
Total Expenditures	\$ 110,317,838	\$ 100,937,114	\$ (9,380,724)	\$ 80,000,728	\$ 69,908,156	\$ (10,092,572)	72.52%	69.26%	-3.26%
Total Revenues	\$ 106,676,741	\$ 100,937,114	\$ (5,739,626)	\$ 74,450,118	\$ 75,027,084	\$ 576,967	69.79%	74.33%	4.54%

Attachment: Feb25FinRprt (3758 : Treasurer's Report for February 2025)

PLANNING COMMISSION

NAME	TERM EXPIRES	NEW/ RE-APPOINT
Conway, Don	12/31/2027	New Appointment (replacing Josh McNeil)
Reid, James	12/31/2027	New Appointment (replacing Curtis Sigler)

PLANNING COMMISSION

NAME	TERM EXPIRES	NEW/ RE-APPOINT
Conway, Don	12/31/2027	New Appointment (replacing Josh McNeil)
Reid, James	12/31/2027	New Appointment (replacing Curtis Sigler)

EXP REALTY

US 70 HIGHWAY IMPROVEMENTS

BARTLETT, TN



06/03/2024
ISSUED FOR
PERMIT

CONTACTS

PROPERTY OWNER	JOHN T. BRANDON 8223 HIGHWAY 70 ARLINGTON, TN 38002
DESIGN PROFESSIONAL	BARGE DESIGN SOLUTIONS 60 GERMANTOWN COURT, SUITE 100 MEMPHIS, TENNESSEE 38018 901.755.7166 CONTACT: RUSS BRASFIELD, PE
OWNER REPRESENTATIVE	EXP REALTY BRUCE MINLER 901.482.0444
WATER SERVICE	CITY OF BARTLETT 6400 STAGE ROAD BARTLETT, TN 38134 901.385.6499 CONTACT: DALAN HUBBARD
SEWER	CITY OF BARTLETT 6400 STAGE ROAD BARTLETT, TN 38134 901.385.6499 CONTACT: DALAN HUBBARD

INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
C0.00	COVER SHEET
C0.01	GENERAL NOTES
C0.21	EXISTING CONDITIONS
C1.01	SITE LAYOUT PLAN
C2.01	GRADING PLAN AND PROFILE
C2.02	US HIGHWAY 70 CROSS SECTIONS
C2.03	US HIGHWAY 70 CROSS SECTIONS
C2.41	INITIAL EROSION & SEDIMENT CONTROL PLAN
C2.42	FINAL EROSION & SEDIMENT CONTROL PLAN
C7.01	SITE DETAILS
C7.41	SEDIMENT AND EROSION CONTROL DETAILS



VICINITY MAP

NOT TO SCALE

PROPERTY DATA

PARCEL ID B0149 00860 & B0149 00861
ZONING CL AND RE

FEMA NOTE

THIS PARCEL IS NOT LOCATED IN A FLOOD HAZARD AREA ACCORDING TO
FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP
COMMUNITY NO. 47157C, PANEL NO. 0310G, DATED FEBRUARY 5, 2013. ZONE
"X."



60 Germantown Court // Suite 100 // Memphis, Tennessee 38018
Phone (901) 755-7166 // Fax (901) 755-7844

DEPARTMENT OF ENGINEERING

BARTLETT, TENNESSEE

SURVEY: BARGE DATE: - BOOK: _____
DESIGN: BARGE DATE: - SCALE

CITY ENGINEER DATE

EXP REALTY
US 70 UTILITY IMPROVEMENTS
BARTLETT, TN

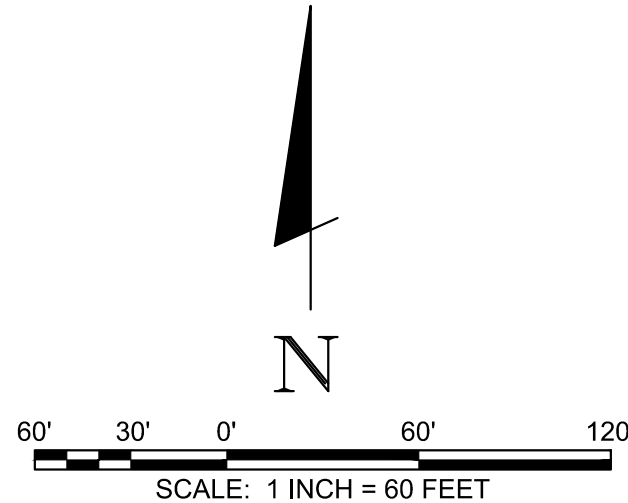
C0.00

BARGE No.: 38550-00

EXP REALTY
US 70 HIGHWAY IMPROVEMENTS

BARTLETT, TN

Attachment: JTB Rezoning (3756 : Ord. 25-01, Rezone 8229 Hwy 70)



	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	EXISTING FENCE
	PROPERTY LINE
	EXISTING OVERHEAD POWER
	EXISTING WATER LINE
	EXISTING OVERHEAD CABLE
	EXISTING POWER POLE
	EXISTING WATER METER
	EXISTING WATER VAULT
	EXISTING GAS VAULT
	CENTER LINE

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120'	DATUM: TNSPC (NAD83) NAVD 1988	FEMA PANEL: ZONE "X", PANEL NO. 47157C0310G, 2/5/13.	PARCEL ID: B0149 00680 B0149 00681
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DEPARTMENT OF ENGINEERING

BARTLETT, TENNESSEE

SURVEY: BARGE DATE: - BOOK: _____

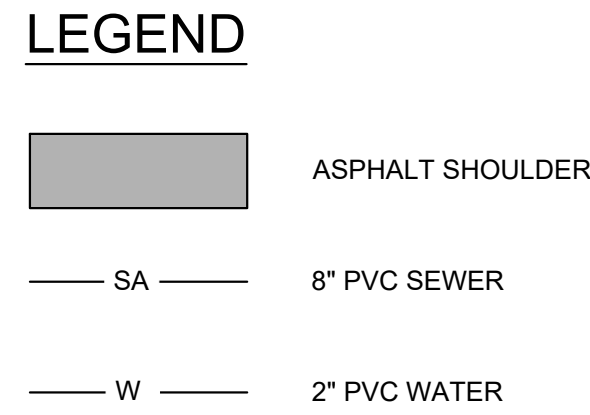
DESIGN: BARGE DATE: - SCALE

CITY ENGINEER DATE

[illegible]

C0.21

FILE NO. 3855000

DEPARTMENT OF ENGINEERING

BARTLETT, TENNESSEE

SURVEY: BARGE

DATE: -

BOOK: _____

DESIGN: BARGE

DATE: -

SCALE

CITY ENGINEER

DATE _____

C1.00

FILE NO. 3855000

1. ALL DRIVEWAYS MEET TDOT INTERSECTION SITE DISTANCE STANDARDS.
2. ALL STRIPING IN TDOT ROW SHALL BE THERMOPLASTIC

SPEED LIMIT: 50
AATD (2023): 10.375
EDGE CLEARANCE: 27'

ASPHALT ROADWAY

ASPHALT DRIVEWAY

1. 8" COMPACTED MINERAL AGGREGATE BASE
2. 2" ASPHALTIC BASE (TDOT 307C)
3. 1.5" RIDING SURFACE (TDOT 411D)

1 1/2" SURFACE (D MIX)

2" BINDER

4" A MIX

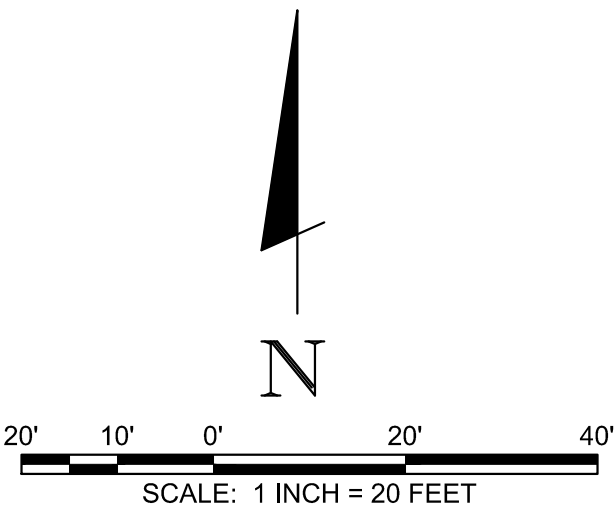
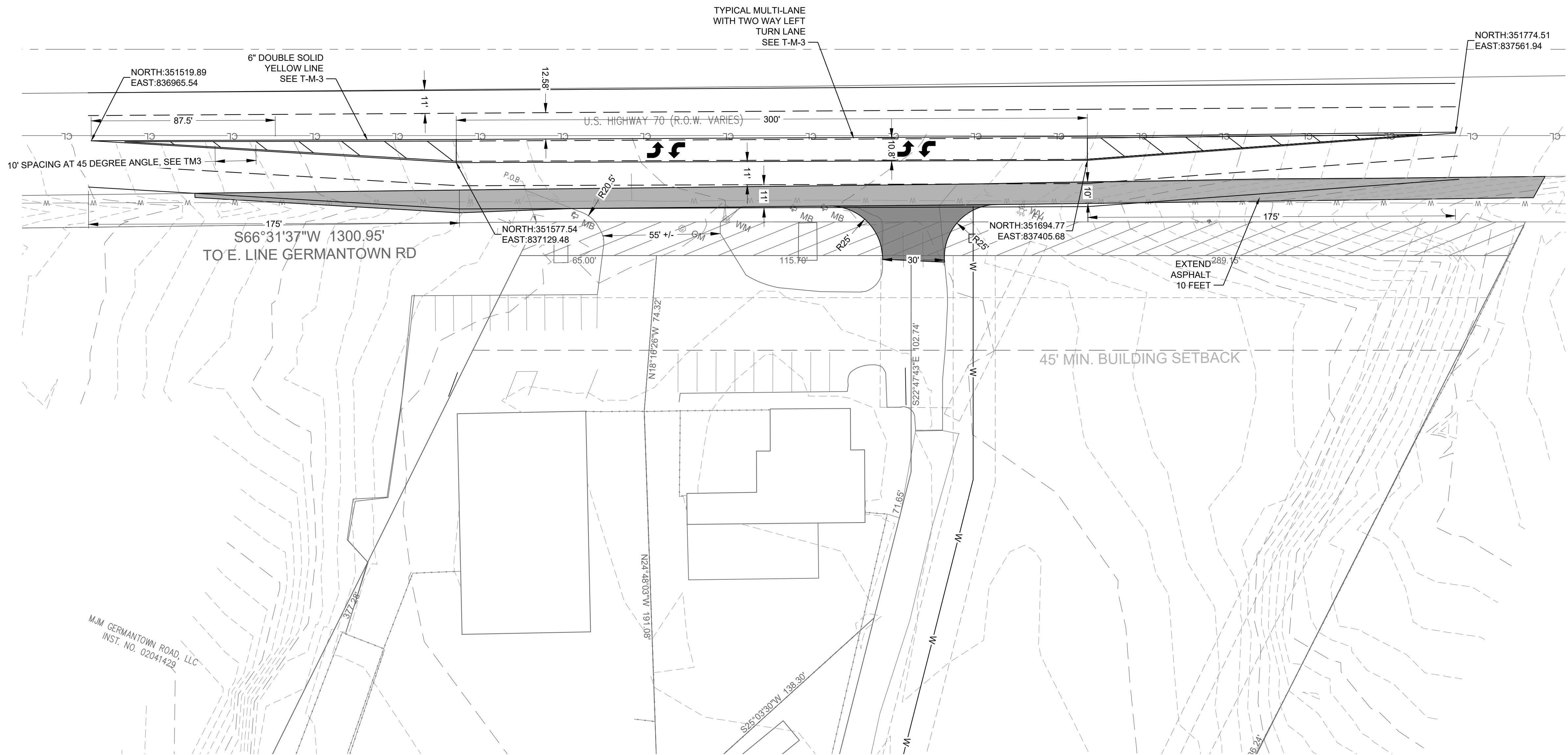
10" BASE STONE

Diagram illustrating a typical road section with dimensions and features:

- Overall width: 41' (left side) and 57' (right side).
- Centerline offset: $\pm 21.5'$ (left side) and $\pm 10.5'$ (right side).
- Right-of-way offset: $\pm 11'$ (right side).
- Proposed swale: 4% SLOPE, MIN.
- Proposed swale width: 1'.
- Proposed swale depth: 1'.
- Proposed swale material: MILL 1' OF EXISTING PAVEMENT AND OVERLAP WITH NEW PAVEMENT.
- Existing road: EXISTING ROAD.
- Proposed swale material: PROPOSED SWALE: SEE C2.01.

EXP REALTY
US 70 HIGHWAY IMPROVEMENTS

Attachment: JTB Rezoning (3756 : Ord. 25-01, Rezone 8229 Hwy 70)



DATUM: TNSPC (NAD83) NAVD 1988	FEMA PANEL: ZONE "X", PANEL NO. 47157C0310G, 2/5/13.	PARCEL ID: B0149 00680 B0149 00681
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DEPARTMENT OF ENGINEERING

BARTLETT, TENNESSEE

SURVEY: BARGE DATE: - BOOK: _____

DESIGN: BARGE DATE: - SCALE

CITY ENGINEER DATE

C1.01

FILE NO. 3855000

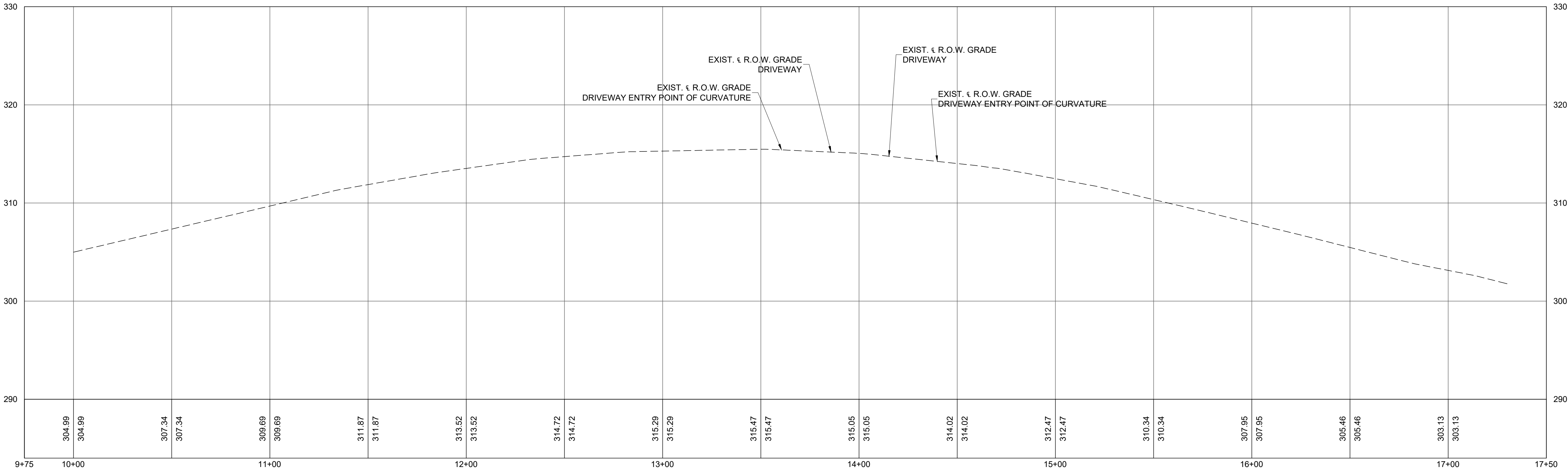
GRADING PLAN AND PROFILE

EXP REALTY
US 70 HIGHWAY IMPROVEMENTS

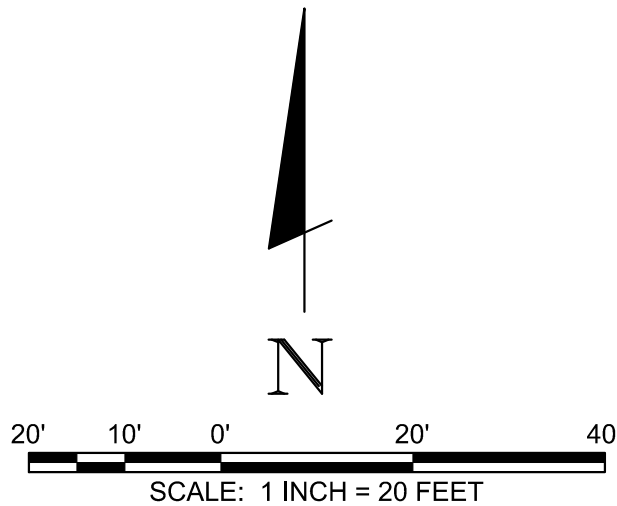
BARTLETT, TN

Attachment: JTB Rezoning (3756 : Ord. 25-01, Rezone 8229 Hwy 70)

1. SEE SHEET C0.01 FOR ADDITIONAL GRADING AND DRAINAGE NOTES.
2. CONTRACTOR TO FIELD VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION.



US HWY 70 PROFILE STA. 9+75 TO 17+50
SCALE: 1"=10' H
1"=2' V





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DATUM: NAD83 (NAD83) NAVD 1988	FEMA PANEL: ZONE "X", PANEL NO. 47157C0310G, 2/5/13.	PARCEL: B0149 00 B0149 00
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[illegible]

DEPARTMENT OF ENGINEERING

BARTLETT, TENNESSEE

SURVEY: BARGE

DATE: -

BOOK: _____

DESIGN: BARGE

DATE: -

SCALE

CITY ENGINEER

DATE _____

C2.01

FILE NO. 3855000

USER: HMCOLABRESE
FILE: \\corp.bwsc.net\data\Projects\39\39550\3955000\04_CAD\CIVIL\PLOT\3955000_C2.01.dwg
SAVED: 3/4/2025
PLOTTED: 4/4/2025

INITIAL EROSION & SEDIMENT CONTROL PLAN

EXP REALTY

US 70 HIGHWAY IMPROVEMENTS

BARTLETT, TN

INITIAL EROSION & SEDIMENT CONTROL PLAN

EXP REALTY
US 70 HIGHWAY IMPROVEMENTS

BARTLETT, TN

Attachment: JTB Rezoning (3756 : Ord. 25-01, Rezone 8229 Hwy 70)

Attachment: JTB Rezoning (3756 : Ord. 25-01, Rezone 8229 Hwy 70)

1. SEE SHEET C0.01 FOR EROSION AND SEDIMENT CONTROL NOTES.
2. REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES EXCEPT FOR OUTLET PROTECTION UPON SUBSTANTIAL COMPLETION OF SITE OR WHEN GRASS IS THOROUGHLY ESTABLISHED, WHICHEVER COMES LAST

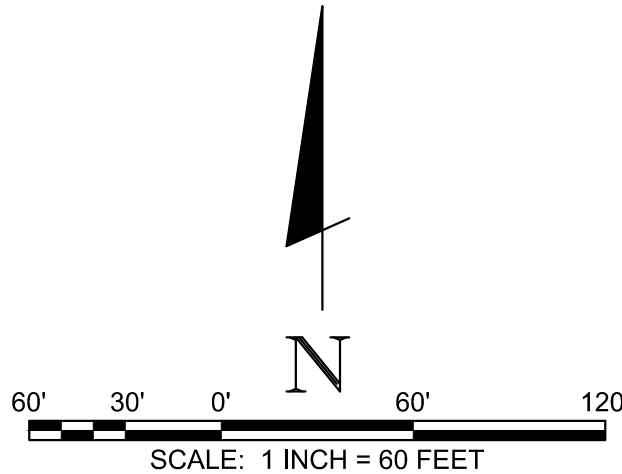
1. THE CONTRACTOR SHALL MAINTAIN ALL EPSC MEASUREMENT DEVICES INSTALLED IN THE INITIAL PHASE.
2. THE CONTRACTOR SHALL INSTALL INLET PROTECTION.

LEGEND

CW CONCRETE WASHOUT (DETAIL 4/C7.02)

PERMANENT SEEDING

— — — LIMITS OF DISTURBANCE



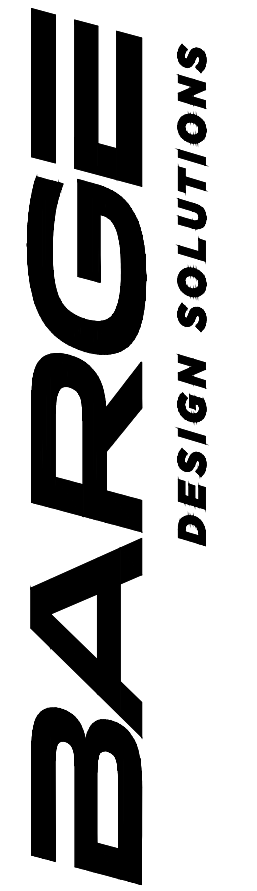
DATUM: TNSPC (NAD83) NAVD 1988	FEMA PANEL: ZONE "X", PANEL NO. 47157C0310G, 2/5/13.	PARCEL ID B0149 0068 B0149 0068
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BARTLETT, TENNESSEE

DESIGN: BARGE DATE: - SCALE

CITY ENGINEER DATE

FILE NO. 3855000



1. SEE SHEET C0.01 FOR EROSION AND SEDIMENT CONTROL NOTES.
2. REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES EXCEPT FOR OUTLET PROTECTION UPON SUBSTANTIAL COMPLETION OF SITE OR WHEN GRASS IS THOROUGHLY ESTABLISHED, WHICHEVER COMES LAST

1. THE CONTRACTOR SHALL MAINTAIN ALL EPSC MEASURES INSTALLED IN THE INITIAL PHASE.
2. THE CONTRACTOR SHALL INSTALL INLET PROTECTION.

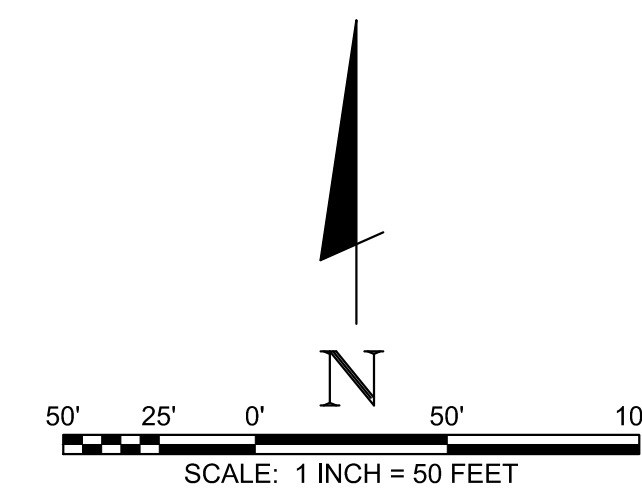
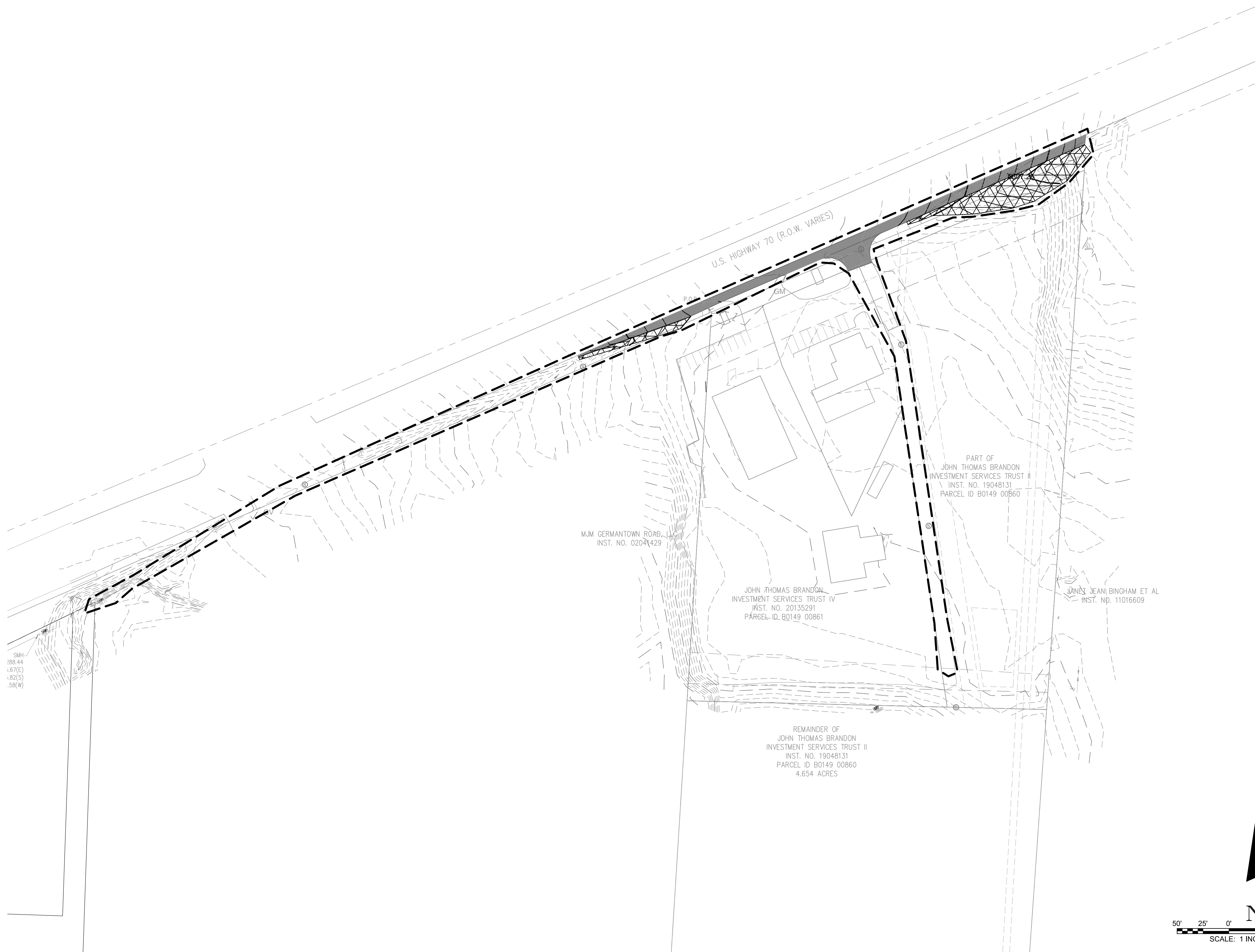
LEGEND

CW CONCRETE WASHOUT (DETAIL 4/C7.02)



PERMANENT SEEDING

LIMITS OF DISTURBANCE



DATUM: TNSPC (NAD83) NAVD 1988	FEMA PANEL: ZONE "X", PANEL NO. 47157C0310G, 2/5/13.	PARCEL ID: B0149 0068 B0149 0068
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DEPARTMENT OF ENGINEERING

BARTLETT, TENNESSEE

SURVEY: BARGE DATE: - BOOK: _____

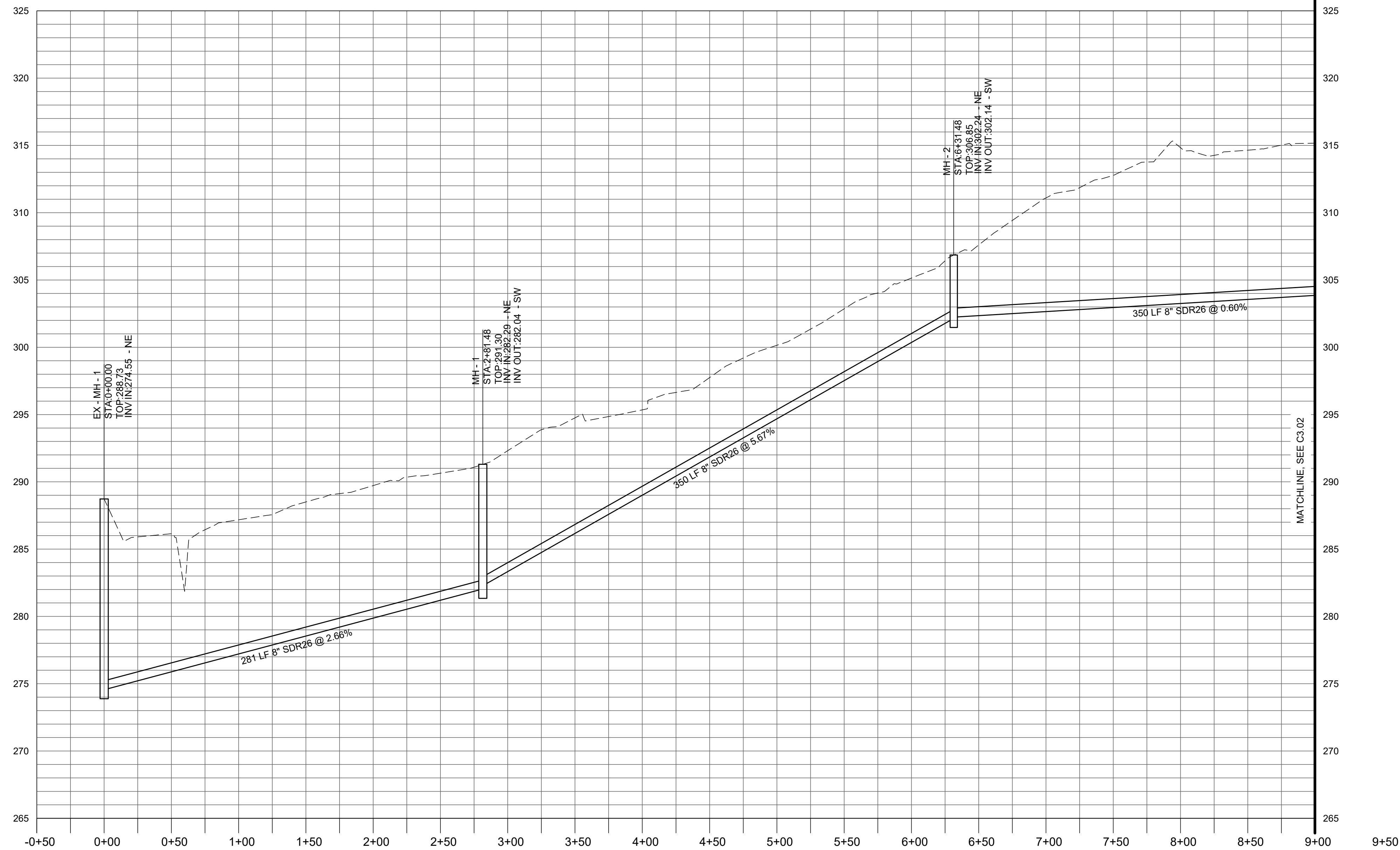
DESIGN: BARGE DATE: - SCALE

CITY ENGINEER DATE

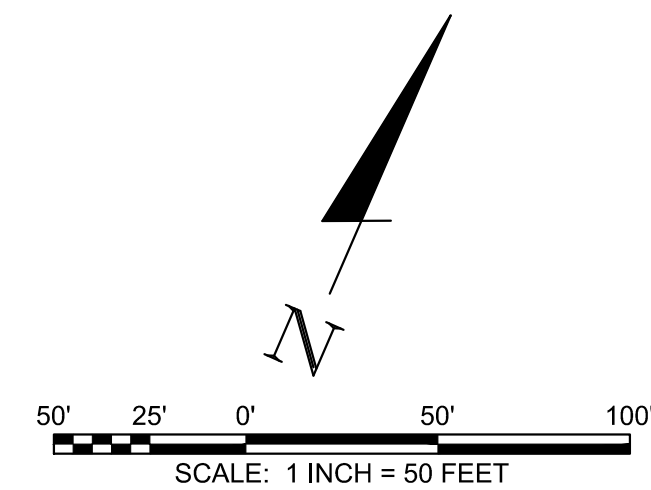
[illegible]

C2.42

FILE NO. 3855000



SCALE:
V: 1" = 2'
H: 1" = 20'



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DEPARTMENT OF ENGINEERING

BARTLETT, TENNESSEE

SURVEY: BARGE

DATE: -

BOOK: _____

DESIGN: BARGE

DATE: -

SCALE

CITY ENGINEER

DATE _____

SANITARY SEWER PLAN AND PROFILE

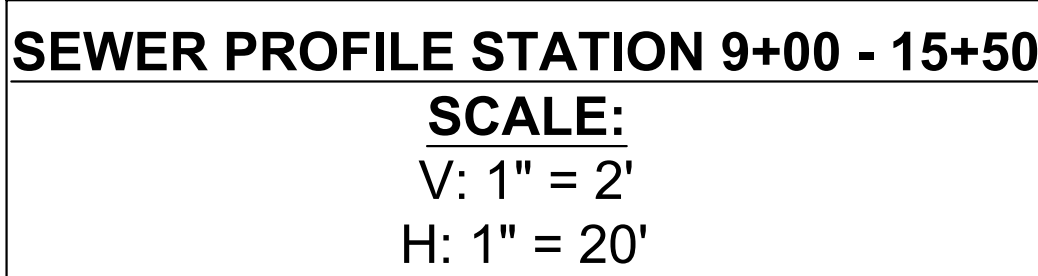
EXP REALTY
US 70 HIGHWAY IMPROVEMENTS

BARTLETT, TN

Attachment: JTB Rezoning (3756 : Ord. 25-01, Rezone 8229 Hwy 70)

C3.01

FILE NO. 3855000

DEPARTMENT OF ENGINEERING

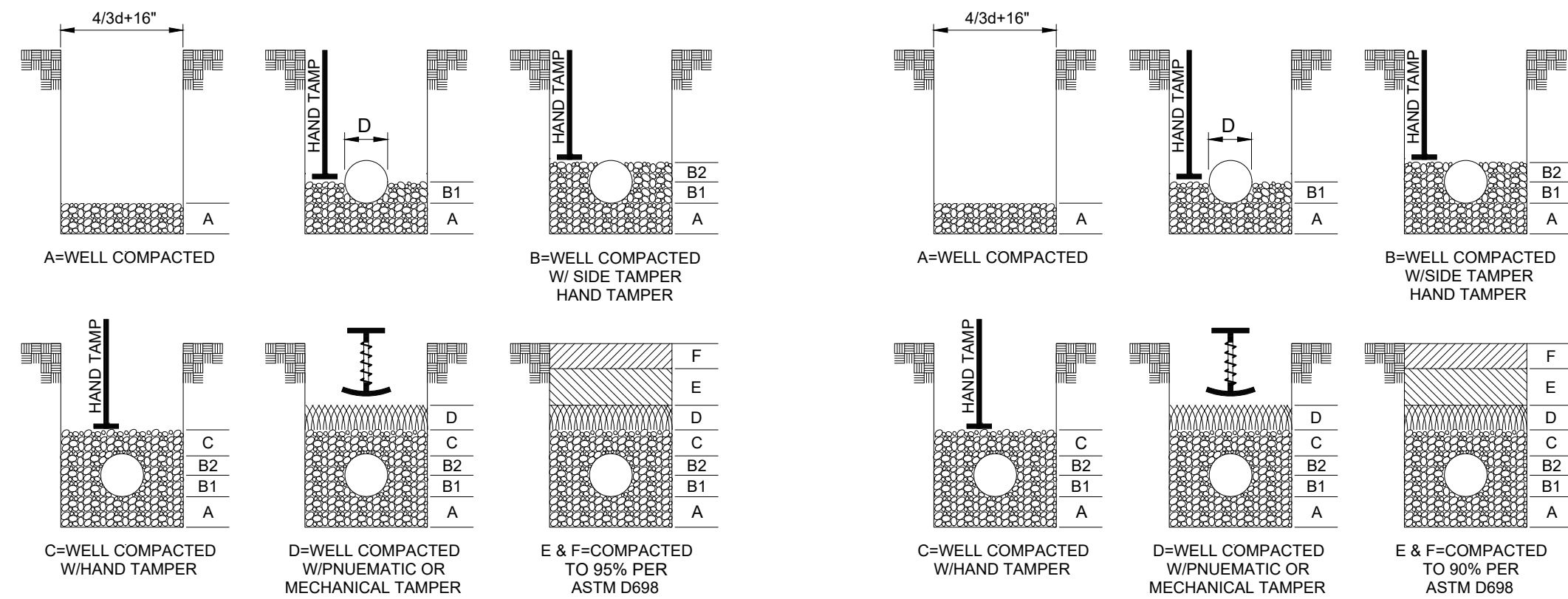
CITY ENGINEER DATE

FILE NO. 3855000

SITE DETAILS

EXP REALTY
US 70 HIGHWAY IMPROVEMENTS
BARTLETT, TN

Attachment: JTB Rezoning (3756 : Ord. 25-01, Rezone 8229 Hwy 70)



Layer	Depth	Material
A	6"	CLASS 1 FOR PLASTIC PIPE, CLASS 1.4 FOR ALL OTHER PIPE.
B	VARIES	CLASS 1 FOR PLASTIC PIPE, CLASS 1.4 FOR ALL OTHER PIPE, TAMPED IN MAXIMUM LAYERS
C	6"	CLASS 1 FOR PLASTIC PIPE, CLASS 1.4 FOR ALL OTHER PIPE
D	6"	SELECTED BACKFILL MATERIAL CLASS 1.4 FOR ALL PIPE, UNLESS OTHERWISE NOTED
E	VARIES	CLASS 1.4 FOR ALL PIPE UNLESS OTHERWISE NOTED, 75% OF BACKFILL MATERIAL MAY CONTAIN BROKEN STONES NOT EXCEEDING 6" IN DIAMETER-TAMPED IN 8" MAXIMUM LAYERS
F	12"	CLASS 1.4 FOR ALL PIPE-EXCEPT USE CLASS A, GRADE D, FINISHED 12" DEEP ACROSS THE ENTIRE LENGTH ALONG EXISTING PAVEMENT UNLESS OTHERWISE NOTED

BACKFILLING & COMPACTION OF PIPE TRENCHES IN IMPROVED AREAS

LAYER	DEPTH	MATERIAL
A	6" MIN.	CLASS 1 FOR PLASTIC PIPE, CLASS 1-4 FOR ALL OTHER PIPE
B	VARIES	CLASS 1 FOR PLASTIC PIPE, CLASS 1-4 FOR ALL OTHER PIPE, TAMPED IN 6" MAXIMUM LAYERS.
C	6"	CLASS 1 FOR PLASTIC PIPE, CLASS 1-4 FOR ALL OTHER PIPE
D	6"	SELECTED BACKFILL MAXIMUM 1-4 FOR ALL PIPE, CLASS 1-4 FOR ALL PIPE, 75% OF BACKFILL MATERIAL MAY CONTAIN BROKEN STONES NOT EXCEEDING 6" IN DIAMETER, TAMPED IN 12" MAXIMUM LAYERS
E	VARIES	CLASS 3 OR 4 FOR ALL PIPE, FREE OF LARGE CLODS, VEGETABLE MATTER, DEBRIS STONE AND/OR ANY OTHER OBJECTIONABLE MATTER

BACKFILLING & COMPACTION OF PIPE TRENCHES IN UNIMPROVED AREAS

- | | |
|--|---|
| 1. CLASS 1 MATERIALS: ANGULAR, TO 1" INCH GRADED; TO 1" INCH GRADED STONE INCLUDING A NUMBER OF FILL MATERIALS THAT HAVE REGIONAL SIGNIFICANCE SUCH AS CRUSHED STONE, GINS, SLAG AND CRUSHED BRICK. | 3. CLASS 3 MATERIAL: FINE SAND AND CLAYEY GRAVELS, INCLUDING FINE SANDS, SAND-CLAY MIXTURES, AND GRAVEL-CLAY MIXTURES. |
| 2. CLASS 2 MATERIALS: COARSE SANDS AND GRAVELS WITH A MAXIMUM PARTICLE DIMENSION OF 1-1/2" INCH INCLUDING VARIOUSLY GRADED SAND AND GRAVELS CONTAINING SMALL PERCENTAGES OF FINES, GENERALLY GRANULAR AND NON-COHESIVE, EITHER WET OR DRY. | 4. CLASS 4 MATERIAL: SILT, SILTY CLAYS, AND CLAYS, INCLUDING INORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY. |
| | 5. CLASS 5 MATERIALS: ORGANIC SOILS, AS WELL AS SOILS CONTAINING FROZEN EARTH, DEBRIS, ROSS LARGER THAN 1-1/2 INCHES AND OTHER FOREIGN MATERIALS. |

4 PIPE TRENCH BEDDING & BACKFILL MATERIAL

[illegible]

DEPARTMENT OF ENGINEERING

BARTLETT, TENNESSEE

SURVEY: BARGE

DATE: -

BOOK: _____

DESIGN: BARGE

DATE: -

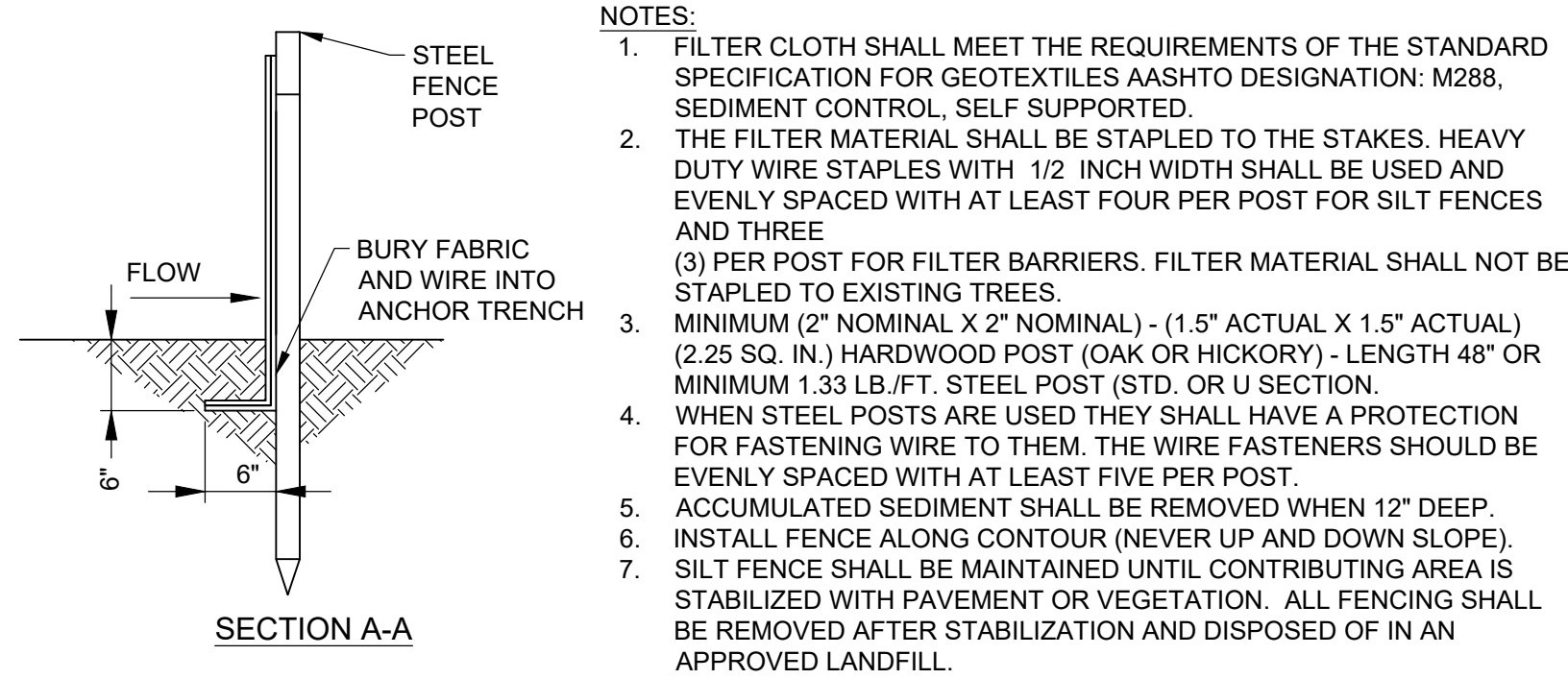
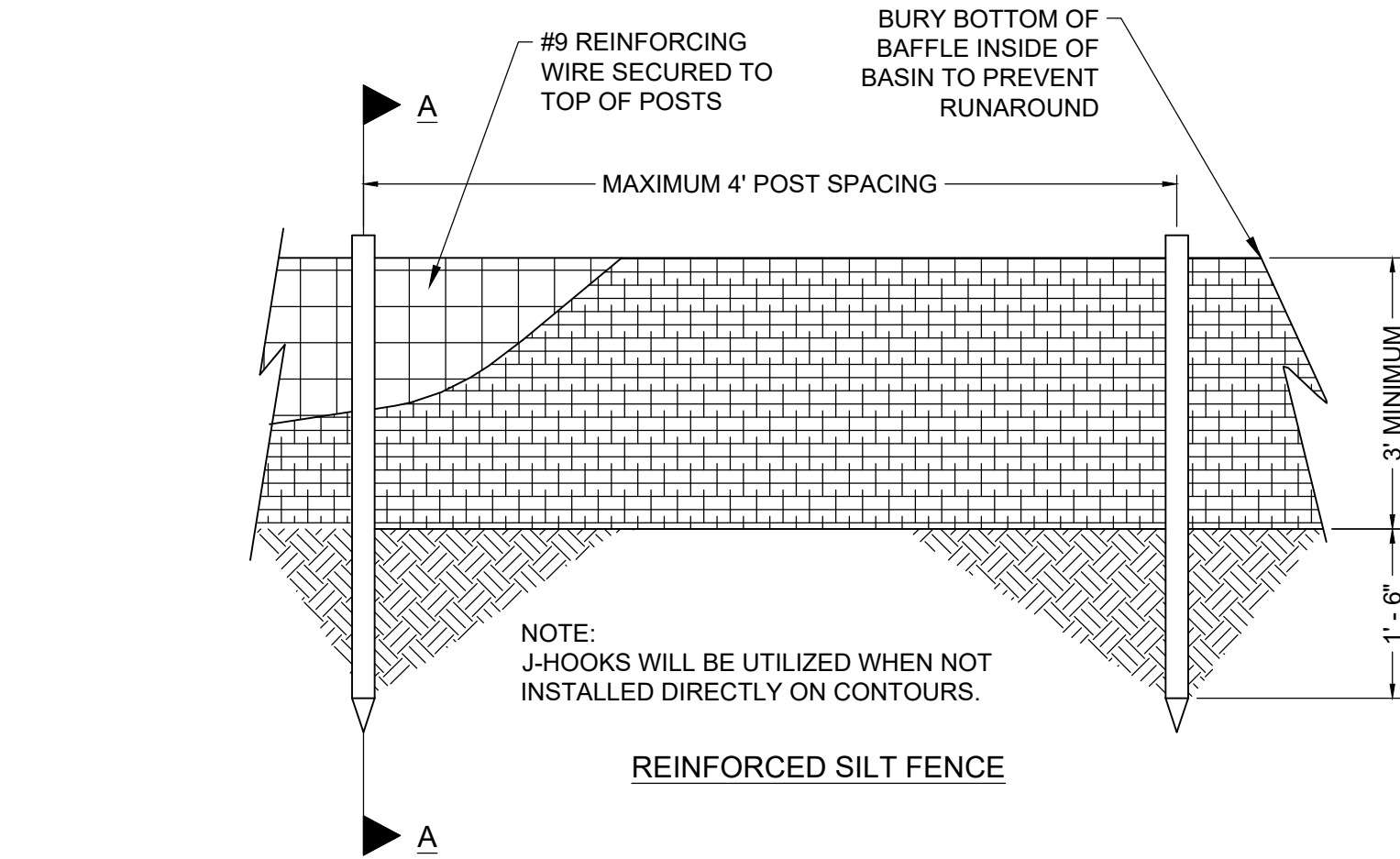
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CITY ENGINEER

DATE _____

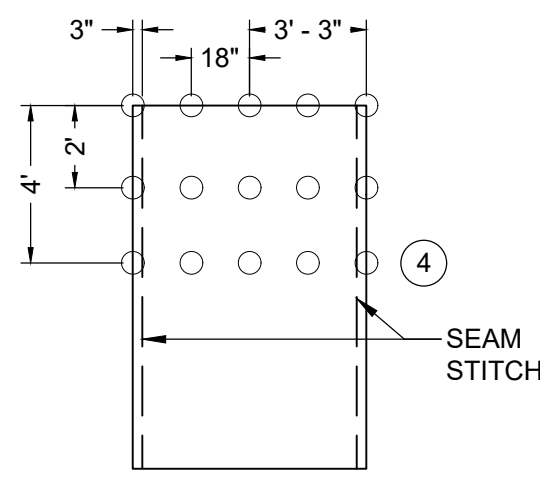
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FILE NO. 3855000



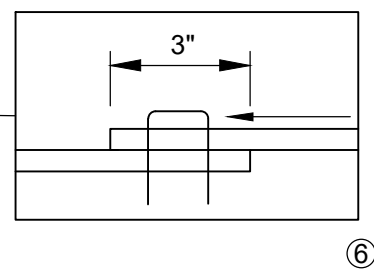
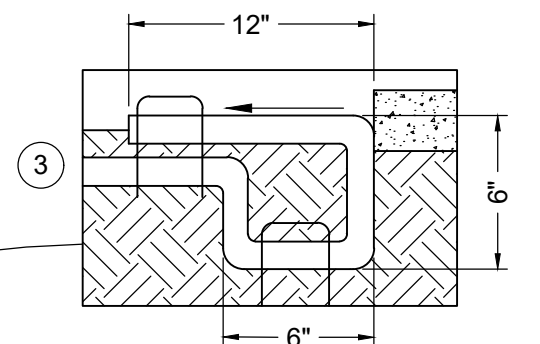
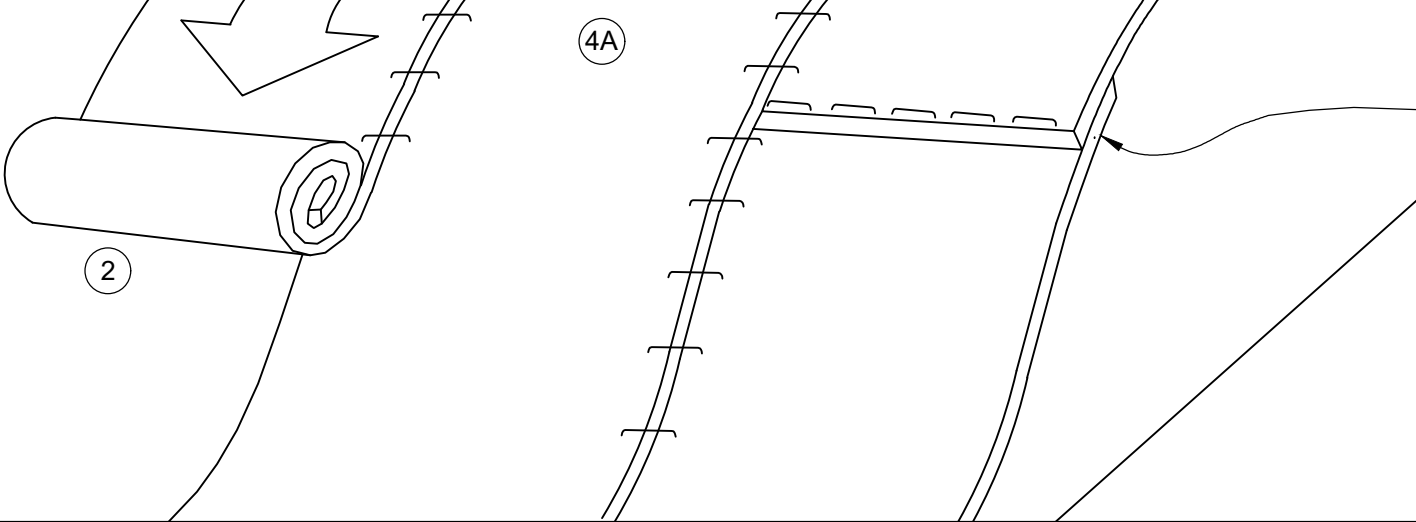
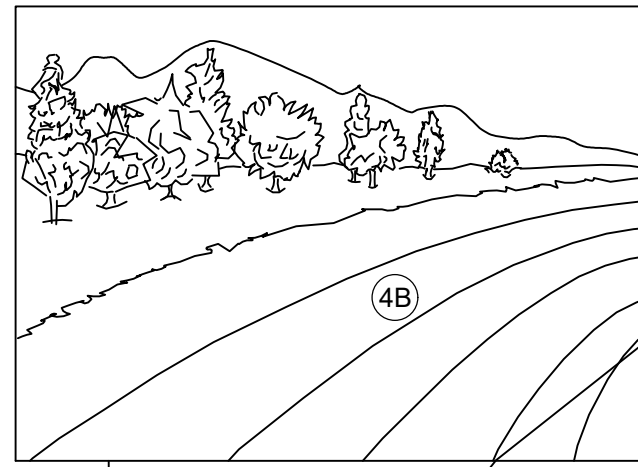
- NOTES:
1. FILTER CLOTH SHALL MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATION FOR GEOTEXTILES AASHTO DESIGNATION: M288, SEDIMENT CONTROL, SELF SUPPORTED.
 2. THE FILTER MATERIAL SHALL BE STAPLED TO THE STAKES, HEAVY DUTY WIRE STAPLES WITH 1/2" INCH WIDTH SHALL BE USED AND EVENLY SPACED WITH AT LEAST FOUR PER POST FOR SILT FENCES AND THREE
 - (3) PER POST FOR FILTER BARRIERS. FILTER MATERIAL SHALL NOT BE STAPLED TO EXISTING TREES.
 3. MINIMUM (2" NOMINAL X 2" NOMINAL) - (1.5" ACTUAL X 1.5" ACTUAL) (2.25 SQ. IN.) HARDWOOD POST (OAK OR HICKORY) - LENGTH 48" OR MINIMUM 1.33 LB./FT. STEEL POST (STD. OR U SECTION).
 4. WHEN STEEL POSTS ARE USED THEY SHALL HAVE A PROTECTION FOR FASTENING WIRE TO THEM. THE WIRE FASTENERS SHOULD BE EVENLY SPACED WITH AT LEAST FIVE PER POST.
 5. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN 12" DEEP.
 6. INSTALL FENCE ALONG CONTOUR (NEVER UP AND DOWN SLOPE).
 7. SILT FENCE SHALL BE MAINTAINED UNTIL CONTRIBUTING AREA IS STABILIZED WITH PAVEMENT OR VEGETATION. ALL FENCING SHALL BE REMOVED AFTER STABILIZATION AND DISPOSED OF IN AN APPROVED LANDFILL.

1 SILT FENCE
C7.02 SCALE: NTS



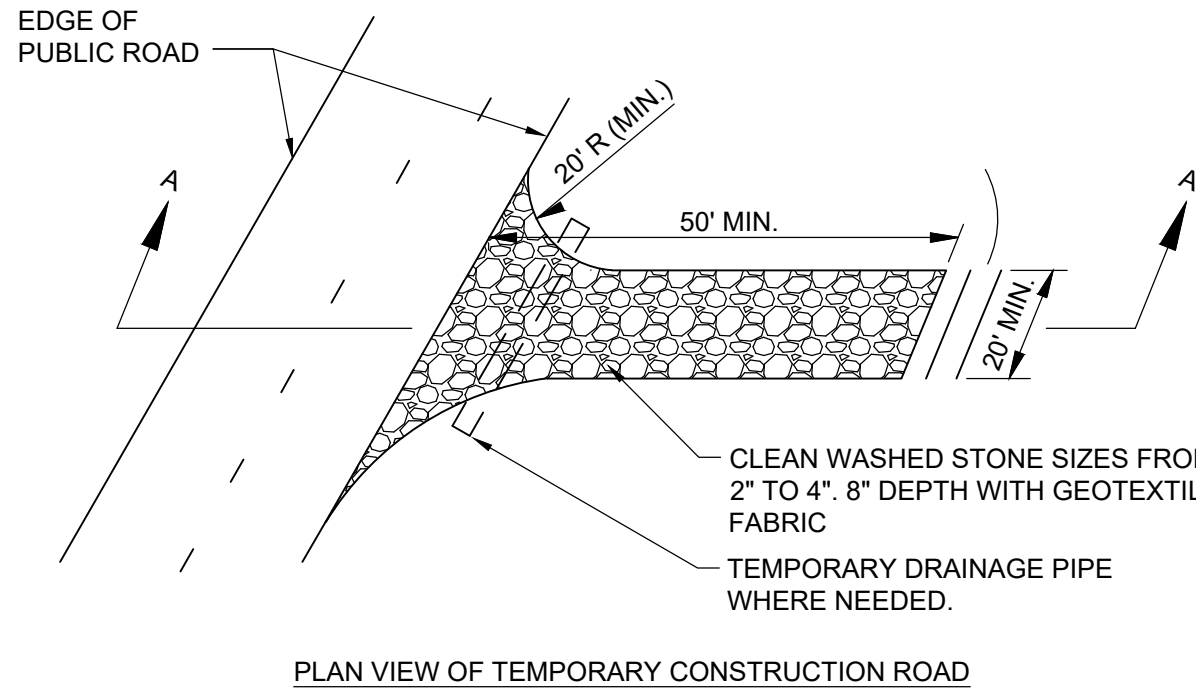
STAPLE PATTERN GUIDE

1. 4 STAPLES PER SQ. YD.
2. STAPLES SHALL BE 6" 11 GA. WIRE, "U" SHAPED STAPLES. LARGER STAPLES MAY BE REQUIRED FOR LOOSE SOIL. HEAVIER GAUGE STAPLES MAY BE REQUIRED FOR ROCKY OR HEAVILY COMPACTED SOIL.
3. FOR BLANKETS WITH THE OPTIONAL NORTH AMERICAN GREEN DOT SYSTEM, PLACE STAPLES/STAKES THROUGH EACH OF THE WHITE COLORED DOTS.



- NOTES:
1. BLANKET SHALL BE NORTH AMERICAN GREEN S150BN WITH TYPE B2 ANCHORS OR APPROVED SUBSTITUTION.
 2. INSTALLED TO MANUFACTURER RECOMMENDATIONS.
 3. PREPARE SOIL BEFORE INSTALLING BLANKETS. SEE SEEDING AND SODDING NOTES. CONTRACTOR SHALL WATER SEED TO ENSURE GERMINATION AND ATTAIN A STAND OF GRASS ACCEPTABLE TO THE OWNER AND ENGINEER.
 4. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES OR STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
 5. ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES OR STAKES SHOULD BE PLACED THROUGH THE WHITE DOTS.
 6. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" TO 5" OVERLAP.
 7. CONSECUTIVE BLANKETS SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.

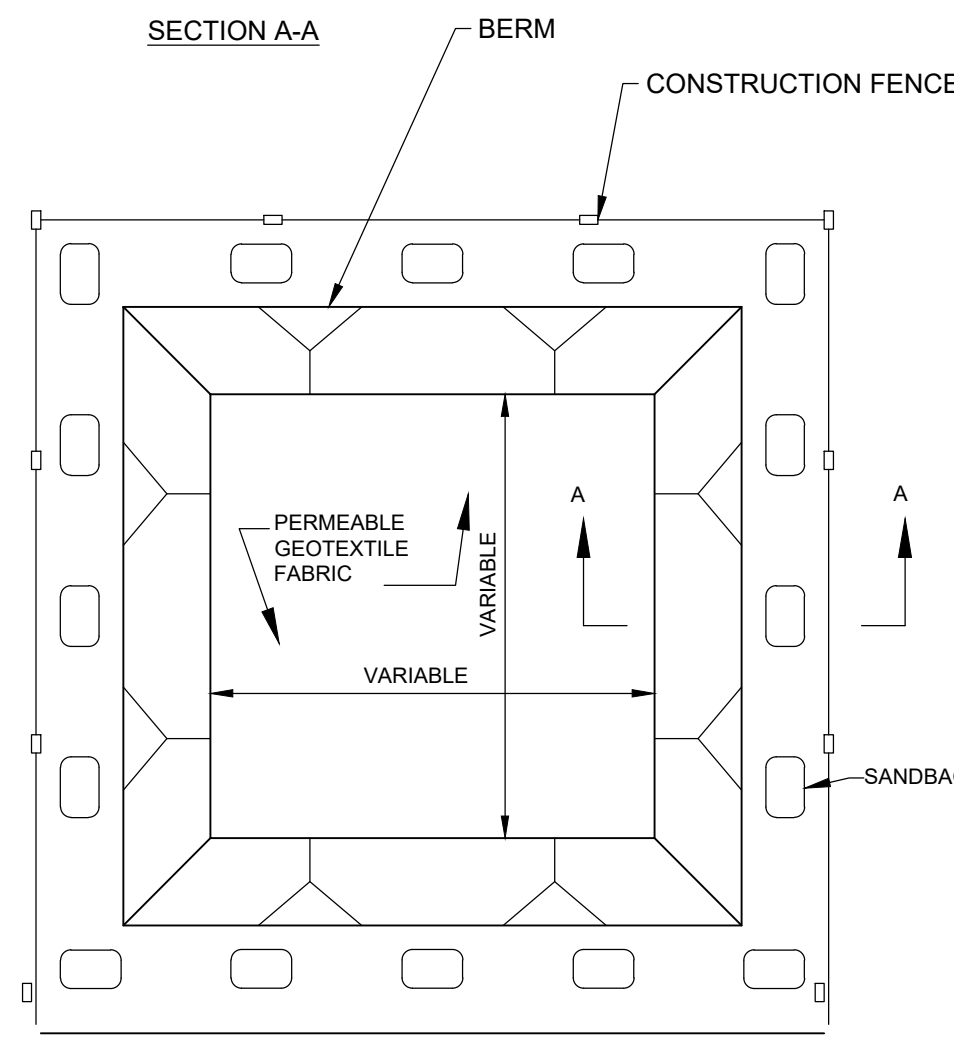
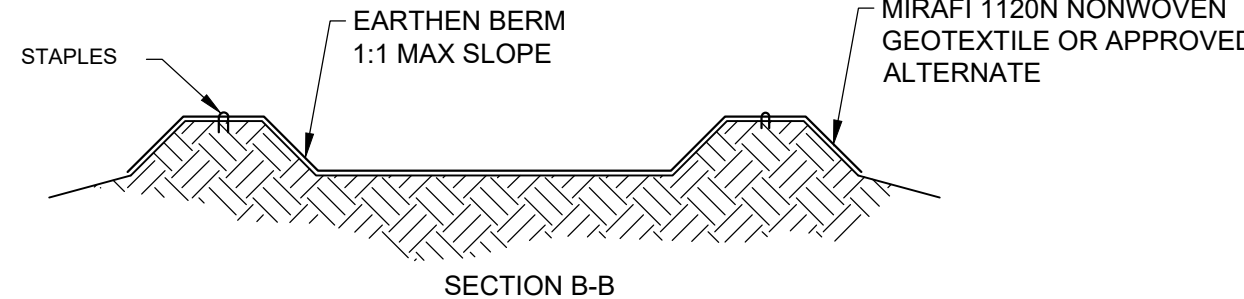
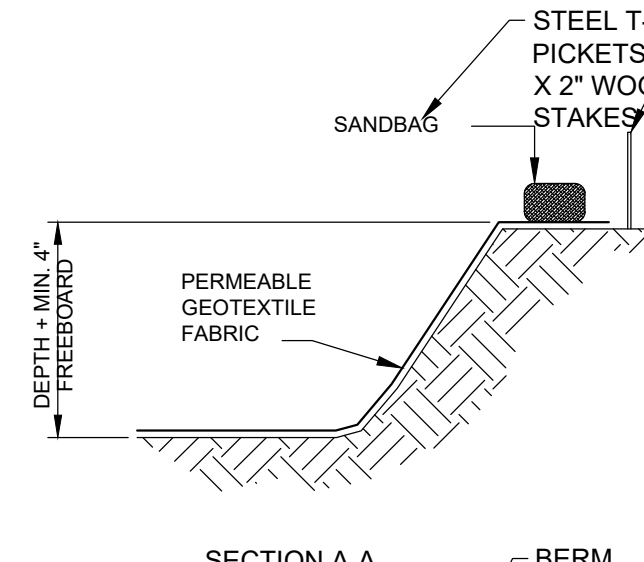
3 SLOPE MATTING
C7.02 SCALE: NTS



NOTES:

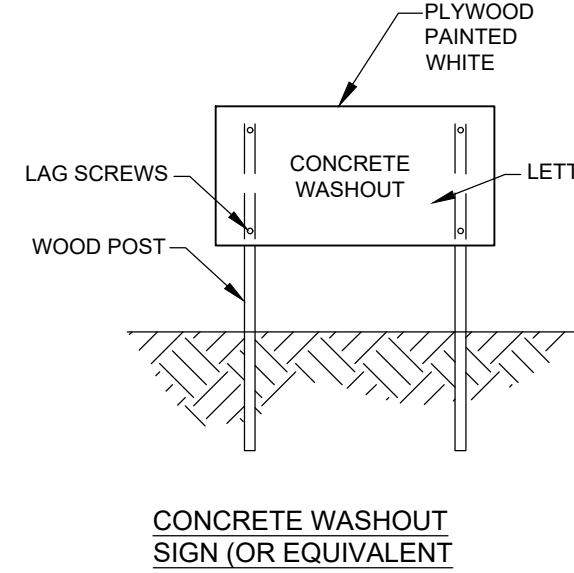
1. STONE FOR A STABILIZED CONSTRUCTION EXIT SHALL BE 2 TO 4 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
2. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50 FEET.
3. THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
4. THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 20 FEET, WHICH EVER IS GREATER.
5. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE. FABRIC SHALL BE 12 OZ./S.Y. NON-WOVEN.
6. ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
7. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.
8. IF APPLICABLE, DIVERSION DITCH AND SEDIMENT TRAP SHALL BE LOCATED AS SHOWN IN PLANS. REPRESENTATION IN THE ABOVE DETAIL IS FOR GENERAL REFERENCE.

2 CONSTRUCTION EXIT
C7.02 SCALE: NTS



PLAN VIEW
TYPE "BELOW GRADE"

2 CONCRETE WASHOUT
C7.03 SCALE: NTS



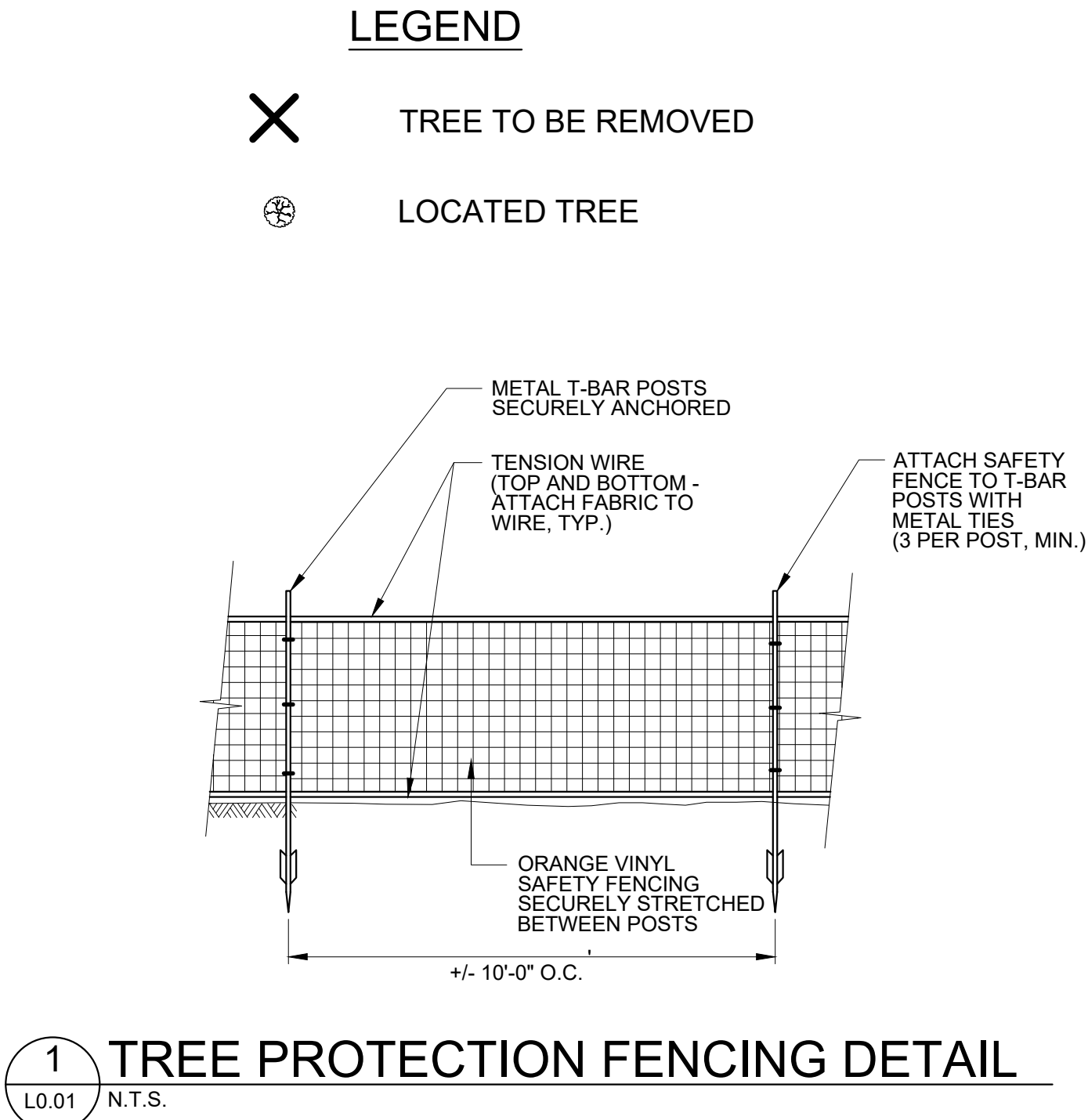
- NOTES:
1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
 2. SIGNAGE IDENTIFYING THE CONCRETE WASHOUT AREA SHALL BE INSTALLED WITHIN 5FT. OF THE WASHOUT FACILITY.

DEPARTMENT OF ENGINEERING	
BARTLETT, TENNESSEE	
SURVEY: BARGE	DATE: - BOOK: _____
DESIGN: BARGE	DATE: - SCALE
CITY ENGINEER	DATE

REVISION INFORMATION	DATE	DESCRIPTION
REV. 0	04/04/2025	ISSUE FOR PERMIT

C7.41
FILE NO. 3855000

USER:HMCO\ABRESE
FILE:\icorp.bwsc.net\data\Projects\38550\38550000\04_CAD\LAND\38550000_L0.01.dwg
SAVED: 6/3/2024
PLOTTED: 4/4/2025



811 Know what's below
Call before you dig.
811
www.call811.com

DATUM: TNSPC (NAD83) NAVD 1988
FEMA PANEL: ZONE "X", PANEL NO. 47157C0310G, 2/5/13.
PARCEL ID: B0149 00680, B0149 00681

DEPARTMENT OF ENGINEERING

BARTLETT, TENNESSEE

SURVEY: BARGE DATE: - BOOK: -
DESIGN: BARGE DATE: - SCALE

CITY ENGINEER DATE

L0.01
FILE NO. 3855000

TREE SURVEY AND PROTECTION PLAN

EXP REALTY

US 70 HIGHWAY IMPROVEMENTS

BARTLETT, TN

BARGE
DESIGN SOLUTIONS

615 3rd Avenue South / Suite 700 / Nashville, Tennessee 37210
PHONE (615) 254-1500 / FAX (615) 255-6572

LANDSCAPE PLAN

EXP REALTY
US 70 HIGHWAY IMPROVEMENTS
BARTLETT, TN

Attachment: JTB Rezoning (3756 : Ord. 25-01, Rezone 8229 Hwy 70)

[illegible]

L1.01

FILE NO. 3855000

LEGEND

20' LANDSCAPED AREA

20' LANDSCAPED BUFFER



Know what's **below**
Call before you dig.
 811
www.call811.com

www.call811.com

DATUM:
TNSPC (NAD83)
NAVD 1988

FEMA PANEL:
ZONE "X", PANEL NO.
47157C0310G, 2/5/13.

PARCEL ID:
B0149 0068
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DEPARTMENT OF ENGINEERING

BARTLETT, TENNESSEE

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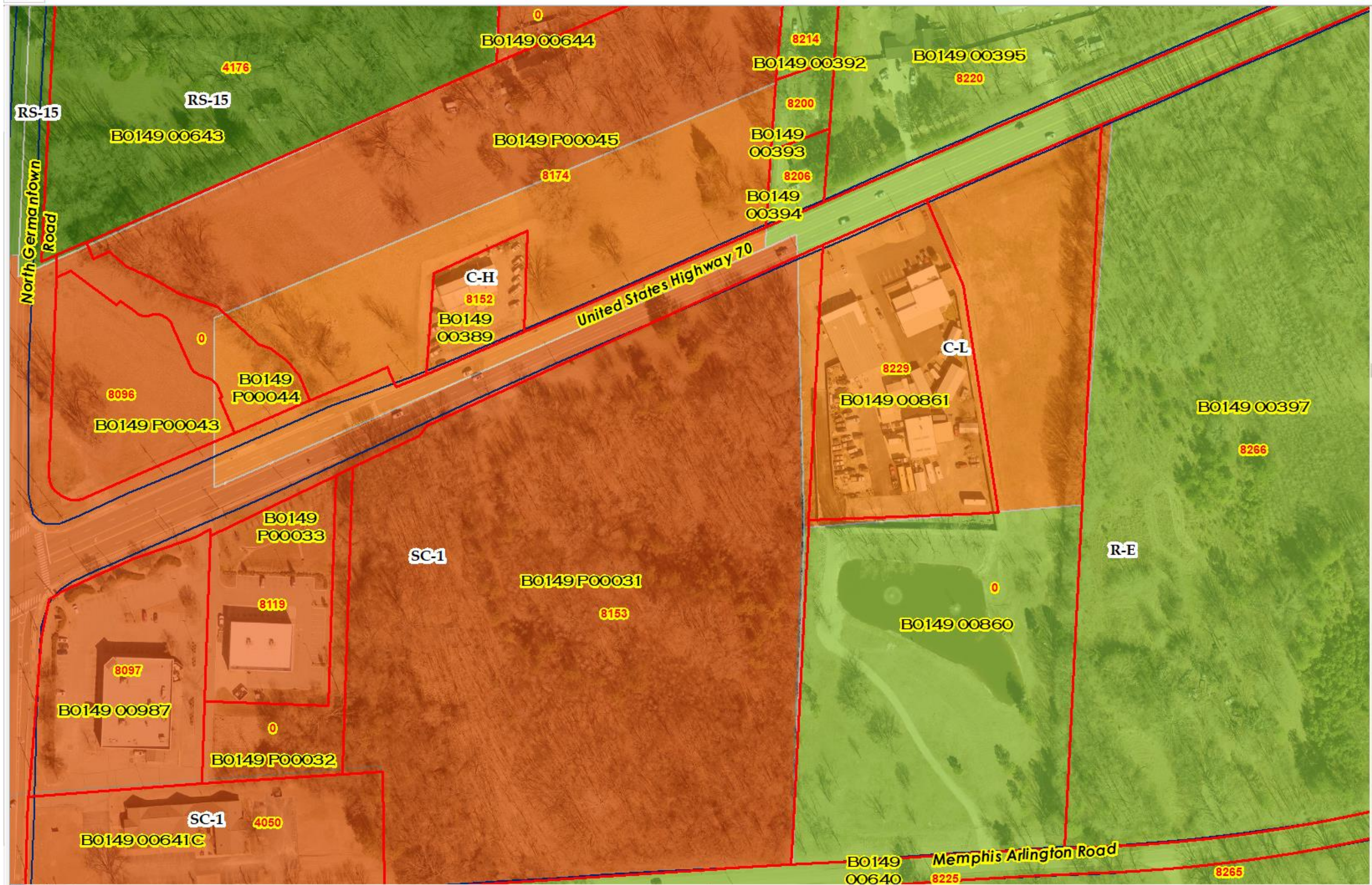
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SCALE

CITY ENGINEER

DATE _____



Attachment: JTB Rezoning Vicinity Map (3756 : Ord. 25-01, Rezone 8229 Hwy 70)

Municipal Planning Commission
Minutes
Monday, April 7, 2025 – 6:30 p.m.

The Bartlett Planning Commission (PC) met in the City Hall Assembly Chamber on Monday, April 7, 2025 at 6:30 p.m. for a regularly scheduled meeting.

The following members were present:

David Hunt
Jack Young, Alderman
Paul Kaiser
Jim Lamb
Ken Demetriou
Greg Easton
John Conroy, Chairman

The following members were absent:

Josh McNeil

The following staff/advisors were present: Sam Harris, Senior Planner; Leslie Brock, Planner; Melissa McAfee, Administrative Secretary; Trey Arthur, Director of Code Enforcement; Erin Cambell, Assistant Director of Engineering; Howard McNatt, Fire Marshall; Matt Crenshaw, Director of Public Works; Ed McKenney, City Attorney

Alderman Jack Young opened the meeting with prayer.

The Pledge of Allegiance to the flag of the United States of America was recited.

****Official Business of the Day****

Approval of Minutes of the February 3, 2025 meeting:

David Hunt made a motion to approve the minutes of the Monday, February 3, 2025 meeting with the following correction: Engineering Condition #5 on Agenda Item #3 should say, "Existing sidewalks shown on this plan set are not installed. The developer will be responsible for installing 5' sidewalks and wheelchair ramps in the 9.5-foot pedestrian and utility easement along Union Depot Drive and Portage Drive". Jim Lamb seconded the motion. Roll Call Vote: All members present voted Yes. Motion carries. Minutes were approved with corrections.

NEW BUSINESS

Public Hearing
Rezoning

1. JTB Subdivision, 8229 Highway 70 (Russ Brasfield, Barge Design Solutions)

INTRODUCTION: Senior Planner Sam Harris introduced the application for Mr. Russ Brasfield, with Barge Design Solutions, who is requesting Planning Commission approval of a favorable recommendation to rezone 5.089 acres of land from the "C-L" Neighborhood Business Zoning District to "C-H" Highway Business Zoning District. The subject property is located at 8229 Highway 70.

BACKGROUND: The subject property is the existing location of Birch's Automotive, the office for Traditional Plumbing, and a vacant lot. On July 1, 2024, the Planning Commission approved the Master Plan and Construction Plan for the 5.089-acre JTB Subdivision. Lot 1 is 2.124 acres, and it is the site of the existing Birch's Automotive. Lot 2 is 0.591 acres, and it is the office for Traditional Plumbing. Lot 3 is proposed to be 2.374 acres, and it is a vacant lot. Birch's Automotive is considered a pre-existing nonconforming use because the underlying zoning district does not permit general auto repair as a use, but the site has been used in this manner prior to being annexed by the City of Bartlett in 2012. In fact, the subject property has been used for auto repair or a contractor's business which is another "C-H" use not permitted in the underlying "C-L" zoning district going back similarly as Highway 70 Car Care across the street.

The properties that surround the proposed rezoning change consist of: "R-E" Residential Estate and "C-H" Highway Business to the north; "R-E" Residential Estate to the south; "R-E" Residential Estate to the east; and "SC-1" Planned Unit Commercial Development to the west.

DISCUSSION: The specific request by the applicant is for approval of a favorable recommendation to rezone 5.089 acres of land from "C-L" Neighborhood Business Zoning District to "C-H" Highway Business Zoning District in order to mirror the zoning across Highway 70 for Highway 70 Car Care that was put in place at the time of annexation in 2004 to reflect the pre-existing use of the site in Shelby County. The subject property had pre-existing uses in Shelby County that aligned with the "C-H" Highway Business Zoning District prior to being annexed by the City of Bartlett in 2012. However, the rezoning that took place at the time of annexation to "C-L" Neighborhood Business did not reflect these pre-existing uses. The applicant will limit the number of "C-H" uses permitted in the JTB

Subdivision and address the required screening/buffering requirements with the "C-H" uses permitted on the forthcoming Final Plan for the JTB Subdivision.

Recommendation: Favorable recommendation to the Board of Mayor and Aldermen for approval with conditions.

Engineering Conditions:

General:

1. A Commercial Subdivision contract may be required and will be prepared by Engineering and submitted to the developer/engineer for review to cover the fees to be paid to the City of Bartlett.
2. If required, Applicant/ Engineer shall provide a **digital set of drawing** files showing the sanitary sewer lines, drainage lines, lot lines and all improvements in AutoCAD format to dhubbard@cityofbartlett.org and ecampbell@cityofbartlett.org for use in the preparation of the Water Design Plan. This plan will be coordinated with the site design engineer to resolve any conflicts.
3. A SWPPP and a TDEC NPDES permit may be required and shall be submitted to the TDEC and the City of Bartlett Engineering office.
4. All new utilities shall be underground.
5. Correct all markups.
6. Developer shall construct a center turn lane on Highway 70. This shall meet the requirements of TDOT and Bartlett.
7. All three lots of this subdivision shall use a shared driveway and associated ingress/egress easement due to the limited sight distance. This must be approved and permitted by TDOT. This shall be recorded on the plat along with a maintenance agreement.
8. Road construction may require utility poles to be relocated.
9. A traffic control plan is required for work at Hwy 70.
10. A traffic impact analysis and/or a Site Impact Analysis may be required by TDOT.
11. A detention basin and associated drainage will be required as part of the Site Plan for Lot 3. Any additional pavement or buildings on Lots 1&2 may also require detention.

Erosion Control Plan & Details:

12. TDEC permit (if required) tracking number shall be added to the Erosion Control Plan.
13. Roadside swales to be fully sodded and pinned.
14. Show locations of construction exit and concrete wash out.
15. Additional erosion prevention and sediment control measures may be required at ditch crossings for sewer main.

Utility Plan:

16. State (TDOT) Utility Encroachment Permit will be required.
17. The water extension will be designed by the City of Bartlett Utility Engineer.
18. Sewer plan and profile will be required. These were not submitted with the plan set.
19. Sewer to be installed in accordance with City of Bartlett technical specifications and details.
20. Sewer manholes are to be spaced no greater than 350 feet apart.
21. Sewer crossing at ditch/stream crossing shall be ductile iron.
22. Sewer structure and pipe tables are required.
23. Indicate sewer pipe as SDR26.
24. Sewer tap(s) shall be shown.

Planning Conditions:

1. The applicant must obtain Final Plan approval from the Planning Commission to complete the subdivision.
2. The applicant must obtain Site Plan approval from the Planning Commission and Design Review Commission before obtaining a construction permit on Lot 3.
3. The applicant must install the streetscape across the Highway 70 frontage of Lots 1 and 2 in conjunction with issuance of a building permit for Lot 3.
4. The applicant must install the Landscape Plate 23D commercial adjacent to residential buffer along the rear property line of Lot 1 and Lot 3 in conjunction with issuance of a building permit for Lot 3 or in conjunction with issuance of a building permit of the 4.654-acre residential lot with frontage on Memphis Arlington Road.
5. The owner/applicant shall identify all utilities on site by contacting Tennessee One Call at 811 before commencing any site work.
6. The applicant and/or property owners shall be present at the meeting in order to make decisions relative to any changes that may be suggested by the Planning Commission.

7. The applicant and/or property owners shall be present at the corresponding Board of Mayor and Aldermen meetings to make decisions relative to any changes that may be suggested by the Board of Mayor and Aldermen.

Trevor Cropp, Barge Design Solutions, stepped forward.

Mr. Cropp stated that he is here on behalf of Mr. Brasfield and in agreement with comments and conditions of staff.

Administrative Secretary Melissa McAfee stated that the Planning Department did not receive any correspondence related to this application.

The public hearing opened at 6:37 p.m.

Chairman Conroy called for anyone in favor of approval of a favorable recommendation to the Board of Mayor and Aldermen to step forward. Hearing none.

Chairman Conroy called for anyone against approval of a favorable recommendation to the Board of Mayor and Aldermen to step forward. Hearing none.

The public hearing closed at 6:38 p.m.

John Conroy made a motion to forward a favorable recommendation to the Board of Mayor and Aldermen for the Rezoning of 8229 Highway 70 from "C-L" Neighborhood Business District to "C-H" Highway Business District. Greg Easton seconded the motion. Roll Call Vote: All members present voted Yes. Motion carries.

Master Plan

2. Castleton Subdivision, Eastern Terminus of Inniswood Drive (David Bray, the Bray Firm)

INTRODUCTION: Mr. Harris introduced the application for Mr. David Bray, with the Bray Firm, who is requesting Planning Commission Approval of a Master Plan for the Castleton Subdivision. The subject property is located at the eastern terminus of Inniswood Drive. The subject property is zoned "RS-15" Single Family Residential.

BACKGROUND: The vacant 10.66-acre lot was created by deed on November 15, 1999.

DISCUSSION: The specific request by the applicant is for Master Plan approval to subdivide 5.05 acres of land into a 10-lot subdivision. The lot sizes will range from 15,000 square feet to 21,751 square feet. Access to the subdivision will be from Inniswood Drive. The proposed development will have a common open space detention basin with an area designated for the cluster mailbox.

Recommendation: Approval with conditions.

Engineering Conditions:

General:

1. A Residential Site Plan contract may be required and will be prepared by Engineering and submitted to the developer/engineer for review to cover the fees to be paid to the City of Bartlett.
2. Applicant/ Engineer shall provide a **digital set of drawing** files showing the sanitary sewer lines, drainage lines, lot lines and all improvements in AutoCAD format to dhubbard@cityofbartlett.org and ecampbell@cityofbartlett.org for use in the preparation of the Water Design Plan. This plan will be coordinated with the site design engineer to resolve any conflicts.
3. A SWPPP and a TDEC permit may be required. A Notice of Intent (NOI) shall be submitted to TDEC with a copy provided to the City of Bartlett Engineering office.
4. All new utilities shall be underground.
5. Easements should be shown on all plan sheets.
6. Future realignment of Ellendale Road (84'ROW) shall be shown on remnant lot as a no build zone.
7. Lot 3 may need to be adjusted to accommodate the development of full ROW (60') on Fiske Road.
8. Correct all markups.

Plat:

9. Sewer easements need to be added.
10. Drainage easements need to be added.
11. Areas reserved for detention shall be identified as non-buildable. This is currently called out as COS A. A note about the HOA's responsibility for maintenance shall be added to the plat.
12. Subdivision monuments shall be shown in accordance with the subdivision regulation.
13. Lots 1, 2, 3 are to have no direct driveway access onto Fiske Rd.

14. A sidewalk chart is required. Wheelchair ramps on all corners.

Sanitary Sewer:

15. Sewer shall be stubbed to the remnant lot for future connection.

16. A structure and pipe table is required.

17. A plan and profile is required.

Erosion Control Plan:

18. The engineer shall provide a copy of the SWPPP (Storm Water Pollution Prevention Plan) that has been or will be submitted to TDEC (Tennessee Department of Conservation).

19. Prior to any work being started, an NOC (Notice of Coverage) from TDEC must be received and a copy submitted to the City of Bartlett.

20. Metal posts with wire-backed fence are required on the proposed silt fences.

21. Details for inlet protection are required.

22. The TDEC permit number shall be shown.

Grading and Drainage:

23. The applicant's engineer shall submit the stamped and signed detention calculations for the detention basins required for this property and show the 'pre' and the 'post' runoff for the 2, 5, 10, 25, 100-year storms.

24. Existing structures at the intersection of Glenchase and Inniswood shall be included in the drainage design with new drainage calculations for adjusted drainage areas and capacity.

25. Structure and pipe table required.

26. Plan and profile required.

Planning Comments:

1. A Resident of Bristol Glen Subdivision 1st addition requested that, if possible, the applicant leave some of the larger well-established trees that will not be hindered by construction.

Planning Conditions:

1. The applicant shall provide a tree survey with a data table with the construction plans.

2. The applicant shall designate and show a 5-foot utility easement along all property lines.
3. The applicant shall apply to the Planning Commission for the approval of the Construction Plan and the Final Plan to legally record this subdivision.
4. The applicant shall be present at the meetings in order to make decisions relative to any changes that may be suggested by the Planning Commission.

Chairman Conroy asked if the applicant is present.

Mr. Harris stated that the applicant is not present.

David Hunt made a motion to continue the vote on the Castleton Subdivision Master Plan until next month, so the applicant is present to state their agreement with comments and conditions of the staff report. Jack Young seconded the motion. Roll Call Vote: All members present voted Yes. Motion carries.

Site Plan

3. Raleigh Primitive Baptist Church, 7247 Andrews Road (Josh Burnette, Renaissance Design Studio)

****Mr. Harris stated that the applicant contacted the Planning Department this afternoon and withdrew their application. They would like to go before the Board of Zoning Appeals before the Planning Commission. Staff report on this agenda item is shown below.****

INTRODUCTION: Mr. Josh Burnette, with Renaissance Design Studio, is requesting Planning Commission approval of a revised site plan for the Raleigh Primitive Baptist Church. The subject property is located at 7247 Andrews Road. It is within the "RS-18" Single Family Residential Zoning District.

BACKGROUND: The subject property is Lot 56, Block A of the Ellendale Highway Subdivision recorded on Plat Book 9, Page 90 in April 1929. At some time prior to annexation by the City of Bartlett in 1977, a church was constructed on the subject property. In 1995, the subject property received site plan approval and a building permit for a one-story addition to the rear of the existing church. On July 18, 2024, the subject property received a variance from the minimum side yard building setback requirement to add a new drive-thru portico along the east building elevation to be utilized during inclement weather. The existing parking lot is not marked with parking spaces.

DISCUSSION: The specific request by the applicant is for the approval of a revised site plan to expand the parking lot by adding 29 new parking spaces in the rear of the lot. The disturbed area is currently grass and trees, and it will be paved over to create the additional spaces. The applicant will be installing a detention swale to handle the stormwater drainage. The specifics of the proposed site plan are as follows:

Site Data	
Site Area:	1.00-acre/ 43,560-square feet
Disturbed Area:	0.1626-acres/ 7,083-square feet
Total Existing Parking Spaces:	unknown
Total Required Parking Spaces: (One space for each 4 seats in the main auditorium.)	18 (1 ADA Accessible)
Total Proposed Parking Spaces:	29 (0 ADA Accessible)
Greenspace/Open space:	36%

Recommendation: Approval with conditions.

Engineering Conditions:

General:

1. A Site Plan contract may be required and will be prepared by Engineering and submitted to the developer/engineer for review to cover the fees to be paid to the City of Bartlett.
2. A SWPPP and a TDEC permit may be required. A Notice of Intent (NOI) shall be submitted to TDEC with a copy provided to the City of Bartlett Engineering office.
3. All new utilities shall be underground.
4. Easements should be shown on all plan sheets.
5. Correct all markups.

Erosion Control Plan:

6. If required, the engineer shall provide a copy of the SWPPP (Storm Water Pollution Prevention Plan) that has been or will be submitted to TDEC (Tennessee Department of Conservation).
7. If required, prior to any work being started, an NOC (Notice of Coverage) from TDEC must be received and a copy submitted to the City of Bartlett.

Grading and Drainage:

8. The applicant's engineer shall submit the stamped and signed detention calculations for the detention basins required for this property and show the 'pre' and the 'post' runoff for the 2, 5, 10, 25, 100 year storms.
9. The engineer must design the detention so that the post development runoff is equal to or less than pre-development runoff.
10. The detention basin area should be labeled as "Detention- no build zone" on the site plans.

Planning Conditions:

1. The pre-existing parking lot does encroach within the required 20' residential/nonresidential landscape buffer Plate 23D along the east property line. However, the applicant must revise the proposed parking layout to not encroach within the required 20' residential/nonresidential landscape buffer Plate 23D along the east property line, or the applicant must obtain a variance for this encroachment from the Board of Zoning Appeals.
2. The applicant must designate at least one ADA accessible parking space.
3. The applicant must install the Landscape Plate 23D nonresidential adjacent to residential buffer along the south, east, and west property lines.
4. The owner/applicant shall identify all utilities on site by contacting Tennessee One Call at 811 before commencing any site work.
5. The applicant and/or property owners shall be present at the meeting in order to make decisions relative to any changes that may be suggested by the Planning Commission.

Officer Elections

Jim Lamb made a motion to nominate Paul Kaiser as Chairman of the Planning Commission. David Hunt seconded the motion. Roll Call Vote: All members present voted Yes. Motion carries. Paul Kaiser is the new Chairman.

David Hunt made a motion to nominate Jim Lamb as Vice Chairman of the Planning Commission. Paul Kaiser seconded the motion. Roll Call Vote: All

members present voted Yes. Motion carries. Jim Lamb is the new Vice Chairman.

Open Discussion

John Conroy called for any discussion items. Hearing none.

Adjourned at 6:44 p.m.