

## ACTION FORM BRYAN CITY COUNCIL

<b>DATE OF COUNCIL MEETING:</b> March 24, 2015		<b>DATE SUBMITTED:</b> February 27, 2015	
<b>DEPARTMENT OF ORIGIN:</b> Water Services		<b>SUBMITTED BY:</b> J. Barfknecht	
<b>MEETING TYPE:</b>	<b>CLASSIFICATION:</b>	<b>ORDINANCE:</b>	<b>STRATEGIC INITIATIVE:</b>
<input type="checkbox"/> BCD	<input type="checkbox"/> PUBLIC HEARING	<input type="checkbox"/> 1ST READING	<input type="checkbox"/> PUBLIC SAFETY
<input type="checkbox"/> SPECIAL	<input type="checkbox"/> CONSENT	<input type="checkbox"/> 2ND READING	<input type="checkbox"/> SERVICE
<input checked="" type="checkbox"/> REGULAR	<input checked="" type="checkbox"/> STATUTORY		<input checked="" type="checkbox"/> ECONOMIC DEVELOP.
<input type="checkbox"/> WORKSHOP	<input type="checkbox"/> REGULAR		<input checked="" type="checkbox"/> INFRASTRUCTURE
			<input checked="" type="checkbox"/> QUALITY OF LIFE
<b>AGENDA ITEM DESCRIPTION:</b> Consider approving a professional services contract to CDM-Smith, Inc. to masterplan and model waterline infrastructure for the west side of Bryan along Highway 47 and State Highway 21 in the not to exceed amount of \$65,350.00.			
<b>SUMMARY STATEMENT:</b> The Water Services Department respectfully requests the City Council approve the professional services contract with CDM-Smith Inc. to evaluate the needed size of a waterline to extend from Leonard Road to State Highway 21 along Highway 47 to account for future growth. In addition, the contract provides for modeling of the service area to identify a proposed site for an elevated tank or confirm a location previously identified. In addition to determining the size of the waterline and the location of an elevated storage tank, the contract includes preliminary engineering to determine the route of the waterline so easements can be acquired ahead of design.			
Water Services anticipates constructing this line in 2018, if not before. This waterline will eliminate the need for Bryan to purchase water from Wellborn for the former OSR customers, and the waterline will support growth in the Hwy 47 and SH 21 corridor.			
Staff recommends the approval of this contract to CDM-Smith, Inc. in the not to exceed amount of \$65,350.00. The fee for this design will be paid for from the budgeted funds in FY15.			
<b>STAFF ANALYSIS AND RECOMMENDATION:</b> Water Services respectfully requests City Council approve the professional services contract to perform preliminary engineering. The results of this contract will be instrumental in planning the growth for the west side of Bryan and for future water customers in this area of our service territory.			
<b>OPTIONS (In Suggested Order of Staff Preference):</b>			
1. Approve the professional services contract.			
2. Do not approve the professional services contract.			
<b>ATTACHMENTS:</b>			
1. Proposal			
<b>FUNDING SOURCE:</b> budgeted Water Operating Funds			
<b>APPROVALS:</b> Jayson E. Barfknecht 02/27/15; Hugh R. Walker, 02/27/2015			
<b>APPROVED FOR SUBMITTAL: CITY MANAGER</b> Joey Dunn for KR 03-04-15			
<b>APPROVED FOR SUBMITTAL: CITY ATTORNEY</b> LCrawford for JHampton 3/17/2015			

February 12, 2015  
Mr. Jayson Barfknecht, Ph.D., P.E.  
Director of Public Works  
City of Bryan  
P.O. Box 1000  
Bryan, TX 77805

RE: New Elevated Storage Tank Location and Hwy 47 OSR Water System Transmission  
Main Preliminary Engineering  
Professional Services Proposal

Dear Mr. Barfknecht:

Per our discussions regarding the evaluation of the proposed site for a new elevated storage tank on the west side of the water distribution system and the sizing of the new Highway 47 OSR Water System Transmission Main, we have prepared this professional services agreement for the services required to provide the following preliminary engineering services.

1. Evaluate the location(s) of the new elevated storage tank,
2. Determine the capacity of the new elevated storage tank
3. Determine the operational characteristics of the new elevated storage tank based on current demands and future demands
4. Determine the diameter(s) of the new water transmission main
5. Prepare preliminary engineering drawings of the new elevated storage tank and route drawings of the new water transmission main showing
  - a. aerial photo features
  - b. property parcel information
  - c. jurisdictional waters

To complete the preliminary engineering on the new elevated storage tank and the new water transmission main the following tasks must be completed.

1. Import most recent GIS data on water pipes and other features into Water GEMS
2. Check for proper conversion of pumps, tanks, valves and other facilities
3. Check demands, elevations, pipe data and other hydraulic parameters in model
4. Geolocate water billing data and associate the billing data with model nodes
5. Verify the model outputs represent field conditions
  - a. Steady state comparison of pressures for two time snapshots – assuming field data is available
6. Evaluate location of new elevated storage tank by running existing Max Day Demand and Average Day Demand Extended Period Simulation (EPS)

7. During existing Max Day Demand and Average Day Demand EPS, evaluate sizes for new water transmission main
8. Estimate 2030 demand using per capita demand rate and future population estimates
9. Create 2030 EPS scenario
10. Run 2030 EPS to evaluate location of new elevated storage tank under 2030 conditions
11. Run 2030 EPS to evaluate sizes of new water transmission main
12. Prepare tech memo with results of modeling
13. Prepare route drawings at 1"=100' showing new water transmission route with property parcel information and jurisdictional waters
14. Prepare preliminary site plan for new elevated storage tank

It is assumed that the City will provide the following information and services.

1. Latest GIS pipe data
2. 12 months of water billing data including service address and monthly usage (we would prefer October 2013 through September 2014)
3. Estimate of where population growth will occur in the water system between 2015 and 2030
4. Review and comment on proposed operation of new elevated storage tank
5. Review and comment on sizing and route of new water transmission main
6. Review and comment on tech memo
7. Assist by providing available utility information along the water transmission main route including City owned utilities and utilities owned by other utilities in Brazos County

We propose to complete the scope of work described above for a lump sum of \$65,350. We propose to complete the existing condition model within three weeks of receiving the pipe and water billing data. We propose to complete the future conditions model within one week of receiving the location of the future population. We will complete the draft tech memo and preliminary engineering drawings three weeks following receipt of the location of the future population.

We are prepared to start work immediately upon your notice to proceed. If you have any questions regarding this professional services proposal, please contact me.

Sincerely,

Allen D. Woelke, P.E.  
Vice President  
CDM Smith Inc.