



To: City of Cuero

From: Urban Engineering

Date: October 06, 2020

RE: Engineering Beneficiary Justification and Engineering Project Justification Memo for Water System Improvements 2020 CDBG – MIT – Harvey Competition Application

The City of Cuero (CoC), located in DeWitt County, provides and maintains public infrastructure for over 9,800 residents with a significant portion being low-middle income. The infrastructure the CoC maintains, specifically their public water system, serves as the sole source of potable water to residents. The French Street Water Treatment Plant (WTP) and various water lines throughout the CoC have been designated as needing improvements. These improvement projects include replacing existing water mains, drilling a new water well, and rehabilitating the existing ground storage tank. These improvement projects are needed to reduce the effects of future disasters on the area, to improve the resiliency and effectiveness of the system, and to better serve residents.

Natural disaster situations increase the stress on public water systems which can lead to waterline breaks, loss of pressure, and lapses in service. Typical damages from natural disasters can include fires, downed trees, and damaged powerlines.

The flows required to extinguish a fire are much higher than the average demand on the system. This increase in flow causes a pressure drop which makes the system unreliable and ineffective. A localized pressure source ensures that sufficient pressure and quantity of water is reliably supplied to the system during times that higher flows are necessary.

Downed trees and powerlines due to hurricanes and major storms can lead to waterline breaks. Inadequate valving means waterlines cannot be isolated and the system is unable to supply potable water to residents. In the event that these issues arise simultaneously, the resulting pressure loss is more severe and lapses in service last much longer.

The French Street WTP is a decommissioned water treatment plant that has a plugged well and a ground storage tank in need of repair. To provide a localized pressure source and water to the area, the French Street WTP needs to be made operational by constructing a new 1,000 gpm (gallons per minute) ground water well, rehabilitating the existing ground storage tank, installing two (2) new high service pumps, and installing one (1) new generator. These improvements will ensure that the French Street WTP is equipped to provide pressure and service to the distribution system in times of need and gives additional time to City personnel to diagnose and repair problems. The proposed improvements are shown in the attached CDBG-MIT Exhibits.

The water mains designated for repair are shown in the attached CDBG-MIT Exhibits. These water mains have been identified because they are antiquated, cast iron mains that frequently break and cause lapses in potable water service. The proposed improvement projects include replacing the existing mains with new 8-inch PVC pipe including fittings, valves, services, and fire hydrants. This will increase system reliability, improve the City's ability to isolate mains and complete necessary repairs, provide reliable fire protection and ensure fire flows can be achieved, and protect the health, safety, and welfare of residents.



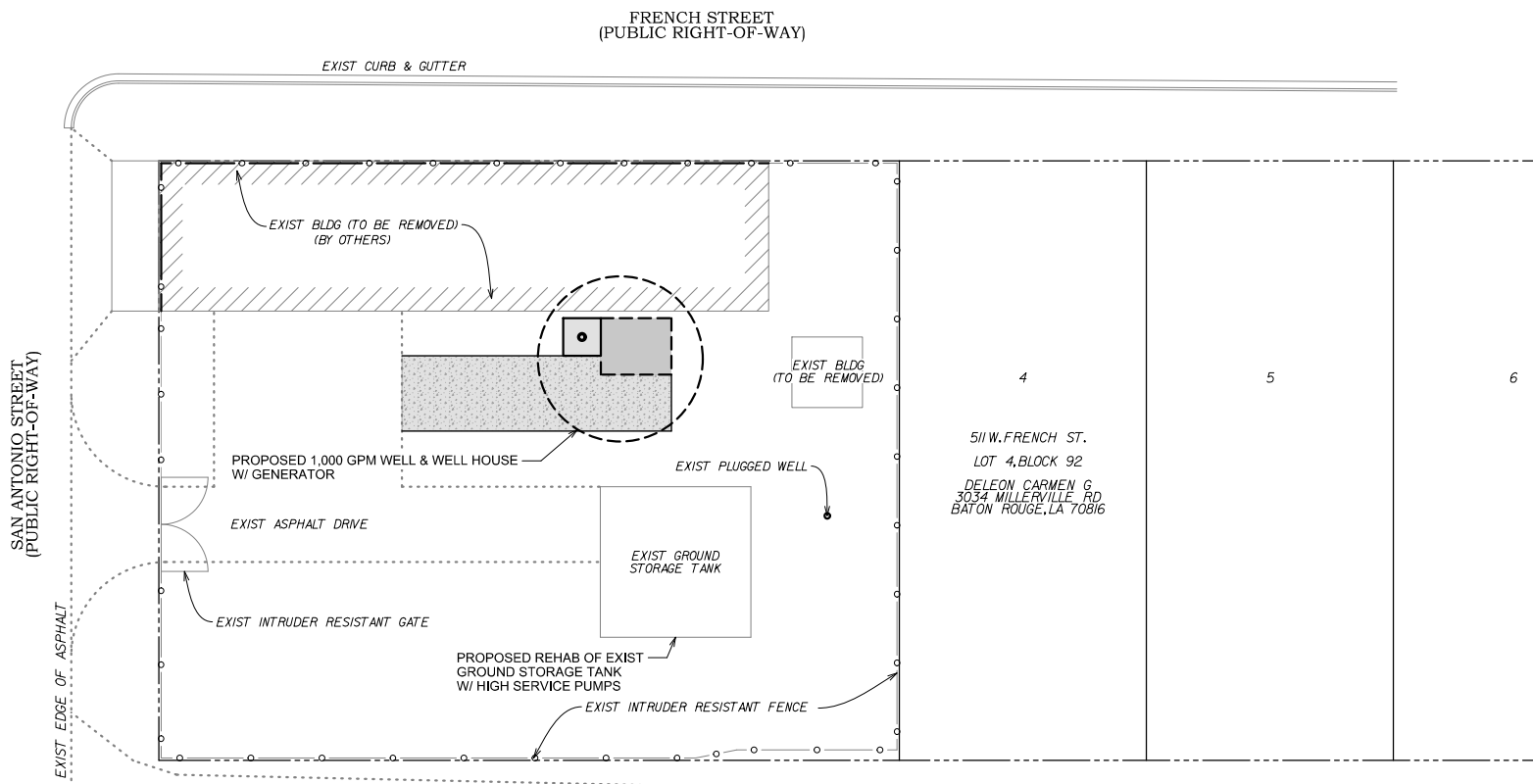
Residents need a reliable public water system that can provide service during disaster situations. It is critical that the City of Cuero secure funding to properly address these issues and allow for the continued, effective use of the water system.

The projects proposed are critical for the community and more specifically residents of Census Tract 9702 Block Groups 3 & 4 and Census Tract 9704 Block Group 1 who depend directly on the French Street WTP and the identified water mains.

It is Urban Engineering's professional opinion that the projects proposed will have a positive impact on the residents within the identified project area and that the proposed projects will mitigate the ill effects of future disasters on the area.



Matt A. Glaze PE
10/6/20



FRENCH STREET
(PUBLIC RIGHT-OF-WAY)

EXIST CURB & GUTTER

SAN ANTONIO STREET
(PUBLIC RIGHT-OF-WAY)

EXIST EDGE OF ASPHALT

EXIST BLDG (TO BE REMOVED)
(BY OTHERS)

EXIST BLDG
(TO BE REMOVED)

PROPOSED 1,000 GPM WELL & WELL HOUSE
W/ GENERATOR

EXIST PLUGGED WELL

EXIST ASPHALT DRIVE

EXIST GROUND
STORAGE TANK

EXIST INTRUDER RESISTANT GATE

PROPOSED REHAB OF EXIST
GROUND STORAGE TANK
W/ HIGH SERVICE PUMPS

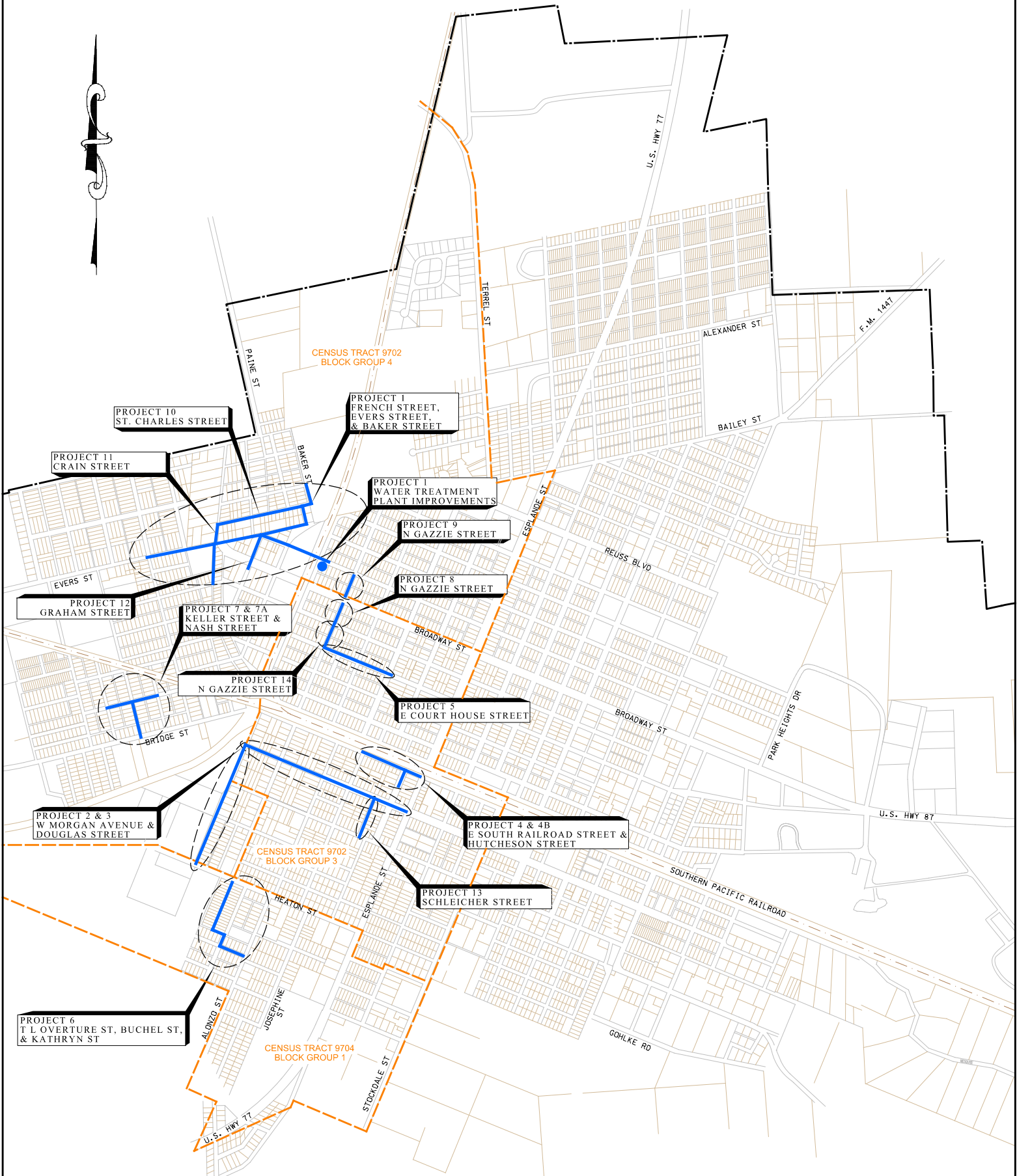
EXIST INTRUDER RESISTANT FENCE

511 W. FRENCH ST.
LOT 4, BLOCK 92
DELEON CARMEN G.
3034 MILLERVILLE RD
BATON ROUGE, LA 70816

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CITY OF CUERO
CDBG - MIT
 WATER MAIN PROJECT MAP



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 DATE 10/06/20



CDBG-MIT: Budget Justification of Retail Costs (Former Table 2)

Cost Verification Controls must be in place to assure that construction costs are reasonable and consistent with market costs at the time and place of construction.

Applicant/Subrecipient:	City of Cuero					
Site/Activity Title:	Water System Improvements 2020 CDBG-MIT-Harvey Competition					
Eligible Activity:						
Materials/Facilities/Services	\$/Unit	Unit	Quantity	Construction	Acquisition	Total
Mobilization, Insurance and Bonds (Maximum 5% of Base Bid)	\$ 169,700.00	LS	1	\$ 169,700.00	\$ -	\$ 169,700.00
Barricading & Traffic Control (Furnish, Install, Maintain & Remove Signs & Warning Devices) (Includes Flagmen, Traffic Handling & Temporary Striping)	\$ 10,000.00	LS	1	\$ 10,000.00	\$ -	\$ 10,000.00
Construction Staking	\$ 30,000.00	LS	1	\$ 30,000.00	\$ -	\$ 30,000.00
Storm Water Pollution Prevention Plan (Prepare, Implement and Maintain Storm Water Plan and Controls)	\$ 5,000.00	LS	1	\$ 5,000.00	\$ -	\$ 5,000.00
Water Well	\$ 700,000.00	LS	1	\$ 700,000.00	\$ -	\$ 700,000.00
Rehab Ground Storage Tank	\$ 600,000.00	LS	1	\$ 600,000.00	\$ -	\$ 600,000.00
High Service Pumps	\$ 80,000.00	EA	2	\$ 160,000.00	\$ -	\$ 160,000.00
Generator	\$ 40,000.00	LS	1	\$ 40,000.00	\$ -	\$ 40,000.00
Water Main (10")	\$ 95.00	LF	250	\$ 23,750.00	\$ -	\$ 23,750.00
Water Main (8")	\$ 85.00	LF	16775	\$ 1,425,875.00	\$ -	\$ 1,425,875.00
Fire Hydrant (All Depths)	\$ 6,750.00	EA	27	\$ 182,250.00	\$ -	\$ 182,250.00
Water Service (1" with 3/4" Meter)	\$ 1,300.00	EA	167	\$ 217,100.00	\$ -	\$ 217,100.00
Engineering Services	\$ 445,459.00	LS	1	\$ 445,459.00	\$ -	\$ 445,459.00
	\$ -		0	\$ -	\$ -	\$ -
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	\$ -		0	\$ -	\$ -	\$ -
TOTAL	\$ 2,088,389.00			\$ 4,009,134.00	\$ -	\$ 4,009,134.00

1. Identify and explain the annual projected operation and maintenance costs associated with the proposed activities.

Operation and maintenance costs are expected to be \$12,000 - \$15,000 per year.

2. Identify and explain any special engineering activities.

N/A.



Seal

Date: 10/6/20
Phone Number: 361-578-5836

Signature of Registered Engineer/Architect
Responsible For Budget Justification: